INTERNATIONAL JOURNAL FOR REGIONAL DEVELOPMENT

IJRD

International Journal for Regional Development (IJRD) is a scientific, academic review covering all fields of policies, administration and management of regional and logistics affairs, including, but not limited to, business ethics, business strategy, entrepreneurship, innovation, international projects, cross-cultural studies, as well as supply chain and operations management.

Vol. I.
April 2019

Official Journal of

AREMA

AREMA – ACADEMY OF REGIONAL DEVELOPMENT

INTERNATIONAL JOURNAL FOR REGIONAL DEVELOPMENT

International Journal for Regional Development
(IJRD - Print) ISSN 2463-7920
(IJRD - Online) ISSN 2463-7939

PUBLISHED BY
AREMA, Academy of regional management
Kidričeva ulica 28
SI - 3250 Rogaška Slatina
www.arema.si
info@arema.si

The published articles express authors' viewpoints.
All articles have been triple blind peer reviewed.

CONTENT

EDITORIAL COMENTARY

Dear colleagues,

this spring AREMA, Academy of regional management, Rogaška Slatina is starting publishing an international scientific review devoted entirely to fostering an understanding of issues in regional and logistics development in theory and practice.

International Journal of Regional Development (IJRD) is a scientific, academic review covering all fields of policies, administration and management of regional affairs, including, but not limited to, business ethics, business strategy, entrepreneurship, innovation, international projects, cross-cultural studies, as well as supply chain and operations management.

The IJRD aims to present the latest thinking and research on major regional development topics in the form of articles that meet high academic quality standards, while still being accessible to non-specialists. Interdisciplinary research and cross-functional issues are particularly favoured. The IJRD encourages submissions from other disciplines if they contribute significantly to problems considered by managers and researchers in the field of regional development.

We are cordially inviting professionals, academics and researchers to join us as international editorial members as well as researchers who would like to publish their original scientific research work and projects.

Looking forward to cooperate with you

Dr. Patricija Jankovič
Editor In-chief

Matjaž Štor[1]

THE USE OF COMMON INFRASTRUCTURE IN COMPANIES AS A DEVELOPMENT CHALLENGE

Abstract:
People and our activities are prisoners of time and space, where we live and work, which also applies to logistics. Large and modern companies will need to shift freight from road to rail and thus ensure the sustainable development of logistic and common infrastructure in Europe and on the whole World. 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 products, 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 should be managed from good staff and hire external experts. In this case 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: *Development of logistic strategies, development of new products, logistic services, the common infrastructure, steel industry, the logistic infrastructure, the organizational development, the logistic process, the sustainable development of logistic, the vision of business logistic.*

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1 INTRODUCTION

The future of the world industry is uncertain; this is partly due to its internal structural changes, but also due to structural changes amongst their customers. Concurrently, competition within the industry is increasing, and therefore focus is constantly being placed on reducing costs and leveraging economies of scale. However, in order for several industries to benefit from economies of scale, it is necessary to work with a well thought-out logistics strategy. Bases on our long-term experiences in many different fields and companies In the competitive environment of today's global markets we are sure that the demands of customers are extremely increasing. They expect to get the best product at the lowest price with immediate availability. Logistics, including transportation, inventory maintenance, order processing, purchasing, warehousing, materials handling, packaging, customer service standards, and product scheduling must continuously be developed to meet the challenges of the market. From that reasons is very significant connection between Štore Steel company, steel industry and the following research of Slovenian companies because of their high competitive strength.

The globalization, with longer distances to customers and suppliers, and the progressing trend of outsourcing are examples of why the importance of logistics has increased over the last few years. A considerable part of the final product cost is frozen during the early product development phases. In the early phases of the product development process, the cost of making design changes is low compared to making changes later in the product development process. The product development decisions made in the early phases of the product development process have considerable impact on future manufacturing and logistics activities as well.

1.1 Objectives, hypothesis and methods of research

In exploring these issues we set the following objectives:

- examine the innovations in the field of logistics exculpatory in Slovenia and abroad,
- find the best concepts in the logistics firms exculpatory,
- connect their experiences in the economy in this field with the findings of the profession.

Through deductive method was carried out of general positions that are defined by the theory, practical conclusions on dependencies between phenomena that we have observed.
In exploring we tested hypothesis:

H1: The Slovenian Managers' perception of changes in the organization and Management of logistics services is not a major source permit competing strengths of the company in steel industry.

The research took place in 2011 to 2012, respondents were CEOs or. CEOs, directors or. Head of logistics. Sample survey consisted of two hundred businesses (responding to the sixty managers), a questionnaire was first tested on a small sample of firms in cooperation with experts and scientists. Acquired primary data in a quantitative survey were analyzed by methods of descriptive statistics. After conducting research, we collected data should be analyzed using statistical methods and statistical software tools IBM SPSS Statistics 19 We used the chi-square test and rank correlation.

2 FINDINGS

Research for the needs of this thesis, we began to plan in the first half of 2011. The field studies were carried out in the second half of 2011 (ACS Survey 2011 - the first phase of the main empirical research), we have studied enough secondary sources and prepare the theoretical concept of support for logistics in developing new products. In the second half of 2012, we carried out further research in companies (survey ACS 2012 survey of 200 managers in Slovenia, which is then represented the second phase of the main empirical studies) to find additional arguments to confirm the research hypothesis and gain additional starting points for making the concept for logistics support in developing new products.

For the purposes of research we chose a large Slovenian companies, because we evaluated that organized the department or department of logistics and IT, which have their leader or director. Of course, we first turned to the top management of companies to the cooperation of strategic management easier glass or by e-mail. on the phone. The research results of sixty-sized Slovenian companies showed that most companies already clear that logistics is not only an important source of savings, but also a driving force for the strategic development of the company.

Below we present some key findings:

- the response was very good, in most cases, the management of the largest Slovenian companies aware of the importance of logistic processes and that there are significant causal link between the proportion of new products launched on the market and adequate logistic processes and enhancing the competitiveness of enterprises,
- surveyed companies are finding that they should participate in the development of best personnel with interdisciplinary knowledge, but a lack of will, trust and communication between all business functions of the company.

The final results of the empirical study are as follows:

- In companies where they represent new products more than 30% in total revenues and managers are very satisfied with their logistic process, we conclude that they have adequate support operations, as they are to this emergency great speed and complexity of the transactions and the increased

need for flexibility, technology, personnel, processes and overall company operations.

- On the basis of data on investments in logistics and business managers' satisfaction with it, we first find that the observation adequate support operations. On the other hand, we are in business to get an overview of the investment in the development of logistics and so we can conclude that in most companies, which invest in logistic enough resources to create appropriate support business, but also accelerate the development of logistics.
- On the basis of the data obtained, we can conclude that those companies that develop logistics and successfully market new products, and they represent more than 30% of total sales, have a significant competitive advantage. They are always a step ahead of competitors.

The complexity of the production is reduced without limiting the customer's choice to a small number of variants. The production process in steel industry is relieved from customization activities while these operations are relocated to further processes of the supply chain and the use of common infrastructure. The approach of late product individualization should be described in future and how it causes new challenges for the supply chain and development of logistics services. Analytic instruments will help to detect reasonable components of a product that should be individualized.

2.1 Development of new products

New or innovative products are growing in importance both in numbers and revenues, putting an extra stress on most current supply chains - defined conceptually as a buyer with a network of suppliers - as those were originally designed for efficiency purposes and existing products. While new products due to their characteristics, such as short life cycle, demand variability, and high investment risk, require responsive, flexible, adaptable supply chains and relevant practices. Those practices need to be properly tailored for specific different types of new products, perceived as a continuum of newness and change (Andersson, 2007: 28).

2.2 Development of logistics strategies

House-builders and traditional retailers appear to focus on similar logistics service requirements, whereas the logistics service requirement of the multiple retailers differ. Furthermore, this it provides a general definition of logistics strategy that has been operationalized by generic logistics strategies. The industry makes use of generic logistics strategies such as differentiation and postponement. The individual industry ought to consider improving their process performance by implementing additional generic logistics strategies as well as increasing their utilization of generic logistics strategies that are already implemented. The industry's utilization of generic logistics strategies is however restricted by its own supplier market (including uncertainties of quality of incoming material), and also by the inherent nature of commodity products, as well as divergent material flows (Flint & others, 2005: 37).

There is important that global supply chains integrate many companies from steel and metal processing of Slovenia, where generic logistics strategies are very expended.

2.3 Logistics management as a part of development management

Based on our practical experiences it will be necessary to develop a framework supporting the collaboration between the logistics, the product development process and other fields. To do this, it has been essential to analyze which parameters influence the efficiency of the logistics process and the interface between the logistics and the product development process. Also, to investigate how the logistics department can be integrated earlier in the product development process has been of interest. This has been done through a theoretical review. Many companies also primarily described activities for getting very close to customers to gather direct input from customers as a source of idea generation for more frequently than they did some of the alternative idea generation activities mentioned in the literature such as brainstorming exercises, scenario exercises, technology tracking, or competitor logistics services analyses. Direct engagement with customers focused on searching for clues to changes in needs and identifying unmet needs that could be resolved through innovation (Andersson, 2007: 26).

2.4 Organizational development in logistics services

Logistics is a relatively new science discipline, which in the meantime positions itself in the modern business. Based on own practical experiences logistics can be seen as an instrument of rationalization, as philosophy and as a business function. However the companies are rarely comprehending synergistic effects of logistics management and marketing management in terms of growing competitive advantages and strengthening the company image. Companies should recognize the importance of appropriate logistics services for organizational development.

2.5 Vision of product development and logistics services

Emerging markets are fraught with uncertainty, diverse global players, rapid technological change, wide-spread price wars, and seemingly endless reorganization. These changes have presented challenges to organizations in the form of shorter product cycles, increased segment fragmentation, blurring industry boundaries, breaking corporate hierarchies, and increased interdependence of world market. Organizations are responding to competition by capitalizing on global policies and adopting self-directed teams and horizontal structures that enhance external activities. To do this organizations are getting conscious of the boundaries they are operating in. With hyper competition and globalization organizations blur boundaries to gain maximum business opportunity from other geographic boundaries.

Competition is also managed by focusing on bringing out new products to the market with appropriate logistics services (Ittman & others, 2007: 345).

Product development is critical because new products are becoming the nexus of competition for firms. They are the means by which members of organizations diversify, adapt, and even reinvent their firms to match evolving market and technological conditions. This calls for a closer look at boundary crossing behaviour as part of the external activity during product development. The studies carried out in the process of product development identify external activity orientation as important criteria for success. Product development processes involve project management activity. Unlike other processes of an organization, product development is a knowledge intensive activity, which brings together individuals having different skill sets and mindsets. These individuals need to interact regularly to understand and coordinate their activities. The non-routine nature of the process makes boundary-crossing activity more critical for successful product and logistic development (Lam, 2005: 15). Applied on this reason we need to develop new logistics services and good common infrastructure to get appropriate experts in companies.

This article focuses on the boundary crossing behaviours performed by product development teams. External activity was found to result in high percentages of successful projects and sales derived from new products. Product development is an activity with high uncertainty. The external activities that are performed by product development teams and their nature of relationships shared are variously classified as interactive and collaborative behaviour. Underlying this classification is a dichotomous behaviour where in the former embodies presence of informal behaviour between partners, while the latter embodies formal behaviour. Further research on these behaviours have shown that informal type of external activity also known as collaborative behaviour plays an important role in the successful development of products. Collaboration represents the unstructured, affective nature of interdepartmental relationships. They were found to result in improved product development. The external activities performed by product development teams were also found to be influenced by variables like product development life cycle, informal groups, awareness and open climate. (Andersson, 2007: 25)

Based on the past literature a conceptual framework was developed. It consisted of defining the role of collaborative and interactive boundary crossing behaviours across product development teams and certain variables influencing this behaviour. The model was validated through preliminary interviews. These interviews were conducted across team members, team leaders and knowledge management experts. A few more variables were identified that were considered to influence the collaborative behaviour performed by product development teams. These variables are sharing behaviour and confidence with the time available for developing the product. The collaborative behaviour was further studied to understand its relationship with product development team behaviour, sharing behaviour of teams

of outside the boundary, demographic variables and innovation level of product developed. These variables were termed direct influencers of collaborative behaviour. Innovation level did not play any significant role in influencing collaborative behaviour. Collaboration behaviour was further studied to understand how they are causally related with these variables (Andersson, 2007: 29).

With respect to collaboration across horizontal boundary, it was found that sharing behaviour, as well as autonomous team leader behaviour influenced them. Across geographical boundary, the open-climate was found causally related. Across value chain boundary sharing behaviour was found to influence collaborative behaviour. These were open climate behaviours, sharing behaviour, and autonomous team leader behaviour. These were labelled direct influencers. The ones that did not show a direct influence were termed as indirect influencers. Since the role of direct influencers was clearly understood, the role of indirect influencers needed further analysis as these were variables selected from literature and expert interviews and expected to have influence on boundary crossing behaviour. It was assumed that if they did then they may indirectly influence collaborative behaviours. For this the indirect variables were correlated with the direct influencers. The results showed that open-climate was positively correlated with awareness of objectives, Product development life cycle and the team's confidence in time line of the project. Interestingly sharing behaviour and autonomous behaviour of the team leader was not correlated with any potentially indirect influencer or variable. This meant that awareness of objectives, product development life cycle with modern logistics service and the team's confidence in time line of the project can influence collaborative behaviour indirectly (Stancu & others, 2008: 102).

The role of product development was understood deeper in the context of level of innovation. This is specifically done as the poor influence of level of innovation and duration were a surprise since they were expected to have influence on boundary crossing behaviour. Teams were classified into low, medium and high innovation level teams. The collaboration behaviour within these teams was then studied. The results showed that there was a pattern in the usage of collaboration behaviour across the different channels. Collaboration behaviour was used most across medium innovation level team as compared to low and high innovation level teams. This was the case of collaboration across horizontal and geographical boundary. In the case of value chain boundary, no such pattern was recognizable. Interestingly it meant that in low and high innovation collaborative behaviour was lower and it increased only during medium innovation. This meant that increase in collaborative behaviour across horizontal boundaries result in lesser time taken to develop the product (Lam, 2005: 11).

2.6 Impact of effective logistics management on company business

Since understanding customers' situation and developing knowledge about customers' business often are a necessity in order to be trustworthy as a third part logistics company, the references from existing customers are extremely important. The existing customers and their development in the logistics not only develop the knowledge and capabilities of the company, but are also often a prerequisite to get new ones. Further, in some cases, customers also actually demand customer coordination (Lam, 2005: 25).

Therefore, the existing customers and systems will play an important role for how firms enter into business both directly and indirectly. This is also obvious in the cases, where customers came from their traditional transport business. Since the business normally starts as a side activity, the business idea and attitudes of the firm's existing system are still dominating. Further, the international customers and partners play an important role in the logistics development since many of the early customers were foreign companies wanting to compete on equal terms with domestic firms. The importance of the first customers led many of the companies to develop in many directions without a clear focus (Mentzer, 2001: 89).

Once the logistics business and number of customers are growing, the balance between the two dimensions becomes more relevant to manage. We know there is a natural tendency to increase the degree of integration in your relationships to customers and customers' customers over time. In the cases it seemed that the logistics firms were taking on more advanced activities for the customers, thereby increasing their integration to the customers and the customers' customers. In some cases, it was rather the customers' customers that were initiating development and continued integration while customer relationship was more stable (Waters, 2003: 79).

To develop concepts of just in time logistics and lean production seems to be used as a way to increase customer adaptation for company and also to create the specific knowledge needed. In many cases, such were in steel industry, the business was divided into a number of different niches depending on the needs of their customers. Thereby it was possible to take different demands into consideration and still develop specific knowledge and to coordinate a limited amount of customers. Between the niches, the degree of coordination and adaptation can differ depending on the customers. Furthermore, both customer and customers' customers would, to a higher extent, want to influence with the customer coordination can take place. Over time some of the logistics firms break out from the existing business. One of the reasons of creating a separate business is that customers demand the most effective solutions from the providers. Customers see the neutrality of firms as an asset. This is enhanced by the fact that customers normally use several transport and warehousing firms for different parts of the world and for different kinds of goods. Furthermore, if

a third place logistics provider wants to coordinate supply chains, the question of neutrality seems to play an even more important role (Rushton & others, 2005: 165). Finally, the separation means that the new firm will have a smaller amount of customers, a different set of representatives, and a more limited network. The problem is of course also how to create the right knowledge base in the firm. Further, each customer coordination and adaptation will be more important. Being a separate firm might also mean that there is a higher risk of being acquired (Rushton & others, 2005: 173).

Internationalization seems to be closely tied to the logistics development. International customers are growing internationally by logistics firms. Third part logistics firms internationalize through their customers. Both are contributing to each others' international development (Yoshiki & others, 2005: 57).

However, in the internationalization of third part logistics was limited to certain geographical regions like Nordic countries, central Europe, or maybe US, rather than being truly international. One exception was that the customer wanted the same third part logistics firm, in another country covering another geographical area. In other cases, the customers seemed to use different third part logistics providers for different regional areas. Further, customers often want to have alternatives for safety and competitive reasons. Another issue of importance is to what extent the emerging logistics providers can use their traditional international transport or warehousing partners for their logistics services (Stancu & others, 2008: 102).

The existing international ties of the traditional business actually can complicate the internationalization of the logistics firm if the partner lacks the suitable competence. An exception is the main stream system that made agreements with logistics provider in order to use the transportation system to reach large parts of the world from one or a few warehouses suitably located. Further, the size and numbers of suppliers and partners also influence the development of the logistics providers' role to a large extent. The partners and suppliers have the expectation that they should develop together. In some cases, logistics business might be initiated from some other countries taking Scandinavia into a European agreement. In these cases, will they actually manage to keep a high quality in their logistics services in different parts of the world (Zackrisson & others, 2006: 73)?

Will the large number of mergers and acquisitions in logistics business solve the problems or enhance them? In the cases, we found that acquisitions and mergers had large effects on the logistics providers, which is not significant for steel industry in Slovenia. There could be synergy effects in case of acquisitions or mergers.

New customers came and other customers left as a result of alliances, acquisitions, and mergers. In one case, the logistics firm actually used mergers and acquisitions as an opportunity to find customers. We also found that many mergers and acquisitions

have been taking place among the firms that we have studied, which actually changed the attitude towards how the business should be organized. This will probably increase in the future (Waters, 2003. 86).

3 RESULTS

Based on field research we conducted in the second half of 2011 and in the second half of 2012 involved directors / heads of marketing, logistics and manufacturing representative firms in the steel industry in Slovenia, the hypothesis:

- H1: The Slovenian Managers' perception of changes in the organization and Management of logistics services is not a major source permit competing strengths of the company in steel industry.
- is confirmed.

The result and conclusion of this article is a framework that gives support for what to focus on, how to collaborate, in which phases collaboration is meaningful, and which persons need to be involved in the different product development phases. Working as the framework suggests will, hopefully, give closer collaboration between the logistics - and the product development process than without this supportive framework. The expectation of the collaboration is an earlier integration of the logistics department in the product development process and through this influence and increase the efficiency of the logistics process. The implementation of this conclusions was in Štore Steel company in their common infrastructure in the end of 2013, when was finished the big investment in production field.

4 CONCLUSIONS

Importance and sufficiency of existing constructs of customer service, customer satisfaction and service quality in the logistics function in industry represent ongoing challenges in the logistics discipline and are under-researched in industry sector that is affected by primary producer crises, product commoditization and increasing retailer power. Firms that improve customer service should increase customer satisfaction resulting in better customer-supplier relationships, increased customer loyalty, profitability and a differential competitive advantage. Additionally, some existing studies suffer from a general lack of rigor that pervades the logistics discipline and has prevented meaningful development of research validity and reliability. Finally, existing research into these activities from the marketing discipline is under-utilized in these investigations.

Common infrastructure cannot be built or changed overnight. This issue is one of the biggest challenges in steel industry in Slovenia, where it will be necessary to change the attitude of the logistics infrastructure and logistics activities, which should be supported by their common infrastructure. Companies should, while planning

development, regardless of their activity, always cover the question of what will happen in ten, fifteen or twenty years in terms of logistics and attitude to the environment. In the field of design and development of logistics in Slovenia was still quite early. In this area in most Slovenian companies in steel industry require reorganization or business process reengineering. Logistics business will be divided into three parts:

- operational,
- support,
- development.

The problem is that the development of logistics and investments in logistics, especially some of the other areas or sectors through the development of logistics do not have anything to do. For this reason, it will be generally in the companies devote more attention and resources to the development and planning logistics.

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Patricija Jankovič[2]

SUSTAINABILITY – A CONCEPT OR JUST A FASHION?

Abstract:
In the last hundred and fifty years in which the human kind managed to achieve the biggest technologic progress in history it became evident that the uncontrolled desire for an economic expansion, without any respect for the consequences, endangered its own existence. This led to the adoption of a number of political acts, which in a bitter form and content often struck a bit of the profession.

The article shows how the terminology of economic and social development has been renamed as sustainable development. However, we pay special attention to the definition of the latter, which, due to its uncertainty, leaves only the letter on paper.

Key words: *economic and social development, sustainable development,* environment, sustainable growth.

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1. INTODUCTION

Man's attitude towards the environment has through thousands of years presented itself in exploitation of natural resources that have been inferior to the needs a human as the “absolute master with the right to an unlimited use and exploitation.” (Pichler 1997, p.1291)

In the last hundred and fifty years in which the human kind managed to achieve the biggest technologic progress in history it became evident that the uncontrolled desire for an economic expansion, without any respect for the consequences, endangered its own existence. The first recognition, that due to endangering our own kind it is necessary to protect the environment in which humans live was followed by implementation of rules, restrictions and later different regulations which (except a handful of people) not many thought of as significant. The second recognition, that a healthy environment is in fact a foundation for a healthy life resulted in the beginning of the development of the Environmental Law.

In spite of the environment protection with the help of the numerous national and international legal norms the uncontrolled industrialization and urbanization caused an enormous damage to the environment that consequently resulted in emergence of eco-remediations that could be defined, not only as environment protection but also as systems for regeneration of the environment, which take into consideration the meaning, structure and functioning of ecosystems. In the second half of the previous century most of the modern countries added the environmental care in their directives of the » economic and social development« as a responsibility towards the global community.

The fact that the uncontrolled use and exploitation of the natural resources caused not only thinning of the ozone layer, the green house effect, animal and plant species extinction etc., but also a lack of natural resources had in our opinion been the reason for growing tendencies for replacement of non-recyclable natural resources with the recyclable or limited with the unlimited, with which we could ensure a permanent use of natural resources.

Brundland (1987, UN report Our common future)) has in her report popularized the term 'Sustainable development' and made its definition that has since then been, in addition to the World Bank, used in numerous governments and international documents. She believed that a sustainable development means satisfying the needs of today without jeopardizing the future generations in fulfilment of their needs. Surely, sustainable development is by no means only the use of natural resources. In the same

report Desai illustrated the sustainable development by using an image of a bridge connecting economy, ecology and ethics and emphasised that is necessary to link different sectors (agriculture, energy, commerce, investments) and integrate the sectors into the development planning. He also points out that it is necessary to expand the concept of the sustainable development onto all sector policies and the most important: onto the key private sphere stake-holders.

The very report meant a turning point in perception of development policies and the term » economic and social development« that had often been used before got replaced by the term »Sustainable Development«.

Lukman (2009, p. 82) claims that a "sustainable development emphasises the evolution of society with a responsible economic acting that is in accordance with environmental and natural processes. The political dimension for him represents the key element to it. In the sustainable development the paradigm of the economic, social and environmental resources limitations with intent to contribute to the welfare of the future generations is contained. It can be applied on a local, national or global level; anywhere it always bases on political decisions. «

The role of the politics lies within the development guidelines of any field whatsoever may it be the economic, social or environmental and is important indeed. However we believe that without an efficient cooperation (vertical as well as horizontal) of all stakeholders, politics cannot fulfil its basic task which is to achieve those sustainable goals towards which the development of the society has to be oriented towards in order to ensure its present as well as the future welfare.

According to Sharachchandra (1991, p. 607-621) the term Sustainable Development is merely a phrase, that not only does not offer a satisfactory definition but even more, it demonstrates the lack of an actual content in interpretations of the concept and an inability to form a picture of an efficient model of a sustainable institution.

We, his critics can give our consent since it is impossible to trace the unified definition of the sustainable development in theory and it is usually linked with the context in which it is used in EU's documents where we can also find the term » the sustainable growth« and an interpretation that bases on Brundland's report when explaining the term. And if the report on our joint future has in fact set a frame for a definition, it has within that left a vast space for different interpretations. This on its own is, of course, not bad. The problem however is, and we should agree with Sharachchandra on this one as

well, that with the popularization of the term came also an uncontrolled phraseology. » Sustainable, sustaining etc.« became adjectives that often simply get patched on to numerous different terms only because it is more likeable.

The logical consequence of such examples is that it is difficult indeed to extract the content out of such expressions. In case there was an efficient model of executing a sustainable activity, such and other similar nebulousness could be avoided but now even though a well designed frame of a definition of sustainable development, as a consequence of the stated above, creates a (false) impression that the sustainable development is nothing but a phrase.

A similar opinion was also expressed by Temple (1992, p.1) when he wrote that the term »Sustainable« is overdosed and that »the word ' sustainable' is these days used in far too many instances and ecologic stability is one of the instances that is confusing for numerous people. You have heard about the sustainable development, the sustainable growth, the sustainable economies, the sustainable societies and the sustainable agriculture. Everything is sustainable. «

Not considering the critiques, the problems of sustainable development has been from year to year becoming more enforced.

In the year 1992, within the frame of the Conference of the United Nations RIO+10, on the basis of the Brundald's report a discussion had been opened on development projects and adopted an important document named Agenda 21. As a conclusion document the Agenda has defined the key environmental problems as well as the necessary measures and references for reaching a sustainable development. Important guidelines were given in the Agenda's part where it recommends transferring the executing principles and producing concrete plans for a sustainable development onto the lower political spheres which means from the international onto the national and hence from onto the local level.

Agenda 21 has referenced redefining and encouraging the institutional changes that have according to Wright (2004, p.761 – 768) an essential role in achieving the sustainable development. The role of the local communities is in this respect particularly important. Developing individual sustainable goals oriented on specific needs or tasks of a specific local community including all the stakeholders (public administration, economies, public sector, civil society, inhabitants) on the basic development areas (economic, social and environmental) brings benefits to the community as well as to the

inhabitants. At the same time it represents an “important demonstration of the ways necessary to achieve the wanted values and performance within the whole community.” (Cortese 2003, p. 15 – 22)

The World Forum 2005 has placed the strategy of the sustainable development in three pillars that support each other:

- the economic development
- the social development
- protecting the environment.

According to some United Nations' Forums we should in the lines of the general declaration on cultural diversity also have the fourth pillar, represented by the cultural diversity.

Protection of natural resources is embedded in all the spheres of the sustainable development and represents an efficient use of energy (heating, cooling, lighting), environment protection and eco-remediation (managing the agricultural, forest land, building plots, water systems, litter, air), the use of the green technologies (broad-range connections and internet services, roads, public transport, railways) as well as the care for healthy food and a reasonable planning and executing the plans for the non-economic activities as are health-care and education. In doing so, a concern for the environment and a responsible use of natural resources also have to be a part of the strategy of economic development. In addition to a consistent concern for the environment the economic development has to focus on all members of the community and not just on a few.

According to Schoeman (2013) when social development is concerned there is a distinctive problem within the poor communities that are for the most part overlooked in the big development plans, which needs to be overcome in striving to achieve a real sustainable development. The indicators of the sustainable social development are mainly the length of life-time, education and GDP per person.

From the three pillars of sustainable development it is evident that the development applies on the environment as well as on the economy and social strata of people. In case it is executed on all three levels at the same time, then we can actually talk about a real development. The imbalance of the spheres or simply a »development« that is profit oriented cannot be marked as a sustainable one.

The United Nation's conference RIO+20 in 2012 has for many been a disappointment. Considering the fact that it has been 25 years since the

Brundland's report was published and 20 years since the first world forum (where the Agenda 21 was accepted) happened, there has been, with the exception of numerous polemics, meetings and conferences, done very little. As the main reason, too big expectations from the national and the intergovernmental administrations without cooperation, public rising of awareness, educating the general public and those active in the field of economy was pointed out. (Halle, Najam and Beaton 2013, p. 1-14)

EU has in its contribution for the conference singled out that in spite of efforts from the sides of government and non-government organizations in all the Countries sustainable development still is not a priority on political agendas, also that the goals are still not specifically defined and that there is simply not enough cooperation between ministries in governments. To be able to annulate the gap in practice it is important to stimulate wholesome strategies, public interest, raising awareness and efficient administration. Above all however, it is urgent to start imputing new mechanisms of coordination and establish an active cooperation among all involved: the government and the non-government organizations, local authorities, civil society and the private sector. The cooperation between the public and the private sector in transition to a sustainable development is crucial for EU.
The sustainable consciousness has to be introduced to all organizational structures; it needs to become a part of the research, development and innovativeness, teaching, learning and expert work, as well as, all the activities have to be carried out in graduate baby steps and goals. In addition to this, it is necessary to firstly focus on the local level and spread the new realisations horizontally and only then spread them vertically.

Due to the definitions quoted that are in fact more or less politically prejudiced, the formal specification of sustainable development from the point of view of the Theory of Systems or the Theory of Systems Management is indeed extremely demanding. Both disciplines have been developing since the 1960s. (Hasegawa 2013, p. 1-7)

Let us abstract the sustainable development as a management system (P) that has a multitude of outputs (y) in time (t). Those outputs define the economical, social and environmental indicators. The sensor (F) enables the detection of the selected indicators. According to the soft definition it should detect the economic statistics, public opinion surveys as well as the results of measurements of environmental physical quantities. The measured differences (e) among the desirable values (r) and the measured output values (y) are then brought into the controller (C). The later has to generate such inputs (u) that draw the output values towards the desired values (r).

The controller in such a context has to react on both levels, on the legislation level as well as on the monitoring and undertaking compulsory measures (e.g. financial, tax, environmental control). Unforeseen disturbances (i) from the system surroundings influence the mirroring of the inputs (u) onto the outputs (y). The principle of system management leaning towards graduate reductions of the difference (e) between the wanted condition (r) and the actual condition (y) is in theory of management called the principle of the management system with a negative loopback (Figure 17).

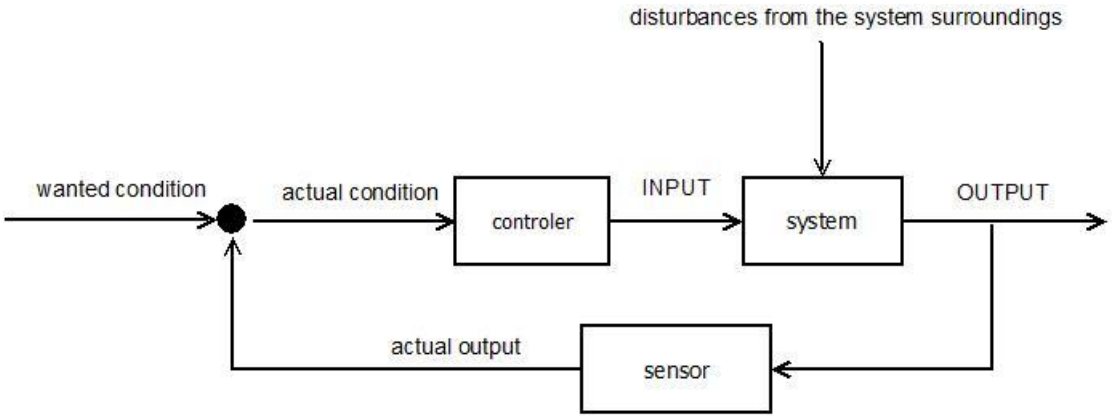

Figure 17: Principle of the management system with a negative loopback

Source: Own, 2014.

Such a weakly defined system of sustainable development is practically uncontrollable, unobservable and consequently instable. Some brilliant scientists such as Piere-Simon Laplace (Z-transformations, Theory of Probability), Aleksander Lyapunov (Theory of Stability), Norbert Wiener (Cybernetics), Harry Nykvist (Criteria of stability), Richard Bellman (dynamic programming), Andrej Kolmogorov (Wiener-Kolmogorov's filter), Kalman (Kalman's filter), Lev Pontrjagin (maximum and bang-bang principles) have been working on solving these problems.

The very concept of stability could be used as an analogy for sustainable development. Let us enumerate only the most important obstacles for management system with a negative loopback:

- measuring of the output of variables: a) there is no consensus on recruitment of the output variables and b) different delays in taking the measurements (e.g. from milliseconds in environmental measurements to several months in opinion surveys and economy

statistics) and c) a sensor has to measure multiple variables simultaneously since it is the so called MIMO system in question (multiple inputs, multiple outputs),

- a dynamic setting of the desired values : in addition to the emergence of new indicators (and letting go of the old ones) the set point values of the outputs change with time,
- Building a robust and at the same time responsive and in addition to that also a precise controller would demand a lot of cooperation and efforts from different participants (from science to economy, law, organizing via concise legislation and an efficient inter-sector control as well as efficient implication of sanctions.

Evethough, the realisation of the concepts of the Theory of Management into a sustainable development seems in the present to be a distant future, there are however essential conditions such as cooperation and expert knowledge of the participants (civil society, entrepreneurs, different fields' experts, legislators) that have to be met first.

The effect of raising of awareness and educating brings stronger and better results than the passing of a new legislations, declarations and regulations that are sadly going to, without a concrete change of understanding and expertise of the processes on the field of sustainable development that considers social interactions between the subjects involved that are a part of the process, stay merely mechanisms for constraint and by no means a way towards a sustainable development. By that we mean the development of the society as a whole that builds welfare today and the present then becomes a foundation for the welfare of the society of the tomorrow, where when achieving the set goals all cooperate evenly and equally no matter the economic or legal position, the public service as well as the executants and users.

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Kornelija Jagodič[3]

ONLINE MARKETING

Abstract

Success of a certain business depends on much more than the quality of the offer itself; it is mainly about the ability to sufficiently reach the market and convince masses of people to buy a product or service. In the last decades marketing has changed to a great extent, for it has become much more diverse and at the same time a lot more affordable as well. Although, that does not necessarily mean that all the changes have made everything easier; having all these possibilities to choose from, and mastering all the different means available to the point where they can actually work to one's advantage, can represent a whole new scale of obstacles one might stumble upon on the way to reaching business success. The internet is definitely one of the main factors which crucially contributed to that phenomenon since it has drastically changed the manner of giving and distributing information which consecutively affects the efficiency of marketing as such. The term online marketing comprises all marketing activities carried out in digital form or in online media: advertising via email, search engines, social media platforms and websites. The latter are generally the basis and source of all other online marketing moves which serve to lead individuals to particular websites and with the help of their content eventually convert them into customers.

Keywords: *internet, marketing, website, email, search engine, social media*

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1 THE ORIGINS OF DIGITAL MARKETING

The beginnings of internet marketing go back to the year 1978 when the very first digital advertisements for a presentation of a new DEC (Digital Equipment Corporation) computer model were sent via ARPANET (The Advanced Research Projects Network), the predecessor of the internet we know today.[4] However, that version of internet was mainly restricted to academic institutions and defence organisations with an average of approximately 2,600 people online at a time. With that innovative bold act of sending an unsought email to a random mass of 400 people, an attractive new era of advertisement began since all of a sudden the potential customers were just one click away; whether they had given their consent in any way or not at all. In fact, that was the first example of what later became known as "spam", although the term itself was not used till around 15 years later. With time the technique of spamming evolved and instead of individuals sending out mass emails, many spammers started to abuse it for the spread of different kinds of malware by using virus-infected computers often referred to as bots. 80 % of all spam mail sent out today is believed to be distributed by such infected computer completely without the awareness of their owners. Nevertheless, reaching the customer base had never before been this easy and affordable which was the main reason for its up-coming thriving and popularity. Another form of the digital marketing strategy emerged in the middle of the 80s when it became popular to add floppy discs containing promotional material to newspapers or magazines. Often print media also offered their readers a way to order free floppy discs with thorough information about products of their interest. A few years later the compact disk took over the role of the floppy disk. The website, undoubtedly the core of all other successful online marketing activities, goes decades back as well. At the time the very first publically available website went online, the internet was but a little more than a collection of static documents mainly used by academics and defence organisations. What primarily motivated its creator, the computer scientist Tim Berners-Lee, was the need to make information easily accessible and sharable without too many restrictions. When he created the world's fist website in 1990, the 60-year-old Brit was a researcher at CERN, European Organization for Nuclear Research. It consisted of separate pages connected by hyperlinks, and it provided information about the World Wide Web; the visitors got an insight into basic online terminology and were instructed in creating their very own web pages. The website was taken down around 1993 due to its supposed obsolescence but was eventually revived by CERN in 2013 when its crucial role in documenting the history of human development had been recognised. For that reason the website can

[4] Templeton, B. *Reflections on the 25th Anniversary of Spam,* 2003. Available at: http://www.templetons.com/brad/spam/spam25.html

still be accessed today. [5] The term online marketing itself, which can be seen as an umbrella term for all forms of marketing using digital technology, is approximately the same age as the first website since it was first mentioned in the 90s of the previous century.[6] However, this form of marketing really began to thrive in the first decade of the 20th century, which can be contributed to growing usage of devices that enable the user access to the World Wide Web and consequently to the broad spectrum of the consumption offer the average consumer has been subjected to.

2 WEBSITE

Some languages, like for example Slovenian, do not really have the distinction between a website and a webpage; instead of that they use the term webpage for both which can be slightly confusing to the English speaking population, in case they are not familiar with that fact. Needless to say, a good website functions as a very efficient business card that is why it should be utmost user friendly, attractive and accessible. If the user does not find what they are looking for within a few seconds, there is a great chance that they will leave the website and start looking for a more appropriate one that might be more appealing and relevant to satisfying their needs. First step one needs to consider prior to undertaking online marketing in general is a thorough analysis of the product or service about to be merchandised, as well as an analysis of the current market. What needs to be established when creating a website is what the most sought after thing at the moment is, what the contemporary consumer reacts strongest to and what exactly the follow-up actions expected from the visitor of a specific website are. Once established the website needs to be updated regularly; its structure, content and functionality should constantly be up-to-date. The internet is a vast place where everybody can contribute to the whole picture; it is where information spreads with the speed of light, whether it is positive or negative, true or false. Therefore it is advisable to pay attention to what can eventually be found online about one's own product or service in order to be able to adjust content of the website, as well as the whole offer, to that particular feedback, in case it turns out to be relative.

The most important part of a website is unarguably its content. However, while attempting to make a website as rich and attractive as possible, one runs the risk of overwhelming the visitors with off-putting information

[5] Murgia, M. *The World's First Website Went Online 25 Years Ago,* 2.9.2016. Available at: http://www.telegraph.co.uk/technology/internet/12061803/The-worlds-first-website-went-online-25-years-ago-today.html

[6] Clark, D. *The End of the Expert: Why No One in Marketing Knows What They're Doing,* 11.3.2012.

overload. Once visitor's attention is lost it is very hard, if not impossible, to fully regain it. Another important thing when it comes to the visuals and the layout of a website are the colours used since they affect the way how human brain functions. Some people go that far to claim that colours represent up to 85 percent of the reason why somebody is attracted to a certain product and eventually purchases it, but since it is nearly impossible to test these theories there is no scientific evidence for such bold claims. On the other hand, a great number of theories involving the power of colours are indisputable. It is believed that it takes only 90 seconds for the potential buyer to create an opinion about a certain product and that up to 90 percent of that decision is colour based. Although, using the appropriate colours for the right things can be quite challenging; one has to consider the nature of the website, the timing and the purpose, the audience, etc.. First important rule that should be followed is that every website should contain enough white, because it is the most suiting to the eye and transmits a feeling of freedom and breathability. Nevertheless, the power of white is too often neglected since it is mainly used as background. Furthermore, some theorists do not even recognize it as a real colour. Moreover, the colour preference is naturally gender dependent; so women seem to prefer blue, purple and green, whereas they dislike gray, orange and brown. The majority of men on the other hand do not like purple, orange and brown, while they react positively to blue, green and black. One of the most widely used colours is in fact blue, for it is believed to cultivate trust and transmit calmness. That is the reason why many world-known companies use it to their advantage nowadays, among them Facebook and PayPal, as well as many reputable banks or other financial institutions. Unfortunately, there is no universal colour that can be efficiently used for all purposes; blue is not advisable to be used for advertising anything food related since it is supposed to reduce the appetite. Theorists suggest that this notion is due to the evolutionary connection of the colour blue with poison. Not that clear and obvious in meaning is yellow. Normally, it is used to transmit some kind of a warning and is therefore often used in traffic and on all kinds of warning signs in general. Because of its alerting connotation, many people perceive it as unpleasant. Nevertheless, there are those who believe in its positive nature, so some brands even use it to convey the feeling of fun, playfulness and friendliness. Similar enlivening qualities are contributed to orange, so it is often used to stimulate activity, competitiveness and confidence which might be the reason why many famous sports teams use it. The colour of *"Buy Now"* or *"Add to Cart"* buttons of many online stores is in fact orange or yellow, possibly in order to stimulate purchase and make the buyer actually push it. In general, bright colours tend to stimulate people to action, but they should not be used excessively since moderation seems to be the key to successful advertising. Anyhow, the use of some colours is more self-explanatory after all; green is best used to advertise

anything nature and environment related. In addition, it is said to enhance creativity and activism. Another very interesting and versatile colour is black, as it stands for classic elegance, sophistication, luxury and power, which explains its frequent use in merchandising of high-value products. [7]

When it comes to the structure of an effective website, it is important to keep it simple, clear and compact. Therefore a typical contemporary site generally consists of three main parts; header, content part and footer. The purpose of the header, which can be found on top of each separate webpage the website consists of, is to establish the connection between the visitor and the website owner. What can normally be found in the header is the logo, the name, the main menu and eventually a slogan. In order not to take too much focus from the main part of the website, it should not be too big and crowded. The main content part of the homepage offers visitor current and relevant information by using attractive headings and pictures which aim to arouse interest in further browsing and thus make the visitors spend more time on the website. More thorough information about specific things can be found on subpages, like product information, past, current and upcoming events, sales, etc., dependable on the nature of the website. People naturally tend to be repelled by monotonous things, so in order to make texts more readable and generally more appealing to the readers, they should be divided into shorter sections and contain attractive subheadings. The third main part of a typical website is the footer where contact information can be found as well as links to further content that might be relevant to website visitors. Just like the header, the footer also remains the same on all subpages. [8] To enable further interaction with its visitors, websites normally offer a simple way to register; by doing that individuals are urged to leave some kind of contact information and personal data which is subsequently important for further merchandising moves. For that reason, registration is often linked to certain sale offers or discounts which are supposed to increase visitors' motivation and willingness for signing up.

3 EMAIL MARKETING

Marketing via electronic mail services is at its best efficiency once a sufficient customer base exists and a brand is relatively broadly recognisable already. It is a good way to involve existing customers in the business and inform them about novelties, changes in offer, discounts, etc., which is supposed to strengthen customer loyalty and give them the feeling that they partake in the

[7] Smith, J. *How to Use the Psychology of Color to Increase Website Conversions.* Available at: https://blog.kissmetrics.com/psychology-of-color-and-conversions/

[8] Kroll, D., Weber, J., Röder, D . *Guidline for Effective E-marketing for Fortified Heritage,* 2014.

development of a renowned company. One of the sub-goals of email marketing is raising the number of visitors on a company's website by luring them there with special offers; it thus serves as a so-called Traffic Builder. Email marketing can in general function as a link between different forms of online marketing, so it is not at all unusual for companies to include links to social media websites in their newsletters as well. There is a great chance that interesting information, or anything else catchy enough, gets shared among a fair number of social media users, on the principle of word-of-mouth propaganda. Within email marketing there are different ways of establishing and maintaining customer contact by email. What triggers the sending of mail are different actions undertaken by potential and current customers, like registering on a website, the purchase of a product or clicking on a web link. That means that the main part of the mailing system is in fact automatic and runs on its own. Eventually, the sending of emails occurs periodically even if individuals do not react to mail sent to their address. Prior to regularly receiving promotional mail the recipients give their consent, which is normally done when registering at a website, and they have to have the possibility to unsubscribe from receiving email notifications at any given time.[9] To keep receivers from unsubscribing, the mail should be individualised and tailored to customer's needs since one of the main reasons for un-subscriptions is irrelevant content. For the purpose of individual targeting, companies tend to collect personal information. Besides name and surname, that is normally the date of birth and the address, for people tend to react much stronger when personally addressed. It is believed that the subject lines play a crucial role as well; the perfect subject line is rather short and precise so that the receiver knows immediately what the content of the mail is. What should also be checked in case of a high un-subscription rate is the frequency of mailing, for it should neither be too low nor too high. Surveys show that more than 50 percent of emails are currently read on different mobile devices that is why most companies modify their mail, so it is suitable for mobile displays. For the same reason most websites have a mobile version as well. A downside of email marketing is the rising number of actual spam mail which overwhelms the consumers with mail they do not want, so one runs the danger that they will not even feel the desire to open yet another mail that looks like spam. Or the computer software recognizes it as spam, and the promotional mail lands in Junk E-mail folder without the receiver having even noticed it. Moreover, not only that the legislation regulating it is more or less country dependant, it is also constantly changing, so one might eventually find oneself on the verge of breaking the law.

[9] Schwarz, T. *Leitfaden E-Mail Marketing 2.0,* 2009

What makes email marketing effective is the low cost and the fact that a huge number of customers can be reached simultaneously and immediately, but one of its main advantages is that the success of different campaigns, and the business as such, can easily be measured. What can be observed and analysed for that purpose is the number of people subscribed to newsletter on websites, number of open mails, clicks on sent links and the number of people who eventually unsubscribe from getting emails. Such analysis is a perfect way to sufficiently determine customer response based on which companies can change and adjust their marketing strategies to better serve the needs of their customers.

4 SEARCH ENGINE MARKETING

The visibility of websites on the internet is of utter importance for business success because the competition is immense. Search engine marketing tries to ensure that a specific website will most certainly appear in search results and tempt potential customers to click on the link provided. Search Engine Optimization is the process of manipulating the search results that search engines show naturally, without having been paid to place certain results on a higher position. These un-manipulated search results are therefore also referred to as earned results.

The optimozation affects all search categories. Naturally, the user is primarily attracted to relevant and interesting content; consequently a rich content-heavy website plays a decisive role in earned search result placement. Before a website is automatically catalogued for the database, it gets analysed, evaluated and categorised according to different criteria. Therefore texts, headings, pictures and videos have to be utmost unambiguous, clear and topic-specific. One of the more important criteria search engines use when determining the ranking of relevant search results is the time the average visitor spends on a website. But the most important ranking factors are the keywords, so they should therefore be present on every website to a sufficient extend and used in a relevant context on different subpages. The use of synonyms and paraphrases is recommendable as well, especially because the optimal density of keywords is just around 3-4 percent; a higher presence runs the danger of being considered un-natural and consequentially leads to a devaluation of the website. What also influences the ranking is the so-called “backlinks” to the website, which can be found elsewhere, for example in publications, articles or in social media, but the quality and respectability should come before the quantity once again. In addition to that, regular website updating is of crucial importance for visibility in search results.

Moreover, the visibility can be artificially increased by paid inclusion in the result pages. Advertisers can choose from various payment models, one of the more popular is paying per click on the advertisement. One is able to choose the days and the time of advertising, the maximum number of payable clicks per day, etc.. When a search query matches the content of the paid advertisement, the user sees the ad parallel to the natural search results; if the ad is interesting enough to click on, the user lands on the advertised website and eventually becomes a customer. There are many search engines available, but the most used one is indisputably Google, as it represents 90 % of the world-wide market share. What determines the price of paid advertisements there is often the demand for a keyword; words frequently searched are therefore more expensive than those less frequently sought after.[10]

5 SOCIAL MEDIA MARKETING

Another important and effective form of online marketing is advertising on different social media platforms. Its primal aim is to create a virtual community where customers and potential customers can freely express their needs, wishes and opinions. Networks primarily included are Facebook, Google+, LikedIn and similar. One of the most important advantages of social media marketing is that an interesting advertisement can easily catch the attention of network users who eventually spread the content by sharing it among each other. One thing that makes it slightly different from other forms or marketing is the perfect opportunity of a direct personal contact with the customers. In addition to these advantages, all the online activities contribute to improved "searchability" of the promoted website or business in general. The decision on whether to use social media marketing or not depends partially on the target audience, although some presence in social media is recommended in any case. If implemented properly, it is a great means of taking care of the image, proving support, conducting research and strengthening customer loyalty. In order to use social media to the fullest, one needs to manage user-generated content effectively, for instance comments, chats, user reviews, etc.., and use it to one's advantage. Especially important are the latter, namely the customer reviews, considering the ever growing number of online buyers who regularly consult user reviews prior to making purchase decisions. Surveys have shown that 88 percent of online consumers value user reviews as much as personal recommendations and are therefore accordingly influenced by them. According to the same survey, only 12 percent clamed not to read product reviews regularly. Depriving customers of other buyers' reviews can consequently lead to enormous decline in sale,

[10] Kroll, D., Weber, J., Röder, D . *Guidline for Effective E-marketing for Fortified Heritage,* 2014.

meaning that product reviews should be effectively included on every website, not only those which can be found on social media platforms. Reviews represent unique content of a specific product which means a higher authority and more relevance when it comes to search engine ranking. Even the negative reviews contribute to a higher conversion rate and to more sincerity since exclusively positive reviews would be considered rather unnatural or faked. As long the good reviews prevail over the bad ones, all reviews work in seller's advantage. [11] Customer behaviour and actions can easily be measured with the help of tools like Google Analytics, and that can ease the decision on which social media marketing activity to focus on and even which social network to choose to begin with.

One of the downsides is definitely that it demands persistence and regularity since all the comments and opinions should be commented on as soon as possible. A special attention should be laid on negative feedback for it has the ability to draw even more publicity than the positive one. Although, a prompt response can correct a lot because it makes the unsatisfied customer feel regarded and listened to. Dealing with visible problems effectively and timely in general leaves a good impression on the rest of the website visitors. Another downside of social media marketing is that one is most likely to encounter the so-called spammers and scammers whose sole malicious purpose is to spread negativity and to ruin other people's reputation. Social media accounts are frequently subjected to security breaches since hackers are attracted to anything with monetary value, so the decision to enter the social media platform with one's business can definitely represent an additional security risk as well.

6 CONCLUSION

Contemporary buyers do not just blindly go to the nearest store and buy whatever they need. They proceed much more strategically; since they have the world at their fingers, they grab a digital device, check the complete offer currently available, compare the prices and consult other buyers about the quality by thoroughly reading user reviews and chatting on different online forums. With the prospect of growing popularity of online shopping, indicators namely show that online sales will most probably double within a few years, every business should consider strengthening their online presence since having a good and informative website that has the ability to attract and

[11] DeMers, J., *How Important Are Customer Reviews For Online Marketing?,* 28.12.2015. Available at: http://www.forbes.com/sites/jaysondemers/2015/12/28/how-important-are-customer-reviews-for-online-marketing/#3b91f892788c

keep customers' attention is the key to establishing a widely recognisable business identity.

The term traditional marketing refers to the marketing strategies prior to the era of online marketing and comprises direct sales and advertising via television, radio, mail and print. Despite the many advantages modern marketing methods have to offer, there are still some aspects that make the traditional approach unique in its efficiency, and that is why it might never actually become completely obsolete. What works in favour of the traditional approach is the so-called person-to-person selling, which many still consider effective, and the tangibility, for many people still enjoy flipping through printed material in their leisure time. In addition to that, there is still a minor group of customers who are not fond of the digital world revolving around modern advertising, and if a market is primarily online, then the traditional marketing is the only way to reach these individuals. Its downsides are definitely the price and the difficulty to monitor the results and success of separate campaigns due to the lack of direct feedback. In comparison to traditional marketing, online marketing is a lot more time-consuming and unforgiving since it requires promptness and strict consistency across all platforms used in order to maintain a respectable brand identity. Thus, the chance of ruining the reputation and image one has been establishing for years is much bigger.

Unlike the traditional marketing, online marketing is not limited by geographical boundaries for one has the ability to reach audience from all over the world in matter of seconds, at any given time of the day. When it comes to digital marketing, not even the size of the business plays a decisive role since all strategies can be successfully implemented by a one-person business, given they can come up with a strategy capable of raising sufficient amount of brand awareness among people. Neither does its financial standing matter much, because many of most decisive marketing strategies are completely free, for example social media marketing and search engine optimisation. Another thing that makes online marketing utmost effective is the direct communication with customers which provides immediate and genuine feedback that gives a priceless insight into what the buyers really want and paves the way to a complete market analysis. While promoting online, it is important to have both short- and long-term goals set and to constantly check whether they have been achieved or not and to what extent. In case of a failure, previously used tactics need to be thoroughly analysed and the strategies need to be changed and adapted to the needs of the current market. There does not seem to be one form of marketing that could be considered better and more successful than the rest; what works best is a healthy combination of all of them used consistently and in synergy. The internet is without doubt a decisive and indispensable component of the

contemporary marketing strategy, as it offers numerous ways of promoting your brand, product or image. Making a business recognizable and influential on local and global level is nowadays undoubtedly the easiest and the most cost-efficient over the internet.

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LOGISTICS MANAGEMENT IN THE SMART INDUSTRY

Abstract

Research question: The development of logistics and logistics processes is necessarily linked to development processes and technological modernization of industrial production and, consequently, the development of individual logistics processes, which connects the industry with procedures for the preparation and execution of industrial production. Therefore, it is sensible that the logistics management and logistics processes follow the development and changes in the industry and the possibility of their own updating.

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The purpose of the study: The aim of the research is to identify the technological possibilities for the development of logistics processes, which will follow the development of the industry and its requirements. By studying individual phenomena, methods and processes of industrial development, we were looking for ways and methods on how to improve the delivery of materials for production. We collected and observed the actual, empirical and measurable data, we compared them and looked for the claim, through which we could confirm the need for sustainable development in logistics.

The method of the research: We have used the methods of examining both, the individual elements of logistics and logistic processes, and through each stage we looked for possible solutions. The method of interpretation has given us the theoretical views and policies in the research area. With the empirical method, we were looking for similar or identical links from the past that can be measured, and by using certain criteria that can be evaluated.

The results: In the logistics of time adapted to the development stage of the industry, which is the highest level reached in the late industry 4.0 when it is actually assumed the role of supply of materials, transport, storage and care for the environment. The finding showed us that the logistics management through industrial development keeps pace with technological progress and the industry is constantly looking for suitable methods and technological approaches to provide adequate responses.

The results of the survey: Logistics adapted to the developmental stages of the industry, with the highest rate in the latest industry 4.0, when it actually took over the role of material delivery, transport, storage and environmental care. The finding has shown us that logistics management through industrial development follows the technological progress of the industry and has always sought appropriate methods and technological approaches for providing appropriate responses.

Research limitations: In the process of finding appropriate management guidelines, we were linked to the study of individual processes and processes of logistics in the industry, which, due to business, innovation, technology and other secrets, however, we had limitations in acquiring certain data and we knew that some data will remain disclosed.

***Keywords**: management, logistics, processes, smart machines*

1 INTRODUCTION

The development industry has always been linked to the management of logistics, logistics and logistics processes, which are a key part of the service activities of each organization and vary depending on the form of industrial production, and should therefore be kept studying and through this study the possibilities of modernization should be explored, as well as, cost reduction, use of technology, relevant organizations, management and administration (business and management) processes. In management there are several interrelated management methods, of which industrial production, market supply and consumption, distribution, exchange commodity trends and international trade are time-dependant. The element of the control of international competition, production expansion, management, service industries, adequate care, supervision of production processes, use of modern technologies, market monitoring and consumer acquisition is of great importance.

Management of logistics provided advanced technology in the implementation of logistics services to meet the needs of industrial production. These are processes that are necessary because the industrial production changes, a digitized form of governance of new technologies is being introduced, as well as, changing the way of life, the need for new and sought-after products is being risen, what directed industry and logistics management into finding technical, technological and professional solutions that will satisfy the needs of man (consumer).

Various artists illustrate the historical development of industry and state that the development of the industrial period began with the industry 1.0, which covered the period from the end of the 18th century and resulted in the introduction of mechanical production driven by the power of water and steam. Through the sustainable development, logistics management has driven industry and science in the search for new development opportunities, which reflected in the development period of the industry 2.0, which continued in the 20th century, with the beginning of the introduction of electricity (until then it was unknown), with the introduction of numerical production. For the first time a production line was introduced, in which workers performed only certain works in the sequence. The findings tell us that the greatest impact on the development of industry had World War II. It caused the destruction which resulted in the development of a new industry 3.0. Its effect was seen in the early sixties of the 19th century with the introduction of the first forms of information systems and the first semi-automated machines into specific manufacturing processes. It was about the initial forms of hardware and automated equipment, which performed more

demanding physical work, such as lifting, pressing, transmissions and similar. Undoubtedly, there was great economic progress in industrial production, transportation, storage and processes that were essential for the preparation of industrial production (loading, stowage, lifting, transfers, internal transport). The first forms of logistics information systems and information technology occur in order to be used for inter-organizational networking [1]. The development of logistics management and service activities should be sought in the development of the industry 4.0 since a big leap in development, thinking, technology and especially the needs of man for the latest product, a newer form of life, was made. However, the development of the intelligence industry 4.0 completely overshadowed all the hitherto industrial development period in many ways and today it represents the technologically highest form of organizing industrial production, which has still an impact on the nowadays market, market conditions and the consumer undoubtedly. The industry 4.0 refers to the intelligent networking of machines, people and processes in the industry with the help of information and communication technologies that allowed a direct networking [2]. A modern infrastructure was developed, as well as, a modern mode of transport, various forms of transport, which encouraged the development of a new era in industrial development [3].

A new intelligent revolution took control of the achievements of science and industry. Automated equipment, automatically guided machinery, equipment and cradles were taken over by the computer with its software called the Internet industry integration. It is about soft management in the sustainable development of the industry. Its goal was to achieve effective results and meet the wishes of the market and consumers by minimizing interventions in nature and natural resources. The leap from an analogue system of management of technological processes in the projection of the digital world was made, through which thousands of times greater connection capability was provided. The machines became automated and they were run by software and equipment, respectively robots. It was a period of development that created smart factories, there is a virtual reflection, a virtual design, virtual manufacturing and virtual processing [4]. Management followed a sustainable development that did not stop and sought to ensure the rational use of natural and other resources, which provided new products in the industry, the economy and general use.

There is a new break the industry on the way, which is reflected in the guidelines of the industry 5.0, in which science and industry expect the personalization of production and the full cooperation of the man and the new age of smart devices (machines, robots), from which it can be concluded that the man and the machine will fully cooperate with the system. The sense

of the future development of the industry is the personal relationship of man with the machine and the robot in the appropriate efficiency and creativity in the industry. The industry is using science and technological processes continuously develop procedures and processes of production, which should preserve energy, human health and the need for new developments. However, it should be understood that the industry has achieved through technological development, through the development of the Internet, informatics, information systems, computer science, management digitization processes, the introduction of modern production methods, the introduction of robots and smart technology a greater economic impact. Aware of the rapid economic development, technological advances, economic and commercial competition, rapid changes in production, the increasing digitization of production and other processes, robotics individual processes, the industry created the need for investment in the development of technology for the purposes of providing logistics and logistics processes in the industry and beyond [5]. All these stages require appropriate management, oriented outsourcing and customized guidance.

1.1 Scope of research management in the smart industry

In the phase of globalization of industrial production and the market, it has led to the elimination of logistics, logistics processes and logistics processes of production and to a massive dedication to the industry to produce its own product, all because of the recognition that any activity in industry or elsewhere, which is not directly linked to production, an activity which is a burden to the industry and these procedures, should be considered separately.

At this stage, a question occurs: what does actually the industry 4.0 means in the service activity, management and sustainable development of the industry. There is a new generation of technologically advanced generation and the industry 5.0 on its way, which tells us that in the industry 5.0 screws communicate with robots for assembly, self-propelled fork-lift trucks store goods on high shelves, intelligent machines coordinate production processes independently, employees or associated with machinery and the products are directly connected to each other.

It is about a continuous development and coordinated management, which show production flexibility and integration of production within the industry and among several different industries. They are connected by a digital network connected by internet, linking them by international internet. Therefore, the smart machines are better spent, as well as, consistent processes.

One has to understand that this late part of the industry 4.0 by introducing new parameters of the smart industry 5.0 brings recognition of the need for greater cooperation in the production of the industry with management and logistics utilities work. Appropriate management of logistics with the use of certain technologies, automatisation and systematic management enables the logistics cost reduction in the pre-processing and after production [6]. Certainly in the development of the industry 5.0 science and industry expect a reliable production development, where the production line is constructed in manufacturing modules, which will enable quick change frameworks, quick assembly of new tasks, improve productivity and efficiency, individual or individualized products will be able to produce in small quantities at affordable prices.

Logistics management through the sustainable development of the industry and its constituent components tends to focus on customers, consumers, where consumers and producers in the field of interest are brought together. The management attraction resides also in a modular system, which is reflected in the consumer design, where customers can create their own products in accordance with their needs and their desires.

At the same time it is interesting that the aim of the modern industry is that smart products, already delivered and used, send response data to the manufacturer, independent from the user. These response data are used by the industry reasonably in order to improve their own product. Consequently, the manufacturer uses the response data knowledge to produce new modern and improved products or new services. Through the sustainable development the logistics management followed the algorithm and calculating of the ideal infrastructure, the nearest and the most matching routes of delivery, as smart machines, independently of the module, report the need for new materials or new products. This way a new age of smart grid is built that allows optimal flow of goods, products, orders allowing continuous cross-organizational integration.

The modular production data are strung and tied to the production or to the state in the production, logistics or other processes. They are combined and evaluated according to the industry guidelines 4.0 and the directions of the industry 5.0, where a continual and sustainable development can be seen. Appropriate management in logistics allows data to be sent both to the supplier, the manufacturer, the customer and the buyer at the same time. Acquired data should be regularly analysed. Based on the findings new development processes, new trends in design and usability of the products and thus guidance to more modern production are prepared. The aim is to prepare a scientific foundation of new and more useful models, either in

industry or in other economic branch. The improvement is mainly featured in smart technology for the user, which is attached to sensors, touch, digital administration and management, satellite management and administration and similarly.

Logistics management through sustainable development requires from the industry, media service processes and the user to handle products so that they are useful as long as possible, and that they ensure their responsiveness and traceability. The aim is to ensure product data orientation throughout their use. From the view of logistics, it is necessary to fundamentally ensure the form in which materials can be recycled, which ensures the material cycle, circular management and sustainable development [7].

1.2 The basic hypothesis of the research

Logistics management in the smart industry performing sustainable industrial development, sustainable development of logistics processes using the industry 4.0 as a transition into new age of the upcoming industry 5.0 requires the introduction of new technologies and modern information systems that will enable the implementation of certain procedures and processes in the stages of pre-production and later in the process of care for the final products. In recognition of these requirements, we came to the conclusion that the values of logistics management must be involved in smart technology (computer-programmed equipment) in order to balance all the processes (they realized that logistics is as important as production) to the final product. The smart technology will enable fast, accurate and professional support to industry [8]. For this purpose, we have set our hypothesis "Logistics management in the smart industry is a part of technological progress" and opened the question whether it is possible to use modern facilities (intelligent machines) with the appropriate management in the logistics processes. By comparing the observable, empirical and measurable data liable to certain criteria we recognized guidelines of the industry 4.0 (FoF Factories of the Future) and the requirements for a rapid response to development requirements of the industry 5.0.
In the developing industry, logistics management and its processes, we recognized an implementation of delivery, carrying, dispensing, scanned, weighing and other equipment, with which we wanted to eliminate the time and service errors in the individual phases of logistics services. After observation, experimentation and creation of new processes a result of successful research work has shown. At the same time there was a guidance of how to direct research into new virtual change in industrial production.

1.3 Objectives and vision of the outlined research

People speak and write about the logistics management the whole time of industrial development. Particularly, it can be explained that the service industry has used existing technology, information systems and has placed new technology in industrial processes since the seventies of the previous century. Otherwise, it should be understood that the then computer PC slowly and steadily came to industry and revolutionized it, using the former information technology, with the help of management and the first computerized automation. Over time, there has been a recognition of the digital data transmission system and the digitalisation of the world, which has accelerated the development and digitization of production, with which the vision industry for a new quality of global integration through the industry all over the world (internet connection) was realised.

Studying achievements of science, technology and industrial development, we directed the goals and vision of our research on finding items that will show the role of management through the sustainable development of individual processes, which ensures precise, safe, well-timed material supply for the needs of industrial production. The industry management followed the guidelines of technological progress and wanted to eliminate the physical form of work in logistics and, in accordance with the new technology, to use methods and achievements, which will enable the use of technology in the implementation of logistics and logistics processes. The path led to the provision of logistical procedures and processes that will ensure fast and smooth operation of industrial production. We were looking for consistency of application of advanced technologies and technological systems "Just in Time", which provide fast delivery of production materials. To achieve this, we used through management of logistics, due to the time of alignment, automated equipment (robots) to provide processes during preparation, transport, packaging, scanning, packaging, storage and loading. In terms of research, our vision aimed at finding flexible ways to implement logistics in industrial production, how to use the hardware to improve logistics processes and how to enable the production running smoothly in the industry. In the process of introducing technology in logistic processes a digital network had to be used, with a variety of interfaces between the different users and different suppliers, which required constant search for appropriate solutions and monitoring of industrial production. Our goal was to acquire new knowledge for improving industrial production through logistics management with the help of studying phenomena by gathering observable, empirical and measurable data undergoing measurable thinking.

2 THEORETICAL BACKGROUND OF THE RESEARCH

2.1 Guidelines on logistics management in a smart factory

It has to be understood that the guidelines for theoretical sustainable development are oriented after the trends of industrial development, which follows the development of the industry generation 4.0 and all the innovations are placed into the development that make the faster and easier performance of required processes. Science, experts and scholars present digitization as a phenomenon and a tool for management of intelligent machines and we cite that digitization arrived in the middle class long ago. We explain that it is about citing in the industrial context, which explains that the technology is not only the primacy of the leading and managerial class of people in the industry, or wider, but also the technology involved in the production processes, which undoubtedly leads to changes of business models, products and processes, changing requirements for physical work. Therefore, the guidelines are oriented to teaching staff in order to conquest various skills, so that they follow digitization of industry [9]. The guidelines include digital production of the industry 4.0 and introduction workflows where automated machines are bearers of the work and the worker is only as a supervisor of the work automation.

In the future, we see a general communication and performance of man and machine in a digital world [10]. The guidelines of the industry 4.0 as a catalyst, as a moderator of different interests and ambassadors, provide a competitive exchange of all relevant stakeholders from politics, business, science, trade unions and associations. They are listed as an essential platform, which is one of the world's leading industrial 4.0 networks, which develops the basic concepts in working groups on how to tackle the challenges on the way to the industry 5.0. At the same time it also gives concrete recommendations to science, economy and development policy. Consequently, development guidelines enable national and international exchanges with a number of bilateral and multilateral cooperation, particularly in the field of safety and standardization of information technology [11]. It is the understanding that we all want to know everything, although we know it is not true. Responsiveness depends on both labour and capital, industry and market, consumption and inquiry.

The feature of logistics management in the sustainable development of the industry is in its constant technological and organizational development and advanced search of technology, IT, digital and other elements that would facilitate smooth industrial production, reduce costs and ensure the market. These guidelines have become a synonym for the introduction of a fully autonomous processes of pre-processing, production and special production

processes which should enable better goods to a buyer [12]. This is a logistics management, which is reflected through the introduction of an autonomous packaging, palletizing, storage, delivery, etc., with consistent use of the industry guidelines 4.0 [13]. Industry wants to provide a fully autonomous system of data processing, procurement, production plan and production through its production in the manufacturing and service industries.

The aim is to combine the data with mathematical optimization intelligence, which is a basis for the development of IT tools for the design and operation of industrial production systems, taking into account the achievements of lean manufacturing processes, as well as, in logistics [14]. Nevertheless, it should be understood that there is a set of tools to detect and promptly eliminate undesirable losses, wastage, improve quality, shorten production time and reduce costs.

2.2 The importance of logistics management in a smart factory

The research has shown that the division of individual production processes in the interior (clean production) and external (logistics), in its initial phase, signified care of the industry management for product and directing all technical and technological processes into a design, improvement and attractiveness of each product. Posterior mathematical and financial observations showed that a negligence of logistics would mean a time hindrance to production. Therefore, it came to a discovery that logistics is essential for the industry because there is a series of preparatory and implementation work and tasks, without which the industry cannot assure its mission.

The industry has gradually recognized that in the process of development of the logistics industry 4.0 the possibilities of development that will follow its production must be assured. In the phase of a review of the role of logistics management, we were looking for a platform for the use of modern technologies and systems that are already provided by the industry guidelines 4.0. So, the type of a product and the number of pieces that have to be brought from the warehouse into production or to produce, are recorded on the magnetic card Kanban. The magnetic card Kanban tells to a consumer (a robot or a machine) Kanban magnetic card tells what must be brought at some point, or produce, and how much to take away. A smart machine as a customer always takes only as much goods as required. On the other hand, a manufacturer has to supplement the amount again in a particular process order.

The Kanban system explains that it is suitable for a big industrial serial production, where there are fewer fluctuations in the need for changes and where a steady and balanced production process are assured [16]. Through the system the importance of the development of individual parts and the whole is shown.

2.3 Logistics Management, as an exclusive support to autonomous equipment

Management of a smart factory is based on the simultaneous development of the components that accompany communication between equipment and people, provide leadership and management. They provide information about the communication flow between all the factors involved in the production, they recognize changes and allow rational work, rational use of energy and the proper management and administration.

When we use the concept of autonomous device in the industry in the simultaneous sense, we are looking for an exclusive starting point to support management in the sustainable development of logistic processes, which should be updated in the future to perform individual tasks. In our research area, we recognized that it may be exclusive support in industrial production, to perform logistical tasks of AGV SMARTCART 100TT (Automated Guided Vehicle), smart fork-lift trucks and other transport equipment of various shapes. These are autonomous devices used to transport goods and materials from the handy storages in production [17]. These smart devices of the new generation, which as components make decisions by themselves, they carry out their own processes and they renew energy (charge batteries) by themselves. They work by using tracking according to the method of fixed tracks along the planned path, that are accurately encoded in the program, wherein the robot follows a magnetic tape (or other form), which is its infrastructure, using RFID technology, and is connected to the manufacturing system, which controls the path of many robots. These are the first autonomous devices, which can also be used for the implementation of logistics and providing logistics and logistics processes in direct relation to industrial production. Other forms of autonomous devices are also recognizable that perform the material transfer at certain points, such as robots in the form of a hand that perform certain movements in the stages of production, where a man is not capable of doing it. There are other forms in the development that are checked and tested in virtual procedures.

3 METHODS

3.1 Need for management in logistics

Development of management in industry and economy is linked up with the growth and development of the industry, as well as logistics. Logistics management changes over time qualitatively, the characteristic of the variation can be defined mathematically, according to time, economically or with the concept of economic growth and economic development. Economic growth includes growth of created goods and services that industry can achieve quantitatively with a larger scope of work, capital, and energy or with increased productivity and efficiency as a result of the application of knowledge of the existing production factors.

Subjectively, economic growth can also be interactive through the appropriate forms of management in production and logistics management. The global industry is always in constant movement, development and looking for the best development solutions and it never stops. A causal factor for changes was globalization, which led to severe economic competition, and therefore to rapid changes in both the technological and organizational field, which has a direct impact on changes in organization and management. This process continues changes and looks for new challenges and a place for its expansion.

We know that industry develops only and solely due to changing consumer's desires, needs, habits, status, importance, populism and the likewise, because there is a habit on the side of consumption which they must adapt to production. Industrial management and forms of governance and management within the industry are a result of synchronous and intertwined processes on the production side and consumption.

Autonomous technology and autonomous equipment are factors that can and will impact on the development, so the industry is constantly focused on finding new and innovative solutions. Since logistics is an integral part of the industrial production globally, it is possible to understand that logistics and logistics management follow the same directions.

3.2 Useful technologies in a logistics smart factory

Technology has been present in logistics since the beginning of the development of industry and industrial production, namely the technology originally represented the forms of devices that can carry out heavy work such as: lifting, storage, sorting and likewise. Using a modern autonomous

device or robot AGV SMARTCART 100TT (or other applicable autonomous devices, machines, robots) in preparation for the production and the production itself, presents a novelty. The devices were first used in the automotive industry, household appliance industry, pharmacy, food industry and later much broader.

Logistics management proposes using intelligent autonomous devices in the form of a robot that autonomously and according to a certain pattern lead material in production and supply a production line or carry out other activities, for which there is no need for a man to perform. An intelligent device can perform the work during the phases of production, or collecting the final products in the process of preparation for storage or transportation [18]. Logistics management orders to the fact that the introduction of autonomous appliances or equipment at an early stage, which means that the process of reducing the number of jobs, operators and the introduction of computer control has started.

Technological support in logistics means for the industry: cheaper services, fewer employees and more savings [19]. Logistics processes in a rough context means the course of the material from the supplier, through internal production processes to customers. How this is done depends on: the organization of processes, use of scientific and functional methods that directly facilitate the implementation of individual processes. This is a complex management, which is also present in logistics and provides coordinated, lean, lossless procedures or processes that are appropriately managed and has an adequate information system and technical support. This allows us to explain that the management and efficient logistics is crucial for industrial production and it is particularly important as a cost factor in the price of the product. It is an intellectual capital of man and machine merging in the process of industrial production, for the purposes of development.

4 RESULTS

4.1 Specific support to management in the logistics of the smart industry

Among the results, it should be noted that the industry and the whole economy strive to introduce smart technology and monitoring the situation on the world market as required by the guidelines and the industrial development of generation 5.0. This need is particularly evident in the automotive industry, which introduced, specifically for its own research, a

new virtual world, on which the new modern and technologically improved production methods are grounded. Through digitization, using computer software equipment and simultaneous programmes, the research departments in the automotive industry develop virtual programs, which allow the formation of imaginary individual tools for the production of motor vehicle parts. We should understand that with the development of new technologies are also developing trends in logistics management modernization simultaneously, which reflect on the management of the warehouses where the work is performed by robotic fork-lift trucks and other robotic means of transport, where applicable voice guidance operators or workers are used. There are installed systems for accurate location of the position of the worker or the means of transport are installed. There is also a visual direction of workers for process managing installed. For the managing of autonomous devices they use artificial intelligence. In the field of transport organization, where planning and optimization of transport processes take place in the context of interactive cooperation between different information systems, is similar. This is the logistics industry or service area, where they already use autonomous robotic vehicles that perform those difficult and demanding work that are dangerous for humans or they present a loss of time. Through the new management there is a strong tendency to use alternative sources of energy to perform various logistic processes and procedures. The logistics information system is useful to support obtaining the relevant information about the storage or transportation while supporting the inter-organizational integration of different organizations or different industries. Management enables the connection of all types of storage and transportation capacity, the integration of all infrastructures (road, rail, water and air), there are also all means of transport included. Appropriate containers are standardized; they are adapted in the process of storage and transportation in a way that they correspond to all forms of transport vehicles. In the modern transport there are gas or electric vehicles (here, a specific way to support the development and protection of the environment can be seen) increasingly used. There is also significant progress in the development of mobile terminals and communication technologies, which enable permanent connection to the Internet and small terminal devices in vehicles on the road with stores, with customers, etc. Today it is impossible to speak in a competitive market, if there is no appropriate support information system and if there is no relevant use of modern technology, because without IT support, barcode and GPS, navigation logistics system, impossible to perform logistics.

The introduction of new technologies, compliance with the guidelines of the upcoming industry 5.0 requires the use of RFID and robotic manipulators. A concrete support is shown in the development of robotic and intelligent

transport, in full traceability of goods on the way, in introducing new ways of identifying with one-dimensional, two-dimensional and multiple dimensional bar codes, radio frequency identification and broader. The concrete support of the industrial technology is a means for reducing costs, increasing its offer, expanding production [20].

Picture 4.1: Inter-organizational networking of industry, warehouses, transport and market

4.2 Intelligent systems and technology in the process of logistics management

Industrial and logistics management are oriented in the way that they use to use modern equipment and systems, enabling them to monitor: the situation in manufacturing, logistics, managing and maintaining market competition in their processes. These are numerous intelligent technologies and information systems for the collection, storage, processing and transmission of data.

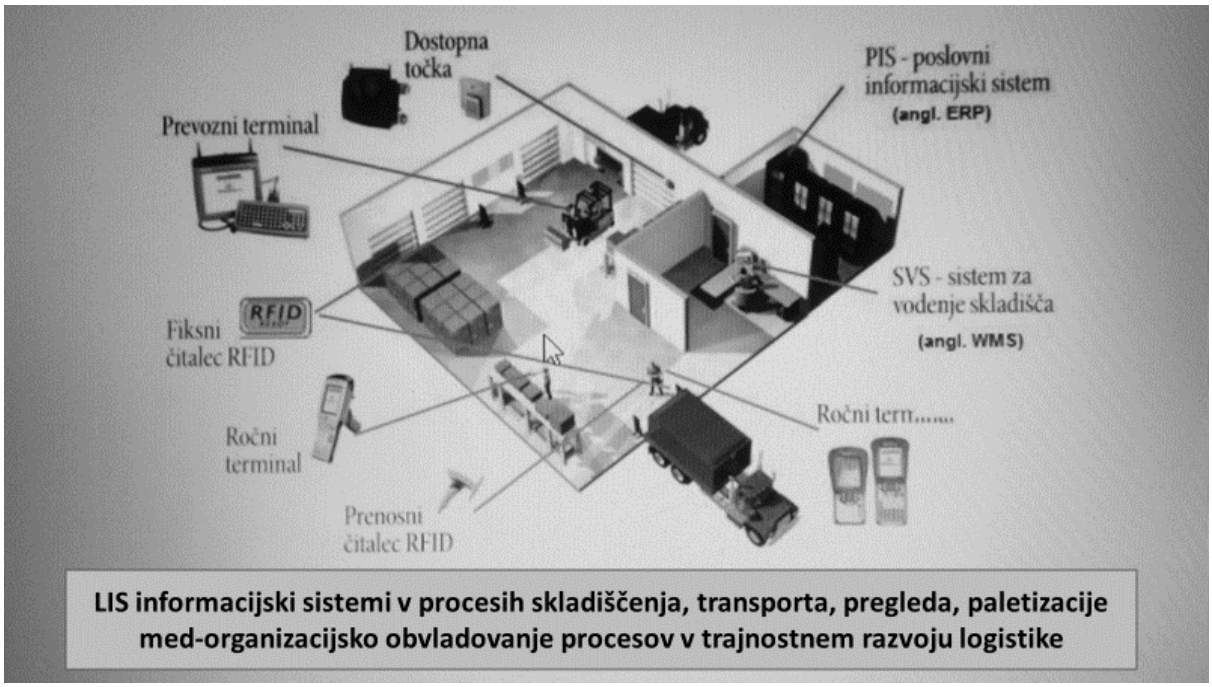
Because logistics, with its logistics processes, is included in the total price of the sold product, industrial and logistics management is obliged to integrate business information systems (Enterprise Resource Planning) into the procedures and processes of preparation and production, which represents comprehensive software solutions for industry and its available capacity.

In the management of the logistics process of storage and handling of goods in production and from production to market using WMS (Warehouse Management Systems) system, which enables the management and

warehouse management, and provides information support for logistic processes in the warehouse in terms of products receiving, storage places, picking, issuing goods, control of the situation, need to supply. The system fully supervises, monitors and updates storage process and it is directly linked to the operating system and the industry as a subsystem to support the industry.

All operations take place with the help of wireless mobile terminals, without the use of paper and promptly transmitting the data back to the ERP system. The system uses identification technology in the form of radio frequency identification, bar codes. A new age technology enables voice guidance and management using lights. The support is perfected by the management and follows the guidelines of the industry 4.0 development [21].

In the context of our study, we used a certain intelligent or smart equipment (technology), which carries out the logistics processes of entry materials in the production, implementation of internal transport and processes related to production and the tasks and processes, whose task is to review the final products, their preparation for transport and own transportation.



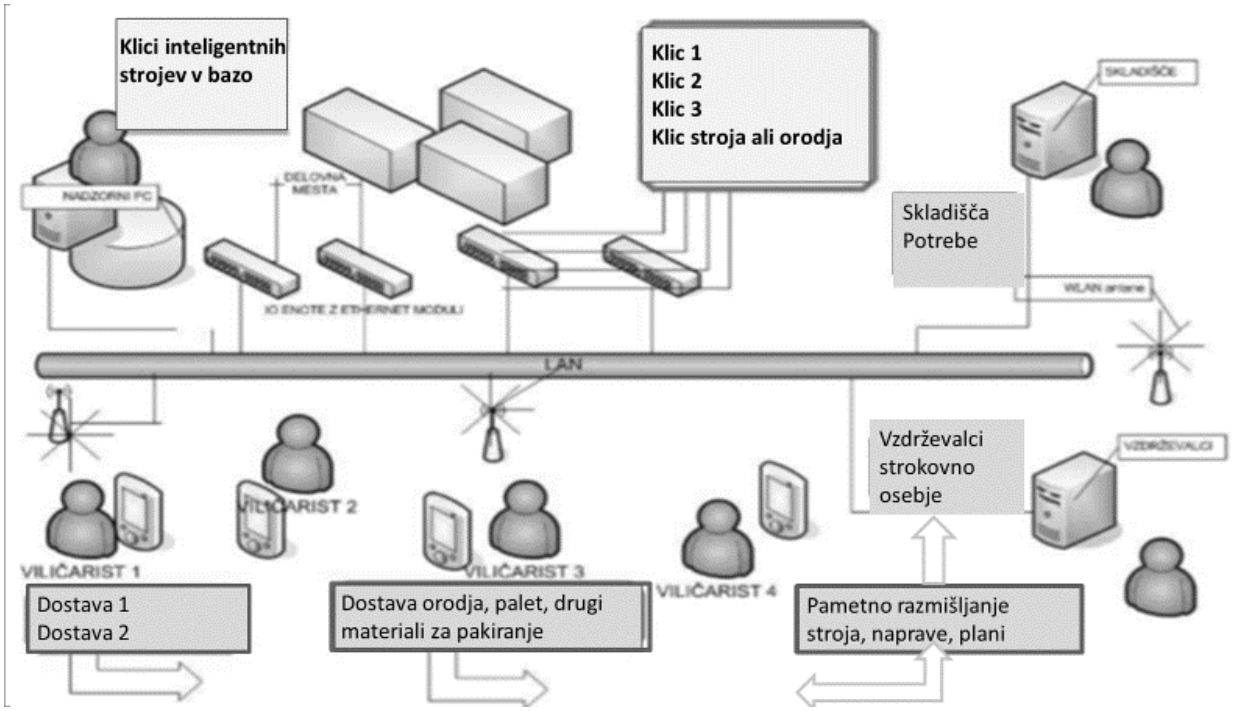
Picture 4.2: LIS (the information systems in processes of storage, transport, examination, palletizing)

With the help of technology and computer software we were looking for advanced implementation procedures and at the same time we were

eliminating potential errors and difficulties. The aim was to accelerate a new age of intelligent logistics work to eliminate errors and prevent emerging logistics and manufacturing complaints, which required, in accordance with the industry 5.0, the use of known and tested methods in the world. There are a number of techniques and procedures for the development of logistic processes, which can be seen in sequence and enable faster manufacturing, precise procedures, shortening the time of individual services and lower costs.

In the eyes of the management the lean production is general philosophy of process management in the industry, which helps improve the overall values of key performance indicators (KPI Key Performance Indicator). It is a set of tools to detect and eliminate ongoing losses, improve quality, shorten production times and reduce production or logistics costs. The system was developed in TPS - Toyota Production System, where they established the philosophy of the organization of production and logistics, including the interaction between suppliers and buyers. The production is supported by various logistical tools, among which the most well-known processes of continuous improvement are Kaizen and Poka-yoke.

The goal of lean manufacturing is to achieve a steady flow of work throughout the production, which alone sensors errors, jams and replaces them with new, advanced flows. Using the Japanese method Kaizen in industry and in the logistics process provides continuous improvement, which is designed as a long-term process, integrated in the industry. The basic purpose of the use of the modern method has been continuously improving processes, application of new knowledge, experience and skills of all employees in the company. In the process of sustainable development is industry in the process of improvement of quality, productivity and production efficiency using other tools, methods, techniques and strategies (6 Sigma, 5S, 20-key, integrated management productivity, Total productive Maintenance, SMED, Just-in-Time and Just in Sequence) .



Picture 4.3: Diagram of information flow in the process of implementation of logistics processes by the method of KANBAN

Management of logistics in smart factories suggests using the method called Total Productive Maintenance, which is reflected in the total productive maintenance. It is a method of management to improve the efficiency of intelligent software. Since it is universal, it can be used in any production or logistics systems, regardless of the stage of development of the organization. It focuses on maintenance as a necessary and very important part of the business performance, it does not reflect, however, as a non-profit activity or cost, although it is present in all forms of industry. The goal is to eliminate losses in the initial preparation and production and to achieve production efficiency, which includes all employees and relies on teamwork in pursuit of ideas for improvement, it fosters an employee's feeling of ownership, for their facilities and workspace, it maintains systems for the equipment and production and it extends the lifetime of machines and allows all employees to continuously acquire additional skills and knowledge. The method SMED (Single Minute Exchange of Dies) has a significant impact on the sustainable development of the logistics processes as well. It is to determine the minimum time to set frameworks, tools or preparation of the smart machine, production line for the functioning of each product. Setting up the equipment, machine and production line for each production process lasts a certain time, which the SMED method tries to shorten. The goal is to enable and adapt the machines for the manufacture of another product as quickly as

possible. There are also many other methods useful, which cannot be mentioned in the context.

4.3 Expected effects of logistics management

Identifying sophisticated methods and systems of management in finding solutions to improve logistics in the smart factory, setting up of automatic generation of individual processes, production preparation, preparation of plan of customer orders, production machinery and equipment, etc. requires the introduction of modern logistics processes supported by technology, logistics information systems, business information systems and support tools for production. Expectations have been achieved in various fields, namely already in the introduction of AGV devices (conveyor robot), the introduction of smart lines, smart forklifts and other equipment that has brought certain effects, which are measured in time, the number of operations carried out, in a quantity of material treated, weight, etc. Individual consuming processes have been eliminated. As well as, individual inefficient processes and operations that present the physical transmission of materials, continuous recording and the mathematical processing of the data. The tasks, which imply a waste of time and space, have been eliminated and new products have been introduced, as well as, new procedures, new operations, which represent the progress of the entire industrial production, which constitute the sustainable development of logistics processes in terms of development of the industry 4.0.

The system of modern intelligent logistics software is being developed as a product of all the methods mentioned in this chapter, the autonomic system is achieved and personalization of autonomous equipment or the collaboration of man and machine, respectively. The junction of human knowledge and intelligent machine is achieved through management, which together forms the intellectual capital of the industry.
During these procedures, the sustainable development of logistic processes is evident, the visible effects can be seen in the detailed processing of the data, the implementation of individual procedures, and professional implementation of logistics processes and appropriate education of operators in industrial production. With the shown operations using autonomous software, modern IT, business and other connecting systems in logistics, we have confirmed our hypothesis.

5 DISCUSSION

In this particular case, we were looking for data and results of the use of automated equipment, intelligent devices and logistic systems, which would

support logistical management in the smart factory and strengthen industrial production.

The goal was to automate and improve the individual processes and procedures and logistics industry to provide both savings in time, space, means and used materials through logistics management, sustainable development and specific tasks. This is undoubtedly the result of teamwork, experience, underpinned by the methods of finding solutions for reducing losses in the process of preparation and production, and in the final part of products' storage and the improvement of fluidity and productivity in the automotive industry.

Although we knew that in science (in practice much less) everything is relative and everything can be upgraded, supplemented, modified and innovated, we persistently searched for those elements, models and advantages that would give us the answer to everything that can be done, in order to provide industry with appropriate management, competitive advantage, product improvement, and the provision of the market.

The development of management in logistics in smart factories is by far not completed and will follow the technological, material, systematic and research field in the industry. Intellectual capital industry strengthens, develops and conquers the universal width, therefore, new changes are expected in the future, such as new technologies, new methods and new developments. This tells us that the survey is not complete, to continue with the goal of finding new opportunities, better solutions and competitive advantages.

6 CONCLUSION

We have found that logistics management in smart factories represents processes, information, equipment, systems, automation, visualization, digitization and a number of other processes that define information, networking and collaboration as a key factor in helping the industry in its control of production and achieving development. The task of management is to transform the industry, transform human beings and its needs and establish logistics and production, which will be oriented towards protecting the human environment, in the production of those items and devices that will help human development. The task of management is to provide broad support for the development of intellectual capital of industry and the expansion of industrial agenda.

Management in the logistics of smart factories should be understood as a support and development of all areas of industrial production in order to control competition, to provide human needs, environmental quality and social justice as triple bottom line, where the basic vector is technology, and this is why it is a constantly evolving process. The introduction of smart technology and development of smart factories is the main module of management in the sustainable development and modernization of industry, therefore, each modernization of production, logistics and logistics processes is a systemic improvement. We have set up a hypothesis that has been explained professionally confirmed by a review. Practical findings and the study of literature gave us a theoretical basis for confirming our assumption, which proved to be necessary. The field of research is deeply embedded in the development of the industry 4.0 and using automated equipment and intelligent systems go beyond the limits of the current development, which tells us that the industry's 5.0 guidelines are slowly developing, which will fully digitize the world and everything around it. Our work is far from complete, and we look forward to new findings.

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Robert Mašera[14]

TEAMWORK AND GROUP WORK

Abstract:
A team is a group of people with a full set of complementary skills required to complete a task, job, or project. Team members operate with a high degree of interdependence, share authority and responsibility for self-management, are accountable for the collective performance, and work toward a common goal and shared rewards(s). A team becomes more than just a collection of people when a strong sense of mutual commitment creates synergy, thus generating performance greater than the sum of the performance of its individual members.

The purpose of creating teams is to provide a framework that will increase the ability of employees to participate in planning, problem-solving, and decision-making to better serve customers. For teams to fulfill their intended role of improving organizational effectiveness, it is critical that teams develop into working units that are focused on their goal, mission, or reason for existing.

Many times, when you're hired or promoted into a leadership role, the team is already there. You have to adapt your ideas and plans to fit the knowledge, skills, and abilities of the existing team.

But sometimes, you get to create your own team. It can happen on special projects when you're pulling people from different departments, or when you are creating a new department.

Key words: team, group, organization, leader, productivity

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1. INTRODUCTION

In the business world, the words “group” and “team” seem interchangeable, but smart entrepreneurs realize there are subtle – and important – differences. Recognizing these differences early on will help business owners and managers to achieve their organizational goals with the staff on hand.

What is a group?

A group in the workplace is usually made up of three or more people who recognize themselves as a distinct unit or department, but who actually work independently of each other. For example, a small business may have a client services group, but one person may focus on local clients, one person may focus on regional clients and a third person may assist those individuals. Also, groups tend to be permanent fixtures with ongoing goals or responsibilities.

What Is a Team?

A team consists three or more people who may come from different departments within a business, but collaborate on the same purpose, goal or project. For instance, before your business creates a new product, you might organize a team composed of people from all departments – engineering, finance, legal, marketing, etc. – to think through your potential new product and avoid costly surprises down the road. With a team, individuals recognize the expertise and talents of others needed to achieve the team’s goal. Additionally, teams are often formed for temporary assignments with one specific goal, focus or outcome in mind.

Why Form Groups?

Managers recognized many years ago that two heads are better than one, thus small businesses have turned to groups or departments for many reasons. With group work, members have a shared knowledge of the group’s objectives, but specific tasks or responsibilities are assigned to different individuals. By separating work into groups – such as one devoted to marketing, one devoted to accounting, etc. – individuals within those groups are able to maximize their expertise on a long-term basis.

Why Form Teams?

Businesses form teams usually to tackle a specific goal or project with the intent of leveraging the collective expertise of a variety of people. Because experts from various departments are involved, teams can avoid potential

problems early on in a project. For instance, a team of only engineers may create a new product but may not understand whether it's affordable until someone with a finance background completes a "return on investment" or ROI analysis on its feasibility.

Having a finance member involved in the team from the beginning will help the engineers to create an affordable product in the first place, saving time and resources. Teams can be very productive because involving people with different talents provides teams with increased opportunities to work more efficiently.

Researcher R. Meredith Belbin came up with nine team roles through a study conducted at Henley Management College. He identified the team roles after observing the behavioral tendencies of individuals within a group. The team roles consist of three categories: action-oriented roles, people-oriented roles and thought-oriented roles. Teams formed on the basis of Belbin's categories are effective in achieving their objectives because there are no overlapping roles or missing qualities in the team.

The nine Belbin team roles are: shaper, implementer, completer/finisher, coordinator, team worker, resource investigator, monitor-evaluator, specialist roles and plants role.

Action-oriented Role: Shaper

In a team, the shaper role is performed by people who are dynamic and relish challenges. Rather than quit when faced with challenges, shapers maintain a positive mental attitude and strive to find the best ways to overcome challenges facing the team. Shapers are extroverts and possess great interpersonal communication skills and work toward motivating other team members.

Action-oriented Role: Implementer

People who play the implementer role in a team are those who actually get things done in the team. They are practical, efficient and well-organized. Implementers turn the team's ideas and thoughts into actual plans. Because of their conservative nature, implementers are rather rigid and slow to accept change in a team.

Action-oriented Role: Completer/ Finisher

Finishers have an eye for detail. In a team, they're regarded as perfectionists because they're the ones who detect errors or omissions and strive to ensure

that the team adheres to deadlines. They're neat and self-conscious and worry at the slightest sign of a problem. Finishers also have a problem with delegation; they would rather be overwhelmed than share their work with others.

People-oriented Role: Coordinator

Coordinators are seen as possessing the traditional team role. They're mature and confident in nature and possess great listening skill. They guide the activities of the team to what they identify to be the team's obligations. Coordinators are good at delegating duties, but they may be manipulative when it comes to directing the team toward what they perceive to be its goals.

People-oriented Role: Team Worker

Team workers are the people who ensure the team remains united. They work toward resolving conflict or issues affecting the team's dynamics. Team workers are very supportive of other team members and are thus popular within the team. Team workers are known to be non-committal during decision making because they don't want to be seen as taking sides: they put team cohesion ahead of their decision-making abilities.

People-oriented Role: Resource Investigator

Resource investigators are inquisitive and enthusiastic in nature and possess great negotiating and networking skills. They are extroverts, which makes it easy for others to relate to them. Through their networking skills, resource investigators develop external contacts and negotiate for the team's resources. They are quick thinkers and good at getting information from other people.

Thought-oriented Role: Monitor-Evaluator

These are the critical thinkers in a team. They're serious minded and cautious in nature. Rather than rush into decision making, they prefer to critically analyze information before making any conclusions. Monitor-evaluators lack the energy to motivate other team members and are deemed to be slow in decision making.

Thought-oriented Role: Specialist

Workers with expert knowledge in a particular area comprise the specialist role. Their contribution to the team is limited only to their area of expertise. Their priority is in maintaining their professional standards. Though they

show great pride in their area of expertise, they show little or no interest in the expertise of others. Because of their expert knowledge, they're indispensable members of a team.

Thought-oriented Role: Plants

Plants are innovative members of the team. They come up with original approaches and ideas that help the team in solving problems or overcoming challenges. Plants are introverts in nature and possess poor communication skills. Plants prefer to work alone. They react well to praise but are greatly affected by negative criticism.

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Team Building Techniques

To succeed, team building techniques need to move from ideas to movement. The first set of ideas lays the foundation for success, but building a team takes action.

Part of building trusting work relationships is getting to know each other. Try getting your team together once a day for five or ten minutes to share goals, milestones, or challenges. They don't need to be work-related. Perhaps someone started taking piano lessons. Maybe a coworker's son made the honor roll. Sharing with each other makes us more human.

As much as anything, meals are a social experience. Get together weekly for a team lunch. The informal environment gives your team a chance to bond.

Sometimes, team building techniques do require you to get out of the workplace. That doesn't mean you have to spend the day playing games that no one enjoys. There are plenty of opportunities for volunteer work in any community. Help out at a soup kitchen, clean up your local park, or engage a local nonprofit to help with a letter writing campaign.

The advantages of teamwork

In Slovenia more and more managers and workers know that there are many advantages of teamwork in the workplace. When it comes to maximizing the effectiveness of an organization, no matter how big or small, teamwork can improve just about every aspect of its performance.

It can raise levels of morale, expertise, efficiency, the quality of customer service, initiative, learning, planning, and creativity.

It can also produce more motivated members, a more effective day to day performance, a sense of ownership, better end results, and ultimately, bigger profits.

A team is a way of organizing different people with different goals and plans into a cohesive whole. When a team is successful, it funnels the energy of team members for the overall good of the organization.

Some further advantages of teamwork are:

- a better understanding of decisions
- more support for and participation in implementation plans
- increased contribution to problem-solving and decision making
- more ownership of decisions, processes, and changes
- more ability and willingness to participate in performance evaluation and improvement.

Forming a successful team

Building a successful work team can be tough and challenging because people bring everything about whom they are to the team.

It includes opinions, knowledge, values, past work experiences, upbringing, education, prior team experiences, life, and work goals, and skills in communication and team building.

From clear expectations to appropriate methods for collaboration and communication, you can create a successful team if you pay attention to some recommended areas that need regular attention:

- If you truly value and want to encourage teamwork and collaboration, your organization's culture must support your employees in practicing these skills. You need to take the actions necessary to create a work environment that expects, fosters, rewards and recognizes teamwork.

  Your work systems and approaches must support collaboration with a reduced emphasis on individual advancement. Interested in how to create this culture? Here are 11 actions you can take to create a collaborative culture.

- Have you ever wondered why some teams are effective and others are dysfunctional for the life of the team? The effective teams have figured out the essentials of interpersonal communication dynamics and relationships.

  They are clear about the purpose for the team and about each other's roles on the team. Further, the team members have figured out how to assess how they are performing as a team constantly - and they check progress and relationships frequently. Find ten more tips about how to create better teamwork.

- One of the fundamental needs in an environment that fosters teamwork and collaboration is empowered employees. They act independently and require minimal direction. Managers in organizations say that they want employee empowerment, but they act in ways that undermine the ability of employees to act.

  Here are ten ways that organizations make employee empowerment fail. If you're aware of these, you can avoid squashing empowerment and teamwork.

- Another critical factor in team success is effective communication. These ten simple secrets emphasize the communication techniques that will help you build teamwork and camaraderie with your coworkers.

  They zero in on the effective interpersonal behaviors that build the team. If all team members practiced the secrets of great communicators, then a supportive teamwork environment is assured.

- In the normal course of working with each other, team members develop particular ways of interacting and accomplishing work. They fall into habits and patterns around behaviors such as keeping commitments, meeting deadlines, planning next steps, and decision making.

The disadvantages of teamwork

Some of the habits and patterns used in forming teams serve well - and some of them undermine the team's success.

For all the positives that business owners are finding with the team model, there are some disadvantages to consider. Understanding what is working for individual companies is important, so that employee satisfaction and productivity can be maximized.

There are some people who aren't designed to be team players, and there are some teams whose team members just don't get along. Either of these cases makes for a problematic scenario in the workplace team concept. If people are selfish and are trying to shine on their own, that person is not communicating with the other people on the team, and so the team members are not getting the information and resources necessary to do their jobs well.

When conflict arises, it can reduce the productivity of the team. People are more focused on who is right or wrong and which side to take rather than getting the job done. It adds stress and anxiety to the entire team, all of which can then cause morale and productivity to spiral downwards.

There is the possibility that one team member might want to live off the success of the entire team. Employee reviews might not be all that effective in team scenarios, because during an employee review, it can be difficult to specify contributing team members. Left unchecked, the lazy team member might create resentment among the rest of the team, which, in turn, hurts productivity through negative morale.

When everyone is part of the team and is making decisions, the vision and authority of the actual leader can become blurred by the power of the team. Leaders should consult teams, while making it very clear that they have the ultimate decision and the team is there to support the mission, as led by management.

2. CONCLUSION

Modern companies, as well as individuals, members of an organization's managerial team and supervisors need to prepare themselves to adapt successfully to a rapidly changing business environment.

Team building is a process that requires the cooperation of everyone, and that's also an ideal place to start. Get everyone on the same level. Use a websites to distribute an anonymous survey to find out where your team feels strongest and where it needs help. Be clear that your intent is to build a happier, more involved team. You don't want to inadvertently get rumours going.

Teams can benefit from team building activities that are focused on helping groups of employees build successful teams. There are several ways for team building activities to go wrong, however, and not produce your desired outcomes. These are the critical factors in designing and implementing team building activities that will help you build an environment of teamwork and collaboration.

Happy employees equal happy customers, and one sure way to create a happy team is to create an environment of value. Each person on your team has insight and a point of view to contribute. Make sure they have that opportunity. Ask each person their opinion on strategies and goals, and never downplay the response.

However you choose to build or improve a team, remember that communication and empathy are key. Value the people around you and the success will follow.

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SELF-SUFICIENCY MODEL IN SMALL MUNICIPALITIES

Abstract

The study aims at the problem of self-sufficiency of a rural municipality which has natural geographic and culturally historic benefits allowing the development of agriculture and tourism as leading economy activities that could significantly aid the achievement of sustainable development policy of the municipality.

The main aim of research was the analysis of the current state of agriculture and tourism in the municipality for the period of previous five years. The size, employment and the income of farm and tourist economies

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have been researched and the satisfaction of economies has been compared with the supply and sales of own products and crops. It has been established that the respondents at the time of research did not participate in any joint projects and that this lack of joint market presentations is one of the main drawbacks on the way to achieve the development tasks.

The problem-based part of research has been focused on creating of the supply chain model which is presented in the diagram of processes and diagram of individual parts included in the supply chain. The model presents a well-working supply chain as a basis of successful business operation of all stakeholders which simultaneously enables customers to buy high-quality, locally grown foods.

Key words: *self-sufficiency, community, supply chain, agriculture, brand mark*

1 INTRODUCTION

The study municipality lies in western part of hilly Slovenske gorice. Sunny sides of hills are covered with vineyards and orchards, whereas in flat areas croplands prevail – all this confirms that agriculture is an important activity of the municipality, which should be fully exploited to benefit the development of municipality and quality of citizens' lives.

Insufficient interactions of municipality's communal administration with the residents lead into uncontrollable measures which did not enable equal and satisfactory development of all spheres and all parts of the municipality. Even ambitiously based plans to start self-sufficiency remained completely unexploited or were postponed.

In 2012 the municipality implemented a farm market titled "Let's nourish ourselves" within the community project. The market allows farmers, operators of personal supplementary activities and supplementary activities on farms, other individuals who perform cottage industry, salesmen and caterers, cooperatives and other individuals and organizations meeting certain requirements. Farmers and other individuals guarantee their own production with KMG-MID number of their farm where they live and work.

This market could have been the proof of synergy in sustainable development of the municipality. It turned out that farming is so highly developed that farmers are literally self-sufficient regarding healthy, home-grown food so the inhabitants would not have to buy genetically modified and "plastic" artificial food that is displayed on the shelves in shops and brought from distant and

unknown places. Unfortunately however, the project did not reach its upgrade since the market started to turn into some sort of flea market which definitely was not its intention.

Farming, wine-growing and tourism should be the main driving force of the development in the municipality. Despite favourable natural, geographic, and cultural conditions the problems that emerge are low utilization of good conditions, inefficient logistic infrastructure, unrecognizability of the area and insufficient interactions of municipality's stakeholders.

Supply chain covers the flow of goods or service from its creation through distributors to buyers or final costumers. All connections and processes require various activities. Raw materials enter supply chain at its beginning and are later processed into products which can reach final buyers or become raw materials for a new supply chain. A supply chain involves several companies that supplement the product in each phase. A supply chain consists of a block of companies (suppliers, distributers, manufacturers, retailers and buyers) that are intertwined in order to achieve the highest level of service for the final buyer (Urbancl, 2011).

According to Zuckerman, the concept of supply chain stands for the complete overview of all parties included in the network working together as a team. The goal of inclusion is as efficient use of time and sources as possible (Zuckerman, 2002: 8).

Most experts regard supply chain as a set of parties (companies, suppliers, manufacturers, traders, distributors, etc.) intertwined among themselves in various phases of business flow, with a common goal to provide the best possible final customer supply (such as Klopčič, 2003 and Potočnik, 2002). Truly, as Sušnik says, all cases display cooperation of all companies or parties forming a supply chain, where achievement of efficient supply chain is based on process management and cooperation regarding logistics of all parties within supply-chain. (Sušnik, 2012).

Supply chains also include material, information and financial flow. All three flows are obligatory for the existence of a supply chain. Most exploited or commonly used is definitely the flow of information. It enables reciprocal arrangements between the buyer and the seller leading to a business. Only arranged deal enables the move (physical flow) of goods within material flow of the supply chain. A closed deal also leads to payment arranged in financial flow. (Sušnik, 2012).

However, the fourth flow seems to prevail in supply chain: knowledge. This flow includes exchange of various knowledge, experience and good practice.

Supply chain is based on three pillars (Wikipedia, 2015):

1 Processes including firm's capacity of logistics, development of new products and management of knowledge:
2 Structure of organisation including the structure of relationships from vertical integration to business network as well as management approaches, scale of success and reward schemes;
3 Technologies combining processes and information technology.

Rajter and Križman claim that most important areas of decision-making within a supply chain to be:

- *Location* which covers decisions about allocation of manufacturing, storing and retailing facilities and includes decisions on strategies for entering the market and the level of supply (service) for the customer.
- *Manufacture* where all decisions on about production programme, the size of facilities, their capacities and production predictions according to customer and other requirements are made.
- *Storage* where management of all phases and all levels of supply chain is crucial. Coordination of mutual processes and common reduction of storage costs within the whole supply chain is also very important.
- *Transport* which links to storage decisions, optimal transport modes and routes and the level of customer supplies. (Schary and Skjoett-Larsen, 1995 in Rajter and Križman, 2010):

The concept of supply chains exceeds the frame of only one company. It includes several parties at different phases of the processes. Usually this means that a good conceptualized supply chain requires both, partnership of all parties, as well as appropriate, innovative and efficient management directed into the satisfaction of customer's needs.

One must be aware that all possible mistakes at different phases of supply chain result in extra costs charged to buyer or final customer.

When speaking of agriculture it could be assumed that this activity has nothing in common with logistics and supply chains, yet the truth is far from that. Every activity included in agricultural economy belongs in the area of supply chains.

A simple supply chain in agriculture could resemble the picture below.

Picture 1: An example of supply chain in agriculture
Source: own, 2015.

Economic theories and practices usually show, that farmers face problems in a supply chain, both at the beginning as well as at the end. Seeds, seedings, packaging for final product, fertilisers, vaccine, animal feed etc. are bought at high prices from suppliers. On the other hand, they hardly sell their products to retailers at reasonable prices, since they try to pressure farmers with (too) low prices and long payment deadlines. Farmers are thus forced to "produce" (grow) cheaper goods which cannot guarantee quality. This way only they can make profitable businesses with (whole)sale dealer. Yet the customer does not buy quality and healthy products.

If analysed in detail, a supply chain in agriculture can be broken down into the following segments:

- Purchase of seeds, fertilisers, means for plant protection, fuel, etc.
- Transport and storage at the farm facilities,
- Production can include animal and/or crop farming, winegrowing, etc.,
- Final storage of products for sale,
- Storage and management of packaging waste,
- (Whole)sale.

Agriculture usually includes two types of untypical supply chains, namely cold supply chain and food supply chain. Both are rather specific since they supply the market with perishable products and are especially important for food supply. The peculiarity of these supply chains is provision of safe food for the consumer. In such supply chains time special attention has to be paid to temperature, packaging, means of transport and legal regulations throughout the supply chain. Cold supply chains, however, are not intended only for food supply but can be used in supply of medicine, varnishes, colours, flowers, and other agricultural products. Usually these are more expensive from classical supply chains, since they require constant temperature surveillance (Sušnik, 2012).

The problem of sustainable tourism starts at the very definition. Prodnik and David claim that "sustainable form of tourism" is the one which "does not

deplete net resources and social resources for its development" (Prodnik and David, 2009). Talking about sustainable form of tourism or anything else without explaining or at least defining the term sustainable is in our opinion unsuitable.

"When Brundland[18] set the frame of definition and sustainable development defined as fulfilment of present needs without endangering the needs of future generations, she left a void and an undefined space, so individuals, theoreticians and politicians had an open way to personal interpretation of sustainable development. Sustainable development was adjusted to every topic of research and debates and it was marked as responsible economical treatment (economic sustainability), as wise use of natural resources with the goal to reach more efficient production (economic sustainability), as fight against climate changes (environmental sustainability), and even as fight against poverty, and inclusion of all in development plans (social sustainability).

Indisputably, the theoreticians that try to link sustainable development with economy, environment and society are going in the right direction, since it is about strategies of development plans that must reach all spheres and include all parties to achieve visible improvement. At the same time it is important that the development runs simultaneously at all spheres, otherwise the ratio can oscillate and destabilize society as whole. The result of such different interpretations of sustainable development has shown in often totally uncritical use of adjective "sustainable", many polemics and consequently in findings that after twenty-five years of efforts to reach sustainable development there are no results to show" (Jankovič, 2015).

In our opinion the definition of sustainable tourism which Prodnik and David[19], try to establish must be upgraded, to become more suitable. Sustainable tourism must not only preserve natural and social resources or conditions for its development, but must also combine all parties and all spheres concerning tourism in its strategy. From economy to ecology, from culture to pleasure of users and contractors.

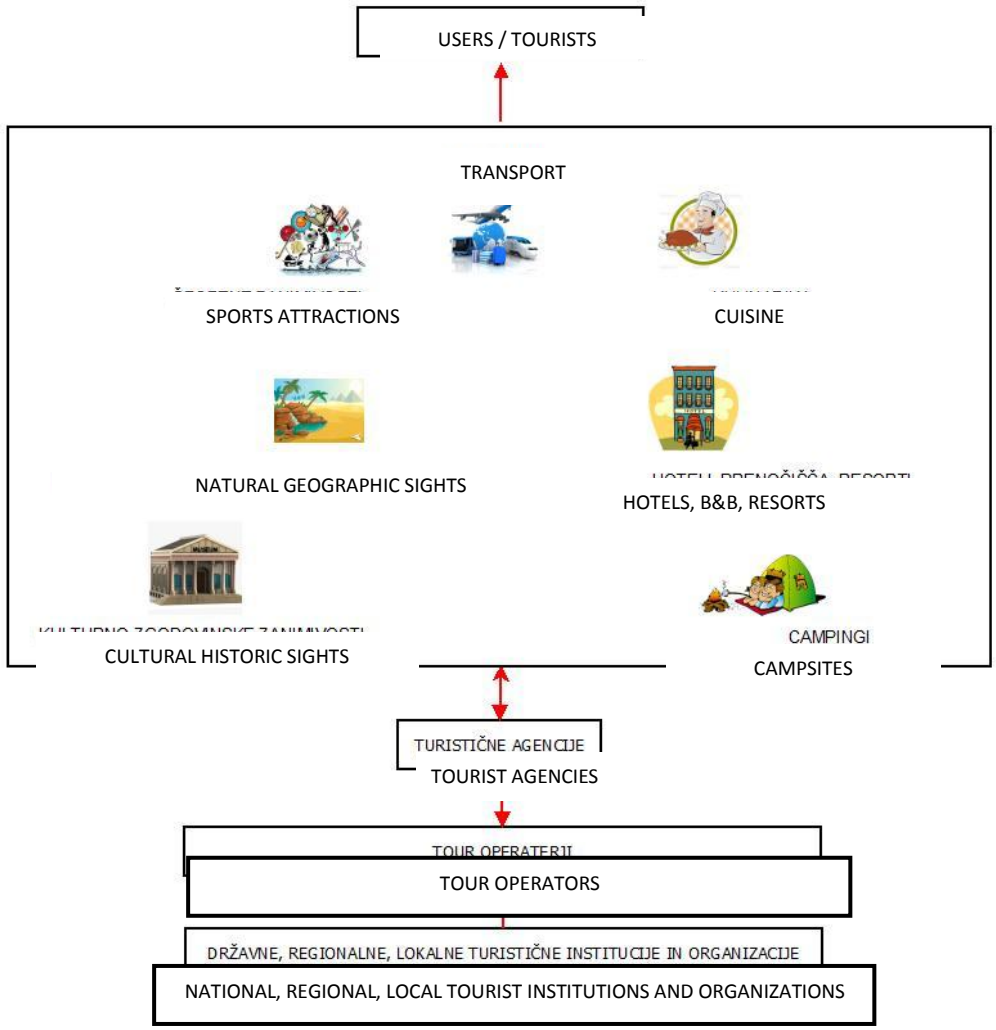
One of the most important factors in the tourist development is the supply chain in tourism. The success of tourist supply chain depends on the success of its individual constituents. A huge role in its success is also played by tourist agencies. They cooperate with various parts of supply chain from

[18] Gro Harlem Brundtland, in 1987 President of Commission on Environment and Development and then Norwegian Prime Minister.
[2]As above.

transport companies, to hoteliers, caterers, culture centres and last but not least banks and insurance companies.

Despite many different studies in the field of supply chain management in tourism most attention is paid to the problems of marketing and sales, yet many other important linking constituents from suppliers to sellers of tourist products are neglected (Zhang, Song and Huang, 2009).

Picture 2 presents umbrella supply chain in tourism. It is our belief that our umbrella operation of national, regional and local tourist institutions and organizations is strategic development of tourism. Tour operators and tourist agencies should carry central and key role from the point view of marketing and sales whereas, each individual constituent or tourist subject should reasonably include one's own individual development goals into strategic development of the region or area of action.



Picture 2: Supply chain in tourism
Source: own, 2015.

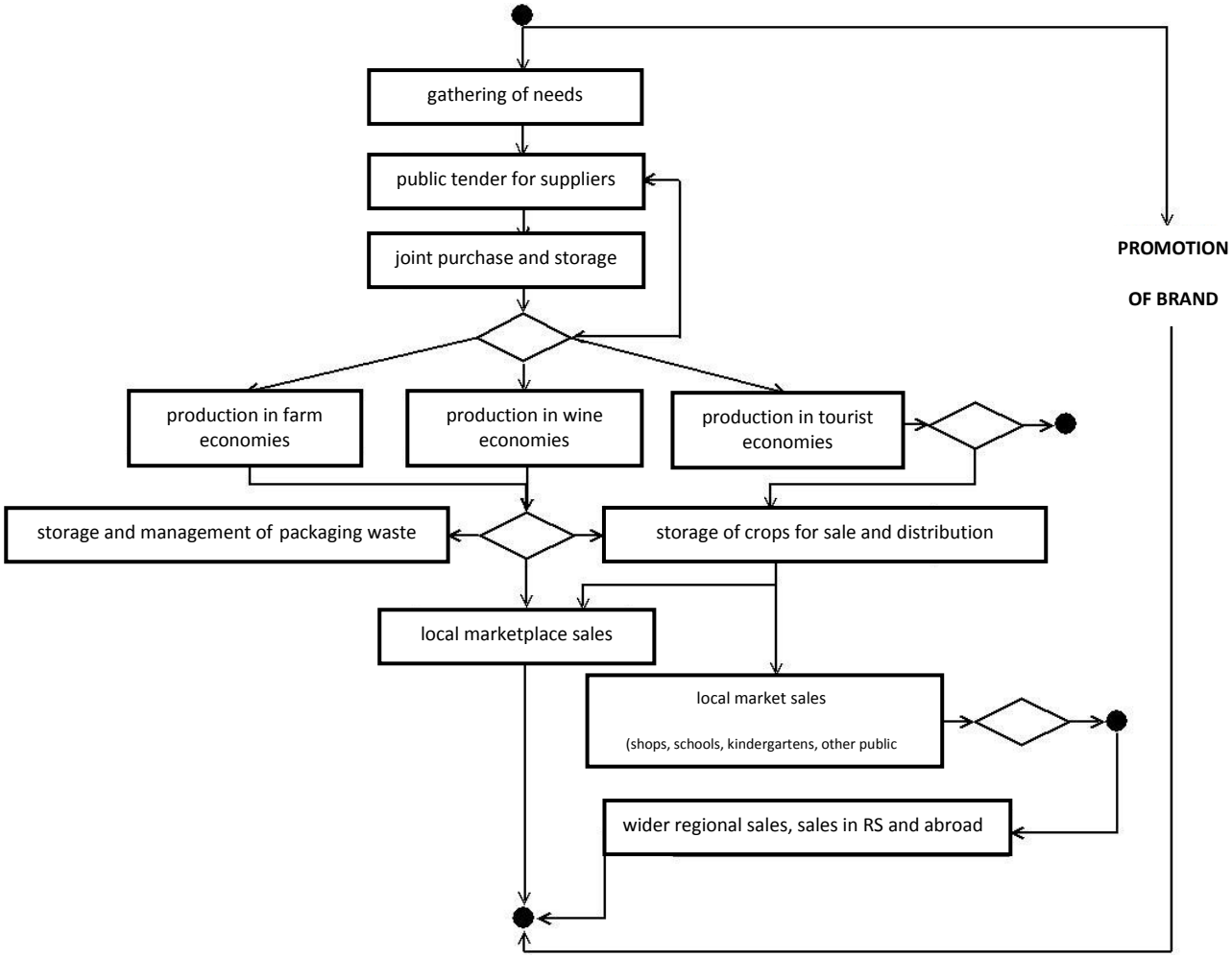
Within the umbrella supply chain special supply chains are formed, which are specific for each individual subject and are based on different logistic systems, e.g. hotel supply chains, transport supply chains, cuisine supply chains, etc.

2 PROPOSED SELF-SUFFICIENCY MODEL FOR MUNICIPALITY

The outline of natural resources and analysis of development advantages and disadvantages of the municipality show that despite poorly developed farm infrastructure with low productivity and high unemployment rate due to optimal position, fertile grounds and many cultural historic and natural geographic attributes, the strategic development sectors are agriculture and tourism.

The municipality has over twenty active tourist farms and wineries, and over fifteen individual restaurant facilities, half of them offering lodging services. Despite given natural conditions for hiking and cycling tourism and ecological and farm tourism these activities do not achieve the expected levels of success. Farming areas covered 35.2 % of complete municipality area in 2010 which is almost 9 % less than the EU average and 10 % more than the average in Slovenia. The number of 284 farm economies from the year 2010 dropped drastically under 200 and is still dropping. Farmers face problems with purchase of seeds and intermediate goods and mostly do not meet optimal sale of their own crops and products. Therefore, farms are abandoned, fertile grounds are turned into meadows, and due to overgrowing cultivated land is degraded. Apart from environmental damage, the abandoned activities lead into loss of traditional crafts, unemployment, relocation of (mostly) young people in cities or abroad, and subsequently aging of population and deadlock of municipality development.

The analysis of the research has shown, that many tourist and farm economies in the municipality face problems with marketing of their products and services, that they do not apply with projects in different EU programmes, and that they lack mutual cooperation. The latter is also the biggest weakness exposed by the interviewees. They expressed the need of a model, which would enable cooperation of tourist and farm economies in the municipality and with joint mergence on the market enable smoother sale of crops, products and services. Based on theoretical knowledge and results of the research a model has been prepared to enable cooperation of tourist and farm economies, enlarge recognisability of their crops, products and services and encourages sustainable and market oriented development of both areas.



Picture 3: Process self-sufficiency model
Source: own, 2015.

Picture 3 presents the process model. Information flows in the process are:

- accession treaties and gathering of needs in the self-sufficiency model of participating farm and tourist economies,
- public tender for suppliers,
- selection and purchase of the best products at optimum price and storage,
- production (growing, making, etc.) in various economies (agriculture, winery, farm tourism),
- storage of crops, sales contracts, distribution contracts,
- storage and management of packaging waste,
- sales at the local marketplace,
- sales to local organisations,
- regional sales and wider,
- promotion of brand *Made in …* simultaneously throughout the process.

The model has been divided into phases, which enables constant control of supply process (chain) and immediate evaluation of individual phases, and thus elimination of possible mistakes or shortcomings. The content of the phases is defined as follows:

Starting phase of the whole process is **PHASE 0**, which is also the longest phase, since it lasts from the beginning to the end of the process and is at the same time one of the most important phases in the development cycle of self-sufficiency. This is promotion and marketing of brand MADE IN … All three activities are accompanied with many important decisions that in fact never end.

PHASE 1 **Gathering of needs in the self-sufficiency model of participating farm and tourist economies.** In this phase the needs of all members are gathered (intermediate goods, seeds, seedings, fertilisers, vaccine, tools, packaging, consumable materials, etc.) – all necessary for normal functioning of an economy.

PHASE 2 **Public tender to suppliers.** At this phase the best and the most suitable suppliers are chosen and negotiations for the price (which is usually lower than the one offered to a single economy since the amounts of purchase are larger) and for payment and delivery deadlines.
Individual economies can satisfy purchase needs also individually with known suppliers and established business routes or deals.

PHASE 3 Selection and purchase of the best products at optimum price and storage. When the supplier is chosen and the best products are selected delivery contracts are set with the supplier/s (usually there are multiple suppliers). Based on the contracts and arrangements the supplier supplies purchased products, which are appropriately stored or saved for the use of farm and tourist economies. The storage facilities are located in the municipality so the needed products are conveniently at hand for the users.

PHASE 4 **Production, growing and manufacture** etc. takes place at individual farm, wine and tourist economies.

PHASE 5 **Storage of crops, sales contracts, distribution contracts**. When production finishes (according to phases, depending on harvest, completed processing of farm or food products, production of special craft products, etc.), the products are stored in special storage centre for products for sale and distribution. This centre is also in the municipality for larger convenience. Marketing of products is implemented, as well as negotiations for top prices and sales conditions. As a result of joint marketing generally higher prices and wider range of customers can be achieved compared to marketing of individual economies.

At tourist farms the amount of products for own need is established yet the abundance is put into the centre for further sale. If there is no abundance the whole phase is completed at the farm.

PHASE 6 At the special centre in the municipality **storage and management of packaging waste** take place which is otherwise a very expensive bypass process of production for an individual economy.

PHASE 7 **Sales at the local marketplace**. This is a way to boost direct sales at local market and to shorten trade route which also shortens the way “from the field to the plate”. Thus the customer has access to fresher and healthier farm/food products. At the market all economies sell part of their products (depending on harvest) directly to the residents of the municipality.

PHASE 8 **Sales at local market** are implemented for the amount and

"content" of products requested by the market. Due to high level of trust in home production by local residents the economies must be encouraged to promote products in local organizations in the whole municipality (kindergartens, schools, health centres, shops, businesses, restaurants, tourist facilities). This way further promotion of farm tourism is also achieved.
Simultaneously with sales at the local market the net of consulting, training and education for different public goals concerning farm production, production of half-products and final products, monitoring of environment and climate changes, marketing, promotion of farm and culinary tourism within the municipality, and healthy locally produced food is established.

Phase 9 **Regional sales and wider**. After the establishment of local supply system the abundance of products can be marketed widely in the area or the whole country, as well as foreign market. This phase must be prepared and planned in advance, since the needs of local market and possibilities of sales outside the local area must be predicted. Given the fact that this is a joint marketing of local products and cooperation in order to achieve successful sales, the acquisition of this goal is far easier than finding individual buyers for each individual economy.

Phase 9 concludes the process model. Since the model organises the processes of food or farm product supplies one must carry in mind that more than one phase can be executed simultaneously (e.g. potato harvest can start in June, other garden product throughout the year, fruit in summer and autumn, grapes in autumn, etc.).

Creating this model for the development of self-efficiency in the municipality two research questions have been answered as:

- processes for self-sufficiency have been optimally modelled,
  and
- correct information flow in the modelled processes described in detail in each phase has been ensured.

3. SUPPLY CHAIN MODEL

Precondition for establishment of the model is formation of joint forum which would be in charge of correct and efficient implementation of all phases of the model. In our opinion the most appropriate legal entity would be Economic Interest Grouping (further EIG) for Agriculture and Tourism. This is a legal entity with a goal to facilitate and accelerate gainful activity of the members, improve and increase results of the activity without making very own profit, thus being in this relationship as a support system. Farm and tourist economies in the municipality become members of EIG on the basis of an application form.

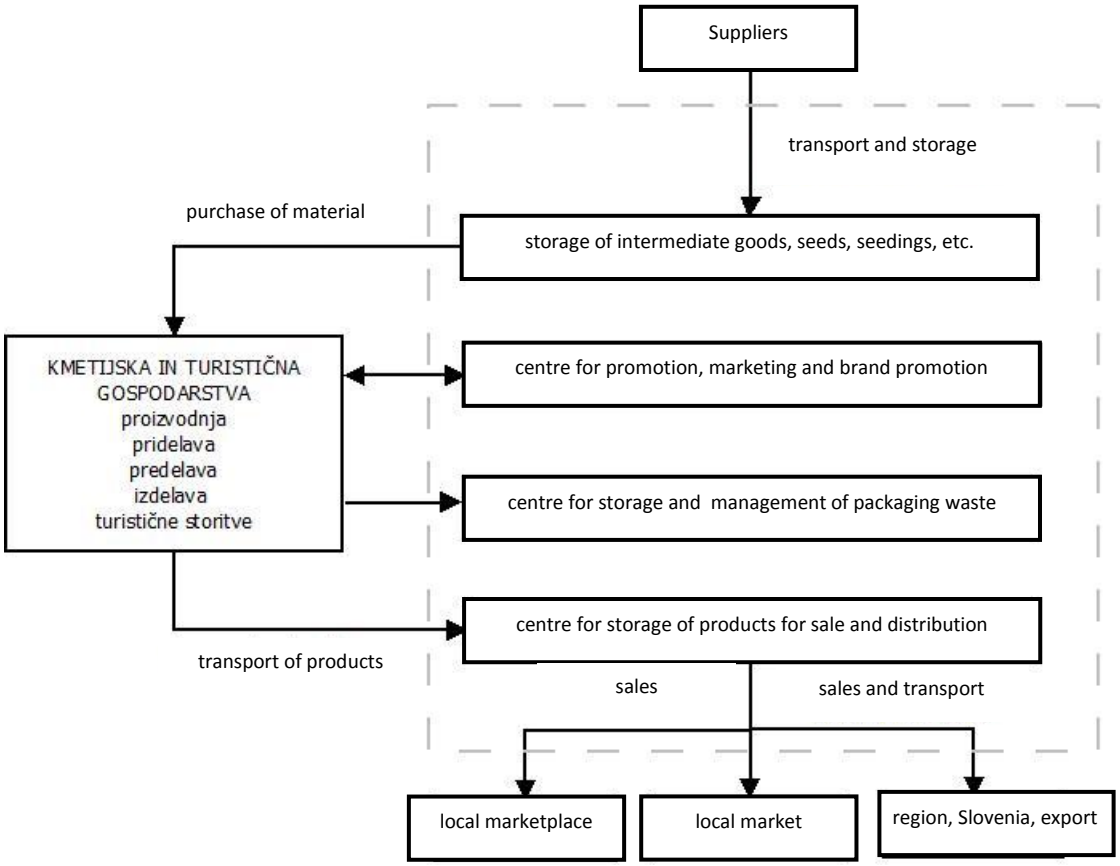
Further condition for efficient model activities is the establishment of the brand *Made in ….* Embodying specific qualities of the municipality, this unique brand has an important power to increase the recognisability and success of the municipality in a global sense. In the designing process of the brand one has to focus on those peculiarities that will draw attention of others and preserve the brand in the long term. Before the implementation of the brand the municipality needs a formed vision and has to incorporate and develop strategic points, which include historical events; architecture and buildings, cultural institutions, various events, displays, sports teams; environment and climate; demographic structure; folk customs and culture; global connections, cooperation between municipality and economic companies; speed of communication, adjustability and attraction to people companies and assets.

In the area of municipality many products that could be transformed into a brand are made. The brand must incorporate the following four elements:

- Farm tourism, winegrowing and agriculture,
- Quality of life (beautiful landscape, sustainable development, interpersonal relations),
- Tradition and values (customs, cultural events, historic buildings),
- Openess, cooperation, development, dynamics (entrepreneurship, communication, adjustability).

In current specifically competitive times recognisability that is guaranteed by brand can be the decisive factor in marketing of products.

Especially, to achieve development goals in the area of agriculture and tourism a well and efficiently conceptualised supply chain is crucial. Based on the process model and information flows within, a model of supply chain for the self-sufficiency of the municipality has been created as shown in the picture bellow.



Picture 4: Model of supply chain for municipality's self-sufficiency
Source: own, 2015.

The above model of the supply chain presents an opportunity to use natural resources of the countryside in municipality as an area with rather well preserved and diverse environment on one hand and with adequate state of natural resources on the other.

The municipality would within the implementation of the model increase (too) low self-sufficiency with farm crops and products. It would encourage development of market oriented farms with clear vision of development and direction towards production of high-quality products with greater added value. Linking all parties for joint emergence on the market would bring to initiation of faster transfer of modern technologies in to practice and take care of inheritance of young farm heirs.

Under the aegis of EIG (in the above picture the main activities are within the light grey dashed line box) the unified brand MADE IN … for various high-quality products would be developed and slowly implemented. Possibilities for exploitation of natural energy sources would be introduced and joint

projects for rational use of energy would be prepared and implemented. Gradually, the lacking infrastructure and joint innovative and technologically demanding and modern installations would be built for production of high-quality half-products and final products with unified brand to achieve joint promotion and marketing of all products and simultaneous acquisition of competitive prices.

Thus the enlargement of market share would be achieved in home consumption as well as faster development of local market. Cooperation of all key parties would be enabled and multipurpose function of agriculture would be reinforced. The principles of sustainable development would be established and thus economically efficient and competitive, socially responsible and environment friendly and sustainable farm production would be encouraged. Economic efficiency of farms with new employments would be enlarged, and municipality would get new economic opportunities in supplementary and non-agricultural activities.

Promotion and marketing of locally produced food and introduction of the brand would contribute to added value and recognisability of tourist and culinary actions. Due to cooperation with agriculture and joint market appearance, the municipality would become an area known for healthy food, ecological and farm tourism, which is with active inclusion of natural and culturally-historical sites one of the best foundations for the development of tourism.

Economic benefits of accelerated development of both fields – tourism and agriculture for the municipality would gradually result in investments into better and innovative community infrastructure, into roads, cycling and hiking paths, and nature protective and educational paths. At the same time we cannot neglect the fact the municipality which is able to provide sufficient amounts of food for its residents has extensive competitive advantage from others. Finally, it can also become an education centre for other local communities that would like to adopt the same or similar model.

With gradual upgrade of the model implementation the performance and competiveness of agricultural and tourist activities in the municipality would also raise – consequently, also of other activities that support them: service businesses, food processing industry, shops, educational facilities, etc.

The model establishes a well-working net of supply chain which is the foundation of successful business performance of all constituents and thus enables the customer to buy healthy, high-quality, home-grown food.

4. DISCUSSION

The problem of inadequate self-sufficiency of the countries, regions and local communities has in the era of global economic recession become a huge pressing problem. The awareness of necessity to achieve sustainable development, which is the final goal of every community, has even deepened the problems. Therefore, possibilities of small rural municipalities have to be carefully inspected despite their wish for faster and more efficient achievement of development goals. The display of natural geographic and cultural historic resources of the researched municipality (as one of the typical examples of a small, rural and border municipality) has shown that this local community has numerous possibilities to exploit during the process of reaching own development goals.

Some of the advantages are definitely the intact nature, the vicinity of the city and national border (especially in connection with international project), the quality of life environment, high quality of farm and wine products, fertile soil that covers more than a third of the municipality, many existing farms, vineyards and tourist farms.

The identified weaknesses are mostly low productivity in agriculture, underdeveloped infrastructure, unemployment, lack of vision and strategy from the municipality, and total absence of cooperation among local community administration, the residents and individual economic parties. However, the largest disadvantage seems to be the unrecognizability of the area and municipality and yet simultaneous ignorance of sights that mark it. The most typical example is “Heart Among Vineyards”. This unusually routed road surrounded by vineyards has grown a local attraction into a national symbol and even global attraction. However, the picture of Heart Among Vineyards (a local symbol that municipality should build its recognisability on) is wildly and uncontrollably exploited in various commercial activities of major merchants, as expected without any mentioning of the heart’s home town. Even Republic of Slovenia has recently used the Heart Among Vineyard photography at the EXPO Fair in Milan without any mentioning of the town, of course. Touristically aware environment cannot afford such “theft” or abuse of a local attraction.

After careful examination of development problematics, and plans and wishes for the future of the municipality it has been established that agriculture and tourism are the main centre of municipality’s development.

In the light of self-sufficiency problems in the municipality, foreign and home sources from the field of supply chains have been studied and it has been established that researches are primarily applied to companies. Only scarce studies have been made in the area of agriculture and tourism. Yet the assumption that supply chains in these two areas are not important would have been completely incorrect.

A supply chain in agriculture is especially vulnerable at its beginning (the purchase of seeds, seedings, fertilisers, vaccines, fuel, etc.) and at its end with the sale of products. Farmers face difficulties with selling their products at profitable rates to retailers who pressure them with demands for low prices and to long payment deadlines. Therefore, farmers are literally forced to "produce" (grow) cheaper products that are of high quality. Consequently, the buyer does not buy quality and healthy products. Important intermediate constituents of supply chain are also transport and storage in the farm facilities, production that can include animal and/or crop farming, winegrowing, etc., final storage of product for sale, and storage and management of packaging waste. All these parts of supply chain are important for successful market activities, regardless the size of a farm economy.

A similar problem appears with supply chains in tourism. The studies that would define them in detail are scarce and mainly concentrated on the activities of tourist agencies and transport. On the basis of findings about the necessities of constant supply chain in tourism our supply chain has been formed to connect all constituents and agents: regional and local tourist institutions (as tourism development planners), tour operators and tourist agencies (as marketing managers and sales managers) and hoteliers, organizer of sports and cultural events), caterers (all accounted in the group of providers) and transport organizers. A well planned tourist supply chain is along with efficient marketing the most important factor in the development of tourism. Similar to agriculture, in tourism only the size of tourist economies or institutions does not play an important role.

The analysis of empirical research status in the field of farm and tourist economies in the municipality has shown that most people are employed in businesses that work in the fields of farming and tourism. At the same time these are also the largest economies by their size and have on average the largest incomes. Half of them buys goods from regular suppliers and are quite satisfied with the supply. Larger inconveniences appear in sales, since they have to search for customers themselves and do not have organised sales activities. The problem of unorganised purchase and sales activities (which results in dissatisfaction with business performance) is also present in farm, tourist and hosting economies. The stated exposes the need for supply chain with carefully structured initial (purchase) and final (sales) phase.

The respondents have expressed exceptional interest in cooperation in joint projects which would enable a joint supply chain and joint market appearance. The consequences of present non-cooperation and unrecognizability of their products, crops and services show in gradual decline of farm touristic activities which should have been a pillar of the development in the municipality.

On the grounds of theoretical findings and analysis results of empirical data a model of self-sufficiency for the municipality has been created. As a precondition for the implementation of the model an establishment of Economic Interest Grouping (further EIG) for Agriculture and Tourism in the municipality was determined to embody and implement all activities and main processes of the self-sufficiency. To achieve bigger recognition of the area and product a unified brand "Made in …" has been proposed. The processes in the model of self-sufficiency have been divided into 9 phases that enable constant control and evaluation of performed activities which are based on cooperation of all constituents in the supply chain.

The risks in the application of the model can show as possible unreadiness for the membership in the EIG and as slightly higher start-up costs. However, through appropriate raising of awareness with the future members of EIG and the system of joint investments these risks can be avoided.

The advantages of the model are cheaper and simpler purchase of intermediate goods, seeds, seedings, tools, etc., joint storage of purchased material and joint storage of packaging waste and final products which basically enables lower costs of production and thus cheaper products. Due to joint centre of promotion and marketing, marketing of unified brand and due to joint market appearance the sales can be made at higher prices as compared to individual attempts.

The planned joint access to the market and aimed marketing will expand recognisability of the municipality in the region and wider, and enable a more efficient development of tourism which will together with the complete development of agriculture contribute to achievement of sustainable development of the municipality as whole.

The model can bring different life values into our society, change the way of life and thinking and improve economic state of all constituents at the same time.

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