



INTERNATIONAL ROUND TABLE

**CRISIS MANAGEMENT  
IN THE TIME OF COVID 19**

*IMPROVISE, ADAPT AND OVERCOME*

COLLECTION OF PROFESSIONAL PAPERS



ROGAŠKA SLATINA, 9. 4. 2021



International round table, Collection of professional papers  
**Crisis management in the time of COVID 19**  
**Improvise, Adapt and Overcome**

Slovenija, Rogaška Slatina, 9.4.2021

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## **EDITORIAL COMENTARY**

The epidemiological crisis will have major consequences for human life and health. In particular, it will affect most spheres in the economy.

The main purpose of our round table was to create a platform for professional discussion, supported by a wide range of topics arising from social and economic activities, both in terms of management, leadership, organization and implementation of these.

With particular emphasis on crisis management, this international event provided opportunities for collaboration, mentoring, sharing and exchanging ideas.

Our main objectives were:

- Celebrating the courage, creativity, strength of conviction and humanity of socially responsible leaders and their capacity to leave a lasting legacy impacting the future development of communities and organizations across the world.
- Inspiring innovation and stimulating opportunities for managers to lead responsibly in the world, in their nations, in their communities and in their homes.
- Building bridges and encouraging collaboration between students and their professors and managers.
- Creating a synergistic, inspirational and motivational environment enabling ethical, unique and dynamic debate.

With special students section we have all together affirmed AREMA's commitment to educating students globally for and about leadership and crisis management.

**Asoc. Prof. Dr. Patricija Jankovič**  
*Editor In-chief*

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# THE IMPACT OF CORONA CRISIS ON SUSTAINABILITY IN TOURISM

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Daniel Hodžić<sup>2</sup>

## **Abstract:**

In article, through the importance of tourism for development of many environments, we compare the effects of the tourism industry before and during the pandemic.

The special stress is on new, sustainable forms of tourism, the consequences of the pandemic are shown and possibilities of tourism recovery in the post-pandemic period are highlighted.

**Key words:** tourism, travel, pandemic, sustainability, health.

## **1. Introduction**

Tourism is not a new phenomenon. Travel is as old as humanity, thousands of years ago Homo sapiens traveled as a nomad. The word tourist and tourism are of more recent date, and originated about two hundred years ago. This is even before the time when tourism emerged as a global phenomenon as we know it today, which is several

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decades old (Mihalič, 2008). In any case, tourism can be defined as an interdisciplinary industry, which includes catering services (restaurants), hotel industry, tourist mediation (agencies) and complementary tourist activities (gambling, events, recreation, etc.). The multiplier effects of tourism are also evident in other economic (transport, trade, agriculture, food industry ...) and non-economic (culture, sports, science, education ...) industries. We must not forget that tourism also markets the environment in the broadest sense of the word (natural and cultural heritage, cultural landscape, quality of life of the population, organization of a state and society and its attitude towards guests - tourists ...). The fact is that the modern tourist offer no longer includes only services related to rest and recreation (gaining new strength), but also work, education, research, trade (Andrejčič, 1997). We are talking about an industry with many economic effects. Due to tourism, new economic industries are developing, and the structure of production and consumption is also changing. Due to the overflow of funds, international tourism also affects international trade. Roughly, two types of benefits are recorded: direct economic benefits arising from the sale of catering, transportation and other services and goods directly to tourists, and social benefits that are not measurable in money but are material and moral. In some countries, international tourism has significantly improved the economic situation. With this, tourism has become one of the important factors of economic and social development in many places (Babič et al., 1998).

Tourism is one of the world's major economic sectors. It is the third-largest export category (after fuels and chemicals) and in 2019 accounted for 7% of global trade. For some countries, it can represent over 20% of their GDP and, overall, it is the third largest export sector of the global economy.

Tourism supports one in 10 jobs and provides livelihoods for many millions more in both developing and developed economies.

In some Small Island Developing States (SIDS), tourism has accounted for as much as 80% of exports, while it also represents important shares of national economies in both developed and developing countries.

## **2. Modern tourism trends and sustainability**

A huge amount of studies have been written about the pros and cons of tourism (Google search engine offers more than 20 million hits in English language). The main advantages include: introduction of foreign currencies and increased revenues, development and exploitation of natural resources (regulation of waterways, wildlife reserves, forests, etc.), care for historical and cultural facilities, construction of new infrastructure, increasing employment opportunities, development of new technologies, learning about different cultures, social and religious environment, development support of rural areas with new resources (Schneider, 1993; Brau,



Lanza, Pigliaru, 2007). The main disadvantages are the damage to natural and cultural heritage caused by mass tourism, loss of the destination's own identity, excessive impact on the lives of locals, outflow of earnings from the country, especially in cases of foreign owners of tourist facilities (Kripendorf, 1982, Presenza, Del Chiappa, Sheehan, 2013).

With the expansion of mass tourism, the industries impact further increased on the development of regions, countries, individual industries, on the environment, (non) preservation of natural and cultural heritage, on the lives of locals, etc.. That is why the development of tourism must be planned and directed, otherwise the positive effects may soon turn into negative ones.

Until recently, the thesis was that tourism (especially mass tourism) necessarily harms both the landscape where it develops and agriculture in it. However, numerous studies in some of the most environmentally sensitive areas of the world have shown that this thesis is not necessarily true. Moreover, the links between agriculture and tourism can decisively increase the positive economic impacts of tourism also on agricultural development (especially in developing countries) (Rogerson, 2011, in Gerbec, 2015).

The coexistence between agriculture and tourism has proven to be extremely successful in Caribbean Aruba, which has been heavily dependent on food imports, while at the same time having a considerable uncultivated area. With the decision to offer tourists locally grown food, excellent marketing and an agreement between agricultural and tourism workers to sell home-grown produce, agricultural activity on the island has intensified and tourism has gained added value by providing guests with local food, such as they could only get in Aruba (Kock, 2013 in Gerbec, 2015).

The problem of uncontrolled construction of hotels on the Cook Islands, Fiji, Palau, Samoa, Tonga and Vanuatu to the detriment of agricultural land, was successfully stopped with a study and a pilot project involving two islands, Samoa and Tonga. The authorities have equally involved both industries, agriculture and tourism, in the strategic development of the islands. The activities of the two industries were interconnected, thus encouraging hotels to buy domestic agricultural products and promote healthy and home-grown food. In this way, many farms have redeveloped, successfully marketing their products on the island, and hotels no longer have to import expensive food products for their guests (Rogers, 2012 in Gerbec, 2015).

In Wales, they went a step further and shaped the coexistence of tourism and agriculture into so-called agrarian tourism. It stands for the development of the region, which is linked to environmental, economic and social sustainability. Food grown on organic farms is offered to tourists in all tourist facilities in the region. The facilities are built from environmentally friendly materials and respect the principles of waste processing, the use of renewable energy sources and CO<sub>2</sub> reduction. Guests

can also take part in work on organic farms and in the processing of agricultural products. It is a special type of tourism that is essentially based on agriculture (Frost and Wachter, 2010 in Gerbec, 2015).

When talking about modern tourist trends, we need to illuminate them from at least two aspects. The first aspect is to formulate a strategy for the development of a tourist destination.

Storytelling is one of the most effective tools that helps develop and market tourist destinations, products, attractions and providers. According to the Slovenian Tourist Organization (STO, 2019), this is a process that »also includes a key moment, i.e. storytelling: how to turn certain events, facts, information, knowledge or behavior into a story that attracts the target audience. Storytelling is a tool that converts information into an easily understandable and memorable language that touches the heart. Information is static, stories are dynamic. Stories have a lot of potential in them to visually present what we want to convey. Storytelling has the power to strengthen the brand internally as well as externally. Branding is a goal, and storytelling is a tool that helps on the way to the goal«.

However, the development of the destination must be monitored very closely at all times, at least according to the following areas or criteria (EU, DG Enterprise and Industry, 2013):

- Destination management:
  - Sustainable tourism public policy;
  - Sustainable tourism management in tourism companies;
  - Customer satisfaction;
  - Information and communication.
- Economic value of the destination:
  - Tourist flow (volume and value) at the destination;
  - The success of the tourist company;
  - Scope and quality of employment;
  - Safety and health;
  - Tourist supply chain.
- Impact on society and culture:
  - Impact on the community / society;
  - Gender equality;
  - Equality / accessibility;
  - Protection and strengthening of cultural heritage, local identity and property.
- Environmental impact:
  - Reducing the impact of traffic;
  - Climate change;
  - Solid waste management;
  - Sewage treatment;
  - Water management;

- Energy consumption;
- Landscape protection and biodiversity;
- Lighting and noise management;
- Bathing water quality.

Second aspect are the different wishes, needs, wants and habits of "modern" tourists, who nowadays expect much more than just another tourist destination.

The form of tourism that has been gaining in popularity lately is hiking. It is not only popular among tourists who like to hike, but it is suitable for everyone who wants to experience nature and authentic local experiences. It is also about meeting the needs of physical and healthy activity during the trip and for active holidays. This type of tourism also does not require excessive financial investments or unpopular interventions in the environment for the destination. If properly planned, hiking tourism enriches the landscape and does not desecrate it. Hikes mostly take place on unpaved roads, requiring no special skills or physical strength from tourists. With an additional offer that includes a wide range of products (accommodation facilities, cuisine, wine, culture, historical sites, pilgrimage sites, etc.), such travel tourism can last from a few hours to a few days or even weeks (Gerbec Potočnik, 2019).

The modern tourist is no longer as »static« as he was a decade ago. He is also less willing to leave the decision about a vacation to a travel agency. Young and middle-aged people in particular are increasingly focusing on their own holiday planning using the world wide web and online media. They do not want to be stationed at only one point, but they want to see and experience as much as possible within the widest possible radius. Holidays are also becoming shorter, but therefore more frequent. Particularly popular are the so-called extended weekends in nearby destinations.

The problem of sustainable tourism appears in its very definition. Prodnik and David claim that a »sustainable form of tourism« is one that »does not deplete natural and social resources or conditions for its development« (Prodnik and David, 2009 in Gerbec 2015). To talk about a sustainable form of tourism or anything else without first explaining or at least defining the term "sustainable" is, in our opinion, inappropriate.

»When Brundland<sup>3</sup> set the framework for the definition and defined sustainable development as meeting the needs of the present without compromising the needs of future generations, she left it so empty and vague that individuals, theorists and politicians had an open path to their own conception of sustainable development. Sustainable development was adapted to each topic of research or discussion and was characterized as responsible economic behavior (economic sustainability), as a

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<sup>3</sup> Gro Harlem Brundtland, President of the United Nations Environment and Development Commission in 1987 and then Prime Minister of Norway.

rational use of natural resources in order to achieve more efficient production (economic sustainability), as a fight against environmental pollution (environmental sustainability) and even as a fight against poverty and efforts to include everyone in development plans (social sustainability). Undoubtedly, theorists who are trying to connect sustainable development with the economy as well as with the environment and society as a whole are on the right track. Namely, these are development plan strategies that must reach all spheres and involve all stakeholders in order to achieve visible progress. At the same time, it is important that development takes place simultaneously in all spheres, otherwise relations can fluctuate and destabilize society as a whole. The result of such different conceptions of sustainable development has been shown in the often completely uncritical use of the adjective »sustainable« numerous controversies and consequently in the findings that twenty-five years of efforts to achieve the celebrated sustainable development has not borne fruit (Jankovič, 2015 in Gerbec 2015).

We believe that the definition of sustainable tourism that Prodnik and David are trying to form needs to be supplemented in order to be appropriate. Sustainable tourism must not only not exhaust the natural and social resources or conditions for its development, but must unite in its strategy all stakeholders and all spheres in which tourism interferes; from the economy to the environment, from culture to the satisfaction of users and contractors (Gerbec 2015).

Tourism is a social, cultural and economic phenomenon that contributes to economic growth, social development and mutual understanding around the world. It has a direct impact on the economy, the natural and built environment, the local population of tourist places and also on the visitors themselves. Tourism therefore depends on the environment, the social and economic structure and state policies. It is vital for it to maintain the values of it's well-being in all dimensions, i.e. individual tourist destinations.

The concept of sustainable tourism has been gaining ground for the last twenty years and is becoming increasingly important in various national and supranational agendas and development strategies.

Although the phrase »sustainable tourism« nominally refers to the protection of the environment and natural heritage, it covers much more. From the fight against poverty and the promotion of equal opportunities, to the protection and safeguarding of cultural heritage (including language and customs), the conservation of animal and plant species and similar.

It is mainly about the tourist destination retaining its uniqueness, its diversity and its originality. This demarcates it from becoming »just another tourist destination«

where you can experience the same things as anywhere else.<sup>4</sup> Special emphasis in the management of sustainable tourist destinations is on the approach, which lays the foundation for joint action, cooperation, ongoing checks, effective communication and an integrated approach.

## **2. Tourism during the COVID-19 pandemic**

Tourism is one of the sectors most affected by the Covid-19 pandemic, impacting economies, livelihoods, public services and opportunities on all continents. All parts of its vast value-chain have been affected. Export revenues from tourism could be felt by \$910 billion to \$1.2 trillion in 2020. This has a wider impact and could reduce global GDP by 1.5% to 2.8% (UNWTO, 2021).

According to UNWTO (2021) as many as 100 million direct tourism jobs are at risk, in addition to sectors associated with tourism such as labour-intensive accommodation and food services industries that provide employment for 144 million workers worldwide. Small businesses (which shoulder 80% of global tourism) are particularly vulnerable. Women, who make up 54% of the tourism workforce, youth and workers in the informal economy are among the most at-risk categories. No nation will be unaffected. Destinations most reliant on tourism for jobs and economic growth are likely to be hit hardest: SIDS, Least Developed Countries (LDCs) and African countries. In Africa, the sector represented 10% of all exports in 2019.

The sudden fall in tourism cuts off funding for biodiversity conservation. Some 7% of world tourism relates to wildlife, a segment growing by 3% annually. This places jobs at risk and has already led to a rise in poaching, looting and in consumption of bushmeat, partly due to the decreased presence of tourists and staff. The impact on biodiversity and ecosystems is particularly critical in SIDS and LDCs. In many African destinations, wildlife accounts for up to 80% of visits, and in many SIDS, tourism revenues enable marine conservation efforts. Several examples of community involvement in nature tourism show how communities, including indigenous peoples, have been able to protect their cultural and natural heritage while creating wealth and improve their wellbeing. The impact of COVID-19 on tourism places further pressure on heritage conservation as well as on the cultural and social fabric of communities, particularly for indigenous people and ethnic groups. For instance, many intangible cultural heritage practices such as traditional festivals and gatherings have been halted or postponed, and with the closure of markets for

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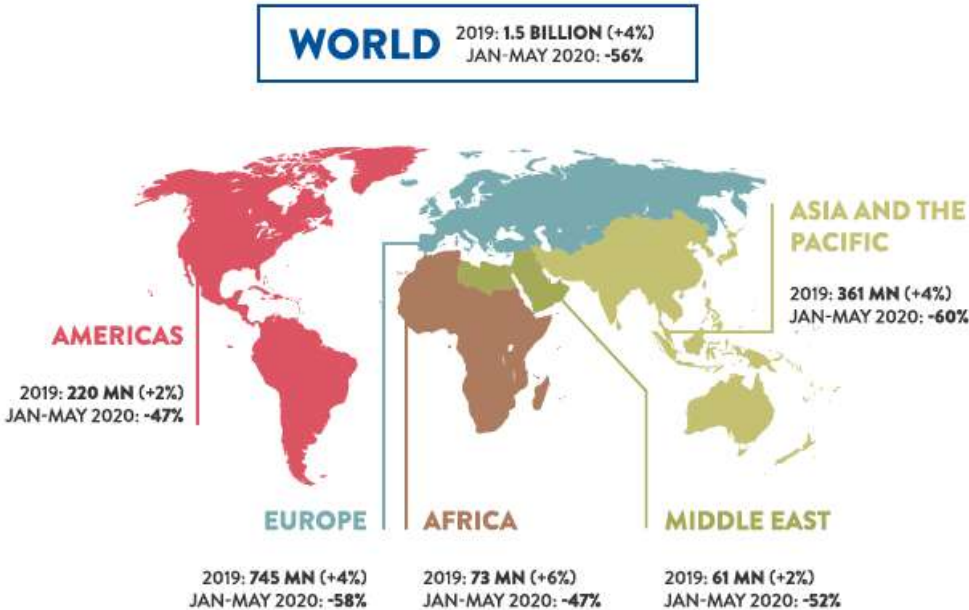
<sup>4</sup> Typical examples of cultural heritage neglect can be found all over the world. Particularly visible are e.g. in Mexico, which (at least on the Yucatan Peninsula) designed hotels so that they could stand anywhere in the world or better in the US. In many resorts with hyper-production of all-inclusive mass tourism, they have become so perfectly adapted to American tourists that you can no longer find anything in them that would testify to the fact that you are in Mexico. The horrific consequences, however, are that hordes of American tourists literally exploit these destinations for a few days of drunkenness on artificially constructed "cultural" evenings that have nothing to do with culture (especially Mexican). There is no point in losing words about the environment destruction.

handicrafts, products and other goods, indigenous women’s revenues have been particularly impacted. 90% of countries have closed World Heritage Sites, with immense socio-economic consequences for communities reliant on tourism. Further, 90% of museums closed and 13% may never reopen (UNWTO, 2021).

The criticality of the situation in global tourism can further be understood from the report published by the World Tourism Organization (UNWTO, 2020). In it, they wrote that the world is facing an unprecedented global health, social and economic crisis due to the COVID-19 pandemic. Travel and tourism are among the most affected sectors with a massive fall of international demand amid global travel restrictions including many borders fully closed, to contain the virus.

The decline in demand in the first ten months of 2020 means 900 million less arrivals of international tourists compared to the same period in 2019 and means a loss of 935 billion US dollars in revenues from international tourism, which is a 10 times greater loss of revenues in tourism than in 2009 economic crisis and the return of world tourism to the level of 30 years ago. The World Tourism Organization expects to approach the figures recorded in 2019 by 2023 and 2024, respectively (UNWTO, 2020).

Asia and the Pacific saw an 82% decrease in arrivals in January-October 2020. The Middle East recorded a 73% decline, while Africa saw a 69% drop this ten-month period. International arrivals in both Europe and the Americas declined by 68% (UNWTO, 2020).



**Figure 1: International tourist arrivals, January - May 2020.**

Source: UNWTO, 2020.

In February 2021, the Slovenian Tourist Organization (STO, 2021) announced that the pandemic had plunged tourism into the worst crisis to date, which had led to a drastic drop in global and European tourism. Due to the pandemic, tourism in Slovenia is in the worst crises in history. In terms of revenue and overnight stays, it is at the level of ten years ago. The recovery of Slovenian tourism will be long-lasting, returning to the level of overnight stays from 2019 could be closer to 2023 or later.

Slovenia is among the countries that strongly feel the impact of the pandemic on tourism, as tourism makes a significant contribution to Slovenia's GDP (9.9% of GDP), employs 6.5% of the working population and is largely dependent on international tourists. The recorded drop has a large multiplier effect on other industries (WTO, 2021).

### **3. The future of tourism or how COVID has changed it**

The extended UNWTO scenarios for 2021-2024 suggest that international tourism could begin to recover from the second half of 2021. Nevertheless, the return of international arrivals to the 2019 level may take 2.5 to 4 years (UNWTO, 2020).

The UNWTO (2020) has announced that demand for international travel remains subdued, with domestic tourism growing in some major markets, such as China and Russia, where demand for domestic air travel has largely returned to pre-pandemic levels. However, the future of global tourism relies heavily on the introduction and effectiveness of vaccines, which would increase consumer confidence and help ease travel restrictions.

The World Travel & Tourism Council (WTTC, 2020) predicts that in the future, travel agencies will have to nominally focus on providing safe and "COVID-19 compliant" travel. They believe that the only way to gain the trust of the general public and encourage people to travel is to show in practice that agencies are capable of carrying out "COVID-19 compliant" trips, while respecting all the various restrictions imposed due to the pandemic, as well as in "real-time" monitor, inform and respond to any changes. To sum up, agencies will have to show by practice that traveling during the pandemic can still be fun and, above all, safe.

The heads of some of the largest travel agencies say that the agencies and with them the entire tourism sector have quickly and effectively adapted to the implemented safety and hygiene protocols introduced due to the pandemic (WTTC, 2020).

Jaschke one of the managing director of well known world tourist group Kempinski (2021) said that they have seen an increase in demand for certification in regard to cleanliness and hygiene but also CSR commitment. Guests are far more sensitive to these topics than they used to be. To assure the highest level of hygiene and to protect guests and employees alike, they have established the Kempinski White Glove

Service, taking into consideration all aspects of their daily operation. Guests reacted extremely positively as they were given full confidence in the cleanliness and disinfection of our premises. A good indicator of the shift in booking habits is that booking websites prominently display the standards hotels apply to assure safety for guests, even if in their segment, as he believes, it is expected by guests that, besides the local regulations, the hotels operate under the highest hygiene standards anyway. In addition, CSR plays a crucial role in the booking process and needs to meet the demands of today's travellers. Their sustainability programmes consist of various initiatives directed towards reducing energy and water consumption, minimising waste, eliminating single-use plastic, maximising the engagement and wellbeing of employees, promoting the contribution to the health of local communities, preventing a breach of human rights, improving sustainable procurement practices in their supply chain and offering sustainable products and services, such as sustainable meetings. They work on a wide range of initiatives, such as EarthCheck, Clean the World, Soap for Hope and Linen for Masks and, wherever possible, implement these globally or at a local level.

The latest tourism studies have shown that 70% of global travellers say they would be more likely to book accommodation knowing it was eco-friendly, and 55% of global travellers report being more determined to make sustainable travel choices compared to last year. "I believe that in the corporate and leisure segment, the sustainability factor will become more and more important and offers a great chance for the industry to shift to a more sustainable way, concentrating again more on seasonality, locally produced goods, the support for local initiatives but, even more importantly, investing in education and training for the community, giving employment to the local population and embedding culture and traditions in the properties. In a few words, if customers demand a more sustainable way, we as hoteliers will follow and have the opportunity of gaining a higher market share by leading the change" claimed Jaschke (2021).

Melcher (2021) claims that before the Corona virus pandemic, crowded attractions and jam-packed destinations were a common sight. Over tourism was burdening destinations, communities and environments – being effectively unsustainable.

As the Corona virus started waving across the globe, strict lockdowns and travel restrictions saw worn-out destinations regain their balance as travelling was no longer an option. Decreased tourists resulted in a reduction of crowds, pollution and adverse effects on local communities. And the current pandemic has largely affected travellers' behaviours too. Nowadays, they are eager to explore remote destinations at a slower pace, seeking to immerse in local cultures. They are also likely to book last-minute trips because of fast-changing travel restrictions. This behaviour is enhanced by the pre-existing digital trend of booking with 52% of millennial travellers arranging trips online and 25% doing so from their mobile phones (Passport, 2020a).



One thing is for sure though - not travelling at all is not the answer. Just because old-fashioned tourism was unsustainable does not mean that tourism as a whole can't change. When managed, directed and guided with sustainability at its core, tourism has the capacity to create lasting effects on local communities and largely contribute to the conservation and preservation of the environment and wildlife. For this reason, we believe that this crisis is a chance to rethink travel; Melcher is sure (2021).

A recent study found that 76% of travellers are more concerned about sustainability after COVID proving that they believe the sector needs reform as well. However, the same study shows that only 55% of travel businesses implement a sustainability strategy – indicating an evident gap (Passport, 2020b).

Travellers' principles should be matched by the tourism industry, presenting a unique opportunity to redefine travel collaboratively. Current trends reveal that travellers desire to support local businesses and initiatives that are eco-friendly and look for sustainably managed travel options. Given consumer trends and the pandemic, travel in the future must become more conscious and sustainable - preserving destinations rather than exhausting them. To achieve this goal, the focus should be on promoting encounters and experiences with local people and the support of local businesses as well as the protection and conservation of nature and wildlife. Tourism stakeholders need to develop new strategies that incorporate sustainable practices to support this movement (Melcher, 2021).

Leisure tourism will become more and more a way to explore the local culture and to get an understanding of the place we are travelling to (Jaschke, 2021, Gerbec, 2019). We may agree with those statements. In the next few years tourism must evolve into communities to survive. The whole industry must adapt. The lockdown, combined with the current technologies of video conferencing, has shown many corporations that business travel is not necessary. In the future, this could mean a significant decline in business travel. We believe that luxury leisure travellers will be the driving force of the industry moving forward.

And this is something that major tourist companies are aware of. "The integration of the hotels in the local community and the shift of mind to a more "giving back" mentality will happen as a necessity in response to the increased demand of the guests, says Jaschke (2021) and claims that governmental regulations, a smaller amount of resources and the increase in cost of natural resources will force hospitality to adapt and change to be able to still operate in a profitable way. Guests want to enjoy a holiday guilt-free and not have to justify themselves, once home again.

## 4. Conclusions

At the current stage, the actual extent of the damage that the pandemic will leave behind in tourism cannot be accurately estimated. However, we can say with certainty that tourism as we knew it has ceased to exist.

By creating a roadmap to transform tourism UNWTO (2021) pointed out five priorities for post pandemic tourism restart:

- **Mitigate socio-economic impacts on livelihoods**, particularly women's employment and economic security.
- **Boost competitiveness and build resilience**, including through economic diversification, with promotion of domestic and regional tourism where possible, and facilitation of conducive business environment for micro, small and medium-sized enterprises (MSMEs).
- **Advance innovation and digital transformation of tourism**, including promotion of innovation and investment in digital skills, particularly for workers temporarily without jobs and for job seekers.
- **Foster sustainability and green growth** to shift towards a resilient, competitive, resource efficient and carbon-neutral tourism sector. Green investments for recovery could target protected areas, renewable energy, smart buildings and the circular economy, among other opportunities.
- **Coordination and partnerships to restart and transform sector towards achieving SDGs**, ensuring tourism's restart and recovery puts people first and work together to ease and lift travel restrictions in a responsible and coordinated manner.

We can easily say that this is the beginning of a new, more sustainable era of tourism. And this is the opportunity to redesign travel as we know it.

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# THE IMPACT OF TECHNOLOGY AND ORGANISATION OF WORK ON STRESS MANAGEMENT IN TELECOMMUTING

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## Abstract:

The purpose of the research was to find the level of impact of knowledge about technologies and the right organisation of time on stress management in teleworking. 727 employees from 232 different Slovenian organisations replied to the survey questionnaire. The respondents already had previous experience in using IT, which enables teleworking, and that provided a smoother transition from conventional work to teleworking. After the first week of teleworking, the employees saw working from home as an obstacle, particularly due to the issue of acquiring new knowledge associated with technology and also because of the problems related to the

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organisation of time. After one month of working from home, the results of the research indicated that the information technology made teleworking easier for the employees and helped them to manage stress.

**Keywords:** telework, stress management, stress related to telework, contemporary technologies.

## 1. Introduction

The outbreak of 2019 novel coronavirus disease (Covid-19) in Wuhan, China spread quickly nationwide (Novel, 2020). The countries and companies responded quickly in a way that they imposed restrictions on public life and enable working from home. The situation is not calming down, on the contrary, in July 2020 we are even recording daily records of new infections (Centers for Disease Control and Prevention, 2020). It is therefore expected that there will be more telecommuting/telework in the future as compared to the past.

Nevertheless, the idea of telecommuting is not new. On the contrary, telework has been present in our lives for more than 20 years. Ever since its introduction it received huge interest around the world and from different areas of interest. Although the popularity of telecommuting is still increasing, it remains unclear how it affects the well-being of employees (Perry idr., 2018). The first to experiment with electronic distant work were the managers and employees and that did not go unnoticed. Before long employment agencies, city planners, telecommunication firms, experts for transportation, computer vendors, employment agencies and others also showed interest in telecommuting (Jackson & Van der Wielen, 1998). The use of technologies brings many benefits. Among other things, technologies are the ones that enabled employers to provide work from home for their employees during the Covid-19 epidemic. Technology allows employees to be equally involved in the work process both in the office and at home. However, in Slovenia we do not use modern technology enough, we do not invest enough in employee education, and there is also a lack of process optimisation. Businesses still perceive modern technology as a cost rather than a competitive advantage for improving the market position (Zupan, 2015). People use the Internet mainly for socialisation, but not for real computer knowledge, which could be useful for them in business (Raspor, 2020). Commuting could function as a challenge stressor, which is both energy-depleting and stimulating; besides, it is also inherently connected to burnout and collaboration as well (Crawford, LePine, & Rich, 2010; Perry et al., 2018). In terms of their works (Perry, Rubino, & Hunter, 2018; Jackson & Van der Wielen, 1998), we posed the following research question: "To what degree and in what way was stress present among employees, who overnight became teleworkers and what role does the modern technology plays in stress management?"

## **2. Background**

### **Working from home**

The workplace is subject to changes in reply to numerous technological and societal trends that are making work more accessible and the performance of work faster, cheaper, and greener (Perry idr., 2018). Working from home (also called telecommuting or telework) is getting more and more a common practice (Bloom idr., 2015). It is not easy to grasp the meaning of telecommuting since there are various definitions that include various elements (Haddon & Brynin, 2005): technology, location, contractual arrangements, and time. In the EU, 5.0% of employed persons have been employed to work from home as a percentage of total employment since 2010, and 5.4% in 2019, which is an 8% increase. In the same period, it increased in Slovenia from 6.7% to 6.9% or 3% (Eurostat, 2020). Thus, before the Covid-19 pandemic, the majority of Slovenian companies provided a flexible arrival to or departure from work, while reduced working hours and work from home, whereas the latter was more of a privilege than a right then. More precisely, work from home was introduced for the jobs which can be carried out from home; the mentioned option is not possible in the case of a vendor, for example. Although flexible working time offers many good things, (Zupan, 2019). 2062 people were registered for working from home in 2019. In March 2020, the registrations of employers started to increase so that the inspectorate now only records the number of employers who are introducing the measure of working from home. Between 1 January and 23 March, 2534 employers registered work from home, i.e. more entities registered for this type of work than in the whole of 2019 (MMC, 2020). Organisations were not prepared for the pandemic. Schools did not have any strategic plans for distance learning, should such case arise. Somehow they did not realise that this might happen (Makovec, 2020).

When it comes to the economic impact of social distancing measures aimed to stop the spread of Covid-19, we have to consider an underlying issue about the modern economy: how many occupations can be carried out at home? Also in Slovenia, all people in Slovenia did not work from home during the pandemic. Production and commerce mostly functioned without interruptions. The jobs that can be performed from home are only those where people can work via remote access. Dingel and Neiman found that 37% of jobs in the United States can be carried out entirely at home. In relation to this, there are considerable differences across cities and industries. The jobs connected with work from home are usually better paid than other jobs and account for 46% of all US wages. (Dingel & Neiman, 2020). Telecommuting is not a new form of work, especially not in international/EU teams, which perform intellectual type of work. Effective collaboration and communication within the IT network are of crucial importance for a successful telework (Rozman, 2020; Rozman idr., 2017).

The World Health Organization issued certain recommendations regarding control over public life in the case of Covid 19. Measures for the general public include the implementation of flexible work arrangements. These are: teleworking, distance learning, reduction and avoiding crowds, the closure of non-essential facilities and services, protection for vulnerable groups, local or national movement restrictions, coordinated reorganisation of health care and social services networks to protect hospitals. Besides, there are also the actions aimed to staying-at-home. The measures are combined with individual protective measures against Covid-19 such as frequent hand washing and cough etiquette (World Health Organization, 2020). On the basis of these very recommendations, the countries and companies felt encouraged to implement general restrictions (where possible) in order to limit infection transmission.

### **Work Stress**

The home atmosphere involves a lot of mood swings if compared to that of office and employees may find difficult to concentrate on work constantly. Besides, the capacity of an average employee to work with broader and general instructions is in question. Work in company enables more bureaucracy and more coordination than telecommuting. Only more preparation and independence are needed for a successful performance of all tasks during telework. However, working from home does not impede this in any way (Kumar & Aithal, 2016).

In relation to the first month of working from home, many employees were in a state of semi-shock. They spent a lot of energy on just how to figure out the logistics of working remotely so that they did not have time to deal with the emotions as well. They had to face with new reality. As the panic over remote working logistics has decreased, people have settled into a routine. But now we can see the troubling signs of the emotional pressure of the employees who work from home (Murphy, 2020).

Some of the common sources of stress that they face, are (Scott, 2020): (1) Lack of structure: it is necessary to set a specific schedule for work, private duties and rest. (2) Too Many Distractions: many people forget that those who work from home still have to work. (3) Difficulty with setting boundaries: it is important to set the limits in terms of to-do and not-to-list. In doing so, the line between productivity and leisure time, between time for socialisation and working time will not be blurred. (4) Social isolation: the possibility for socialisation and hanging out is reduced and that can consequently lead into poor awareness of work . (5) Lack of focus: it can happen that people who work from home can give precedence to private matters over work tasks.

The other source indicated that the most important advantages for people who work from home are increased autonomy and flexibility. For the organisations, these are increased human resource capacity and the reduction of indirect expenses. And for society, the benefits are a reduction in environmental damage, solutions for special-needs populations, and savings in infrastructure and energy. On the other hand, there



are also disadvantages: to individuals, possible sense of isolation and lack of separation between work and home. For organisations, the drawbacks are the costs involved in the transition to new work methods, training, damage to commitment and identification with the organisation. Lastly, dealing with a danger of creating detached individuals is a downside for society (Harpaz, 2002).

### **The gap in digital skills in Europe**

In a more broader sense, having a digitally skilled labour force and population is essential for the creation of a digital single market in Europe. This is also important for receiving its benefits, for European competitiveness and for an inclusive digital society. However, currently 42% of Europeans do not have basic digital skills. The current labour force has not yet been fully trained. Besides, 37% of working people – farmers, bank employees, factory workers, etc – also lack sufficient digital skills, despite its increasing need in all jobs. This is owing to a still ongoing transition from industrial to service society. What is more, Europe also faces a shortage of skilled ICT specialists to fill the growing number of job vacancies in all sectors of the economy. Therefore, the European society will still have a lot to do to reach the transition to a digital society. What is more, there is a need to modernise our education and training systems as well, which currently do not prepare young people sufficiently for digital economy and society. It is also necessary to start with a life-long learning approach so that people can use their skills sets in their life according to their needs (European Commission, 2020).

The European Commission is aware that only competent employees will contribute to productivity and development. For this reason, it has started with preparing digital strategies. The focus is on gathering the compilation of good practices used in different countries, with the aim to benefit all countries. Within this framework, the Digital Skills and Jobs Coalition intended to four groups was developed, namely (European Commission, 2020): (1) Digital skills for all – it is important to train all citizens as only those with digital literacy skills can participate in work processes and decision-making; (2) Digital skills for the labour force – job seekers and employees need digital skills for the digital economy, e.g. upskilling and reskilling of workers, jobseekers; actions on career advice and guidance; (3) Digital skills for ICT professionals – there is an increasing need for ICT professionals, (4) Digital skills in education – digital skills for a lifelong learning.

### **3. Methods**

A survey questionnaire was used for the purpose of the research. It was made by using the 1ka on-line survey and submitted on 14 April 2020 via e-mail and was also published on social networks. The survey was available from 14 to 26 April 2020. The interval for conducting the survey was set for a short period of time to enable the respondents to experience the first days of quarantine to the greatest extent possible and to compare this period to the situation after one month of working from home.

The first part of the questionnaire contained data on gender, age, education, profession and marital status. The second part of the questionnaire included statements about information technology. The third part consisted of questions about working from home. All questions are related to the 5-point Likert scale, with the help of which the respondents expressed their level of agreement with individual statements. The questions related to stress when working from home were prepared by using a table with two scales because we wanted to show a comparison of experiencing stress after one week and one month of working from home. The e-mail containing the questionnaire was sent to 68 faculties, 24 primary schools, 53 companies, 16 adult education centres, 26 secondary schools, 18 libraries, 5 music schools, 13 museums and 9 business incubators. At the same time, the questionnaire was shared on Facebook and LinkedIn.

The data was statistically analysed and tested by the use of *SPSS*.

### **Research Instrument**

The employees from 232 different organisations were invited to take part in our random sample. 727 employees replied to the survey questionnaire, of which 631 worked from home. The level of stress after the first week and after the first month of working from home was compared. The obtained replies were analysed by using *SPSS*.

To measure the quantity of bullying, a part of *Web Questionnaire 1ka* was used. The questions were also adapted to Slovenian population, tested and revised.

In order to test the questionnaire, a preliminary research small scale analysis (on five samples) was conducted, the inconsistencies in answers were resolved and the general understanding of the questions was checked out as well.

The first part of the questionnaire contained information on gender, age, education, profession and marital status. The second part of the questionnaire included the statements on information technology. The third part consisted of questions about working from home. All questions were measured in relation to the 5-point Likert scale.

### **Demographic data**

With the random sampling procedure, we received opinions from 727 respondents (605 female and 122 male). As indicated in the table (table 1) below, the women participating in the survey represent 0.15% of the working age population, while the share of men is 0.02%. Sample gender ratio reflected the organisation gender ratio 8:2 in favour of females. The respondents were almost equally divided into two age groups: 26 to 35 years and 36 to 45 years and 61% of them had university degree.

Table 1: Demographic data

	Working age population (Source: SORS, 2020)	Number of participants	Percent by working age population	Percent by participating population
<b>Gender</b>				
Female	401,754	605	0.15%	83%
Men	492,475	122	0.02%	17%
<b>Age group</b>				
Under 25 years	42,625	39	0.09%	5.36%
26–35 years	198,858	186	0.09%	25.58%
36–45 years	264,766	241	0.09%	33.15%
46–55 years	251,148	170	0.06%	23.38%
over 56 years	136,832	91	0.06%	12.52%
<b>Total</b>	<b>894,229</b>	<b>727</b>	<b>0.01%</b>	<b>100%</b>
<b>Education</b>				
University/Master's degree/PhD		445		61%
Higher/tertiary		180		25%
Secondary professional/general		78		11%
Secondary vocational		22		3%
Primary		0		0%
<b>Type of work</b>				
Managerial function		50		7%
Head of group, department, manager		130		18%
Employee (office, school, healthcare establishment)		442		61%
Employee (production, factory, warehouse)		10		1%
Other		93		13%
<b>Type of company</b>				
Production company		50		7%
Service company		167		23%
Educational institution		408		60%
State administration		80		11%
<b>Work experience</b>				
Under 5 years		228		31%
6–10 years		123		17%
11–20 years		171		24%
20–30 years		122		17%

over 30 years		83		11%
Marital status				
Married (or consensual union)		615		85%
Single		112		15%
Care in private life				
Care for school-age children		240		33%
Care for preschool children		167		23%
Care for parents		87		12%
Care for grandparents		14		2%
None		189		26%
Other		36		5%

To summarise the socio-demographic data of the research, the participants were mostly women from the age groups 26–35 and 36–45 and with university degree. The majority of the respondents were employed in schools, offices and health care system, and had up to five years of work experience. The respondents were mainly married and took care of the school-age children.

### **Hypotheses**

In terms of the review of the theories we posed the following research question: "To what degree and in what way was stress present among employees, who overnight became teleworkers and what impact did it have/what impact does it have on the technology and the organisation of work?"

We set the following hypotheses:

**H1:** A new method of working was accepted with understanding by the family environment of the workers who worked remotely what contributed to reduction in stress.

The factors "technologies" and "stress when working from home" described below are associated with this hypothesis.

By using the Pearson correlation coefficient, we examined the correlation between the knowledge of technologies and stress. To calculate this correlation, we used the factor relating to the knowledge of technologies and the factor relating to the stress when working from home. To measure the factor named "knowledge of technologies", the following statements were applied:

- I assess my knowledge of IT as very good.
- Initially, the work from home was difficult for me.
- Technology made the work from home easier.
- Due to work from home, I had to acquire new knowledge.

To measure the factor named "stress during working from home", the following three statements were used:

- Work from home created conflicts between me and my family (common household).
- My family understands that I need to concentrate when working from home.
- Due to certain adjustments that the work from home brings, certain tensions arise in private life.

**H2:** Due to work from home, the workers spend more time for work which causes them additional stress.

We were also interested in the correlation between the occurrence of stress and organisation of time. To determine the respective relation, we used the variable "I need more time for work from home compared to work from the workplace" and the variable "I experienced stress when working from home".

**H3:** Modern technology helps in managing stress related to telework.

The survey provided two statements associated with the formed hypothesis. To establish the correlation, we used the variable "good knowledge of ICT" and the variable "technology made the work from home easier".

#### 4. Results

**H1:** A new method of working was accepted with understanding by the family environment of the workers who worked remotely what contributed to reduction in stress.

The average value of replies was  $M = 3.6$ . The table 2 shows that in average the respondents assessed that they had to acquire new knowledge for working from home.

Table 2: Description of variables of the factor "knowledge of technologies" (n = 631)

Variable	Minimum	Maximum	Average	Standard deviation
I assess my knowledge of ICT as very good.	1	5	3.68	0.933
Initially, the work from home was difficult for me.	1	5	3.67	1.212
Technology made the work from home easier.	1	5	4.37	0.948
Due to work from home, I had to acquire new knowledge.	1	5	2.97	1.506

The average value of replies was  $M = 2.07$  as indicated in the Table 3.

Table 3: Description of the factor "Stress during working from home" (n = 631)

Variable	Minimum	Maximum	Average	Standard deviation
Work from home created conflicts between me and my family.	1	5	1.87	1.152
My family understands that I need to concentrate when working from home.	1.00	5.00	1.948	1.1107
Due to certain adjustments that the work from home brings, certain tensions arise in private life.	1	5	2.39	1.284

To establish the correlation between stress and insufficient knowledge of technologies, we used the Pearson correlation coefficient (see Table 4). In the first week of working from home, there was an important correlation between the stress when working from home and insufficient knowledge of technologies,  $r = -0.174$ ,  $p$  (two-sided)  $< 0.01$ . The employees with less knowledge experienced more stress when working from home. After the first month of working from home (see Table 5), there was also an important correlation between the stress when working from home and insufficient knowledge of technologies,  $r = -0.140$ ,  $p$  (two-sided)  $< 0.01$ . The employees with less knowledge experienced more stress when working from home.

Table 4: Pearson correlation coefficient between the variable "knowledge of ICT" and "stress" (one week)

		factor_knowledge_ict	factor_stress_week
factor_knowledge_ict	Pearson correlation coefficient	1	-0.174**
	Importance (2-sided)		0.000
	Total	631	631
factor_stress_week	Pearson correlation coefficient	-0.174**	1
	Importance (2-sided)	0.000	
	Total	631	631

\*\* . Statistical significance at 0.01 (2-sided)

Table 5: Pearson correlation coefficient between the variable "knowledge of ICT" and "stress" (one month)

		factor_knowledge_ict	factor_stress_month
factor_knowledge_ict	Pearson correlation coefficient	1	-0.140**
	Importance (2-sided)		0.000
	Total	631	631
factor_	Pearson correlation	-0.140**	1

stress_month	coefficient		
	Importance (2-sided)	0.000	
	Total	631	631

\*\* . Statistical significance at 0.01 (2-sided)

Since the variables in the first week as well as after the first month are correlated, we can confirm that the knowledge of technology is related to stress in an individual.

**H2:** Due to work from home, the workers spend more time for work which causes them additional stress.

By using the Pearson correlation coefficient, we examined the correlation between the stress when working from home with the variable "I need more time when working from home than working at an organisation". We found that there is a high correlation (table 6) of the respective variables in this case, meaning that 25% of variance can be explained. Table 8 indicates that there is an important correlation between stress when working from home and the fact that employees require more time for work,  $r = .478$ ,  $p$  (two-sided)  $< 0.01$ . Given the fact that the variables are correlated, the hypothesis is confirmed.

Table 6: Pearson correlation coefficient of Hypothesis 4

		Stress_in work_from_home
I need more time when working from home than for work at an organisation.	Pearson correlation coefficient	0.478**
	Importance (2-sided)	0.000
	Total	631

Based on the provided data, we can conclude that the workers spend more time for work at home than for work in an organisation, which causes them additional stress.

**H3:** Modern technology helps in managing stress related to telework.

By using the Pearson correlation coefficient, we examined the correlation between the knowledge of technology with less straining work when working from home (Table 7). We found that there is a medium correlation of the respective variables in this case, meaning that 9% of variance can be explained. There is therefore an important correlation between good knowledge of technology and thus less straining work when working from home,  $r = .342$ ,  $p$  (two-sided)  $< 0,01$ . Given the fact that the variables are correlated, we may assert that modern technology helps in managing stress when working from home.

Table 7: Pearson correlation coefficient of Hypothesis 3

		Good knowledge of ICT
Technology made the work from home easier.	Pearson correlation coefficient	0.342**
	Importance (2-sided)	0.000
	Total	631

## 5. Conclusion

The study included 727 respondents, of which 87% worked from home during the epidemic. The employees who worked from home during the epidemic thus already had previous experience, in particular in using the Internet, which enabled them an easier transition from the conventional way of work to teleworking. The majority of employees also believe that technology made work from home easier. These results can be attributed to the fact that most respondents were 36 to 45 years old, meaning that this is a generation with computer skills. Nevertheless, respondents initially found work from home difficult. They felt under stress in particular after the first week of working from home and the stress reduced after the first month. To manage their stress and perform their work, the respondents had to acquire new knowledge, such as the use of Teams, Zoom application, learn to record and upload audio and video content, learn to record voice in PowerPoint and convert it into video content, learn how to remotely access their computers, use on-line classrooms and communicate with their colleagues and clients via video conferences. After one month of working from home, the respondents started to regularly test the equipment before initiating a video conference and took care of updates and files' backups. After the first week of working from home, a large share still used e-mail to communicate with their colleagues, while after one month video calls were made more frequently. The comparison of the results after one week and after one month of working from home shows the increase in the share of those who thought the modern technology made the work from home easier. Definitively, the organisation of time was the most difficult task for the employees working from home.

The research question "To what degree and in what way was stress present among employees, who overnight became teleworkers and what role does the modern technology plays in stress management?"

can be answered that the stress was present and that by improving the knowledge of technology and organisation of work, it can be managed. In order to be successful in managing stress, one must understand it. It is expected that the epidemic will reoccur and that we will have the second wave (Johns Hopkins CSSE, 2020) and that the work and study from home will have to be organised again. In the light of this, here are some measures to help us be more prepared for this type of work.



In the world of today, digital literacy is particularly important. However, it still causes problems to some people. Society, organisations and individuals themselves can help to increase the level of digital literacy and at the same time improve stress management. Society must strive for enhanced implementation of modern technologies and follow the guidelines of Digital Skills EU (European Commission, 2020). By using these technologies, we would make a large move forward in the sense of making our work easier and accessing the information in a quicker and more cost-efficient way. Modern technologies increase the possibilities of connecting different industries. Modern information and communication technologies significantly save time and money. They can be applied in all fields of work and life. The use of smart phones as a means of modern technology means better interaction, exchange of information, and also has an impact on human relationships. In this context, it is important that educational systems are based on the use of ICT in order to follow the progress of the economy and technology or to adjust to new conditions. All primary and secondary school pupils must be provided with equal opportunities in acquiring the knowledge in the field of ICT. Modern school and education systems must be developed. Unfortunately, the reality is different in society (Sardoč, 2013). The inequality was in particular evident during the Covid-19 epidemic. If we are equipped with adequate digital competences, then we are consequently under less stress (Fong idr., 2020). That was also shown by our research.

In districts, small facilities equipped with computers could be provided for citizens free of charge or for a small fee. This would be very useful during the Covid-19 epidemic, since the employees working from home could retreat to a quieter and less stressful environment.

People are a key component of every organisation (Gorenak idr., 2019). In the working environment, employees and employers face different challenges (Buzeti, 2020). The results of the study reveal show clear recommendations for managers who design or supervise remote work arrangements. It is important that companies take care of their employees' well-being. The individuals should not feel that they are left alone when working from home. The employers should be available to their employees via phone and e-mail, provide them support and listen to their needs and problems. They have to be mentors and inform their employees on the examples of good practices and on the methods of works applied in other companies. The companies must provide work equipment to their employees. They must also organise education courses and training since qualified employees will feel more self-confident in performing their work, they will be motivated and as a result, the performance will be better. External mentors should be present at training courses to monitor the progress of employees and present them good practices applied in other companies. The companies with business units could organise monthly meetings via video applications to provide the presence of employees from different business units. The companies can do a lot by simply familiarise their employees with the possibilities mentioned above. They should continuously promote a healthy lifestyle

and enable their employees to relax from time to time. On special days, e.g. Earth Day, celebrated on 22 April, they could encourage their employees to take a walk in nature and perform a simple task: to make a mandala using branches, leaves and flowers, and make a photo of it and send it by e-mail to compete for a prize.

The individuals themselves can also contribute in this regard. The organisation of time is different when working from home, since the work can be performed at any time, i.e. we are more flexible. However, the latter is not always a good thing because employees can be available to their employers throughout the day, and the working time can easily extend into the night. Because we switch between work and private tasks during the day, the focus on work tasks is smaller and fatigue is greater. Therefore, it is especially important that the work for the next day is already organised an evening before. Tasks should be separated according to their priority and we can also use free applications available on mobile phones and computers. Working schedule should be presented to family members so that they do not disturb the workflow.

We must understand that work from home can also lead to burnout, and thus it is important to manage stress. If there are any problems in the home environment, they should be solved as soon as possible. We should not forget to have a balanced and healthy diet, which is rich in vitamins, since this helps us to reduce stress. We should be physically active since physical activity is one of the efficient ways to cope with stress. It is proven that happy hormones are released during physical exercise and they help re-establish natural hormone balance after stressful situations. We should partake in a physical activity that makes us happy. It is important that it is done outdoor and we can also invite other family members. The stress can be also managed by planning pleasant activities. When working from home, we could also have more time to pursue hobbies that we have abandoned or forgotten about. We should engage children in playing table or parlour games, and gardening can also relax us in relation to everyday stress.

The feeling of anxiety and depression can be reduced by doing relaxation techniques, such as breathing exercises, meditation, yoga, etc. Information and communication technology enable us to keep in touch with our friends. In addition, we can watch a good film on TV or online, read a book or relax listening to music.

The first step is always the hardest, and many people can find work from home very difficult. We must not forget that, in addition to doing their job, people also take care of their children. People have different working conditions; some perhaps do not have a possibility for quiet work, while others simply do not know how to organise their time. It was due to this kind of challenges that we wanted to collect as many proposals for improving the work from home as possible and thus managing stress at work. The competencies for work have been one of the focal points of discussion within Human Resources Management for the past two decades (Gorenak idr., 2019),

while competencies of working from home will play an important role in the upcoming period. Organisational learning occurs when members of an organisation change their shared assumptions and beliefs. Consequently, they manage to change their behaviour and improve their capacity to act (Cecez-Kecmanovic idr., 2006). This all could happen after organisations change their culture to include collaborative learning for the future.

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# "STAY AT HOME" AND ITS IMPACT ON TOURISM

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Dejan Sekulić<sup>9</sup>

Marija Mandarić<sup>10</sup>

## **Abstract:**

The aim of this paper is to investigate the changes that have occurred in tourism with the emergence of the COVID-19 pandemic. There is no doubt that the pandemic had devastating consequences for the tourism industry and all its segments. The paper presents the results of research and analysis on the consequences of the pandemic on Aviation Sector, Hotel Industry, Car Rental Industry and Cruise Industry. However, the pandemic showed that the tourism industry has a Janus-faced character. That is, in addition to the negative effects on tourism, the pandemic caused positive trends in

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urban-rural tourism and that the consequences of locking, social distancing and measures under the slogan "Stay at Home" affect tourist trends and expectations of tourists in the future.

**Keywords:** COVID-19, urban tourism, rural tourism, second home tourism

## **1. Introduction**

Tourism is the leading economic activity in both developed and developing countries. This activity contributes 10.4% of world GDP and 10% of employees in the world, work in tourism. The continuous growth of global tourism is conditioned by the growth of the middle class, falling travel prices, especially airline tickets, the application of new business models, technological progress and visa liberalization. There is no doubt that tourism is the leading economic branch of the global economy that contributes to the growth of national economies, employment of the population and the creation of conditions for the improvement of life in underdeveloped areas. The accelerated growth of tourism has set new requirements, in the field of sustainable development and reducing the negative impact on the environment.

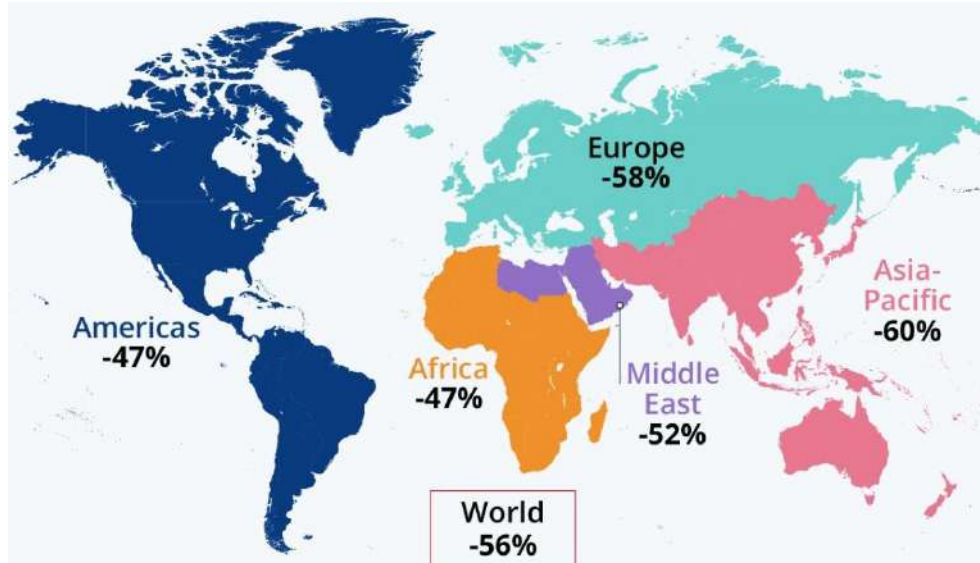
With the outbreak of the COVID 19 pandemic, the growth and development of the tourism industry was halted overnight. The closure of ports, airports, hotels, isolation measures and social distancing have become a reality. The pandemic spread rapidly and affected both developed and developing countries and underdeveloped countries, leaving consequences on the economies of all countries, especially leaving a deep mark on tourism and hospitality. The negative impact of the pandemic affected all sectors of the economy, and it turned out that tourism in particular. The first predictions given by the UNWTO were that international arrivals would fall between 20% and 30% compared to 2019 (Gossling et al., 2020). It is estimated that about 90% of the world's population was forced to stay at home, which completely changed the tourism and hospitality industry. There was a mass cancellation of hotel reservations, which led to a drop in hotel occupancy and revenue per room. By canceling the cruise and closing the port, many passengers and crew members remained trapped on cruise ships. The airline industry has faced travel cancellations and airport closures (Nicola et al., 2020). The sports sector was not spared either. Cancellations are the Olympic Games, golf and tennis tournaments, football and basketball championships, marathons. Many events have been canceled indefinitely, and some have been postponed to subsequent years (Stone, 2020). In addition, The United Nations (UN 2020) notes that the pandemic was not only a health problem but also a socio-economic crisis which calls for global cooperation.

## 2. COVID 19 and Tourism Implications

Every crisis, caused by economic and non-economic factors, usually leads to long-term consequences in all spheres of life. Throughout history, starting from the Great Depression of the 1930s to the Great World Economic Crisis at the beginning of the 21st century, production activities were the most affected areas. It is expected that such situation will also occur when it comes to the crisis caused by the COVID-19 pandemic (Cvijanović, Pantić, 2021). The World Tourism Organization (UNWTO) reports that international tourist arrivals declined by 74% in 2020 compared to the previous year. That equates to a decline of around 1 billion international arrivals, bringing the industry back to levels last seen in the late 1980s. The collapse in international travel represents an estimated loss of USD 1.3 trillion in export revenues - more than 11 times the loss recorded during the 2009 global economic crisis. The crisis has put between 100 and 120 million direct tourism jobs at risk, many of them in small and medium-sized enterprises.

Many tourism destinations had less tourists than before, airlines are canceling flights and staffing, trade fairs and cruises have been canceled, and hotels are being closed. In addition to these, there are other companies that rely on and directly or indirectly depend on tourism and suffer the negative effects of this situation (Cvijanović et al., 2021). Prior to the coronavirus outbreak, the global tourism sector had seen almost uninterrupted growth for decades. Since 1980, the number of international arrivals skyrocketed from 277 million to nearly 1.5 billion in 2019. The two largest crises of the past decades, the SARS epidemic of 2003 and the global financial crisis of 2009, were minor bumps in the road compared to the COVID-19 pandemic.

Picture 1: Change in international tourist arrivals May 2020/May 2019.



Source: UNWTO



According to the UNWTO's estimates, it will take the industry between 2.5 and 4 years to return to pre-pandemic levels of international tourist arrivals. The biggest drop in the number of tourist arrivals was recorded in Asia and the Pacific, 60% compared to 2019. Europe was visited by 58% fewer tourists, the Middle East by 52%, while the US and Africa saw a 47% drop in the number of international arrivals. Globally, tourism has declined by 56% (UNWTO, 2021).

### *Implications on Aviation Sector*

Globalisation and continued aviation efficiency mean that many people can reach distant places within a relatively short period. It is established that global mobility efficiency has been a critical factor in supporting human civilisation and commerce for a better world (Dube & Nhamo 2020).

According to the International Air Transport Association (IATA), the COVID 19 pandemic has had a very negative impact on the aviation industry. There was a 90% drop in traffic and mass travel cancellations. IATA estimated that the crisis caused by the corona virus in the European aviation sector created losses of 76 billion dollars and a drop in demand of 46% measured by traffic per passenger kilometer. If the closure of the airport and other losses related to air traffic are taken into account, about 12.2 million jobs are endangered and the European BPD will be lower by 823 billion dollars (ICG, 2020a).

The impact can be viewed separately by European countries. Thus, in France, there was a drop of 65 million passengers and a lost revenue of 12 billion dollars. In response to the crisis, Air France-KLM reduced the number of flights. In Italy, there was a drop of 7 million passengers, a drop in revenue of 9.5 billion dollars. Spain, as a country heavily dependent on tourism, has seen a drop of 93.7 million passengers, which could lead to the loss of 750,000 jobs. In Germany, as the strongest economy in Europe, a decline of 84.4 million passengers is expected, the loss of about 400,000 jobs and a smaller contribution to the German GDP in the amount of 28 billion dollars. Lufthansa, the largest airline, faced the biggest crisis in history and was forced to land 700 planes from its fleet and reduce business operations by 95% to a level almost as in 1955. Air traffic in Greece recorded a loss of 21.5 million passengers and \$ 3.2 billion in revenue.

The crisis has hit the largest airlines. Air France plans to retain its employees, but with shorter working hours despite a \$ 7 billion loan in the first quarter of 2020. British Airways announced in April 2020 that it was laying off 12,000 of the company's 42,000 employees. Lufthansa closed its Germanwings subsidiary, and company director Carsten Spohr said the company was losing \$ 1 million an hour and carrying less than 3,000 passengers a day, compared to normal business when it was carrying 350,000 passengers a day. Even low-budget companies such as Easy Jet

have been hit by the crisis. Easy Jet canceled the order of 24 Airbus aircraft and requested a loan of £ 600 million to consolidate the business (MKG, 2020b).

Due to all the circumstances, IATA asked for help of 200 billion dollars of direct financial aid, loans, guarantees or issuing bonds, in order to save the world's airlines due to the collapse of air traffic.

In response to the new situation, airlines have introduced stricter health and hygiene safety measures, mandatory wearing of masks during the summer, leaving empty central seats. However, low-budget companies are not able to operate profitably in accordance with the application of these measures, as they depend on 100% occupancy of aircraft, while traditional companies achieve profitability with 75% capacity utilization.

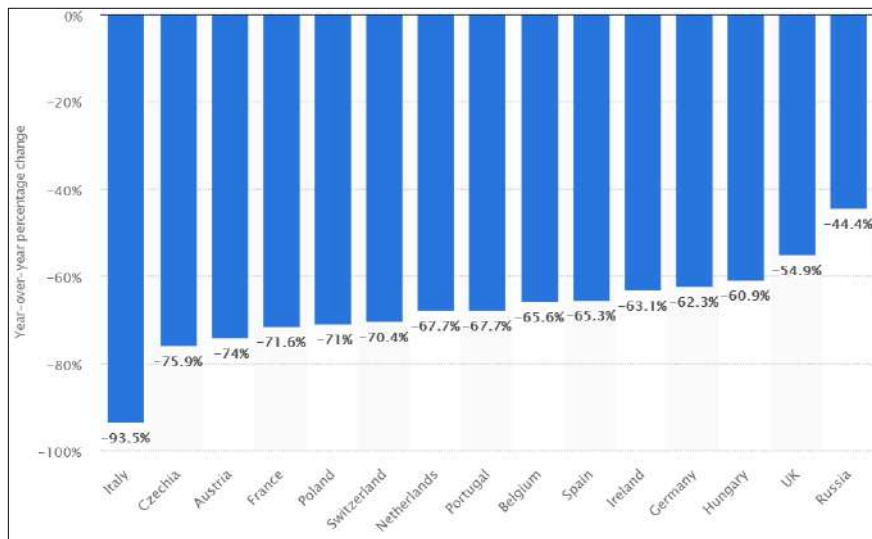
### *Implications on Hotel Industry*

Given the large number of guests coming from different regions of the world, hotels and other forms of accommodation are potential hotspots for the spread of the disease. Most research mainly relates to the spread of disease through food, environmental pollution, swimming pools and air (Beauté et al. 2019; Kimura et al. 2011; Marks et al. 2000). The health and safety of guests is a legal obligation of hospitality objects. Failure to comply with these regulations leads to criminal liability of hotels which can have major implications for their reputation and market image. Outbreaks negatively affect hotel occupancy, revenue, and profit (Yang et al. 2020).

There is no doubt that the COVID-19 pandemic had dramatic effects on the hotel industry worldwide. Such a decline in occupancy of European hotels, average room rates (ADR) and revenue per room (RevPAR) has not been recorded in the last 20 or more years. Thus, the terrorist attack on September 11, 2001, had an impact on the drop in hotel occupancy and room rates from 7 to 8%. The global financial crisis in 2009 had a negative trend in the hotel industry, causing a drop of 10-13%. The 2016 terrorist attacks had little impact on the average room price, which fell by about 3% (Kett, 2020).

The European hotel industry recorded a large decline in business activity in 2020 compared to the previous year. Revenues per room fell by 80.5%, which is 10.6 EUR without VAT. The decline in revenue is related to the decline in average occupancy to 16.3% and the average room price by 43 percentage points (28.9% and EUR 65.2 excluding VAT). Luxury hotels recorded a drop in revenue per room of 89.6%, mid-range hotels 80.2%. Higher resilience was shown by economy class hotels (68.7% drop in room revenue) and budget hotels (53.7% drop in room revenue).

Picture 2: Change in hotel TRevPAR due to coronavirus (COVID-19) in Europe March 2019/2020



Source: Lock, 2020; Statista

The beginning of 2021 did not bring much change. French hoteliers recorded a slight increase in hotel occupancy of 24.6% in January (-33.1 points). On the other hand, German hoteliers who showed better resilience to changes recorded a decline of 49.8 points in hotel occupancy (MKG, 2021).

Looking at total revenue per room (TrevPAR) for March 2020/2021, it can be seen that Italian hoteliers recorded a decrease in total revenue per room by 93.5%, followed by the Czech Republic (-75.9%), Austria (-74%), France (-71.6%). The UK (-54.9%) and Russia (-44.4%) had the smallest decline of the countries on the list (Lock, 2020).

In response to the changes, hoteliers have taken various measures. The survey conducted by ReviewPro 2020 globally included 494 hotels. Of this number, 30% were from North America, 28.3% from Europe, 18.7% from Asia, 10.9% from Oceania, 6.4% from Africa, 3.5% from Latin America and 2.3 % in the Caribbean. The results of the survey showed that the largest number of hotels (64.8%) in response to the crisis first reduced marketing costs and closed unfilled hotel floors (64.6%). Bank loans and loan rescheduling were requested by 53% of hotels, while 52% of respondents laid off workers and reduced salaries.

Table 1: Impact of COVID-19 on major hotel chains

Hotel chain	Impacts and responses to COVID-19
Accor (operates in 100 countries, with more than 4800 hotels and 280,000 employees worldwide)	Closed two-thirds (3200) of its hotels worldwide Cancelled 280 million euros (\$304 million) in dividends

	<p>Dedicated to allocating 25% of the planned dividend payout of €70 million to a fund dedicated to employees and “preserve” the remainder</p> <p>Introduced a new booking and modification policy that allowed tourists to flexibly manage their bookings or get credit notes and refunds</p> <p>20-day plus booking discount of 25%</p> <p>Reduced the schedules of or furloughed 75% of its global head office teams</p>
Marriott International (7.484 hotels, 131 countries, 1,4 milion rooms, 30 brands)	<p>They furloughed about 174,000 employees at all levels and no payment for workers during the period, only health benefits</p> <p>Put workers on unpaid leave</p>
Hilton Hotel (has 6.100 properties in 100 countries)	<p>Closed 150 of its hotels in China, which represents 60% of its operations in China</p> <p>Announced suspension of operations on 26 March 2020</p> <p>President and CEO had to forego salary for the remainder of the year</p> <p>The executive committee took a 50% pay cut for the period of the crisis</p> <p>Reduced schedules or be furloughed for up to 90 days and only be paid medical benefits</p> <p>Corporate team members who were not furloughed took a 20% pay cut</p> <p>Eliminated non-essential expenses and capital expenditures</p> <p>Suspended all share buybacks and payment of undeclared dividends</p>
Intercontinental Hotel Group	Reported 6% decline in business

(5.656 hotels across nearly 100 countries)	<p>in January and February 2020 and 90% in China</p> <p>At the peak in China, 178 hotels were closed</p> <p>Further 60% decline in business in March 2020</p> <p>Deferred renovations and imposed salary cuts for staff including board and executive level in March 2020</p> <p>Cancelled S\$150 million in dividends</p> <p>Cut capital expenditure by S\$100 million for 2020</p> <p>Cancelled fee waivers to existing and new bookings at all hotels globally for stays between 9 March 2020 and 30 April 2020 and later extended to 30 June 2020</p> <p>Modified and/or reduced services in some hotels, e.g. reduction in restaurant and bar service, alternative guest room furnishings and/or amenities</p> <p>Suspended operations</p>
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*Source: Nhamo et al., (2020). Impacts and Implications of COVID-19 on the Global Hotel Industry and Airbnb*

A small number of respondents offered their hotels to the government (20%), hospitals (16.2%) and medical staff and patients infected with the corona virus (14.2%). In response to the drop in hotel occupancy, the price of the room was reduced. About 60% of hotels reduced prices, while 12% reduced prices by more than 40%. The logic is that the reduction of prices will lead to an increase in hotel occupancy when the travel ban and social distancing measures are lifted. However, many travelers, especially those in the middle class, who have lost their jobs or whose incomes have been reduced, are unlikely to be able to spend their free time traveling. So a sharp drop in prices can negatively affect a hotel's future operations or the value of its brand. Another strategy could be to reduce unnecessary costs, improve cancellation policies or improve loyalty programs.

Almost 75% of respondents indicated that they would reassess internal policies and procedures in preparation for reopening. Many of these policies will revolve around enhanced cleaning and social distancing measures. Employee training is also a

priority, with 57% of respondents recommending their staff attend industry webinars, and 52.13% recommending educational programs.

About 40% of respondents said they would change their distribution strategies by focusing on niche markets and local tourists, which is in line with other research that has shown that post-COVID travel will be more local in nature.

When it comes to communication with guests, hoteliers believe that the most important channels are social networks (80%) and guest reviews (60%). In addition, email marketing is a good channel of communication while surveys during and after the stay are of little importance. When asked "Will the behavior of guests change after the pandemic?", over 90% of hoteliers believe that guests will be more sensitive to the hygiene policy in hotels, while 74% believe that they will seek more flexible cancellation programs. Also, 62% believe that guests will prefer domestic over international travel and will be less willing to share public space (ReviewPro, 2020).

### *Implications on Car Rental Industry*

The transport sector is an essential sector of the tourism economy in that it offers convenience to the travelling public and enables the tourist to better explore their destinations. Airports across the world, towns and regions offer vehicle hire services that provide convenience to the travelling public. The car hire industry can be traced back to the early twentieth century (Yang et al. 2008). A review of the largest listed car rental companies shows that the sector has since grown into a multibillion-dollar industry, generating hundreds of billions into the global economy annually.

The most important car rental markets are the USA, France, Germany, the UK, Japan, Korea, China and India. In 2018, the car rental market was \$ 88.2 billion (Grand View Research, 2019). Estimates and analyzes said that this market will grow by about 15% in the next 5 to 10 years and reach a total revenue of 214 billion dollars. The car rental market has followed the growth of global tourism. The most important companies in this sector are Avis, Budget Group, Enterprise Holdings, Europcar Group, Car2go, Hertz Corp and Sixt. The greatest demand for car rental is at airports. However, with the development of the Internet, other transportation options have emerged such as vehicle sharing which represent serious competition to car rental (Puschmann & Alt, 2016). Sharing the transport service created by Uber, promoting e-scooters to reduce emissions and preserving the environment, using bicycles to promote healthy living and closing city cores to cars has a major impact on the car rental sector. In addition to the emergence of new services, the development of urban transport in urban areas is also a competition to this industry.

No one could have predicted what would happen to companies in this sector before the pandemic. As a result of the pandemic, the car rental industry lost billions of dollars in revenue. There has been a decline in the value of shares of leading

companies in the sector such as Hertz, Avis, Europcar, Uber and Lyft. The rating of companies collapsed and general instability in the market was created. So Hertz filed for bankruptcy after paying \$ 16 million in retention bonuses to his executives. The losses led to mass layoffs and the sale of property.

### *Implications on Cruise Industry*

The cruise ship industry is an important segment of the global tourism industry providing leisure, employment and revenue across the whole world. The cruise ship industry has been the fastest-growing segment in the travel tourism industry between 1980 and 2019. The average annual growth rate in the number of cruise passengers worldwide to have been above 8.4%

over the past 20 years in 2019 alone, over 30 million passengers were transported on cruise lines globally. Records from the Cruise Lines International Association (CLIA) assessed that the industry created over 1.11 million jobs worth over US\$ 45.6 billion in wages and salaries in 2018. (Nhamo et al., 2020).

The dynamic growth of this industry can be seen through a growth rate of 69% for the previous decade compared to 42% growth of land-based tourism in the same period (BREA 2018). The highest growth was recorded in Europe, Asia and Australia. There have also been job creation, increased revenues and tax revenues in all regions of the world. In 2017, 136.9 million passengers were recorded who achieved \$ 61 billion in direct consumption in the cruise sector.

The corona virus has shaken the ship and cruise industry. Almost all cruisers were moored to docks very quickly when the virus appeared. In February 2020, the world followed the tragic fate of the cruiser Diamond Princess, which came to the attention of all world media when the first cases of coronavirus were diagnosed on board, before it spread and infected 700 people. There were 3,700 passengers on board who had to go through the harsh quarantine measures of the Japanese health authorities before the passengers and crew managed to disembark at the port of Yokohama.

The industry serves about 12 million passengers from the United States, 7 million from Europe and about 2.4 million passengers from China. Similar to the aviation industry, the cruise industry has faced numerous cancellations of travel reservations and requests for refunds. Companies operating in this industry have started issuing vouchers, which represent an opportunity to use the reserved refill in the coming period when the pandemic passes.

### *Changing in tourism: from Urban to Rural*

Research can be found in the literature that indicates that crisis situations can affect urban and rural tourism differently. Thus, research in the UK has shown that rural

tourism is more affected by public crises (Leslie & Black, 2006), while urban tourism is more affected by the economic crisis (Iovino, 2019).

The pandemic caused by the COVID-19 virus left significant negative consequences on travel, and thus on tourism. The basic question that is still relevant now is how to travel in the future, what measures will be in force. The answers to these questions consequently affect the development of tourism and the whole economy. Jiricka-Purrer et al. (2020) indicate that the decline in tourism trends during the pandemic will have a positive impact on the revitalization of urban tourism, especially in relation to adaptation to climate change. Wen et al. (2020) predict that there will be new forms of tourist behavior and the popularity of new forms of tourism such as luxury tourism, health tourism, slow tourism and smart tourism.

The United Nations World Tourism Organization defined urban tourism as “a tourist activity in urban space. Cities/urban destinations provide a wide range and variety of cultural, architectural, technological, social and natural experiences and products for leisure and business” (UNWTO, 2020). The core of urban tourism is the culture of leisure and business in the city, which relies on leisure within cultural venues and various consumer places provided within the urban space. Therefore, urban tourism includes visiting urban cultural stadiums, parks and commercial recreational areas. S druge strane, World Organization for Economic Cooperation and Development (OECD, 1994) defined rural tourism as tourism activities in the countryside. Rural tourism also includes agro tourism, farm tourism and rural tourism in rural areas. This form of tourism should be small in scale and closely related to nature and the rural environment. Rural tourism activities are based on the rural area, traditional production methods, culture and heritage.

Rural tourism has been recognized as a tool for poverty reduction, but its effects on locals are still being discussed by scholars. Even there is a possibility that rural tourism is affecting locals in a negative way. Still, it is used by lots of governments as a way of improving the way of life of the locals. The most effective method of including locals in rural tourism is community participation or community-based action (Blažević et al., 2018).

Research conducted in China after the end of the pandemic showed that it is easier for tourists to accept prevention measures and restrictions in public places. The changes that took place went in the direction of the development of "civilized tourism" and "civilized tourist behavior". This behavior meant changing habits (cleaner and safer) in order to prevent the spread of the disease and preserve health. Visits to parks, zoos and botanical gardens and other natural urban destinations will be popular in the future as well. As far as rural tourism is concerned, the pandemic has created a significant tourist demand for health and relaxation so that rural tourism that takes place in nature has excellent potential for development and will have a positive impact on people's mental health. It will positively affect the travels of parents and children, which will create better mutual relations during their stay in



nature and the rural environment. Tourists discovered new activities and experiences by staying in a rural area and were satisfied with the prevention of a pandemic, which greatly changed the perception of rural tourism. As a basis for future development, tourists expect the improvement of infrastructure and facilities in the rural area as well as accommodation reservation systems (Li et al. 2021).

Seraphin & Dosquet (2020) believe that the tourism industry during the pandemic showed a Janus-faced character. That is, that any positive impact on the industry causes a negative on the other hand, and vice versa. Locking, closing borders and banning movement was supposed to stop people's movements. However, in some countries, such as France, there has been a mass movement from large cities to villages and coastal areas. Thus, by March 17, 2020, Paris had decreased by 11% of the population (INSEE, 2020). This migration is conditioned by the fact that many Parisians have houses and cottages on the coast and in rural areas. This form of tourism, the so-called second-home tourism, represents a significant part of domestic tourism. As a form of tourism, *second homes* are associated with terms such as routine and novelty; inversion; back-to-nature; identity; surety, continuity; work; elitism; aspiration; and time and distance, vacation home; holiday home and leisure home (Roca, 2013). Similar to other forms of tourism, *second home tourism* contributes to capital inflows; employment creation; income generation for small businesses such as grocery shops; restaurants; services and leisure companies; and construction companies partly because second home owners tend to have more disposable income than local inhabitants (Larsson & Muller, 2017). It is closely related to mountain tourism and rural tourism because other homes are usually far from large urban centers. Second home tourism characterized by diversification, marginalization, difficulty of access, niche and aesthetics can play a significant role in the post-COVID 19 period. In the post-COVID 19 lockdown context, second-home tourism and mountain tourism could play the role of placebo for “crisis tourists”, defined as: “individuals or groups traveling from one place to another for the purpose of physical and/or psychological well-being during a crisis (global warming, energy crisis, war, terrorism or global pandemics)”. Also, during the pandemic, the hotel industry was severely affected as most hotels were closed or operated at reduced capacity as opposed to staying in other houses in rural areas where there was an influx of large numbers of residents from urban centers. This trend is noticeable not only in France, but also in the USA, Turkey, Spain, Italy and Germany.

Zogal et al. (2020) point out that second homes were used as a place of temporary escape from large cities where the virus spread much faster and stronger than in rural areas. Fear of infection could lead tourists to choose other homes more often than traditional forms of accommodation where physical distancing is more difficult. In addition to health reasons, the pandemic led to the emergence and work from home. Many employees replaced their offices with work from their home and their other home. Thus, the use of the second home was expanded from recreational and tourist purposes to a place for privileged remote work. The possibility of teleworking is a

factor that could encourage many people to move from big cities and buy a new home in a rural area or return to the family home where their ancestors lived. The growth of demand for these houses may affect the emergence of speculation in the market, ie the growth of real estate prices and rental houses in resorts and rural areas with high potential for profit.

### **3. Conclusion**

The COVID-19 pandemic, which was declared in March 2020, affected the entire world economy. One of the most endangered sectors has become tourism. During the night, flights were suspended, cruisers were moored at the docks, hotels were closed, car rental was stopped. World tourism recorded a drop of 74% in the number of arrivals compared to the previous year, ie by 1 billion passengers, which brought tourism to the level of 1980. \$ 1.3 trillion in revenue was lost and 100-120 million workers were at risk of losing places in tourism.

On the other hand, the negative effects of the pandemic on global tourism have had a positive impact on tourism trends from urban centers to rural areas. The so-called second home tourism gained in popularity as measures of locking, isolation, and social distancing took effect in cities. Many people who have their second home in a rural area, on the shores or in the mountains have gone there in search of peace, relaxation, health and a stay in nature. These changes are noticeable throughout Europe and have led to an increase in demand for houses in rural areas and their rental prices.

The main dilemmas that remain open in the post-pandemic period relate to the question of when global tourism will recover and return to the 2019 level. Optimists believe that this will happen in 2 to 3 years (2023-2024). Another question in this paper is whether the changes in the behavior and preferences of tourists that occurred during the pandemic will affect second home to become the preferred form of accommodation in the future and how and whether traditional forms of accommodation will adapt to this change. Then, how will these changes affect real estate prices and rental prices in rural and urban areas. Will other homes be converted into permanent homes and will the temporary migration of the urban-rural population become permanent? In the conditions of a pandemic, many residents of overcrowded cities are rethinking their way of life by moving to rural areas. Free time, comfort, peace, staying in nature and silence are gaining in importance. The question arises, what are the socio-economic effects of these migrations. Will the richer inhabitants of urban areas reconsider the previous lifestyle and accept the new one?

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# ADVANTAGES AND DISADVANTAGES OF HUMAN RESOURCES MANAGEMENT DURING COVID 19

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## Abstract:

When we talk about economic growth, industrial development, entrepreneurship development, introduction of modern technologies, introduction of intelligent systems, introduction of logistic information or logistic management systems, coexistence or cooperation of natural and artificial intelligence, we often mean development and management of human resources and its management. We know that economic development always has the need for change, the need to upgrade and to introduce new, more modern systems. However, when we have in mind the management of human resources (Human Resource Management), this is often related to the development of internal acts of organizations, companies or administration on job systematization, increasing the number of employees, which is

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certainly a human resource issue and urgent management that changes gradually when searching for quality, properly trained and educated staff. Human resource management in the logistical sense, acting and directing towards the development of logistics and logistics management, towards improving the systems and operation of the entire production or the entire economy, is the art of management that must adapt, change and seek appropriate legal and life solutions. In all of this, management has a challenging task, and at the same time it is affected by a number of side effects, which can be linked to business growth or business loss, while frequent fluctuations can cause a number of problems related to overall economic policy.

The research is focused on logistics management and changes that, through various influences, can lead to a complete crisis of human resource management, related to poor performance of industry, production or another sector, where it may even shape the management. In practice, there are frequent cases which, through the functioning of the state or local community, due to natural disasters (storms, floods, fires,), diseases and various epidemics, can affect economic development and management, but can also lead to complete collapse of industry, economy or state. We found out that the Covid-19 epidemic is a type of unintended natural impact which, in order to ensure the safety of human health and life, causes economic, industrial, entrepreneurial or even national collapse, severely affecting the economy, industry, trade, supply, human resources management, people and society as a whole. In the first and second waves of the Covid-19 pandemic, which was reflected in 2020 and will continue in 2021, we looked for reasons for human resource issues and connecting management to the changing situation, looking for reasons for layoffs, worker migration and brain drain abroad.

**Key words:** Human Resource Management, Systems Development, Lay off, Brain Drain.

## **1. Introduction**

Management is generally understood as the administration or decision-making process, planning, explaining, directing, and allocating organizational resources, leading, monitoring and evaluating the implementation of various activities in the organization (industry, manufacturing company, local community or country). At the same time, we know that management is an economic and organizational scientific discipline founded in the early 1920s by the author Henri Fayol (2016) (1), and has been adopted by many authors as well as the profession itself. Due to the width of management, it needs to be divided appropriately, as Fayol has already done, and for the needs of industry, economy, administration and more widely grouped individual forms of management through Strategic Management, Human Resource Management, Communications Management, Financial Management, Crisis Management, Change Management, Knowledge Management and Management by

objectives. Knowing Fayol's classifications, we looked for impacts on logistics information and logistics management systems in this research area, which are reflected through human resource management. According to Foley, we have learned that any leadership in the economy, industry, business, administration and overall, has a very important role to play in managing large or small organizations, in managing industrial, commercial, political, religious or other forms of organizations, depending on how and in what way management implements management or leadership, not forgetting external influences.

We have found that the economic development of an individual country, individual economy, industry or company is tied to a number of systems that affect the development, education, schooling, culture and many other activities required by society. Undoubtedly, this includes human resources development, knowledge development, intelligent systems, because when we talk about economic growth, industrial development, entrepreneurship development, introduction of modern technologies, introduction of intelligent systems, introduction of logistics information and management systems, coexistence or cooperation of natural with artificial intelligence, we also have in mind the development and management of people aka. Human Resource Management, which deals with the regulation of issues related to staff policy. We know that any movement and development of society, economy, industry and more broadly, can cause the need for systemic, informational, managerial or other changes, the need to upgrade systems, to introduce new systems, increasing or decreasing the number of employees, which is a staff issue that is gradually turned into the search and selection of suitable staff or search for suitably qualified and educated staff that will create added value. We talk about human resources management, management of the development in the direction of improving the systems and operation of the entire production or the entire economy. Certainly, management plays an important role in all this because it influences development, but at the same time it is influenced by many factors that can be related to business, business growth or loss, and frequent business fluctuations can cause many problems related to personnel policy.

Precisely due to emerging and lasting changes in society, economy, industrial development, market and supply of the population, our research focused on changes and human resource management in activities that can lead to a complete crisis, which in turn affects the poor performance of industry, production or other activities. There are known cases where, due to external influences, natural disasters, health or other influences, the activities of countries or local communities can slow down or stop completely. There are known cases of natural disasters (storms, floods, fires...), diseases and various epidemics, which can greatly change the system and the impact on the forms of leadership and management. In practice, this can also be cases when there is a complete economic collapse.



The Covid-19 epidemic is a type of natural impact that, in order to ensure the safety, health and life of people, causes economic, industrial, entrepreneurial or even national collapse, with the economy, industry, tourism, entrepreneurship, human resources management and the whole society suffers greatly. It can be a time or even a period in which all systems of functioning society, the state, the economy, industry, trade and the supply of the population have to be adapted to the situation that has arisen, which causes serious problems for everybody. In the first and second waves of the pandemic in 2020 and 2021, we searched for and studied staff issues, which we linked to changing conditions and we looked for the causes of changes in employment systems in industry, economy, entrepreneurship, trade, health and others. We looked for justifiable reasons for management to terminate employment, to lay off workers, to migrate labour, and to brain drain abroad.

In the past, forms of labour movement were known during the time of the common state, which has survived in a way to this day. Therefore, we made a brief comparison of the movement and migration of different groups of workers from Bosnia and Herzegovina (hereinafter: BIH) to Slovenia, Austria and other developed European Union countries (hereinafter: EU) and groups of workers from Slovenia to Austria, Germany, the Netherlands and especially countries of the northern part of Europe. The perceived phenomenon was explained by our colleague Professor Beganović, who defined the migration of workers in the period before and during Covid-19, no more as "Departure of workers" to Slovenia, Austria, Germany, etc. because of work reasons, but as "Migration of families" to Slovenia, Austria, Germany, Switzerland, Sweden, etc. for work and a better life. We have seen a migratory shift in the population due to better working conditions, better social, health and material conditions, which justifies leaving one's own homes, real estate, culture, language and customs, at the cost of better working conditions and a better life. The entrepreneur, Željko Zec from Banja Luka, substantiates this finding by claiming that these are new forms of migration of families and new generations of people who see the EU as their home in the future, while confirming that these are new generations of people who will completely assimilated in their new place of residence and will never return, either to BIH or to Slovenia. He cites the established practice from the former common country, when working families migrated to Slovenia for work, but were still tied to their hometowns, where they built houses, maintained and visited homes, and returned when they retired. New generations are leaving forever and becoming equal citizens of the countries where they settle down, which the systems of these countries allow them to do and sometimes offer them even more. In both cases, as stated by the representative counselling service for migrant workers Lukić (2021) in Ljubljana, the migration of orderly and educated people can be detected, which is questionable for both BIH and Slovenia, as it is a brain drain, an intelligence escape, an educated and trained people whose systems in BIH or Slovenia do not give them the opportunity for suitable work or appropriate coexistence. Thus, a foreign country, a foreign employer gets educated, trained and talented staff who can easily upgrade their economic or other systems, which makes them very proud in the host country.

Foreigners value their knowledge, their work and value it accordingly, which is not known in Slovenia, much less in Bosnia and Herzegovina. Colleague Brula recognizes this form of inappropriate attitude of society, local community or state, in places such as Bela Krajina, in her own case, where a person with a master's degree has the opportunity to perform only physical work with a private entrepreneur. Employment agencies have mainly educated people who are not valued by employers, are too expensive for them or there are other reasons for their unemployment.

Through the phenomenon of these cases, we looked for natural, material, health, political, economic and other reasons that led to mass migrations from Bosnia and Herzegovina to Slovenia and also mass migrations of entire families from Slovenia to Austria, Germany, Sweden and the like. The data were checked in areas of Prekmurje, Styria and White Carniola, where brain drain is most present. The obtained data gave us complete answers, which are related to the economic, political, and above all health condition of an individual country. On top of that, we looked for justified reasons for laying off workers in Slovenia, especially temporary employees from Bosnia and Herzegovina, which we linked to the consequences of Covid-19, state funding and state aid packages for employers in Slovenia.

## **2. Research area**

It is impossible to talk about the field of employment or the economic, industrial, entrepreneurial and administrative field, where there would be a surplus of employees, as it is a systemic or technological period of industry 4.0 development, which is in the final stage and the new period of Intelligent Systems and Technologies Industry 5.0 is slowly starting (the Japanese already use the terminology), where a greater coexistence of artificial and natural intelligence is increasing. What does it mean for industry, economy, entrepreneurship, public administration, etc.? Does it mean that it does not need people's potential anymore? On the contrary, it can be confirmed that everyone needs more and more educated and technologically skilled people who master production, logistics and other processes.

Already in his economics of transport industry, Professor Zelenika (2010) (2) in the chapter "Projections of sustainable growth and development of elements of production of transport products in the period 2009 to 2025" predicted the rapid growth of modern systems that will enable greater human-machine cooperation. It is identifying individual elements that influence the development of the economy, the development of management and the role of man in the entire system of operation. Tomšič (2009) (3) also described modern shifts, where he described value shifts in a modern globalized society, where he described it through systems of management excellence. Interesting for us was also Gričar (2009) (4), who through his papers demonstrated the use of information systems for inter-organizational networking, which gave special importance to management and networking of organizations in individual areas. This is an area of management that requires soft measures for

dealing with human resources or other forms of inter-organizational or organizational integration and decision-making in times of crisis, which is quite unclear, especially when it is a difficult period caused by nature, natural disasters or other forms of unpredictable or even predictable events. It is about the need for successful management of organizational changes, as stated by Bukovec (2009) (5), where he states various systems and their appropriate management.

It is also important to master leadership and management systems, especially in cases of emergencies or situations that require a certain tolerance or complexity for change. That is when the wisdom and skills of leadership and communication, as described by Miglič and Vukovič (2006) (6), are demonstrated, which can also be used in cases such as those that occurred during the Covid-19 pandemic. It is a matter of meaningful recognition of the situation, measured decision-making and the search for appropriate solutions, which must be within the framework of workers' rights guaranteed by the Constitution and sectoral legislation. According to the authors Jankovič and Murtič (2019), legal relationships that arise through the management of individual organizations or individuals who enter into a relationship with an individual organization are also interesting. The thin threads of this finding were recognized in the field of tourism and tourist activity by Murtič and Jankovič (2020), where during the pandemic they recognized the need to warn users of the basics of recognizing legal relations in tourism. Beganovič (2016) (7) based his writings on the impact of individual organizational or natural changes on development opportunities and summarized them in a scientific monograph through innovation and the search for appropriate solutions for organizations and management.

For the research area, we took the area of industry, production of the company and some service activities, which are the most sensitive in times of rapid or severe changes, and at the same time are areas that are quickly affected by economic, natural or other changes. This is the area with the largest deficit in terms of employee management, as most employees are from other countries, making them a vulnerable group whose organizations are easily deprived of their basic rights and laid off, transferred or otherwise managed. It is also an area where the educational structure is mainly at a lower levels of education or even at a vocational level and is economically dependent, which is why employers often abuse it, despite the current legislation in the social and employment field. Reasons for management changes in this area can also be found in the process of introducing intelligent systems, introducing new technology, and often the social phenomenon is decisive for the development and implementation of management in Slovenia or Bosnia and Herzegovina.

### **3. The thesis of the research**

When setting the starting point of research, which is at the same time a research area that needs to be confirmed or refuted through research, there is a thesis or hypothesis

that is always questionable if there is no appropriate measurable data for it. This assumption is further confirmed by the hypothesis that usually needs to be confirmed by statistics, which supports a particular research area with data to make it relevant or to become the basis for further research. In our case, in order to arrive at an appropriate basis that would, through a review of the obtained data or evidence, give us a basis for a proper statement or refutation of the thesis, we first had to obtain answers to certain questions that are not statistical, although they could also be used for statistical purposes, which were the only appropriate basis for setting or confirming the thesis, namely:

- In which field of work in Slovenia are most employees from third world countries?
- What legal basis is given for the exercise of their social and basic human rights?
- What criteria are necessary for the employment of workers from abroad?
- Is the type and direction of education of employees from third world countries important?
- What are the most common reasons for Slovenian workers to go abroad?

We sought individual answers to the questions posed and based on them, we were able to put forward a thesis on how and if the Covid-19 pandemic affects human resource management, being aware that we will encounter many intertwining interests of employers, employees and the Institute for employment or countries related to working conditions, employment conditions, economic status, financial situation, accommodation possibilities, rights and obligations imposed by law. We also encountered a number of other influences that often affect or are a causal link for management and governance management in the field of employment policy. Unfortunately, the worst-case scenarios have come true, showing the interests of the exploitation of the employee by the employer and the interest of employers in drawing state subsidies or EU funds to cover fictitious losses that employers did not even have due to the situation. Already in the search for a basis for setting out our thesis, we came to astonishing data that indicate the urgent action of the relevant inspection and other services. There would also be enough work for law enforcement agencies if the state decided to do so.

The decision to put forward a thesis was not an easy one, which we were aware of, but we still wanted to address this area, based on all political, social and pandemic events, and find relevant data that would shed light on examples of good or bad practice.

### **Possible starting points of the research**

If we wanted to follow the purpose of the research panel, examples of good practice, the topic for discussion and the guidelines of the curriculum of the Academy of Regional Management, we had to focus on transport, service activities, industrial production and education for their needs. We also prepared a search for data and

answers to the questions asked, which were the base for our thesis and depending on them, whether we will stay within the regional management or the research will take us in another direction.

As a possible starting point, we took those areas of regional management that we found to be most exposed in terms of labour force management, employment, scheduling and management of various forms of business, in which it is possible to employ workers from third world countries, through employment processes and legal criteria. We were offered the field of construction, various finishing construction and other works, work in warehouses, transport, logistics and economic zones. However, the issue of dealing with people in the forestry sector, which has all the attributes of both logistics and logistics processes, was offered to us by its very nature. We did not deliberately go into the fields of health, catering, tourism and hospitality, because these are the areas that are most affected in general and in every crisis, and we should devote special discussion to these areas.

Already after the starting point of the research field, we were focused on finding areas of work in Slovenia, where most employed workers are from third world countries, what legal basis they used for employment. We checked the criteria for employment, focusing on checking the importance of type and direction of education of employees from third world countries, while also paying special attention to the opposite issue of the departure of our citizens abroad and also looked for the most common reasons for the departure of Slovenian workers abroad. We were surprised by the amount of data, as we could even make a doctoral dissertation or more out of the data obtained, and we would still not process all of it, including the data that measures the reasons for the departure of our educated workers abroad.

Due to numerous media phenomena about the exploitation of labour in Slovenia, which represent Slovenia as an EU country that abuses human rights and fundamental freedoms, we searched for such data and processed them through the questions asked. The results are presented in the joint discussion of this paper.

#### **4. Research methodology**

The topic itself and research issues open up many possibilities for discussion, which is impossible to cover in a particular discussion, so we did not even address certain research methods that would otherwise be used in logistics or management. Usually, the theoretical part focuses on a descriptive method based on the review and study of domestic and foreign professional material, where we usually use the compilation method, where we present summarized observations, views and conclusions of other authors, identify differences and similarities of thinking of different authors, which served us as a comparison to the obtained indicators. The analysis of primary and secondary sources could also be useful, which in logistics or management allows the analysis of data resulting from other described methods. The deductive and inductive

method would come to a final conclusion and if we had a hypothesis, we would use statistical (quantitative) data for calculations at the level of obtained statistics and shares.

As the research methodology did not require such detailed interventions in the research field, we only partially focused on the data processed by the quantitative method, where we only indicated the prevalence of the problem of employment and management related to foreign labour in logistics. Nevertheless, we used the method of description, at least in part, due to the existence of extensive material and the collection of documentation for the submission of applications for foreigners. We also partially used the functional method, mainly due to the citation and application of individual legal norms and legislation related to the procedures of the administration, the conduct of employers, industry, companies and other natural or legal persons covered by the survey.

Otherwise, given the breadth of the research field, it would be possible to use all research methods and interpret them as needed or at the request of an individual procedure, which was not our intention and there is no need for that, at least not in this paper.

## **5. The course of the research**

The purpose of the research was not to study migration and movement of people, not even in the field of economic issues, but the field is comprehensively related to migration in a way that it required certain explanations in the area of the research. For migrations in which economic causes and motives predominate are defined as labour or economic migrations. It includes workers who are looking for better working conditions and therefore leave the home environment where they were unemployed or had poor working conditions. In this sense, it should be understood that migrants or workers include not only those who are forced into migration by living conditions, but also those professionals who migrate for better working conditions, opportunities for advancement, education, training, intelligent development and professional development.

Rising mortality and declining birth rates are forcing EU Member States to find cheaper labour that pays them appropriately according to the standard forms of the countries they come from, and which is still an underestimated labour force in EU Member States, which pays off economically in both cases. In this sense, we understand that the need for foreign workers is growing due to the demographic characteristics of EU countries. Nevertheless, the entry of foreign workers is still limited, the interests of the domestic workforce are protected, otherwise temporary employment is increasing, which increases market flexibility in the EU labour market and eliminates the shortage of workers in certain industries. This was already evident at the beginning of the 21st century, as described by Bevc, Prevolnik Rupel,

Christensen and Verlič (2000, p. 72) and temporary employment is a way for countries to avoid paying social security costs that would otherwise be incurred in the case of permanent employment of a foreigner. Free movement of workers is the most liberal regime for managing interstate migration with an economic goal. The meaning of this approach is that in the consensual system of the participating countries, free movement of workers is beneficial for economies and individuals and their families, and that the right to free movement of workers goes beyond the right of the state to protect the national labour market. From a legal point of view, the freedom of movement for workers is facilitated by the Treaty establishing the European Community and the legislative dictatorship of the Court of Justice of the European Communities, which abolishes discrimination on grounds of nationality in terms of employment, pay and other conditions. The advantage of this method is mainly that for economic purposes, public authorities do not need to check the applications of workers and employers, which means less administrative procedures. The method allows a foreigner to move and reside freely for the purpose of employment, is not limited to the country of origin when searching for it, and does not have to return to it after the termination of employment. The basic document for defining migration policy in Slovenia is the Resolution on Migration Policy of the Republic of Slovenia from 2002, which was based on Article 5 of the then Aliens Act (Official Gazette of the Republic of Slovenia, no. 61/99, 9/2001 - ZPPreb and 87/2002), which stipulated that the National Assembly of the Republic of Slovenia, on the basis of the Government of the Republic of Slovenia, adopt a resolution on migration policy every two years, determining economic, social and other measures and activities to be adopted by the Republic of Slovenia in this field, as well as cooperation with other countries and international organizations in this field. (Resolution on the Migration Policy of the Republic of Slovenia (ReMPRS), Official Gazette of the Republic of Slovenia, No. 106/2002. Today, the Aliens Act (Official Gazette of the Republic of Slovenia, No. 1/18 - official consolidated text, 9/18 - amended and 62/19 - ex. US) regulates this much more liberally and enables the employment of workers of all professions and education. From the legal point of view, it should be noted that the field is covered by a wide range of laws and regulations, which are not listed in our paper, but are accessible.

We were mainly looking for economic reasons for the arrival of foreign labour in Slovenia and reasons for the departure of Slovenian labour abroad. In the last few years, Slovenian work organizations have set up joint interest agencies to find suitable staff for each field of work. Foreigners from third countries need a permit issued by an administrative unit to reside and work in Slovenia, and the Employment Service of Slovenia issues a consent to this permit. Work permits are issued for BIH citizens and for seasonal work in agriculture for up to 90 days <https://www.gov.si/teme/zaposlovanje-in-delo-tujcev/>. The site contains all the data of the Agency for the Employment of Aliens, which publishes the conditions for the employment of a foreigner, explanations for changing employers, an information sheet for foreigners, an overview of work permits and applications for a work permit.

The matter is legally regulated according to EU guidelines and employment policy in the Republic of Slovenia. The legal review of employment procedures and methods gives us information that in Slovenia everything is regulated by law and appropriate employment criteria and conditions have been set. Our task was to find data on the actual situation and, above all, to find forms of management in individual forms of work and to find any weaknesses. Data from the Employment Service, various employment agencies or labour protection associations did not give us realistic data on how many third-world workers are actually employed in Slovenia and with Slovenian employers, how they are treated, what their rights are and whether they are given the proper conditions for their training, education and introduction into the state system and the rights of all citizens or all people located in the territory of the Republic of Slovenia.

Colleague Beganović checked the reasons for the departure of labour from some regions of BIH, including the area of Banja Luka in the region of Republika Srpska, the area of Tuzla in the Federation of BIH and the Brčko District as an independent unit of the common state of BIH. Unfortunately, the data is protected, so we only provide an overview of the data that could be obtained and transmitted.

<b>Country/Year</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Slovenia</b>	870	690	30	7
<b>Austria</b>	320	247	320	17
<b>Switzerland</b>	270	500	12	0
<b>Germany</b>	460	390	40	20
<b>Belgium</b>	700	560	75	5
<b>Sweden</b>	520	490	40	37
<b>The Netherlands</b>	450	525	30	18

The data are collected partially from the employment services of the above-mentioned places, agencies or organizations engaged in the employment of workers abroad. Reasons for relocation are primarily political, which prevent the employment of workers of other political affiliations or parties; national, which prevent the employment of workers of another nation; corruption, which explain the employment of those who are within the first or second criterion and the general disorder of the state. Slovenia is interesting for workers from BIH because it is fairly close to BIH and that allows them to move from home to work daily or weekly. Other European countries attract a workforce with a good standard, the possibility of education, training, management of material or property status, a fairly fast opportunity to get their own property, housing and vehicles. Whole families are moving to these countries, leaving their homes, selling their properties in BIH and moving abroad permanently.



In 2019, 2020 and 2021, we also recorded the return of workers back to BIH, but only from Slovenia. The reasons were mainly the closure of many work organizations due to the pandemic and the impact of Covid-19, which prevented the continuation of work abroad. In some cases, employers send workers home and send them part of their livelihood, while most employers have fired them and stopped providing them with any compensation. Some workers cite full exploitation and slavery as the reason for returning from Slovenia, especially in the field of manual labour in construction, forestry and the wood industry, where the employer still owes them several months' of income and their living and working conditions were impossible. A similar case is present in the field of transport, where drivers are exploited, then they are not paid or given in accordance with the concluded contract. Many who returned from Slovenia got jobs through their relatives employed in other EU countries and have already moved with their families. It can be concluded from the above that after the end of the pandemic, there will be a strong drop in the Slovenian labour market, as most former employees in Slovenia do not want to return under the conditions offered by employers.

The data were checked in Slovenia, at Slovenian employment agencies and individuals. Unfortunately, we received confirmation of the statements of workers from BIH. Slovene employers mainly stated the reasons why the state and the systems of subsidizing individual activities do not return to them the legal means prescribed by the state and consequently did not perform their duties to workers from abroad.

We also checked the reasons for the departure of the Slovenian workforce to other EU countries and we were surprised, as we came across similar answers as our colleague Beganović. Newer generations of Slovenian citizens look at the EU and EU countries as their home and they do not care where they live or where they work, only that they are personally satisfied and that they can achieve material results, economic or any other result, as they have pre planned. Indicative data from the Statistical Office of the Republic of Slovenia show that in the years between 2018 and 2021, 15,000 people emigrated from Slovenia to Austria, Germany, Switzerland, Sweden, the Netherlands, Belgium and beyond. This number also includes our students who are temporarily studying abroad and for whom it is typical that only a small part of them return to Slovenia. The data is not surprising, but it is typical that the educated, mostly highly educated staff move abroad from Slovenia, which means that foreign employers get educated staff in whom they do not have to invest anything, so they have added value and a surplus in science.

It is hard to be sure that the Covid-19 is the reason for the move, at least in the case of Slovenia. Through the collected data, we came to the realization that in the management and treatment of people, it is possible to identify the weaknesses of the Slovenian human resource management. The reasons given by young educated people are poor pay for their knowledge and work, unregulated employment,

disrespect at workplace, exploitation, mobbing, etc., which places us as a country among the countries that make the most of the workforce, and consequently classify us as countries, who do not have regulated staff management. Due to the broadness and complexity of the task, we stopped our research and left it for some other time and new researchers.

## **6. Discussion**

Whether Covid-19 is a root cause for redundancies, for changing forms of work, for different leadership and management, for different work recordings, for different attitudes towards employees, for creating unnecessary or bad relationships or for other changes is impossible to confirm or refute in this discussion, because the pandemic is still on-going and makes it impossible for even that healthy part of the economy, administration and society to function. Certainly, the reasons for the refusal of employment in Slovenia by workers from BIH can be considered inappropriate and inhumane relations of employers, who allows them to live under impossible conditions, work without organized meals, irregular payment or even non-payment and these could be listed as reasons that were present even before the pandemic. We also looked for causes in the non-functioning of state institutions such as employment services, the labour inspectorate, the police and other bodies that are in charge of protecting human rights and freedom. We summarized our thoughts on poor management and management of individual resources, which is a result of poor or deficient rule of law. In order to get the discussed data and at least the approximate results of our paper, we asked ourselves some questions in the research and thesis phase, which were the basis for finding answers about the quality of human resource management or management of individual service or production jobs related to leadership and management of employees and work processes. We searched in which field of work in Slovenia are most employees from third world countries, where we were mostly interested in which work processes workers from BIH participate in. We found that most of the BIH workforce is in the field of construction, catering, transportation, warehouses and the like, already due to the language reasons. It is also interesting to note that among them, there are trained teachers, pharmacists, various vocational educations, who did not get a job in BIH, so they looked for a job in the field of physical work in Slovenia. We went on to ask what legal basis is given for the exercise of their social and basic human rights. When it comes to workers from EU member states, their rights are equal to the rights of Slovenian workers, but when it comes to workers from BIH, the situation is quite complicated and related to obtaining a work permit, residence permit, and inability to change employers and many other basic human rights and freedom. We also looked for which criteria are necessary for the employment of workers from abroad and found the information that there are not enough manual workers and deficit professions at the Employment Service, which is why there are no Slovenian workers. There are no criteria for the employment of workers from BIH, the only condition is that there are not enough individual professions or manual workers on the Slovenian

market. It is also not important the type and direction of education of employees from third world countries, because most jobs in professions that are not related to working with people do not know the language, which makes them unable to pursue their education, at least not until they acquire sufficient knowledge in Slovenia and learn the Slovenian language.

Interesting was the question that we asked workers in BIH who were already employed in Slovenia and have now returned home to their country. We asked them what are the most common reasons for leaving Slovenia, to which they replied that Slovenian employers do not respect them as people, do not appreciate their work, despise them, do not have adequate working conditions, do not have adequate living conditions, pay them irregularly personal income, and some have not received wages for months or even years. The bad light about Slovenian employers is spreading rapidly, so there are fewer and fewer workers from BIH in Slovenia and more and more of them are using Slovenia to look for work in Austria, Germany or elsewhere. For comparison, we looked for reasons for Slovenian workers to go abroad. First, we obtained data for the area of Prekmurje, Styria and other border parts of Slovenia with Austria, where due to poor economic conditions, most workers sought work in Austria. We also looked for other reasons and especially the reasons for the departure of intellectual capital abroad, for which we interviewed 100 different people, of different genders and different ages. Countries like Austria, Germany, the Netherlands, Belgium, etc. have a highly developed Erasmus program and exchange, where they get to know our students earlier and offer them work, a good salary, housing and better working and living conditions in the exchange process. Abroad, our workers are more respected, have higher salary and have a better social status, which attracts them. The younger generations are tied to a common English language, which connects them and allows a quick integration into any environment. As part of their work, they are respected, paid much better than in Slovenia, and so foreign employers get pre-trained staff who are very capable and want to work, create and research. Slovenia has one of the best educational systems, which has been shown through our students and graduates, who progress very quickly abroad and even run well-known systems of development and work. In conversations with our citizens abroad, we learned that they are well respected, that foreigners value their work and that they are sociable and are constantly included in society's systems, which they were missing in Slovenia.

Where should we look for reasons for our findings? We did not cite precise sources in the discussion, as they are partly with the Employment Agencies Abroad, partly with the Employment Service and the UE. However, the records are unrelated, do not overlap and do not give accurate calculations. The obtained data are difficult to evaluate mathematically or as a percentage, as they are so fragmented that they would need a more specific research in which we could show the situation in Slovenian management in the field of human resources management, individual logistics procedures, individual logistics or production processes, etc.

## **7. The Final thought**

In one word, the data collected are devastating, as it is impossible to use it any other way than an assessment in the field of human management, managing and business, management of industrial, economic, logistical or other processes, which is certainly a big task and above all a task for the state and its systemic policy. Entrepreneurship in the field of construction is left to people who do not have the appropriate education, who do not have the appropriate knowledge, who lead work with the goal of earning their own money. However, there are a lot of problems in the assignment of work, as our builders only get work that large organizations (these are mostly foreign) do not want to do. These works, however, are very poorly paid. As a result, companies have difficulty surviving and consequently behave badly towards their employees. They have poor working conditions, they have poor organization, there is no management with people, and they often fail to provide even regular salaries for the work done. We have come to such a stratified management in all areas of work that it is almost impossible to talk about management. It even occurs in large organizations that, in order to avoid the costs of finding, preparing and involving foreign workers in production processes or industrial production processes, they rather use various agencies that are set up by foreign organizations that employ for the needs of our industry, while exploit workers to disgrace.

Our workers have been informed with the way people are treated, what the resources are, the way work is organized, how big is the salary, the attitude towards employees, etc., which is why more and more young and educated people are still deciding to leave Slovenia and look for work abroad.

It follows from the findings, that through the collection and verification of data, we refuted our thesis that the Covid-19 pandemic affects human resource management. Certainly the consequences of Covid-19, which brought positives to the employers and negative to the workers, are evident, but the pandemic is not the cause of the conditions that were poorly understood even before the pandemic. This is an area that is also controversial because of the law enforcement systems, the control systems in the country, which are defending local or real jurisdiction and are set up in such a way that no one is responsible for anything.

We have found that the field is so disordered that it is impossible to talk about a management system or an orderly society. Because the field is so broad and so complex, we decided to leave this field to some longer research from which we could make a diploma, a master's thesis or even a doctoral dissertation.

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# CRISIS MANAGEMENT IN SUPPORT OF STRATEGIC MANAGEMENT DURING PANDEMIC COVID 19

Dr. Matjaž Štor<sup>15</sup>

## **Abstract:**

We faced with a new reality where we have been limited by space and time since before, and now we have become prisoners of the global health crisis. We need to start thinking and acting completely differently in all areas. In a new and imaginative way, we all need to manage crisis management and act strategically at both the local and global level, which is certainly not easy, as we need breakthrough ideas and concepts. In this respect, it will be necessary to find new funding models, development of cross-border logistics connections and the overall logistics infrastructure in terms of mobility for freight, services and people. It is necessary to develop new logistic services, new logistic strategies, the new logistics technology and adequate IT support for business logistics. It makes sense we should intensively to develop the concept of circular economy, which should be the vision of business logistics undoubtedly. It requires the organizational development, which be managed from good staff and hire external experts. We need to implement the concept of logistic process optimization on supply chains levels. In steel industry, which is the part of global automotive supply chain, is very important to implement modern logistics concepts in all business functions too.

**Key words:** crisis management, strategic management, development of logistic strategies, development of new logistic services, the common infrastructure, steel industry, the logistic infrastructure, the organizational development, the vision of business logistic.

## **1. Hazards, risks and crisis management**

### **1.1 Hazards and risks**

With all the benefits that new technology brings us, we can also expect new problems and dangers, such that we can predict and those that will come unannounced. In the last decade, companies have recovered from the financial crisis and are getting used

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to the new norm, but this is becoming a priority other problems such as pressure from global competition, which according to many questionnaires should be the number one concern for business leaders, consumer expectations, global changes, shortages of raw materials, natural disasters, lack of adequate manpower, etc.

Global change and natural disasters are not currently a priority concern for supply chains, but leaders warn that more and more attention will need to be paid to this in the coming years. A change in the weather or a natural disaster is something that even the most experienced supply chain manager cannot anticipate. These events can directly affect infrastructure that is important for transport, especially air transport. Although changes and natural disasters are unpredictable, it is worth having a contingency plan that could relieve the supply chain and avoid excessive outages. The problem, however, is creating a plan that connects all the members of the supply chain and also expects their partners to cooperate in the event of an accident. The easiest solution is a high level of communication and cooperation between all participants, understanding what kind of weather is most likely capable of disrupting the supply chain and having a backup plan that can be carried out quickly and efficiently in such a case.

War, terrorist attacks and other geopolitical threats are now the concern of one in five of the leaders in supply chains, in 2013 this figure was only around 8%. With globalization and geopolitical conflicts, war on the other side of the world can affect a company's business, trading rules, freedom of movement, and the movement of currency values can affect business. Many companies are also suffering from the battle for the geopolitical gains of world power, currently the most current example is the American sanctioning of all companies and countries that allegedly buy oil from or trade in Iran. So-called trade wars are also becoming increasingly topical and affecting the economy.

Of all the dangers, mass job loss is the most prevalent among people and the media. This should be due to the development of robotics, artificial intelligence and automation, and it will increasingly pay off for companies to replace the human workforce with robots and automation where possible. Despite the fact that new technology will erase the need for certain types of employment, there will be a need for new skills and jobs. This means that someone will always have to repair, maintain, review, program this technology, and future and to some extent today's generations entering the labor market will have to be technologically literate, and companies will require more educated and educated people due to fewer jobs, talented workers. It would be optimal for each company to offer additional training to its employees. The fact is that with such rapid developments, we can't even imagine what kind of new jobs will be created, just as a few decades ago we shouldn't have imagined the many jobs created with the development of telephone, applications, social networks, internet ...

Cyber threats are something that threatens all businesses and has always been a threat that should absolutely not be ignored. New innovative systems are bringing us more and more solutions that have always threatened the supply chain, but as these become more and more connected, the level of vulnerability is ever increasing. The challenge is to secure the supply chain from hackers and other cyber threats. The solution would be to insure all new systems in a company's information systems as threats come from everywhere; e-mail, attachments, USB sticks or even public Wifi. In order to ensure data security, it is necessary to constantly inform and warn of the dangers that threaten. The most controversial are hackers who are funded and educated by the Chinese government, who are given the task of stealing intellectual property, such as military secrets, patents, trade secrets. However, the danger is not limited to data theft or money, but also includes physical dangers. An example of this is when the US and Israeli intelligence agencies merged to create a computer virus, which was later connected to a computer via an "infected" USB stick at an institution working on Iran's nuclear weapons program. The virus manipulated computer software and destroyed centrifuges and other machines by overheating, resulting in a major blow to Iran's nuclear program.

A pandemic, the term we have heard the most about in the last year. The pandemic is also having an extremely large impact on the entire economy, as companies have been convinced that the outbreak itself will not happen worldwide. Despite all the surprises, the economy picked up quickly, as they reduced production in the early stages and made sure that the warehouses were not overcrowded with finished products. It was also necessary to lay off the redundant workers created in this step. Of course, in logistics, the pandemic was not so directly felt among the "waves" themselves, because even if countries closed borders, regions, municipalities, traffic always remained open for transit traffic. Which means all carriers were able to operate.

## **1.2 Crisis management**

With proper planning and strategy, a supply chain can operate without major problems, but unforeseen problems and dangers can still occur. In such cases, it is important not to panic and make ill-considered decisions, so we must always be prepared for times of crisis and then know how to react.

We do this in many ways, but we will highlight only five important ones:

- Creating a plan for major problems and interruptions: Our goal is primarily to identify the most important and least important suppliers for us, so it is easier to prepare for major surprises. One problem that we can encounter is also natural disasters, we also need a crisis plan for such cases.
- Training of employees in the field of crisis management: We need to train our team on operation, management and analysis. supply chain, and its weaknesses.



- Calmness and thoughtful decisions: We choose a proactive approach to each situation, we must learn how to react correctly, calculate the damage and implement a contingency plan.
- Look at the bigger picture: It is important that we not only look at our problems, but look at the entire supply chain and how our mistakes could affect our business partners. It is important that we work with them, look for common solutions and are ready to provide the necessary information and doubts we have.
- Taking responsibility: If we see that our decision has brought problems to us or our partners, we need to know how to take responsibility. We should not point the finger and look for the culprit, as this can ruin the relationship with our employees and business partners, which means we need to prove ourselves in the role of leader. In such cases, with the help of a team, we assess the damage and try to react as quickly as possible and smooth the situation.

## **2. Strategic management**

All our efforts to increase the well-being of the whole world should be based on global strategic goals, for which there should be a healthy compromise in the broadest sense among all stakeholders. If we start from the microeconomic point of view, then the strategic and sustainable development of the company / organization / institution can be managed with at least five groups of stakeholders, namely:

- with professional management and motivated employees,
- with strategic customers,
- with strategic suppliers,
- with strategic owners,
- with a properly informed local community.

In order to connect the microeconomic with the macroeconomic sphere, public-private partnerships must exist and develop, without which companies on the one hand and the public sector on the other, each living in its own "bubble". Thus, there can be no development breakthrough of a certain region or country or wider e.g. European Union and then the whole world. As the very concept of strategic development of a company / organization / institution suggests the long-term nature of all activities in this regard, it is necessary to have a longer period of time in mind for the preparation and implementation of a successful development strategy. It is necessary to have a clear long-term vision or insight into the future and so e.g. anticipate for the next 10 years what will happen in this case and sustainably plan strategic goals. The strategy is a kind of "glue" that then brings the stakeholders together and motivates them to achieve sustainable goals. Public-private partnerships will be increasingly interesting for regions and local communities, as we also place greater emphasis and weight on the sustainable development of modern society and the world.

The current situation in the global economy, when we are moving from a health crisis to a new great recession, for which we do not yet know how deep it will be, opens many questions and challenges, how to successfully overcome them at the state, region, local community and individual worker, official and citizen. In the history of mankind, charismatic personalities, who were also true leaders, have always tested their vision and strategic thinking on how to increase their well-being and the well-being of their subordinate employees, citizens, voters, and so on. At the same time, they were always ready to look for broad compromises between the long-term goals that needed to be achieved in order for the development of the company / organization / institution or region or local community to be sustainable. Sustainable development is precisely the fact that we manage to activate all existing resources to achieve some strategic goals, but we must remain morally and ethically sound, so that we do not harm other stakeholders with our actions, we all need to gain something. Only in this way can we ensure prosperity through the local at the global level or vice versa.

It may be necessary to point out the concept of competitiveness, which brings certain advantages from the consumer's point of view, as the existence of competition always forces product / service providers to be more transparent and thus more favorable, but not always better. The globalization of business has led to the fact that we can buy products / services from all over the world at any time, but we are all in the grip of cost competitiveness, so everything is subject to cost competitiveness, favorable sales price, and the quality of products / services is no longer so important. On the other hand, this leads us, as final consumers, to indirectly abandon the sustainable development of society. In fact, we are dominated by global companies that do not have an interest in the sustainable development of the world, but above all to make maximum profit at the expense of ethics and morals.

Global warming and pollution is entering a critical phase, when completely new economic models and policies will have to be invented, not to mention new strategic considerations regarding changes in consumer shopping habits, as our planet cannot tolerate such a consumer trend in the long run. A key change will have to happen in our heads about this, as we will need to rethink who we are, where we are going, what our strategic goals should be, which will need to be more sustainable so that our descendants can survive at all and start writing a new period of economic and development breakthrough.

If we want to find effective solutions to all the problems and challenges of this world, then we must act sustainably and live every day, we must direct our children and grandchildren to sustainable development. They will have to continue to educate the next generations in this spirit, as there is a high probability that our children and grandchildren will enjoy less prosperity than we have now. This can happen after a very long period of constant increase in the material well-being of people globally, which will be indescribable, inconceivable, shocking and frightening for future

generations. There is no major misconception or illusions than to live in the belief that such prosperity is eternal and that international corporations can exploit natural resources to the point of impotence and that humanity will not suffer any consequences or that we don't even want to believe the scientific evidence that the planet is changing dangerously due to human activity. Then a virus appears, which destroys our entire socio-economic system overnight. All of a sudden we need to become more respectful, humble and think, we need to become more supportive and cohesive again. This is the exact opposite of the current overproduction of goods and consumerism, and a real small revolution in our heads. All of the above requires a strategic consideration of the governing state structures, management in companies, the individual and finally even more wind in the sails of sustainable planning and development of the world.

### **3. Conclusion**

Knowing how supply chains work allows us to more easily imagine how strongly technology can affect already technologically advanced supply chains so that room for improvement in certain technologies can be found just about everywhere. By presenting some of these technologies, we can play with our imagination and reasoning and form a supply chain of the future in our heads. Understanding and progress will be noticed by each of us in our daily lives, in the beginning it will be known in our role (especially as a consumer) in the supply chain, but later some technologies will spread to our private life and complement it. . A good example is the development of self-driving smart vehicles, which can already be said to be part of the future. In addition, our shopping experience will improve, delivery will be faster and more reliable, products will be cheaper and better, more and more emphasis will be placed on customer satisfaction and satisfaction, and so on. This also develops new ways of advertising and obtaining data, of which we have been a part for several years and includes the collection of our data from mobile devices or new ways of obtaining feedback and customer satisfaction. So there is an increasingly focused and effective advertising, there is a segmentation of consumers, which means that despite a better shopping experience, we will be the "target" of this development, and there are concerns about excessive acquisition of our private and other data, which can lead to sales and passing on our information to a third party without our authorization. Companies will use this primarily to be able to offer us ads for what they are supposed to actually need or at least be interested in based on the data collected.

The fact is that with the development of artificial intelligence and robotics we are in a transition to a new era that will further increase the comfort and life of us individuals, but we can also expect many problems that we already know or imagine that will bring us headaches. The main concern of the individual is, of course, the potential loss of employment due to the introduction of new technologies, but we are also threatened by major problems, especially the growing dependence of humanity on technology. With improper planning and preparation for crisis moments, our society

can experience serious disasters, with the development of infrastructure, the crisis of inactivity due to human or natural disasters will increase, so it is difficult to emphasize how important effective crisis management is becoming. However, the development of technology, as always, plays an important role in geopolitics, and world powers are rushing with developments that are supposed to bring them a booming economy or, which is dangerous for the world, military dominance. Countries place emphasis on the development of offensive and defensive cyber capabilities, the use of artificial intelligence in the war industry, and so on. Some countries are e.g. capable of targeting military, transport, financial and electrical infrastructure with their cyber capabilities, so in times of war, a country's economy and logistics capabilities would be disabled without the war even starting.

In any case, when talking about crises in general, it is important to first think about the worst-case scenario, but it is necessary to think differently and more positively, because the state of crisis offers opportunities for a new beginning. From this point of view, it is very interesting to follow the orientation of the richest earthlings (Bezos, Musk, Zuckerbrg...) in the following areas:

- space,
- artificial intelligence,
- longevity of people

to which they invest hundreds of millions of dollars intensively.

From a sufficiently large distance of observation, the dilemma arises as to whether these are new developmental, breakthrough ideas and technologies, or whether the elites of the richest earthlings and their tech giants they own may lead us into a digital disaster. Namely, they rely on these new technologies to solve all the problems of this planet in the future, and we humans are, in their view, just one big problem.

## **References**

- Own thoughts.

# NEW MODELS CARE FOR THE ELDERLY

Aleš Janžovnik<sup>16</sup>

## Abstract

With an advanced society people are living longer. According to the United Nations, average age of the world's population is approaching 70 years. Extending the lifespan entails different problems. A rigid system of elderly care, lack of adequate staff, inadequate funding for different institutions related to the care of the elderly, influencing the need for quality of care, which in turn leads to conditions that do not support stable aging. An additional problem is the lack of suitable rooms and very long queues. To solve this problem, urgent and comprehensive solution need to be found. The new solutions need to be inventive and suitable to the period we live in.

Related to the aging problem this research first seeks to verify the extent to which the written findings of already conducted research apply to the elderly population in Slovenia. In doing so, we are primarily interested in the extent to which these results can be applied to our environment and our population over the age of 65, taking into account the specifics of our social and social environment. The findings of the research will serve as a starting point for the development of new proposals for models of care, nursing and care for the elderly. To solve the existing problems in the field of care, nursing and protection, the problem must be solved comprehensively. New proposals for models of nursing and care for the elderly should be urgently addressing:

- a) The field of social policy and care planning.
- b) The field of spatial and urban planning in the placement of retirement homes in space.
- c) Field of building construction (modular construction, smart buildings, etc.).
- d) The field of new concepts of living (age is wisdom, old but active, old but useful, etc).
- e) The field of financing the care of the elderly (fair pay, competitive prices, etc.).
- f) The area of organization and responsibility in the management of care, nursing and protection.

The above findings and guidelines of this research are good starting point for designing new models of care. Given the situation in our country, 3 new models are

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proving to be potentially interesting and feasible, which will be presented on another occasion. All of the above solve the current problem of long-term care and represent a good alternative to today's models of care for the elderly.

## **1. Starting point of the research**

With advanced societies and economic development, the life expectancy of the population has greatly increased. Life expectancy increased rapidly from the Renaissance onwards. Estimates say that in the run-up to the Industrial Revolution, life expectancy was around 30 years in all regions of the world (UN, 2015). In the early 19th century, life expectancy began to increase in the early industrialized countries, but remained low in the rest of the world, leading to very large inequalities in the distribution of health around the world. As Roser writes, in recent decades, with globalization and the economic development of a developing country, global inequality has diminished. In the world, the average life expectancy has more than doubled since 1900 and is now about 70 years. According to United Nations statistics from 2016, the average life expectancy in highly developed and economically advanced countries in Western Europe and in Canada, Australia, New Zealand and Japan was around 82 years. In other European Union countries, in the US and economically the fast-growing countries of Europe like Turkey, in Arab counties (United Arab Emirates and as such), in counties in Asia (China, Thailand...) and Latin America (Brazil, Chile...) average life expectancy was around 76 years. In Russia, the countries of the former Russian Federation, Peru, Venezuela, Colombia, Libya, Egypt, Saudi Arabia and other economically similarly developed countries, the average life expectancy was around 71 years, in developing third world countries, including India, Pakistan, Indonesia, Kenya, Ethiopia and others around 65 years, and in other underdeveloped countries around 60 years (UN, 2015). Currently, no country in the world has a lower life expectancy than the countries with the highest life expectancy in 1800 (Roser, 2019).

Doubled life expectancy also entails certain problems and difficulties. Globalization and a different way of life have also completely changed our view of life, aging, social relations and other things around us. The fast pace of life and the modern way of functioning of society in conjunction with great competition and the desire to succeed in the global market, have led to children no longer having time to take care of their parents. The basic cell of society, the traditional family as we have known it in the past, has disintegrated. There are almost no families where 3 or even 4 generations would live under one roof, coexist and help each other intergenerationally. Because children are unable or unwilling to care for their parents or grandparents, they are forced to go to retirement homes or other similar institutions, which in many cases are only institutions that prepare the elderly, especially the disabled and seriously ill for death (Kenda et al., 2018). There are several reasons for this. One of the main ones is certainly the institutional organization of most institutions for the care of the elderly. The rigidity of the system, the lack of adequate and qualified staff and the

unsatisfactory financing of institutions in charge of the care of the elderly mainly affect the quality of the provision of care, nursing and care services for the elderly. The lack of time that would be needed to treat an individual client and the non-stimulating work environment, due to the current situation in retirement and nursing homes and all other similar institutionalized institutions (Bitanc, 2017) leads to apathy of employees, which affects the quality of service and well-being of protégés.

An extensive study conducted in the United Kingdom (Fahey et al., 2003) also found that the services provided by retirement and nursing homes are generally poor. By observing a control group of residents in old people's homes, medical care showed that medical care for the elderly, living in homes inadequate and ineffective, and that in many cases the drugs prescribed were not properly dosed. Moreover, the same study found that in many cases, protégés were prescribed unhealthy drugs, mainly due to the fact that in very many cases, the health status of the protégés was very poorly controlled. This is especially true for patients with chronic diseases. The study included 65-year-old individuals, of whom 172 individuals lived in nursing homes (study group) and 527 individuals lived in their own home (control group).

A comparative study conducted in Brazil found very similar (Teston-Ferraz, Marcon, 2014). The latter compared a group of 50 individuals who received care and nursing at home with 173 individuals who lived in nursing homes. In addition, the Brazilian study showed that at the same or similar level of care, nursing and care, the well-being of residents who received help in their own home was significantly better than those who lived in homes for the elderly. The study showed that the quality of life of senior citizens is influenced by many factors (level of care, environment, social inclusion...), and at the same time confirmed that the place of residence has a significant impact on the well-being and mental health of senior citizens.

A very similar conclusion was reached by a comparative study conducted in India (Amonkar et al., 2018). The study, which looked at the lives of 180 individuals over the age of 60, with 60 individuals living in nursing homes and the remaining 120 individuals in a home environment, found that individuals who spend their old age in a home environment are surrounded by relatives. and embedded in a familiar social environment, regardless of age, gender, and socioeconomic status, show significantly fewer signs of depression than individuals aging in nursing homes.

The importance of the relationship to the social environment for quality of life in old age has also been shown by an extensive study conducted in New Zealand (Wiles et al., 2008). Over a period of several years, it studied 83 individuals from different backgrounds and found that most senior citizens associate and positively assess quality of life with the level of social contacts and integration into the local environment, independence, their health and their social and economic status. In doing so, the quality of life, regardless of social environment and cultural differences, is very significantly influenced by adaptation to change and resilience to health

problems. As the study showed, both are much greater if the individual maintains social contacts in the local environment in which he or she lives for as long as possible. That the environment in which an individual ages is very important was shown by another New Zealand study, which dealt mainly with the question “What is the ideal environment for aging?” (Wiles et al. 2013). The study involved 121 individuals aged between 56 and 92 years. The study showed that older people primarily want choices about where, how and in what way they want to age. “On-site care”, ang. “Aging in place” as the authors of the study call it, has proven to be a very suitable alternative to other forms of aging, as aging in the home environment evokes in individuals a sense of greater attachment and connection to the social environment, a sense of security and greater homeliness. Aging in this way is also related to the feeling of one's own identity and belonging to the environment, especially through the individual's independence and the role that individuals play in the environment in which they live. The quality of life in old age is therefore more influenced by other factors than the health condition of an individual, which is further confirmed by a British study (Netuveli et al., 2008), which finds that both aging and deteriorating health of an individual have no effect on quality. The lives of the elderly, as long as this individual has the opportunity to maintain an active role in the environment in which he or she lives for as long as possible.

That aging, illness, disease-related immobility, and disability do not have a significant impact on perceptions of quality of life was also shown by a study published in the journal *Issues and Mental Health Nursing* (Guse, Masesar, 2009). This showed that for people who have been in long-term care in nursing homes, interaction with family and friends, as well as sports activities, spending free time in nature and mutual help are important for a quality life. Successful aging and its positive perception are thus closely linked to the environment in which the individual lives and the social network in which the individual is involved in his or her last period of life. The same conclusions were reached by researchers in New Jersey, who asked 53 residents of nursing homes what is key to quality aging (Ferri, James, Pruchano, 2009). Older people believe that physical activity, physical well-being, the level of social relations and perceptions of the perception of aging or mental health are important for quality aging. Successful aging has been shown to be positively associated with social support, life satisfaction, and subjective health. This was also confirmed by a study involving 18 senior citizens in order to determine the perception of observers of what is successful aging, or to determine the role of learning in the process of adapting to age-related changes (Duay, Bryan, 2006). The study showed that successful aging is positively influenced mainly by mutual and intergenerational cooperation, regular maintenance of physical and mental health of individuals, which is mostly related to sports activities of senior citizens, and financial stability. This fact is not negligible. Paul and Margret Betles (1990) in their publication *Psychological Perspectives on Success: A Selective Compensation Optimization Model* argues that successful aging is a lifelong process of maximizing profits and reducing losses of three processes: choice, optimization of choice, and appropriate compensation for choice. As the



author of the article points out, summarizing the aforementioned thesis (Freund, 2008), a person's entire life, in addition to securing offspring, is directed towards the goal of ensuring maximum financial security and independence in old age. This was also confirmed by an extensive qualitative study involving 207 people aged 65–72 who were asked how to achieve successful aging (Nimrod, Ben-Shem, 2015). The results showed that the elderly estimate that successful aging is a positive result of the resources obtained and the effort invested throughout the entire life cycle. Successful aging is a lifelong process that begins with early investment in adulthood, continues to maintain the continuity that happens in old age with changes and certain losses (retirement), and ends with various strategies for emotional management of the new condition. Individuals who have secured adequate financial stability in the run-up to retirement have been shown to be significantly more receptive to aging and the difficulties associated with it. Such individuals also live a much better quality of life in old age. The comparison between the average gross monthly pension of a Slovenian pensioner, which according to the Pension and Disability Insurance Institute (ZPIZ, 2019) amounts to just under 620€, and the average cost of accommodation in retirement and nursery homes, which according to the cekin.si web portal in 2019 were in average 705€, is it is clear that in Slovenia the average person in care cannot live a quality life.

The situation is very similar elsewhere in the world. As noted in one article in a study conducted per 100 individuals and published in the prestigious *International Journal for Policy and Research* (Deeming, Keen, 2002), it showed that today, middle- and lower-income retirees have significant difficulties in paying for their care, nursing and care services in old people's homes. The same study found that they can only afford basic services. The survey points out that the situation in this area will be significantly worse in the future and that the majority of respondents underestimate their pension income and do not understand how long-term care is financed. Most of those surveyed believe that long-term care should be paid for by the state. Similar findings were made at the International Labor Department in Geneva (Scheil-Adlung, Bonan, 2012), where they found that caring for, caring for, and caring for the elderly posed a very large financial burden, which insurance companies cover only a small portion. This poses a serious threat to the financial sustainability of the protégé and his family, so many homes for the elderly cannot afford it. Because such individuals in most cases decide to live alone, other risks may increase - isolation, insufficient control, etc. The study thus finds that in most European countries they face an inadequate and insufficient level of services, which is mainly due to the lack of appropriate and competent staff. At the same time, the authors of the article point out that the elimination of inequalities in access to care, nursing and care for the elderly and health services requires above all an integrated political approach within the broader social protection system. According to them, increasing the national level of social protection can reduce the social and economic vulnerability of the elderly. In addition, such a policy should ensure access to appropriate services, which should be

designed to focus in particular on adequate social support and financial protection for older people in a way that addresses inequalities.

All this indicates that institutional forms of assistance are not the optimal model of care, nursing and care for the elderly, and that these forms do not provide the elderly with a quality life. If we take into account the fact that in most homes for the elderly there is a great lack of space and a lack of beds, according to the Community of Social Institutions of Slovenia, 8,087 people are currently waiting for a free bed in a public or private home for the elderly or other similar institutions (SSZS, 2019). The waiting periods are from three months to several years (Huč-Uršič, 2015), so the question arises whether there are alternatives to existing models of care, nursing and care for the elderly. If we also take into account the sad statistics of deaths as a result of Covid-19 infections, which were the highest among the residents of nursing homes not only in Slovenia but also in other European countries, it is clear that the issues of long-term nursing and care for the elderly must be addressed with a quite different approach. Moreover, the mental stresses experienced by the elderly during isolation are not humanly worthy and are, in the light of future possible outbreaks of infectious diseases, something we must avoid by properly organizing and running nursing homes. As it turned out, many deaths in nursing homes were related to improper crisis management.

We must not forget the fact that older people have the idea that entering a home for the elderly is an inevitable part of life that every elderly person has to face in their last period of life. Survey responses of 250 residents of various nursing homes in the United States (Biederhan, Normoyle, 1991) showed that compared to the issue of entry into the home itself, issues related to the level and quality of care, nursing and care and the cost of services are completely irrelevant and irrelevant. Entering the home for each individual means a significant change in lifestyle, but also a change in his status. Upon entering the home, the individual becomes hierarchically equal to all other protégés, which completely destroys the individual's existing social concept. The fear of entering a home can in some cases be so great that it significantly affects the overall experience of oneself, which can lead to a deterioration of the psychological state and consequently also to the quality of life of the individual facing this fear. However, this fear can also lead to apathy and, consequently, to the individual losing the will to live. This raises the question of whether entering a home is really an inevitable part of a person's life, and whether it can be avoided. The question also arises as to whether there are alternative forms of care, nursing and care for the elderly that will not be based on the dehumanization of the individual. As can be seen from the aforementioned studies and research, the possibilities therefore certainly exist, but of course we must not forget why care, nursing and care for the elderly is necessary and what it is intended for. This is not only about creating the right conditions for good aging and the associated quality of life, but also about providing a sense of personal security (from fears associated with aging - accidents, illnesses, dying).

Taking into account the results of research, as an alternative to institutional forms of care, nursing and care for the elderly, home care in the home social environment is offered, which, like various forms of institutional care, has its drawbacks. In my personal opinion, its main drawback is that home help is also organized in an overly institutional way, which makes it quite rigid and inefficient. It is therefore more or less a solution that seeks to alleviate the problem of lack of adequate capacity, rather than a solution that would actually provide an adequate level of care, nursing and care for the elderly. In addition to the above, home care has another key problem. Unlike nursing homes, not all forms of home care provide adequate care 24 hours a day, 7 days a week. In order to enable this type of service every day of the year, a completely different model of care, nursing and care for the elderly should be developed. This raises the key issue of providing adequate, trustworthy, professional and competent staff and an appropriate organizational model that would be able to provide a comprehensive level of care at the appropriate quality level and at an appropriate price that can be afforded by individuals with lower and middle income. However, other issues remain open. Older people are one of the most vulnerable groups in our society. Precisely for this reason, older individuals can be quick targets of various abuses and attacks. A study conducted years ago by the Australian Institute of Criminology (Pinkerton-James et al., 1992) found that a person over the age of 65 is less likely to be a victim of crime than such a victim. persons, but this does not mean that older people are not victims of various crimes. Statistics show that the crimes in which the elderly are involved as victims are on the rise. The results of a study by the aforementioned Australian Institute show that the elderly is in most cases victims of assault, abuse and crime of neglect and neglect. As research has shown, attacks most often manifest themselves in the form of robberies, thefts and thefts both on the streets and in their own homes. The latter are common especially in cases where the elderly live alone. Abuses of the elderly are most often manifested in the form of psychological, physical or economic violence, the latter being mainly reflected in the underestimation of the elderly and consequently in unequal conditions regarding loans, purchase of real estate and movable property and various financial frauds. It is these facts that arouse fear in the elderly. Fear of being a victim of violence, intimidation, harassment, and fear of having their own property, which they associate closely with their own independence. There is also a strong fear among the elderly that they will be forgotten and excluded from the social environment (Pinkerton-James et al., 1992).

With age, the organism also declines, which also leads to many health problems. In addition to fear of collapse, cardiac arrest, and other health problems, fear of falls and related injuries is also one of the greatest fears of the elderly (Pinkerton-James et al., 1992).

In order to ensure the best and most dignified life for older people outside the existing institutional framework, to address issues related to older people's fears and to ensure a safe environment in which older people receive quality care every day of

the year when they need it, different forms need to be found. care, nursing and protection. One of the potential possible solutions is offered by modern technologies and modern communication channels. With technology, care, care and protection of the elderly at home can be provided in the home environment in several ways (Ruggiero, Sacile, Giancomini, 1999). With various technological solutions it is possible to passively monitor all events in one's own home (apartment or house) with the help of devices and sensors and actively measure individual parameters of the living environment (temperature, humidity...), as well as individual parameters and vital signs of an individual. heart rate, respiration, level of agitation...). He emphasizes that all technological solutions must be such that they are easy for users to use and that they are acceptable to both medical staff and users. The latter means that the technological device must be designed to perform the specific function for which it was designed, while allowing a third party (doctor) to monitor the operation of the device and the condition of the user. It is therefore important that the devices are safe, easy to use and operate, reliable and affordable. It is also essential that these do not replace man. According to the author, the introduction of a home care system requires significant changes in the organization of care, nursing and care for the elderly, as the introduction of this technology is not just about data transfer. The data obtained at a distance must be analysed, interpreted appropriately and, in accordance with the interpretation of the data, also reacted appropriately when a discrepancy is found to occur. According to the author, the most important aspects of home care are appropriate organization of care and training, coordination and management of staff and their competencies (Mayer et al. 2001), maintaining and improving the quality of care, improving the quality of life of the elderly and continuous technology development. competition in the market. Technology is currently one of the fastest growing areas of healthcare.

Although many older people are afraid of modern technology due to their ignorance, this cannot be a reason not to use it, as modern technology can make life much easier for the elderly. This is confirmed by numerous studies. A pilot study conducted by a team of scientists from the University of Pennsylvania (Demiris, Hensel, 2009) showed that older people can benefit from the use of modern technology, especially when it comes to call-to-call technology, the panic button, monitoring and prevention of falls due to nausea, dizziness or heart attack and control of various vital body parameters (heart rate, body temperature...). Most of the 15 participants had a positive attitude towards the devices and sensors that were installed in their apartments as they improved their sense of security. In connection with the smart house-the elderly, today there is already a considerable range of equipment and applications that can improve the quality of life of individuals who have decided to spend the last period of their lives in the comfort of their house or apartment. As Dimiris (2013) states in his second article, quite a few projects are underway around the world to upgrade apartments and houses into smart living spaces for the needs of the elderly. Most of the projects are related to the monitoring of bodily functions, followed by safety monitoring projects, projects for psychological monitoring,

projects to support motor and sensory functions, and projects to increase social interaction and connection with the social environment. All other projects are less numerous. The author notes that the development of technology is on the rise, and that more and more devices and applications for smartphones and tablets are also appearing on the market. At the same time, the author points out that many technical and technological issues are open to the field of technology, and that we must be very predictable when introducing such technologies. Namely, the mentioned technology strongly interferes in the private sphere, which opens up questions related to ethics and morals of such actions. Technology also always allows for various types of abuse, among which hackers have recently become more likely to intrude into device systems.

In order to meet the needs of the market and provide an adequate number of capacities for providing care and protection of the elderly, while providing the elderly with quality services and decent aging, it is not enough to build new retirement homes or to change the policies (the Long-Term Care Act for the Elderly) and financing of institutions, who take care of the elderly. In the light of the current problems in the field of care for the elderly (Pristavec-Dorič, Eror, 2013) (Kavšek, Erman, 2015) and the existing Slovenian construction and environmental legislation (GZ, 2017) (ZUreP-2, 2017) with which very long procedures for the adoption of spatial acts and processes for the preparation of project documentation, which form the basis for the construction of homes for the elderly, it is necessary to find new innovative solutions and approaches (models) of care, nursing and care for the elderly.

## **2. Purpose and objective of the research**

### **2.1. Purpose**

Related to the introductory discussion of the problem, this research first seeks to verify the extent to which the written findings of already conducted research apply to the elderly population in Slovenia. In doing so, we are primarily interested in the extent to which these results can be applied to our environment and our population over the age of 65, taking into account the specifics of our social and social environment. The findings of the first part of the research will serve as a starting point for the development of new proposals for models of care, nursing and care for the elderly. To solve the existing problems in the field of care, nursing and protection, the problem must be solved comprehensively. Solving the problem must take place at the general, strategic level (top to bottom approach) as well as at the fully operational level (bottom to top approach). In order to develop the best possible strategy of nursing and care for the elderly on the basis of operational knowledge, it is not important that the profession cooperates well with decision-makers (vertical integration), but it is very important that different professions at the operational level horizontally linked (Kenda et al, 2018). As the authors of the papers and discussions

in the collection *Seniors as Present and Future of Society* note, these connections are not the best at the moment, so good and appropriate coordination of all involved would be necessary for the operation of the system. In our opinion, good and appropriate coordination alone is not enough to solve the problem of care, nursing and care for the elderly in a comprehensive way. New proposals for models of nursing and care for the elderly should be urgently addressing:

- a) The field of social policy and care planning.
- b) The field of spatial and urban planning in the placement of retirement homes in space.
- c) Field of building construction (modular construction, smart buildings, etc.).
- d) The field of new concepts of living (age is wisdom, old but active, old but useful, etc).
- e) The field of financing the care of the elderly (fair pay, competitive prices, etc.).
- f) The area of organization and responsibility in the management of care, nursing and protection.

The first part of the research presented in this article provides a starting point for designing new models of care for the elderly. Based on the cross-section of the existing situation, individual characteristics of Slovenian population and preferences and wishes of the elderly new models of care and nursing for elderly will be proposed. The preferences and wishes of individuals are determined based on a survey from which we take the preferences of individuals over the age of 45 to design models. In the second part of the study which has not yet been implemented, the feasibility and applicability of the proposed new models of care will be carried out.

## **2.2. Goal**

The basic goal of the research is to create a realistic and practical proposal of a new model of nursing and care for the elderly, which would at least partially solve the existing problems in the organization and provision of quality care and the lack of adequate capacities and facilities for social services, and which would provide faster and easier access to services for nursing, care and protection of the elderly, and above all significantly reduce the financial burden on the budget for service users.

## **3. Hypothesis**

Our thesis is that the situation in Slovenia shows a similar picture as studies presented at the beginning of this article. At the same time, we argue that on this basis first part of this study it is possible to design proposals for new models of care for the elderly, which will be an alternative to existing models.

## 4. Work methodology

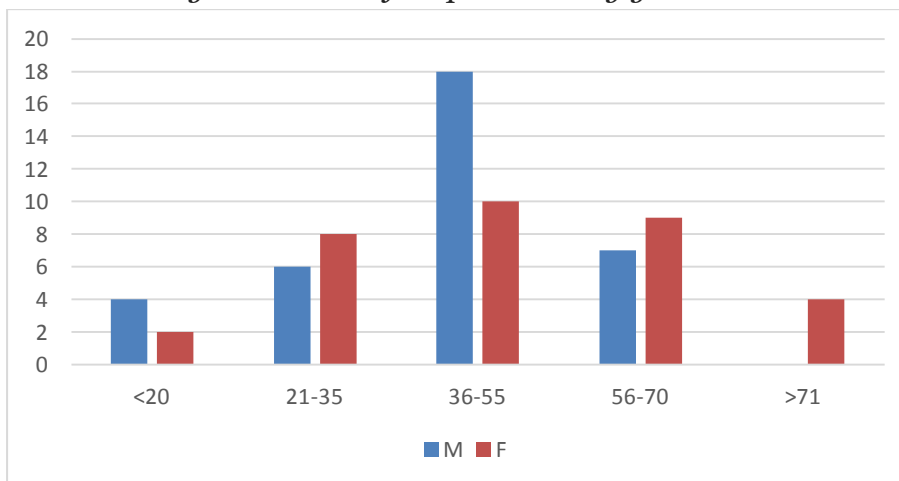
The article presents the results of survey which was published 1KA online platform between 01. 06. 2019 in 01. 09. 2019 on and in which 68 respondents participated. In the survey, we were mainly interested in the following:

- Where would individuals prefer to age, at home or in an institution?
- If a person wanted to age at home, what would they prefer to choose for their home (apartment/house)?
- What kind of environment would an individual want to live in?
- What, in an individual's opinion, would be the most optimal home size for an elderly person?
- What does an individual find important when it comes to care, nursing, protection?
- To what extent do individuals use modern technology?

## 5. Results

68 people took part in the survey, of which 35 were men and 33 were women. According to the age structure, the elderly population predominates (71%), which is good for the research itself, as this is the part of the population that is already retired or is slowly preparing for the retirement and therefore has already formed its own opinion about aging. This, however, is what we need if we want to get the right perspective on quality aging.

*Feature 1: Age structure of respondents by gender.*



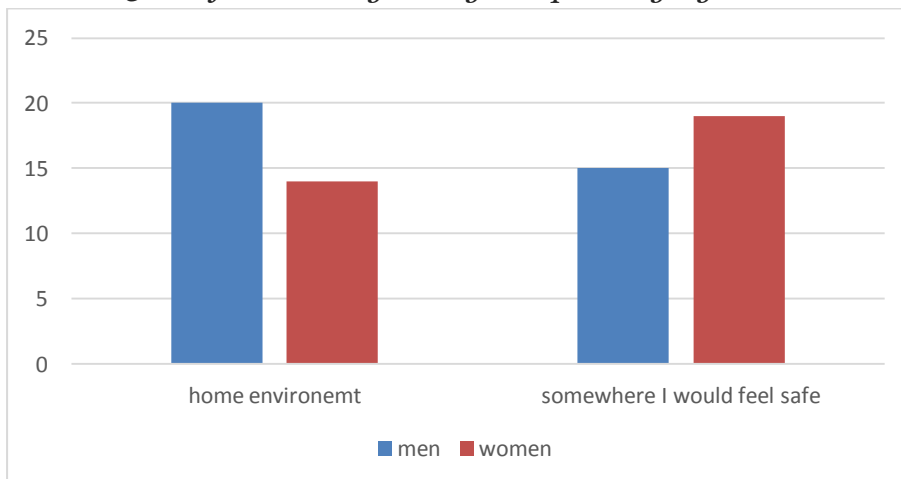
If we look at where the respondents would like to spend their old age, we see that Slovenians would like to enjoy their old age in their own home. Only 26% of respondents would like to spend the last period of their lives in a home for the elderly. As can be seen from the graph below, most of them would like to grow old in their own apartment or house. This is true for both men and women.

*Feature 2: Accommodation preferences by gender.*



The results regarding the preferences of the environment in which individuals would like to age are very interesting. Most men would rather age in the environment in which they lived and which they know well. Women, however, would prefer to move to an environment where they would rest more safely. As we will see later, women would significantly prefer to move somewhere closer to relatives, as this gives them a greater sense of security.

*Feature 3: Preferences regarding adequate aging environment by gender.*



If we look at the above results from the point of view of education and economic status of the individual, we find that the answers do not differ significantly from the results shown. Regardless of the choice or status of the individual, most respondents want to age in their own apartment in the house, and in this case, too, men prefer a home environment, and women an environment in which they feel safe. Education and economic status come to the fore as it comes to determining the optimal unit size that seems appropriate for an individual's last period of aging. When we compared



two variables with the method of determining relationships, namely the size of the accommodation unit and the education of the surveyed individuals, we found that the surveyed individuals responded to certain answers less than 5. Since it is not possible to make an analysis in this way, we combined data for both variables. In the question related to the optimal size of the unit, instead of three categories (<27 m<sup>2</sup>, between 28-54 m<sup>2</sup> and > 54 m<sup>2</sup>) we got two categories, (up to 27 m<sup>2</sup> and over 28 m<sup>2</sup>) and in the question related to education only primary school, secondary combined school and vocational education into the category of lower education, and higher, higher and scientific titles of master and doctor into the category of higher education. The recalculation gave the following data.

Table 1: Chi-square test (SPSS).

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,714a	1	,054		
Continuity Correction <sup>b</sup>	2,835	1	,092		
Likelihood Ratio	3,747	1	,053		
Fisher's Exact Test				,046	,046
Linear-by-Linear Association	3,660	1	,056		
N of Valid Cases	68				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 15,04.

b. Computed only for a 2x2 table

Table 2: Optimal size of the accommodation unit according to education (SPSS, Chi-square Test).

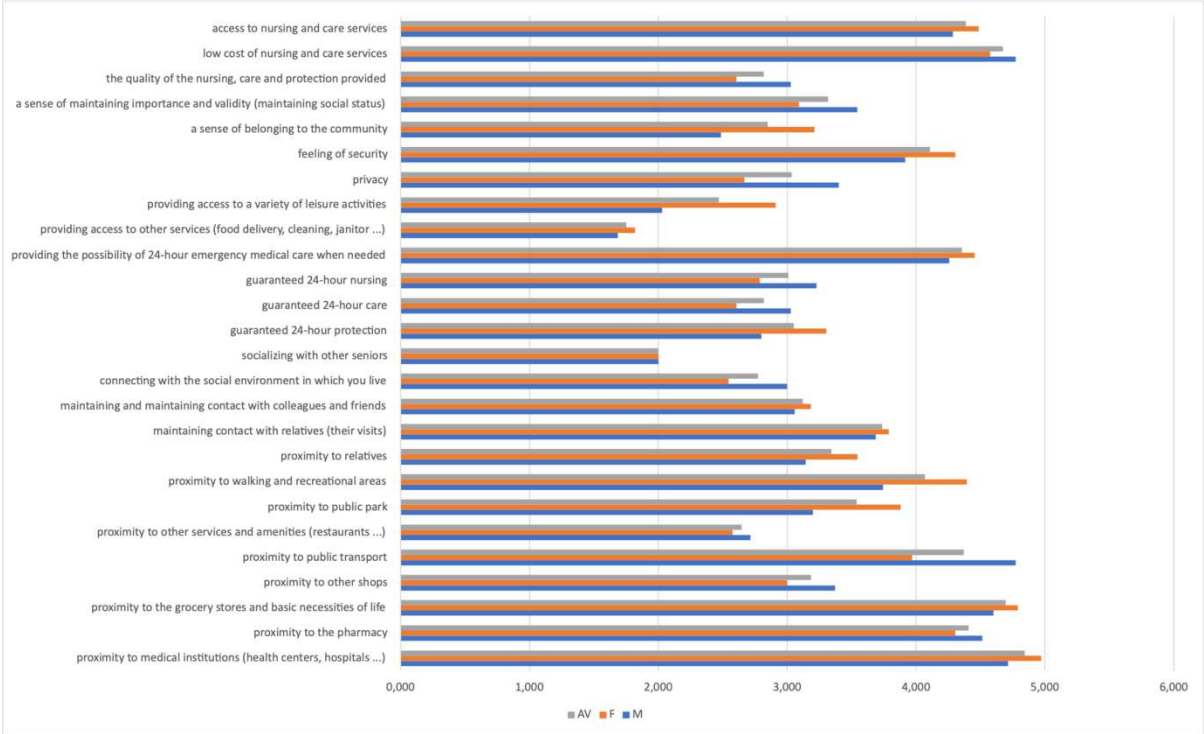
Unit size		Lower education	Higher education	All together
Up to 27 m <sup>2</sup>	Count	<b>23</b>	12	35
	% of total	<b>33.8%</b>	17.6%	51.5%
Over 28 m <sup>2</sup>	Count	14	<b>19</b>	33
	% of total	20.6%	<b>27.9%</b>	48.5%
All together	Count	37	31	68
	% of total	54.4%	45.6%	100.0%

As can be seen from the table, the surveyed individuals with lower education believe that the optimal size of the living unit, apartment or house in which they want to spend their age is up to 27 m2 (23; 33.8%). The surveyed individuals with higher education believe that the optimal unit is suitable for aging larger than 28 m2 (19; 27.9%). As the Fisher’s Exact Test shows, the differences are statistically different because the sig. 0.046.

This result is not a surprise, as the higher educated tend to have a better economic status and therefore they live in larger properties. Consequently, they also believe that a larger living unit is more optimal for living in old age.

In terms of what is important for good living age, the results showed the following.

*Feature 4: Key elements and factors for quality old age by gender.*



The graph in the figure above shows the average of all respondents' responses on the 5-point Likart scale (Likart, 1932). On our scale 1 means that the think is not important and 5 means that the think is very important. In our survey the question was to what extent the following is important for quality aging. As can be seen from the average of the answers, respondents believe that it is very important for quality aging that the elderly live near health facilities and pharmacies, that in their proximity they are grocery stores, that the individual has access to public transport and recreational areas, that elderly maintain contact with relatives, that when something happens health wise emergency medical assistance can be immediately provided and that elderly person feels safe in the environment in which individual lives. They also consider it very important that, in case person is not able to care for

itself anymore they have guaranteed access to assistance (nursing and care) and that the price of this service is as cheap as possible.

As we mentioned in the introduction to this discussion, women would prefer to move closer to their relatives in the last period of their lives, which is also confirmed by the analysis below.

*Table 3: Test of normal distribution of values in samples.*

Answer the questions	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Proximity to medical institutions	,507	68	,000	,443	68	,000
Close to grocery and basic necessities for life	,438	68	,000	,581	68	,000
Proximity to other shops	,246	68	,000	,805	68	,000
Proximity to public transport	,405	68	,000	,638	68	,000
Proximity to relatives	,427	68	,000	,624	68	,000
Socializing with other seniors	,264	68	,000	,749	68	,000
Guaranteed option of 24-hour care	,224	68	,000	,846	68	,000
Guaranteed possibility of 24-hour protection	,421	68	,000	,653	68	,000
Option 24 emergency medical care provided when needed	,265	68	,000	,688	68	,000
Guaranteed access to other services	,321	68	,000	,760	68	,000
Guaranteed access to various leisure activities	,333	68	,000	,829	68	,000
Availability of care, nursing and care services (ASAP)	,372	68	,000	,676	68	,000

a. Lilliefors Significance Correction

*Table 4: Total analysis statistics (SPSS, Mann Witheny Test).*

Gender		N	Mean	Std. Deviation	Std. Error Mean
Proximity to relatives	Men (M)	35	3,14	,355	,060
	Women (W)	33	3,55	,617	,107

Table 5: Independent sample test (SPSS, Mann Withney Test).

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Proximity to relatives	28,562	,000	3,322	66	,001	-,403	,121	-,645	-,161	
Equal variances assumed			3,272	50,470	,002	-,403	,123	-,650	-,156	

Table 6: Importance of contact with relatives in different genders (SPSS, Mann Witheny Test).

Gender	N	Average	Standard deviation	Sig
Proximity to relatives	Men (M)	35	3,14	0,001
	Women (W)	33	3,55	

The table shows that proximity to relatives is significantly more important for women than for men, which is evident from both the average of the answers and the standard deviation.

As we can see, the importance of maintaining contact with relatives is very important for the elderly. To make it easier to plan long-term care for the elderly, it makes sense to look at whether access to public transport and the fact that an elderly person who is still fit and can visit their relatives, reduces the need for closeness. With this we do not mean personal contact, but the remoteness of the elderly person's place of residence, which gives the feeling that the elderly person that he is close to someone who can quickly come to his aid in the event if something happens to them. To

determine the links between access to public transport and contacts with relatives, a regression analysis was performed, which showed the following.

*Table 7: Included variables (SPSS, Regression Test, Enter method).*

Model	Variables Entered	Variables Removed	Method
1	Proximity to public transport		Enter

- a. Dependent Variable: Contacts with relatives
- b. All requested variables entered.

Contacts with relatives were determined as a dependent variable, and the proximity of public transport as an independent variable.

*Table 8: Model summary (SPSS, Regression Test).*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,815a	,665	,660	,312

- a. Predictors: (Constant), Proximity to public transport

*Table 9: ANOVA (SPSS, Regression Test).*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	12,780	1	12,780	130,978	,000b
Residual	6,440	66	,098		
Total	19,221	67			

- a. Dependent Variable: Contacts with relatives
- b. Predictors: (Constant), Proximity to public transport

*Table 10: Calculation of coefficients (SPSS, Regression Test).*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5,510	,193		28,477	,000
Proximity to public transport	-,495	,043	-,815	-11,445	,000

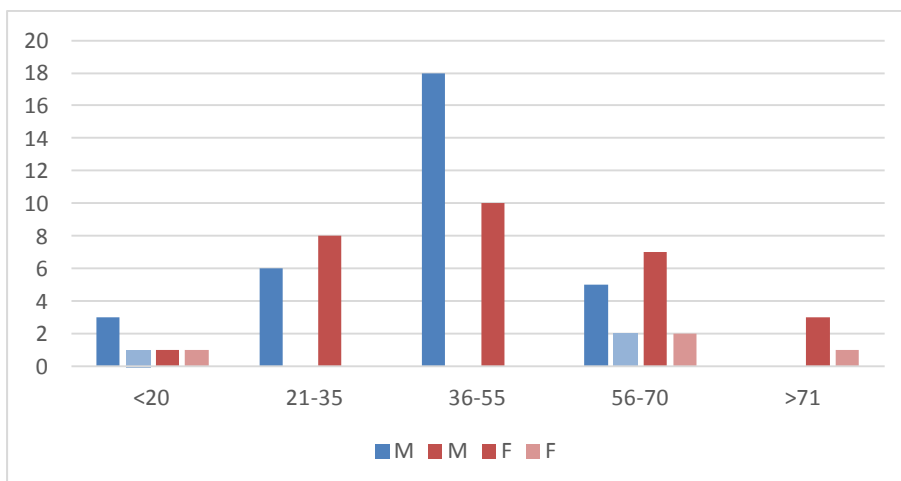
- a. Dependent Variable: Contacts with relatives

The regression model according to the method Enter explains 66.5% of the variability of the dependent variable – in our case contacts with relatives. We found that there is a negative impact between contacts with relatives and the proximity of public transport. This means that the proximity of public transport reduces the importance of maintaining contact with relatives in the elderly.

The last very important issue is the use of modern technology. This can have a significant impact on the care of the elderly in the future, and at the same time can significantly improve the quality of aging. If we look at the graph in Figure 5, we see that most of the naked ones use modern paths. As we can see, the older generations, with the exception of some elderly people, use at least a mobile phone. Of these, more than 60% have smart phone users.

This is very important, as providers are already offering distance medical care on the Slovenian market.

*Feature 5: Use and non-use of modern technologies in different age groups of men and women.*



## 6. Discussion and conclusions

Based on the partial results of the survey, we can say with certainty that the preferences of Slovenes are very similar to the preferences perceived by research abroad. Here, too, individuals want to spend their old age in the comfort of their home and in an environment that they know well and feel safe in. In doing so, it is very important for them to keep in touch with relatives. As we have found, a good traffic connection between the place of residence of the elderly person and the place of residence of relatives is very important. It is especially important that the locations where the elderly live are well equipped with public service and public transport. This is very important, as the feeling of greater mobility reduces the feeling of loneliness.

As shown in this article, for quality aging respondents find it particularly important that the elderly have adequate service available in the environment in which they live.

They find it particularly important to be close to a health facility, pharmacy, grocery store, and outdoor areas where seniors can engage in daily recreation. If there are no medical facilities nearby, it is very important that the individual has access to medical care 24 hours a day. This is exactly what makes individuals feel safe.

The survey also showed that a large proportion of individuals, regardless of age, already use modern technologies, which is encouraging. It should not be forgotten, however, that only computer-literate individuals were included in this survey, as the test survey was initially published only in online form. This means that it was met only by individuals who are already skilled in the use of modern technology. When the survey is conducted on a larger scale and also with classic questionnaires, this ratio is likely to change slightly.

At this stage, the research does not yet make a significant contribution to theory and practice, as the survey sample is not twofold, but it indicates the direction in which the proposals for new models of nursing and care will be considered. Based on the findings of research studies from abroad and the previous findings of the survey, from the point of view of long-term care for the elderly, it is necessary to think in the direction of de-institutionalization of care for the elderly. As already mentioned, the current model of care in nursing homes is too rigid. Prescribed standards of care and inadequate funding, however, represent a major financial burden for service users. The new models of care should thus go in the direction of creating smaller care units that will be more manageable, but above all more humane and user-friendly. We have in mind homes with a smaller number of beds or specialized settlements in which only parents of different age groups will live. Regarding small settlements, special communities would be formed within which the more vital elderly could help the less vital in certain tasks. This ensures two. Even in the last period of their lives, individuals would live in the same way as they did before retirement. The feeling that they are part of society would give them motivation to insist on an active lifestyle (quality aging) for a long time.

In the case of smaller homes for the elderly (apartment blocks) as well as in specialized settlements, the entire care service would be included in the service, and the service would be paid according to the service actually provided. The scope of service provided by individual service providers would of course be dependent on the needs of the individual. Individuals who would be more independent would pay less or just small fee for the coordinator, and individuals who would need more assistance would pay more. In this way, according to our calculations, the monthly cost of care for some individuals could also be halved. The management and coordination of care for the elderly would be taken carried out by the service manager. Nursing and care service itself would be performed by contractors who would prove their professional competence with their references and previous work before starting work.

The main condition, of course, is that individuals in such settlements feel safe. In doing so, we have safety in the event of any health problems or injuries in mind. Here, modern technology comes to the front, which enables constant monitoring of individuals, whether it is the control of vital organ functions or the control of movement around the apartment or house.

The above findings and guidelines are a good starting point for designing new models of care. Given the situation in our country, 3 new models are proving to be potentially interesting and feasible, which will be presented on another occasion. All of the above solve the current problem of long-term care and represent a good alternative to today's models of care for the elderly.

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# **BUSINESS PROCESS DYNAMICS AND ORGANIZATION MANAGEMENT IN TIMES OF COVID-19 CRISIS**

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## **Abstract**

The 2020 global pandemic crisis has caused, among other things, enormous difficulties in organizational processes and has shifted all business processes into a virtual dimension. One of the biggest challenges for employers has been the issue of establishing new ways of carrying out business processes in these extraordinary circumstances. Business processes are being relocated and set in a virtual environment. At the same time, in addition to the challenges of setting up and relocating business processes, there arose a need to regulate the proper functioning of such work. Regulating the rights and obligations of employers and workers in the conditions of extraordinary dynamics of business processes has become a challenge for all stakeholders in the economic system. This paper presents the main limitations, the legal framework and the challenges related to the management and organization of business processes which organizations had to face during the pandemic; it also describes the most important measures to support employers during the COVID-19 crisis.

## **1. Introduction**

Besides providing us with the benefits of technological development and globalization, modern world has also become increasingly complex, insecure, and exposed to various challenges that directly or indirectly create conflicts and open up various crisis hotspots that require adequate responses and mechanisms to protect

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national security, primarily the security of citizens. Conceptually, crisis means a disorder, disruption or danger that implies an initial difficult state in any natural, social, and cognitive process. If we try to point out the ontological meaning of the word crisis (why something is exactly what it is), then it undoubtedly implies the need or importance of decision-making, which is the key element of crisis management and is related to making timely decisions that will enable life, work, and business to run smoothly and without disruption. However, the question arises how to respond to unforeseen crises such as natural disasters, catastrophes, infectious diseases, and the like. These are crises in which it is difficult or almost impossible to prevent the causes, so the focus in decision-making is on repairing the damage, i.e., crisis management needs to ensure that the situation has as few harmful consequences as possible. Democratic states are obliged to respond to all possible risks with adequate measures to protect their citizens, i.e., to undertake activities that will reduce the fear of the occurrence of a risk and create a positive feeling among citizens in counteracting the risks. In this sense, policy makers and others involved have an obligation and responsibility to ensure safety of citizens through the various instruments and activities at their disposal. The corona virus has put the whole world to the test and, due to its unpredictability, created an extraordinary public health emergency. Public authorities have been faced with the challenge of saving people's lives, but also ensuring the functioning of the economy and sources of income. Due to the unpredictability of the situation imposed by the pandemic and the necessity of taking urgent measures, a need for a radical change in the overall social structure was created and issues of the structure and functioning of the security system were raised. "Modern security policy is interpreted as the technology of governing and managing social and political challenges arising from threats and risks. Risks are "known" variables of the complex security issue that can be managed, which moves modern security policies and practices from traditional threats to territorial integrity and sovereignty towards risks that simultaneously threaten the individual, the society, and the state (the established political order and governance). In such a context, the implementation of security also requires a new way of governing, where a situation may arise in which the state will suspend the polity by applying emergency measures. This does not necessarily happen only in cases prescribed by the constitution and regarding emergencies of an imminent threat of attack and the attack on the country itself, but they can also be applied in other situations if the risk demands it. ... The latest example is the emergence of the COVID-19 virus pandemic, which in many countries around the world has imposed numerous restrictions on daily activities to prevent the spread of the virus and potential catastrophic consequences for citizens, the public health system, and the state (especially the economic system). Citizens' support of security practices which the state carries out to prevent serious consequences is important, because suspension of rights and restrictions of daily activities always raise fears that democratic procedures and institutions may be jeopardized, i.e., that preconditions for continuous suspension of civil liberties and human rights may be created. Accountable states should bear this in mind and be aware that any form of suspension and restriction can cause security practices to slip

in an undesirable direction and establish security mechanisms that will cause even greater fear (of the state and its actions) among citizens, and possible adverse reactions (protests, non-compliance with bans, etc.). "<sup>20</sup>

With the escalation of the pandemic, the usual established business activities suddenly had to be altered, which caused numerous difficulties for all those who perform them. In times of fear and concern for people's health, new forms of business had to be defined; these forms had to take into account sudden adjustments and additional costs for employers caused by reduced resources due to frequent sick leave of employees.

The sudden transition to new working conditions also stressed the need for legislators to regulate work in emergency situations, while regulating the rights and obligations of both an organization's employers and employees.

## **2. Legal aspects of the organisation of work in emergency situations**

There has been a heated debate in Croatia regarding the restrictive measures taken by the Government of the Republic of Croatia in an attempt to stop the spread of the infection caused by the COVID-19 virus. Namely, this controversy has additionally been "fuelled" by the disagreement of various experts: lawyers, economists, doctors, sociologists, psychologists, and others. This consequently inspired additional fear among citizens who have become doubtful of the Government's readiness to solve an already complex problem. Special responsibility lies with the media, who often look for sensations and further spread fear and doubt about the readiness to face the risk caused by the pandemic.

Before commenting on the dilemma regarding this issue, it is necessary to point out some theoretical legal assumptions. When trying to define a legal norm, first we need to consider the nature of a legal norm. Namely, in the very beginning, it is necessary to make a distinction between a legal norm and the natural law and the notion of just or "normal". Abstracting Kelsen's normative theory<sup>21</sup> we can say that all other perspectives on the nature of law and legal norms have an immanent view that between the emergence of the positivity of a legal norm and the onset of behaviour regulated by it, there is a period during which a person can choose whether to act accordingly or not. However, this freedom of choice is conditioned by several economic, political, cultural, psychological, health and other factors. Therefore, we cannot say that the legal norm and the natural law or "normal" are one and the same from the point of view of the autonomy of will. This stems from the very definition of the legal norm as a rule on human behaviour, which is protected by the possibility of applying state coercion. After all, the starting point of law is illegality; law sets

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<sup>20</sup> Mihalinić, M.; *Suvremena sigurnost, novi rizici i razvoj preventivnih modela kriznog upravljanja u Republici Hrvatskoj*, doctoral thesis, The Faculty of Political Science in Zagreb, Zagreb, 2020, p.7

<sup>21</sup> Kelsen, Hans (2003), *Problem suverenosti i teorija međunarodnog prava*, Belgrade

standards to those social relations that are especially important for the social community and that can potentially produce conflicts. The existence of legal certainty as a precondition for the rule of law requires the dominance of legal norms whose content is not subject to any further interpretation and explanation. If in a certain legal relationship there is a need for additional explanation, interpretation, or implementation injunction, or if it is open to numerous possibilities of action, then the legality of acts and affairs could be subject to determination by a political factor. When we talk about the need for a larger number of legal norms that have categorical dispositions, we hold that we should be aware of the fact that the legal system cannot be established only by these norms, and that there is no norm that can fully determine a particular social relationship. There are no norms for behaviour and actions in emergency situations, and what is more, no universal manual has ever been written for such situations. Adjustments of individuals in different areas of life and work depend on the type of danger, the specific situation, the incident or the observed problem, and the consequences that result from either of these. Thus, there is no absolute legal positivism because it is impossible to predict all life situations and to define in advance and prescribe appropriate rules of conduct at a critical moment. Crisis situations usually arise from conflicts and (natural) disasters or accidents. We bear witness to the fact that no one has (so far) answered the question as to where the beginning, i.e., the cause of the pandemic lies, and when it will end. True, there are different interpretations, scientific and unscientific, but the material truth is not yet available to the public. Therefore, policy makers have a great responsibility in identifying (defining) problems, making decisions, implementing, and applying adequate measures and procedures in combating this pandemic. Therefore, Mihalinić is right when she states in her doctoral thesis the following: “The reconceptualization of security policies today takes place through the gradual or complete abandonment of concepts based on threats to sovereignty and integrity (threat-based concept) and the development of new ones aimed at risk analysis (risk-based concept), as well as through the development of new security structures. Conceptual changes require reforms that are extremely complex for democracies because they are under great pressure from two essential principles: efficiency and accountability.”<sup>22</sup>

### **3. Normative-legal regulations related to COVID-19**

The pandemic of the disease caused by the COVID-19 virus raised the issue of the so-called "state of emergency", i.e., it provoked the discussion and doubts regarding the question of how to constitutionally qualify the circumstances of the COVID-19 pandemic. Namely, legal experts, but also the general public are in doubt about whether we are currently in a state of emergency caused by a “major natural disaster” or not. The answer to this question defines the legal framework within which the

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<sup>22</sup> Mihalinić, M.; *Suvremena sigurnost, novi rizici i razvoj preventivnih modela kriznog upravljanja u Republici Hrvatskoj*, doctoral thesis, The Faculty of Political Science in Zagreb, Zagreb, 2020

government can adopt and implement measures against the existing epidemic.<sup>23</sup> The doubts are directed towards the interpretation of Articles 16 and 17 of the Constitution of the Republic of Croatia, which read as follows:

Article 16: “(1) Freedoms and rights may be restricted only by law in order to protect the freedoms and rights of others and the legal order, public morals and health. (2) Any restriction on a freedom or right must be proportionate to the nature of the need for the restriction in each individual case.”

Article 17: “(1) In times of war or imminent threat to the independence and unity of the state, as well as in times of major natural disasters, certain freedoms and rights guaranteed by the Constitution may be restricted. The Croatian Parliament decides on this by a two-thirds majority of all deputies, and if the Croatian Parliament cannot meet, the President of the Republic makes the decision at the proposal of the Government and with the co-signature of the Prime Minister. (2) The scope of the restriction must be appropriate to the nature of the danger and may not result in inequality of persons with regard to race, skin colour, sex, language, religion, national or social origin. (3) Even in the event of an imminent threat to the survival of the state, the application of the provisions of the Constitution on the right to life, the prohibition of torture, cruel or degrading treatment or punishment, the legal determination of criminal offenses and punishments, and freedom of thought, conscience, and religion may not be restricted.”<sup>24</sup>

The content of Article 16 and Article 17 encourages opposing views and raises doubts among constitutional legal experts regarding the constitutionality and legality of the use of legal procedure in imposing measures relating to the restriction of human rights in order to protect human health. Further to the harmonization of positions related to the adoption of measures of the National Civil Protection Headquarters related to the suppression of the COVID-19 pandemic, the Constitutional Court at its session held on 14 September 2020 rejected almost all proposals for constitutional review related to decisions of the National Civil Protection Headquarters, except for those related to the ban on Sunday shops. The Constitutional Court assessed that the stated measures had a legitimate goal, protection of the life and health of citizens, and were necessary to achieve that goal.

Decisions of the Civil Protection Headquarters of the Republic of Croatia for the prevention of the spread of coronavirus infection are based on the Act on the Protection of the Population from Infectious Diseases "Official Gazette", no. 79/07, 113/08, 43/09, 130/17, 114/18, 47/20 and 134/20) and the Civil Protection System Act (MM number: 82/15, 118/18, 31/20). In the preamble to the Decision of the Civil Protection Headquarters, the legal basis is Article 47 of the Act on the Protection of

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<sup>23</sup> more on this topic in: Gardašević, Đ. (2020) Pandemija i Ustav Republike Hrvatske, Informator no. 6623, Zagreb, 2020

<sup>24</sup> Ustav Republike Hrvatske (Official Gazette, No. 85/10 - consolidated text), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2010\\_07\\_85\\_2422.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2010_07_85_2422.html), (11/03/2021)

the Population from Infectious Diseases and Article 22a of the Civil Protection System Act, which are listed below:

Article 47 of the Act on the Protection of the Population from Infectious Diseases states: In order to protect the population of the Republic of Croatia from entry of cholera, plague, viral haemorrhagic fevers, yellow fever, COVID-19 disease caused by SARS-CoV-2 virus and other infectious diseases, measures are taken determined by this Act and international agreements to which the Republic of Croatia is a party. In order to prevent and control infectious diseases referred to in paragraph 1 of this Article, at the proposal of the Croatian Institute of Public Health, the Minister may order special safety measures to protect the population from infectious diseases: 1) implementation of mandatory anti-epidemic disinfection, disinsection and deratization; 2) establishment of quarantine; 3) a ban on travel to a country where there is an epidemic of the disease referred to in paragraph 1 of this Article; 4) prohibition of movement of persons, i.e., restriction of movement in infected or directly endangered areas; 5) restriction or prohibition of trade in certain types of goods and products; 6) mandatory participation of health care institutions and other legal entities, private health care workers and natural persons in disease control; 7) prohibition of the use of facilities, equipment and means of transport; 8) isolation of persons in their own home or other appropriate space - self-isolation; 9) the obligation to properly wear a face mask or medical mask; 10) prohibition or restriction of holding public events and/or gatherings; 11) prohibition or restriction of holding private gatherings; 12) other necessary measures.

In the cases referred to in paragraph 1 of this Article, the Minister may also propose a ban on entry into the Republic of Croatia to persons coming from areas where there is an epidemic of infectious diseases who do not have a valid vaccination certificate, or when it is in the interest of public health. When, in accordance with Article 2, paragraphs 4 and 5 of this Act, an epidemic of a contagious disease or danger of an epidemic of infectious disease has been declared in relation to which the World Health Organization has declared a pandemic, i.e., an epidemic or danger thereof, the Civil Protection Headquarters of the Republic of Croatia may, in cooperation with the Ministry of Health and the Croatian Institute of Public Health, issue a decision ordering the security measures referred to in paragraphs 1 to 3 of this Article. Decisions of the Headquarters are made under the direct supervision of the Government of the Republic of Croatia. For the purpose of implementing a safety measure for the protection of the population from infectious diseases, the persons referred to in paragraph 2, item 4 of this Article shall be entitled to compensation, unless the preconditions referred to in paragraph 4 of this Article are met. The amount of the fee as well as the criteria for determining the fee referred to in paragraph 4 of this Article shall be determined by the Minister with the consent of the Minister responsible for finance. The security measures referred to in paragraph 2 of



this Article ordered by the Minister and the Civil Protection Headquarters of the Republic of Croatia shall be published in the Official Gazette. "<sup>25</sup>

Article 22a of the Civil Protection System Act states: "(1) In the event of special circumstances that imply an event or a certain situation that could not have been foreseen and could not have been affected, and which endangers the life and health of citizens, endangers valuable assets, significantly impairs the environment and economic activity or causes significant economic damage, the Civil Protection Headquarters of the Republic of Croatia makes decisions and gives instructions implemented by the civil protection headquarters of local and regional self-government units. (2) Decisions and instructions referred to in paragraph 1 of this Article shall be implemented for the protection of life and health of citizens, preservation of property, economic activity and the environment, and harmonization of actions of legal entities and citizens."<sup>26</sup>

Based on these legal provisions, the Civil Protection Headquarters has made a number of decisions aimed at preventing the spread of coronavirus infection. The Headquarters makes these decisions almost every day, and although nearly 50 have been made since the beginning of 2021, the end of this process is not in sight yet. The success of mitigating the effects of the pandemic will also depend not only on how long the state of emergency lasts and how many people will be vaccinated, but also on how effective and well-targeted the measures to help the economy are.

#### **4. Support measures for organizations in times of COVID-19 crisis**

In response to the difficulties caused by the development of the pandemic, the Government of the Republic of Croatia is continuously adopting and designing assistance and support measures for job retention. Among other measures, special emphasis is placed on "pandemic" measures specially created to support employers to overcome negative shocks and the consequences of business losses.

Table 1 shows measures specifically designed to help the economy during the pandemic.

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<sup>25</sup> Zakon o zaštiti pučanstva od zaraznih bolesti (2007), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2007\\_07\\_79\\_2486.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2007_07_79_2486.html), (11/03/2021), Izmjene Zakona o zaštiti pučanstva od zaraznih bolesti (2020), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2020\\_12\\_134\\_2550.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2020_12_134_2550.html), (11/03/2021)

<sup>26</sup> Zakon o sustavu civilne zaštite (2015), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2015\\_07\\_82\\_1567.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2015_07_82_1567.html), (11/03/2021), Izmjene Zakona o sustavu civilne zaštite (2018), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2018\\_12\\_118\\_2351.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2018_12_118_2351.html), (11/03/2021)

Zakon o dopuni Zakona o sustavu civilne zaštite (2020), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2020\\_03\\_31\\_673.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2020_03_31_673.html), (11/03/2021), Zakon o izmjenama i dopunama Zakona o sustavu civilne zaštite (2021), available at: [https://narodne-novine.nn.hr/clanci/sluzbeni/2021\\_02\\_20\\_444.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2021_02_20_444.html), (11/03/2021)

Table 1: Job-retention measures

<b>MEASURE</b>	<b>AIM</b>
Shortening working hours / standing-by position	Job retention in businesses whose work has been temporarily reduced due to special circumstances caused by Coronavirus (COVID -19)
Job-retention support (COVID-19)	Job retention in businesses whose economic activity has been disrupted due to special circumstance caused by Coronavirus (COVID -19).
Job-retention support (COVID-19 and earthquake-affected areas)	Job retention in businesses whose economic activity has been disrupted due to special circumstances caused by Coronavirus (COVID-19) and the consequences of the earthquake disaster in the Sisak-Moslavina, Zagreb and Karlovac counties.
Job retention support for work done in sheltered workshops, integrative workshops and employment units for people with disabilities	Job retention in businesses whose economic activity has been disrupted due to special circumstances caused by Coronavirus (COVID -19).
Returning seasonal workers	Financial support to seasonal workers during the period when they are not working, in order to provide the necessary workforce for businesses from all industries that have periods of reduced activity during the year due to the seasonal nature of their business.

Source: Hrvatski zavod za zapošljavanje (2021) Očuvanje radnih mjesta, available at: <https://mjera-orm.hzz.hr/ocuvanje-radnih-mjesta>, (10/03/2021)

The measure *Shortening working hours / standing-by position* aims to retain jobs in businesses whose scope of work has been temporarily reduced due to special circumstances caused by Coronavirus (COVID-19); this measure is prescribed until 31 December 2021. The support amounts up to 3,600.00 kuna per employee. (Hrvatski zavod za zapošljavanje, 2021)

An integral part of the economic measures of the Government of the Republic of Croatia that are aimed at safeguarding jobs in the most vulnerable sectors is the measure *Job-retention support (COVID-19)*. This measure is aimed at employers who perform economic activity and amounts to up to 4,000.00 kuna per employee. It will be in force from January to June 2021. (Hrvatski zavod za zapošljavanje, 2021)

The aforementioned measure has been extended by a measure for earthquake-affected areas, *Job-retention support (COVID-19 and Earthquake-Affected Areas)*, which also applies to retention of jobs for employers whose economic activities have

been disrupted due to special circumstances caused by Coronavirus (COVID-19) and the consequences of the earthquake disaster in the Sisak-Moslavina, Zagreb and Karlovac counties. The measure is aimed at employers who perform economic activity. (Hrvatski zavod za zapošljavanje, 2021)

The measure *Job retention support for work done in sheltered workshops, integrative workshops and employment units for people with disabilities* also aims to preserve jobs in businesses whose economic activity has been disrupted due to special circumstances caused by Coronavirus (COVID-19). The support amounts up to 4,000.00 kuna per employee. (Hrvatski zavod za zapošljavanje, 2021)

The measure *Returning seasonal workers* refers to financial support to seasonal workers in the period when they are not working, in order to provide the necessary labour force to businesses from all industries that have periods of reduced work activity during the year due to the seasonal nature of their business. The duration of the measure is 6 months with the possibility of extending the measure for as long as special circumstances caused by Coronavirus (COVID - 19) last. The amount of the subsidy is 100% of the cost of extended insurance for the first 3 months, 50% of extended insurance for the next period which can last for a maximum of 3 months, and 100% of the cost of extended insurance after the first six months for employers already using the measure during special circumstances caused by Coronavirus (COVID - 19). (Hrvatski zavod za zapošljavanje, 2021)

For workers the financial support is paid for a maximum of 6 months of extended pension insurance in the amount defined on the basis of the calculation of monetary compensation during unemployment, and up to 70% of the average salary paid in Croatian economy for the first 90 days, and 35% for the rest of the period. The average paid off net salary for 2019 was 6,439.00 kuna (in the period from January 1<sup>st</sup> 2020 to October 31<sup>st</sup> 2020). Financial assistance to returning seasonal workers is paid in accordance with Article 43 of the Labour Market Act (OG 118/18, 32/20); after the expiration of the first six months for persons who have used the measure, 50% of the net minimum wage is paid off during the special circumstances caused by Coronavirus (COVID - 19) (Act Amending the Labour Market Act, OG 32/2020). (Hrvatski zavod za zapošljavanje, 2021)

## **5. Teleworking as a solution in COVID-19 crisis**

In the times of COVID-19 pandemic, teleworking, or “working from a remote workplace”<sup>27</sup> as defined by Labour Act, has become the solution or norm for all the jobs that can be performed remotely. Article 17 of the Labor Act prescribes the content of a written teleworking employment contract through seven paragraphs. The subjects are the employer and the worker who works from home "or at other premises which are not the employer's premises"<sup>28</sup>. It is important to note that for

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<sup>27</sup> Zakon o radu (2020), available at: <https://www.zakon.hr/z/307/Zakon-o-radu>, (11/03/2021)

<sup>28</sup> Zakon o radu (2020), available at: <https://www.zakon.hr/z/307/Zakon-o-radu>, (11/03/2021)

such work a special contract is signed which, in addition to the data that all other employment contracts have, must also contain additional information on the following: working hours, deadlines, time and manner of monitoring work and quality of work, equipment for performing work that the employer is obliged to procure, use of own equipment and reimbursement of costs related thereto, reimbursement of other work-related costs and the manner of training and professional development of the worker. These provisions primarily protect the workers and their rights that may be endangered by working at their home or at other premises other than the employer's. However, in practice this is not the case in the current situation. Most teleworking employment contracts are not signed in writing, nor do they include the necessary data prescribed by the Labour Act. In the current situation, work from home is most often performed on the basis of an employer's order accepted by the workers, which means that these contracts are concluded orally or by implied actions. Thus, the practice caused by the COVID-19 crisis has in this case shown that there are numerous shortcomings of the labour law legislation because not all available solutions have been implemented to ensure continuous and uninterrupted teleworking. Analysing the existing solutions related to teleworking, Rožman (2020) states that "In order to abide by the Labour Act, employers are obliged to submit a written teleworking employment contract to employees, i.e., sign such a written employment contract with the employee. Signing a written teleworking employment contract, i.e., contract for remote working, is important because working remotely without a written teleworking employment contract creates an irrefutable presumption that the arrangement is concluded for an indefinite period of time, and workers could refer to the presumption and refuse to come to work at the employer's premises after the need to work at home ceases."<sup>29</sup> However, practice has shown that in the absence of crisis labour legislation, solutions that are possible in the current situation are used. Namely, the provision of the Labour Act on teleworking (working from home) employment contract is focused primarily on the advantages of such work. Working from home reduces the employer's costs and allows for flexible working hours. There are other advantages explained by disciplines such as work organization, ergonomics, work psychology, work sociology, economics, and other disciplines. The development of modern technologies, especially ICT, has enabled a number of excellent solutions for teleworking, i.e., working from home. At the time of the adoption of the existing (valid) Labour Act, the legislator did not have in mind the crisis situation created by the corona crisis. The legislator could not have foreseen it and that is partly one of the reasons why today we do not have legal or social solutions for workers and the world of labour in general. Moslavac (2020) says: "Aware of the fact that frequent changes in the sensitive area of work create unnecessary legal uncertainty, we still cannot avoid proposals *de lege ferenda* for open issues "the day after" the health crisis. The blockade of work, almost absolute, at the state level, with restrictions on human rights and freedoms, indicated that we kept our eyes wide closed. The lifestyle we enjoyed after the last recession

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<sup>29</sup> Rožman, K. (2020) Ugovor o radu na izdvojenom mjestu rada (rad kod kuće), Zagreb, no. 4/20, p. 10.

disappeared overnight. Public authorities have "released" many workers from their work obligations due to public health concerns. State intervention in labour and contractual relations is necessary in a democratic society and must be appropriate. Normative regulation of labour relations must be flexible. In the employer-employee relationship, the employment contract as the foundation of that relationship has to be viable. We must take advantage of modern technologies such as blockchain and the so-called *smart contracts* based on such technologies, to create a sustainable system of labour relations, contracting and performance of work and its payment. We are chronically short of crisis labour legislation, because even the most basic issues such as the following have not been resolved: the right to terminate all work activities, the authority in charge of enforcing overall work suspension, the "emergency measures" to counter the crisis at the time of its outbreak or immediately thereafter, and the starting point for arranging the new work order in the post crisis situation."<sup>30</sup>

## 6. Conclusion

This paper analyses the problem of business process dynamics and organization management during the COVID - 19 crisis. Although it does not offer solutions to the doubts that arise in the current situation, the analysis of the problem confirmed the initial claims about the complexity and multidimensionality of the problem caused by the pandemic crisis.

After conducting research and analysing the organizational and business process management in the context of the given regulatory framework, the following conclusions were reached: 1) Emergencies and crises can have a very negative impact on the entire economy, as shown by the current pandemic crisis caused by COVID-19. The escalation of the crisis at the global level has caused structural disruptions in the functioning of all segments of the economy and society as a whole. Changes in the way we do business, relocation of business processes, more difficult monitoring and managing of processes have all brought about high costs and caused losses; 2) Security and well-being of citizens is a common good, regardless of the fact that legal norms redistribute social power and that it may happen that among the subjects of law there are individuals and groups whose interests and positions are endangered. Public authorities have been faced with the challenge of saving people's lives, but also ensuring the functioning of the economy and sources of income. Due to the unpredictability of the situation imposed by the pandemic and the necessity of taking urgent measures, a need for a radical change in the overall social structure was created and issues concerning the structure and functioning of the security system were raised. The Civil Protection Headquarters has made a number of decisions aimed at preventing the spread of coronavirus infection. Decisions of the Civil Protection Headquarters of the Republic of Croatia on the prevention of the spread of coronavirus infection are based on the Act on the Protection of the Population from

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<sup>30</sup> Moslavac, B. (2020) Svijet rada „dan poslije“ epidemije zarazne bolesti, Radno pravo, no. 5/20, Zagreb, p. 10-11.

Infectious Diseases and the Civil Protection System Act. In this logical constellation, justice is applicable only in cases of established social relations, in limiting the rights of individuals and groups and ensuring equality of people before the law; 3) In response to the difficulties caused by the development of the pandemic, the Government of the Republic of Croatia continuously adopts and designs measures of assistance and support for job retention. Among other measures, special emphasis is placed on "pandemic" measures created directly to support employers to overcome negative shocks and consequences of business losses; 4) Teleworking, or "working from a remote workplace" as defined by the Labour Act, in this time of pandemic or COVID-19 crisis has become the solution or norm for all the jobs that can be performed remotely. The practice caused by the COVID-19 crisis in this case showed that there are numerous shortcomings in the system of labour law legislation, because not all available solutions have been implemented to ensure continuous and uninterrupted teleworking. The current situation has confirmed that we chronically lack crisis labour legislation. State intervention in labour and contractual relations is necessary in a democratic society and must be appropriate. The normative regulation of labour relations must be flexible. In the employer-employee relationship, the employment contract as the foundation of that relationship has to be viable.

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# DATA LITERACY AND ITS IMPORTANCE IN MODERN ORGANIZATIONS

Tilen Medeot<sup>31</sup>

## Summary

Purpose of this article is to describe meaning of developing new skills within organization to gain more information and value from their data. Never before have organizations stored as much data as in recent years but a lot of organizations are lagging in leveraging the value of this data. Much of this can be attributed to fact that not all employees have skillsets that could enable organizations to gain value from data. Organizations that will recognize and prioritize the importance of data literacy as an enabler of decision making will gain in value, stability and growth.

**Keywords:** data, information, literacy, data literacy, data-driven culture, decision making, data science,

## 1. Introduction

Every activity today generates a lot of data: every transaction a business makes, every device we are using is constantly generating data, basically every our movement generates data. In the last decades organizations are tend to store as lot of data as possible with an idea of gaining valuable information from these data. In order to gain more value from data that is available to organizations they have to establish and nurture data driven culture. Data driven culture means that organizations use data to make rational decisions. One of the most important drivers of data drive culture is the ability to understand, engage, analyze and reason with data – a skillset that is also known as data literacy.

## 2. What is data literacy

Literacy, by definition, indicates the ability of reading and writing or knowledge of a particular subject (Dictionary, 2021). When we include data in the context of literacy, we are talking about the so-called data literacy.

There are several different definitions of data literacy, namely:

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1. Effective use of data for business/commercial actions and outcomes (Forbes 2019)
2. Understanding the meaning of data: the ability to read charts, draw correct conclusions from data and recognize when data are being used in misleading or inappropriate ways (Eastern Michigan University, 2021)
3. Ability to read, write, and communicate data in context, including an understanding of data sources and their constructs, analytical methods and techniques used, and the ability to describe an example of use, application, and resulting value (Gartner, 2021)

One of the first and most widely accepted definitions divides data literacy into four separate components: the ability to read, work with, analyze, and argue with data. Each of the skills involves several activities, i.e. (R. Bhargava, C. D'Ignazio):

- Reading data: understanding data in different formats, and what aspects of the world it represents.
- Working with data: creating, acquiring, cleaning, and managing it.
- Analyzing data: filtering, sorting, aggregating, comparing, and performing other such analytic operations on it.
- Arguing with data: using data to support a larger narrative intended to communicate some message to a particular audience.

When summarizing the above definitions in a business organizational context, we can say that the first step of data literacy is the ability to communicate, write, and read data in a business context. The task of the employees, and not just data scientists, is to critically assess the data, find meaning in the numbers, and gather actionable business insights. Employees with business area expertise are best suited to act on data insights to create results. Accordingly, it is critical for everyone in an organization to have access to data and a basic ability to read and use data. This approach allows organizations to make fact-based decisions and for individuals to be able to experiment with data and thus discover new insights and opportunities. Sharing data for widespread use is fundamental for the development and progress of all modern companies and organizations (Marr, 2020).

Data literacy is a fundamental skill to support the creation of a data driven culture. A data-driven culture uses data in decision making processes. In companies that are data-driven data represents a valuable strategic asset which should be widely available and accessible. (CIO, 2020). The purpose of data-drive culture is to examine and organize data with the gal of better serving organization's goals and to speed up business decision-making process (Gartner, 2019).



### 3. Levels of data literacy and data roles

Based on four components of data literacy (read/understand; work/engage; analyze; argue/reason) different levels of data literacy can be identified. Gartner defines 5 levels of proficiency in data literacy (Gartner, 2017):

- Conversational: basic understanding of data, analytics and use cases
- Literacy: ability to speak, write and engage in data, data analytics programs and use cases
- Competency: competent of designing, developing and applying data and analytics programs
- Fluency: fluent in all three elements of information language across most business domains within and industry vertical
- Multilingual: fluency across all three elements of the information language across multiple business domains

People in organizations master different skills regarding data literacy and data proficiency. In data driven companies there are usual 4 different data roles for business users with different set of skills, capabilities and learning requirements (KPMG, 2016):

- Data Beliver: people with limited to no analytical knowledge, but need to understand and engage with data in order to make decisions
- Data User: people who need to incorporate data and analysis in daily work. They need to understand and engage with the data.
- Data scientist: people with great analytical skills, who need no further development of analytical skills. Areas to focus further development are usually reasoning with data, storytelling, communicating...
- Data Leader: people of good understanding of data with the ability of result or analysis interpretation. They see the added value of using analytics in daily activities. Data leader do not have the same analytical skill set as data scientists but needs to be able to communicate, discuss and reason with data. They need to be able to translate analytical results to business user with more limited analytical knowledge.

These four roles are tightly related to previously described levels of data literacy (Goedhart et al, 2018):

Data literacy level	Data role			
Conversational	Data Beliver			
Literacy		Data User		
Competency			Data scientist	
Fluency				
Multilingual				Data leader

#### 4. What makes data literacy important

In a data (and information) driven world, data literacy is as important as literacy itself. An organization’s success will be heavily influenced by its employees’ ability to master data literacy skills. Business performance is strongly connected with a good grasp of data and, consequently, fact-based decision making (DataIQ, 2020).

Most companies and organizations today manage (collect, store) large amounts of data. However, just storing data does not mean that companies understand tangible and measurable value from data. Today, many organizations face gaps in employee skills in data literacy. Low data literacy makes it impossible for many organizations to carry out activities of digital transformations (DataIQ, 2020).

It is becoming increasingly clear that, contrary to popular belief, the challenges in attaining the value of stored data do not lie in technology and tools, but people and their approach to data management. It has become apparent that most individuals are not skilled in interpreting the data at their disposal.

Based on research, it has been found that (Deloitte, 2021):

- a mere 21% of the global workforce seems confident in their data literacy skills (Deloitte, 2021),
- only 25% of employees feel fully prepared to use data effectively when entering their current role,
- just 24% of senior decision-makers pass standard data literacy tests (Deloitte, 2021),
- 67% of executives are not comfortable accessing or using data from their existing tools and resources (Deloitte, 2019),
- data literacy rate of Generation Y (Millennials), most familiar with the digital world, does not exceed the general average, as it is just 22% (Forbes, 2018).

Widespread data literacy among employees is key in achieving the full value of data investments (storage) and performing data analytics since real value is only achieved through scalability, repeatability, and effective integration of data into daily decision-making (Deloitte, 2021).

The increasing quantity and variety of data that companies obtain daily require employees to use specific skills such as critical thinking, problem-solving, computational, and analytical thinking using data. In fact, poor data literacy will inhibit the growth of all companies and organizations whose operations are focused and supported by the use of data (Zeenea, 2020).

Data increases organizations' success in creating both physical and digital business opportunities - they improve accuracy, increase efficiency, and employees' ability to deliver greater value. Thus, it is important and essential to be able to interpret, analyze and communicate data findings to reveal the secrets of successful business and competitive advantage (Zeenea, 2020).

Regardless of large investments in data processing and management tools (over \$ 200 million in 2020 (Marr, 2020)), 50% of companies and organizations will still have a deficit of staff with developed data literacy and artificial intelligence (AI) skills, which will make it impossible to reach business value. The prevalence of data and analytical capabilities, including AI, requires that creators and consumers 'speak data' as a common language. The ability to understand and communicate in a common data language is a fundamental skill. This marks the difference between successfully deriving value from data and analytics and losing out to competitors who have included data literacy as their organizations' core competencies (Gartner, 2019). The amount of data collected by an individual company or organization is irrelevant until the data is being dealt with or analyzed. Only when the data is processed and gets put to work it provides organizations actionable insights into the collected data, which in turn provides additional business value (Marr, 2020).

While most companies are still trying to figure out how to understand their data, a new type of data-focused company is emerging. Such companies go beyond merely recording (business) transactions, as they use the data to forecast and influence the execution of future business activities. Such a degree of reliance of the business on data requires an extremely high-level data literacy. Data literacy is needed to support not only fact-based decision making but to enable users to study and experiment with data to explore new opportunities (Tableau, 2018).

Similarly, as literacy has contributed to human progress over the past few hundred years, data literacy will also be essential to sustaining organizations in this century. Making sense of data is not just the skill of data scientists and technology experts, but also an essential skill for all employees. Not all jobs require rigorous data science

skills, but it is imperative that every employee is data literate to participate and contribute to the data economy (Tableau, 2018).

## **5. Challenges in introducing data literacy**

The introduction and development of data literacy in organizations represents a change in the organizational culture. Such changes usually represent a major challenge for the company and its employees. When building a data-driven culture, which is the basis for boosting data literacy, we are met with the following challenges (Qlik, 2018):

1. **Resistance from the workforce:** organizations and cultures involved are based on traditions. Changes in culture, way of thinking, and working usually lead to resistance, as some people find change very difficult. Many wishes to make decisions as they have thus far - a gut feeling, experience, and not (necessarily) supported by solid and clear facts. Raising awareness within this group that the company is moving to a culture where decisions and activities are data-driven is critical to success.
2. **Finding data champions:** disapproval of the new business mode of operation can also be found at the highest management positions in the organization. Therefore, organizations wishing to focus on such business methods must designate the “so-called” data champions, who will provide business/executive directors with support and guidance in using the data. As a result, new functions are emerging in companies today, i.e. (Chief Data Officer (CDO), Chief Analytics Officer (CAO)), whose mission is to ensure that businesses can become more data literate.
3. **Data governance:** as mentioned before, the levels of data production and consumption are at the highest levels in history. Many individuals are already using new datasets to explore new ideas and new insights that drive better decision-making. When an organization promotes data democratization and self-service analytics, leadership must, at the same time, ensure responsible data management: insight into data and the answers they provide must be vetted and accurate.
4. **Insecurity:** many employees and future employees (students) rank themselves below average when it comes to data literacy confidence. This presents a major challenge for organizations and businesses, as they must not assume that digitally literate (e.g. students) people are also data literate. Organizations need to identify employee data literacy levels and promote the acquisition of data literacy skills.
5. **Breaking down organizational silos:** many companies already employ a large data literate workforce, who have usually joined information or business analytics teams and are often isolated from high-level business decision makers. Involving these employees in more proactive collaboration and knowledge sharing will be critical to enhancing literacy rates among employees within the organization.

## **6. How to improve data literacy**

Once the organization or company identifies the need for data literacy in order to support and develop data-drive culture and fact-based decision their next step is to prepare a plan on how to become more data-literate. Working with data requires an individual capability improvement based on the data role one has within organization in order to gain the required level of data literacy. There is no single way on how to improve data literacy but based on different roadmaps, plans and companies should focus on (Goedhart et al, 2018):

1. Definition of data literacy business goals and objectives: management should define a goal regarding data literacy in order to pursue creation of value and how to impact the business with improved data literacy. Leadership should be aligned with a common ambition that is focused on what can be achieved with data literacy, the expected levels of data proficiency specified for the functions within the organization and how these impacts required behavior and ways of working.
2. Awareness: Data literacy goals and objectives needs to be communicated top-down. Process of communicating goals is a perfect moment to identify data leaders within organizations and to create ownership of the cultural change plan.
3. Introduction of changes: Organization should define what are expected levels of data proficiency and data roles per person. Employees must understand what are their responsibilities and how to develop or improve their skills in order to meet the requirements. A matrix of different roles of data literacy and employees should be prepared in order to adapt the development plan.
4. Execution of changes: it is necessary to facilitate the changes and to start preparing organization and its employees to the desired level of data literacy proficiency. Practical changes need to implemented with the help of training, workshops, tools and an enabling environment. People need to understand and start working with data to support business decisions and other regular activities, with a level of data literacy suitable for their position in organization.
5. Nurturing and ensuring: organizations need to ensured that becoming and staying data literate is nurtured in the culture by continuously managing, communication and monitoring the change and capabilities.

## **7. Role of data literacy in crisis situations**

Crisis situations requires organizations to act rapidly. Managers who address crisis situations need to make appropriate and well-informed decisions in a short time period. Due to lack of time to react decisions often rely on the experience. This approach may result in biased decisions that would not lead to the desired goal. (Mezey, 2004)

Another option of making decisions includes more analytical process which requires management to interpret and analyze information thoroughly before making decisions. Providing management with more data does not mean that they are given more information. Information is gained through analysis and appropriate context interpretation (same piece of information can imply different meaning, depending on what is known about the situation). Companies with higher data literacy levels among their employees can provide management quality information in much shorter time. Decision makers need to gather, comprehend, and interpret information, which they also have to retain to be able to make predictions about possible future events (Steinrücke et al, 2020).

## 8. Conclusion

Organizations have recognized the importance of data, what we can see by storing huge amounts of data. But if the data is just stored and is “sitting still” it has no value. Companies have to gain new value - information from this large amount of stored data. Every new information enables companies to improve their decision, to generate new business value, to be better as the competition or to adapt to new situations...

Companies that have developed data driven culture have leveraged the potential of their data by using it in their decision-making activities. In order to establish and nurture data driven culture companies have to emphasize the meaning of data literacy within organization. Organizations that will not achieves adequate levels of data literacy will not use the full potential of their data and by that will not be competitive in modern business environment.

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# THE IMPACT OF COVID 19 EPIDEMICS ON WORKING RELATIONSHIPS AT SELF-EMPLOYMENT

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## Abstract

In this article we investigate the impact of the abuse of the institute of self-employment on the security of employment. We present the development of independent entrepreneurship in Slovenia and explain in detail the statistical data in the field of establishments, closures or even personal bankruptcies. The special attention is given to the data of the COVID 19 epidemic period.

Through a detailed analysis of the literature and sources and case studies, we proved that the abuse of the institute of self-employment during the economic crisis due to the epidemic proved to be particularly acute, as inspection services do not control the exploitation of workers forced to establish self-employment.

**Key words:** epidemic, sole proprietor, working relationships, job loss, measures, inspection, employment.

## 1. Introduction

On the 4<sup>th</sup> of March 2020, the first case of infection with the new corona virus was discovered in Slovenia by a tourist who came to Slovenia from Morocco via Italy. The government has taken the first steps to curb the virus by banning visits to retirement homes and hospitals. This was followed by a ban on socializing over a hundred people, and on March 11, it introduced controls and restrictions on crossing the border with Italy. Due to the spread of the corona virus in the country, the government declared an epidemic, and the management of the expert group for containment and control of the epidemic in support of the government crisis

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headquarters was entrusted to infectiologist. In the first wave of the epidemic, public life in Slovenia stopped on March 16; public transport was abolished, and after the closure of tourism and craft activities, educational institutions and technical shops, only pharmacies, banks, post offices, food shops and petrol stations remained open.

Hospitals, with the exception of treatment of pregnant women, oncology and emergencies, operated on a reduced scale, due to the orientation and adjustment of treatment conditions for patients with Covid-19. The next measure followed on March 20 was a ban on gathering people in public places. At that time, it was necessary to solve the problem of congestion of foreign passengers and trucks that were stuck in the country due to the closure of border crossings. An action was launched to return around 800 Slovenian citizens through the Ministry of Foreign Affairs, who were unable to return to the country for the same reason (closing the interstate borders). Among the many subsequent measures taken by the government in an effort to curb the spread of corona virus in the country stand out: restriction of contacts, closure of services, a ban on crossing inter-municipal borders, and curfew. (24ur-magazin, 2020)

The Covid-19 epidemic has most affected the elderly population of people housed in nursing homes. As many as four-fifths of these infected people from these institutions are dead, which proves that this is an institutional problem and not just an age group. In institutions such as retirement homes, a significantly higher concentration of people and a greater number of contacts mean a significantly higher risk of transmitting the infection. The analysis showed that the same age group living at home is not exposed to infections to such an extent. Therefore, we can in some way be considered that the people who have died in retirement homes were somehow passive victims of the institutional system. Measures against curbing the spread of corona virus in this case did not allow safer care for residents of nursing homes as they were based on self-isolation and contact restrictions. Thus, in the case of infections of elderly residents, questions arose as to where accommodation would be most suitable for them in order to reduce the possibilities of transmission within the institution to other residents. A major obstacle to the reorganization of the system was the lack of staff and their lack of training in working with the infected. Controversy over this issue only erupted after the end of the first wave of the Covid epidemic; however, questions remained about the deaths of people in homes rather than hospitals, as well as the inadequate equipment of these institutions, deepening the issue of deprivation of appropriate treatment and humane response (Flaker, 2020).

A review of the data of infected and deceased people, which can be monitored daily, shows that the infection is significantly more distributed among the population by age groups than the mortality rate; out of which we conclude that the mortality rate increases with age and the presence of concomitant diseases. Statistics on infected, hospitalized, intensively treated and intubated (shown in the tables below) change

daily, so we rely on the latest data from 22 - 25 January 2021 (when the second wave of the epidemic is expected to peak):

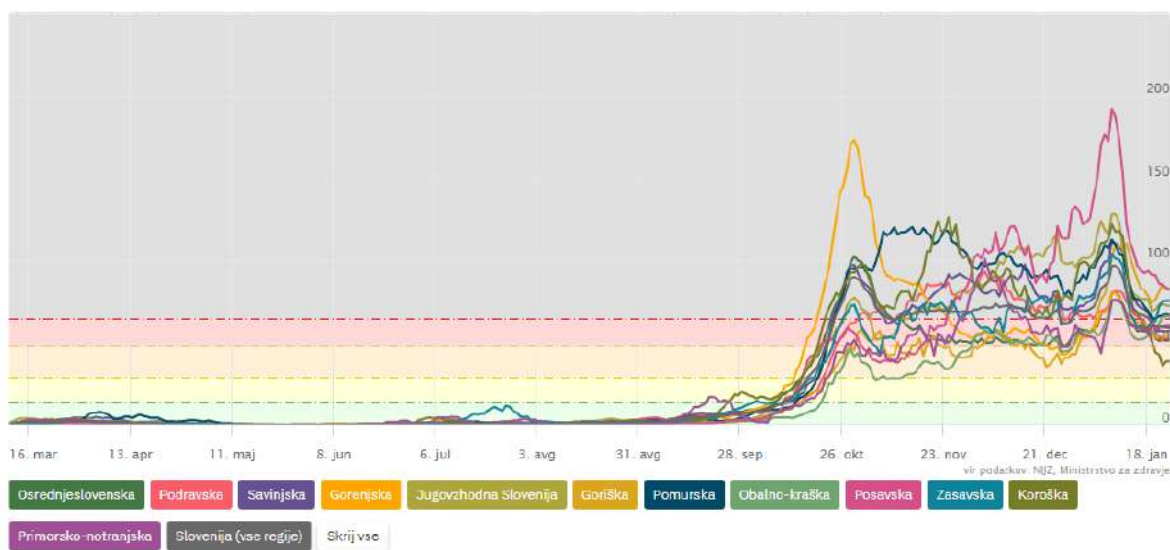
- Active cases of Covid-19 virus infections in Slovenia (22 January 2021): 18700.
- Deaths as a result of Covid-19 in Slovenia until 23 January 2021: 3329.

**Table 1: Active cases of Covid-19 virus infection broken down by region per 100,000 population (22 Jan 2020)**

Posavska			1264,8
Goriška			1213,5
Jugovzhodna Slovenija			1057,2
Pomurska			995,7
Zasavska			936,2
Savinjska			907,3
Slovenija (vse regije)			890,4
Primorsko - notranjska			828,8
Podravska			821,7
Obalno - kraška			813,7
Gorenjska			808,7
Osrednjeslovenska			757,9
Koroška			721,4

Source: COVID sledilnik, 2021.

For easier presentation, the above data, by months for each region in the period from 10.3.2020 to 25.1.2021, can also be shown in Figure no.1.



**Figure 2: Active cases of Covid-19 virus infection are broken down by region per 100,000 population**

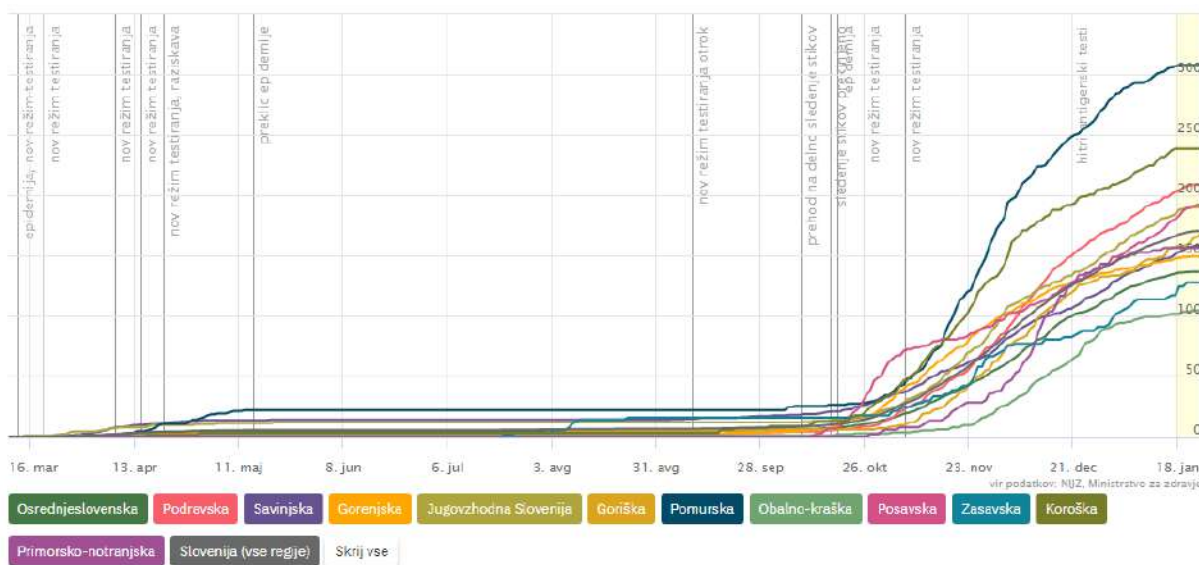
Vir: COVID sledilnik, 2021.

**Table 2: Residents died of Covid-19 virus by January 22<sup>th</sup> 2020, broken down by region per 100,000 inhabitants**

Pomurska			295,5
Koroška			232,9
Podravska			193,6
Jugovzhodna Slovenija			177,6
Posavska			176,4
Slovenija (vse regije)			160,5
Primorsko - notranjska			156,3
Savinjska			148,6
Goriška			146,1
Gorenjska			145,3
Osrednjeslovenska			129,4
Zasavska			113,7
Obalno - kraška			100,1

Source: COVID sledilnik, 2021.

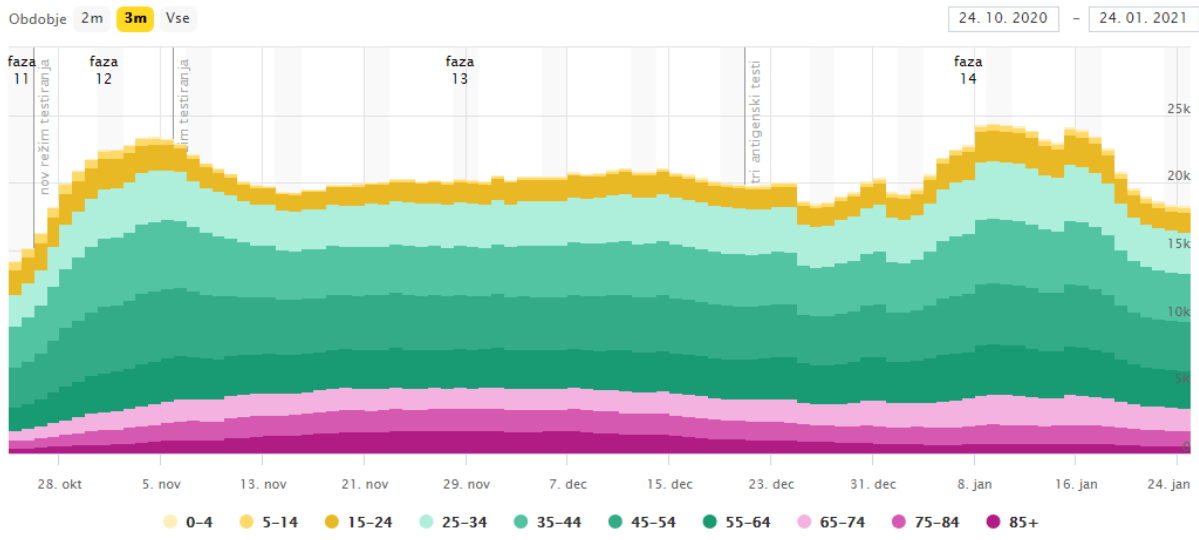
Figure 2 shows the deaths by region from the beginning of the epidemic to 25.1.2021.



**Figure 2: Cases of death by region per 100000 population.**

Source: COVID sledilnik, 2021.

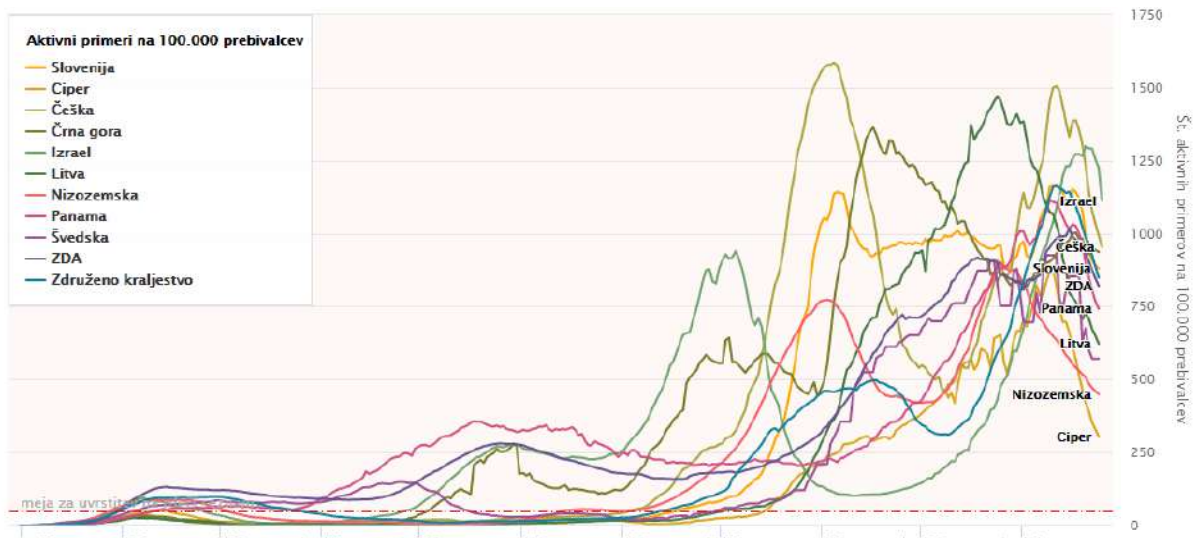
When checking active cases by age groups, we captured the second wave of the epidemic and show it in Figure 3.



**Figure 3: Active cases by age groups.**

Source: COVID sledilnik, 2021.

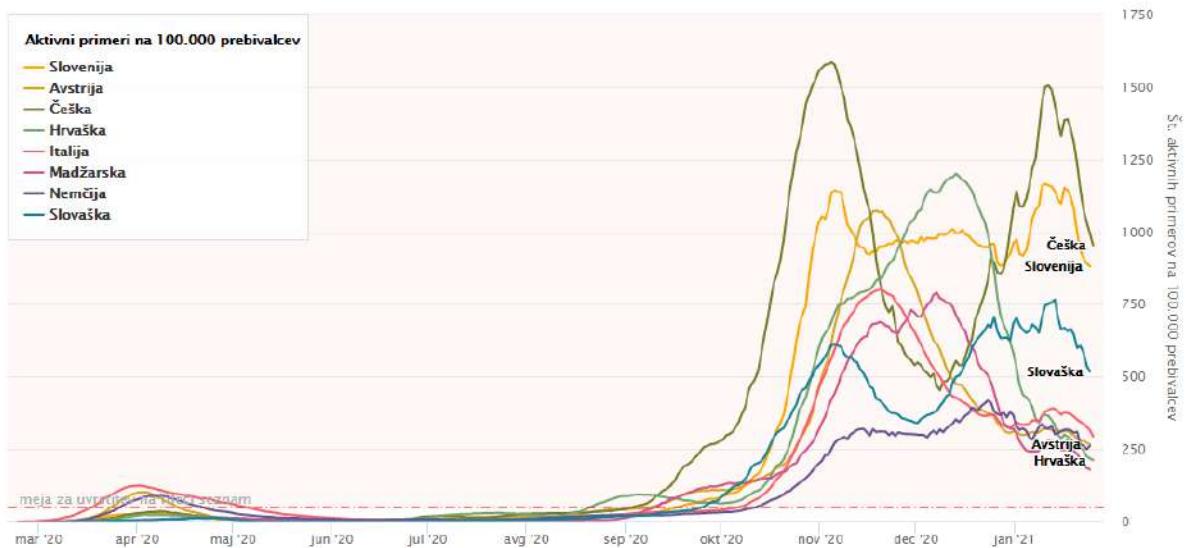
If we look at the data for the world, we can conclude that on January 25<sup>th</sup> 2021, Slovenia was at the very top in terms of the number of infections per 100,000 inhabitants (Figure 4).



**Figure 4: WORLD - number of actively infected inhabitants per 100,000.**

Source: COVID sledilnik, 2021.

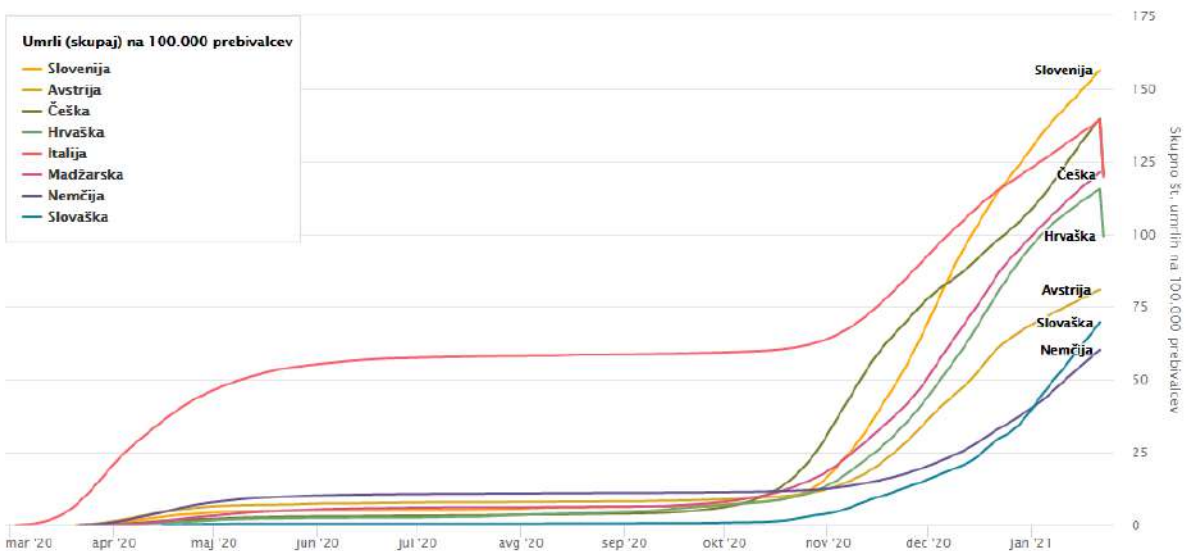
A similar picture is obtained when checking the data and comparing it with the countries in our area (Figure 5).



**Figure 5: SURROUNDINGS - number of actively infected inhabitants per 100,000.**

Source: COVID sledilnik, 2021.

When checking the 7-day average of deaths, we absolutely hold an infamous record in Europe.



**Figure 6: Deaths - 7-day average Europe.**

Source: COVID sledilnik, 2021.

The data are far from encouraging, especially considering the fact that in October 2020 the government took quite restrictive measures to curb the epidemiological catastrophe, bordering or locking-down many areas of both private and business life.

These measures have severely affected small businesses and sole proprietors (SPs) by suspending service activities. Self-employed people, who lost their income overnight, were forced to decide whether to close the business and register with the Employment Service (in order to get rid of the obligation to pay social security contributions) or to keep the status of entrepreneur despite stopping the business and wait for state aid (which does not come down to them when deleting activities from the register).

The Agency for Public Legal Records and Services (Ajpes) confirmed that sole proprietors return after submitting documentation for deletion with questions about whether the procedure can be stopped or revoked from the business register, because they found out that according to the promised government assistance (state aid) the risk of personal bankruptcy is lower (Necenzurirano.si, 2020).

Table 3, on one hand, shows a large decline in entrepreneurial activity due to epidemiological measures, but on the other hand, in the same time, large number of new establishments (despite inactivity and an impossible situation). By all logic, new founders are not looking for opportunities in setting up a new company or sole proprietorship at a time when service activities are practically standing but they only need status. Therefore, they do not open an activity from their own entrepreneurial initiative, which would enable them to independently manage a gainful activity within a regulated company that would allow them to appear on the market independently. Most probably there is a compulsion to precarious work (in the time of the deepest crises) standing behind many of new founded sole proprietorships. And they simply see no other solution to assure their own existence (Gibanje za dostojno delo in socialno dužbo, 2021).

As a rule, precarious work is when self-employment is only apparent, but in fact there are all the elements of an employment relationship. Namely, this phenomenon is controversial from the point of view of labour law, because it is a way of covert employment, with which employers try to streamline operations (MP-mladi podjetnik, 2017).

Regardless of the new entries of entrepreneurial statuses in the business register, whose intentions are not entirely clear during the deep crisis of entrepreneurship, the high number (14438 extracts in 2020) of experienced entrepreneurs, including caterers, hairdressers, real estate agents, tourism workers, event organizers, photographers, instructors .... and were left without work and earnings during the epidemic points to a tunnel that unfortunately in the end (despite the proverb) does not have a bright light.

Table 3 shows the neutralization of statistics of sole proprietorships entered and deregistered from the business register, with the majority of entries in the register

being status or virtual, while all deregistered sole proprietorships who lost their jobs and incomes are victims of anti-epidemiological measures during a health crisis.

**Table 3: Data on new and closed sole proprietorships in 2020**

	<b>NEW</b>	<b>CLOSED</b>
<b>January</b>	1511	1103
<b>February</b>	1422	1046
<b>March</b>	1285	2088
<b>April</b>	382	1512
<b>May</b>	883	1072
<b>June</b>	1520	1119
<b>July</b>	1391	1087
<b>August</b>	1181	982
<b>September</b>	1856	871
<b>October</b>	2009	1274
<b>November</b>	1109	971
<b>December</b>	866	1313
<b>TOTAL</b>	<b>15395</b>	<b>14438</b>

Source: AJPES, 2021.

In the first month of 2021, AJPES states that 1,661 legal entities were registered and 1,204 deleted, of which 1,267 sole proprietors were newly registered and 986 were deleted. 33 associations and even 94 other natural persons were also deleted.

The data of business entities in Slovenia clearly shows that independent entrepreneurs/ sole proprietorships make up the majority of all, i.e. as many as 44.7% of registered business entities.

## **2. Research focus**

With the Companies Act, which entered into force on 10<sup>th</sup> of July 1993, the first step was taken towards a comprehensive regulation of the field of status law of economic entities in the Republic of Slovenia. Paragraph 7 of the first article de jure introduced the term sole proprietor, by stipulating that a sole proprietor - an individual/a natural person who independently carries out a gainful activity on the market as his exclusive activity. In the fifth article, it also determined that the entrepreneur is liable for his obligations with all his property (ZGD, Ur. l. RS, No. 30/93). In its provisions, the law also outlined some important differences between an individual entrepreneur and the established term craftsman, which thus became a form of independent entrepreneurship. To date, company legislation has undergone a number of changes, which have modernized and harmonized the provisions with the common law of the



European Union. After almost thirty years of "enthronement" of independent entrepreneurship in Slovenia, we can see that the legislation is difficult to keep up with all changes in the market, especially those that through malicious exploitation of the law cause many individuals to be forced start a sole proprietorship.

Entrepreneurial logic requires first a good business idea, then its verification. After the prepared business plan, which is the foundation of every business, the decision to start a business follows. In many cases of newly established sole proprietorships however, all these initial (for economically efficient business of course necessary) phases are completely omitted. In most cases, individuals embark on the path of entrepreneurship, which is not the case at all. We find that two main reasons are to blame: 1) employers, despite the fact that they need workers, do not want to "burden" their company with additional employment (it is problematic to consider employees as a burden and not as a building block of company success). Therefore, they require workers to become self-employed (ie "at their own expense") and to conclude various civil law contracts with them; 2) natural persons go into self-employment completely spontaneously, because they hope that they will somehow save their existence (funds obtained from the Employment Service, various state aid, which also includes some Covid measures, etc.).

The consequences of such actions are not only (too) numerous bankruptcies of sole proprietors (de facto personal bankruptcy), the consequences of which (on personal levels) are and will be shown for many years to come, but also a threatening social bomb for the country who is (like many others) approaching the economic crisis that will undoubtedly follow the COVID-19 epidemic and will (as usual) hit mainly all those (both individuals and legal entities) who barely survived before the epidemic.

Many closures of sole proprietorships, on the other hand, show a realistic picture of the economic situation in the country, as they actually mean that there is no work for entrepreneurs (or they cannot do it due to epidemiological conditions), and in the same time measures taken by the government are not (at least not to a sufficient extent) helping to overcome the crisis.

### **3. The abuse of the institute of self employment**

The world economic system has been changing (according to a rough estimate) in the last ten years on the basis of neoliberal ideology (and unrestrainedly for the last three years), especially in the field of socio-economic relations. Neoliberalism based on competitive relations and enrichment at the expense of exploitation transforms as much as possible a humane society and values into an impersonal competitive battle of offering one's own services and abilities and selling oneself (Psihologija dela, 2019). New ideas of flexible work began to change the relations between workers and employers in favor of the more powerful ones, who relieve themselves of the costs of doing business at the expense of exploitation and violation of the law. There are more

and more self-employed people who, contrary to the definition and principles of entrepreneurship, consolidate a new trend of wild capitalism under the label of free market and flexible work, which brings many negative consequences to the individual and society as a whole. In a closed system of regular employment, more and more individuals are forced to agree to all cases of exploitative forms of employment. As a result, a new social subclass is formed, which does not have its own savings, most often not its own housing and minimal possibilities for establishing a family environment. We call them poor employees and they are easy prey for the supporters of neoliberal tendencies, which flourished in the economic crisis in 2007, but date back to the 1970s. This phenomenon can simply be described as a trend of global precarization, which in no way bypassed Slovenia (Psihologija dela, 2019, Gabrič, 2015).

So, just like in other western countries, precarious work in Slovenia is on the rise under the guise of market flexibility. Statistics show that this is a subordinate position of the self-employed (a large proportion are sole proprietors) whose share reaches 41% of all employees, but if we focus on the younger population, the statistics show even 76.5% of atypically employed individuals in the entire younger population. Statistics on these high percentages of atypical employment cover all non-regular employment. These, however, we know are all based on civil law contracts (sole proprietor, business and copyright contracts) and employment law contracts (i.e., fixed-term contracts, part-time contracts, and work through student services). Precarious work is characterized by a lack of rights, excessively low paid work, which results in difficult financial situation of individuals, poor mental and physical health (in this way) of employed individuals and payment of minimum social and pension insurance contributions, and harms the state. Among sole proprietors, precarious workers are those who open an sole proprietorship at the request of an employer, or those who, with the status of an sole proprietor have been operating positively for a long time, and due to the circumstances at some point they agree to the working conditions dictated or conditioned by the employer (Gradiva, 2018). In such subordinate conditions, however, they cannot provide services according to the principle of entrepreneurship, ie in their own name and for their own account, which would mean that they appear on the market independently and have only a business relationship with the client. They find themselves in a subordinate position of the employer due to financial hardship and lack of work, so they agree to a business relationship that has essentially all the elements of an employment relationship (Samostojni podjetnik, 2021), which means that they actually do business with the employer in disguise. The employer, on the other hand, presents the disguised employment relationship as a subscription business relationship, for which it pays the sole proprietor through invoices, which the latter must issue to him as a statement of the ordered and performed service. In this case, a self-employed person in a disguised employment relationship does not have the position of an employee under an employment contract, ie under the Employment Relationships Act (ZDR-1), which deprives him of adequate employment protection and all rights to such an

employee. He is treated as an equal client who performs work for the client under a civil law contract, although in reality he works according to all the criteria of the employed person, ie the elements of the employment relationship. Characteristic of such a disguised employment relationship is the personal performance of work for the client, which means that the contractor can only be him, and that the work for him cannot be done by someone else. The next fact that a self-employed person works in a disguised employment relationship is that he constantly performs the same work for a longer period of time, and that he performs work for the employer in his organized work process under his supervision and instructions.

The deprived rights that emerge from such a disguised employment relationship are mostly - the right to a break, paid leave, holiday pay, payment of social security contributions, coverage of sick leave, severance pay in the event of dismissal by the employer, etc. (Korak naprej, 2020, Insolv-info, 2017a). In other words, we are talking about a disguised employment relationship when the relationship between the employee and the employer is shown differently, so that the employer avoids paying taxes and contributions and all obligations under the employment contract (Samostojni podjetnik, 2021). The main reason that employers force the self-employed into a disguised employment relationship is the desire (due to lower operating costs) for unfair competition. (Gibanje za dostojno delo in socialno družbo, 2017). For an individual who finds himself in such a situation (when he has to cooperate with his status as an entrepreneur at the request of the employer in his work process), this means constant psychological pressure due to poverty, as a consequence of the costs of doing work in such a way. From a one-time monthly receipt of funds on the account on the basis of an issued invoice (which is dictated by the employer) he has to pay the taxes and contributions as well as cover its costs of sick leave, which would otherwise (in the case of an employment contract) be borne by the employer within the first thirty days. Additional psychological pressure creates the fear of losing a job, as he is aware that he can be replaced by someone else at any time without notice (fear is justified, because the very reason for the self-employed to agree to such an employment relationship is their distress). In this context, there is too little talk about the mental state of precarious workers due to physical overload and burnout as a result of constantly exceeding the statutory timeframes due to tight deadlines, working beyond all regulations and availability even in free time, and awareness of everyday insecurity without planning the future financial security. All of these are stressful circumstances that affect an individual's mental health even more than long-term unemployment (Psihologija dela, 2019, Novice.svet.24.si, 2019).

Precarious work also has social consequences. Precarious workers pay significantly less social security and pension insurance contributions, as they are unable to pay social benefits from the reduced earnings (we focus on individuals who were forced by the employer to open a sole proprietorship), which the employer transfers to them through accounts. Those contributions are incomparable to those of full-time employees. In addition, they are also subject to taxes and personal income tax from

the same earnings. This, in turn, means fewer funds for the state budget, which is reflected in the health, pension and school systems, as well as other state investments. Therefore, the state does not allow precarious work and in Article 13 of the Employment Relationships Act (ZDR-1) clearly defines the working conditions that define an employment relationship under an employment contract, and at the same time stipulates that the employer requesting or referred to in Article 13 of this Act allows or for any reason performs through any of the other contracts, in violation (Gradiva, 2018). On the other hand, due to the loose interest of the state in improving the system and suppressing exploitation and breaking the law, there is a concern that its interest is due to "perhaps sufficient" accumulation, hidden on the side of capital (Gabrič, 2015), or not really aware complexity of the problem. Slovenian policy is quite loud regarding the problem of the prevalence of precarious work, but the inefficient work of inspection services, too lax legislation and the consequent inconsistent punishment of violators (which could otherwise discourage them from exploiting and punishing them with proportionate penalties) which could otherwise discourage exploitation and bad practice by the consistency of action in terms of proportionate punishment. (Novice.svet.24.si, 2019, Insolv-info, 2017a).

What does the case law say about the problem of disguised employment relationships? At the international level, these problems are addressed by the so-called "Recommendation" of the International Labor Organization (ILO) no. 198, enacted in 2006 (Insolv-info, 2017b). Given the lack of other legal sources that would regulate the issue of hidden employment relationships, in the case of the ILO it is an important international document, despite the fact that it has the nature of a recommendation and is not legally binding (Kutnjak, 2017). In its recommendation, the International Labor Organization provides guidance on deciding whether to differentiate between an employment relationship and other legal relationships (whether employment law or civil law). It puts the facts of the contractual relationship before the formal description of the relationship and draws attention to the indicators by which it is possible to determine and prove whether it is an employment relationship on the basis of the plaintiff's submitted facts. In its recommendation, the ILO also advises national case law on what measures to take to prevent illegal concealment of employment, and provides access to effective procedures for employment disputes (Insolv-info, 2017b). In the Recommendation, the ILO defines a disguised employment relationship as a relationship that is apparent and misleads the actual legal relationship between the employee and the employer or sole proprietor and the latter, with the intention of the employer to nullify or reduce the legal protection of the employee or sole proprietor. Legislation refers to a specific employment relationship (Slovenian legislation in this respect corresponds to the definition of the ILO) (Kutnjak, 2017).

The court's finding as to whether or not there is an employment relationship is (for a self-employed person - in our case a self-employed person who finds himself in a disguised employment relationship) important for exercising the rights arising from

the employment relationship for which the individual was appointed due to a misrepresented legal relationship by the employer deprived. Therefore, the correct decision of the court in the case of establishing an employment relationship is important for the plaintiff entrepreneur or individual, due to the exercise of legal protection provided by labor legislation (in Slovenia ZDR-1). In short, the purpose of the ILO Recommendation is to draw attention to existing case law in a particular country to certain questionable views of the case law in question, which illogically or unreasonably restrict the right to judicial protection of an injured party in a disguised employment relationship. Slovenia is one of the few countries (Austria, Germany) that has a separate independent declaratory action (regulated by the Civil Procedure Act - ZPP), which is feasible under certain prescribed preconditions. This procedure is used in our legislation for the preventive provision of legal and judicial protection in the event that the rights of the client are endangered and is intended only to determine the legal situation, without changing, transforming or ordering anything, but only allowing the parties to face their legal status in the continuation of court proceedings (Insolv-info, 2017b).

In Slovenian case law, we have the Labor and Social Courts Act, which in the first paragraph of Article 5 gives jurisdiction to the Labor Court to decide on individual labor disputes and other essential elements of the legal relationship between the parties (conclusion, duration and termination of employment). When it comes to determining the true nature of the legal relationship between the contracting parties, the proceedings are initiated upon the application of the party for a declaratory action to the Labor Court. If the court in the declaratory action considers or finds that the continuation of the employment relationship could not be possible with regard to the interests of both parties, it may also decide to terminate the employment relationship in accordance with Article 118 of ZDR - 1 (Kutnjak, 2017, Pravo za vse, 2020 ).

The lawsuit is the last procedure in resolving an individual dispute between a self-employed person and the employer, when the employer does not recognize the legal relationship as an employment relationship. However, the employer can change the civil law relationship into an employment relationship after the action of the Labor Inspectorate and the lawsuit does not arise at all. At the end of last year, an amendment to the Labor Inspection Act came into force, according to which a labor inspector can now request an employer who has been found to have a disguised employment relationship to offer a suitable employment contract to sole proprietor working in such a relationship within three days. In such a case, the employer may terminate the business relationship with the employee through a Civil Law contract, or decide to rectify the error, settling (after concluding an out-of-court settlement) also contributions and other obligations from the employment contract retrospectively (but not more than 18 months). A self-employed person (entrepreneur) may not continue to perform work under the previous contract from the moment of submitting the labor inspection until the validity of the new employment contract (Pritličje, 2021, Pravni SOS, 2019).

The abuse of the status of an independent entrepreneur, with a targeted campaign in cooperation with labor inspectors, was taken over by the FURS (Financial Administration of the Republic of Slovenia) on its own initiative. Such actions would be welcome in terms of suppressing the exploitative way of employment and spreading precarious work if they were aimed only at employers' violations. However, since the politics is primarily concerned with resolving incorrectly redistributed money from taxes and contributions, it ensures that the entrepreneur's reduced earnings from employment into employment income are legally reclassified and taxed at its own discretion (we know that precarious workers pay due to poverty minimum contributions). So, regardless of the fact that the inspection consequently fines employers (violators) for the offense, any such action also affects the already impoverished precarious workers. FURS denotes self-employed individuals working for employers with forced sole proprietor status as fictitious sole proprietors. In the targeted campaign, it mainly checks the correct payment of contributions and taxes, and pays special attention to the income of self-employed persons, with whom it determines whether their contractual relationship is dependent or independent. It carries out inspections at taxpayers (employers) where it determines the activity of natural persons with the status of a sole proprietor in their work process. FURS explains that in the case of disclosure of a covert transaction with a fictitious transaction, when the employer pays income from work to the account of the sole proprietor through a contract, reviews all contracts and payments, and determines whether these payments should be paid to employees as salary. If it finds the latter, all income paid through sole proprietorship. taxed as employment income. In such a case, employers are followed by financial sanctions. For FURS, the only problem in proving a violation of the law is the insurance business, where the Insurance Act allows an exception regarding employment through sole proprietorship, but does not define when it could be a disguised employment relationship. The Ministry of Finance interprets that insurance cannot be an exception, and that they, like everyone else, are prohibited from employment through civil contracts (Hreščak, 2016).

However, there is a possibility when a sole proprietor can perform work for a single client through a civil contract, without fear that the act will be sanctioned. But only if he acquires the status of an economically dependent person. However, this does not mean that even in such a case it is not a disguised employment relationship, because even this time the work performed by a sole proprietor under a civil contract for the client (in this case the contractor is called the client and not the employer) must not show elements of employment relationships. A sole proprietor who acquires the status of an economically dependent person may not employ workers, this is the first condition, and the second is that he obtains at least 80% of his annual income from this sole client (Jan, 2021, Grahek, 2015). If the entrepreneur is eligible for such status, he must inform the client at the end of each calendar year that he is economically dependent on him. As proof, in addition to the notification of the status of economically dependent person, he must also submit the necessary evidence to the client. Such a sole proprietor or an economically dependent person has certain rights

arising from the second paragraph of Article 214 of the Employment Relationships Act. These are:

- Prohibition of discrimination
- Ensuring minimum notice periods
- Prohibition of termination of the contract for unfounded reasons
- Ensuring payment for agreed work
- Payments of taxes and contributions
- Claiming liability for damages.

The Employment Relationships Act therefore provides such sole proprietors with very limited employment protection and regulates these issues only unless otherwise provided by a special regulation. The status of an economically dependent person has been in force since 2013 and is still very sparsely defined in ZDR-1 (Lorenzutti, 2018, BSC, 2021). The findings of the tax inspections of FURS showed that in these cases, too, business contracts were concluded between the client and sole proprietor in many cases only fictitious transactions in which its actual content differs from its form. FURS is also in these cases the payment of subscribers to the account of sole proprietor reclassified to income from employment, from which he assessed taxes, advance payment of personal income tax and social security contributions. These measures of FURS are substantiated in Articles 5 and 74 of the Tax Procedure Act (ZdavP-2), which stipulates that all income is valued according to its economic content, and that fictitious transactions do not affect taxation (BiroBonus, 2021) .

The percentage of the self-employed is increasing from year to year, and thus the percentage of the unemployed in Slovenia is decreasing, which counts in favour of misleading the public. This increase does not stop even during the health crisis due to the Covid-19 epidemics, which has halted the economy and especially entrepreneurship, and there is no reason to open new sole proprietorships, as the health crisis has made it impossible to survive from any of these gainful activities and in fact required a number of closures and bankruptcies of otherwise sufficiently stable entrepreneurs before the crisis. This fact clearly indicates the increase in disguised employment relationships and the extent of precarious work in Slovenia. In the last decade, after a marked increase in the number of precarious workers and violations by employers, even before the health crisis, the percentage of self-employed people found themselves below the poverty line. Poverty among the self-employed is confirmed by unquestionable numbers, and especially by the people who encounter them on a daily basis (Gradiva, 2018). Precariousness has unfortunately become a new reality that many have already had to accept. The ignorance of politics, however, leads many individuals (including those who believed that the social anomaly was a temporary reflection of the economic crisis) into experiences that change the context of society in all segments.

#### 4. Conclusions

According to AJPES (2021) on 31<sup>st</sup> of December 2020 there were 99,044 independent entrepreneurs operating in Slovenia. Compared to 2019, the total number has not changed significantly. In the "crown year", 14,438 sole proprietors were erased (which is a logical consequence given the many restrictions on activities and long-term complete closures), but it is unusual that it was in this year, when operations were almost historically hampered, even disabled; newly opened as many as 15,395 sole proprietorships. In January 2021, more than 1,600 were newly enrolled. Here, of course, the logical question is why there are so many newly opened sole proprietorships, while established (or existing) sole proprietors are closing their activities. Is it possible that in this period of crisis they have found a market niche for the activity they intend to carry out? And given the incredible number of new discoveries: How many such markets niches have suddenly emerged?

At the same time, we cannot ignore the fact that, due to numerous suspensions of activities in 2020, unemployment also jumped. According to the data of the Business Institute (ESS, 2021), at the end of December 2020, 87,283 unemployed persons were registered, which is 3,144 persons or 3.7% more than in November. Compared to December 2019, unemployment was higher by 11,991 persons or 15.9%. In 2020, an average of 85,003 unemployed persons was registered at the Employment Service, which is 14.6% more than in 2019. In December alone, 7,735 unemployed persons registered with the Employment Service.

Of the 4,591 unemployed persons who were deregistered from the register in December 2020, 2,913 persons were employed or self-employed. Among those "employed" were most secretaries, simple workers in manufacturing, salesmen, other simple workers, storekeepers and sales and sales officers, waiters, commercial sales agents, cleaners, servers and household helpers, etc. in offices, hotels and other institutions, drivers of personal vehicles, taxis and light vans and economists (ESS, 2021).

In 2021, 15,276 new jobseekers were newly registered at the Employment Service (of which only a good 800 were first-time job seekers).

These data testify to the fact that the labour market has swung in a direction that on the one hand shows an extremely high number of unemployed and also a high number of closures of sole proprietorships, and on the other hand shows an almost unbelievably high number of new sole proprietors. Based on the data and explanations given in the previous chapters, we can conclude, in particular, the following:

1. people who have lost their jobs either due to the bankruptcy of companies or because they have become redundant workers (this is undoubtedly the impact of the crown crisis; and there were only 3,166 in January) are simply forced to



do anything to make a living (it is important to know) it is necessary that most companies that go bankrupt usually owe their former employees salaries and / or contributions for several months);

2. people who lost their jobs due to the course of temporary employment (there were 9,141 of them in January) do not receive any compensation from the Employment Service and thus are left without any means of subsistence overnight (such temporary employment is in Slovenia rather a rule than an exception, which the law does not allow, but practice (even inspections!) accepts);
3. according to the epidemiological situation in Slovenia, there is practically no employment, and employers (understandably) do not dare to risk employment with regard to the unstable situation.

Based on the above, the only way to save the existence of people is to open a sole proprietorship and perform work for the employer through monthly invoices. What this means and brings with it, we have described in detail in previous chapters. However, it also (can) explain where and why such a high number of new independent entrepreneurs come from.

Our claim can be further supported by a brief analysis of so called "Employment" in the hospitality and tourism sector. Due to the pandemic, it suffered the largest losses (at the time of writing, the sector in Slovenia has been almost completely closed for months). Most caterers and hoteliers first put the staff on hold and then fired them to a greater extent. In addition, it is necessary to know that these are already (especially in tourist places) so-called seasonal jobs. Sometimes employers "solved" the seasonal way of working with fixed-term employment contracts. Now, however, it is easier and, above all, cheaper for them to "employ staff through sole proprietorship"<sup>34</sup>. This avoids employment costs and administrative difficulties when they no longer need a worker. In such cases, civil contracts are terminated without any consequences for the employer.

The situation is very similar with most travel agencies (unfortunately since many years). So-called commercial agents or economists (depending on the name used by individual agencies) in most cases do their work for a travel agency as sole proprietors. In addition, they are (among all other signs of employment) also tied to sales. This means that they have the right to issue an invoice only on condition that they have reached the amount of the sale set by the employer. In this case, they are entitled to an invoice amount of the net minimum wage. From this point on, the commission scale is used, which is set in such a way that the sole proprietor can only increase the amount in his account by a certain percentage when he reaches the amount set in the scale.

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<sup>34</sup> This is a popular term in Slovenia, where of course there can be no talk of any kind of employment. It is used en masse to mislead workers.

Hospitality and tourism can indisputably be ranked at the top of the scale of abuses of the status of sole proprietorship. Unfortunately, in recent times it has also been successfully overtaken by some predominantly service activities, such as:

- hairdressing and cosmetics (here it is usually the so-called "sale of a chair", which means that instead of employment the worker opens a sole proprietorship and is paid as much as he does the work on "his chair"),
- various business-accounting-legal services (it is almost "normal" to perform this activity with sole proprietorship),
- cleaning, care or household assistance (employment contracts are extremely rare here),
- various craft works (more and more workers must have their own sole proprietorship),
- research, education, work on projects (high value-added jobs are withdrawn from work through sole proprietorship and thus degrade many professionals either into precarious work or forced to flee abroad).

The problem (which we have already described in detail) of such abuse of the law and thus also of the staff is not only that these are illegal actions that are very rarely stepped on by the inspection services, but they increase with the fact that such "abused" workers are silent for fear of protecting their own existence. In the case of inspection measures, it is not just a matter of the employer having to pay taxes and contributions retroactively, but two more things happen: the employee (sole proprietor) must also pay the difference in personal income tax retroactively, and his civil contract with the employer terminates immediately. And this is the reason why workers are usually silent and do not report illegal practices.

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# ARCHITECTURAL DESIGN OFFICE IN SLOVENIA - WORK AND OTHER ACTIVITIES DURING THE 2020 PANDEMICS

Dr. Andrej Šmid<sup>35</sup>

## Abstract

Every architectural office has multiple tasks to be processed - conception of the ideas, architectural design projects, building permit procedures, building site supervisions, various public presentations and similar - the 2020 Covid pandemics altered many of them in an unexpected, previously never tested ways.

Architectural offices in Slovenia did not stop working - the office patterns altered, but the essence of architectural design - the preparation and supervision of the building processes - was preserved in the most pure and essential fashion: it is not bold to say that the architectural practice in Slovenia during the 2020 Covid pandemics experienced various jumps to higher levels - be it the conception or building supervision.

This article will show that the new ways of practising architecture used the Covid experience to become more focused on the design - the rigid office work procedures were sacrificed in order to preserve the essence of the architectural occupation : to design and to build.

## 1. Architectural office before the pandemics

An architectural office is a company that practises architectural design and urban planning and mainly pursues the assistance to various stages of building process: the conception, the preparation and the supervision of building on site. Since the preparaton of architectural designs is not bound to the building site - which has to be initially visited and then studied off-site - architects can produce design drawings virtually anywhere. Using contemporary design techniques and widely available GIS data<sup>36</sup>, architects have transformed their practice into a nomadic experience long

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Since 1993 he was working in local architectural offices and after graduation in the local urban planning office until 2001 when he started his architectural career at the Komunaprojekt office in Maribor. In 2013 he founded his own architectural office, the Studio Baza and Arhitekt Šmid office in 2016. His work in architecture and urban planning is very divergent, from the urban detailed planning to the architectural design of mainly non residential buildings.

His academic career started in 2010 as a guest lecturer at the Architectural department of the Civil engineering Faculty of the Maribor University. The research on urban structures of former Yugoslavia cities led to the PhD completion in 2019 at the Faculty of Architecture of the Graz University of Technology (TU Graz). Today he is partly employed as an assistant at the Faculty for civil engineering, traffic engineering and architecture of the Maribor University-

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<sup>36</sup> Such as GoogleMaps worldwide, iObčina and PISO in Slovenia and several databases on state and community level

before the Covid pandemics - very rarely an architectural office in Slovenia has enough projects to be finished in their hometowns.

Looking at the structure of an architectural office based in Slovenia in the second decade of the 21<sup>st</sup> century, it is obvious that there is a majority of small architectural offices that are based on one or two senior architects and one or two coworkers. The architectural design projects of these micro-offices are limited to individual residential and smaller public building projects and the appearance of the offices is rather modest. They are rarely involved in medium size and major public projects. The second form of an architectural office is a small firm that consists mainly of two or three senior architects and up to ten coworkers. The firm is able to pursue medium size investment designs and is able to cooperate with public on medium size public investment projects. The firm is mainly working with private investors, a small fraction of their work is bound to individual residential projects. The third form of an architectural office organisation is a decent architectural office with more than five senior architects and at least a dozen coworkers - this operational form is almost extinct since the 2012 economic crisis, but approximately a dozen of offices in Slovenia managed to survive and develop an architectural design practice that obviously survives all the movements in the investment sector of the national economy.

In Slovenia, all the architectural offices are classified under the business register classification<sup>37</sup> 71.111 Architectural design (Arhitekturno projektiranje) and senior architects have to become licensed members of the Slovenian Architects and Spatial planners Chamber (ZAPS, Zbornica za arhitekturo in prostor). The architectural design and spatial planning is a registered business activity which is bound to the chamber license when contacting the state and municipal government in any way - be it obtaining the building permit for an individual building or creating a spatial regulation document for the community. It is specific that the smaller architectural offices consist of only architects and do not include other engineers - construction, installations, fire prevention and other planners.

Since the architectural occupation is as old as the building process itself, the legal and fiscal regulations of the trade are well known and widely accepted. The architectural occupation includes a part of the public service and is highly responsible since it meets the intentions of the investors on one hand and the rigid state and local regulations on the other hand. Basically architects' job can be divided into three main fields of work and expertise: to conceive, develop and invent new functional and aesthetic solutions for the client; to obtain the permits to build and finally to supervise the building process until completion. The architectural job and project is finished when the building is finished and handed over to the client or end-user. These three stages of architectural work are well understood even at the small building ventures. Each of them is quite different and asks for various attendance

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<sup>37</sup> According to the registration rules, the main business has to be specified according to the SKD (Standard classification of the business) when registering a company in Slovenia

techniques by the architect: the development of the design is done mainly in the office, and it mainly asks for a profound dialogue with the client; the building permit procedure is bound to correspondence with various public offices, community and state preservation legal bodies and communal infrastructure providers - these contacts are rarely personal since the decisions are always following the valid legal documents. The building organisation and supervision is a completely different procedure and it is based on project design provided by the architect and other engineers involved: the preparation is done prior to setting up a building site and the building site asks for regular supervision. Supervision of the building site includes the control of the execution procedures and deals with minor changes of the design. As odd as it may sound - the building and completion process generally takes more time than the conception of the architectural design.

## **2. Architectural office during the 2020 lockdown**

The last discussion on altering the architectural office practise was held during the 2012-2016 recession. The alteration of the office work was then captured by a short observation, published on my linkedin page<sup>38</sup> on January 19, 2015:

*Travelling architects, flying circus*

*The recession in Slovenia and the southern central Europe triggered a decision for all my colleague architects residing in the region: to fall to the social bottom or to start following the architectural jobs? There are some that totally abandoned architecture and started alternative businesses, and there are other that work as CAD monkeys via the internet for some bigtime european offices. Very few left for Qatar and some working architects converted to teaching architects. I find the dilemma of becoming a teaching architect similar to the practice that was often made by the politicians in the 1970es in the socialist Yugoslavia: if a journalist was really good, he would be "promoted" to an editor. I cannot follow this example: a good journalist is a good journalist and often does not have the power and the guts to play an executing editor. Editing (or teaching) is something completely different than writing (or designing architecture).*

*So we jumped into the architectural design and started working all over the region. It is vivid, it is hard - but it is also satisfying. In the sense of Georg Simmel we as architects are perfect strangers: we go everywhere to be aliens. To design, to leave a trace, getting to know the locals very thoroughly. To come, to stay, to go back, to come again.*

*There are two bonuses to our decision: the first is to practice architecture more intensively; since noone knows us we have to give our best. The second bonus is that*

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<sup>38</sup> LinkedIn is a professional platform for personal presentations, the observation is published on my site ([73\) Travelling architects, flying circus? | LinkedIn](#))

*all the problems at home become very distant since they are local problems. And all local problems are dissolved. Sooner or later.*

In the 2020 Covid pandemics lockdown the architectural bussiness could not turn more different than the nomadic modus operandi, described in the short text above: architecture and building turned local - it seemed that the lockdown in Slovenia slowed all the design processes down.

An average architectural office processes in the 2020 lockdown were altered in many ways. Basically, the office was redesigned in order to allow the employees to keep proper distance, almost all the coordination meetings were moved to the virtual platforms, the building site supervision was maintained at a very concise level and the contacts with clients was reduced to the most necessary. In general, changes did not affect the work in any ways - the work processes and procedures were fully optimised regarding many aspects.

Immediately after inventing the epidemics lockdown to the public life, almost all the offices tried to do work as much from home as possible. This proved essentially possible for a period of two or three weeks since home is no place to keep the office archives, to collect all the paperwork and move it from office to the home office, to conduct all the design modifications with coworkers exclusively online and similar. A vast majority of the offices invented the “comeback to the office” in cautious ways - the number of people working in the same room was changed, the work procedures were distinguished by necessity as “the office procedures” and “the out-of-office procedures”, the online meetings were practically fully converted to the (third) cathegory - “the online procedures” and the building site coordination meetings were treated either as “the building site visits” or “online building site coordination meetings”.

In the first phase of 2020 pandemics lockdown the number of new contracts was expected to diminish and it became visible in the second half of the year. The “slovenian” way of prepairing construction works is bound to two periods: a vast majority of contracts are arranged and signed after longer holidays - either in september or in january. The covid pandemics modified at least one of these time-spans - since the december period was not used as a three week celebration event, the clients obviously started thinking about new projects a month earlier than in “normal” years: new contracts were prepared and acquired before (and not after) the new years’ eve.

The communication processes were altered an refined: prior to the lockdown, an ordinary coordination meeting would take place at the building site, causing all the involved parties to come to the place. The lockdown rules limited the meeting members number and it was necessary to invent a new form of a coordination meeting: the combination of an online meeting, which physically takes place at the



building site with some key members (hosts), but allows other attendees to be present online, creating communication channels of picture and sound (installing the microphones, loudspeakers, cameras and screens at a building site conference room). The benefits of such preparations were visible at the first meetings: the physically present attending members of the meeting (hosts) are employees of the building site and are bound to be at the site at all times, the visitors on the other hand are present at the online meeting and can save the time of travelling to and from the site to their offices. This caused new ways of attending the meetings: the visitors learned to report to the meetings online and from their offices, homes, cars, outdoors. The meetings were held in more concise ways, when attending an online meeting, the cooperation is more concentrated, people tend to be present for a shorter time but in a more devoted manner. The digital technical materials (drawings, texts, mails, schemes, photos) are easily shared and the discussion level was raised to a higher level of technical discussion. Some building sites introduced new ways of building site supervision that included installing cameras to the cranes in order to track construction progress - these camera online videos could be included at the coordination meeting discussions. Of course the number of “host members” and “online visitors” was not constant - some online visitors had to check the construction procedures on site and some hosts could attend the meetings from their offices - but nevertheless - the coordination meetings at the building sites were inevitably modified.

The second package of architectural work is the communication with the various offices in order to obtain building permits or the communication an procedures that lead to the completion of urban planning documents. These communication paths were changed in unexpected ways. In the first couple of months of the lockdown in 2020 it seemed that various offices were shut down since almost no communication was possible. This changed vividly in the second half of the year: all the communication channels were opened and it was nothing unusual if you heard children background voices when discussing a technical solution with an official or a clerk. A majority of the officials was for at least some time working from home, and this means dealing with official documents from a non-official work environment. Almost all the communication was conducted per e mails, all discussions and clarifications per phone. Online meetings were held only if more officials had to attend the meeting. Since the majority of cases is solved by an individual official, online meetings were exceptional. It is obvious that the state and local government in Slovenia proved (especially in the second half of 2020) that it is operational in the “home office modus operandi”. This includes all the aspects of construction work and architectural planning activities - be it issuing the building permits, supervising building sites or fining parking of the vehicles on public green areas. Even the most complex procedures, i.e. preparing of urban plans or similar, were conducted in a most sophisticated manner and to the satisfaction of all the involved parties.

### **3. Architectural office after the 2020 lockdown**

Just as every crisis is a teacher, the 2020 lockdown and the Covid pandemics taught the architects and all the parties, involved in construction activities, to alter their work processes. When the offices slid back to the office attendance, some of the procedures from the lockdown period were kept as smart: coordination meetings at the construction sites are still kept as online meetings, the hosts are still on site and the online visitors did not return to the physical presence. The supervision is still held on site, but the attendance is somehow kept optimised: if not necessary, a meeting will not be held on site. Architectural offices moved back from home to office attendance, but some of the processes, especially individual concept development, are sometimes still done in home environments, since they offer better work conditions for this kind of creative work. The offices and homes are fully equipped with communication hardware and software so technically it would be possible to continue the home office practice. But the architects interaction, human contact and cooperation in the office are vital for developing the project design and architectural vision of the future buildings. The nature of architectural occupation is imaginative, architects are like dreamers, at least in the initial phase of conception - dreaming together can mostly add to the architectural quality of the design.

The architectural office after 2020 lockdown did not return to “normal” since “normality” was never a category, connected to architectural design. Every critical period of time adds to modification of all architectural offices. In the last decade offices gained an international approach setup, there are less and less offices that operate in a strictly local manner and construct exclusively in local environments. Last decade started with economic crisis, this decade started with a pandemics. Unfortunately last decade was defined by a crisis in the construction industry and fortunately (for architects), the pandemics obviously did not trigger limitations in the construction industry and business processes. The public procurement investments are even showing new and bigger intentions.

Surely, new rules and new methods and techniques were invented to avoid possible lockdown limitations to the architectural occupation - but every critical situation is merely a call for adjustments.

### **4. Architectural office tomorrow**

It seems that the year 2021 brings new challenges to the architectural practice - new waves of the Covid tend to be approaching. For three decades the architectural offices in Slovenia are undergoing smaller and larger redefinitions and it seems that the architectural office may only be a hull, a frame of what is the core of architectural design: the creation. The development of this frame is really only a continuous improvisation, a permanent adjusting process, a constant modification. The core

business, the design of buildings, will always start and result at the same spot: architectural design is reasonable when the building structures are completed and handed over to the end user. Since the construction industry was not really affected by the Covid pandemics, we were glad to observe that architectural design joined this fortunate fate.

On the other hand, if the pandemics will occur again and last for a longer period of time, major changes in the architectural and urban realities await us - the society will have to deal with issues such as alteration of the public space use, public buildings and installations use, public transport standstill, permanent local government modifications and total alteration of services that include larger user groups. These challenges are yet to be observed, pinpointed and solved.

## **TRANSPORTNA LOGISTIKA v KRIZNIH RAZMERAH**

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### **Povzetek**

V prispevku je predstavljena vloga transportne logistike cestnega prometa v kriznih razmerah.

Opisane in analizirane so značilnosti organizacije transportov z vidika zadovoljevanja potreb po oskrbi prizadetih območij z dobrinami za sanacijo nastalih razmer oz. za izvajanje ukrepov za omilitev in preprečevanje škode. Poseben poudarek raziskave v pričujočem članku je posvečen preučevanju prometnega toka in implementaciji prevozov masovne oskrbe v organizaciji transportnih kolon oz. konvojev. Kolonske prevoze sestavljajo različno število vozil, ki se morajo gibati po prevozni poti z optimalno načrtovano hitrostjo ne glede na stanje prometne infrastrukture in drugih neugodnih razmer, ki pogojujejo pričakovano učinkovitost in varnost prometne storitve. Cilj prispevka je pojasniti vlogo cestnega transporta v kriznih razmerah in oblikovati pristop k načrtovanju transportno logističnih rešitev z uporabo transportnih konvojev. Zaradi pomanjkanje podatkov in nedostopnosti do virov iz katerih bi črpali analogna spoznanja stroke v novejšem času, smo pri raziskavi delno uporabili metodologijo vojaške logistike.

## **TRANSPORT LOGISTICS IN CRISIS SITUATIONS**

### **Abstract**

This article describes the role of road transport logistics in road traffic during crisis.

Characteristics of the transport organization of goods for the recovery of the incurred conditions or for execution of mitigation and prevention measures are described and analyzed from the supply fulfilment point of view. Special emphasis is dedicated to the study of traffic flow and the implementation of mass supply in convoy management. Convoy formation can include various number of vehicles that needs to advance along the planned route regardless of the traffic infrastructure and other unexpected conditions that affect the expected traffic efficiency and safety.

The objective of the article is to explain the role of road transport in emergency situations and to prepare a guideline for defining transport and logistics solutions based on transport convoys. Due to lack of valid data and inaccessibility of sources which would provide us with analogical findings in recent time, we had to use methodology of military logistics.

## **1. Vloga transportne logistike v kriznih razmerah**

Z vidika kriznih ali izrednih razmer je pomen transportne logistike najlažje razumeti, če ga povežemo s pojmi:« reševanje, obramba, zdravstvena oskrba, intendantska oskrba, odpravljanje posledic, evakuacija, ..«, ki so v neposredni odvisnosti s prevozi ljudi in stvari, ki se znajdejo v okolju kriznih razmer: vojne, pandemije, potresa, poplav, obsežnih požarov in drugih ujem. Transportna logistika je dejavnost oskrbe s transportom in opravili, ki so v povezavi z njim. Izvajanje prometnih in transportnih nalog v izrednih oz. kriznih razmerah v Republiki Sloveniji je določeno in opredeljeno v Zakonu o obrambi, v Zakonu o varstvu pred naravnimi in drugimi nesrečami, v Zakonu o materialni dolžnosti in v raznih podzakonskih aktih.

Transport ima pri aktivnostih prizadete skupnosti in tistih, ki prizadeti skupnosti pomagajo zelo velik pomen, veliko večjega kot v običajnem življenju saj je potrebno na prizadetem območju hitro ukrepati, ukrepanje pa je po navadi oteženo zaradi katastrofalnih razmer, npr. zaradi vojnih razmer, zaradi razdejanj okolja kot posledica raznih ujm ali pa tveganja pred kontaminacijo v pandemičnih razmerah.

Vloga transportne logistike v kriznih razmerah se odraža v mobilnem značaju zaščitnih reševalnih in drugih delovanj, povečani intenzivnosti izvajanja operacij, masovni prisotnosti transportnih sredstev na prizadetem območju, povečanih potrebah po dobrinah, ki jih je potrebno dostavljati do porabnikov, kot tudi na povečani migraciji (evakuaciji) ljudi. Zaradi tega je urejen transportno prometni sistem in pravočasno izvrševanje transportnih nalog pomemben predpogoj za uspešno izvajanje zaščite in reševanja, nudenje materialne, zdravstvene in drugih oblik oskrbe prizadetim. Od transportne logistike je v veliki meri odvisna podpora, ki obsega naloge, potrebne za minimizacijo nastale škode in pospešitev normalizacije stanja. Pravilna organizacija cestnega transporta v takih pogojih je kompleksna in odgovorna naloga. Napake v organizaciji in pri izvajanju transportov neposredno vplivajo na zmanjšanje učinkovitosti dela strokovnjakov, ki si prizadevajo omiliti nastalo škodo in preprečiti širjenje nastalih posledic. Zaradi tega morajo odločevalci in izvajalci logističnih aktivnosti dobro poznati zakonitosti transportnih procesov, predvsem dejavnikov, ki vplivajo na organizacijo dela, koriščenje prometne infrastrukture, prometne suprastrukture in specifične lastnosti predmetov dela (potnikov oz. tovorov) v procesu proizvodnje transportnih oz. logističnih storitev.

V kriznih razmerah, kjer se okoliščine lahko hitro menjajo morajo biti odločitve in realizacija transportno logističnih nalog izpeljane v čim krajšem času. Ta pogoj zahteva, da morajo biti nosilci transportne logistike dobro organizirani in usposobljeni ter podprti z ustrezno tehniko, da bi lahko naloge izpeljali učinkovito in sprejemljivo hitro.

V primeru, da predvidevamo, da bo krizno stanje dolgotrajnejše je izrednega pomena tudi ekonomično izkoriščanje prevoznih sredstev in sredstev pretovorih manipulacij, tako z vidika izkoristka nosilnosti, kot z vidika izkoristka prostornine tovornega prostora vozil. Pri izkoriščanju kapacitet voznega parka je potrebno pravilno izbirati glede na transportno nalogo, tip transportnega sredstva, vrste tovora, prevozne poti

in ustrezno vozno osebje. Za učinkovite rezultate v logistiki je racionalna eksploatacija voznega parka in parka manipulacijskih sredstev zelo pomemben cilj načrtovalcem transportno logističnih aktivnosti.

V kriznih razmerah, ki so pogojene z reševalnimi aktivnostmi so pogoji za izvajanje transporta večinoma zahtevni, potrebe po transportnih storitvah pa velike. Razmere na ogroženih območjih pogosto pogojujejo poškodovane in uničene pomembne prometne komunikacije. To npr. lahko izzove prekinitve v železniškem prometu, zato je promet mogoč samo v določenih smereh. Ker vodni, zračni in železniški promet v Sloveniji zadovoljujejo potrebe le na določenih lokacijah je cestni transport osnovni transport na katerem pretežno temeljijo aktivnosti transportne logistike.

Vzroki zaradi katerih ima cestni transport v kriznih razmerah pglavitno vlogo so:

- elastičnost v prilagajanju potreb po prevozih,
- velika razpršenost cestne mreže,
- neodvisnost od drugih vrst prometa
- možnost gibanja izven prometnih komunikacij,
- zadovoljive hitrosti gibanja transportnih sredstev,
- majhna občutljivost na kvaliteto cestnega omrežja v primerjavi z težavnejšimi razmerami pri normalizaciji funkcij delovanja poškodovanega železniškega omrežja.

## **2. Cestni promet in transportna logistika v izrednih razmerah**

Običajni kriteriji za razdelitev cestnega transporta so tehnični, organizacijski in ekonomski.

Kot navaja Pantelić (1986) tehnično delitev cestnega transporta po načinu izvajanja v kriznih situacijah oz. v izrednih razmerah lahko predstavimo kot:

- vlečna in vlečena cestna transportna sredstva za prevoz tovora in vozila za prevoz ljudi-potnikov
- traktorski, z delovnimi stroji in z vozovi
- s tovorjenjem na živino

Transport z motornimi vozili in v kombinaciji z vlečenimi vozili je najpomembnejša in najbolj zastopana vrsta cestnega transporta. Namenjen je izvajanju vseh vrst prevozov materialno tehničnih sredstev, prehrane, sanitetnega materiala in ljudi . V sodobnih koncepcijah obrambe in zaščite in reševanja je to osnovna oblika transporta.

Transport s traktorji in raznimi delovnimi stroji se uporablja za prevoz tovora na slabših cestnih komunikacijah (poljske in gozdne poti), v bazah začasne razmestitve in namestitve ljudi, na začasnih terminalih cestnega, oskrbnih centrih ipd. Primeren je za krajše razdalje in nepogrešljiv na slabše prevoznih poteh.

Transport z živino se uporabljata tam, kjer ostalih oblik cestnega transporta ni mogoče izvajati, npr. območja, ki so brez cestnih povezav (oskrbne postojanke v gorah in podobno).

Po ekonomskih kriterijih transport delimo na javni transport in transport za lastne potrebe. Javni transport je tisti, ki zadovoljuje potrebe družbe po prevozih. Ta oblika ima proizvodni značaj in predstavlja gospodarsko dejavnost. Je velikega pomena za družbo, zato so mu po zakonu naložene obveze, ki jih mora upoštevati (za vse uporabnike so postavljeni isti pogoji, določene linije se ne morejo ukinjati tudi če niso racionalne, sprejet mora biti ves tovor, če odgovarja predpisom, upoštevanje voznih redov, ceniki za določene vrste prevozov so tarifno določeni, odobreni in se ne morejo spreminjati brez odobritve). Prevoz za lastne potrebe je prevoz blaga ali ljudi zaradi zadovoljevanja potreb dejavnosti lastnika motornega sredstva in sicer:

- Če so lastniki motornih transportnih sredstev organizacije, državne ustanove in druge pravne osebe, potem se tak prevoz uporablja za: prevoz delavcev te organizacije ali ustanove in prevoz stvari za potrebe osnovne dejavnosti organizacije.
- Če so lastniki vozil državljani, ki ga uporabljajo za zadovoljevanje lastnih potreb.
- Pri prevozu z lastnim vozilom ali vozilom vzetim v zakup proti plačilu: gasilska društva za prevoz gasilcev, hotelska podjetja za prevoz svojih gostov, turistične agencije, zdravstvene ustanove in podobno.

Cestni transport, ki ga v izrednih razmerah izvajamo z vozili v lasti državnih organov, organov lokalne samouprave, z mobiliziranimi vozili delovnih organizacij ali občanov, se po Zakonu o prevozih v cestnem prometu obravnava kot transport za lastne potrebe.

Cestni promet v kriznih razmerah predstavlja aktivnosti oskrbe prizadetih na prizadetem območju in je integralni del nacionalnega prometnega sistema, ki mora zagotavljati učinkovito izvajanje transportov. Proces proizvodnje transportne storitve v izrednih razmerah vključuje:

- transportna sredstva državnih organov, delovnih organizacij in fizičnih oseb,
- mrežo komunikacij s spremljajočimi objekti prometne infrastrukture,
- upravne organe pristojne za cestni promet na lokalni in državni ravni, uprave enote, enote služb za zaščito in reševanje, ter druge pooblaščen organe in
- transportne organizacije in upravjalce prometne infrastrukture.

Komunikacijsko mrežo predstavljajo vse kategorizirane in ne kategorizirane ceste, objekti in naprave na njih ter informacijska infrastruktura.

Odgovorni nosilci cestnega prometa v izrednih razmerah so organi in službe ministrstev, ki upravljajo in vodijo aktivnosti na prizadetem okolju. Organizacija prometa mora biti taka, da zagotavlja hiter odziv in prilagoditve danim razmeram.

Za doseganje ustrezne učinkovitosti mora biti organizacija upravljanja, planiranja, izvajanja in kontrole postavljena teritorialno na omejenem ali celotnem ozemlju države in zajema:

- planiranje in organizacijo posamičnih prevozov in masovnih prevozov organiziranih v konvojih,
- reguliranje in kontroliranje udeležencev v prometu na javnih prometnih poteh in na območjih omejenega gibanja,
- operativno mobilizacijske naloge materialne narave in obveznikov na delovni ali vojaški dolžnosti (Uradni list RS, št. 7/91-I, Uredba o delovni dolžnosti),
- naloge vezane na določanje načinov koriščenja prevoznih sredstev,
- naloge organizacije dela v voznih parkih, na mestih kjer se opravljajo manipulacije vezane na prevzem in predajo dobrim,
- naloge usposabljanja delovnega osebja in odgovornih za transport na vseh nivojih vodenja in izvajanja,
- odločanje o angažiranju in uporabi sredstev transportnih manipulacij
- odločanje o uporabi informacijske podpore in sistema za obveščanje,
- naloge v zvezi z uporabo dokumentacije,
- odločanje na vseh operativnih nivojih po sistemu zakonskih določil in drugih predpisov s področja prometa.

### **3. Cestni prevozni procesi**

Transport je rezultat gibanja transportnega sredstva po prevoznih potih. Pojem gibanje predstavlja proces spremembe kraja, transport pa premeščanje stvari ali ljudi iz enega v drug kraj. Transport v izrednih oz. kriznih razmerah predstavlja vsako nalogo, ki je v zvezi s premeščanjem posameznikov in enot za pomoč in reševanje ter ustreznega tovora iz enega na drug kraj. Vsak organiziran transport v izrednih razmerah pogojuje njegov vzrok, cilj, način, čas trajanja, prostor v katerem se izvaja, struktura in organizacija. Izvajalci ali nosilci transporta morajo biti sposobni, da v najkrajšem času preidejo iz stanja mirovanja v stanje gibanja. Izvor premika ali začetek transportnega procesa je mesto ali področje iz katerega načrtovano prično transport v skladu z odločitvami in s ciljem realizacije določene naloge. Ciljno mesto transporta je kraj ali področje v geografskem prostoru, kjer se izvajajo zaključne naloge transportnega procesa. Področje izvajanje transporta je vnaprej, s ciljem transporta določen in omejen prostor gibanja transportnih sredstev. Vzrok za gibanje izhaja iz naloge zaradi katere se izvaja transport kot npr.: reševanje, evakuacija, materialna oskrba, zdravstvena oskrba in podobno.

Prometne storitve v kriznih razmerah lahko izvajamo v okviru prostega prometnega režima ali pa v pogojih zaprtega prometnega režima. Prosti režim prometa je gibanje



transportnih sredstev po prometnicah brez posebnih omejitev, prepovedi in prednostnih transportov, razen tistih, ki so določeni z zakonodajo. Udeleženci v prometu svobodno v okviru zakonskih določil izbirajo vozne hitrosti, smeri gibanja in organizacijo transportov. Zaprti prometni režim predstavlja množico ukrepov, postopkov in opravil, ki v interesu obvladovanja kriznih razmer določa načine in oblike transportnih procesov na celotnem ali omejenem državnem prostoru oziroma na določenih prometnih smereh. Tak prometni režim določajo organi pristojni za materialno oskrbo v izrednih razmerah na državni ravni, na lokalnem področju pa občinske uprave v soglasju s pristojnimi državnimi organi. Transporti v zaprtem prometnem režimu se izvajajo posamično, skupinsko v homogenih in heterogenih kolonah oz. kombinirano. Prevozi se izvajajo z najetimi transportnimi sredstvi, s transportnimi sredstvi stalne formacije enot pristojnih organov reševanja in zaščite ali z mobiliziranimi sredstvi po sistemu materialne obveze pravnih in fizičnih oseb.

### 3.1 Hitrost gibanja transportnih sredstev

Osnovni kazalec gibanja transportnih sredstev je njihova hitrost. Hitrost gibanja ( $v$ ) je definirana kot opravljena pot v določenem času. Pri vožnji posameznih transportnih sredstev ali transportnih sredstev v kolonah oz. organiziranih skupinah transportnih sredstev razlikujemo sledeče hitrosti:

- Trenutna hitrost ( $v$ ) je hitrost, s katero se transportno sredstvo premika in jo voznik odčitava v vozilu na merilcu hitrosti v določenem trenutku vožnje. Uporablja se pri kontroli hitrosti udeležencev v prometu. Vozniki glede na trenutno hitrost primerjajo načrtovano oz. dovoljeno hitrost in jo neprestano usklajujejo.
- Povprečna ali srednja hitrost ( $v_s$ ) je hitrost s katero je voznik v povprečju prevozil določeno pot. Dobimo jo če prevoženo pot delimo s časom vožnje. V čas vožnje so zajeti tudi časi kratkih postankov (zaradi odstopa prednosti drugim vozilom, čakanje pred semaforjem, pred prehodom čez železniško progo, prehodom za pešce. Uporablja se za določanje planske hitrosti vožnje.
- Načrtovana ali planska hitrost ( $v_p$ ) je hitrost, ki jo uporabljamo za planiranje voženj.
- Dovoljena hitrost ( $v_d$ ) je največja trenutna hitrost s katero je dovoljeno voziti na določenem delu poti.
- Največja ali maksimalna hitrost ( $v_{max}$ ) je hitrost, ki jo doseže transportno sredstvo v prometu.
- Optimalna hitrost ( $v_o$ ) se nanaša na najbolj primerno hitrost pri vožnji preko ali mimo preprek ali poškodovanih delov cestišča (ozko grlo) in se nanaša le na določen odsek prevozne poti.
- Hitrost prometnega toka glede na pot ( $v_{pt}$ ). Je povprečna hitrost vseh transportnih sredstev na opazovanem določenem delu prometnice.
- Hitrost prometnega toka glede na čas ( $v_t$ ). Je povprečna hitrost vseh transportnih sredstev na določenem delu prometnice v določenem trenutku.

V primeru vožnje transportnih sredstev v koloni z enako hitrostjo sta vrednosti hitrosti prometnega toka glede na pot in čas enake.

### 3.2 Gostota prometa

Pojem gostota prometa ( $g$ ) predstavlja število transportnih sredstev, ki se istočasno nahajajo na določeni dolžini prevozne poti in jo izražamo kot število transportnih sredstev na enoto poti (voz/km ali voz/m). Gostota prometa je kvantitativna karakteristika prometnega toka in je funkcionalno vezana na prometni tok ( $q$ ) in hitrost ( $v$ ).

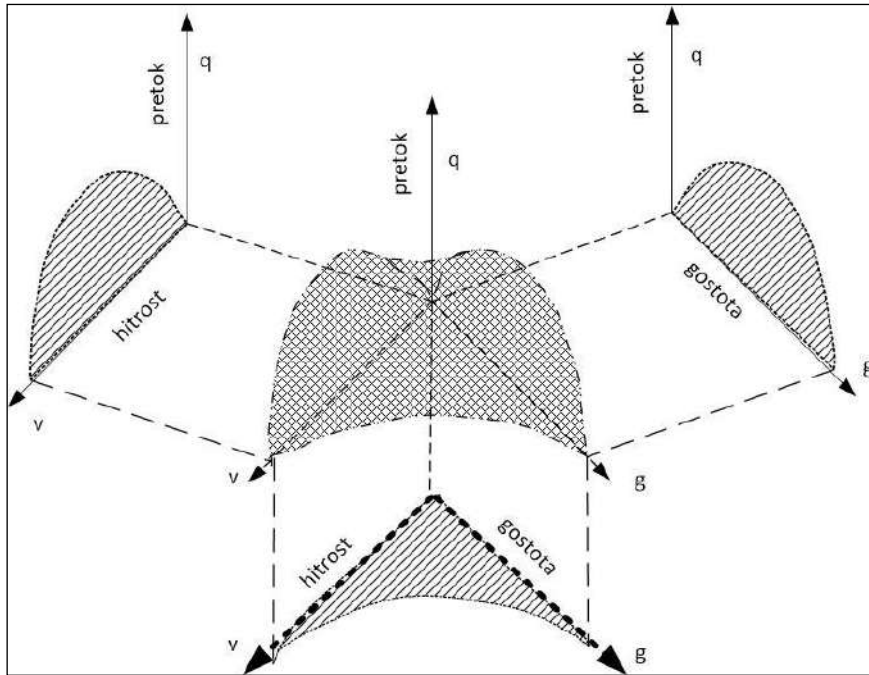
$$g = \frac{q}{v} \quad \text{voz}/m \quad (1)$$

Gostoto prometa lahko izrazimo tudi z medsebojno oddaljenostjo transportnih sredstev ( $l_{mv}$ ), ki vozijo v isto smer.

$$g = \frac{1}{l_{mv}} \quad \text{voz}/m \quad (2)$$

V prometu, ki se odvija v kriznih oz. izrednih razmerah je možno gostoto prometa planirati za vse prevozne poti, ki se uporabljajo na kriznem obočju na določenih transportnih smereh. Za racionalen transport je zelo pomembno da je gostota prometa optimalno določena. Gostoto prometa pogojuje stanje prevozne poti, stanje prevoznih sredstev, razne ovire na prevozni poti, potrebna statična in dinamična količina transportnega dela, idr.

Pod pojmom prometni tok transportnih sredstev ( $q$ ) pojmuje število transportnih sredstev, ki prevozijo določeno mesto na prevozni poti (prečni presek prometnice v eni vozni smeri) v enoti časa in ga izražamo s številom transportnih sredstev na uro ali sekundo (voz/h, voz/s). Prometni tok je najpomembnejša karakteristika dinamike transporta saj služi za dimenzioniranje prevozne zmogljivosti prometnice in konkretno organizacijo transportnih procesov (Cvetković, 1990, str. 7).



**Slika 3: Odnos med pretokom, gostoto in hitrostjo vozil v cestnem prometu**

Vir: prirejeno po: (Jovanović, 1989)

Iz slike 1 je razviden odnos med gostoto prometa in hitrostjo transportnih sredstev na prometni tok. Prometni tok doseže maksimalno vrednost pri optimalni hitrosti in gostoti prometa. To pa pomeni tudi, da je prometni tok optimalen takrat, kadar sta optimalna hitrost transportnih sredstev in gostota prometa.

### 3.3 Optimalno stanje prometnega toka

Pri optimalnem prometnem toku so medsebojni časi prehajanja transportnih sredstev ( $t$ ) mimo opazovanega mesta na prometnici minimalni zato, ker to mesto prevozi največje število transportnih sredstev v enoti časa. Vozila vozijo na medsebojni razdalji po formuli :

$$l_r = v \cdot t_r + \frac{v^2}{2g(\varphi \cos \alpha + \sin \alpha)} + l_{vr} + l_v \quad (m) \quad (3)$$

Pri tem je:

- $v$ , trenutna hitrost transportnih sredstev (m/s),
- $t_r$ , čas reakcije voznika (s),
- $g$ , zemeljski pospešek (9,81 m/s<sup>2</sup>),
- $\varphi$ , količnik kotalnega upora,
- $\alpha$ , vzdolžni nagib prometnice,
- $l_{vr}$ , varnostna razdalja med transportnimi sredstvi
- $l_v$ , povprečna dolžina transportnega sredstva.

V priločniku Saobračajno obezbeđenje oružanih snaga (1988) je navedeno, da optimalno hitrost, optimalno razdaljo med vozili in optimalno hitrost vozil, ki vozijo v kolonah računamo po formulah 4, 5 in 6.

Optimalna hitrost ( $v_0$ ) vozil je:

$$v_0 = \sqrt{19,62 \cdot l_s \cdot \varphi} \quad (m/s) \quad (4)$$

Optimalna razdalja med vozili je:

$$l_o = v_0 \cdot t_{mo} + \frac{v_0^2}{2g(\varphi \cdot \cos \alpha + \sin \alpha)} + l_v \quad (m) \quad (5)$$

Če izhajamo iz osnovnega obrazca je optimalna gostota prometa ( $g_o$ ):

$$g_o = \frac{l}{l_v + l_o} = \frac{l}{v_0 \cdot t_r + \frac{v_0^2}{2g(\varphi \cdot \cos \alpha + \sin \alpha)} + l_{vr} + l_v} \quad (\text{voz/m}) \quad (6)$$

Izhajajoč iz osnovnega odnosa, da je tok enak produktu hitrosti in gostote prometa, je maksimalno možen prometni tok:

$$q_{\max} = v_o \cdot g_o = \frac{v_o}{v_o \cdot t_{med} + \frac{v_o^2}{2g(\varphi \cdot \cos \alpha + \sin \alpha)} + l_{vr} + l_v} \quad (\text{voz/s})$$

oz.

$$q_{\max} = \frac{l}{t_{med} + \frac{v_o}{2g(\varphi \cdot \cos \alpha + \sin \alpha)} + l_{vr} + l_v} \quad (\text{voz/s})$$

Iz predhodnih modelov izhaja:

1. da je optimalna hitrost odvisna od tornega količnika in nagiba prometnice ( $\alpha, \varphi$ )
2. da je optimalna hitrost odvisna od nagiba ceste, tornega količnika ( $\alpha, \varphi$ ) in reakcijskega časa ( $t_r$ ), dolžine vozila ( $l_v$ ) in medsebojne razdalje transportnih sredstev ( $l_{mr}$ )

Zaradi racionalnejšega izkoriščanja prevoznih poti v kriznih pogojih je nujno potrebno težiti k planiranju in skrbni organizaciji prevozov tako, da za vsake posamične transporte določimo optimalne hitrosti gibanja transportnih sredstev in optimalno gostoto prometa.

Za izbiro prevozne poti sta propustna moč oz. možen prometni tok poglavitna dejavnika učinkovite transportne logistike. Prepustna moč prevozne poti nam pove sposobnost prometnice izražene s številom transportnih sredstev, ki prevozijo opazovano mesto v enoti časa.

Najpomembnejši dejavniki, ki vplivajo na prepustno moč so:

- širina in število prometnih pasov
- oddaljenost bočnih ovir
- preglednost
- nagib cestišča, ovinki, predori, križišča idr.
- vrsta in kvaliteta vozne površine vozišča

Splošni model za določanje propustne moči prometnice je:

$$P_{\max} = q_{\max} = v_o \cdot g_o \quad (\text{voz} / \text{s}) \quad (8)$$

Pomen oznak:

- $v_o$ , optimalna hitrost vozila ali kolone (m/s)
- $g_o$ , optimalna gostota kolone (ts/m)

Glede na to, da vozila oziroma kolone na kriznih območjih vozijo po prometnicah z različnimi kvaliteta vozni površin, pogostimi preprekami oz. ozkimi grli izhajajo, da določimo propustno moč po sledečem obrazcu:

$$P_{\max} = \frac{v_g \cdot k}{l_{rov}} \quad (\text{voz} / \text{s}) \quad (9)$$

Pomen oznak:

- $v_g$ , hitrost vožnje na oviranem delu prometnice – ozko grlo
- $l_{rov}$ , računsko medsebojna oddaljenost transportnih sredstev na ozkem grlu
- $k$ , koeficient propustne moči glede na kvaliteto vozne površine

**Tabela 4: Koeficienti propustne moči glede na vozno površino**

Vrsta vozišča	Koeficient (k)
Asfaltno betonsko vozišče	1
Tlakovano vozišče	0,9
Utrjeni makadam	0,85

Vir: Radišić (1990)

Propustna moč prometnic je odvisna tudi od somernosti prometa, in sicer ali se koristi za enosmerni ali dvosmerni promet. Prometnice za enosmerni promet omogočajo vožnjo samo v eni smeri, zato vozila in kolone iz druge smeri smejo voziti po prometnici izmenično, ko je promet iz nasprotno smeri ustavljen, medtem, ko prometnice za dvosmerni promet omogočajo vožnjo v obe smeri istočasno. Ali se neka prometnica v celoti ali delno (na določenem odseku) uporablja za enosmerni ali

dvosmerni promet je odvisno predvsem od širine prometnice, vozne površine, sestave kolone (širine transportnih sredstev), pogojev vidljivosti in prioritet voženj. Če širina prometnice omogoča vozilom vožnjo mimo ali prehitevanje, pri določenih pogojih stanja vozišča in vidljivosti, potem je ta prometnica primerna za dvosmerni promet. Prometnice za omejeni dvosmerni promet morajo biti dovolj široke, da omogočajo prehitevanje vozilom ali kolonom pod pogojem, da se prehitevana kolona ali transportno sredstvo zaustavi na skrajni desni strani vozišča, pogosto tudi delno na bankini ceste.

Najučinkovitejše koriščenje enosmernih prometnic dosežemo tako, da jih uporabljamo izključno za promet v eni smeri z istim namenom, npr. za evakuacijo prebivalstva, prevoz poškodovanih in ranjenih, prevoz materialnih sredstev ipd.

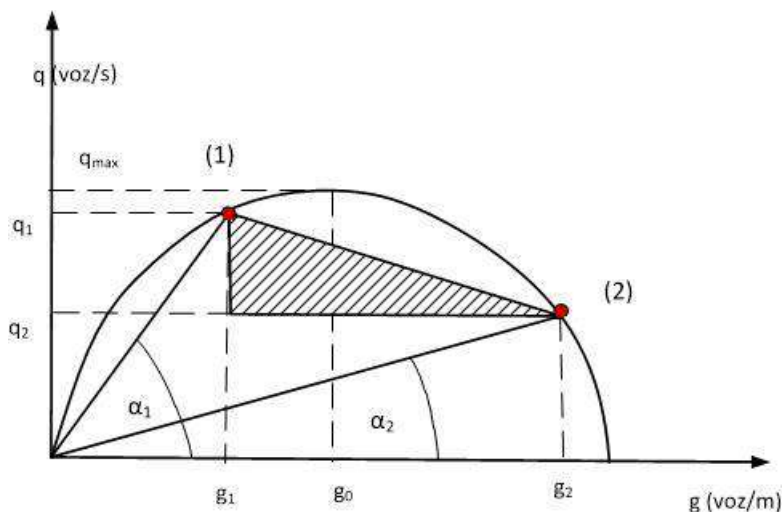
Ko moramo uporabljati enosmerne prometnice za promet v obe smeri, zaradi povečanja propustne moči koristimo možne obvoze na smeri, kar nam omogoča, da na določenem delu poti izvajamo dvosmerni promet. Kot obvoznice koristimo: namensko zgrajene pomožne obvoznice, primerne vzporedne poti slabše kvalitete (gozdne poti, kolovozi), križišča, ulice v mestih ob glavni prometnici, itd.

Uporaba obvozov na prometnicah za enosmerni promet pogojuje natančno planiranje gibanja vseh kolon in transportnih sredstev ob brezpogojnem spoštovanju itinerarija. Ozka grla na prometnicah so vsa zožena mesta prečnega preseka prometnice, kjer je zmanjšana propustna moč, zaradi kakršnekoli fizične ovire ali motnje na cestišču. Ozka grla so lahko začasna ali stalna. Začasna so tista, ki se relativno hitro in enostavno odpravijo, stalna pa tista, ki jih odpravimo le z radikalnejšim posegom ali rekonstrukcijo v daljšem časovnem obdobju.

### **3.4 Sprememba stanja prometnega toka**

Vsak prometni tok oz. vožnja kolone transportnih sredstev je na določenem mestu na prometnici opredeljena s pretokom ( $q$ ) in hitrostjo ( $v$ ) ali pretokom ( $q$ ) in gostoto ( $g$ ) ali hitrostjo ( $v$ ) in gostoto ( $g$ ).

Pri prehodu skozi ovirano področje prometnice oz. skozi ozko grlo pride do spremembe stanja prometnega toka. Spremeni se hitrost, gostota in pretok transportnih sredstev.



**Slika 4: Odnos med pretokom, gostoto in hitrostjo vozil v cestnem prometu**

Vir: Prirejeno po:( Saobračajno obezbedenje oružanih snaga (1988)

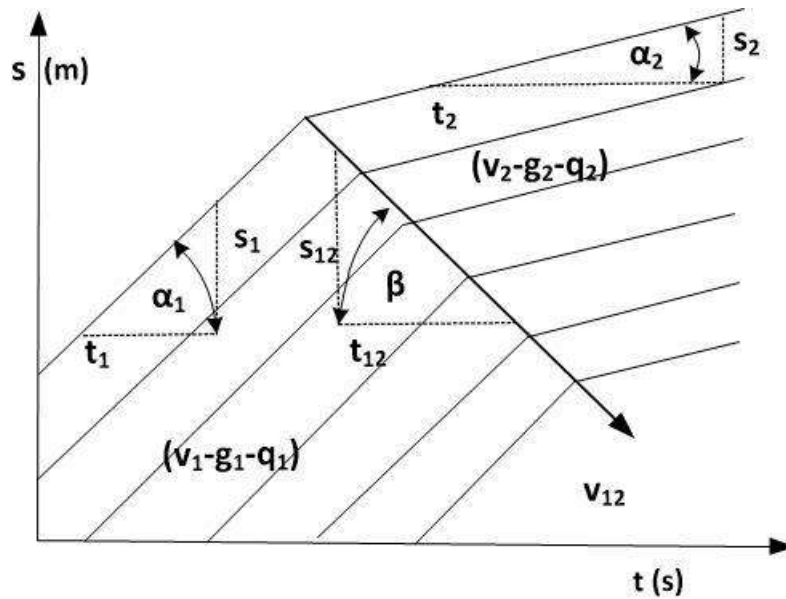
Na grafičnem prikazu na sliki 2 predstavlja stanje :

Stanje »1« pred ozkim grlom, na diagramu krivulja odvisnosti  $q-g$  (pretok – gostota), pripada točka  $(q_1 - g_1)$  in odnos  $(q_1/g_1)$  hitrost  $v_1$ , ki je enak  $tg\alpha_1$  sekante, ki gre  $(0,0)$  in  $(q_1 - g_1)$ .

Stanje “2” na ozkem grlu na krivulji odvisnosti  $(q - g)$  pripada točka  $(q_2 - g_2)$ . Analogno kot pri stanju “1” izključimo, da je hitrost gibanja v ozkem grlu  $v_2$ :

$$v_2 = \frac{q_2}{g_2} = tg\alpha_2 = \frac{s_2}{t_2} \quad (10)$$

kjer je  $s_2$  pot ki jo prevozi transportno sredstvo v času  $t_2$ .



**Slika 5: Diagram (s-t), premagovanje ovire oz. ozkega grla na prevozni poti**

Vir: Prirejeno po: (Saobračajno obezbeđenje oružanih snaga (1988))

V diagramu pot-čas (s-t) je kot  $\alpha_1$  sklenjen s potjo transportnega sredstva z absciso (pred ozkim grlom) zato je tu hitrost  $v_1$  sledeča:

$$v_1 = \frac{q^1}{g^1} = tg \alpha_1 = \frac{s_1}{t_1} \quad (\text{m/s}) \quad (11)$$

kjer je  $s_1$  pot, ki jo prevozi transportno sredstvo v času  $t_1$ .

Na diagramu (s-t) slika:2 je razvidna sprememba stanja prometnega toka ima časovno in prostorsko vrednost, tj. da se ne dogaja trenutno in ne na enem mestu prometnice. Z vidika urejanja prometa so pomembni parametri: hitrost  $v_{12}$ , spremembe stanja prometnega toka. Iz diagrama (q-g) izhaja:

$$v_{12} = tg \beta = \frac{q^1 - q^2}{g^1 - g^2} = \frac{q}{g} \quad (\text{m/s}) \quad (12)$$

Iz diagrama (s-t) pa izhaja:

$$v_{12} = tg \beta = \frac{s_{12}}{t_{12}} \quad (\text{m/s}) \quad (13)$$

kjer je  $s_{12}$  pot, ki jo zajame val<sup>39</sup> spremembe stanja prometnega toka v času  $t_{12}$ .

<sup>39</sup> Pojav spremembe prometnega stanja imenujemo val zaradi analogije s podobnimi pojavi v hidromehaniki.



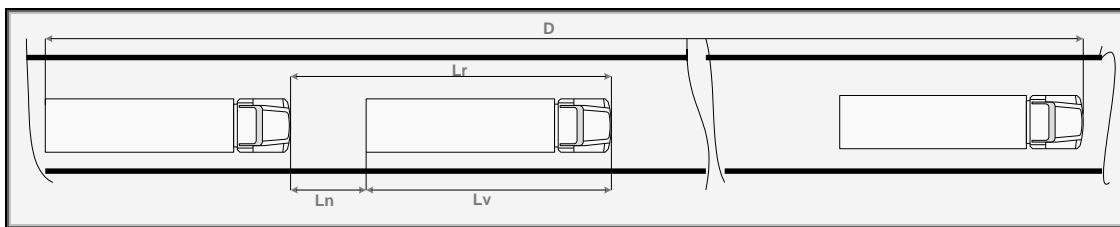
## 4. Organizacija transportov v kolonah

Cestni transport lahko poteka s posamičnimi vozili ali organizirano v skupini ali povezani množici več transportnih sredstev oziroma v kolonah. V kriznih oz. izrednih razmerah se pogosto pojavljajo potrebe po transportu velikega obsega, tako z vidika prevoza blaga kot ljudi v zelo kratkem času. Take prevoze je z vidika učinkovitosti oskrbe smiselno izvajati izključno v kolonah.

### 4.1 Vrste kolon

Ovisno od transportne naloge, strukture transportnih sredstev (homogena ali nehomogena), voznih pogojev, stanja prometnic itd. je možno kolone formirati kot kontinuirane ali neprekinjene in diskontinuirane ali prekinjene.

Kontinuirane kolone predstavljajo neprekinjen niz transportnih sredstev, ki vozijo na konstantni medsebojni razdalji ( $L_n$ ).



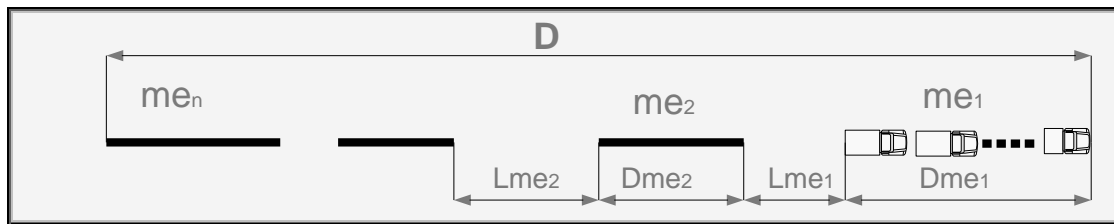
**Slika 6: Kontinuirana kolona**

Dolžina neprekinjene kolone znaša:

$$\begin{aligned} D &= (N - 1) \cdot l_r + l_v = \\ &= N \cdot l_v + (N - 1) \cdot l_n \approx \frac{N}{g} \end{aligned} \quad (14)$$

Diskontinuirana ali prekinjena oblika organizacije kolonskega transporta se uporablja pri večjem številu heterogenih transportnih sredstev, ko prevažamo večje količine različnih vrst tovorov, lahko tudi v kombinaciji s prevozom ljudi. Take transportne procese izvajamo najpogosteje pri evakuacijah ljudi in dobrin ali pa obratno pri centralizirani oskrbi.

Za diskontinuirane kolone je značilno, da so sestavljane iz več kontinuiranih kolon oz. skupin transportnih sredstev ali kot navaja Radišić (1989) z več mraševskih elementov ( $m_e$ ) približno enakih transportnih lastnosti. Dolžina diskontinuirane kolone ( $D$ ) predstavlja vsoto dolžin kontinuiranih kolon in njihovih medsebojnih razdalj ( $L_{me}$ ).



**Slika 7: Diskontinuirana kolona**

$$D = \sum_{i=1}^n Dme_i + \sum_{i=1}^{n-1} Lme_i \quad (m) \quad (15)$$

Pomen oznak:

- $D_{me}$ , dolžina kontinuirane kolone ali formacijske transportne enote
- $L_{me}$ , medsebojna razdalja kontinuiranih kolon
- $n$ , število kontinuiranih kolon

Transporte v oblikah diskontinuiranih kolon uporabljamo:

- ko izvajamo transportni proces v režimu enosmernega prometa,
- ko se transporti odvijajo v slabih voznih pogojih (sneg, poledica, slaba vidljivost),
- ko transportiramo velike količine tovora različnih transportnih lastnosti, ki mora v namembno mesto prispeti istočasno (sanitetni material, prehrana, predmeti za namestitev ljudi, gradbeni material, sredstva za reševanje ipd.) idr.

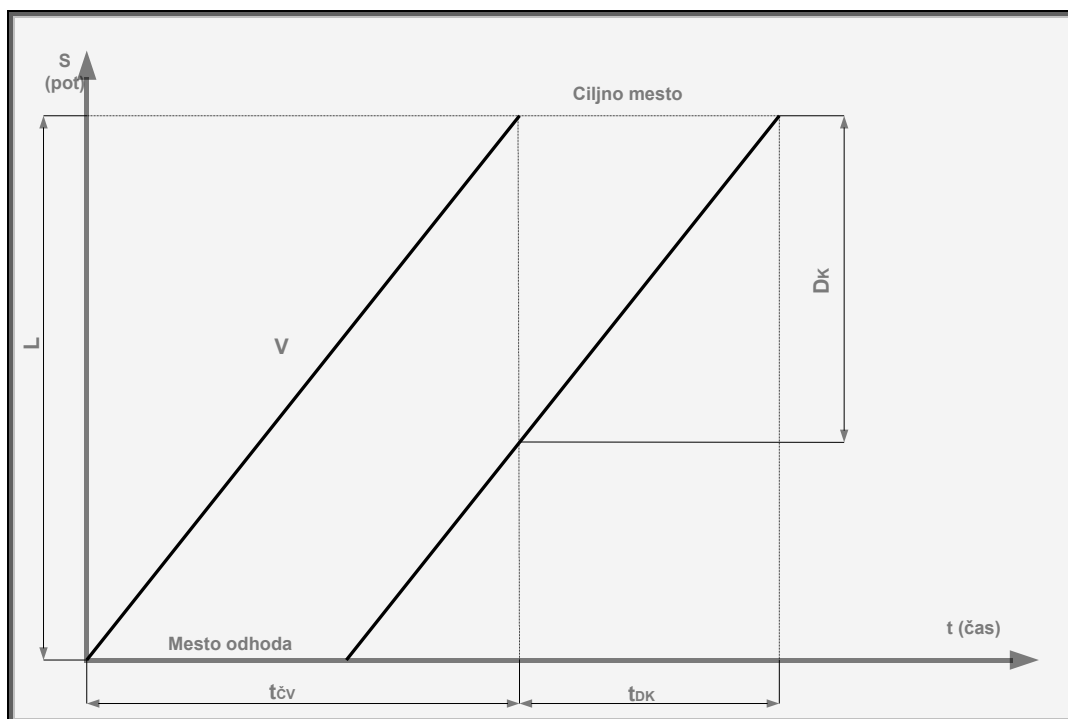
Implementacija diskontinuiranih transportnih kolon v prevozne procese, poleg svojih prednosti, ki predstavljajo učinkovitost transporta velikih količin tovora in istočasnosti transporta različnih vrst tovora ima tudi določene pomanjkljivosti, ki se manifestirajo kot:

- oteženo planiranje in izvajanje transportnega procesa zaradi različnih eksploatacijskih lastnosti transportnih sredstev,
- nizka transportna hitrost,
- neelastičnost transporta v smislu možnosti hitre spremembe smeri oz. poti transporta v odvisnosti od spremenjenih pogojev vožnje,
- možne začasne prekinitve prometnega toka zaradi nenadnih okvar na posameznih transportnih sredstvih ipd.

#### **4.2.1 Čas transporta v kolonah**

Pod pojmom čas vožnje transportnih sredstev v kolonah ( $T_k$ ) razumemo čas, ki preteče od trenutka, ko prvo transportno sredstvo kolone prične z vožnjo na izhodiščnem mestu do trenutka, ko zadnje transportno mesto iz kolone prispe na končni cilj.

Model gibanja kolone je podan na sliki 6, ki prikazuje čas vožnje vozil v koloni«



**Slika 8: Prikaz časa vožnje v koloni**

Čas vožnje transporta v koloni izračunamo:

$$T_k = t_{čv} + t_{dk} = \frac{L}{v} + \frac{D_k}{v} = \frac{L + D_k}{v} \quad (\text{ur}) \quad (16)$$

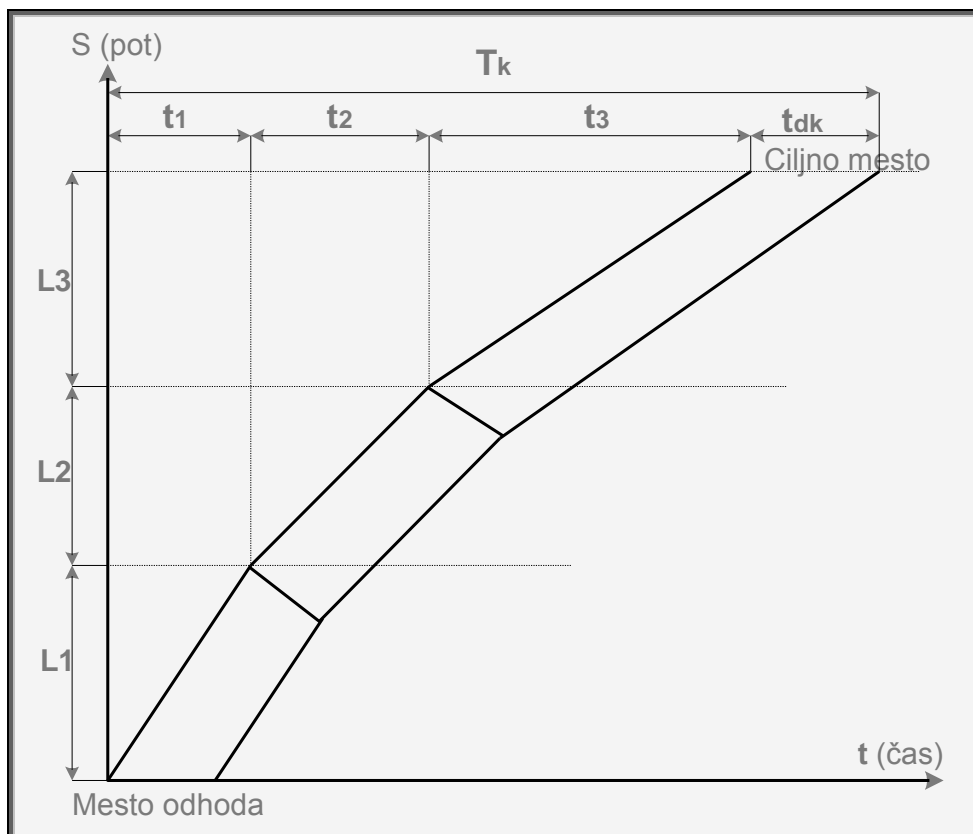
Pomen oznak:

- L, dolžina transportne poti (km)
- $D_k$ , dolžina kolone (km)
- V, hitrost gibanja kolone (km/h)
- $t_{čv}$ , čas vožnje čelnega transportnega sredstva<sup>40</sup>
- $t_{dk}$ , čas, ki mine med dospeljem čelnega in končnega<sup>41</sup> transportnega sredstva kolone na cilju

Če je transportna pot razdeljena na več odsekov, čas transporta v kolonah določamo glede na model, ki je prikazan na sliki 7.

<sup>40</sup> Čelno transportno sredstvo je prvo vozilo v koloni

<sup>41</sup> Končno transportno sredstvo je zadnje transportno sredstvo v koloni



**Slika 9: Prikaz časa vožnje v koloni po poti, ki je razdeljena na več odsekov**

Čas transporta v koloni, ki se giblje po prometnici sestavljeni iz več različnih odsekov izračunamo:

$$T_k = t_1 + t_2 + t_3 + t_{dk} = \frac{L_1}{v_{d1}} + \frac{L_2}{v_{d2}} + \frac{L_3}{v_{d3}} + \frac{Dk_3}{V_{d3}} \quad (\text{ur}) \quad (17)$$

oziroma

$$T_k = \sum_{i=1}^n t_{\check{c}i} + t_{dkn} = \sum_{i=1}^n \frac{L_i}{v_{di}} + \frac{Dk_n}{v_{dn}} \quad (\text{ur}) \quad (18)$$

Pomen oznak:

- $L_i$ , dolžina transportne poti  $i$ -tega odseka (km)
- $Dk_n$ , dolžina kolone na  $n$ -tem odseku (km)
- $V$ , hitrost gibanja kolone (km/h)
- $t_{\check{c}i}$ , čas vožnje čelnega transportnega sredstva na  $i$ -tem odseku
- $t_{dkn}$ , čas, ki mine med dospetjem čelnega in končnega transportnega sredstva kolone na cilju (zadnjem odseku)
- $n$ , število odsekov transportne poti

V primeru, da so v času gibanja kolone planirani postanki in odmori, čas gibanja kolone izračunamo:

$$Tk = \sum_{i=1}^n t\check{c}_i + tdk_n + \sum_{j=1}^m tp_j + \sum_{k=1}^o tok \quad (\text{ur}) \quad (19)$$

Pomen oznak:

- $tp_j$ , čas trajanja j-tega postanka (h)
- $tok$ , čas trajanja k-tega odmora
- $m$ , število postankov
- $o$ , število odmorov

### 4.3 Čas premagovanja vožnje na ozkih grlih.

Optimizacijo vožnje transportnih sredstev pri premagovanju ovir ali ozkih grl na prometnicah dosežemo z izbiro ustreznih hitrosti gibanja in ustrezno določenimi intervali vožnje skupin transportnih sredstev. Prometnica bo racionalno izkoriščena, če se na njenem najneugodnejšem odseku ali ozkem grlu zagotovi kontinuiran pretok transportnih sredstev z minimalnim časovnim intervalom med transportnimi sredstvi.

Da bi dosegli tako gibanje transportnih sredstev je nujno določiti interval slednja transportnih sredstev že pred mestom ovire oz. ozkim grlom.

V primeru, ko je hitrost na ozkem grlu manjša od hitrosti transportnih sredstev pred ozkim grlom prihaja do zastojev.

## 5. Zaključek

Organizacija dela v transportu zajema določene principe in načine, ki temeljijo na strokovno postavljenih in izkustvenih normativih, na podlagi katerih načrtujemo in izvajamo transport. Kvaliteto organizacije transportne logistike ocenjujemo po tem, s kakšno točnostjo so usklajeni vsi elemente transporta, da se lahko ta izvede kar se da racionalno, tako s tehnično tehnološkega vidika kot z vidika angažiranja delovne sile ter da je ta pravočasno realiziran. Pri tem si pomagamo z metodami operacijskih raziskav in tehničnih izračunov, kar pa ne pomeni, da te metode in izračune uporabljamo kot recepte za reševanje vseh organizacijskih problemov vezanih na transportno logistiko v kriznih razmerah. Z njimi si pomagamo kot z izhodiščem za konkretno organiziranje raznih transportov, ker je vsak transport zase specifičen.

Poglaviten dejavnik pri prevozu ljudi in blaga v kolonah predstavlja podrejanje organizacije in tehnike okolju in danim razmeram ter v prispevku predstavljenim zakonitostim. To v veliki meri olajša potek transportnih sredstev in poveča učinkovitost transportnega dela. V prispevku so predstavljeni nekateri modeli za načrtovanje transportnih procesov na področju organizacije in izvedbe cestnih

prevozov v homogenih in nehomogenih kolonah. Zakonitosti, ki pogojujejo organizacijo prevozov v kolonah predstavljajo razporeditev oz. vrstni red transportnih sredstev, njihovo usklajeno gibanje pri določeni hitrosti in premagovanje ovir na določenem delu prevozne poti. Za realizacijo in načrtovanje prioritet v okviru transportno logistični dejavnost so odgovorni krizni managerji. Ti posredujejo zahteve organizatorjem prevozov, ki operativno odločajo glede tehnologije, tehnike in organizacije transportov in načrtujejo časovno usklajenost oz. pravočasnost oskrbe kriznih območij.

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# CUSTOMS PROCEDURE – IMPORT IN THE TIME OF EPIDEMIC

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Ingrid Uhernik Franko

## Abstract:

Discussion of customs procedure of import is related to logistics and logistics processes, but it is also related to the law and it depends on many changes. It is practically impossible to say if the epidemic Covid 19 have made changes, so we took the whole first paragraph to describe the Customs from its beginning till now, for better understanding of our article content.

**Key words:** customs, customs procedures, import, customs warehouse, temporary import

## 1. Introduction

In this article we discuss about customs which are important even nowadays and have a very big impact on trading with goods, with third world countries. Customs are actually duties, which have to be paid for the goods we import from the third world countries. Through customs and customs procedures Slovenia and the whole European Community protect the internal market and guarantee the transition of the goods, people and capital in economic and commercial activities.

Slovenia has introduced independent customs territory on the 8th of October 1991, when the customs supervision started on the southern border. In fact, it all started a few months earlier at the night from 25th to 26th June 1991, when »Temeljna ustavna listina« and »Ustavni zakon za izvedbo temeljne ustavne listine o samostojnosti in neodvisnosti Republike Slovenije« has started to valid. On this day also the Customs management of RS was established.

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Slovenian's entrance into the European Union in 2004 means also the entrance in customs union. Besides that its members do not have to pay any import duties, they use the same customs tariffs and customs rules. Its main goals are not the same as in the past, when Customs just wanted to »earn« as much money for country's treasury. Now in 21th century their meaning is a bit different. They want to make the production as much competitive, to increase the export and to protect the intellectual property, environment, population's health and public interest.

Customs jobs like collecting import duties, control of import and export in the country - from the perspective of safety, control of excise duties, collecting excise duties, collecting statistics information etc., in Republic of Slovenia does »Carinska uprava RS«, which is a part of »FURS – Finančna uprava Republike Slovenije«.

Through the basics of the commercial law in logistics it is necessary to study also the systems of customs procedures, because they protect market of the European Union, but what binds Slovenia to it, is a EU membership and the same common interest of stable economy and stable European market. (Murtič, Jankovič, 2018).

## **2. Research area**

For the research area we have used customs procedures of import – looking for quality, price and usefulness from the perspectives of slovenian market and needs of consumers.

Logically was to treat the area, which relates to releasing goods into free circulation. We explained:

»Import of goods is entry of the goods from the third country or from the third territory, which is not a part of the customs union, to the customs territory union.« (FURS, 2020)

We explain, that goods necessarily have to be physically at the terminal before sending customs declaration in the customs program. If we have permission, written on the paper from the customs, the goods can exceptionally be physically on the location, stated on the permission.

After that, customs declarant fill in a customs declaration and send it to the Customs in electronics form, by considering »Pravilnik o izpolnjevanju enotne upravne listine« and other forms, useful in customs procedures. In this case of electronics declarations, all the original documents have to be available to the Customs even physically, but it is not necessary to be sent in electronics form too. From the moment, declaration is sent in the customs program, the goods are under the Customs control, so they can require anytime to see the goods even physically anytime.



As an attachments to Customs declaration we classify the invoice, packing list, shortterm/longterm supplier declarations and other certificates of origin – it depends on which goods we are dealing with. For some of them, we also need certificates about veterinary, phytosanitary controls etc,.. Methodologically it is a must to explain, that all the procedures and activities of the Customs and their individual systems are a part of logistics activities, which are included in different procedures of acceptance, check-up, evaluation and customs procedures. All that enables the control of financial flow in Slovenia and in general – in EU.

### **3. Thesis**

Changed conditions in global economy, market trade, import, individual and economy trade are making impact on the process and amount of goods exchanges, which were quite noticeable in the time of epidemic Covid 19. The amount of goods is smaller and their exchange has stopped. But the important fact, that have to be mentioned is, that the exchange of food products and protective equipment increases. This fact is changing some conditions and procedures and just because of this, we – I and Ingrid limited our case studying of management in customs business. We gave an accent to the epidemic Covid 19 and set a thesis – »Covid 19 impact on work of the Customs«. With individual examples we show up the correct procedures and present their impacts and deviations from the expected results.

We know that thesis do not reflect the opinion we could have if we would be able to use actual data and informations, which are for now still in review by many state authorities and institutions.

### **4. The base of research**

For the base of the research we have used the goods we import and for which the import duties have to be paid. The amount of duties depends on the type of goods – in which tariff number belongs in TARIC. It depends also on their value, quantity and origin. When duties depends on origin, we determine it with »Carinski zakonik Unije«.

Goods have origin of the country if they are fully sourced, produced or processed enough. Processed enough is, when the last economically essential process is made in the country and a new product is it's result. Just packing, making smaller or bigger units, sorting, labeling etc. is not enough for achieving country's origin.

Many countries »separate« non-preferential and preferential origin, which is always determined by international agreements. If Customs in the process of import demands to prove origin of the goods, we do it with appropriate certificates.

In this article we have also shown up legal basis and norms, which have to be used if we want to open and maintain a customs warehouse:

»-Uredba (EU) št.952/2013 o Carinskem zakoniku Unije (UL EU L 269 v nadaljevanju: CZU); členi 210-225, 237-242, 85-86  
-Delegirana uredba Komisije (EU) 2015/2044 o podrobnih pravilih v zvezi z nekaterimi določbami CZU (UL EU L št. 3463; v nadaljevanju: DU); členi 169, 171, 177-180, 201-203;  
-Izvedbena uredba Komisije (EU) 2015/2447 o določitvi podrobnih pravil za izvajanje nekaterih določb CZU (UL EU L 343; v nadaljevanju IU); členi 268-269;  
-Delegirana uredba Komisije (EU) 2016/341 v zvezi z predhodnimi določbami za nekatere določbe CZU, kadar zadevni elektronski sistemi še ne delujejo in o spremembi DU (UL EU L 69; v nadaljevanju PDU); « (FURS, 2016)

A customs warehouse where we are storing customs goods can be any place, approved by customs authority under certain conditions. Storage places must perform specific technical conditions and conditions, which ensure customs controls when it is necessary.

## **5. Methodology of research**

The content of our research is directed on conceiving the model of customs procedures, for which could be used innovative, interdisciplinarily and opened procedures of country's functioning, if we are talking about market control and movement of goods in Slovenia and EU.

It was necessary to study many legal basis, legislative and regulatory provisions and also the »rules« of Customs services. Through their functioning we wanted to come to the main information – if epidemic has caused changes and why.

Because the time was pressing and because of the article limits we did not go to study inductive and deductive approaches from the past, which could give us reliable information, so we have directed all the methodology in searching practical solutions from Customs jobs.

For the methodology of our research we have used procedures and show, that the process of customs warehouse can be used for:

- Customs goods; which came into the customs area and customs duties does not have to be paid
- Slovenian origin goods; where is determined with regulations that some of measures for the export goods can be used in the process of customs warehouse

Importers can decide for giving their goods in customs warehouse in some cases, when they still don't know for which final use the goods they are importing are or when they don't want to determine the final customs use yet. In this cases when goods are in customs warehouse, importers do not have to pay customs duties, until

they find buyers for their goods, who pay all the customs duties in the process of import.

We know more sorts of customs warehouses:

Private – if goods are being stored for the holder of customs warehouse's permission and if the holder is also the importer.

Public – if there are being stored customs goods for any slovenian inhabitants or for of any other foreign inhabitants. We devide them into three types:

Type I: is a customs warehouse, where the holder of customs warehouse and the importer are responsible for all obligations.

Type II: is a customs warehouse, where the importer is responsible for all obligations.

Type III: is a customs warehouse, which is managed by customs authorities.

For storing goods in customs warehouse it is necessary to send a require in a person or by an e-mail to FURS – customs sector and get a permisson from them - customs authorities. The permission can be required to a person, who is registered, who has a seat of a company registered on customs area, etc,. The owner of the warehouse is than responsible that goods are really under customs control all the time and that all the obligations are fulfilled. (Košir, 1996)

For the goods in warehouse, the holder of the permission has to submit an »instrument of insurance« - this means a warranty of paying customs duties. A warranty is determinied differently – in a proportion of customs duties height and it is necessary to introduce it before starting a customs warehouse business.

In time of storage we are allowed to do just procesess which do not change a physical state and the quality of goods.

There are two possible ways to move goods from one customs warehouse to the other:

- with moving goods from one type of a warehouse with ending a process with transit declaration and closing a transit declaration with a new one in the other type of a warehouse.
- - without ending a warehouse process between the same types of customs warehouses.

During all the time we have to lead the evidences about the type and quantity of goods and also about a total quantity of entered and shipped amount. This numbers strictly have to match with customs documents. Customs controls can be based on physical controls or inventory, done by a holder of warehouse permission.

The whole process is finished by any declarant. The exeption is a warehouse type D – the process must be finished by a holder of a warehouse permission.

## 6. The course of the research

The course of our research went through practical procedures and classification of the individual forms and also through the typology. We have substantiated it with data about temporary import. For that, we get some concrete, useful data which explain how the process goes.

It was necessary to explain the temporary import where is possible to understand, that it is very important in customs and foreign trade system. It enables a use of non EU preferential origin goods on customs EU area, with partial or complete exemption of customs duties, where we are allowed to do just processes which do not change a physical state and the quality of goods.

If we talk about changing the ownership in the process of the usual import, a temporary import means a transition of the goods from one customs area to another customs area without changing the ownership. After this period goods are returned to their owner.

For the process we need a permission which we get, when we are sending a customs declaration in a customs program by a person who uses his goods or gives them into. In the moment it has to be clear, that goods are going to be exported later again, after a time, certain by customs authorities. The time of this period has to be long enough to achieve the permitted goal of a use – one year (24 months) is maximum.

Of course we know some exceptions which allow us not paying any customs duties. This means not paying customs duties for all the personal items of passengers, which are needed in the time of staying in EU community area. Into those items we count: personal clothes, toilet tools, personal jewelry, photo cameras, music instruments, computers, orthopedic tools etc., which have to return back with a person, in the same physical form.

Items I have mentioned above and others are classified in groups, which have the same characteristics – the frequency of their use and speed demands:

- **transport devices and vehicles;** complete exemption of paying customs duties for transport pallets, containers etc.,.
- **personal items, sports equipment and tools for sailor's amusement**
- **first aid material, medical surgical and lab equipment;** complete exemption of paying customs duties when equipment is going to urgent loan because of another hospital's require, because of their deficit.
- **tools for image, sound and information transfer, advertising material, professional and science equipment;** complete exemption of paying customs duties because of their advertising or presentation before the sale.

- **-packaging, models, molds/ matrixs, measuring devices, goods samples etc.,**
- **goods for events and sales;** complete exemption of paying customs duties for works of art, antiques,..
- **spare parts, accesories and others;** complete exemption of paying customs duties when they are used for a repair or maintenance.

## 7. Discussion

It is possible to summarize from our study material, that it goes for examples of good practice where we have shown which are procedures and missions of Customs, which missions also have to be done and how to act in different cases.

Actually everything is happening around the same/similarly cases, but the rules are changing, so it is necessary to qualify and educate all the time.

We have explained that temporary import is finished when another customs use is allowed and as mentioned before, the process is *usually* finished with an export. The main rule is that before another customs use is approved, all the partly exempted customs duties have to be paid.

Looking for the sense of our article's discussion we have concepted our research on practical performance, where we were looking for the impacts of epidemic Covid 19 on work process, on people, management and changes.

We came to the result that it is impossible to assess how and how much the epidemic impacted and if it is still impacting on customs procedures and the way of work. We wanted to make more accurated research, but it is impossible in the moment if we are looking from the security perspective. It was impossible to confirm or disprove our thesis »Covid 19 impact on customs services«, so we have postponed a research continuation for new researces or researchers.

## 8. Conclusion

Through our writing we have presented that Customs are each day more important because they have the impact to international exchange etc,.

We have tried to present the peculiarities of one of the customs procedures, where the Customs are the strictes – this is an import procedure. We have also shortly represent the history and development of the Customs from the past till now and some sub procedures of the import, where belong also customs warehouse and temporary import.

Despite the limits of getting information and datas, we tried to get the basics for the evaluation of the epidemic impact on management, customs warehouse and customs

services. It wa impossible to do more than we did, so we have decided just to »update« the knowledge of readers and listeners.

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# PROBLEM OF THE SHADOW ECONOMY IN SLOVENIA

Robert Mašera

## Abstract

Shadow, also called underground, informal or parallel economy, is present in every social economic system in the world. It not only includes illegal activities but also unreported income from the production of legal goods and services, either from monetary or barter transactions. Hence, the shadow economy comprises all economic activities that would generally be taxable were they reported to the tax authorities. A precise definition of the shadow economy, however, does not exist, because the shadow economy develops all the time, adjusting to changes in taxation and regulations.

In every country policymakers and government administrators need to attempt to regulate the size of shadow economy by estimating how often underground activities occur, as well as the size of these activities, so that they can make appropriate decisions on resource allocation. This, of course, might be quite difficult, due to the fact that people engaged in underground activities do their best to avoid detection.

The size of shadow economy in Slovenia is quite worrying as it is amongst the highest in the EU. The latest calculations by the British tax analyst Richard Murphy show that less than 2,6 billion taxes in Slovenia (from the total of 825 billion ) are not being collected.

The encouraging news is that the amount of not collected taxes is decreasing.

**Key words:** tax morale, awareness, undeclared work, tax evasion, shadow economy

## 1. Introduction

Digitalization and globalization affect our ways of life, communication as well as work. Major changes happen on daily basis. We are offered less complicated and quicker ways to access information, products and services than ever before. Nevertheless, there are still a number of cash transactions, which, without a doubt cause shadow economy (Schneider, 2013).

The majority agree that shadow economy represents one of the biggest problems in the society and all countries take certain measures to diminish its impact.

Nastav (2009) once said: shadow economy is somewhere between white and black, not invisible, not registered and not illegal or prohibited. It is legal in its basis but successfully hidden.

A useful starting point for a theoretical discussion of the shadow economy is the groundbreaking study by Allingham and Sandmo (1972) on income tax evasion. While the shadow economy and tax evasion are not congruent, in most cases activities in the shadow economy imply the evasion of direct or indirect taxes, such that factors determining tax evasion will most certainly also affect the shadow economy. According to Allingham and Sandmo tax compliance depends on its expected costs and benefits. The benefits of tax non-compliance result from the individual marginal tax rate and true individual income. In the case of the shadow economy the individual marginal tax rate is often roughly calculated using the overall tax burden from indirect and direct taxes including social security contributions. The expected costs of non-compliance derive from deterrence enacted by the state, that is, the state's auditing activities raising the probability of detection and the fines individuals face when they are caught. Individual morality also plays a role in compliance and additional costs may apply beyond the tax administration's pure punishment in the form of psychic costs like shame or regret, but also additional pecuniary costs if, for example, loss of reputation results. Individuals are rational calculators who weigh up costs and benefits when considering breaking the law. Their decision to partially or completely participate in the shadow economy is a choice under uncertainty, facing a trade-off between gains if their activities are not discovered and losses if discovered and penalized.

Activities associated with shadow economies, which also include moonlighting, are facts of life around the world. Most societies attempt to control these activities through various measures such as punishment, prosecution, economic growth or education. To more effectively and efficiently allocate resources, it is crucial for a country to gather information about the extent of the shadow economy, its magnitude, who is engaged in underground activities, and the frequency of these activities. Unfortunately, it is very difficult to get accurate information about shadow economy activities, including the goods and labour involved, because individuals engaged in these activities do not wish to be identified. The negative effects of shadow economy can be felt by employers and employees, as well as the particular country (including social insurance, wealth, safety of people and the environment...).

The estimations of shadow economy vary according to sources and the methodology of the research. In Slovenia numbers from 5% up to 30% GDP can be found. Even though the most frequent estimations are around 15% which makes around 6 billion euros. The mentioned amount of income and outcome avoids formal registrations and tax payment. The actual GDP would therefore be around 46 billion instead of estimated 40 billion. Slovenia would still be placed among the countries with approximately the same amount, but the differences between countries would be considerably smaller. The actual GDP (including shadow economy) would increase in undeveloped countries (IMF, 2018). Interestingly, Slovenia's estimated range of shadow economy is average according to its development. IMF usually present



relatively high amounts of shadow economy, so the real estimations are definitely lower.

A shadow economy does not happen by accident. It is a recognised consequence of imperfections in the economic system and inadequacies in economic policy (Sedovnik, 2010). While the factors that generate and foster the growth of a shadow economy are many and complex, literature considers the following to be the most important: excessive tax burden, government over-regulation of business, and poor performance by government bodies (tax, judiciary, police, and other authorities). Identifying the fundamental causes of a shadow economy is a precondition for designing efficient instruments and policy measures to tackle it.

## **2. Shadow Labour Force**

Participation in the shadow labor market has also been rising. The shadow labor market includes all cases where employees or employers, or both, hold a shadow economy position producing for the market—regardless of whether they also have officially recorded positions. Some workers in the shadow economy take on second jobs after or even during their regular hours in official employment. Others work only in the shadow economy, either because they find it more profitable to do so or because they are barred from the official economy—as is the case for illegal immigrants, for example.

Shadow labour force is recognised when:

- there are no legal documents for a certain business,
- an individual executes business activities that are not registered,
- an individual or a company executes a business regardless of legal prohibitions,
- an individual from abroad executes a business that is not registered in Slovenia,
- a company is established in one of the EU countries but does not follow the regulations of the EU marketplace,
- an individual executes a business or work which is not registered or does not follow the regulations.

## **3. The consequences of the shadow economy**

As it was suggested, relationship between social development and the shadow economy is endogenous. The shadow economy affects human development through the channel of economic and social environment (Ministrstvo za gospodarski razvoj in tehnologijo, 2013). We can find negative as well as positive impact of the shadow economy, even though the negative impact is more visible.

### **3.1 Negative effects of the shadow economy**

The negative impact of the shadow economy is more evident, and can be explained using several arguments: firstly, an increase in size of the shadow economy leads to a significant decrease in tax revenues and to worse public goods provision, that in turn can obstacle economic growth. A decrease in tax revenues usually leads to a decrease in government spending and transfers, which, in turn can lead to worsen of social environment, therefore, less money for schools, health care, ecology, social welfare, infrastrucutre etc.(Vlada RS b. l. a.). This can, in fact, be considered as a vicious circle, which, certainly decreases quality of institutions and results in recession of social development. Secondly, in time of rise of the shadow economy the availability of public services for everyone in the economy decreased, and as result economic growth weakens. This explanation is closely related to the previous one and means that the shadow economy decreases government income which leads to less capacity to provide public goods with high quality, thus decreases quality of life (Nastav, 2009). As a result, it leads to a reduction of social welfare in society. Moreover Schneider (2013) emphasizes that the shadow economy leads to a disintegration of social norms, as the consumers and customers cannot claim compensations for damaged goods or weak services. Most of the times they in the end pay even more fort he goods or services (Vlada RS b. l. a.) Furthermore, shadow labour workers receive minimal or no social or health insurrance. Due to the fact that there are so many individuals who do not pay taxes, the others have to pay so much more to maintain the social standard of the country. Individuals who get caught into shadow labour usually realize the consequences when it is already too late.

### **3.2 Positive effects of the shadow economy**

It is not very straightforward that the shadow economy can have a positive effect on social development, but it might take place, as the positive effects are, in fact, the reason the shadow economy exists in the first place. The shadow economy can be a reflection on social development and, as a result, an increase of migration into the shadow sector can be seen as a reaction to excessive constraints created by institutions and bureaucracy (Schneider, 2016). Such findings should result in detection fails by government and then improving their work. The shadow economy provides the economy with an entrepreneurial and dynamic spirit, which in turn can lead to higher competition, efficiency and rate of investment (Schneider, 2016). The shadow economy enables the customers to purchase a certain product or service at a much lower price, avoiding tax deduction and much faster than in regular shops (Nastav, 2009). Such situation may provide a higher potential for economic growth and as a result positive correlation between increase of the shadow economy and economic growth. The same logic is applied to the case of social development. In particular, higher consumption leads to higher living standards that, in turn, contribute to social development. Large informal sector may be viewed as the nursery of future economic growth within the formal economy. The shadow economy can be used as substitute solution for problems that are not solved adequately by the official

institutions of the welfare state and the labour market (Omerzu, 2000). It could be stated that the shadow economy is safety for political discontent in planned economies, as many small companies start doing business illegally and only later become legal businesses. We can conclude that the shadow economy is, in fact, useful, as it provides the basis for the entrepreneurship, the competition and higher efficiency, it helps develop markets and financial instruments, as well as social and economic institutions. Negative effects should, by all means, be decreased or eliminated, on the other hand, the positive effects should be maintained and used (Nastav, 2009). Avoiding tax payment means less state income and furthermore incorrect economic and social data used as a source of information for the political measures. Incorrect economic and social data include economic growth, the level of productivity, the level of inflation, the range of the economic circle, the size of tax basis, the level of unemployment (Schneider, 2016). Using incorrect data, the measures of the economic policy might have the opposite effect and worsen the actual situation.

#### **4. Tax morale**

Tax morale regards the question to what extent citizens consider it their moral duty to pay taxes as well as to which extent the shadow economy is present and tracked in a certain society. Once an individual enters the shadow economy, they will find it extremely hard and unlikely to step out as they are completely aware of its benefits and profits (Schneider, 2016). The customers who purchase a product or a service at a lower price, normally do not feel any guilt.

#### **5. Unfair competition**

Unfair competition addresses circumstances where consumers have been misled, or deceptive trade practices, as well as practices designed to restrict or alter a company's revenue. The shadow economy products and services are normally much cheaper, as the shadow economy businesses avoid certain regulations, restrictions and paying taxes. As the result of the previously mentioned actions, legal activities cannot compete with the activities of the shadow economy. Many legal companies therefore decide to address the shadow economy (Schneider, 2016).

#### **6. Unfair consumption of public goods and services**

The equality in consumption, living conditions, educational attainment, health, public transport etc. is provided by the state government by collecting taxes and therefore not equally accessible by individuals participating in the shadow economy. The government logically expects all the individuals using the above mentioned goods and services to pay taxes. Unequal access to government provided goods and services reinforces, reproduces, and exacerbates the unequal social and economic structure and as the result in a way forces taxpayers to enter the shadow economy to cut the expenses and save money (Schneider, 2016).

## **7. Problems of undeclared work**

Shadow economy companies manage their businesses by not following the laws, regulations and restrictions. In the same way they do not follow the law and regulations when hiring employees, who, in this case, do not have access to social and health insurance or legal contracts and can be fired whenever employers decide they are no longer needed. Even more so, the employers are not legally bound to financially help employees in case of accidents, injuries etc. The research has shown that in the shadow economy employees are paid less for the same amount of work than in the legal sector and are exposed to much worse work conditions (Nastav, 2009).

## **8. Non regulated activities**

The products and services offered in the shadow economy might not be appropriate and might not be of the same quality as the ones in the formal economy as particular demanded standards are not being followed. The customers purchasing products or services in the sector of the shadow economy are not entitled to guarantees which they would be in the formal sector. Schneider states an example of a hairdresser following all the safety and health regulations. Shadow labour hairdressers, however, do not follow all the standards and regulations which might lead to great complications and damages (Schneider, 2016).

## **9. Slovenian measures against shadow economy**

The shadow economy is a phenomenon present in all societies, regardless of their level of development. The definitions of the shadow economy differ among researchers, countries and also between various time frames. Besides, different terms are used for labelling the studied phenomenon, sometimes interchangeably, and not always consistently. Nevertheless, expressions like the shadow economy have been rooted in the researchers' languages and are as such widely used<sup>1</sup>. Therefore it is important to stress what is meant under the shadow economy in this paper to avoid possible wrong interpretations: shadow economy comprises all productive activities, whose goods and services are legal, but the activity itself is deliberately concealed from authorities, usually to make financial gains (e.g. tax avoidance, noncompliance with certain regulations and standards, etc.). Schneider (2002) defines the shadow economy as including all market-based legal production of goods and services that are deliberately concealed from public authorities to avoid payment of taxes or social security contributions or having to meet certain legal labor market standards. His analysis suggests that reducing complexity of the tax system, and adopting tax measures – policy and administrative - to incentivize formal payments for business transactions through banking channels, including electronic payments, and use of “plastic money”, can prove useful in reducing informality. In addition, using ICT solutions to improve tax enforcement against shadow economy transactions,

particularly measures to plug tax evasion directly related to transactions with the shadow economy, would be most effective. We could say that the shadow economy is in fact a reaction against the government legislation and tax regulations. It actually comes from the people's and the companies' dissatisfaction with the current state of economy. When people's trust is hindered, they tend to seek other secret possibilities such as the shadow economy. This way a new strong industry growth fighting the crisis emerges (Nastav, 2009). Of all the factors related to the design of the tax system and the institutional environment for its payment, collection, and administration, the following have the most significant impact on the extent of the shadow economy: size and structure of the tax burden; efficiency of the tax administration in collecting taxes; penalty policy; complexity and fairness of the tax system; and compliance costs. Slovenia was seldom covered in the studies of shadow economy. The early transition period was covered and studied by Glas (1991) and Kukar (1995). They both list similar causes for the existence and development of the shadow economy, which all date back into the socialist regime. Mainly, these focus on rigid legislative framework, centrally planned and controlled supply of goods (which seldom followed the demand), unstable centrally planned and controlled supply of goods (which seldom followed the demand), unstable macroeconomic environment, and increasing tax and contributions burden in the period of transition. The need for increased efficiency and more market-oriented production enterprises has increased whereas the bureaucratic obstacles were only partially removed. The latter caused many of the private businesses to start "off the record", in the shadow economy. Of all the factors related to the design of the tax system and the institutional environment for its payment, collection, and administration, the following have the most significant impact on the extent of the shadow economy: size and structure of the tax burden; efficiency of the tax administration in collecting taxes; penalty policy; complexity and fairness of the tax system; and compliance costs.

In 2009 Slovenian Ministry of Finance (FURS) started a project called »Shadow Economy« with one main objective – to lessen the range of the shadow economy in Slovenia. The main objective includes smaller aims and tasks – to increase the efficiency of controlling and tax paying, spreading awareness amongst tax payers via media, cooperating with inspection service, managing equal supervision of the shadow economy in all the offices, preparing suggested changes of the legislation in order to increase the efficiency of the supervision and the prevention of the shadow economy.

Slovenian Ministry of Finance in cooperation with DURS supervises the registered tax payers in risky businesses who do not register the whole income or hire shadow labour force, as well as the non registered tax payers who break the law (FURS, 2017). Slovenian politics has started the fight against the shadow economy. Along with regular inspection a Commission of the Slovenian Government has been established to discover and prevent shadow labour work. Most importantly, all the activities have to focus on the elimination of the main causes of the shadow economy.

The only acceptable way to eliminate the shadow economy is to support businesses, employment, research and development. This would enable the development of the macroeconomic environment and the institutional frame (Nastav, 2009). Changes are also needed in the work legislation and payment discipline (Sedovnik, 2010).

Undertaking different actions in the fight against the shadow economy Slovenia attempts to change people's mindsets. The government started a media supported action »*Vklopi razum, zahtevaj račun*« (»*Always demand the receipt*« action) with the main goal to cut the shadow economy by half in the next three years. The fight is to be accepted as the common project as the shadow economy threatens safe retirements as well as safe health care system. The fight against the shadow economy in Slovenia represents and promises a better life in this country (STA 2013). The main task of the Market inspectorate is the fight against the shadow economy with the »*Wake up*« action which in the first place attempts to make the consumers aware of their rights when purchasing goods and services. This means the right to receive the receipt by the 35th article of the Consumer protection law (ZVPot) (Ministrstvo za gospodarski razvoj in tehnologijo 2013). Sedovnik (2010) claims that by tolerating the shadow economy we cannot seriously talk about the future our country. The size of the shadow economy depends greatly on the nation's attitude towards the problem. If the nation tolerates it, then the nation's attitude towards it needs to be changed. People should be encouraged to purchase legal goods and services as well as to undertake legal business activities. Negative consequences of the shadow economy should be constantly emphasized. The new legislation requires all businesses to immediately issue invoices and receipts which are then sent to FURS to be confirmed. This prevents changing the income of any sort, tax evasion and disloyal competition on one hand and increases public finance income, the efficiency of the supervision and more equal business conditions on the other hand. It also enables the collection of the quality data on tax payers and provides consumers with the receipts and proof of purchase. As stated above, Slovenia deals with the shadow economy in different ways: inspections, supervisions, emphasizing the importance of paying taxes, high financial penalties, elimination of certain administrative and legislative burdens, introduction of the tax cash registers.

## **10. Conclusion**

The shadow economy is a widely spread and frequent feature in Slovenia as it is worldwide. It affects the economy and the economic growth as an accelerator and an obstacle. Due to poor economic conditions we can expect the growth of the shadow economy in Slovenia. Because they are pushed to the limits of survival, many people are »forced« to perform hidden businesses. On the basis of many different sources and researches we can conclude that people most frequently see the shadow economy as their only way out and can therefore be recognized as a new economic trend in Slovenia.

It includes all the productive branches which offer legal goods and services but are hidden from the government because of the financial reasons (tax evasion, not following the regulations, work legislation etc.). Because labour in the shadow economy is normally not registered, the payments are executed in cash or even in fictitious referrals. This way the payment itself is legal, on the other hand the foundation for the payment is illegal. However, the shadow economy does not include little repairs and production of farm products for people's own needs, tax evasion, drug dealing etc.

The shadow economy obstructs social, economic and budgetary politics and increases health and safety risks. It threatens the competition in the business environment and has negative effects on economic growth.

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# MANAGING THE IDENTIFICATION OF MASS-ACCIDENT VICTIMS DURING THE COVID-19 EPIDEMICS

Matej Trapečar<sup>44</sup>

## Abstract

The identity of victims in mass accidents is a very important investigation procedure. Investigators use primary and secondary methods for identification procedures. Primary methods include fingerprints, DNA and dental records, and secondary methods include personal belongings, identity documents, clothing, tattoos, medical records etc. Two different sets of data have to be collected for the identification process. The first set is data on human remains recovered on site and the second is data on missing persons known to have been present at the time of the accident.

This article presents the disaster victim identification group, the victim identification procedure, logistical support and the use of Interpol forms. Investigators are in contact with human remains and objects that can hold a Covid-19. Appropriate personal protective equipment, medical masks, protective clothing, head and arms protection, and footwear are therefore proposed to investigators.

## 1. Introduction

In the past, various methods were used for identification purposes, such as identification parades, mutilation, stamping, and anthropometry. By the 19th century, criminals had been cut off with fingers and hands and branded with hot iron. The French used an identification parade in prison to identify returnees, where a police officer, who recognised the criminal, as a prize received tobacco. In 1882, Alfonso Bertillon began a systematic study of identification. He used the measurement of individual parts of the human body called anthropometry or berthionage (Vidic, 1973).

Today, biometrics are used for identification (Wayman and others, 2005). Biometrics are based on measurements of biological characteristics of humans, e.g. fingerprints, facial recognition, DNA, iris pattern, etc.

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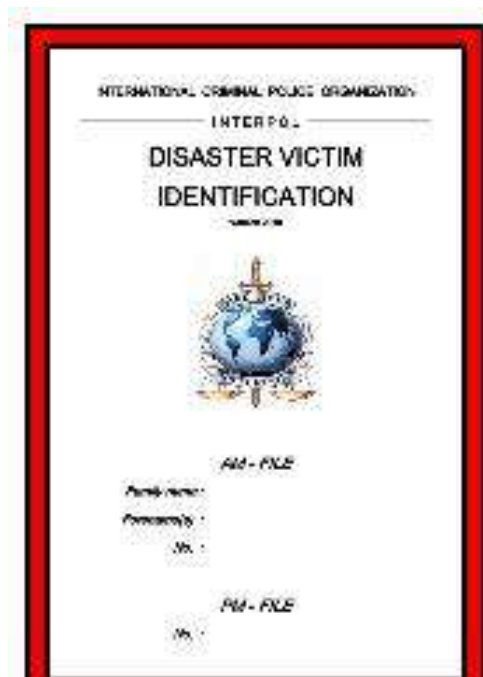


## 2. Identification

Identification of mass accident victims (DVI) is a difficult investigative task that can lead to a successful conclusion only if the work is properly planned. Another condition of success is the involvement of investigators and experts from various organisations, including police and medicine.

In Slovenia, the organisation of identification of victims of mass accidents is defined in State emergency response plans and Operational plans of Ministry of the Interior. These plans address different types of accidents, e.g. railway accidents, earthquakes, aircraft accidents, fire, nuclear or radiological accidents, terrorism. In the case of human victims, investigators must carry out identification procedures and identify the victim (Ministrstvo za obrambo, 2021).

Slovenia and most European countries have DVI groups. Investigators generally use methods and procedures in accordance with Interpol (International Criminal Police Organisation). They use forms to identify the victims of the accident, which are divided into forms for collecting data on the missing person, the body and the final identification report. The final report is a condition for the surrender and burial of the victim (Figure 1).



**Figure 1: Final DVI report**

## 3. Accident scene

The investigating judge has a leading role at the site of a mass accident and cooperates with experts from the police, medicine, pathology, odontology, anthropology and other services. The services in Disaster response management structure are in the Figure 2.



**Figure 2: Disaster response management structure**

Source: Interpol DVI Guide, 2018.

In disaster response management structure, the logistical support is very important. Logistical support must be very well organised. Their tasks include the installation of tents, the transport of investigators, the transport of corpses and human remains, the delivery of water and electricity, etc.

If the accident has a large number of bodies, a place to store bodies and human remains is established. The following teams are formed to view the site of a mass accident and individual actions:

- accident site securing, consisting of accident site closing, protection of participants and property. Securing is provided by police and technical personnel.
- forensic and criminal investigations with the task of collecting notices and preliminary procedures for the identification of dead bodies. The process consists of an examination of the dead bodies and objects carried out by police, criminals, forensics and medical personnel.
- the identification of victims shall be carried out by police officers, forensics, medical personnel, pathologists.
- identification of the cause of the accident involving police officers, forensics and other experts.

Police work at the site of a mass accident: First, the location of the accident involving the location of the accident and its consequences shall be identified, the number of investigators and the number of investigator teams, etc. In the event of a large scale, the location of the accident is divided into several sectors (Figure 3). The location of the accident must be marked, also dead bodies, human remains, identity documents and objects and other traces shall be marked. The location of the accident, including a sketch, measurement, photographing and video documentation, must also be recorded.

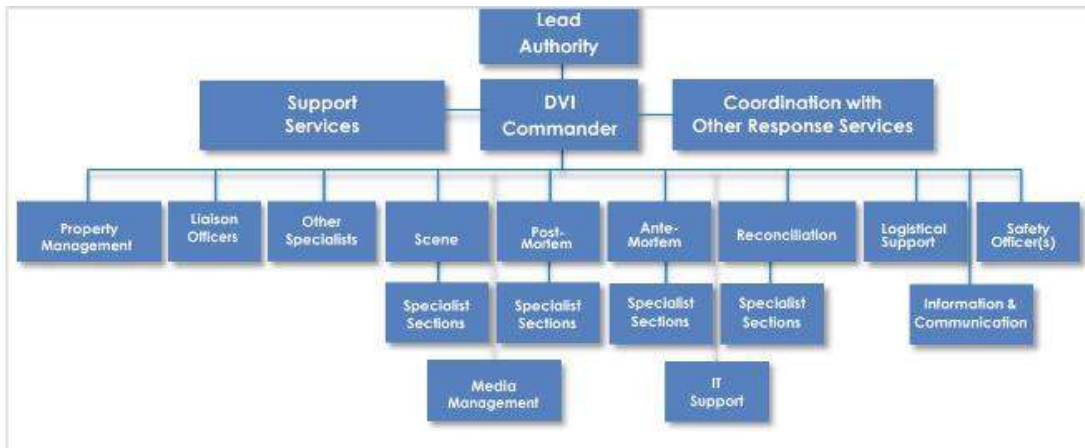


2. Visual recognition: In the past, bodies were only identified visually in some countries. This unscientific approach proved to be unreliable. Accurate identification shall only be provided by a combination of several criteria or methods.
3. Personal effects: an examination and description of clothing, jewellery and the contents of pockets shall be carried out. It must not be forgotten, however, that objects may be mistakenly or intentionally attributed to the wrong body and are never definitive, but only indirect evidence.
4. Physical inspection: a police officer in cooperation with a medical professional carries out the description of the physical characteristics, because the identification process usually involves determining the cause of death. A medical expert is looking for any known injuries and performs an external and internal examination of the body. If a body can be fingerprinted and if pre-mortem fingerprints can be obtained for comparison, they represent a reliable means of identification. Identification is also reliable according to data on dental status and DNA. Analysis of the biological pattern allows the individual to be associated with the ancestors and descendants.

#### **4.1. Identification of victims**

Interpol has developed guidelines and forms for identifying the victims of mass accidents (DVI forms). The forms are divided into three sets. Data on missing persons are entered into yellow ante-mortem forms (AM), and pink post-mortem forms (PM) are intended for data on the dead bodies.



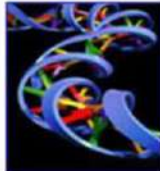
The first identification stage is scene examination. Depending on the incident, and where it happened, it can take days or even weeks for all the victims and their property to be recovered. The second stage is Post-mortem. The human remains are examined by specialists to detect forensic evidence to help identify the victim. This can include fingerprints, dental examination, DNA profiling and physical indications. The next stage is Ante-mortem with dental and medical records, fingerprints and DNA, recovered from the victims' homes or provided by family members. The last stage is reconciliation. When the PM and AM data is collected, a team of specialists compares and reconciles the two sets of information to identify the victims. The basic organizational chart for DVI command structure is in Figure 4.



**Figure 4: Disaster response management structure**



Source: Interpol DVI Guide, 2018.

Figures 5 and 6 show primary identification methods, including fingerprint, DNA and dental status and secondary identification methods (personal data, medical knowledge, documentation, clothing, etc.).

Primary Identifiers		
Friction Ridge Analysis	Forensic Odontology	DNA Analysis
		

**Figure 5: Primary methods of identification (fingerprints, dental status, DNA)**

Source: Interpol DVI Guide, 2018.

Secondary Methods of Identification	
Personal Data/Medical Findings	Evidence / Clothing
	

**Figure 6: Secondary identification methods**

Source: Interpol DVI Guide, 2018.

DVI during Covid-19; for investigators today, Covid-19 requires additional personal protective equipment. Investigators must possess and use personal protective equipment, medical masks, protective clothing, head and weapons protection and footwear to protect themselves from Covid-19 (Cook, 2020). Disinfection of premises where investigators carry out investigations, e.g. autopsies, are also required.

However, it is very important that investigators are vaccinated against Covid-19, or at least undergo regular testing for Covid-19.

## 5. Conclusion

Cooperation between different services is very important for successful DVI identification. Interpol's identification process is good practice. The identification process has three areas. The first is the collection of data on persons who may be the victims of a mass accident; the second is the collection of data and the examination of dead bodies and human remains. If they match, then there is positive identification of the accident victim. With good logistical support, the primary task for DVI investigators is to identify the victims of mass accidents successfully, but they must be healthy for this task, which means they have to wear protective equipment.

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**STUDENTS SECTION**

*In Slovene language*

# KOOPERACIJA V PROIZVODNEM PODJETJU

Veronika Knez<sup>45</sup>

## **Povzetek:**

Na kratko so opisane definicije, procesi in tîrmini, s katerimi se da srečati pri opravljanju dela v proizvodnem podjetju. Predstavljena tema izpostavi težavo pri postopku kooperacije v točno določenem podjetju, kjer je zadan cilj najti rešitev in uspešno vpeljati sistemsko sledljivost postopka kooperacije. Če se želi to doseči, je potrebno najprej spoznati proizvodno podjetje. To pomeni predvsem kateri procesi potekajo znotraj podjetja in na kakšen način, kateri sistem ERP se uporablja in kakšna je optimalna rešitev težave. Po preučitvi teorije in predstavljeni rešitvi sledi še implementacija novega postopka.

**Ključne besede:** kooperacija, proizvodnja, proizvodno podjetje, logistični procesi

## **PROCESS OF COOPERATION IN PRODUCTION COMPANY**

### **Abstract:**

Definitions, processes and terms, that we meet during our work in production company are briefly described. The presented topic highlights the problem of the cooperation process in a specific company, where the goal is to find the most appropriate solution and successfully introduce a systematic traceability of the cooperation process.

If we want to achieve that, it is necessary to first get to know the manufacturing company. This means, above all, which processes take place within the company and in what way, which ERP system is used and what is the optimal solution to the problem. After studying the theory and presenting the solution, the next step is the implementation of a new procedure.

**Key words:** cooperation, production, production company, process in logistic department

### **1. Proizvodno podjetje in proizvodnja**

Ljubič (2000) zapiše, da lahko posplošeno rečemo, da je proizvodnja zavestno dejanje proizvajanja nečesa koristnega. Pod koristno štejemo proizvod, za katerega velja, da je lahko materialni, t.i. fizičen ali pa nematerialni, t.i. storitev. Za definicijo proizvodnega procesa pa preberemo, da je to proces proizvajanja oz. izdelave

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proizvodov. Sistem pri katerem se izvaja proizvodni proces imenujemo proizvodni sistem – enako velja za izdelek kot tudi za storitev.

Vsem je najbolj znan temeljni transformacijski proizvodnji proces oz. reprodukcijski proces, ki teče v transformacijskem (pod)sistemu proizvodnje. V tem procesu se namreč dogaja fizična pretvorba oz. transformacija vložnega elementa v izhodni element. Input torej nek material, energija in informacija se pretvori v output kot izdelek, storitev, odpadki in informacija. (Ljubič, 2000).

## **1.1. Planiranje proizvodnega sistema**

Definicijo planiranja je Ljubič zapisal kot: "*Planiranje je sistematski zavesten proces razmišljanja in odločanja o ciljih, obnašanju ter ukrepanju v prihodnosti.*" Hkrati pa velja: "*Planiranje je ugotavljanje, kateri dogodki in kako se bodo dogodili v prihodnosti.*" (Ljubič, 2000, p.17). Iz tega razumemo, da so cilji planiranja organizacijsko reševanje in predvidevanje dogodkov v prihodnosti, pri tem pa moramo te dogodke spoznati za čim dlje v prihodnost in čim bolj natančno.

Bauchmeister in Polajnar (2000) sta razložila vsebino dejavnosti priprave proizvodnje in sicer je razdeljena na tri dele. Pod prvo spada tehnološka priprava; pri tej se vprašamo: Kaj? Kako? S čim? Pod drugo tj. operativna priprava imamo naslednja vprašanja: Kateri izdelek? Koliko? Kdaj? Kako? Pod tretjo pripravo pa imamo pripravo kontrole proizvodnje: Kakšni so kakovost in morebitni vzroki za odstopanja.

Mihelčič (2002) pa je proizvodni proces razčlenil na: tehnološki proces – blago osnovno oziroma po zgradbi spreminjamo glede na vrste delovnih dogodkov. Skladiščenje – pri blagu načeloma ne prihaja do sprememb značilnosti, saj se gre le za določeno časovno zadrževanje. Notranji transport - pri neobdelanem blagu prihaja do sprememb lokacij. Kontrola kakovosti – količinsko in kakovostno preverjanje blaga v primerjavi s standardi.

### **1.1.1. Osnovno planiranje proizvodnje**

MPS – osnovno planiranje proizvodnje (Master Production Scheduling) je: "*Določanje katere izdelke se namerava v naslednjem planskem obdobju izdelovati v podjetju, v kakšnih količinah in ob katerem času.*"

V okolju izdelave na zalogo (MTS – make to stock), izdelave po naročilu (ETO – Engineer to order in MTO – make to order) so to končni izdelki, ki se dobavljajo kupcem. V okolju sestavljanja po naročilu (ATO – assemble to order in FTO – finish to order) pa sestavi, sklopi, iz katerih so zgrajeni izdelki. (Ljubič, 2000, p. 190)

Informacije, ki so potrebne za pripravo osnovnega plana proizvodnje so: plan proizvodnje programa (fizična proizvodnja + zaloge + obremenitve virov = plan proizvodnega programa), informacija o potrebah (potrebe po izdelkih, varnostne zaloge), stanje zalog (razpoložljive količine, zagotovljene količine, količina za naročilo) in politika naročanja (lot naročanja). (Ljubič, 2000, p.190)

## **1.2. Nabavni proces materiala**

Ena izmed temeljnih poslovnih funkcij je tudi nabavna funkcija, ki se ukvarja s preskrbo surovin, materiala, polizdelkov in izdelkov za nemoten poslovni proces. Če povzamemo, proces nabavne funkcije skrbi, da je blago dostavljeno ob pravem času, na pravem mestu, v pravi kvaliteti in z ekonomsko upravičenimi stroški. (Štor, 2018)

Naloge, da je nabavni proces tudi uspešen, zajemajo: raziskave nabavnega trga, izbiro dobavitelja, izdelavo načrta nabave, iskanje in analiziranje ponudb, poslovno dogovarjanje, sklepanje pogodb, naročanje, prevzem blaga, plačilo dobavitelju, skladiščenje blaga, kontrola in analiza nabavnega poslovanja. (Mihelčič, 2002, p.43)

## **2. Kooperacija**

Kaj je kooperacija? V SSKJ (Slovar slovenskega knjižnega jezika, 1975) preberemo, da je kooperacija: "Organizacija proizvodnje, navadno z delitvijo dela, pri kateri nastopa več članov, podjetij, poslovno sodelovanje", torej podjetja med sabo sodelujejo. Doc. dr. Kavčič (2009, p. 78) je ob pisanju znanstvene monografije zavzel stališče:

*"Kooperacija je oblika obvladovanja in povezovanja, ki jo umeščam med razsežnosti tržnice in hierarhije. Za potrebe tega dela osvojim to stališče, da je kooperacija večinoma pogodbeno razmerje, ki obsega delitev dela med več podjetji. Temelji na medsebojnih interesih in na primerjalnih prednostih, ki jih imajo kooperanti. Primerjalne prednosti lahko kooperanti bolje izkoriščajo v skupnem delovanju."*

Kooperacija lahko obsega vsa funkcionalna področja podjetja ali pa je prisotna le na posameznih področjih t.i. sektorska kooperacija ali kooperacija na posameznih poslovnih funkcijah. (Schneider, et al., 2005)

### **2.1. Zgodovina**

Najstarejša literatura v slovenskem jeziku, ki jo je bilo moč zaslediti na temo proizvodna kooperacija je iz leta 1979, kjer sta Dolenc in Štukelj zapisala, da so v takratnem uresničevanju teh oblik dolgoročnega proizvodnega sodelovanja doseženi pozitivni uspehi. Te oblike sodelovanja so omogočale prenos sodobne tehnike in tehnologije, zagotavljale razvoj proizvodnje in njene izbire, omogočale večjo ekonomičnost in proizvodnost dela. Predvsem sodelovanje na podlagi dolgoročne proizvodne kooperacije zagotavlja ugodnejše ekonomske učinke v primerjavi s proizvodnjo uvožene opreme, saj so bile na podlagi tega zagotovljene večje serije,

večja zmogljivost in nižji stroški. Pojavljati so se začele nekatere slabosti: pogodbe so vsebovale omejitvene klavzule, s katerimi so onemogočili možnost izvoza v določene države, v katerih proizvajalec sam ne proizvaja, niti ni dal pravice proizvodnje drugi osebi, nekatere pogodbe pa so vsebovale prepoved nakupa sestavine ali določenega reprodukcijskega materiala od drugih.

Kumar (1984) je zapisal da gospodarstvo posamezne države skuša sodelovati v mednarodnih ekonomskih odnosih s katerimi bi doseglo koristi, ki pa so zelo na splošno slednje: hitrejše povečanje družbenega proizvoda države, utrjevanje družbene ureditve države, omogočanje ohranjanje in krepitev ekonomske neodvisnosti države in ohranjanje plačilne sposobnosti države do tujine.

### **2.1.1. Začetki kooperacije v Sloveniji**

Na območju Slovenije je zaslediti sodelovanje s tujino v avtomobilski industriji kar kmalu po obdobju prve in druge svetovne vojne. Omeniti je potrebno stavbo Agroservisa v Novem Mestu, kjer je nastalo podjetje Motomontaža leta 1954 in se kasneje preimenovalo v IMV (Industrija motornih vozil). (Delo, 2018). Nemško podjetje DKW (kratica za dampfkraftwagen, kar pomeni vozila na parni pogon) (oldtimeri, 2020) je s proizvodno kooperacijo v hali Agroservisa sestavljalo prva vozila za naš in tuj trg. Podjetje Renault je nato leta 1989 prevzelo proizvodnjo avtomobilov kjer je današnji Revoz Novo mesto. (Avtomagazin, 2020 ).

Na drugem delu Slovenije, v Kopru, je podjetje Tomos leta 1959 sklenilo kooperacijsko pogodbo s francoskim Citroenom, leto kasneje je stekla montaža prvih vozil. Kooperacija je bila predvsem za izdelke, ki so bili večje vrednosti, mednje štejemo žaromete, zaganjalnike, gibke zavorne cevi, kabelske sklope. Oddelek kooperacije v Tomosu je sodeloval pri izboljšavah. (Avto.Over, 2020 ).

### **2.2. Zakonodaja v Sloveniji**

V času samostojne Slovenije je bil 6.3.1993 izdan ukaz o razglasitvi Zakona o zunanjetrgovinskem poslovanju. Zapisan je bil v Uradnem listu Republike Slovenije (ULRS) in sicer v št.13, ki je bila izdana v Ljubljani, v petek 12. marca 1993 in je stopil v veljavo s 27.3.1993. Špec in Turk (2000, p.28) sta zapisala : "*Zakon je tako poenostavljen in liberaliziran, da mi v svetu težko najdemo primero. Temelji na načelu, da je dovoljeno vse, kar ni prepovedano*" kot tudi: "*Kakor je bil zakon o zunanjetrgovinskem poslovanju nekdaj med osnovnimi zunanjetrgovinskimi zakoni, je sedaj praktično nepomemben, vsebina določb, ki so še potrebne pa je prenesena v druge zakone.*" Poleg zakona o zunanjetrgovinskem poslovanju ter spremembah in dopolnitvah zakona so za takšno poslovanje pomembni še Carinski zakon (ULRS , št. 1/95), Zakon o deviznem poslovanju (ULRS št. 23/99), Zakon o preprečevanju dela in zaposlovanja na črno (ULRS, št. 36/00 ), Zakon o nadzoru izvoza blaga z dvojno rabo

(ULRS, št. 37/04) in Zakon o gospodarskih družbah, ki je bil zapisan leta 2009 (ULRS, št. 65/09). (PISRS, 4.1.2021)

### **3. Proizvodno podjetje – praktični vidik**

Podjetje je bilo ustanovljeno leta 1968 v Nemčiji, od leta 1990 pa ima sedež in upravo v Švici. Po svetu ima 10 proizvodnih lokacij a je prisotno v več kot 80 državah po svetu. V Sloveniji se je podjetje ustanovilo leta 2012 in je eno izmed vodilnih dobaviteljev medicinskih in kirurških pripomočkov, sterilizatorjev, dezinfektorjev in čistilnih strojev.

Število zaposlenih se giblje med 200 in 250. (spletna stran podjetja, 2020). Trenutno je na lokaciji v Sloveniji zaposlenih 235 ljudi. Struktura podjetja se v prvi fazi deli na operacije in podporno službo. Pod podporno službo se uvršča globalna nabava kot strateški nivo nabave, oddelek informacijske tehnologije, vzdrževanja projektov, financ, kontrolinga in kadrovskega oddelka. Pod operacije pa uvrščamo tehničnega direktorja, ki je direktni nadrejeni 10 oddelkom oz. segmentom (interni proizvodni oddelek pločevine, oddelek velikih pomivalnih strojev, malih pomivalnih strojev, sterilizatorji, vstavki, logistika, oddelek kakovosti, tehnologija, projektno prodajni oddelek in oddelek lean).

#### **3.1. Logistika v proizvodnem podjetju**

V logistiki je vključno z vodjo zaposlenih 16 oseb. Logistiko vodi en vodja, dva sta zaposlena na delovnem mestu strokovnjak za zunanjo trgovino, kjer so njune delovne naloge usmerjene predvsem v preračun porekla blaga in urejanje zunanjetrgovinskih zadev. Dva sta zaposlena na delovnem mestu sodelavec v logistiki, kjer je njuna delovna zadolžitev predvsem organizacija logistike kar se tiče prevozov, uvozov in izvozov.

Delovne obveznosti zaposlenih na delovnem mestu skladiščnik so opisane v naslednjem odstavku.

V skladišču je 11 zaposlenih, glede na delovni proces so razporejeni po njihovih glavnih zadolžitvah. Najprej sledi fizični prevzem kamionskih pošiljk in pošiljk, ki so dostavljene preko hitre pošte. Pošiljke je potrebno razpakirati iz transportne embalaže, pregledati je potrebno spremno dokumentacijo, preveriti ustrezno vizualno kvaliteto in količino blaga, fizično stanje primerjati s podatki na prejeti dobavnici. V kolikor je vse ustrezno je potrebno začeti s sistemskim prevzemom materiala, kjer se blagu tudi sistemsko določi skladiščna lokacija. Po prvem koraku, se preda material in dokumente sodelavcu iz oddelka kakovosti, ki mora glede na vse zahteve ob naročilu materiala, preveriti lastnosti. Blago premeri, izmeri hrapavost, preveri ustrezne certifikate in ali je blago ustreznih dimenzij glede na pripadajočo risbo. V kolikor je prejeto blago ustrezne kakovosti se sprosti še kakovostni prevzem in tako je

blago pripravljeno na skladiščenje. Odgovorna oseba v skladišču sistemsko prevzeto blago primerno označi in fizično uskladišči na ustrezno lokacijo.

Skladišče vhodnega materiala zajema regalna mesta, kjer je blago skladiščeno na skladiščno enoto paleta, skladiščno enoto zaboj, kardex skladiščno enoto in skladišče za nevarne snovi. Na določenih materialialih (posebnosti) imamo tudi konsignacijsko skladišče in material, ki se naroča po sistemu kanban. Pri vseh prevzemih materiala se skladiščni pakirni enoti določi lokacija skladiščenja, ki je vidna tudi v sistemu ERP, ki ga podjetje uporablja, to je SAP.

Poleg zaposlenih, ki so odgovorni za oddelek vhodne in skladiščne logistike sta še dva zaposlena na oddelku odpreme.

### **3.2. Delovni procesi**

Vsi procesi, vse naloge vseh zaposlenih potekajo preko SAPa, kajti le tako se lahko uspešno analizira vse premike materialov, prikaže uspešnost doseganja kazalnikov na mesečnem in letnem cilju podjetja, pregleduje vrednosti zalog in izračuna najbolj optimalen nabavni, logistični, proizvodni in prodajni proces.

V prejšnjem poglavju smo predstavili osnovne delovne zadolžitve logistike oz. naloge zaposlenih v oddelku logistike. V nadaljevanju pa so zaradi lažjega razumevanja procesa v podjetju opisane delovne zadolžitve na nekaterih delovnih mestih, ki sodelujejo predvsem pri postopku kooperacije, na katerega bomo tudi osredotočeni. Predstavljen je tudi tērmin kooperant.

Mojster segmenta – vodi organizacijo delovnega procesa v delu proizvodnje, vodi in razporeja delo in usklajuje potrebe po delavcih, planira in zagotavlja kapacitete, priprava delovnega naloga in skrb za pravočasnost proizvodnje, skrb za pripravo materiala za izvedbo po delovnih nalogih, sodelovanje in koordinacija dela z drugimi oddelki.

Komisionar segmenta - zbiranje in priprava blaga v skladišču, dobava blaga v proizvodnjo, skeniranje izdelkov, delo z ročnim viličarjem, shranjevanje delovnih nalogov, skrb za urejenost skladiščnih prostorov, skrb za stalno zalogo blaga na komisionirnih lokacijah.

Planer segmenta – planiranje izdelave izdelkov in polizdelkov, sprejem potrjevanje in spremljanje proizvodnih naročil, planiranje proizvodnje glede na kapacitete ljudi, strojev in virov, vodi kooperacijo na segmentu, spremljanje realizacije plana in opozarjanje na odstopanje, izdelava proizvodne dokumentacije.

Kontrola kakovost na vhodni kontroli – izvaja kakovostno kontrolo vhodnega materiala, polizdelkov in končnih izdelkov, hrani in arhivira prejete materialne

certifikate, sodeluje pri postopku vzorčenja blaga, izvaja meritve prvih vzorcev, nadzoruje izvajanje procesne kontrole, pripravlja poročila o izvedeni kontroli.

Kooperant – kdor dela, sodeluje v kooperaciji, poslovni sodelavec (SSKJ,1976). Poslovni sodelavec, ki izvaja proces kooperacije do naročnika.

### **3.3. Kooperacija v proizvodnem procesu na segmentu**

Primer procesa kooperacije v proizvodnem procesu: Mojster iz segmenta sporoči komisionarju kateri delovni nalogi in za katerega kooperanta se naj pripravijo. Komisionar pripravi material za kooperacijo, priloži listke za označevanje blaga in sporoči številke delovnih nalogov planerju. Planer pripravi naročilnico preko sistema in jo pošlje kooperantu. Na v naprej določen dan kooperant pride po pripravljeno blago in ga dostavi nazaj na naročen in potrjen termin. Blago, ki ga dostavi nazaj mora biti prav tako pravilno označeno. Po dostavi blaga komisionarja segmenta lahko blago, ki je prispelo tudi fizično prevzame. V primeru, da je potrebna interna dodelava (v našem primeru 95%) se le ta opravi v tem trenutku (brušenje, kemično čiščenje...). Za interno dodelavo se potrebuje 2 do 3 dni. Blago prihaja na oddelek po potrebi montažnega procesa, da se lahko material prevzame sistemsko po delovnih nalogih. Planer nato lahko zaključi naročilnico in potrdi račun storitve.

Glede na opisan proces smo potrdili, kar smo v zadnjih mesecih tudi videli kot težavo. Blago, ki gre na kooperacijo nima enakega systemskega in fizičnega toka materiala, kot ga ima blago, ki se ga naroča iz strani nabavne službe. Takšno blago se prevzema preko logistike, potrditve kakovosti preko oddelka kakovosti in uskladiščenje blaga. Material, ki gre na kooperacijo po trenutnem procesu namreč nima sledljivosti in pripadajoče dokumentacije kot ji ima odpremnica ob odpremi, dobavnica iz strani dobavitelja ob dostavi, systemskega prevzema preko dobavnice, stanja zaloge, in povezave med vsem naštetim in računom.

## **4. Zaključek**

Med prebiranjem literature in spoznavanjem procesov in toka materiala predvsem v proizvodnem podjetju, je seveda potrebno izpostaviti, da je definicija kooperacije predstavljena oz. opredeljena skoraj enako, se pa podjetja zaradi neenakih sistemov ERP, odločajo za različne načine, kako vodijo in spremljajo te materiale. Do različnih načinov operativne izvedbe prihaja med drugim tudi zato, ker dajejo na zunanjo dodelavo različne skupine materialov. Nekatera podjetja imajo s kooperantom sklenjeno pogodbo za dodelavo materiala (iz cevi kot surovec nam dostavijo cev z izvleki), za obdelavo (na pločevini izvedejo laserski izrez), za predelavo (predelava železa v jeklo). Iz primerov dobrih praks bomo lahko, ob poznavanju našega problema in raziskovanju, kaj vse nam SAP nudi, spremembo tudi implementirali.

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# SODELOVANJE PETROLA IN DARSA PRI ELEKTRONSKEM CESTNINJENJU MOTORNIH VOZIL

Stefan Tadić<sup>46</sup>

**Povzetek** V članku obravnavamo kaj je cestninjenje in zakaj ga potrebujemo. Poleg cestninjenja se v članku obravnavajo vrste cestninjenja. Vrste cestninjenja kateri se bodo obravnavali so današnji sistem cestninjenja in sicer vinjetni sistem cestninjenja in elektronski sistem cestninjenja, kot tudi sistem cestninjenja kateri je bil v uporabi v preteklosti in sicer klasični sistem cestninjenja. Ugotovili smo, da ima vsak način cestninjenja svoje prednosti in slabosti.

**Ključne besede:** Cestninjenje, Elektronski sistem cestninjenja, klasični sistem cestninjenja, vinjetni sistem cestninjenja, DarsGo.

## COOPERATION OF PETROL AND DARSA IN ELECTRONIC TOLLING OF MOTOR VEHICLES

**Abstract** In this article, we discuss what tolling is and why we need it. In addition to tolling, the article discusses the types of tolling. The types of tolling that will be considered are today's tolling system, namely the vignette tolling system and the electronic tolling system, as well as the tolling system that has been in use in the past, namely the classic tolling system. We found that each method of tolling has its advantages and disadvantages.

**Key words:** Toll collection, Electronic toll collection system, classic toll collection system, vignette toll collection system, DarsGo.

### 1. Uvod

Cestnina ali cestninjenje je izraz, ki se predvsem uporablja v cestnem prometu in se lahko nanaša na privatne ceste ali pa javne ceste za katere je potrebno plačilo, da bi jih lahko prevozili (NARA, 2019).

Ceste po katerih se vozimo niso mogle zrasti iz zemlje ali pa nastati ob nekem velikem poku, saj mrtva snov ne more nastati iz mrtve snovi kot danes večina verjame, ampak

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jih je živa snov, oziroma v tem primeru človek, zgradil z natančnim načrtom in načrtnim vlaganjem energije v gradnjo cest. Gradnja hitrih cest in avtocest je velik projekt in ni enostaven, zato je za gradnjo le teh potrebno veliko osebja in delavcev, na primer: arhitekt, vodja delavcev, delavci, dobavitelj materiala za delo in tako dalje. Poleg delovne sile oziroma delavcev pa so za gradnjo hitrih cest in avtocest potrebni tudi predmeti dela kot so, na primer posebna dvigala, tovorna vozila za prevoz materiala, tovorna vozila za mešanje materiala (hruška) in tako dalje. Vse te delavce in ostalo osebje je potrebno plačati za njihovo delo oziroma za njihove storitve, vse predmete dela ki so potrebni za tako gradnjo je potrebno kupiti, kot tudi material ki je tej gradnji primeren. Zato je za gradnjo hitrih cest in avtocest potrebno ogromno denarnih sredstev, ki si jih po navadi država sposodi pri banki nato pa ta sposojeni znesek z leti vrača. Da bi lahko ta znesek lahko vračala je potrebno cestninjenje. Na ta način se pravično razdeli strošek gradnje na voznike ki uporabljajo le te ceste, vozniki so lahko prebivalci države v kateri so le te ceste, lahko pa so tujci ki prihajajo iz različnih razlogov v državo ali pa samo prečkajo to državo. Gradnja hitrih cest in avtocest pa in edino kar predstavlja strošek, zaradi vremenskih vplivov in tovora ki se vozi po le teh cesta je potrebno hitre ceste in avtoceste primerno vzdrževati, kar predstavlja dodaten strošek (*DARS d.d., b. d.*).

## **2. Vinjetni sistem cestninjenja**

Vinjetni sistem cestninjenja velja za vozila z največjo dovoljeno maso do 3,500 kg. Vinjetni sistem se je v Sloveniji uveljavil 1. junija 2008. Vinjeta je nalepka, ki vozniku omogoča neomejeno uporabo oziroma vožnjo po hitrih cestah in avtocestah v določenem časovnem okvirju. Delijo se na vinjete za enosledna motorna vozila ali tako imenovani Razred 1, vinjete za bivalna in dvosledna motorna vozila, z višino vozila nad prvo osjo do 1,30 metrov, ter vinjete za vozila, katerih največja dovoljena masa ne presega 3,500 kg ali tako imenovani 2A razred. Poznamo tudi vinjete za dvosledna motorna vozila, katerih višina vozila je nad prvo osjo 1,30 metrov, in njihova največja dovoljena masa ne presega 3,500 kg ali tako imenovani 2B razred. Možni časovni okvirji pa se razlikujejo glede na vrsto vozila. Za enosledna motorna vozila je možen letni, polletni in tedenski časovni okvir. Za preostali dve kategoriji so časovni okvirji enaki, možni so letni, mesečni in tedenski časovni okvir. Pri dvoslednih vozilih je potrebno vinjeto oziroma nalepko namestiti na notranjo stran vetrobranskega stekla, pri enoslednih motornih vozilih se vinjeto namesti na bočno stran motornega kolesa. Nadzor nad uporabo vinjet izvajajo Družba za avtoceste v Republiki Sloveniji ali DARS, Finančna uprava Republike Slovenije in Policija. Za uporabo neveljavnih, ne ustreznih vinjet in ne uporabo vinjet je dodeljena finančna kazen 300 EUR oziroma 500 EUR (*DARS d.d., b. d.*).

## **3. Klasični sistem cestninjenja**

Pred vinjetnim in elektronskim sistemom cestninjenja oziroma DarsGo sistemom se je uporabljal klasični oziroma ročni sistem cestninjenja. Za ta način cestninjenja so

potrebne cestninske postaje, kjer vozniki plačajo cestnino oziroma zaposleni pobirajo cestnino. Pri tem načinu cestninjenja sta se uveljavila dva podsistema in sicer zaprti sistem ročnega cestninjenja in odprti sistem ročnega cestninjenja.

Pri zaprtem sistemu klasičnega oziroma ročnega cestninjenja ob uporabi hitrih cest in avtocest voznik prejme cestninski listič, s pomočjo katerega ob zapuščanju avtoceste ali hitre ceste plača dejansko ceno. Le ta je določena glede na uporabo cest in glede na prevoženo pot (*Eva Bernik, 2012*).

Pri odprtem sistemu klasičnega oziroma ročnega sistema cestninjenja se ta izvaja na prehodu čelne postaje, ne glede na uporabo hitrih cest in avtocest, oziroma na prevoženo pot. Plača se neka določena relacija. Poti med priključki, ki ne vodijo skozi čelno postajo se ne cestninijo (*Darko Petrović, 2007*).

#### **4. Elektronski sistem cestninjenja**

Elektronski sistem cestninjenja DarsGo je namenjen za vozila z največjo dovoljeno maso nad 3,500 kg. Za tovrstno cestninjenje potrebuje firma, organizacija ali posameznik napravo DarsGo. Naprava je nujna za izvajanje tovrstnega cestninjenja, saj cestninski portali, ki se nahajajo na vsakem odseku nad hitro cesto in avtocesto, ob vožnji vozila skozenj zaznajo napravo DarsGO in le tej primerno odštejejo dobroimetje ali pošljejo račun na firmo, odvisno od načina plačanja. Napravo DarsGo je potrebno namestiti na vetrobransko steklo, podobno kot vinjeto pri vinjetnem sistemu cestninjenja. Za vsak odsek, ki ga vozilo oziroma voznik prevozi se plača cestnina. Višina cestnine posameznega odseka je odvisna od dolžine odseka in značilnosti vozila kot sta EURO-emisijski razred vozila in število osi vlečnega vozila. Nalaganje dobroimetja na napravo DarsGo ali prevzem naprave pa je možen v matičnih DarsGo servisih, pooblaščenih DarsGo servisih na avtocestnem omrežju (vse Petrol in OMW bencinske postaje na avtocestah) in pooblaščenih DarsGo servisih ob avtocestnem omrežju (večina Petrol in OMW bencinskih mestnih postaje ter nekaj MOL mestnih bencinskih postaj) (*DARS d.d., b. d.*).

#### **5. Zaključki**

Pri klasičnem načinu cestninjenja je nadzor plačevanja cestnine na visokem nivoju, saj ni mogoče prečkati cestninske postaje, brez da bi plačali. V nasprotju s klasičnim načinom cestninjenja pa vinjetni način cestninjenja ne zagotavlja tolikšnega nadzora nad plačevanjem cestnine. V primeru, da bi želeli povečati nadzor nad plačevanjem cestnine, bi potrebovali večje število nadzornikov, ki bi na avtocestah in hitrih cestah nadzorovali uporabo vinjet. V tem primeru bi se sorazmerno povečali tudi stroški.

Pri nadzoru plačevanja cestnine, sta si klasični sistem cestninjenja in elektronski sistem cestninjenja zelo podobna, saj za razliko od vinjetnega načina cestninjenja zagotavljata popoln nadzor nad plačevanjem cestnine. Zato menim, da sta pri nadzoru plačevanja cestnine boljša klasični sistem in elektronski sistem cestninjenja.

Pri klasičnem načinu cestninjenja ima nadzor plačevanja cestnine svojo ceno, saj s tem, ko voznik upočasni in zapelje do plačilnega okna, ustavi, plača in nato spelje, zaustavlja promet, zaradi česar je možna posledica tudi nastanek zastojev. Zaradi tega je povečana tudi možnost naleta oziroma prometnih nesreč.

Vinjetni sistem in elektronski sistem cestninjenja s tem nimata težav, saj pri vinjetnem načinu cestninjenja vinjeto namestimo na vetrobransko steklo in vozimo brez kakršnih koli cestninskih ovir na avtocesti ali hitri cesti. Pravilno uporabo vinjet in veljavnost spremljajo nadzorniki s položaja, ki vozniku ni v napoto pri vožnji. Pri elektronskem načinu plačamo oziroma uredimo vse potrebno za plačilo cestnine pred potjo, to nam omogoča, da vozimo po avtocesti in hitri cesti brez cestninskih ovir. Nadzor plačevanja cestnine pri elektronskem načinu cestninjenja izvajajo kamere, ki so povezane s sistemom cestninjenja.

Znano je, da vozilo ob speljevanju izloči v naravo več neželenih plinov, kot ob konstantni vožnji. Zato gre pri klasičnem sistemu cestninjenja z upočasnjevanjem, ustavljanjem ter ponovnim speljevanjem za manj okolju prijazno metodo. Te plini so izredno škodljivi za okolje, kar pomeni da je klasični sistem cestninjenja posledično škodljiv za okolje, ali vsaj bolj škodljiv kot sta vinjetni sistem cestninjenja in elektronski sistem cestninjenja.

Pri elektronskem načinu in klasičnem načinu cestninjenja bi lahko povzeli, da gre za prekomerno zanašanje na tehnologijo, predvsem pri elektronskem sistemu cestninjenja. V primeru odpovedi oziroma prenehanja delovanja opreme je človek nemočen, prav tako se z prenehanjem delovanja opreme preneha tudi cestninjenje. V primeru klasičnega sistema cestninjenja gre lahko za računalnik, ki preneha delovati in posledično zaposleni vozniku ne more izdati potrdila o plačilu cestnine. Lahko gre za prenehanje delovanja oziroma prekinjeno komunikacijo med računalnikom in cestninsko rampo zaradi različnih elektronskih težav. V tem primeru zaposleni na cestninski postaji ne more spustiti voznika naprej.

V primeru elektronskega načina cestninjenja lahko prihaja do težav pri prenehanju delovanja elektronske opreme ali izgube električne energije (na primer: v primeru tehničnih težav v sistemu, vozniku ni omogočeno, da opravi use potrebno za elektronsko cestninjenje). V primeru odpovedi nadzornih kamer na avtocestah in hitrih cestah, ki nadzorujejo plačilo cestnine, je nadzor nad plačilom cestnine tako rekoč nič, saj ga brez kamer ne moremo izvajati.

Prav tako pa menim, da je ena ključnih slabosti elektronskega sistema cestninjenja to, da so vsi podatki shranjeni na trdem disku, prav tako je težava povezovanje z internetom. Elektronski sistem cestninjenja lahko hitro postane tarča spletnih kriminalcev (hekerjev), ki bi lahko vdrli v elektronski sistem cestninjenja. Posledica takega vdora bi lahko bila kraja osebnih podatkov vseh, ki so se vozili po Slovenskih cestah, oziroma so vpisani v sistem elektronskega cestninjenja.

Menim, da je vinjetni sistem najbolj optimalen sistem cestninjenja. Seveda je nadzor plačila celine nekoliko slabši kot pri elektronskem in klasičnem sistemu cestninjenja. Z žrtvovanjem nekoliko nadzora za plačevanje celine pridobimo na pretočnosti prometa, za razliko od klasičnega sistema cestninjenja, s tem pa tudi odpravimo možnosti zastojev, ter posledično temu zmanjšamo možnost za nalete in prometne nesreče.

Prav tako se vinjetni sistem cestninjenja veliko manj zanaša na tehnologijo, kot pri elektronskem sistemu cestninjenja, saj so pri odpovedi elektronskih naprav ali tehničnih napakah pri vinjetnem sistemu cestninjenja posledice skoraj ali pa celo neopazne. Ker je elektronski sistem lahko tarča spletnih kriminalcev in njihovih napadov, pri vinjetnem sistemu cestninjenja to ni mogoče.

Zasebnost in varstvo podatkov sta pri vinjetnem sistemu cestninjenja veliko bolj spoštovana kot pri elektronskem sistemu cestninjenja. Pri vinjetnem sistemu cestninjenja smo kupili nalepko ali tako imenovano vinjeto, ter jo namestili na vetrobransko steklo. Pri elektronskem sistemu cestninjenja so potrebni osebni podatki lastnika vozila oziroma voznika ter podatki vozila. Kot pa je že v zgornjem odstavku omenjeno, je elektronski sistem cestninjenja lahko žrtev spletnega kriminala.

Za klasični sistem cestninjenja je za delovanje potrebna dodatna infrastruktura, in sicer cestninske postaje. Pri elektronskem sistemu cestninjenja je prav tako, kot pri klasičnem sistemu cestninjenja potrebna dodatna infrastruktura, in sicer cestninski portali na avtocestah in hitrih cestah. Prav tako so potrebni servisi (na primer: DarsGo servis in pooblaščen DarsGo servis), kjer bodo vozniki urejali cestninjenje za njihova vozila. Pri vinjetnem sistemu cestninjenja prihaja do manjšega stroška izdelave oziroma tiska nalepk za vetrobransko steklo, zato je tudi z ekonomskega vidika vinjetni sistem najbolj optimalen.

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# PREISKOVANJE LETALSKIH NESREČ

Violeta Žurga<sup>47</sup>

## **Povzetek:**

Letalski promet je glede na statistiko najbolj varen način transporta. Ne glede na to pa so manjše in večje letalske nesreče stalnica. Letalske nesreče spadajo med množične nesreče, za katere velja poseben protokol. Vzroki letalskih nesreč so lahko zelo različni, zato je preiskava letalske nesreče nujna, sploh če gre za sum kaznivega dejanja. Ko se letalska nesreča zgodi, je potrebno najprej poskrbeti za žrtve in kraj letalske nesreče zavarovati, to opravita medicinska pomoč in policija. V nadaljevanju preiskovalci pregledajo teren in dokumentirajo ugotovitve. V članku je predstavljen protokol postopanja v primeru letalskih nesreč s poudarkom na zavarovanju kraja letalske nesreče in preiskavi letalske nesreče. Predstavljeni pa sta tudi obe najpomembnejši službi, ki pri preiskovanju letalskih nesreč v Sloveniji in sicer Služba za preiskovanje letalskih nesreč in incidentov in Skupina za identifikacijo žrtev množičnih nesreč. Identifikacija žrtev poteka po Interpolovih smernicah tristopenjsko, zbiranje predsmrtnih in posmrtnih podatkov ter medsebojne primerjave, na kar šele sledi identifikacija.

**Ključne besede:** policija, množična nesreča, letalska nesreča, zavarovanje kraja nesreče, preiskava letalske nesreče

## AIRCRAFT ACCIDENT INVESTIGATION

### **Abstract:**

According to statistics, air transport is the safest mode of transport. Nonetheless small or major plane crashes are a constant. Plane accidents are among the mass accidents subject to a special protocol. The causes of plane crashes can be quite different, so an investigation into a plane crash is necessary, especially if there is a suspicion of a crime. When a plane crash happens, it is first necessary to take care of the victims and secure the place of the plane crash, this is done by medical assistance and the police. Investigators then inspect the terrain and document the findings. The article presents a protocol for dealing with aviation accidents with an emphasis on securing the scene and investigating an accident. The two most important services in the investigation of aviation accidents in Slovenia are also presented, namely the Aviation Accident and Incident Investigation Service and the Group for the Identification of Victims of Mass Accidents. According to the Interpol guidelines, the identification of victims takes place in three stages, the collection of pre-death and post-mortem data and mutual comparisons, which is followed by identification.

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**Key words:** police, mass crash, plane crash, crash securing the scene, plane crash investigation

## **1. Varnost letalskega prometa**

Zagotavljanje varnosti letenja je najpomembnejši cilj vseh, ki so vključeni v izvajanje in nadzor letalskega prometa. In čeprav statistika kaže, da je v primerjavi z ostalimi transportnimi sredstvi letalski promet kljub vsemu najvarnejši, so letalske nesreče kljub temu medijsko zelo odmevne. ICAO (Mednarodna organizacija za civilno letalstvo - OZN) v svojem varnostnem poročilu poudarja, pride do 2,9 nesreč na milijon odhodov, česar ne moremo trditi o drugih nesrečah (2020). Vsakodnevne nesreče v cestnem transportu se sicer zgodijo bistveno pogosteje in terjajo statistično gledano skupno bistveno več žrtev, a ker gre za niz nesreč manjšega obsega z eno, dvema ali tremi smrtnimi žrtvami, jih javnost komajda zazna.

Če gre pa za nesrečo večjega transportnega letala ali nesrečo čarterskega letala, imamo takoj opravka z množično nesrečo z več deset ali sto mrtvih. Letalska nesreča se lahko primerja samo še z nesrečo potniškega vlaka. Zato spadajo letalske nesreče med množične nesreče, ki vse deležnike in medije postavlja pred povsem nove izzive. Identifikacija žrtev je zagotovo najpomembnejši aspekt predvsem za svojce žrtev, prav tako pa je pomembno tudi raziskovanje vzrokov nesreče ter morebitnih povzročiteljev nesreče.

Vzroki za nastanek letalske nesreče so lahko zelo različni, težko jih je posploševati razen zelo na splošno npr. da gre za človeški faktor ali pa tehnični defekt ali pa teroristično dejanje. Na splošno lahko opišemo vzroke za letalske nesreče zgolj statistično, vendar pa vsaka nova letalska nesreča odpira nov vprašanja in vodi do novih zaključkov, vsaka letalska nesreča je tako primer zase. Odkrivanje in določanje vzrokov letalske nesreče je pomembno, saj oboje pripomore k izboljšanju in večji varnosti letalskega prometa. Pri tem nam pomaga forenzična znanost. Vzrok za letalsko nesrečo pa ni vedno samo človeški faktor ali pa tehnični defekt, pogost vzrok je lahko tudi takšno ali drugačno kaznivo dejanje npr. teroristično dejanje, ki zahteva kriminalistično preiskavo.

Pri odkrivanju vzrokov letalske nesreče, prav tako pri identifikaciji žrtev letalske nesreče, nam pomaga predvsem forenzična znanost. In ker so vse večje letalske nesreče množične nesreče, zahtevajo posebno organiziranost preiskovanja. V Sloveniji sta za preiskovanje letalskih nesreč zadolžena predvsem dva organa in sicer Služba za preiskovanje letalskih nesreč in incidentov (trenutno pod okriljem Ministrstva za infrastrukturo) ter Delovna skupina za identifikacijo oseb ob velikih naravnih in drugih nesrečah.

## **2. Sodelujoče službe pri preiskovanju letalskih nesreč**

Ko se zgodi nesreča, so na kraju nesreče policija, gasilci in medicinska pomoč. To je slika, ki se nam vtisne v spomin, ko se zgodi prometna nesreča. Podobno je tudi v pri drugih nesrečah. V primeru množične nesreče kot je letalska nesreča pa sodeluje še cela vrsta drugih služb, seveda je odvisno predvsem od narave, pomembnosti in množičnosti nesreče, torej od posamezne letalske nesreče, katere službe so dejansko aktivirane in aktivno sodelujejo. Državni načrt zaščite in reševanja ob nesreči zrakoplova predvideva vključitev naslednjih služb (Ministrstvo za obrambo, 2010):

- policija,
- vojska,
- sile za zaščito, reševanje in pomoč (posebne enote kot npr. gorska reševalna služba, jamarska reševalna služba, tehničnoreševalne enote, enote reševalcev z reševalnimi psi, gasilske enote in enota za hitre reševalne intervencije,
- civilna zaščita,
- medicinska pomoč,
- Služba za preiskovanje letalskih nesreč in incidentov, in
- Skupina za identifikacijo žrtev množičnih nesreč.

Različne operativne službe kot so sile za zaščito, reševanje in pomoč, civilna zaščita ter medicinska pomoč sodelujejo pri reševalni akciji, da se čim prej in v čim večji meri sanirajo posledice nesreče, medtem ko so policija, Služba za preiskovanje letalskih nesreč in incidentov ter Skupina za identifikacijo žrtev množičnih nesreč vključene tudi v dogajanje po sami sanaciji nesreče, torej preiskujejo in določajo vzrok nesreče ter izvedejo identifikacijo žrtev, kar lahko traja od več dni do nekaj mesecev ali celo let. In ker strokovni argumenti le redko koga prepričajo oz. niso vedno zadostni, ima lahko vse skupaj tudi boleč sodni epilog, predvsem za žrtve nesreče. Vsem navedenim službam pa se pridružijo tudi forenziki oz. za strokovnjake na področjih z namenom forenzične preiskave nesreče ter žrtev. Najpomembnejši organ v Sloveniji na področju forenzičnih preiskav je Nacionalni forenzični laboratorij (NFL).

V skladu z Uredbo o preiskovanju letalskih nesreč, resnih incidentov in incidentov (Uradni list RS št. 72/03) je vsakdo, ki je bil priča letalski nesreči, obvezen k temu, da to tudi takoj sporočiti policiji (klicna številka 113), Centru za obveščanje (klicna številka 112) ali katerikoli kontroli zračnega prometa Republike Slovenije. V nadaljevanju je potrebno o letalski nesreči obvestiti tudi preiskovalni organ pri ministrstvu, pristojnemu za promet, Upravo Republike Slovenije za civilno letalstvo in policijo, v kolikor jo še nihče ni obvestil. Če gre za nesrečo vojaškega letala pa treba obvestiti tudi ministrstvo za obrambo.

Policija je prva na kraju letalske nesreče. V kolikor pa kraj letalske nesreče ni takoj znan, policija seveda najprej organizira iskalno akcijo z lastnimi policijskimi zrakoplovi (policijskimi helikopterji). Ko je kraj dogodka najden, policija opravi ogled



stanja in začne nemudoma z zavarovanjem sledi in poskrbi, da ostane kraj dogodka čim bolj nedotaknjen in tako omogoči preiskovalcem, ki prispejo kasneje, da dokumentirajo dokazna gradiva za kasnejšo preiskavo. Odvisno od razsežnosti letalske nesreče, pa mora policija poskrbeti tudi za vzpostavitev javnega reda ter po potrebi tudi za varovanje ljudi in njihovega premoženja. Poleg tega nadzira in usmerja promet in tako omogoči dostop interventnim silam za zaščito, reševanje in pomoč ter medicinski pomoči.

Na kraj nesreče prispejo tudi druge operativne službe vključno z medicinsko pomočjo, seveda pa je njihovo posredovanje odvisno predvsem od razsežnosti letalske nesreče ter zahtevnosti terena. Če se je letalska nesreča zgodila v gorah, sodeluje tudi gorska reševalna služba, če imamo opravka s kraškim terenom, pa tudi jamarske reševalna služba. Nepogrešljivi so tehničnoreševalne enote ter enote reševalcev z reševalnimi psi.

### **3. Zavarovanje in ogled kraj aletalske nesreče**

Medtem ko operativne službe nadaljujejo z reševanjem ponesrečencev, pa se začnejo tudi vsi postopki zavarovanja in ogleda kraja letalske nesreče. Za preiskavo letalske nesreče sta zavarovanje in ogled kraja letalske nesreče odločilnega pomena. Preiskovalni organi namreč šele na podlagi ogleda pridejo do pomembnih informacij, da se lahko odločijo za sum kaznivega dejanja oz. za nadaljnji potek preiskave. Pravilno in hitro postopanje je zato nujno.

Državni načrt zaščite in reševanja ob nesreči zrakoplova predvideva v dodatnih navodilih za zavarovanje kraja nesreče naslednje ukrepe (Ministrstvo za obrambo, 2010):

- Pomoč preživelim žrtvam, ki jih je potrebno popisati in od njih zbrati prve informacije.
- Označitev kraja dejanja s širšo okolico s trakom: »STOP POLIOCIJA«, s čimer se prepreči dostop nepooblaščenim osebam ter označi spremembe, ki jih zaradi nujenja prve pomoči ali zaradi drugih vzrokov povzročijo policisti sami.
- Ustrezno zavarovanje sledi, ki jim grozi uničenje (zaradi vetra, ognja, snega i.d.).
- Vzpostavitev vhodnega in izhodnega koridorja za ogledne ekipe, reševalce, gasilce i.d..
- Sprotno obveščanje OKC PU.

Predvsem je pomembno, da je na kraju nesreče oz. razbitin dovoljen vstop samo osebam, ki jim to dovolijo policija ali preiskovalci Službe za preiskovanje letalskih nesreč in incidentov (Ministrstvo za obrambo, 2010). Prav tako ni dovoljeno

- dotikanje in premeščanje razbitin,
- spreminjanje območje nesreče,

- brisanje ali spreminjati sledi nesreče zrakoplova, in
  - premeščanje predmetov ter druge vsebine iz zrakoplova
- vse do konca varovanja območja nesreče oziroma območja razbitin.

Da se zagotovijo vsaj minimalni standardi zavarovanja in ogleda kraja nesreče, predvideva predvsem Zakon o kazenskem postopku (Uradni list RS, št. 32/12) zelo strog protokol za policijo ter druge preiskovalne organe. Protokol v primeru letalske nesreče je podoben oz. isti kot pri vseh nesrečah ali kaznivih dejanjih. Predvsem pa je policija dolžna ves čas zavarovanja kraja dogodka, ogleda in preiskave sodelovati s sodno vejo oblasti oz. s preiskovalnim sodnikom ter sodiščem.

Zakon o kazenskem postopku (Uradni list RS, št. 32/12) v 1. odstavku 164. člena sicer omogoča policiji, da »še pred začetkom preiskave« zaseže »predmete po 220. členu tega zakona, če bi bilo nevarno odlašati, in ob pogojih iz 218. člena tega zakona« opravi preiskavo. 2. odstavek pa pravi: »Če preiskovalni sodnik ne pride takoj na sam kraj, sme policija tudi sama opraviti ogled ter odrediti potrebno izvedensko delo, razen obdukcije in izkopa trupla. Če prispe preiskovalni sodnik na sam kraj med opravo teh dejanj, lahko prevzame in sam opravi ta dejanja.« 3. odstavek pravi, da morata policija in preiskovalni sodnik o poteku ogleda nemudoma obvestiti državnega tožilca.

Zakon v 245. členu določa, da se »ogled opravi, kadar je za ugotovitev ali razjasnitev kakšnega pomembnega dejstva v postopku potrebno neposredno opazovanje.« S pooblastili iz 148. člena pa lahko policija pridobi nadaljnje informacije ter zavaruje dokaze pomembne za preiskavo in sodni postopek. Zakon prav tako omogoča opravljanje ogleda v vseh fazah, torej v predkazenskem postopku, med preiskavo ter med glavno sodno obravnavo. Seveda je priporočljivo, da policija, preiskovalni sodnik in preiskovalci opravijo ogled čim prej, kajti dlje časa mine od nesreče, večja verjetnost je, da dokazi glede na naravo stvari izginejo ali pa so odtujeni.

V primeru letalske nesreče ogleda ni mogoče opraviti na hitro, temveč je potrebno izbrati sistematski pristop. Preiskovalci se poslužujejo več različnih taktik ogleda kraja nesreče in sicer poznamo naslednje štiri ustaljene pristope (Maver, 2004):

- ogled in iskanje v obliki spirale od periferije proti središču, občasno tudi v obratni smeri;
- ogled in iskanje v obliki enojnega in dvojnega hodnika;
- ogled in iskanje po kvadrantih, pri čemer se območje nesreče razdeli na več enako velike kvadrate (ta pristop je najbolj značilen pri letalskih nesrečah);
- ogled in iskanje po delih kroga.

#### **4. Služba za preiskovanje letalskih nesreč in incidentov**

Najpomembnejši organ pri preiskovanju letalskih nesreč je Služba za preiskovanje letalskih nesreč in incidentov, ki deluje v okviru Ministrstva za infrastrukturo. Služba

se loti preiskave takoj, ko izve za letalsko nesrečo, pri čemer je dolžna zagotoviti pripravljenost vsaj enega preiskovalca, to je glavnega preiskovalca, ali pa v primeru, da gre za več preiskovalcev, preiskovalno komisijo. Ko gre za nesrečo majhnega zrakoplova z eno smrtno žrtvijo, je en sam preiskovalec dovolj, v primeru množične nesreče pa mora seveda nastopiti komisija, v kateri sodelujejo preiskovalci z delovnimi izkušnjami na področju letanja (piloti, kontrolor letenje, letalski inženirji in mehaniki i.d.).

V skladu s protokolom kot ga predvidevata Zakon o kazenskem zakonu (Uradni list RS, št. 32/12) in Državni načrt zaščite in reševanja ob nesreči zrakoplova (Ministrstvo za obrambo, 2010) policija najprej zavaruje območje letalske nesreče, opravi ogled, kraj nesreče pa si ogleda tudi preiskovalni sodnik. Vendar pa je policija dolžna nadaljevati z zavarovanjem območja letalske nesreče, v kolikor se za to odloči glavni preiskovalec, in ga dokončno zaključi šele, ko glavni preiskovalec tako odloči. Vsi, ki stopijo na območje letalske nesreče, imajo za to posebna pooblastila glavnega preiskovalca in se izkazujejo s službenimi izkaznicami. Pooblastila glavnega preiskovalca omejujejo zgolj

- pooblastila preiskovalnega sodnika oz. nadrejene policije, v kolikor gre za opravljanje ogleda kraja ali pa za dejanja po kazenskem postopku,
- ukrepi gašenja, po možnosti brez premeščanja razbitin in razvalin, brisanja sledi ter premikanja predmetov iz letala,
- ukrepi odvrnitve neposredne in grozeče nevarnosti,
- ukrepi zaščite, reševanja in nujenja prve pomoči ponesrečenim, po možnosti z istočasnim pisnim in slikovnim dokumentiranjem njihovega položaja na mestu nesreče ali v odnosu na mesto nesreče.

S končanim zavarovanjem in ogledom kraja nesreče se delo Službe za preiskovanje letalskih nesreč in incidentov ter glavnega preiskovalca ne konča, temveč nadaljuje, vendar pa preiskovanje ne poteka več na terenu oz. kraju nesreče, temveč v laboratoriju in pisarni vse do zaključka sodne obravnave. Včasih pa tudi še potem.

## **5. Delovna skupina za identifikacijo žrtev množičnih nesreč (dvi)**

Poleg preiskave in določitev vzroka letalske nesreče je pomembna tudi identifikacija žrtev, za kar je v Sloveniji odgovorna Delovna skupina za identifikacijo oseb ob velikih naravnih in drugih nesrečah, ki je bila ustanovljena pred skoraj petnajst leti, leta 2013 pa dopolnjena. Trapečar navaja, da so naloge policijske identifikacijske skupine sledeče (2017):

- izvajanje priprav za množično identifikacijo oseb,
- organiziranje in izvajanje identifikacije oseb,
- sodelovanje z Inštitutom za sodno medicino pri identifikaciji oseb,
- sodelovanje s pristojnimi ustanovami,
- sodelovanje s kriminalističnotehničnimi podskupinami na kraju nesreče, in

- sodelovanje s kriminalističnotehničnimi podskupinami za zbiranje podatkov o pogrešanih osebah.

Policijska skupina za identifikacijo oseb začne delovati, ko je k temu pozovejo bodisi Štab civilne zaščite, Operativni štab Generalne policijske uprave ali Operativni štab Policijske uprave s predhodnim soglasjem generalnega direktorja policije. Skupina se lahko aktivira tudi na predlog predstojnika Nacionalnega forenzičnega laboratorija Generalne policijske uprave ob večjem številu neznanih oseb, trupel ali pogrešanih oseb. Skupino vodi izvedenec iz Nacionalnega forenzičnega laboratorija Generalne policijske uprave skupaj z namestnikom iz Uprave kriminalistične policije Generalne policijske uprave. Skupino sestavljajo strokovnjaki daktiloskopskih, bioloških in fizikalnih preiskav, preiskav dokumentov, fotografije in dokumentiranja. Zelo pomembni sta operativni skupini v sestavi kriminalista in kriminalističnega tehnika iz regijskih policijskih uprav (Ljubljana, Maribor).

Kadar se zgodi nesreča mednarodnih razsežnosti, je v skupini tudi predstavnik Interpola. Interpol je Mednarodna organizacija kriminalistične policije (International Criminal Police Organization), ki združuje 190 držav članic, sedež organizacije pa je v francoskem Lyonu. Slovenija je postala njegova polnopravna članica leta 1992. Interpol je pomemben tudi zaradi uveljavljanja enakih standardov in poenotenja preiskovalnih kriterijev, saj s tem namenom pripravil priročnik za identifikacijo žrtev množičnih nesreč in obrazce za identifikacijo žrtev množičnih nesreč (DVI forms).

Vsebina Interpolovega priročnika za identifikacijo žrtev množičnih nesreč vključuje (Interpol, 2014):

- zanesljivo identifikacijo (posredni dokazi, fizični dokazi na osnovi zunanjih in notranjih pregledov),
- vizualno prepoznavo,
- nabor osebnih predmetov, in
- fizični pregled (sem spadajo tudi prstni odtisi, v kolikor jih je mogoče pridobiti).

Da bi poenotil in olajšal identifikacijo žrtev množičnih nesreč je Interpol na podlagi svojega priročnika pripravil tudi enotne obrazce za identifikacijo žrtev množičnih nesreč in sicer obrazec s predsmrtnimi podatki o žrtvi (ante mortem ali AM obrazec) in obrazec s posmrtnimi podatki o žrtvi (t.i. post mortem ali PM obrazec).

Identifikacija poteka v treh korakih. Ko je jasno, kdo vse so žrtve (npr. primerjava z seznamom potnikov ponesrečenega letala), se zberejo vsi predsmrtni ali ante mortem podatki o žrtvah. Preiskovalci na terenu zberejo vse posmrtne ali post mortem podatke o žrtvah. Podatke vnašajo v AM in PM obrazce. Najvažnejši del je seveda zaključni del, to je primerjava PM in AM podatkov ter identifikacija posameznih žrtev oz. pogrešanih oseb.

## 6. Zaključek

Varnost v letalskem prometu je na zelo visokem nivoju, tudi Slovenija ni nobena izjema. K sreči sta se v vseh zgodovini letalstva v Sloveniji zgodili samo dve množični letalski nesreči in od tega je minilo že kar nekaj desetletji. V Sloveniji se dogajajo predvsem manjše letalske nesreče z znatnim številom žrtev, zato do sedaj tudi ni bila potrebna preiskovanje v velikem obsegu.

Slovenija je dobro pripravljena na morebiten tak dogodek. Kot je bilo predstavljeno v članku, so predvsem v zakonskem in regulativnem smislu pristojnosti jasne in ukrepi dobro pripravljene, tako pristojnosti kakor tudi ukrepi sledijo praksi drugih držav. Glede na to, da gre pri večjih letalskih nesrečah za množično nesrečo, smo tudi operativno dobro pripravljene, saj velja ista organiziranost in pristojnost služb za kakršnokoli vrsto množične nesreče. Civilna zaščita in druge službe za zaščito, posredovanje in pomoč so se že pogosto izkazale v različnih primerih naravnih nesreč.

Za preiskavo letalske nesreče v Sloveniji je zadolžena Služba za preiskovanje letalskih nesreč in incidentov znotraj Ministrstva za infrastrukturo, ki je organizirana po vzoru podobnih služb drugih držav. Podobno velja za Delovno skupino za identifikacijo žrtev množičnih nesreč, ki deluje v okviru policije. V zakonskem in regulativnem smislu so pristojnosti obeh služb dorečene v zadostni meri, seveda pa je množična nesreča vedno precejšen izziv, rezultatov preiskave in smrtnih žrtev pa je nemogoče predvideti.

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# OPTIMIZACIJA POTOVALNEGA ČASA V MESTNEM POTNIŠKEM PROMETU V MESTU LJUBLJANA

Matej Škorič<sup>48</sup>

## **Povzetek:**

Avtor tega članka sem zaposlen v podjetju Ljubljanski potniški promet, d.o.o., Ljubljana, in sicer kot voznik avtobusa v mestnem potniškem prometu.

Delo voznika avtobusa je osredotočeno najprej na varnost prepeljanih potnikov, v nadaljevanju pa tudi čim bolj optimalnemu sledenju voznega reda in udobju med vožnjo (defenzivna tehnika vožnje).

V članku bomo predstavili, kako bi podjetje LPP lahko skrajšalo čas potovanja in tudi dvignilo udobje med vožnjo s samo spremembo vstopa potnikov na avtobuse.

**Ključne besede:** LPP, Urbana, validator, avtobus, vstop potnikov

## **THE OPTIMISATION OF PUBLIC TRANSPORT TRAVEL TIME IN LJUBLJANA**

### **Abstract:**

I, the author of this article, am employed in Ljubljanski potniški promet d.o.o. (LPP) as a public transport bus driver.

Firstly, the work is focused on the safety of the passengers, and secondly, on closely following the schedule and on passenger comfortability during the drive (defensive driving technique).

In this article, we will take a closer look at the ways in which LPP could shorten their travel time and raise passenger comfortability during the drive merely by changing how passengers enter the bus.

**Key words:** LPP, Urbana, validator, avtobus, vstop potnikov

## **1. Trenutno stanje**

### **Opredelitev problema**

V mestu Ljubljana poteka vstop potnikov na mestne avtobuse samo na enih vratih avtobusa, in sicer pri vozniku. To povzroča izgubo časa za potnike, saj avtobus dalj časa stoji na postajališču, problem pa se pojavi tudi, ker se potniki, ki so že v sredini ali na začetku avtobusa, ne pomaknejo nazaj in s tem otežujejo vstop potnikom, ki še čakajo zunaj.

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## **Rešitev**

V članku bomo predstavili, da je način vstopa potnikov na avtobuse v mestu Ljubljana zastarel in ga je treba nujno spremeniti - naredili bomo presek sedanjega stanja ter prikazali, kako naj se izboljšave izvedejo.

### **2. Plačevanje voznine**

Pravna ureditev plačevanja voznine je za uporabnike definirana v ODLOKU o organizaciji in načinu izvajanja mestnih linijskih prevozov potnikov.

Poglavje V. PRAVICE IN OBVEZNOSTI UPORABNIKOV – POTNIKOV, 22. člen:

Pravica uporabnika – potnika je, da lahko uporablja storitev javne službe skladno s tem odlokom.

Obveznost uporabnika – potnika je, da si pred vstopom v vozilo kupi vozovnico za prevoz z mestnim linijskim prevozom potnikov in vozovnico registrira pri vstopu v vozilo. Potnik mora pokazati vozovnico med vožnjo na zahtevo kontrolorja izvajalca ali inšpektorja. Potnik v vozilu, ki nima vozovnice, mora vozilo zapustiti na zahtevo kontrolorja izvajalca ali inšpektorja. Potniku v vozilu, ki ima neveljavno vozovnico, kontrolor izvajalca ali inšpektor odvzame vozovnico.

Poglavje IX. KAZENSKE DOLOČBE, 35. člen:

Z globo 40 eurov se kaznuje za prekršek uporabnik – potnik, če:

- ne registrira ob vstopu v vozilo vozovnice ali je ne pokaže kontrolorju izvajalca ali inšpektorju, kot to določa drugi odstavek 22. člena,
- ne omogoči vpogleda v mobilni telefon, kot to določa tretji odstavek 22. člena.

(ODLOK o organizaciji in načinu izvajanja mestnih linijskih prevozov potnikov, 2021)

### **Kontrola plačevanja voznine**

Voznik in kontrolor izvajalca izvajata kontrolo vozovnic ob vstopu v vozilo oziroma kontrolo veljavnosti vozovnic tudi med vožnjo, kontrola plačila voznine pa se izvaja ob vstopu v vozilo. (LPP, 2018)

Vendar tukaj pridemo do paradoksalne situacije, ko delo in nalogo voznika izniči interni akt podjetja Organizacijski predpis, Delo voznika, člen 9. Plačevanje za prevoz oseb in prtljage, izdan dne 14.02.2020.

»Voznik izvaja nadzor nad plačilom vožnje in validiranjem kartice. Če potnik ne plača prevoza ali se ne validira, ga voznik opozori. Opozoriti mora tudi naše voznike, ki so v službeni obleki in so potniki, ker pomeni, da se morajo vsi vozniki, ki so potniki, kljub temu, da so v službeni obleki, validirati. Nadzor in opozorilo morata biti opravljena na primeren način, in sicer tako, da potnika ne žalimo oziroma ne uporabljamo

besed, s katerimi bi potnika spravili v neugoden položaj v prisotnosti drugih potnikov in ga ne obsojamo, da goljufa. Če potnik kljub opozorilu ne plača voznine, je voznik dolžan nadaljevati z vožnjo.« (interni podatki LPP)

S tem v bistvu ugotavljamo, da voznik nima nobenih pristojnosti glede neplačevanja voznine, zato lahko izrazimo mnenje, da je spremljanje plačila voznine zgolj nepotrebno obremenjevanje voznika.

## **2. Vstop potnikov**

»Vstop na avtobus je mogoč le pri prvih vratih pri vozniku. Vožnjo z mestnim avtobusom plačamo takoj po vstopu z validacijo kartice. Na vsakem avtobusu sta dva validatorja: prvi se nahaja pri vozniku in je namenjen plačevanju vožnje za eno ali več oseb z isto kartico in plačilu z mobilnim telefonom, drugi se nahaja nad prvimi kolesi avtobusa in je namenjen plačevanju vožnje za eno osebo.« (LPP, 2021)

Pri tem je treba povedati, da na nekaterih novejših avtobusih drugi validator ni več nad prvimi kolesi avtobusa, pač pa na sredini avtobusa v bližini drugih vrat, kar bi že lahko bil nek zametek hitrejšega vstopanja potnikov.

Ravno tako je potrebno še omeniti, da so vsi avtobusi v LPP-ju opremljeni s tipko, ki omogočajo, da si potnik sam odpre vrata z zunanje strani avtobusa, zato s tehnološkega vidika ni nobenega zadržka, da se spremembe vstopa potnikov ne bi dalo izvesti.

Edino potniki, ki bi želeli plačati vožnjo za več oseb, bi še vedno morali vstopati pri vozniku, saj je voznik tisti, ki v svojem sistemu (zaslonu na dotik) nastavi dodatno število potnikov.

### **Vstop potnikov nekoč**

V Ljubljani je bila v mestnem potniškem prometu vseskozi prisotna neka posebnost glede vstopanja in izstopanja potnikov iz avtobusa, in sicer iz razloga, ker je bil sprevodnik v avtobusu zadaj.

»Vstopanje je bilo do tedaj le pri zadnjih vratih, kjer je bil sprevodnik, pri prvih vratih pa so smeli vstopati le potniki z mesečnimi vozovnicami.« (Gantar, 2013)

Z ukinitvijo delovnega mesta sprevodnik in uvedbo žetonov, je bilo vstopanje dovoljeno le še pri prvih vratih, kjer je plačevanje nadziral voznik. (Gantar, 2013)

### **Število potnikov**

Pomemben podatek je tudi, kdaj se opravi največ validacij in to je med tednom (od ponedeljka do petka) med 7. in 8. uro zjutraj, ravno to pa je čas, ko gredo potniki po



obveznostih (v šolo in službo) in podaljševanje potovalnega časa jim povzroča nepotrebno skrb, ali se bo do cilja prišlo pravočasno.

Pridobljeni interni podatki LPP-ja kažejo, da je med tednom (od ponedeljka do petka) dnevno število validacij nekje med 160 in 170 tisoč. Od tega jih je med 7. in 8. uro okoli 18 tisoč.

### 3. Primerjava z drugimi evropskimi mesti

Pridobljeni interni podatki LPP-ja kažejo, da imajo po drugih evropskih mestih tovrstno zadevo urejeno različno.

Ponekod se vstopa lahko na vsa vrata, spet drugje je vstop na tramvaj dovoljen na vsa vrata, medtem ko se na avtobus vstopa le pri vozniku.

### 4. Predlagana rešitev

Trenutno so vsi avtobusi z zunanje in notranje strani označeni z nalepkami, da se vstopa na prva vrata pri vozniku, izstopa pa na vsa ostala vrata.

Te nalepke bo potrebno zamenjati z obvestilom, da imajo prednost pred vstopom na avtobus tisti, ki iz avtobusa izstopajo, da ne bi prišlo do nepotrebne preriravanja.

Predlagamo, da se tako z notranje kot z zunanje strani avtobuse opremi z isto nalepko, in sicer: IZSTOP in VSTOP oziroma v angleškem jeziku EXIT & ENTRANCE. Zdi se namreč nam, da bi že z zaporedjem napisanih besed dovolj jasno povedali, da imajo prednost tisti potniki, ki iz avtobusa izstopajo, pred tistimi, ki bi na avtobus šele vstopili.

#### Predvideni stroški

Cena enega validatorja je od 700 do 800 €. Sam validator ne deluje, če ni podprt s programsko opremo. Strošek validatorja s programsko opremo se poveča na 900 € po enoti. (interni podatki LPP) Večinoma sta v vsakem avtobusu dva validatorja, izjema so midi avtobusi, kjer je po en validator. V midi avtobuse in v avtobuse dolžine 12 m bi za vstop potnikov na vsa vrata bilo potrebno vgraditi po en validator, v avtobuse dolžine 18 m pa 2 validatorja.

Tabela 1: Izračun stroška dodatnih validatorjev.

tip avtobusa	št. vozil	trenutno št. validatorjev	št. potrebnih validatorjev	razlika
midi - 9 m	16	1	2	16
enojni - 12 m	59	2	3	59
zgibni - 18 m	142	2	4	284
skupaj	217			359

Vir: interni podatki LPP na dan 22.01.2021

Če potrebno razliko validatorjev, ki je 359 kosov, pomnožimo s ceno 900 € po enoti, pridemo do rezultata 323.100 €. To je zgolj strošek validatorjev, k temu je potrebno potem prišteti še strošek montaže validatorjev.

## 5. Zaključek

Ko v članku pridemo do podatka, da je število validacij med tednom (od ponedeljka do petka) nekje med 160 in 170 tisoč, je za takšno število potnikov pomembno, da jim lahko ponudimo boljšo uporabniško izkušnjo. Ob tem je potrebno dodati še, da je mesto Ljubljana edina evropska prestolnica, ki nima urejenega tirnega mestnega prometa – tramvaja, tako da je z vidika uporabnikov velik zaostanek že tukaj.

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# TRENING VARNE VOŽNJE KOT PRISPEVEK K VEČJI VARNOSTI V PROMETU

Darko Daljević<sup>49</sup>

## **Povzetek:**

V Evropski uniji – naši »novi« skupni državi, vsak dan zaradi posledic prometnih nesreč na cesti življenje izgubi nekaj več kot sedemdeset oseb.

Številke, ob katerih bi se nujno morali zamisliti kaj kot družba v celoti delamo narobe v smislu varnosti v cestnem prometu.

Številke, ob katerih se večina od nas morda malce zamisli. V resnici pa se nas dotaknejo šele takrat, ko za temi številkami spoznamo bodisi znano osebo, prijatelja, znanca, sorodnika ali pa najhuje verjetno kar je možno – sorodnika!

Ali storimo dovolj, da bi bilo nesreč v cestnem prometu manj?

Zaveza k Viziji o pomenu, da moramo stvari dejansko tudi spreminjati in težiti k temu, da vsak posameznik spremeni in predvsem popravi svoj odnos in kulturo do vseh deležnikov cestnega prometa. Vsak posameznik ima možnost udeležbe na treningu varne vožnje. Pa to v resnici kdaj storimo?

**Ključne besede:** prometna nesreča, posledice, varnost, kultura, trening

## **THE PRACTISE OF SAFE DRIVING AS CONTRIBUTION TO LARGER SAFETY IN TRAFFIC**

### **Abstract:**

In European Union-our new common country, just over seventy people lose their lives every day as a result of road accidents.

Those are the numbers, we as a society simply cannot ignore and have to figure out what are we doing wrong in terms of road safety.

We are talking about number most of us should think, imagine and pay attention to. But in hard reality those numbers personally affects as soon as we are talking about road accident of one our friends, relatives or even close family.

Are we doing enough to prevent and reduce road accident numbers?

The commitment to Vision 0 means, that we need to actually change things and strive for every individual to improve their attitude and culture toward all participants in road traffic. Every individual has the same opportunity to participate in safe driving trainings. But do we ever do that?

**Key words:** Road accident, Consequences, Safety, Culture, Training

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## **1. Centri varne vožnje**

V Sloveniji imamo na voljo pet centrov varne vožnje. Ti centri se nahajajo v Ljubecni, v Murski Soboti, v Krškem, v Logatcu in na Vranskem.

Pooblastilo za izvajanje zakonsko predpisanih programov za voznike začetnike ima enajst različnih organizacij.

Na vsakem od teh centrov se lahko izvajajo prepotrebni treningi simuliranih kritičnih situacij, katere v realnosti v cestnem prometu najpogosteje vodijo v prometne nesreče.

Ponos vseh centrov varne vožnje je vsekakor Center varne vožnje Vransko, ki je po velikosti med desetimi v tem delu Evrope. Zaradi svoje velikosti omogoča izvedbo večih treningov sočasno in tudi pozimi do nekaj stopinj pod ničlo.

Sodoben center varne vožnje Vransko omogoča na svojem poligonu tudi razna testiranja in preizkuse. Ti ob pravilni obdelavi dobljenih podatkov dajejo določene smernice za ozaveščanje nevarnosti in morebitne pomanjkljivosti testiranih segmentov.

Smiselnost delovanja centrov varne vožnje opravičujejo tudi statistični podatki iz sosednje Avstrije, kjer beležijo 28% upad udeležbe mladih voznikov v prometnih nesrečah po uvedbi obveznega tečaja varne vožnje. (Atchison, 2016).

### **1.1. Poligoni varne vožnje**

Poligoni so namenjeni spoznavanju kritičnih situacij, ki v realnem prometu lahko privedejo do hudih posledic. Vsak udeleženec treninga varne vožnje v praksi spozna in doživi kako je varnost v glavni meri odvisna od lastnega odločanja v danem trenutku.

V Sloveniji imamo trenutno pet poligonov, kjer se lahko izvajajo različni treningi varne vožnje. Pomembno je, da so vsi poligoni urejeni in vodeni tako, da se treningi varne vožnje izvajajo pod nadzorom inštruktorjev in v varnem okolju.

Varno okolje pomeni, da pri izvajanju vseh predpisanih vaj infrastruktura poligona omogoča dovolj varnega prostora in onemogoča srečevanje z drugimi vozili. Kajti že samo reševanje simulirane kritične situacije je samo po sebi izjemno zahtevna naloga.

#### **1.1.2. Obveza ali samoinicijativa**

Obvezna udeležba na treningu varne vožnje je eden izmed ukrepov, ki zakonsko določa kateri vozniki morajo in kdaj opraviti z zakonom določeno dodatno usposabljanje voznikov. (ZVoz – Zakon o voznikih, Ur. l. RS, št.48/2011, akt 2294).

Posebna treninga varne vožnje se lahko udeležijo vozniki, ki so zaradi določenega prekrška storjenega v cestnem prometu pridobili kazenske točke. Tako si lahko s potrdilom o opravljenem treningu varne vožnje izbrišejo z zakonom določeno število kazenskih za točno določeno obdobje.

Potreba po treningu varne vožnje je za vse ostale, ki ne podležejo zakonski obvezi, prepuščena lastni inicijativi.

Mnogi so mnenja, da je zelo pomembno stalno obnavljanje in dopolnjevanje svojega znanja. Pomembna je tako praktična vaja kot tudi teoretična obnova. (Breznik., et.al, 2010).

Tako bi lahko poenostavljeno dejali, da je kakršnakoli udeležba na enem izmed treningov varne vožnje večplastno koristna. Pa naj bo to utrjevanje znanja, obnova teorije in cestnoprometnih pravil ali pa zakonska obveza kateregakoli razloga.

Uveljavitev sistemske rešitve za ostala izobraževanja in obnavljanja znanj in veščin varne vožnje bi po mnenju AMZS bila zelo smotrna odločitev. (Steindl in Renko, 2017).

Dandanes živimo v svetu v katerem vlada globalizacija in nenehne spremembe na vsakem koraku. Dejstvo je, da obstajajo nevarnosti a hkrati priložnosti v katerikoli stroki oziroma na vsakem področju. Moderna doba ponuja spremembe, katere je pravzaprav potrebno in nujno izkoristiti, če želimo narediti svet človeku in okolici bolj prijazen in varen. Tako se tudi na področju cestnega prometa porajajo dejavniki in faktorji, katere bomo v prihodnosti poskušali izboljšati ali popolnoma izločiti. O čem sploh govorimo? Govorimo o negativni in še vedno žal neizogibni plati cestnega prometa in to so prometne nesreče. Če jih ne bi bilo, bi živeli v popolnem svetu, a žal je realnost drugačna. Popolnoma preprečiti jih je nemogoče, a možno je število le teh občutno zmanjšati z apliciranjem različnih procesov in dejavnikov, kateri bi lahko privedli do zmanjšanja prometnih nesreč.

Pomembno je ločiti odvisno in neodvisno spremenljivko za razumevanje problema. Neodvisna spremenljivka je vozilo, ki je le objekt katerega upravlja voznik. S svojim vedenjem v prometu voznik odvisno vpliva na potek nadaljnjih dogodkov. V prometu se ne vrti vse le okoli samega vozila in voznika temveč spada v to panogo vplivajočih dejavnikov tudi prometno okolje. Okolje, katerega mora voznik dobro razumeti, ga vseskozi spremljati in marsikdaj tudi predvidevati v kolikor želi zmanjšati možnost nesreče. A celoten vpliv in potek vožnje ne moremo v celoti pripisati samo vozniku, saj je pravzaprav njegova vožnja odvisna tudi od zunanjih organov in ustanov. V prvi vrsti šole vožnje, nadalje preventivno izobraževalne organizacije in ustanove ter vse tja do pristojnih državnih organov.

Leta 2010 so na Pravni fakulteti v Ljubljani izvedli projekt raziskave na področju varnostnih dejavnikov v prometu ter prišli do ugotovitve, da je zelo težko neposredno in jasno določiti vzrok povzročene prometne nesreče. V prometnih nesrečah nikoli ne obstane in izstopa le en vzrok za prometno nesrečo, temveč obstaja skupek spremenljivk in okoliščin, katere privedejo do prometnih nesreč.

Skozi obravnavo zadanega problema smo se osredotočili le na voznika, saj predstavlja največji faktor varne vožnje v cestnem prometu. Lahko bi se osredotočali tudi na ostale, vendar je merljivost in preventivnost ostalih dejavnikov vprašljiva, zato se osredotočimo na voznika, saj lahko na njegovo vedenje oziroma kar vožnjo vplivamo. Pri nas je zakonsko predpisana udeležba v programih dodatnega usposabljanja voznikov in prav to počnejo tudi v AMZS centru varne vožnje na Vranskem. Gre za zakonsko obvezno usposabljanje, katerega ni mogoče izpustiti v kolikor želimo podaljšati vozniško dovoljenje. Obstajajo pa tudi druga izobraževanja in ustanove, katere obnavljajo znanje varne vožnje, katera seveda niso obvezna a so priporočljiva za vsakega posameznika.

Kot že rečeno se na Vranskem ukvarjajo z varno vožnjo, njihov poligon je najsodobnejši v tem delu Evrope. Gre za program, kateri izboljšuje odzivnost in upravljanje vozila v kolikor pridejo vozniki do teh situacij na cestah. Vendar se omenjeni poligon ne uporablja le v namene varne vožnje temveč tudi v namene izvajanja raznih testiranj. Eno izmed takšnih testiranj je bilo leta 2016, izvedeno in organizirano s strani Javne Agencije Republike Slovenije za varnost prometa imenovana »Mobilni telefon«, katere tema je bila ozaveščanje in opozarjanje na uporabo mobilnih telefonov med vožnjo, katero so merili v obliki reakcijskega časa voznika.

Izvedena je bila tudi raziskava glede vpliva treninga varne vožnje na stopnjo prometne varnosti, v katero se je vzelo v obzir intervalno obdobje vsaj desetih let znotraj katerih se je primerjala povezanost med številom opravljenih treningov varne vožnje in med številom prometnih nesreč. Rezultat raziskave je pokazal, da je za prometno nezgodo v veliki meri kriv kar voznik sam. Glavni vzroki za prometne nesreče so neprilagojena hitrost, neupoštevanje pravil prednosti in premajhna varnostna razdalja. Na žalost je še vedno med najpogostejšimi razlogi za prometne nesreče vožnja pod vplivom alkohola ali drugih substanc. Sledijo še uporaba mobilnih telefonov, nezbranost in utrujenost. Statistični podatki policije pravijo, da bi kar 60 % nesreč lahko preprečili kar vozniki sami, če bi imeli ustrezno znanje in izkušnje iz področja reševanja kritičnih voznih situacij.

Pridemo do sklepa, da je dandanes veliko več dejavnikov, kateri lahko privedejo do prometnih nesreč, kot jih je bilo včasih. Hkrati je tudi veliko več priložnosti za zmanjšanje omenjenih tveganj, katere v današnjem svetu digitalizacije in globalizacije preprosto moramo izkoristiti saj lahko z današnjim znanjem izrazito pripomoremo k boljši in predvsem varni prihodnosti cestnega prometa za vse vrste udeležencev.

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# PROBLEM ZAKONSKE OPREDELITVE KONOPLJE V SLOVENIJI

Nik Šišić<sup>50</sup>

## **Povzetek:**

Konoplja je šest metrov visoka rastlina. V zakonu o proizvodnji in prometu s prepovedanimi drogami uvrščena v II skupino – rastline in substance, ki so zelo nevarne zaradi hudih posledic, ki jih lahko povzroči njihova zloraba, vendar pa se lahko uporabljajo v medicini. V zakoniku lahko najdemo težavo pri opredelitvi manjše količine in kaznovanju v tem primeru. Razpon kazni v tem primeru lahko sega od približno 40 do 600 evrov ali od 5 do 30 dni zapora. V kazenskem zakoniku najdemo sankcije v primeru prodaje, ponujanja na prodaj ali brezplačno deljenje droge ali predhodne sestavine, napeljevanja k uživanju in dajanje prostorov za namen uživanja drog. Kazen v teh primerih lahko segajo od 6 mesecev do 15 let zapora. Glede na obravnavane izbrane sodne primer pa vidimo, da ni linearne povezave med dokazi oz. količino konoplje in izrečeno kaznijo.

**Ključne besede:** zakon, droga, konoplja, kazen, sodna praksa

## **The problem of legal definition of cannabis in Slovenia**

### **Abstract:**

Cannabis is a six meters tall plant. In the law of manufacturing and trafficking with illegal drugs, it is classified under group II – plants and substances that are very harmful due to their consequences, which can be caused by their abuse, but can be used in medicine. In this law, we can find the problem with classifying small quantity and punishment in such case. The punishment in such case can vary from 40 to 600 euros or from 5 to 30 days of prison. In criminal law, we find punishments that relate to selling, offering drugs or drug precursors for money or for free, impelling to use drugs and giving premises in purpose of using drugs. Punishments in these cases can vary from 6 months to 15 years of prison. In selected court cases, we see that there is no linear connection between the evidence or the amount of cannabis and the penalty imposed.

**Key words:** law, drugs, cannabis, sentence, judicial practice

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## 1. Zakonska opredelitev konoplje

Po besedah Javna agencija Republike Slovenije za zdravila in medicinske pripomočke (2017; v nadaljevanju JAZMP) so droge rastline ali substance naravnega ali sintetičnega izvora, ki imajo psihotropne učinke ter lahko vplivajo na telesno ali duševno zdravje ali ogrožajo primerno socialno stanje ljudi. Prepovedane droge so razvrščene v eno od treh skupin glede na resnost nevarnosti za zdravje ljudi. Rastline in substance so razvrščene v ustrezno skupino Uredbe o razvrstitvi prepovedanih drog.

Konoplja je do šest metrov visoka rastlina, ki ima več podvrst. Največ se uporabljata navadna in indijska konoplja (*Cannabis sativa* in *Cannabis indica*). V konoplji se poleg drugih snovi nahajajo tudi učinkovine kanabinoidi, med katerimi je najbolj znan delta-9-tetrahidrokanabinol ali THC. Ker gre za psihoaktivno snov, ki lahko povzroča odvisnost in druga tveganja za zdravje ljudi, sta tako konoplja kot THC uvrščena med prepovedane droge. Na seznamu prepovedanih drog so tudi pripravki iz konoplje, ki jim s skupnim imenom pravimo kanabis (hašiš, hašiševo olje in marihuana). (NIJZ, 2014)

Opredelitev prepovedanih drog najdemo v 2. členu ZPPPD-ja. Prepovedane droge so rastline ali substance naravnega ali sintetičnega izvora, ki imajo psihotropne učinke ter lahko vplivajo na telesno ali duševno zdravje ali ogrožajo primerno socialno stanje ljudi in so opredeljene v seznamu Seznam prepovedanih drog v prilogi Uredbe o razvrstitvi prepovedanih drog določa Uradni list republike Slovenije.

Na podlagi ZPPPD so določeni pogoji, pod katerimi sta dovoljena proizvodnja in promet s prepovedanimi drogami ter posest prepovedanih drog. V 3. čl. ZPPPD, ki ga je leta 1999 sprejela Vlada RS, so prepovedane droge opredeljene v treh skupinah:

- **Skupina I:** rastline in substance, ki so zelo nevarne za zdravje ljudi zaradi hudih posledic, ki jih lahko povzroči njihova zloraba, in se ne uporablja niti v medicini;
- **Skupina II:** rastline in substance, ki so zelo nevarne zaradi hudih posledic, ki jih lahko povzroči njihova zloraba, vendar pa se lahko uporabljajo v medicini;
- **Skupina III:** rastline in substance, ki so srednje nevarne zaradi posledic, ki jih lahko povzroči njihova zloraba in se lahko uporabljajo v medicini (ZPPPD, 3. čl.).

l. št.	thebaconum	acetilindurokodemion	$C_{20}H_{23}NO_4$	341,4
107.	TETRAHIDROKANABINOL	Izomere: D6a(10a), D6a(7), D7, D8, D10, D9(11) in njegove stereokemične različice	$C_{21}H_{30}O_2$	314,5
108.	TILIDIN tilidinum	(±)-etil-trans-2-(dimetilamino)-1-fenil-3-cikloheksen-1-karboksilat	$C_{17}H_{23}NO_2$	273,4
109.	TRIHEKSIFENIDIL trihexyphenidylum	1-cikloheksil-1-fenil-1-piperidinpropanol	$C_{20}H_{31}NO$	301,5
110.	TRIMEPERIDIN trimeperidinum	1,2,5-trimetil-4-fenil-4-propionoksi-piperidin	$C_{17}H_{25}NO_2$	275,4
111.	ZIPEPROL zipeprolum	4-(2-metoksi-2-feniletin)-1-(metoksifenilmetil)-1-piperazinetanol	$C_{23}H_{32}N_2O_3$	384,5
112.	KONOPLJA**** - ekstrakti - rastlina - smola	Cannabis sativa L. **** - extracta - herba - resina		
113.	NABILON	(6aR,10aR)-1-hidroksi-6,6-dimetil-3-(2-metiloktan-2-il)-7,8,10,10a-tetrahidro-6aH-benzo[c]kromen-9-on	$C_{24}H_{36}O_3$	372,5

### Slika 10: Konoplja v Uredbi o razvrstitvi prepovedanih drog

Vir: Uredba o razvrstitvi prepovedanih drog, 2019

#### 1.1. Kazenske določbe v ZPPPD

Kazenske določbe v povezavi z drogo oziroma konopljo najdemo v ZPPPD in pa Kazenskem zakoniku. Pri prvem najdemo kazenske določbe v primeru neizpolnjevanja predhodnih členov istega zakonika. V enem izmed členov zakonik opredeljuje kaznovanja v primeru posedovanja manjše količine oz. manjše količine za lastno uporabo. V primeru posameznika, ki nima dovoljenja ministra in opravlja dejavnost sega kazen od približno 400 pa vse do 41 000 evro. Posamezniku grozi kazen od 400 do 20 000 evrov v primeru, ko ta krši člene zakonik, ki narekujejo hranjenje in varovanje prostorov, carinske določbe, vodenje evidenc, pošiljanje ministrstvu vodenih poročil ali predpisanih podatkov in omogočanja nadzorstva in neoviranega delat te vpogleda v evidence in dokumentacijo za opravljanje inšpekcijskih del. Po prvem odstavku 33. člena ZPPPD-ja se z denarno kaznijo od 208,646 € do 625,939 € ali z zaporom do 30 dni kaznuje, kdor ima v posesti prepovedane droge. V drugem odstavku je zapisano, da se v primeru manjše količine kazen zmanjša in sega od 41,729 € do 208,646 € ali 5 dni zapora. V tretjem odstavku navaja, da se lahko z določbami zakona o prekrških mileje kaznuje oseba iz prvega odstavka, ki ima v posesti manjšo količino droge za enkratno uporabo in oseba z drugega odstavka, če ta prostovoljno vstopi v program zdravljenja uživalcev prepovedanih drog ali socialno varstvene programe, ki jih potrdita zdravstveni svet ali svet za droge. Težavo lahko opazimo, ker je milejša kazen opredeljena v primeru manjše količine za enkratno uporabo v drugem odstavku. Pri tem je v tretjem odstavku tudi navedena možnost milejšega kaznovanja v primeru istega pogoja manjše količine in prvega odstavka in drugega, če oseba prostovoljno vstopi v program zdravljenja. Pri vsem tem prepletanju manjše količine pa le ta v zakonu ni opredeljena.

Lahko pogledamo primer sodne prakse, kjer so vidne nejasnosti med odločanjem sankcij po 33. členu ZPPPD-ja. Kršiteljici je bila odrejena globa v višini 208,65 € in odvzem predmetov (po 34. členu ZPPPD-ja) in sicer 1,44 gramov konoplje in kovinski drobilec. Glede na pregled ZPPPD-ja, ki smo ga naredili, vidimo, da je to najmanjša globa, katero opredeljuje prvi odstavek 33. člena. Globa pa bi lahko segala vse do 625,94 € ali celo 30 dni zapora. Kršiteljica je podala pritožbo, saj se ne strinja s presojo prekrška in meni, da morala biti izrečena sankcija po drugem odstavku 33. člena. Ta opredeljuje globo od 41,73 € do 208,65 € ali 5 dni zapora, za posest manjše količine prepovedane droge za enkratno lastno uporabo. Pritožbeno sodišče kršiteljici ugodi in ji izreče najmanjšo možno globo drugega odstavka 33. člena. Pojasnilo je bilo narejeno s pomočjo cigarete, ki naj bi po podatkih na spletu vsebovala 1 gram tobaka. Zasežena količina - 1,44 grama, naj ne bi presegala za toliko, da bi bilo to povsem nesprejemljivo, da bi s tolikšno količino uporabnik lahko zvil ob enkratni uporabi. (ECLI:SI:VSKP:2015:PRP.72.2015)

## **1.2. Kazenske določbe v KZ**

Nadpomenko konoplje najdemo v dveh naslovih členov Kazenskega zakonika. Pod naslov Neupravičene proizvodnje in prometa s prepovedanimi drogami, nedovoljenimi snovmi v športu in predhodnimi sestavinami za izdelavo prepovedanih drog, ki s petimi odstavki predstavlja 186. člen in pod naslov Omogočanja uživanja prepovedanih drog ali nedovoljenih snovi v športu, ki s 4 odstavki predstavlja 187. člen Kazenskega zakonika. Kazen se v teh primerih izreče z zaporno kaznijo, ta lahko sega od leta do desetih let, v najhujšem primeru pa vse do petnajstih let zapora.

### **1.2.1 Neupravičena proizvodnja in promet s prepovedanimi drogami, nedovoljenimi snovmi v športu in predhodnimi sestavinami za izdelavo prepovedanih drog – 186. člen KZ**

186. člen kazenskega zakonika navaja, da se z zaporno kaznijo od enega do desetih let se tako kaznuje neupravičeno proizvodnjanje, predelovanje, prodajanje, ponujanje, kupovanje, hrani, prenaša in posredovanje pri prodaji ali nakupu rastlin in substanc, ki so razvrščene kot prepovedane droge ali so predhodne sestavine, ki se uporabljajo za izdelavo prepovedanih drog.

Nejasnosti, ki jih povzroča nedefinirana količina oz. opredelitev lastna raba lahko vidimo v eni izmed sodnih praks. Gre za pritožbo, nad razsodbo po prvem odstavku 186. členu KZ-1, ki narekuje devet mesecev zapora s preizkusno dobo dveh let, zaradi zaseženih 49 sadik oziroma 494,34 gramov konoplje. Pritožba je podana, zaradi zmotne ugotovitve dejanskega stanja. Obtoženec naj bi sadike konoplje gojil za lastne potrebe, da bi si z njimi lajšal zdravstvene težave, zaradi česar ni izpolnjen zakonski znak proizvodnje iz prvega odstavka 186. člena KZ-1. Na podlagi nadaljnjih informacij je bila pritožba zavržena. Saj obdolženčeve zdravstvena kartoteka priča, da je bil ta nazadnje pri osebnem zdravniku pred več kot desetimi leti in posebnih zdravstvenih težav, razen luskavice (v fazi preiskovanja pa še želodčne težave in psihični nemir) ni

imel. Prav tako pričanja obdolženčevega dedka in prijatelja, katera razen težave z nogo nista omenila. Tako se na podlagi dokazov spodbija možnost opredelitve lastne rabe in s tem obravnavanje po ZPPPD in primer pregleda z vidika KZ. (ECLI:SI:VSMB:2019:II.KP.42305.2017)

Kdor prodaja, ponuja na prodaj ali brezplačno deli prepovedano drogo, ali predhodno sestavino za izdelavo prepovedanih drog mladoletni osebi, duševno bolni osebi, osebi z začasno duševno motnjo, hujšo duševno zaostalostjo ali osebi, ki je v postopku odvajanja od odvisnosti ali rehabilitacije ali če stori dejanje v vzgojnih ali izobraževalnih ustanovah ali v njihovi neposredni bližini, v zaporih, v vojaških enotah, v javnih lokalih ali na javnih prireditvah, ali stori dejanje iz zgornjega odstavka javni uslužbenec, duhovnik, zdravnik, socialni delavec, učitelj ali vzgojitelj in pri tem izkorišča svoj položaj ali kdor za izvrševanje omenjenega dejanja uporablja mladoletne osebe se kaznuje z zaporom od treh do petnajst let. Če je omenjeno storjeno v hudodelski združbi, ali če je storilec organiziral mrežo prekupčevalcev ali posrednikov, se kaznuje z zaporom od petih do petnajstih let. Z zaporom od 6 mesecev do petih let se kaznuje nepooblaščen osebe, ki izdeluje, nabavlja, ima ali daje v uporabo opremo, snovi ali sestavine, za katere ve, da so namenjene za izdelavo prepovedanih drog. Droge in sredstva omenjena v prejšnjem odstavku se vzamejo, kot tudi namenska prevozna sredstva s posebej prirejenimi prostori. (KZ-1, 186. člen)

### **1.2.2 Neupravičena proizvodnja in promet s prepovedanimi drogami, nedovoljenimi snovmi v športu in predhodnimi sestavinami za izdelavo prepovedanih drog – 186. člen KZ**

Napeljevanje drugega k uživanju drog, dajanje drog za uživanje in dajanje prostorov za namen uživanja ali kakorkoli omogočanje uživanja drog se kaznuje s kaznijo od 6 mesecev do osmih let. V primeru, da je to storjeno proti več osebam, mladoletni osebi, duševno bolni osebi, osebi z začasno duševno motnjo, hujše duševno zaostali osebi ali osebi, ki je v postopku odvajanja odvisnosti ali rehabilitaciji ali če stori dejanje v vzgojnih ali izobraževalnih ustanovah ali v njihovi neposredni bližini, v zaporih, v vojaških enotah, v javnih lokalih ali na javnih prireditvah, ali stori dejanje iz prvega odstavka javni uslužbenec, duhovnik, zdravnik, socialni delavec, učitelj ali vzgojitelj in pri tem izkorišča svoj položaj, se kaznuje z zaporom od enega do dvanajstih let. Zgornje ni protipravno, če je storilec v programu zdravljenja odvisnosti ali nadzorovane uporabe droge, ki je v skladu z zakonom potrjen in se izvaja v okviru ali pod nadzorom javnega zdravstva. V nasprotnem primeru se droge ob ugotovljenem prekršku zgornjega odvzame. (KZ-1, 187. člen)

### **1.2.3 Zakonska problematika na primerih sodnih praks**

Vzeli smo nekaj primerov sodnih praks, pri katerih je bila izrečena kazen po prvem odstavku 186. člena kazenskega zakonika. Spodaj smo v grobem izluščili dokazno gradivo, ki je bilo v naših primerih zasežena konoplja in/ali sadike.

Količina sadik / rastlin konoplje	Količina glede na sadike (40g)*	Dodatno zasežena količina [g]	Skupna količina [g]	Kazen [meseč]	Dodeljena pogojna kazen	Sodba
1798	71920	0	<b>71.920,00</b>	<b>18</b>	preklic predhodne pogojne kazni	ECLI:SI:VSLJ:2018:III.KP.4211.2018
562	22480	4055,4	<b>26.535,40</b>	<b>12</b>	/	ECLI:SI:VSLJ:2020:II.KP.44024.2019
16	640	11000	<b>11.640,00</b>	<b>21</b>	/	ECLI:SI:VSLJ:2017:VI.KP.25835.2016
43	1720	239,1	<b>1.959,10</b>	<b>13</b>	3	ECLI:SI:VSCE:2015:II.KP.26054.2012
7	280	996,02	<b>1.276,02</b>	<b>16</b>	3	ECLI:SI:VSRS:2019:I.IPS.39554.2016
12	480	127,32	<b>607,32</b>	<b>12</b>	2	ECLI:SI:VSMB:2018:II.KP.12110.2016

**Tabela 5: Pregled kazni sodnih praks po 186. členu ZPPD**

Vir: lasten vir

Za izračun skupne količine v sodnih primerih smo vzeli predpostavko, ki je bila opredeljena v primeru ECLI:SI:VSCE:2015:II.KP.26054.2012. Ta v jedru navaja da bi iz ene rastline/sadike obtoženi pridobil 40 g konoplje, zato smo sadike v ostalih primerih pomnožili s 40 g in s tem pridobili skupno težo konoplje v primeru. Tabela je razvrščena po padajoči skupni količini, poleg te pa je pripisana izrečena zaporna kazen. Že pri hitrem pregledu tabele pa opazimo, da ni vzporednice med dokazi in izrečeno kaznijo. Pri samem pregledu sodnih praks ne najdemo razloge, ki bi po našem mnenju v tako veliki meri pogojevale razmah med izrečenimi kazni. Menimo da gre za prevelik razpon kazni, ki dovoljuje razpravo o resnosti kaznivega dejanja od primera do primera. Pri tem v zakonu niso navedena nobena določila (npr. dozorena sadika) ali vrednosti oz. razponi (količina konoplje v g oz. Kg), pod katerimi bi se lahko vrednotilo težo storjenega kaznivega dejanja.

## 2. Zaključek

Zakon o proizvodnji in prometu s prepovedanimi drogami določa pogoje, pod katerimi sta dovoljena proizvodnja in promet s prepovedanimi drogami ter posest prepovedanih drog. V zakoniku so prav tako navedene kazni v primeru posameznika, ki samostojno opravlja dejavnost, če proizvaja oziroma da v promet prepovedane droge brez dovoljenja ministra, ima v posesti droge v nasprotju z zakonikom in v primeru posesti manjše količino prepovedane droge za enkratno lastno uporabo. Tu z izbranega sodnega primera vidimo kako neopredeljena terminologija povzroča težavo pri opredelitvi kaznovanja glede na določen odstavek zakonika in na kakšen način je možno interpretirati oziroma dokazovati manjšo količino oz. manjšo količino za lastno rabo.

Kazenski zakonik narekuje kazni v primeru storjenega kaznivega dejanja neupravičene proizvodnje in prometa s prepovedanimi drogami in predhodnimi sestavinami za izdelavo prepovedanih drog. Razliko je torej, da ZPPPD smatra za kaznivo dejanje, če posameznik nima dovoljenja ministra in narekuje denarne kazni in v določenih primerih, maksimalno zaporno kazen 30 dni. V primeru KZ pa je razlika v neupravičenosti dejavnosti, kot tudi kaznovanju, ki narekuje le zaporne kazni zoper kršitelja. Pri tem v zakoniku ni omenjeno kaznovanje v primeru posedovanja, saj se to povezuje z naklepom proizvodnje oziroma prodaje, kot je to razvidno iz naših sodnih primerov. Že v zgoraj navedem sodnem primeru vidimo problem zakonske opredelitve med enim in drugim zakonikom, kar povzroča pritožbe in spodbijanja z absurdnimi dokaznimi gradivi. Pri pregledu količine in kaznovanja v izbranih sodnih primerih pa vidimo kako različno rabsodbo lahko dosežejo primeri brez povezave med enim in drugim. - Tu pa se nam poraja vprašanje ali so olajševalne okoliščine res lahko povzročile razmah med rabsodbami ali je opaziti problem zakonske opredelitve?

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# MEDNARODNA ORGANIZACIJA IZREDNIH PREVOZOV

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## **Povzetek**

Izredni prevoz predstavlja prevoze s tovari, ki presegajo povprečne dimenzije tovora, določen s strani Direkcije Republike Slovenije za infrastrukturo. Izredni prevozi se opravijo na osnovi pridobljenih dovoljenj, ki jih izda Gospodarska zbornica Slovenije. Večini podjetij povzročajo težave, za pridobitev ustreznih dovoljenj, predvsem dolge čakalne dobe za dovoljenja. Le te so posledica pomanjkljivo oddanih vlog za dovoljenja, kot so, predvsem pri tujih prevoznikih, manjkajoče obvezne priloge dokumentov. Izredni prevozi se opravljajo s primernimi transportnimi sredstvi. Izredne prevoze spremlja eno ali več spremljevalnih vozil, ki opozarjajo druge udeležence v prometu na oviro pred seboj. Tovore, ki se prevažajo s transportnim sredstvom, je potrebno ustrezno zavarovati, da ne pride do nevarnosti in poškodb med prevozom.

**Ključne besede:** Izredni prevozi, organizacija izrednih prevozov, izdaja dovoljenj.

## **INTERNATIONAL ORGANIZATION OF EXTRAORDINARY TRANSPORT**

### **Abstract:**

Extraordinary transport represents the transportation of vehicles with bigger cargos, which exceed the ordinary dimensions of it. The dimensions are definite by the directorate for infrastructure. The transportation is completed based on organizing all the permits, which are granted by the Chamber of Commerce and Industry of Slovenia. Most companies have problems with waiting periods for obtaining permits, insufficiently submitted applications for permits, which are especially missing the demanding documents. This problems usually occur with foreign transporters. The extraordinary transport is done with appropriate transport resources. We hit the road with escort vehicles, which are warning other attendees in the traffic. The cargo which is being transported has to be correctly and safely protected, otherwise it can lead us into dangerous situations.

**Key words:** Extraordinary transport, organization of extraordinary transport, granting of a licence.

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## **1. Izredni prevoz**

Izredni prevoz je prevoz z vozilom (motorno vozilo) ali skupino vozil (motorno vozilo s polpriklopnim vozilom ali motorno vozilo s priklopnim vozilom), ki samo ali skupaj z nedeljivim tovorom presega s predpisi dovoljeno skupno maso, osne obremenitve ali mere (dolžino, širino, višino). Izredni prevoz je tudi prevoz, pri katerem je vozilo samo ali s tovorom v mejah s predpisi dovoljene skupne mase, osnih obremenitev ali mer, a presega omejitve kateregakoli od teh elementov, ki je na cesti ali delu ceste odrejen s prometnim znakom. (eUprava, 2017).

Vozilo sme samo ali s tovorom presegati s predpisom dovoljeno ali s prometnim znakom na cesti odrejeno osno obremenitev, skupno maso ali mere le v obsegu in pod pogoji, ki jih določa dovoljenje za izredni prevoz . (eUprava, 2017).

### **1.1 Vrste izrednih prevozov**

Izredne prevoze razdelimo na pet kategorij. Vsaka kategorija ima določene omejitve (eUprava, 2017).

#### Izredni prevoz 1. kategorije:

je prevoz z vozilom, ki samo ali skupaj s tovorom ne presega 44 ton skupne mase, 3 m širine, 4,2 m višine, dolžine za več kot 25% od največje dovoljene s predpisi ali odrejene na cesti s prometnimi znaki ter osnih obremenitev, dovoljenih s predpisi ali odrejenih s prometnimi znaki.

#### Izredni prevozi 2. kategorije:

je prevoz z vozilom, ki ima samo ali skupaj s tovorom naslednje vrednosti skupne mase, dimenzij ali osnih obremenitev: nad 44 ton do največ 60 ton skupne mase, nad 3 m do največ 3,5 m širine, nad 4,2 m do največ 4,5 m višine, ki presega dolžino za 25% do največ 40% od največje dovoljene s predpisi ali odrejene na cesti s prometnimi znaki, in ki presega osne obremenitve za največ 20% od največjih dovoljenih s predpisi ali odrejenih na cesti s prometnimi znaki.

#### Izredni prevozi 3. kategorije:

je prevoz z vozilom, ki samo ali skupaj s tovorom presega zgornje meje skupne mase, dimenzij ali osnih obremenitev, določene za izredni prevoz II. kategorije.

#### Izredni prevozi 4. kategorije:

je prevoz z delovnim vozilom brez tovora, registriranim za udeležbo v prometu, katerega skupna masa presega s predpisi dovoljeno skupno maso in ne presega 60

ton oziroma so zaradi skupne mase presežene dovoljene osne obremenitve. V to kategorijo sodijo tudi delovna vozila brez tovora, katerih dimenzije presegajo s predpisi dovoljene mere.

#### Izredni prevozi 5. kategorije:

je prevoz z delovnim strojem, vleka zamenljivega vlečenega stroja ali traktorskega priključka brez tovora, kadar to vozilo presega s predpisi dovoljene dimenzije in osne obremenitve, vendar ne presega dovoljene skupne mase.

## **2. Pot pridobitve dovoljenja in zakonodaja**

Za izvedbo izrednih prevozov je zahtevana ustrezna dokumentacija, ki spremlja izredni prevoz blaga. Izredni prevoz se sme opraviti na podlagi dovoljenja, ki se lahko pridobi, kadar vozila ali tovora od izvora do cilja ni mogoče prepeljati po železnici ali z drugimi prometnimi sredstvi, ali če bi prevoz z drugimi prometnimi sredstvi povzročil večje skupne stroške prevoza v primerjavi s stroški dodatnih ukrepov za usposobitev prevozne poti za prevoz po cesti. (eUprava, 2017).

Pri oddaji vloge je potrebno oddati podatke o tovoru, vozilu, predlagani poti, predlagani veljavnosti dovoljenja, podatkih o predlagatelju in prevozniku, dimenzijami in masi, osni obremenitvi in sami razdalji med osmi in kolesi. Na podlagi pridobljenih in zbranih podatkov se potem izredni prevoz razvrsti v določene kategorije.

### **2.1 Koliko časa je potrebno za izdajo dovoljenja za izredne prevoze pri nas in drugje?**

Po podatkih eUprave (2017) se dovoljenje za enostavnejše prevoze pridobi v roku petih dni, za zahtevnejše prevoze pa se dovoljenje pridobi v tridesetih dneh. V Sloveniji je možna oddaja vloge za pridobitev dovoljenja v elektronski obliki, zato je postopek pridobitve dovoljenja enostavnejši in hitrejši. Za izredne prevoze v sosednji državi Avstriji je postopek podoben kot v Sloveniji, traja pa od 10 dni pa do 5 tednov. Izredni prevoz se obravnava na osnovi dimenzij tovora, ki se bo prevažal z izrednim prevozom. Vloga se lahko odda v elektronski obliki preko svetovnega spleta.

Za pridobitev dovoljenja za izredni prevoz v Nemčiji, se odda vloga pristojnim organom. Čas za pridobitev dovoljenja za izredni prevoz v Nemčiji je do 3 tednov. Na podlagi teže izrednega prevoza je potrebno plačati pristojbino za uporabo cest. V kolikor je potreba po izvedbi testne simulacije oziroma vaje izrednega prevoza je potrebno izpolniti posebne zahteve. Ob vlogi je potrebno navesti katera transportna

vozila se bodo uporabljala ob izrednem prevozu in ali je potrebno policijsko spremstvo (PFAFF, 2020).

V Združenih državah Amerike je podoben sistem za pridobitev dovoljenj za izredne prevoze tovorov preseženih dimenzij. Postopki pridobitve dovoljenj, so odvisni od zveznih držav v kateri oziroma skozi katere bo potekal izredni prevoz. V večini primerov se na odobritev dovoljenja čaka od tri do petnajst dni.

Posebnost pri izrednih prevozih v ZDA je, da se v večini zveznih držav lahko opravljajo samo podnevi in sicer trideset minut pred sončnim vzhodom do trideset minut po sončnem zahodu. (FreightRun, 2019) Razlog za časovno omejitev je varnost, lažja vidljivost izrednega prevoza, v cestnem prometu za vse udeležence.

V primerjavi z Združenimi državam Amerike, je postopek pridobitve v Evropskih državah dolgotrajnejši in zahtevnejši.

Dovoljenja v Sloveniji se izdajajo na podlagi kategorij izrednega prevoza in časovne veljavnosti dovoljenja t.j. od 30 dni do dovoljenj z daljšim obdobjem veljavnosti do 12 mesecev. Možna je izdaja dovoljenja za posamezen prevoz izrednega tovora ali za skupino vozil, ki v isti smeri vozijo enak tovor.

### **3. Transportna vozila**

Premik izrednega blaga omogoča transportno vozilo. Transportna vozila, ki omogočajo prevoz tovora, morajo biti ustrezno konstruirana. Izredne prevoze se lahko opravlja s standardnimi, predelanimi in specializiranimi transportnimi vozili. Nosilna ogrodja oz. šasija so sestavljene s kupom prečnih nosilcev. (Cehner, 2016). Vozila potrebujejo ustrezne motorje, ki so predelani na poseben način, njihovi pogonski sklopi so prilagojeni, prav tako menjalniki. Transportna vozila vključujejo tudi priklopna vozila, ki imajo dve ali tri osi. Pri večjem premiku izrednega blaga uporabljajo priklopnike, ki imajo več osi ter hidravlično upravljanje.

Za izvajanje izrednega prevoza se najpogosteje uporabljajo prikolice oziroma specialni priklopniki, ki so odprti. Odprti priklopniki pomeni, da je tovor viden, da tovor ni v lesenem zaboju, pokrit s cerado ali ovit v >>shrink wrap<< folijo. Taka vrsta priklopnika omogoča, da se prevaža tovor, ki je težji tudi več kot 200 ton. Prednost prikolice na drugi strani, je njihova raztegljivost. Na prikolico se lahko naloži tovor, ki je dolg več kot 20 metrov.

#### **3.1 Opremljenost transportnih vozil**

Vsako transportno vozilo, ki opravlja izredni prevoz, mora biti opremljeno skladno z zakonodajo. Vsako vozilo, ki opravlja izredni prevoz, mora imeti označeno

preseganje tovora preko tovrnega poda v skladu z Zakonom o pravilih cestnega prometa (ZPrCP). Tovor mora biti, označen z najmanj eno rumeno utripajočo lučjo, ki je vidna vsem udeležencem v prometu.

Na vsaki načrtovani transportni poti, tovorno vozilo spremlja spremljevalec izrednega prevoza. Spremljevalec je oseba, ki ima opravljeno izobraževanje in preizkus znanja za spremljevalca izrednih prevozov na transportnih poteh. Tovorno vozilo, mora biti opremljeno z napravami za brezžično komuniciranje, tako voznik tovornjaka lahko brezžično komunicira s spremljevalcem izrednega prevoza, ki načrtuje in vodi transportno pot.

Transportno vozilo, mora imeti viden napisan na zadnjem delu vozila »izredni prevoz«. Vsako transportno vozilo ima spremljajoče vozilo, za katere veljajo posebna določila oziroma nujno potrebna oprema. Spremljajoča vozila so vozila, ki imajo skupno maso do 3,5 ton. Vozila morajo imeti zastekljene odprtine na vseh straneh vozila. Pri prevozu enostavnega tovora so spremljajoča vozila označena z rumeno utripajočo lučjo in napisom »izredni prevoz«, v primeru zahtevnejšega tovora so označeni še z dodatno svetlobno tablo, kjer se izpisujejo predpisane vsebine. Spremljevalci imajo posebno vlogo, saj z neposredno komunikacijo voznika tovrnega vozila, omogočajo varno doseganje ciljne točke.

#### **4. Zaključek**

Kot je razvidno iz članka mednarodna organizacija izrednih prevozov, smo ugotovili definicijo izrednih prevozov, kako pridobiti dovoljenje izrednih prevozov, vrste in način organizacije poteka in procesa izrednih prevozov. Iz raziskave smo prav tako ugotovili, razlike v časovnem pridobivanju dovoljenj za izredni prevoz. Časovne razlike v Evropskih državah ne odstopajo prav veliko, medtem ko v Združenih državah Amerike pridobivanje dovoljenj poteka hitreje, lažje. Na podlagi ugotovitev, menim, da je povezava tudi v številu prometnih nesreč, saj je v Ameriki veliko število prometnih nesreč v primerjavi z Evropo, kar je lahko povezano s samo zakonodajo oz. predpisi za izredni prevoz in hitrim pridobivanjem dovoljenj.

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# POKLICNI GASILCI IN SLEDI NA KRAJU PROMETNE NESREČE

Matej Trobec<sup>52</sup>

## **Povzetek:**

Gasilska brigada Ljubljana je največja poklicna gasilska enota v Republiki Sloveniji. V letu 2020 je posredovala v skupaj 2029 primerih, od tega se je 239 posredovanj nanašalo na primere prometne nesreče. Okoliščine prometne nesreče so pogosto nejasne in v takih primerih je potrebna podrobna kriminalistična preiskava dogodka. Takrat se na kraju dogodka prepleta delovanje več služb za prvo posredovanje. Vsaka ima svoje ustaljene postopke delovanja in prednostne naloge. Vsem je skupno, da je na prvem mestu reševanje človeškega življenja. Pri nadaljnjih postopkih pa lahko pride do trka prioritete različnih služb. Gasilci na eni strani nadaljujejo s postopki reševanja v primeru prometne nesreče, na drugi strani pa policija že začne s kriminalističnim ogledom kraja. V tem času, ko je na kraju več služb, lahko pride do nenamernega poškodovanja ali uničenja sledi, ki so pomembne za razjasnjevanje okoliščin.

**Ključne besede:** prometna nesreče, gasilci, kriminalistična preiskava prometne nesreče

## PROFESSIONAL FIRE-FIGHTERS AND TRACES AT THE SCENE OF A TRAFFIC ACCIDENT

### **Abstract:**

The Ljubljana Fire Brigade is the largest professional fire brigade in the Republic of Slovenia. In 2020, it intervened in a total of 2,029 cases of which 239 interventions related to traffic accident cases. The circumstances of a car accident are often not clear and such cases require a detailed criminal investigation of the event. It is then that the activities of several emergency first response services collide at the scene. Each has its own established operational procedures and priorities. Common to all these services is that saving human life comes first. While during subsequent procedures there may be a clash of priorities between different services. Fire-fighters, on the one hand, continue with the rescue procedures in the event of a traffic accident while the police already start a criminal investigation of the location. During the period when there are several services at the place of the event, unintentional damage or destruction of traces may occur that are important to clarify the circumstances.

**Key words:** traffic accident, professional firefighters, forensics investigation of traffic accidents

### **1. Prometna nesreča**

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Zakon o pravilih cestnega prometa v svojem 109. členu opredeli prometno nesrečo kot: »Prometna nesreča je nesreča na javni cesti ali nekategorizirani cesti, ki se uporablja za javni cestni promet, v kateri je bilo udeleženo vsaj eno premikajoče se vozilo in je v njej najmanj ena oseba umrla ali je bila telesno poškodovana ali je nastala materialna škoda.« (ZPrCP-UPB2)

Javna agencija Republike Slovenije za varnost prometa v analizi stanja varnosti v cestnem prometu ugotavlja, da se število prometnih nesreč kljub vsem ukrepom iz leta v leto povečuje. V letih 2016–2019 je število prometnih nesreč raslo. V letu 2020 se je stanje izboljšalo na vseh področjih. Lani so zabeležili manjše število prometnih nesreč s posledico smrti, manj hudih telesnih poškodb in lažjih telesnih poškodb. Izboljšanje stanja je posledica ukrepov, ki so v času epidemije virusa Covid-19 zmanjšali promet na slovenskih cestah. Iz analize je jasno razvidno, da se je stanje v primerjavi s prejšnjimi leti izboljšalo v mesecih leta 2020, ko je bila razglašena epidemija. Obdobji od 12. marca do 14. maja 2020 in od 19. oktobra dalje kažeta občutno zmanjšanje prometa in posledično padec števila prometnih nesreč. Na podlagi celotne analize se ocenjuje, da je izboljšanje prometne varnosti predvsem posledica vpliva epidemije Covid-19.

## **1.1 Gasilci in prometne nesreče**

V Republiki Sloveniji se v primeru prometne nesreče in potrebe po reševanju pokliče center za obveščanje, ki deluje v okviru uprave Republike Slovenije za zaščito in reševanje. Center nato aktivira pristojno gasilsko enoto. Gasilstvo je najbolj množična sila v sistemu zaščite in reševanja. Gasilske enote se delijo na poklicne, prostovoljne in gasilske enote v podjetjih. Enote širšega pomena so bile izbrane na podlagi teritorialne lege in operativne pripravljenosti. S tem država zagotavlja ustrezno pokritost celotnega območja. Enote širšega pomena so pooblaščenice za tehnično reševanje ob nesrečah v prometu, zaščito in reševanje ob nesrečah z nevarnimi snovmi, reševanje na tekočih in stoječih vodah in druge naloge zaščite ter reševanja širšega pomena.

V primeru prometne nesreče se aktivira enota širšega pomena, ki pokriva določeno območje. Ostala prostovoljna gasilska društva so aktivirana kot podpora, saj ne premorejo tolikšnega znanja oziroma niso primerno opremljena.

Gasilske enote imajo vnaprej določene postopke, ki zajemajo celoten potek intervencije. Vsi postopki so podrobno opredeljeni in si sledijo v smiselnem zaporedju. Žagar (2018) navaja naslednje zaporedje postopkov:

- Aktiviranje sil za reševanje
- Izvoz vozil in moštva
- Vožnja na kraj dogodka
- Zavarovanje kraja prometne nesreče



- Priprava delovnih površin
- Požarno varovanje
- Stabilizacija in zaščita vozila
- Priprava odprtih za iznos ponesrečenca
- Iznos ponesrečenca

## **1.2 Policija in prometne nesreče**

Zakon o pravilih cestnega prometa razvršča prometne nesreče glede na posledice v naslednje kategorije:

- I. kategorija – samo materialna škoda
- II. kategorija – najmanj ena oseba lahko telesno poškodovana
- III. kategorija – najmanj ena oseba hudo telesno poškodovana
- IV. kategorija – najmanj ena smrtna žrtev ali smrt udeleženca zaradi posledic prometne nesreče 30 dni po nesreči.

Policija mora v primeru prometne nesreče II, III ali IV kategorije opraviti ogled prometne nesreče. Po zakonu o pravilih cestnega prometa se lahko sledi na kraju takih prometnih nesreč odstranijo šele po ogledu oziroma ko to določi vodja ogleda. Ogled kraja prometne nesreče opravljajo uniformirani policisti, kriminalistični tehniki in strokovnjaki z nacionalnega forenzičnega laboratorija, ki nudijo podporo v najtežjih primerih.

Sledi na kraju prometne nesreče so vse sledi, znamenja, predmeti in spremembe v okolici, ki so nastale pred ali med nesrečo in po njej in so z nesrečo povezane. Najpogosteje se najdejo sledovi vožnje, deli vozil, sledovi žrtve, sledovi vozila na žrtvi, sledovi na vozilih in sledovi na objektih in zemljiščih v okolici.

Policija je o dogodku obveščena s strani operativnega komunikacijskega centra policije, ki na kraj dogodka napoti najbližjo prosto enoto. Najpogosteje je to uniformirana enota policije, ki zavaruje kraj dejanja. Če so na kraju prvi, imajo primarno nalogo nuditi pomoč žrtvam nesreče. Ko je reševanje končano, policija prične z ogledom kraja dejanja. Maver (2004) ogled kraja dejanja deli na naslednje faze. Prva faza je prihod in zavarovanje kraja dejanja, kar policija naredi takoj po prihodu. Naslednja faza je orientacija na kraju, kjer ogledna skupina pridobiva informacije: ogled širše in ožje okolice kraja, vremenske in druge razmere, položaj, razmislek o taktiki izvajanja ogleda, razporeditev članov ogledne skupine, odločanje o morebitnem sodelovanju strokovnjakov. Pri statični fazi ogleda se policija drži načela: »najprej z očmi in nato z rokami«. To načelo pomeni, da se v tej fazi ogleda stanje ter dokumentira v prvotni, nespremenjeni obliki. Stanje se fotografira, skicira in dokumentira. Sledi dinamična faza ogleda, ki zajema podroben pregled sledi in predmetov. Z sledmi se rokuje, se jih podrobno fotografira, preveri, oceni, pakira in shrani za prenos v laboratorij. Zadnja faza je dokumentacija stanja. Pomembna je predvsem iz vidika dokazne vrednosti vseh vidikov ogleda na sodišču. Zapisnik o

ogledu vsebuje opis pristopa do kraja dejanja, opis ožjega kraja dejanja ter središča dogodka in mnenja vseh izvedencev. Priložene so tudi skice, fotografije in posnetki.

## **2. Gasilska brigada Ljubljana**

Gasilska brigada Ljubljana je najstarejša poklicna gasilska enota v Republiki Sloveniji. Skupaj s 35 prostovoljnimi gasilskimi društvi sestavlja javno gasilsko službo Mestne občine Ljubljana. Brigada je gasilska enota širšega pomena in posreduje v skoraj vseh primerih nesreč. Sem spadajo tudi reševanja ob nesrečah v prometu, reševanja ob nesrečah z nevarnimi snovmi in reševanja na tekočih in stoječih vodah.

Poklicni gasilci se usposablajo v Izobraževalnem centru za zaščito in reševanje, kjer morajo uspešno opraviti program usposabljanja – poklicni gasilec. Program usposabljanja je sestavljen iz teoretičnega dela, praktičnega dela in usposabljanja z delom v enoti.

Po mnenju vodje skupine v 1. četi Gasilske brigade Ljubljana je sodelovanje s policijo dobro, vendar so še možne nadaljnje izboljšave. Pri prometnih nesrečah zgledno sodelujejo. Policiji nudijo tehnično pomoč tudi po zaključku gasilske intervencije. Glede sledi na kraju prometne nesreče gasilci po njegovem mnenju niso posebej dobro ozaveščeni. Vedo, da na kraju prometne nesreče poteka ogled kraja, ki ga opravi policija. Vendar o konkretnih postopkih policije niso poučeni in ne vedo točno, kaj vse policija preiskuje. Vodja skupine izpostavlja, da so tukaj pomembne izkušnje. Meni, da je sodelovanje in varovanje sledi na kraju prometne nesreče v njihovi enoti dobro organizirano. Izpostavlja, da je brigada največja poklicna enota in ima tudi največ intervencij pri prometnih nesrečah. S tem pridobivajo izkušnje in izboljšajo lastno delovanje. Izraža pa skeptičnost glede kakovosti posredovanja drugih enot širšega pomena, še posebej prostovoljnih gasilskih društev. Manj izkušenj na zahtevnih intervencijah ob prometnih nesrečah pomeni tudi slabše poznavanje postopkov policije. Po njegovem mnenju bi bilo treba v usposabljanje za poklicne in prostovoljne gasilce vključiti dodatne vsebine o sodelovanju z drugimi enotami. To še zlasti velja za področje preiskovanja prometnih nesreč in požarov.

## **3. Zaključek**

Poklicni gasilci pri reševanju v primeru prometne nesreče na kraju najpogosteje sodelujejo z enotami prve pomoči in policijo. Ker so gasilci usposobljeni za prvo in nujno medicinsko pomoč, je sodelovanje z enotami prve pomoči lažje. Gasilci postopke poznajo in jih lahko tudi sami izvedejo. Drugače je pri sodelovanju s policijo. Začetni postopki policije pri obravnavi prometne nesreče ne vplivajo na delo gasilcev. Ob začetku kriminalističnega ogleda kraja prometne nesreče pa se postopki policije odvijajo na kraju, kjer so prej delovali gasilci. Gasilci so slabo seznanjeni s postopki kriminalističnega ogleda, zato lahko pri reševanju nenamerno uničijo ali

poškodujejo sledi, ki bi jih policija potrebovala za pojasnjevanje okoliščin. V programu usposabljanja »poklicni gasilec« se kakršnega koli sodelovanja z drugimi enotami ne obravnava, čeprav se je v praksi izkazalo, da je takšno sodelovanje nujno potrebno za uspešno reševanje v primeru kakršne koli nesreče. Zagotovo bi bilo v prihodnje smiselno v program usposabljanja za poklicne gasilce, prostovoljne gasilce, policiste in nujno medicinsko pomoč vključiti temo sodelovanja z drugimi enotami. Sodelujoči bi s tem pridobili znanje s področja ostalih enot, kar bi pripomoglo k uspešnosti reševanja in splošnega delovanja vsake enote posebej. Skupno interventno delovanje pa bi bilo hitrejše in strokovnejše.

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# NABAVA IN LOGISTIKA ZAŠČITNE OPREME V ČASU NARAVNIH NESREČ

Borut Lorger<sup>53</sup>

## **Povzetek:**

Narava in človek nas nenehno presenečata. Žal velikokrat v negativnem smislu. Tako smo priče sončnim in suhim aprilskim mesecem, deževno nevihtnem poletju, neodgovornim ljudem, ki s svojimi dejanji ogrožajo okolje in soljudi.

Sistem varstva pred naravnimi in drugimi nesrečami v naši državi temelji na odgovornosti regij in občin znotraj nje za organiziranje in izvajanje ukrepov in aktivnosti pri odpravljanju nevarnosti naravnih in drugih hudih nesreč ter za preprečevanje in zmanjševanje njihovih posledic. Prav tako temelji na obveznosti podjetij, zavodov in drugih organizacij za organiziranje in izvajanje nujnih ukrepov za zaščito zaposlenih in njihovega premoženja v okviru njihovih dejavnosti ter odgovornost prebivalcev za njihovo osebno in premoženjsko varnost.

V času naravnih nesreč je potrebno zagotoviti ustrezno število zaščitne, reševalne opreme in sredstev, ki pa seveda morajo biti ustrezna. Lansko leto se je ta problematika še kako izkazala, saj je virus Covid -19 zajel skoraj celi svet, zaščitnih sredstev in seveda opreme za zdravstvo je primanjkovalo, na trgu so se pojavile tudi ponudbe, ki so bile zavajajoče. V takšni situaciji je potrebno hitro speljati nakup in pa seveda vso logistiko, da je oprema in zaščitna sredstva razpolago.

**Ključne besede:** Naravna nesreča, državna zaloga, civilna zaščita, logistika zaščitnih sredstev in nacionalna varnost države.

## **PROCUREMENT AND LOGISTICS OF PROTECTIVE EQUIPMENT IN TIMES OF NATURAL DISASTERS**

### **Abstract:**

Nature and man constantly surprise us, unfortunately, many times in a negative sense. Thus, we are witnessing the sunny and dry months of April, the rainy stormy summer, irresponsible people who are endangering the environment and fellow human beings with their actions.

The system of protection against natural and other disasters in our country is based on the responsibility of regions and municipalities within it to organize and implement measures and activities to eliminate the danger of natural and other serious disasters and to prevent and reduce their consequences. It is also based on

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the obligations of companies, institutions and other organizations to organize and implement emergency measures to protect employees and their property in the context of their activities, and the responsibility of residents for their personal and property safety.

During natural disasters, it is necessary to provide a sufficient number of protective, rescue equipment and resources, which, of course, must be appropriate. Last year, this problem was even more visible, as the Covid-19 virus spread to almost the entire world, protective and healthcare equipment were in short supply, also there were many misleading offers that appeared on the market. In such a situation, it is necessary to quickly carry out the purchase and all the logistics so that the gear and protective equipment are available.

**Key words:** Natural disaster, government stock, civil protection, logistics of protective equipment , national security of the country.

## 1. Naravne nesreče

Pri varstvu pred naravnimi nesrečami moramo na vseh ravneh družbeno-gospodarskega razvoja delovati celovito, interdisciplinarno in preventivno, upoštevati moramo intenzivnost in obseg naravnih procesov in se jim prilagajati. Družbeni pomen preventivnih dejavnosti je pogosto težko izmeriti, saj lahko znanstvena spoznanja o pojavih in procesih v pokrajini v prakso prenesemo šele po določenem času. Pa vendar je dolgoročno razmerje med sredstvi, vloženimi v preventivo, in sredstvi, ki jih porabimo za sanacijo, tudi 1 : 2000 (Komac in Zorn, 2005).

Naravnih nesreč se praviloma ne da predvideti, kdaj se bodo zgodile, v kakšni obliki in velikosti. Zato se po navadi običajno povpraševanje po osnovnih dobrinah v času naravnih nesreč močno poveča. Takrat se pojavi tudi otežena nabava in izdoba določenih materialov stvari, nujno potrebnih za preživetje. Zato je v takih situacijah potrebno imeti dobro izdelane načrte zaščite in reševanja, ki vsaj delno predvidijo škodo in potrebe za določeno nesrečo (potres, epidemija , pandemija, poplave, vihar...), v katerih so vnaprej pripravljene organizacijske strukture kako postopati v dani situaciji.

Lepo je za revijo Zarja povedal Srečko Šestan - poveljnik Civilne zaščite

»Najbolje se bomo lahko zaščitili, če bomo ozaveščeni. To ponavljam že tri leta. Prebivalci smo prvi, ki smo odgovorni za lastno varnost. Tako naj ima vsak, ki ve, da je njegov dom na poplavnem območju, doma vsaj en par škornjev; naj ve, da mora hladilnik oziroma hladilno omaro takoj umakniti iz kleti, ne da čaka na gasilce, ki ne utegnejo takoj priti na vse domove naenkrat. Prvi koraki so zelo pomembni.« (Šestan, 2016).

V lanskem letu, ko nas je zajela pandemija virusa Covid-19, se je lepo pokazala situacija, da kljub dobro izdelanim načrtov zaščite in reševanja nismo bili pripravljeni na takšno katastrofo. Saj kot vemo, nam je kmalu zmanjkalo zaščitni sredstev in opreme v državnih zalogah. Nastal je tudi problem pri izdobavi le te, saj kot vemo je ta virus zajel skoraj celi svet.

Veliko težavo na lokalnem nivoju pa je predstavljal strah pred okužbo z novim – za nas ne poznanim virusom imenovanim Covid-19. Veliko število ljudi se je izoliralo, zaprla so se nekatera podjetja, dejavnosti.... Kot član civilne zaščite sem opazil, da se je tudi seznam pripravljenih za določene akcije pomoči zmanjšal, ravno na račun straha.

**Naravna nesreča - katastrofa:** je posledica delovanja naravnega pojava, ki ga označujemo za naravno tveganje (potres, cunami, orkan, poplava, izbruh ognjenika ipd.) in ima izrazito negativne (»katastrofalne«) posledice za človeško skupnost na prizadetem območju.

**Nacionalna varnost države:** Nacionalna varnost je eden izmed najpomembnejših temeljev za nemoteno delovanje naše države in pomeni predvsem zagotavljanje varnega okolja za razvoj slovenske družbe. (Gov.si, 2021a)

**Civilna zaščita:** Enote in službe Civilne zaščite se praviloma organizirajo, kadar nalog zaščite, reševanja in pomoči ni mogoče opravljati s poklicnimi ali prostovoljnimi reševalnimi službami. Sodelovanje v enotah, organih in službah Civilne

**Državni načrti zaščite in reševanja:** Državne načrte zaščite in reševanja izdelata Uprava Republike Slovenije za zaščito in reševanje v sodelovanju z ministrstvi in drugimi državnimi organi ter ustreznimi strokovnimi organizacijami, v katerih je predvideno

## 2. Pomoč pri naravni nesreči

V Sloveniji je opredeljena z zakonom o varstvu pred naravnimi in drugimi nesrečami (ZVNDN) Zakon o varstvu pred naravnimi in drugimi nesrečami (ZVDN,51/2016 in sprem.)

- Ta zakon ureja varstvo ljudi, živali, premoženja, kulturne dediščine ter okolja pred naravnimi in drugimi nesrečami (v nadaljnjem besedilu: varstvo pred naravnimi in drugimi nesrečami).
- Cilj varstva pred naravnimi in drugimi nesrečami je zmanjšanje števila nesreč ter preprečitev oziroma zmanjšanje žrtev in drugih posledic teh nesreč.
- Država, občine in druge samoupravne lokalne skupnosti (v nadaljnjem besedilu: lokalne skupnosti) organizirajo varstvo pred naravnimi in drugimi nesrečami kot enoten in celovit sistem v državi.

- Sistem varstva iz prejšnjega odstavka obsega programiranje, načrtovanje, organiziranje, izvajanje, nadzor, financiranje ukrepov ter dejavnosti za varstvo pred naravnimi in drugimi nesrečami.
- S tem zakonom se v pravni red Republike Slovenije prenašajo nekatere direktive Evropske skupnosti

### **3. Varstvo pred naravnimi in drugimi nesrečami:**

Sistem varstva pred naravnimi in drugimi nesrečami je namenjen zagotavljanju varstva ljudi, živali, premoženja, kulturne dediščine ter okolja pred naravnimi in drugimi nesrečami. Naš cilj je zmanjšati število nesreč ter preprečiti žrtve in druge posledice oziroma zmanjšati njihovo število. Politika varstva pred naravnimi in drugimi nesrečami je naravnana v krepitev zmogljivosti za celovito obvladovanje naravnih in drugih nesreč, ki obsegajo preventivo, pripravljenost, ukrepanje ob nesrečah, zagotavljanje osnovnih pogojev za življenje in obnovo. (Gov.si, 2021b)

Kot sem že omenil je varstvo pred naravnimi in drugimi nesrečami v Sloveniji natančno opredeljena v zakonu o varstvu pred naravnimi in drugimi nesrečami (ZVNNDN)

Koliko državnih blagovnih rezerv mora imeti država, določi Vlada RS v petletnem programu, v katerem so določene vrste in najmanjše količine posameznih vrst blaga, ki morajo biti na razpolago za potrebe osnovne preskrbe.

Kakšne so te količine, kje jih skladiščimo, kako pride to blago do pomoči potrebnih, je napisano v načrtih zaščite in reševanja.

Slovenija je leta 2016 sprejela tudi Resolucijo o nacionalnem programu varstva pred naravnimi nesrečami v letih od 2016 do 2022 (ReNPVNDN16–22)

Družba se mora v vsakokratnih zgodovinskih in gospodarskih okvirih vedno znova opredeliti do narave. Z vidika gospodarstva oziroma (upo)rabe naravnih virov, ki so poglavitni vir življenja, mora družbo zanimati, kje in kako lahko poseže v naravo ter kakšne so omejitve, da bi pri tem ne bo bistveno prizadela naravnega ravnovesja. Posegi človeka pogosto vplivajo na naravne procese tako, da v naravnem sistemu nastanejo spremembe, ki so na videz neizrazite, včasih pa potekajo v obliki hitrih, intenzivnih naravnih procesov. Če ti procesi prizadenejo družbo, jih imenujemo naravne nesreče. Človekovi posegi najpogosteje šele čez daljši čas izzovejo spremembe v naravni pokrajini. Če temu prištejemo (z vidika naravnih procesov) še razmeroma kratko obdobje instrumentalnega opazovanja naravnih pojavov, je razumljivo, da ne moremo poznati vzrokov za naravne nesreče, ki so le eden od dogodkov v dolgoročnem odzivanju naravnega sistema. Sodobna družba se lahko prilagodi naravnim procesom le, če jih zna prepoznati in pravilno razumeti. Zato bi bilo najprej treba preobrniti paradigmo in naravne nesreče dojeti kot sestavno prvino pokrajine. Takšno gledanje nam bo omogočilo spremembo razmerja med družbo in naravo ter varovanje premoženja in ljudi pred naravnimi nevarnostmi tako, da se jim

bomo izognili, ne pa omejevali ali celo preprečevali naravni proces, saj je slednje pogosto ekonomsko in okoljsko nesprejemljivo. (Komac, et all., 2008).

#### **4. Državne zaloge materialnih sredstev za zagotavljanje pomoči ob naravnih nesrečah**

Kot kažejo dejstva in raziskave, so naravne nesreče po svetu in tudi v Sloveniji v porastu. Skoraj ne mine leto, da nas nebi prizadela kakšna naravna nesreča, ki pa seveda stalno za seboj pusti tako materialne kot tudi psihofizične izgube.

Da bi dosegli dobro zaščito prebivalstva, moramo biti na nesrečo dobro pripravljeni, moramo imeti zadostno število opreme za reševanje, kot tudi hrane oz. nastanitvenih kapacitet, da bi v čim krajšem času lahko pomagali prebivalstvu na ogroženem območju. Seveda je zelo pomembno, da imamo organizirane preskrbovalne verige, dobro logistiko za nujne primere.

Preskrbovalna veriga Angleški izraz »supply chain« slovenski avtorji različno prevajajo, večkrat tudi kot dobavna veriga. Dobavna veriga je mreža zvez in distribucijskih možnosti, ki opravljajo funkcijo nabave materialov, njihovega preoblikovanja v vmesne in končne proizvode ter distribucijo končnih proizvodov kupcem. (Logožar, 2004)

Če gledamo skozi zgodovino lahko vidimo da se je prva logistika razvila ravno zaradi logistike preživetja, zato »Razvojno –evolucijski lok logistike lahko zgodovinsko razdelimo na štiri večja obdobja kriptologistike, protologistike, klasične logistike ter integrativno-integralne logistike.« (Šimec, 2010)

V svojih centralnih skladiščih prevladujejo sredstva namenjena začasni nastanitvi, osebna zaščitna varovalna sredstva, razne cisterne za vodo, agregati, prikolice in kontejnerji za tehnično reševanje, dekontaminacijo... Žal pa kot sami vemo in to se je v letu 2020 tudi lepo pokazalo, da pri večjih naravnih nesrečah, ki zajamejo celotno državo teh sredstev kar hitro zmanjka.

Poleg teh državnih zalog, se nato poslužujemo tudi zalog pri lokalnih proizvajalcih, trgovinah in pa seveda pri nevladnih organizacijah.(Rdeči križ, Karitas, razna društva ki delujejo znotraj Slovenije.

Ker pa vemo da je za naročilo blaga potrebno izvesti javno naročilo, je seveda čas tisti ki pa ni ravno zaveznik javnega naročanja.

Sedanja ureditev javnega naročanja je tako posledica več letnega razvoja z namenom, da se na trgu vzpostavi prosta konkurenca. (Prelog Neffat, 2017).



## 5. Organiziranost Uprave RS za zaščito in reševanje

Z novo zakonodajo je bilo varstvo pred naravnimi in drugimi nesrečami v Sloveniji izločeno iz obrambnega sistema z namenom, da se organizira kot celovita interdisciplinarna dejavnost ter da se vse reševalne službe in druge namensko organizirane sile za zaščito, reševanje in pomoč povežejo v organizacijsko in funkcionalno enoten sistem. Na tem področju so se odprle najširše možnosti sodelovanja med nevladnimi organizacijami ter možnosti in postavitve skupne telekomunikacijske, izobraževalne ter druge pomembne infrastrukture.

Glavne naloge sistema varstva pred naravnimi in drugimi nesrečami temeljijo na podlagi analiz tveganj in groženj varnosti. Upoštevajo se izkušnje iz preteklih nesreč, naravne in druge danosti, sile in sredstva za zaščito, reševanje in pomoč, ki so na voljo ter mednarodna pomoč. Glavne naloge varstva pred naravnimi in drugimi nesrečami pa so: preučevanje in spremljanje nevarnosti, preventiva, obveščanje, opozarjanje, alarmiranje, neposredna tehnična in fizična zaščita, reševanje in pomoč, preprečevanje sekundarnih posledic, zagotavljanje osnovnih pogojev za življenje in sanacija. V državni pristojnosti so predvsem:

- zakonodaja,
- načrtovanje razvojnega in raziskovalnega dela,
- organiziranje sistema opazovanja, obveščanja in alarmiranja,
- organiziranje sistema zvez,
- organiziranje in pripravljane državnih sil za zaščito, reševanje in pomoč,
- priprava programov izobraževanja in usposabljanja,
- pomoč lokalnim skupnostim ob nesrečah.

V pristojnosti lokalnih skupnosti pa so predvsem:

- spremljanje nevarnosti ter obveščanje in alarmiranje ob nevarnostih,
- organiziranje in pripravljane sil za zaščito, reševanje in pomoč,
- izvajanje zaščite, reševanja in pomoči ob nesrečah,
- organiziranje osebne in vzajemne zaščite prebivalcev.

Pri varstvu pred naravnimi in drugimi nesrečami morajo državljani:

- sodelovati v civilni zaščiti,
- dajati materialna sredstva (materialna dolžnost),
- se usposabljati za zaščito, reševanje in pomoč.

Uprava RS za zaščito in reševanje je organ v sestavi Ministrstva za obrambo. Upravne in določene strokovne naloge varstva pred naravnimi in drugimi nesrečami, ki so v državni pristojnosti, upravlja Uprava RS za zaščito in reševanje ter izpostave URSZR za določeno območje. Naloge URSZR so:

- pripravi nacionalni program varstva pred naravnimi in drugimi nesrečami,

- predlaga raziskovalne in razvojne projekte, pripravi analize tveganj in ogroženosti, organizira sistem opazovanja,
- organizira sistem obveščanja in alarmiranja ter skrbi za njuno delovanje,
- organizira sistem zvez in skrbi za njegovo delovanje,
- usmerja in usklajuje preventivne ukrepe,
- razglaša nevarnosti naravnih in drugih nesreč,
- daje napotke za ravnanje ob nevarnostih in nesrečah,
- pripravi državne načrte zaščite in reševanja,
- organizira, opremlja in usposablja civilno zaščito z državno pristojnostjo,
- usklajuje pripravljenost in delovanje ter sofinancira dejavnosti javnih reševalnih služb iz državne pristojnosti,
- pripravlja programe ter organizira in izvaja izobraževanje in usposabljanje za zaščito, reševanje in pomoč,
- zagotavlja pogoje za delo poveljnika in štaba CZ RS,
- zagotavlja pogoje za delo državnih komisij za ocenjevanje škode,
- oblikuje in vzdržuje državne rezerve materialnih sredstev za primer naravnih in drugih nesreč.

## **6. Učinek naravnih nesreč na logistiko**

Ko pride do naravne nesreče je vlada prisiljena k sprejemu ukrepov, kot se je pokazalo lansko leto pri izbruhu Covid-19, z zaklepanjem mest in omejitvami gibanj ljudi med regijami. Seveda ti ukrepi so pogoj za nenadzorovano širitev pandemije, to pa seveda posledično vpliva na svetovno oskrbovalno verigo, ki pa je v teh časih skoraj čisto zastala.

Večina držav je omejila ali ustavila mednarodne lete in letalske prevoze, kar je privedlo do upočasnitve pretoka blaga. Posledično se je zmanjšal promet v zračnem prostoru, ukinili so se leti tovornih letal, prav tako je bil prizadet tudi ladijski promet, ker so plovila več tednov bila v karanteni, preden so dobila dovoljenja za vstop v pristanišča in s tem upočasnila procese dobave nujno potrebnega materiala in zaščitnih sredstev. Ladijski kontejnerji so obtičali v pristaniščih in na tranzitu na državnih mejah.

Seveda je nastal tudi problem v kopenskem transportu saj zaradi omenjenih omejitev surovine niso prišle do pristanišč. Poleg tega se je povpraševanje po surovinah za oskrbo industrije precej zmanjšalo saj je večina držav imela problem z delovno silo in je industrija delovala le delno, obenem pa se zdaj pojavila zahteva po večjem tranzitu zdravil, medicinskih potrebščin in medicinske opreme.

Podatki kažejo da je bil delež tovornih vozil ki, v času trajanja pandemije niso vozila, v Evropi 30 % . Stanje se sedaj počasi izboljšuje, je pa učinkovitost prevoza v veliki meri odvisna od čakalnih časov na mejah, karantene voznikov, nihanja ponudbe in povpraševanja in splošne nestanovitnosti na trgu.

V želji po potrošnem dobrinah in proizvodih se bo izjemno zmanjšala želja po potrošnem izdelku in več bo povpraševanja po bistvenem blagom v trgovini med narodi. Edina trgovinska dobrina, ki jo lahko ocenimo v prihajajočem letu, bodo farmacevtska cepiva, medicinsko blago in zaloge, bolnišnični predmeti in živilski proizvodi.

## **7. Prevoz in logistika proizvodov**

Vsi vemo da je sektor logistike in prevozov v takšnih situacijah ključnega pomena. Vloga , ki jo ima pri dobavi sredstev, je nujna za zaježitev oz. obvladovanje naravne nesreče. Kot vemo je prevoz proizvodov preprosto gibanje izdelkov iz ene točke v drugo, logistika pa ni tako preprosta. Logistično upravljanje vključuje poznavanje pravih izdelkov, koliko jih je sploh potrebno, in kakšen je pravilen čas, da dobiš ustrezno opremo na pravo lokacijo. S tem je prevoz seveda ključni del logistike. Pri prevozu pa je potrebno biti pozoren tudi na dobro zavarovanje tovora, saj vemo da ko pride do izrednega stanja, ko gre za človeško življenje, bi vsi radi imeli željeno blago, zato so tudi kraje tega blaga zelo pogoste.

## **8. Dobava in logistika zaščitne varovalne opreme in nujnih dobrin za preživetje v času naravne nesreče na lokalnem nivoju**

Kot vemo občine samostojno urejajo in izvajajo varstvo pred naravnimi in drugimi nesrečami na območju občine. V občinski pristojnosti je urejanje sistema zaščite in reševanja ter seveda pomoči, preučevanje in spremljanje nevarnosti, preventiva, obveščanje, opozarjanje, alarmiranje, neposredna tehnična in fizična zaščita, reševanje in pomoč, preprečevanje sekundarnih posledic, zagotavljanje osnovnih pogojev za življenje in seveda sama sanacija. Občina je odgovorna tudi za organiziranost in opremljenost enot civilne zaščite in drugih sil za zaščito, reševanje in pomoč v občini. Zagotavlja nujna sredstva začasne nastanitve, v primeru nesreče, določa in izvaja razne programe usposabljanj (razne vaje npr. za primer potresa, poplav, plazov...), usklajuje in izpopolnjuje načrte skupaj z regijo in državo. Občina je dolžna tudi na podlagi statističnih in evidenčnih podatkov, občinskih prostorskih načrtov, izkušenj iz preteklih nesreč ter sprejetih regijskih in državnih načrtov zaščite in reševanja izdelati načrte za primere naravnih in drugih nesreč v občini.

Ocene ogroženosti, s katerimi se ugotovi vire nevarnosti oziroma ogrožanja, možne vzroke za nesreče, verjetnost nesreč, stopnjo ogroženosti in možen obseg nesreče, ogrožene občane in njihovo premoženje ter razpoložljive sile in sredstva za zaščito, reševanje in pomoč, se izdelajo na podlagi navodila o pripravi ocen ogroženosti in so podlage za izdelavo občinskih načrtov zaščite in reševanja. Občina za posamezno nesrečo izdelava celoten načrt ali del načrta, če je tako določeno z državnim ali regijskim načrtom.

Skladno s temi načrti ima občina organizirane lastne sile za zaščito, reševanje in pomoč.

Župan imenuje poveljnika in namestnika poveljnika ter člane štaba Civilne zaščite občine. Kot vemo pa so glavni izvajalci intervencijskih ukrepov in nalog v občini gasilci, kateri zmeraj pokažejo svojo požrtvovalnost in pripravljenost na pomoč pomoči potrebnim.

Občina pa mora seveda zagotoviti tudi dovolj materialnih sredstev za različne vrste nesreč. Za ta namen imajo župani vsako leto v proračunu tudi rezervni sklad. Za večje razsežnosti nesreč, pa se seveda lahko obrnejo tudi na pristojno regijsko izpostavo oz. državo.

### **9. Pojav virusa Covid-19 v Občini Šmarje pri Jelšah in težave pri dobavi in dostavi nujno potrebnih sredstev**

Lani je tudi našo občino, kot eno izmed prvih, prizadel smrtonosni virus Covid-19. Neformalno se je štab civilne zaščite na pobudo župana skupaj s predstavniki zavodov v naši občini sestel 5. 3. 2020. Takrat si sploh nismo mogli predstavljati, v kakšne razsežnosti se bo razvilo dogajanje, povezano z virusom. Teden za tem smo bili priča prvemu primeru okužbe v našem kraju. Ker je vir okužba izhajal oz. je bil odkrit na OŠ Šmarje pri Jelšah, se je župan skupaj z ravnateljem odločil, da na svojo pest zapremo šolo. To se je v prihodnjih dneh pokazalo za pravilno odločitev, saj je država le tri dni za tem zaprla tudi ostale šole. Šolo smo takoj po izpraznitvi v celoti razkužili. Po navodilih stroke smo preko regijskega štaba zaprosili gasilsko enoto posebnega pomena, ki je bila izurjena za razkužitev prostorov. Vse prostore so poškopili s razkužilnim sredstvom ECOCID-S, pri tem je nastala velika škoda na pohištvu in opreми. Za boljše razkuževanje prostorov se je v prihodnosti izkazalo zaplinjevanje. Največjo preizkušnjo pa je naš štab CZ oz. občino doletelo, ko se je okužba z virusom pojavila v domu starejših občanov, v nadaljevanju DSO, in se tam sunkovito širila. DSO je potreboval veliko zaščitne opreme, katero smo skupaj z regijskim štabom pridobivali iz državnih zalog. Naš štab je organiziral prevoze iz skladišč državnih zalog v Rojah do DSO Šmarje pri Jelšah. Nekaj smo se posluževali tudi hitre dostave, vendar večkrat nujno potrebno blago ni prispelo pravočasno, zato smo raje sami organizirali prevoze in sami šli do dobavitelja iskat nujno potrebno blago.

Morem priznati, da je bila v tistem času tudi stroka v velikem precepu. Navodila so se spreminjala iz dneva v dan. Pojavila se je potreba po plastični embalaži za potrebe priprave obrokov za DSO. Vsakodnevno smo sodelovali s tehničnim vodstvom bolnice Celje, ki nam je vsakodnevno sporočala morebitne potrebi pri pomoči, ki so jo potrebovali naslednji dan za delovanje DSO-ja. Namreč v času, ko je virus v domu pobegnil izpod nadzora, je skrb za varovanje DSO-ja prevzel tehnični direktor Bolnice Celje mag. Franc Vindišar.

Prišel je tudi dan, ko so se obrnili na štab, da potrebujejo 6 ljudi za delo v domu kot pomoč hišniku in v pralnici, kajti med njihovimi zaposlenimi je bilo čedalje več okužb. V štabu smo imeli na listi prostovoljcev več kot sto članov, ampak izkazalo se je, da je strah, ko je bilo treba konkretno v središče izbruha bolezni, res terjal svoje, tako da smo komaj nabrali 6 prostovoljcev, ki so za dva dni šli na pomoč v DSO. Prav kmalu smo se zavedali, da lahko s takimi akcijami okužimo še mnogo drugih izven DSO-ja, saj je, kot smo kasneje spoznali, do največ okužb prišlo v trenutku odstranjevanja zaščitne opreme, saj prostovoljci in zaposleni niso bili opozorjeni oziroma ustrezno poučeni na pravilni red odstranitve zaščitnih sredstev in opreme. Službe, ki pa so izurjene, pripravljene na delo z nevarnimi snovmi in imajo ustrezno zaščitno opremo, pa so bile v pripravljenosti. Spet se je pokazalo, da stroka ni pravočasno vpoklicala usposobljenih in primerno zaščitnih ljudi.

Po lastnih izkušnjah se je stanje začelo premikati na bolje po prihodu specialne enote, poklicnih gasilcev iz Celja, ki so uvedli cone, poskrbeli za razkuževanje obuval pri prehodih iz ene cone v drugo. Spremenil se je tudi sistem preoblačenja iz zaščitnih oblek zunaj DSO-ja. V ta namen smo v štabu najprej postavili šotor, katerega smo imeli v skladišču, vendar se zaradi nizkih temperatur zadeva ni obnesla najbolje. Zato smo organizirali dostavo dveh kontejnerjev iz skladišča državnih zalog v Rojah.

Morem priznati, da smo v času prvega vala dobili lepo število doniranih zaščitnih sredstev iz vse Slovenije. Na pomoč so nam prišla tudi podjetja in podjetniki iz lokalnega okolja in širše. Na nas pa je bilo, da smo prepotrebno opremo znali razvrstiti in jo tudi razdeliti pomoči potrebnim.

V času prvega vala epidemije smo imeli vključenih veliko prostovoljcev, ki so občanom dostavljali hrano na dom iz kuhinje, katero smo kot CZ aktivirali za pripravo toplih obrokov. Obroke smo dostavljali starejšim občanom, ki zaradi zaprtja restavracij in menz niso mogli oz. si niso upali sami po obroke zaradi svoje varnosti. Hrano smo dostavljali tudi prostovoljcem, ki so po prenehanju prostovoljnega dela v DSO morali ostati v karanteni v najetih stanovanjih. Ne smemo pozabiti tudi na psihoterapevtsko pomoč, katero smo zagotavljali preko usposobljenih ljudi iz naše lokalne skupnosti.

Kmalu se je tudi izkazalo, tako na državnem kot tudi regijskem in lokalnem nivoju, da je potrebna novelacija načrtov zaščite in reševanja za pojav epidemije, in sicer na verzijo 2.0.

## **10. Zaključek**

Na koncu bi rad dodal, da bo še treba veliko narediti na področju organiziranosti in logistike v CZ. Kar se je podobno kot pri nas pokazalo, ko se je naš štab skupaj z gasilci odzval tudi na pomoč pri potresu v Petrinji. V Sloveniji se je še enkrat izkazalo, da je pomoč sočloveku v stiski še vedno na visoki ravni. Samo v nekaj urah smo zbrali

za štiri velike kombije hrane, raznih oblačil in sredstev za osebno higieno. Še isti dan smo se odpravili proti porušeni Petrinji. Na poti smo srečali veliko tovornjakov, kombijev s pomočjo, namenjeno v Petrinjo. Ko smo prispeli do nesreče, nas policija ni spustila v center Petrinje, ampak so nas usmerili v Sisak, kjer so imeli skladišča in logistične centre. Izkazalo se je, da so ta skladišča prenatrpana, niso se znali zorganizirati, pravilno razporediti doniranih sredstev, zato je bilo po mojem opažanju veliko teh sredstev uničenih oz. poškodovanih, tako da niso bila primerna za nadaljnjo uporabo.

Spoznali smo tudi, da je lokalna skupnost še kako pomembna pri samem razvoju kraja, pri smernicah gradnje in izvedbi ukrepov za zmanjšanje posledic nesreč.

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