

Sustainable development: Innovations in business

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Formal organization is widely used in the company's business and innovation process. Using it, the managers:

- define the roles and responsibilities of innovation staff;
- build the hierarchical structure of power and define the process of making innovative decisions;
- determine the specifics of communication channels and information flows;
- establish the mechanism and scope of the control;
- develop a strategy for coordinating work practices;
- construct the decision-making process;
- define specific features and innovative tasks.

Table 3.1. Comparison between formal and informal organization

	Characteristic	Formal organization	Informal organization
Structure:	<ul style="list-style-type: none"> – Beginning – Logical basis – Sustainability 	Prescriptions Rationality Stability	Unexpectedness Emotionality Dynamics
Impact:	<ul style="list-style-type: none"> – Unit – Type – Movement 	Position Power From top to bottom	Personality Strength Bottom-up
Communications:	<ul style="list-style-type: none"> – Channels – Networks 	Formal Clearly defined movement through formal channels	Informal, poorly defined and non-intersecting channels
Involvement of individuals		According to the positions and roles defined by the formal ones	Only those considered accept- able
Base for interaction		Prescribed according to func- tional obligations	Spontaneous and individual characteristics

Source: (Conway & Steward, 2009, p. 326).

Through this type of organization, **three tasks** are solved:

- formation of the organizational structure defining the composition and place of the innovation units, their provision with resources and the procedures for implementing the innovation activities;
- ensuring the smooth implementation of research, development and deployment with no negative impact on production;
- achieving flexibility and adaptability in line with the degree of complexity and flexibility of the corporate environment.

In distinction from the formal, **informal/social organization**, it has the ability to identify itself through different organizational boundaries—team boundaries, functional boundaries, boundaries of the enterprise itself, the virtual network, etc. This peculiarity is at the heart of the interactive model of the innovation process. With it, new ideas move more easily and quickly to the next innovative stages in an effective filter of inappropriate ideas.

Within the informal organization, individuals participate in four types of networks (Tichy, Tushman, & Fombrun, 1979, pp. 507–519):

- *friendly*—discover relationships based on friendly relations;
- *impact*—represent the power of influence and the structures of power;
- *communication*—focus on the ways of information sharing;
- *economic*—describe patterns of money and commodity exchange.

For clustering networks, Krackhardt & Hanson (1993, p. 111) use slightly different categories. According to them, there are **three types of networks**:

- *networks for informing and counselling* (they bring to the foreground the important players in the organization, i.e., those that the resolution of problems and the provision of technical information depends on);
- *trust networks* (they emphasize the model of sharing delicate and political information and supporting in a crisis situation);
- *communication networks* (for regular communication).

In recent years, interest in informal organization has steadily increased. This is due to the strong subordination of the individuality of the participants in the business and innovation process, the increased aloofness, foreground and demotivation brought about by the bureaucracy of the formal organization, and the inability of the bureaucratic structure to cope with the vague and uncertain environment of innovation development.

To organize the business and innovation process, the enterprise constructs and maintains a particular organizational structure. In general, the **organizational structure** is a *set of regulated sustainable links that ensure the organization's functioning and development as a system*. It includes four types of **elements**:

- *units* (governing bodies, subdivisions, working individuals);
- *relationships/links* (horizontal and vertical);
- *structural levels* (high, medium, low);
- *credentials* (linear, functional, etc.).

The **organizational structure** can be defined as “a set of units located at a different hierarchical level, coordinating the functioning of the business system generally, the management system and the innovation management system in particular; developing and implementing innovative solutions and decisions related to the implementation of the projects and especially innovation projects” (Fatkhutdinov, 2003, p. 131). It must be flexible and fit in the environment. The different types of organizational structure have different potential for opposing the environment. The lack of flexibility in most cases reduces the effectiveness of the innovation management system.

There are **two approaches for building the organizational structure** of the innovative enterprise (mechanistic and organic), which in practice are often applied in a mixed version, with the domination of elements of one or the other approach (Varamezov, 2013, pp. 157–159; Panteleeva, 2013, pp. 175–176).

Mechanistic (hard, bureaucratic) approach has a formal division of labour and narrow specialization. Hierarchical principles and formal rules are strictly observed. Vertical flow of information dominates. Secondary tasks are decomposed into private tasks, which can be performed independently of common tasks. The personal qualities of the innovation staff are not considered to a significant extent in the design of the organizational structure. For enterprises that have adopted a purely mechanistic approach, the dynamics in the environment parameters raises a number of problems. Their solution is lengthy and difficult. For this reason, in the current context, the emphasis is on the application of the second approach.

In the organic (soft) approach, a smaller number of hierarchical levels is constructed. Formal rules and procedures are implemented in an informal relationship environment. Decentralization dominates. The staff is involved in the process of making innovative solutions. They are given greater responsibilities in the implementation of the activities. There is flexibility in management. The main advantages that the enterprise can achieve by adopting the organic approach are identified in three directions: a flexible and dynamic leadership; a flexible mechanism facilitating communications; a targeted priority of technical and innovation development.

Based on the adopted model of organizing the process, the enterprise can choose between five forms of organizing activities (Panteleeva, 2013, pp. 176–177):

- *Functional organization*. The main activities are related to the relevant departments (design, research, production, marketing) and are usually sequential (linear). The downside is that all of these departments are governed by common business objectives, including the R&D unit, although it is quite autonomous.
- *Functional matrix*. A team of specialists from all departments is set up. It is managed by department managers and by the project manager. The functional start dominates the project.
- *Balanced matrix*. It is applied, if necessary, by the functional and the project approach to the development of innovation activity. Part of the innovations is based on the functional start, and others on the project start.
- *Design matrix*. A team of participants from all departments dealing with the problems of the innovation project is being built. This organization is called parallel-integrative.
- *Venture organization*. Team members work exclusively on a project, breaking away from bureaucratic structures.

The degree of involvement of participants in business and innovation activities in different forms is varied. The lowest is in the functional organization, and the highest is in the ventures, where the benefits of it are exacerbated. Based on a number of studies, Jaffee (2001, pp. 284–286) systematized the contemporary

features of the organization of the business and innovation process (which he calls “postmodernist organization”)—virtuality, networks and alliances, flexibility, different job features and risk-taking.

Many economists express the view that the presentation of the organizational structure of the innovation process through an organizational scheme has a number of weaknesses and constraints. On the other hand, it is based on it and combining situations, characteristics, subject and interdisciplinary areas categorize the different types of organizational forms (structures) as—traditional, network, front-back, boundless, learning and self-learning, virtual organization, etc. The use of organizational schemes as a way of visualizing the “skeleton” of the organizational structure will continue in the future, albeit in a form different from our familiar (traditional) structures in the past. This is due to the fact that they allow for quick orientation and the information in them is subordinated to an appropriate and easily understandable graphic form (Conway, & Steward, 2009, pp. 242–244).

The **main advantages of organizational schemes** are described in several ways: they provide transparency and predictability; help quickly and easily understand what should happen in the business and innovation process; present a simplified snapshot of the formal hierarchy in the organizational structure; describe briefly, almost verbally, who is responsible for what and to whom. At the same time, as their **weakness and limitation**, their staticity can be pointed out against the background of continuous changes in the enterprise and its innovation subsystem. Information technologies provide an opportunity to overcome some shortcomings of traditional organizational structures and to achieve flexibility in the scope and content of processes and activities (including virtual presentation in a dynamic way). The complexity of innovation raises the need to expand the circle of participants in the business and innovation process and highlights issues related to strategic alliances, outsourcing and networking.

Achieving effective organization of the business, innovation, business and innovation process, as well as human resources engaged in innovation activities, requires compliance not only with trends and patterns in innovation and organizational science, but also in business in general. It is necessary to find the appropriate balance between the contradictory principles of organizational design at the workplace of the staff of the enterprise, but also the staff engaged in the implementation of innovation processes. Managers should make choices in the following areas (Panteleeva, 2013, p. 178):

- open workplace versus closed workplace;
- workplace or social space;
- workplace tailored to the personality or task specificity;
- stability or flexibility and mobility;
- individuality or organizational efficiency of the enterprise.

3.3. Types of organizational structures

3.3.1. Classic organizational structures

Historically, the linear organizational structure first arises. Here, the units and the contractors are subordinated to a manager who manages all activities, including the innovation. The **linear structure** has a number of merits resulting from its simplicity and economy, the full respect of the principle of unity in governance, the high degree of coordination between the various units and the contractors, the ability to react in unexpected situations. At the same time, the principle of unity and lack of functional units leads to the simultaneous implementation of routine and innovative activities (see Figure 3.2).

The intertwining of various activities in a small number of staff is associated with an intensive workload which limits creativity and favours innovation with a lower degree of novelty and complexity. In the current conditions, this structure finds a more limited application—mainly in micro and small enterprises.

Another type of organizational structure is **functional**. The staff is divided into specialized units based on its functional uniformity. The structure is a collection of fully specialized subdivisions, each of which performs a strictly defined part of R&D, according to its profile and specialization. Each unit includes individuals with a homogeneous specialty. The unit manager directly manages the linear structural units from the lower hierarchical levels in the implementation of the innovation-related activities. In practice, the functional structure is seldom used in pure form. It is usually combined with the linear structure (see Figure 3.3a and 3.3b).

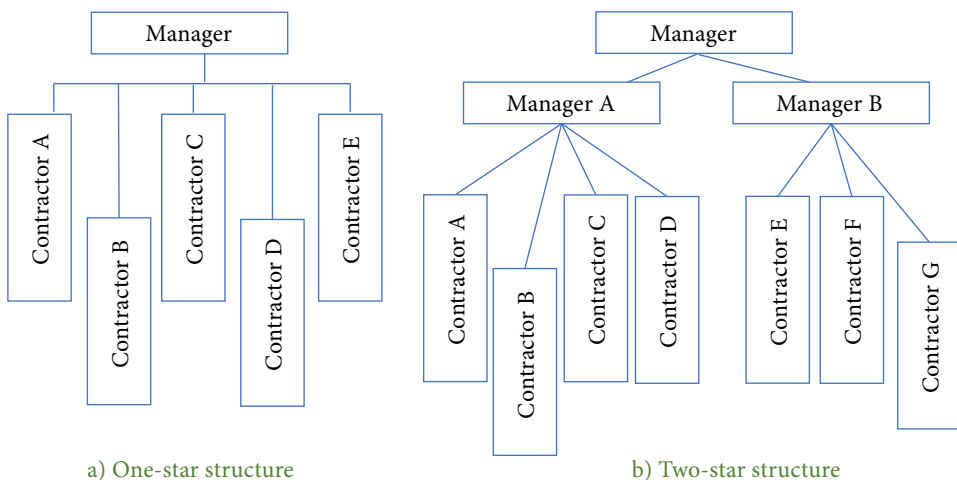


Figure 3.2. Linear organizational structure

Source: Own elaboration.

Process innovations show how the company uses signature or superior methods to do its work (Innovating society, 2020a). Process innovations “often form the core competency of an enterprise and may include patented or proprietary approaches” (Innovating society, 2020b). It is considered the least risky form of innovation, probably because it usually aims at minimizing costs, rather than driving revenues. As a consequence, it has attracted less enthusiasm and attention from entrepreneurs, executives and scholars (Databerg, 2021).

In defining the directions and dimensions of process innovations from the positions of the Doblin Model, we can rely on the sample general base map of Deloitte (Doblin.com, 2013) (see Figure 4.3).



Figure 4.3. Sample general base map of Deloitte in defining the directions and dimensions of process innovations from the positions of the Doblin Model

Source: Based on (Doblin.com, 2013).

A large number of business process innovation cases can be cited, for example (Panteleva, 2013, p. 43):

- the introduction of new automated production line equipment;
- the design of product changes using new computer software;

- the introduction of a bar code or active RFID (radio frequency identification) system for tracking goods;
- the introduction of GPS devices for tracking transport services;
- the introduction of a new reservation system in a travel agency;
- the development of new project management techniques in a consulting firm.
- the application of new or significantly improved information and communication technologies (ICT).

The most frequently cited examples of innovative change in type of process innovation include:

- *Ford*: Henry Ford introduces a production line in his car company's production processes, which leads to significant changes in the process and the way of assembling vehicles, improves the use of timing and significantly reduces the production time of a vehicle from 12 hours to 1,5 hours (Differential, 2020).
- *Grupo Bimbo*: Bimbo introduces a dashboard for mobile sales, which provides quick access to information about queries, sales, other KPIs, shortens meeting time, decision-making, resource allocation and results (Differential, 2020).
- *McDonald's*: The sale of franchise in the late 1940s, as well as the creation of call centers for remote ordering from many restaurants in the United States, led to the optimization of time organizational indicators and a rapid increase in economic results (Innovating society, 2020a).
- *Google*: Process innovation in the field of human resources, related to offering employees 20% of their working time to be free to carry out personal projects contributed to the realization of multifaceted benefits for the company (Innovating society, 2020b).

The ability to identify precisely potentially successful innovative ideas and to transform them into working business sentences in a timely manner is essential for companies. The implementation of successful process innovations brings multifaceted benefits that lead to increased efficiency and improved profitability of the company. Some of the business benefits of innovation in the process include as follows (Upadhyay, 2020):

- Process innovation adds value by improving the overall supply chain, realizing cost efficiency, improving the quality of products and services, improving the brand image, increasing productivity and achieving overall company growth.
- Achievement of greater flexibility and adaptability to customer needs by applying new ways to develop and deliver improved products or services to the market.
- The composition and structure of the workforce are optimized; better customer engagement and work efficiency are achieved.
- Competitive differentiation is realized on the basis of improving business processes, including in an operational manner, on the basis of better customer service and gaining more experience.

4.4. Factors affecting process innovations

The process of developing new products and technologies, and implementing different process innovations is influenced by a number of factors. These factors act in different ways—some stimulate the process innovations, while others delay the development or directly block the innovative activity of the company. Despite the rich variety of factors, they can be classified into several main groups (Varametzov, 2013, pp. 50–58):

- **Techno-economic.** Stimulating: availability of a reserve of financial and material-technical means; availability of the necessary scientific and technical potential; compliance of the new product with the existing technology, production experience and marketing system of the company; material stimulation of the innovation activity, etc. *Obstructive:* lack of funds to finance innovative projects; weak scientific and technical base; lack of reserve capacity; non-compliance of the new product with the existing technology, production experience and marketing system of the company; dominance of the interests of the current production, orientation towards short-term purchase of costs, etc.
- **Legal and regulatory.** Incentives: legislative measures stimulating innovation (tax breaks, preferences, etc.). *Obstructive:* restrictions by antitrust, tax and patent law.
- **Organizational and managerial.** Stimulating: flexibility of organizational and management structures; democratic style of governance, predominance of horizontal information flows and informal relations; decentralization, autonomy; support from senior management; good interaction between functional departments; availability of long-term plans and clearly defined goals; correct identification of needs; presence of an energetic organizer of the innovation process, etc. *Obstructive:* firmly established organizational structures with excessive centralization, conservatism of organizational and management structures, hierarchical principles of construction, predominance of vertical information flows; lack of support from senior management; poor interaction between functional departments; lack of long-term plans and clearly defined goals; formalism; orientation towards short-term return on investments, departmental closure; lack of an energetic organizer of the innovation process, etc.
- **Socio-psychological.** Stimulating: public recognition, moral and material encouragement, providing conditions for self-realization, creative atmosphere, tolerance of failure, etc. *Obstructive:* resistance to changes that may lead to changes in status, the need to look for a new job, breaking stereotypes of behaviour; fear of uncertainty; penalties for failure, etc.

The influence of factors outside the company also deserves attention. In particular, the problem of the influence of the national culture, or rather of some of its features (individualism, collectivism), on the process of developing new

process innovations has become especially acute. In a society with a high degree of individualism, the connection between its members is lost, as each individual is concentrated on his own interests and the interests of their immediate environment. Examples of countries with a high degree of development of individualism include the United States, Great Britain, Canada and Italy. A society with a low degree of individualism (for example, Japan, Iran, Taiwan, and Colombia) adheres to group values and pursues collective interests. Although sociologists have studied this feature of national culture quite thoroughly, they practically ignore the influence of individualism in the process of developing new products.

Research by specialists in the field of innovation management gives sufficient grounds to assume that a high degree of individualism can be associated with the successful development of process innovations. The practice shows that new of process developers are people who are committed to new ideas. Even if others see one idea or another as not worth the cost of resources, these people, in spite of everyone, challenging colleagues, try to find answers to complex, intricate questions. Their intransigence, self-confidence and perseverance are the driving force in the innovation process, which creates prerequisites for its successful development and helps to overcome emerging obstacles.

The up-to-date idea of the innovator allows us to say with confidence that the high level of individualism determines the success of the activity of creating new of processes. Innovators generally rely on their ingenuity and personal participation in the process of creating and implementing new concepts. In most cases, they work autonomously, but at the same time they have a significant impact on the innovative work of their colleagues. The presence of innovators is assessed as the main criterion that distinguishes successful from unsuccessful innovation projects. Innovators in the field of business technology are similar to their colleagues in the field of industry in their purposefulness and individual approach, but they are often not the generators of ideas or carriers of knowledge needed to create a new product, service, technology, etc. Their creative potential depends on the representatives of the highest management units, who help them to reveal their potential and provide the necessary resource base for the successful realization of the ideas. Often, the basis of a new, successful process lies in the efforts of senior management. At the same time, the innovators in the field of business technologies, undoubtedly, do not play an insignificant role in the successful implementation of the innovation projects initiated by the management. Globally viewing the problem, it can be noted that the ingenuity and creative potential of one or another national culture and the successful development of new products are directly related to the level of individualism.

Collectivism, as the antithesis of individualism, can also be attributed to the factors that have a positive impact on the process of creation of process innovations. The Japanese approach to developing new of processes can serve as a typical

supporting example. In Japan, collectivism is one of many factors influencing the innovation process. For example, an integral part of Quality Function Deployment (QFD) technology and the Quality Circle program, as well as many other similar programs, are the working groups—a direct manifestation of collectivism. Japanese working groups are characterized by strong mutual support and consensus. Feelings of empathy and an inner commitment to contribute to the common work set Japanese new product developers apart from their counterparts in other parts of the world. Research on the design and matrix structure on a global scale confirms the indisputable role of group orientation in facilitating the process of creating new products. As a result of studying hundreds of programs for new product/service development, it has been found that design and matrix structures have a significantly stronger impact on the development process than functional ones. So, the collective approach to creating new products is more effective than the individual. When the level of communication, cooperation and harmony is high, i.e., there is a readiness for coordinated work and common goals, the probability of success in creating new products increases significantly.

The results of practical research on the individual and collective approach to the development of new processes are contradictory. On the one hand, individualism promotes the development of new processes, on the other—collectivism also has the same influence. This obvious paradox is removed by a more detailed examination of the stages of the innovation process. As noted earlier, the concept of a two-stage innovation process, including the initiation and implementation stages, has recently emerged. At the initiation stage, the priority task is to develop the most viable, highly feasible ideas by maximizing the range of approaches to their development. No less important requirements are the application of less strict, non-restrictive methods of thinking, which encourage any manifestation of mutual trust, participation in common work, recognition of the achievements of colleagues. That is why the initial stage of the innovation process must be led by people who are firmly convinced of the importance and value of the idea and, therefore, at this stage, individualism is more important. Conversely, at the implementation stage, cohesion and unanimity of the team is needed, as the basic concept of the new product has already been developed and making radical changes can only increase the cost of financial resources and time needed to implement the innovation project. New process developers need to work closely with each other so that the project does not go beyond the set budget and set time limits. In this sense of the implementation stage collectivism is more important. Research on innovation infrastructures shows that companies pursuing an active innovation policy, aiming to encourage the freedom of thought and action of developers, use free rather than a strictly regulated structure at the stage of initiating the new product. Conversely, the implementation stage requirements to the structure are stricter in order to achieve enhanced coordination and control over the implementation of the innovation project.

of tonne-km was realised, while the number of tonne-km in 2018 was 2,7 bn. It should be noted that Croatia achieved growth of 5.8% in rail freight in 2018, while the growth in the EU was 2.1%.

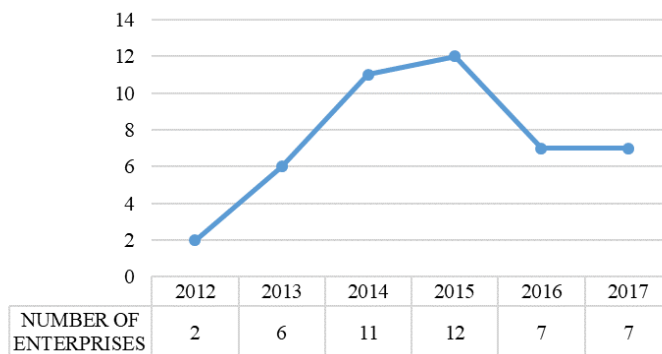


Figure 7.2. Number of enterprises on Croatian Railway market

Source: Authors adjusted according to data from (European Commission, 2015–2020; Statistical pocketbook 2015–2020).

Figure 7.2 clearly shows how the Croatian accession to the European Union has had a positive impact on creating competitiveness on the rail freight service market. The competition in the sector of rail transport can be boosted with these new endeavours. The measures for encouraging the restructuring that also considers social aspects and work conditions should accompany these endeavours (Ongkittikul & Geerlings, 2005).

In 2012, there were only two firms on the market, HŽ Putnički prijevoz (cro. Croatian Railways Passenger Traffic), that held a monopolistic position in the transport of the passengers, and HŽ Cargo that held the same monopolistic position in rail freight transportation. Still, the firm that is owned by the government manages the railway network in Croatia. This fact represented a problem in many other member states, and they have been trying to resolve this with market restructuring and with providing the possibility for other firms to take over railway management. Most rail freight companies in Europe are state-owned. This hinders the companies from developing fast and efficient transportation throughout Europe. There are many problems these companies face: train electrification is incompatible, track gauges are not uniform, long border checks (Wiegman, Hekkert, & Langstraat, 2007). It is also of great importance that governments stop financing inefficient business endeavours of the companies they own through different subsidies and state aids. This is primarily important if they want to ensure equal conditions for all those who operate on this market (European Communities, 2008). Becoming competitive is the first step towards building an efficient market. With the Croatian accession to

the EU, changes in the rail freight transportation occur. This market finally becomes competitive, which positively influences the quality and price of the final service. In 2020, the rail freight services are provided by HŽ Cargo and some other, privately-owned firms: ENNA Transport d.o.o., Rail Cargo Carrier-Croatia d.o.o., Rail & Sea d.o.o., SŽ Tovorni promet d.o.o., Train Hungary and Transagent Špedicija d.o.o.

7.3.2. Case study on the example of the Croatian national rail freight operator

HŽ Cargo was founded and is owned by the Republic of Croatia. It offers the services in regional centres: Centre (Zagreb), West (Rijeka), South (Split) and East (Vinkovci). HŽ Cargo provides the following services (HŽ Cargo, 2020):

- conventional transport, intermodal transport and transport of dangerous goods;
- storage space rental;
- license holder for EUR pallets with the right of their assignment to third parties in the Republic of Croatia;
- rolling stock maintenance (mainly wagon rolling stock).

The realization of the goals set by the EU regarding the freight will largely depend on the rail sector as a strategic sector, and its efforts to shift the balance (Ongkitikul & Geerlings, 2005). System complexity, expensive infrastructure development, lack of resources, increasing cost pressure, decarbonization, and interconnected ICT services are only some of the challenges the railway systems are facing (United Nations Economic Commission for Europe, 2019). HŽ Cargo, being the leading company in this sector, is facing all these challenges as well.

When it comes to rail freight and terminal markets, innovations are important, but it is very difficult to introduce innovations to freight terminals (Wiegman, Hekkert & Langstraat, 2007). An innovation can be seen from two different perspectives: it is something that is newly implemented or something that is new to (Dinges & Pieriegud, 2016):

- the implementing organization—even though the competition is already using this innovation (e.g., selling tickets online);
- a given sector/industry, albeit employed in other sectors/industries (e.g., hybrid vehicles or usage-based billing for traction power);
- a geographic area, e.g., in a country (although known and utilized in other countries, e.g., ERTMS (European Rail Traffic Management System)).

Wiegman, Hekkert and Langstraat (2007) distinguish three categories of innovations on the rail freight market:

1. **“New generation terminals” concepts.** Those terminals have fully automated transshipment techniques and more space-intensive terminal areas. The higher

the level of automatization, the lower the costs of freight manipulation and physical workers.

2. **Trailers on train.** The trailers are built in different forms; however, they all have transporting trailers or swap-bodies on rail wagons. They vary in terms of automation, speed, complexity, and land use. The concepts range from an improvement in 'putting the trailer on the train' to complete new terminal layouts.
3. **Transshipment techniques.** The transshipment techniques can be separated between horizontal and vertical (cranes, reach stackers, and forklift trucks). The innovative vertical concepts in transshipment aim at the increased use of automation to supervise the transshipment material; improvement of the transshipment speed; increasing weight-lifting capacities; transshipment in the presence of an electric overhead line; and a reduction in the used terminal surface. The horizontal transshipment innovations enable the transshipment without lifting the intermodal transshipment unit.

Since 2001, the United Kingdom has been implementing innovations on the rail market with the hope of restoring it to its former glory. Between 2000 and 2020, the innovations brought about many good results: the percentage of the trains that run on time increased to 94% and the number of the broken rails was reduced from almost 1000 to 152. This, in turn, resulted in more passengers using the trains, and more companies transporting more freight by train, which resulted in 30 bn GBP worth of freight transported annually. If companies wish to advance and further develop their business, they should introduce new mechanisation, better automation, automated monitoring systems and innovative thinking (Yianni, 2010). Switzerland has adopted the Swiss split concept which ensures that containers are distributed via conventional shunting yards directly from intermodal terminals to the final recipients' sidings by rail (Islam & Blinge, 2017). All the parties involved in the implementation of innovations should be aware of the fact that this process is difficult and a long-term effort. The same is true about HŽ Cargo and others involved in the process. HŽ Cargo can benefit from the examples of other member states, which have majority of the investments carried out with the support from the EU. Poland is an excellent example: it has modernized its railway infrastructure, repaired railway stations and stops and conducted many other investments on this market thanks to the EU funds (Kozłowski, Pawełczyk, & Piotrowska-Piątek, 2020).

Further development of HŽ Cargo deeply depends on its awareness of that fact, because, for the survival on the market and the establishment of the competitive role, timely implementation of the innovations is of critical importance. Implementation of innovations will not be an easy process for HŽ Cargo. HŽ Cargo management indicate that their strategy for further development firstly focuses on **intermodal**

traffic. This is supported by the fact that in the period from April 2018 to July 2019, the increase of 40% in TEU in the Port of Rijeka was achieved (HŽ Cargo, 2020). Although HŽ Cargo has already undertaken certain steps in upgrading the existing terminals, it is planning to continue with the investments in intermodal terminals. These include the inland intermodal chains with which rail terminals are linked to port terminals (The Geography of Transport Systems, N/A). That is, the focus is placed on building intermodal terminals that link the branches for long-distance transport and then steer towards the branches that operate on shorter distances. To paint the picture, the freight is first transported by sea, then, in the Port of Rijeka, it is transhipped onto the rail and transported to Zagreb or some other destination and then transported by the road (i.e., trucks) to its final destination. In order for the investment of HŽ Cargo to be cost-effective, it is crucial for the new Zagreb-Rijeka railroad to be built in the following years. This would open the possibility for the Port of Rijeka to fully exploit its resources (the 18-meter draught), and to be able to manipulate great amounts of freight it could receive if it had the support of an adequate rail infrastructure. The existing railroad, besides lacking the capacities, has many steep parts, making it dangerous and demanding for a bulk of freight to be transported. This has negative consequences on the duration of the transporting process. Bearing in mind the definition posed by Dinges and Pierieged (2016), who suggest that product innovation can include rolling stock and /or the infrastructure, the conclusion can be drawn that intermodal terminals fall under this category. The previously-mentioned growth has also been reflected in the growth of the transported goods on the rail market in the Republic of Croatia, so, in 2019, the total of 14,449 thousand tonnes was transported, representing the growth of 18.65% in relation to the year 2017. Moreover, a significant increase in business profits was recorded: on July 30, 2019, they amounted to 250,94 m HRK, which is the increase of 20.46% in relation to January 1, 2019 (HŽ Cargo, 2019).

It is important to note that HŽ Cargo has been operating with **RO-LA trains** it is currently renting, but its business plan highlights the importance of investing in the terminals with the huckepack technology, so HŽ Cargo would then stop renting the RO-LO trains and begin using their own. In case where trucks are transported piggybacked on the Rolling Road (ROLA), the roads are kept clear and the influence on the environment is reduced; this also suggests some safety regulations to be taken into consideration (Rail Cargo Group, N/A). To reap the benefits, the investments HŽ Cargo is making will not be enough; it is necessary for the government to subsidize the RO-LO trains. With no subsidies, it is highly unlikely that the road freight carriers will replace the roads with the rail.

HŽ Cargo is persistent in the idea of **advancing its operations**. Therefore, it issued the 'Call for presentation of IT solutions for operational business in railway freight transport' (HŽ Cargo, 2010).

Questions / tasks

1. Do you think that, without the implementation of innovation, the survival of HŽ Cargo would be possible? Where do you see main innovations being implemented?
2. Considering the options of innovations on the rail freight market, do you consider that HŽ Cargo has chosen the appropriate ones?
3. Can you describe the process of innovation (steps taken, results gained)?
4. Where do you see other potential innovation possibilities for HŽ Cargo?
5. Was the innovation, that HŽ Cargo listed, sustaining or disruptive? Explain your standpoint.
6. Describe main characteristics of rail freight market in your country.
7. List innovations that have been implemented on rail freight market in your country. Are there similarities with Croatian market?

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An important question and issue in the use of storytelling in business is where to get ideas for it? **The sources of storytelling** can, for example include (Hajdas, 2011):

- history of the company's founder or president;
- the beginnings of the company;
- employees' stories;
- milestones (successes or failures);
- stories from opinion leaders, contractors;
- product.

The story of Karol Wedel who gave his son Emil a chocolate factory as a wedding gift is a Polish example of storytelling using the history of the company's founder or president, and the origins of the company. Other famous world examples are the story of Steve Jobs, who left Apple as a result of a conflict, but returned after several years (almost like a prodigal son in a biblical story), or Richard Branson, who loves extreme sports and adventures, and he used it for a passion for taking risks in business (type: explorer). It is worth adding that in order to be able to base storytelling on the leader's history, the founder/president should, among others have an unconventional approach to business; an idea that managed to change the way of conducting a business; an interesting personality, charisma, something that attracts other people; or a passion that helps in creating great things (brands like e.g., Rolex, Mercedes).

"The last bottle" is a remarkably interesting Polish example of using storytelling based on the employee's story. A 94-year-old gives back a bottle of Baczewski vodka stolen during the war. The man "with a sparkle in his eyes and visibly moved by the experience, he spoke of his job as a warehouse worker at the Spirits Plants in Kraków, the destination for entire shipments of Baczewski's wares pillaged from Lvov by the Germans. In order to provide for a decent living for himself and his family, he would take a bottle of vodka every day from the warehouse (...). He handed the surviving bottle over to Managing Director of J.A. Baczewski in Poland. Ultimately the company decided to entrust the Polish Vodka Museum in Warsaw with this prize. The bottle (...) is seen by many as a symbolic reflection of the fortunes of Poland" (*The last bottle*, 2021).

In turn, the products that have the greatest potential for creating brand storytelling are products with a long and rich tradition, e.g., Patek Philippe watches, which have been cultivating the traditional Geneva watchmaking artistry since 1839 ("Independent, family-owned Genevan manufacture"). It uses multi-generational storytelling and talks about the ambitions of every man to extend the family and have an heir. They can also be products manufactured in a way that is accompanied by specific (somewhat magical) rituals (it is used by brands such as AXE, Walt Disney, FedEx, Harry Potter) or which in some way change people (physically, mentally, or spiritually), e.g., brands like Dove, Nike, Gillette.

Another important **source of storytelling can be customer engagement or customer stories**. A great example of a company that used customer engagement

as a source of storytelling is Heineken. These company uses random customers to convince them to do the impossible—in return they will receive tickets for the championship. For example, in *The negotiations* football fans try to convince their girlfriends in a furniture store to buy stadium seats for their home. If they managed to convince the woman to buy these two seats, they got two tickets for the Champions League final (*The negotiations*, 2021).

Storytelling, like any marketing activity, should be subject to efficiency assessment. In this case, the following can for example be evaluated:

- brand (or advertising) awareness and perception;
- attitudes towards advertising, company's products;
- perception of quality;
- shopping intentions;
- involvement in the content of the ad.

The use of storytelling influences consumers' brand experience. For example, the results of qualitative research conducted by Lundqvist, Liljander, Gummerus, and van Riel (2013) indicate, that “consumers who were exposed to the story described the brand in much more positive terms and were willing to pay more for the product”.

9.3. Case studies

This section presents examples of the use of storytelling in various spheres of business activity.

9.3.1. Join the medical imaging project at Future Processing, and help us create the better future—storytelling in employer branding

Storytelling can be used in building the employer's brand in the eyes of employees, i.e., in employer branding. Especially nowadays, when the labour market is an employee's market, additional activities are undertaken in order to distinguish the company. Core value which is the salary / wage, turns out to be insufficient incentive. Potential employees are looking for additional, extended values (Stefańska & Olejnik, 2021), especially those that may contribute to improving the reality.

Based on the above assumptions, Future Processing company, with its headquarters in Gliwice, Poland, used storytelling in the employees' recruitment process. The company intended to recruit several high-class specialists to work for them. Highly specific competencies were required when competing for potential new employees with companies from the medical industry. The need to hire new

employees was related to the implementation of a specific project on the border of IT and medicine, aimed at increasing the effectiveness of imaging diagnostics in the treatment of cancer. In the recruitment process, the recruiters prepared a short film using the association with Rembrandt's *Anatomy lesson of Professor Nicolaes Tulp*. Future Processing did not apply the classic recruitment notice but showed how technology supports people and how a candidate can contribute to it (Koc, 2017).



Figure 9.3. Print Screen of scenes from Future Processing's recruitment video

Source: https://www.youtube.com/watch?v=80z3yr7wOBo&feature=emb_logo

Evaluate the effectiveness of storytelling in recruitment, knowing that during the 4 months of the campaign, Future Processing received 75 CVs and hired 13 employees. Can the storytelling used in Future Processing during recruitment be used in the company's further activities and in what way? Suggest possible solutions.

9.3.2. How has Zelmer brand made the dream of a 4-year-old boy and an old lady come true?—storytelling and customer engagement

Thanks to social media monitoring, the manufacturer of the Zelmer brand noticed in 2016 a 4-year-old boy—a fan of household appliances, especially vacuum cleaners (Głowacka, 2016). The boy's mom posted on social media a photo of a birthday cake prepared for him. It was in the shape of a Zelmer vacuum cleaner. This allowed the company to reach the user and to make her child's dream come true. Together with