

# Množično inoviranje – ključ do trajnostno uspešne organizacije Mass innovation - the catalyst for sustainable organization

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## Povzetek

Iskušnje me učijo, da za dosego inovativnosti kot ključnega vzvoda ustvarjanje dodane vrednosti, potrebujemo napreden sistem orodij, podpornih mehanizmov in pristopov, ki podpirajo horizontalna sodelovanja in povezujejo izkušnje modelov, ki vzpodbujajo vodenje od zgoraj navzdol in od spodaj navzgor. Še več, moj argument gre v smeri, da le množično inoviranje ustvarja ustrezno klimo in pogoje za izjemne inovativne dosežke na dolgi rok. Pri tem pa je izjemnega pomena, da se modeli za množično inoviranje ne prenašajo avtomatično iz enega kulturnega okolja v drugega. Prenaša naj se znanje o tem, kako so sistemi, modeli, pristopi nastali, kak ne omejitve in vzpodbude so upo tevali, sama re itev pa mora biti izvirna, okolju prilagojena, da lahko pripelje do optimalnih rezultatov. V prispevku bodo vsi argumenti in vpra anja podprti s primeri iz prakse.

**Ključne besede**: inovativnost, dodana vrednost, množično inoviranje, inovacijski ekosistem, poslovna evolucija, horizontalne strukture

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## Abstract

Experience has taught me that if we want innovation to be the core catalyst of value creation, we need an advanced set of tools, mechanisms and approaches that encourage horizontal cooperation and link the experience of models that encourage top-down and bottom-up leadership models. Even more, I stress that only mass innovation can develop the appropriate culture and mind set for innovative breakthroughs. At the same time it is important that we do not merely transfer effective models for mass innovation from one environment to another, for we should transfer the knowledge and awareness that contributed to the successful model of mass innovation. However, the model itself should be authentic, unique, adjusted to the local environment and local idiosyncrasies. Only with such adjustments can we hope to achieve optimal results. I will support my arguments with examples and experiences from the field.

**Keywords**: innovation, added value, mass innovation, innovation ecosystem, business evolution, horizontal structures

# **1** Mass innovation and innovation ecosystems

Innovation ecosystems<sup>1</sup> are an effective form of cooperation, co-creation and coexistence in modern organisations and society as a whole. They encourage **horizontal** integration of all stake-holders, who jointly **co-create mutually beneficial results**.

There are two types of innovation ecosystems – open and closed. **Closed** innovation ecosystems share and apply the results of their work in order to create new value **within** 

<sup>1</sup> A group of different stake-holders creating (added) value

a defined ecosystem. **Open** innovation ecosystems **share** the results of their work against payment or free of charge with external stakeholders.

Innovation ecosystems can be developed within an individual sector, industry, local community, state or region. They can integrate various groups of stakeholders, industries, interest groups, and sometimes also individuals. They can be geographically or virtually delimited. Regardless of their type or nature they share a common characteristic, namely that the development of innovation initiatives<sup>2</sup> is based on **mass numbers**, interconnectedness, integration and mutual benefits based on **systemic (comprehensive) thinking**.

But this was not the case in the past. The generation of initiatives used to be predominantly limited to small groups of experts. These groups used to seek solutions for the foreseen needs or identified problems and apply them as products in the market, usually in the form of **technological innovations**.

The need for innovation increased with the reinforcement of globalisation and the free flow of goods. This was a result of the need to be distinctive and the search for one's own identity which is necessary if one wishes to be recognisable on the global markets. Thus, the concept of innovation was extended to **service, organisational and social innovation**. These types of innovation significantly broadened the circle of stakeholders necessary to generate various ideas<sup>3</sup>, inventions<sup>4</sup> and innovations<sup>5</sup>. The innovation process started to include an increasing number of individuals. The ability to shape a **business culture** that encourages and develops **mass innovation** has become a distinctive identifiable element between **successful** and less successful companies (1).

With the increasing number and broadening variety of innovative initiatives the micro and macro environments were faced with a new challenge, i.e. their **absorption capability** for successful development and placement of innovative initiatives, or to put it in different terms their ability to understand the advantages and weaknesses of innovations, as well as adopting all necessary adjustments for their successful implementation.

In the continuation, this paper will focus on two key components or characteristics of business innovation ecosystems: multiplicity and absorption capability.

# **1.1** Influence of the evolution of added value on the development of innovation

Since the very beginnings innovation has been one of the driving forces of humanity.



Figure 1: Development of the perception of innovation

Throughout the various phases of our civilisation it has been perceived as related to economic and social successfulness on various levels (Figure 1).

Up until the end of the previous century development in the business world was most commonly linked to technological milestones and related technological innovations, such as: the steam engine, the electromotor, the microchip or new materials. Thus, during this period innovation was exclusively perceived as **technological innovation**. Until the late 1970's or early 1980's this reflected the needs of the business world which increased added value by increasing productivity. This was primarily achieved by the development of new technologies, processes, automation and robotisation.

Technological innovation was usually developed in **small, privileged groups of experts/developers**. Their circle for exchanging ideas rarely included other employees.

In the 1980's, a new driving force of creating added value swept across Europe – quality. The increase of business internationalisation started pushing those European companies that persisted with creating productivity-based added value further towards the margin of survival. This was a result of the growing prices of energy, human resources and input materials. In order to maintain a strong role in the global economy, the European economy needed to find a new driving force.



#### Figure 2: Evolution phases

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Figure 3: Relationship between absorption and multiplicity from the viewpoint of evolution

kasposobnost	3,4 evolucijskafaza <b>Težava</b> : razvito okolje brez navdiha	3,4 evolucijskafaza Idealno: razvito okolje z navdihom
Absorbcijs	1 evolucijska faze <b>Težava</b> : nerazvito okolje, brez navdiha	1,2 evolucijskafaze <b>Težava</b> : nerazvito okolje, skupina z navdihom

With quality as the new generator of added value arose a new need and opportunities for new innovation. The differentiation among companies was expanded to services that provided perspectives regarding the market, value chain, integration and work methods. The process became the key subject of observation. This resulted in including more people into the innovative thinking process. Innovation spread from research and development to all other services and processes within companies. Through appropriate communication and motivation approaches the number of innovative proposals started growing. Consequently, changes were also being implemented at a quicker pace. This opened the issue of the absorption capability of the people who were responsible for implementing changes on the strategic and operational business levels (Figure 3). This is why, parallel to providing motivation for the generation of innovation initiatives, a more comprehensive development of individuals is being encouraged, such that ensures greater flexibility and openness to change.

While productivity was the driving force of added value for more than a hundred years, quality held this place for a mere twenty. Due to the growing influence of the Internet and other modern information technologies that enable global communication and cooperation innovation took over as the central driving force of generating added value at the beginning of the 21<sup>th</sup> century. The need for establishing identity on the levels of the individual, group and object is on the rise. The needs in the global world are becoming increasingly diverse. Instead of the product and the process, **correlations** and the understanding of relationships are growing in importance. Therefore, **business models**, **innovative approaches within the company's organisation** and its relationship with its environment are gaining in importance as regards innovation.

**Innovation ecosystems have been established** as a new form of cooperation, and these, in addition to the internal resources (employees), also include external stakeholders (strategic partners, suppliers, the environment) in the process of considering and generating innovation proposals. The number of active participants is growing and so are the number and complexity of innovation proposals. Companies that do not succeed in activating a mass approach lose ground with respect to the market, thus also failing in terms of business success.

A special type of cooperation is being developed in the form of open innovation ecosystems in which the principle of co-creation and joint application of results represent a border beyond which something new and exciting can be expected in the future. In order to ensure that thinking environments have an absorption capability (Figure 2), the **comprehensive development of competences** of individuals, teams and communities represents one of the key tools for success. **Inter-structural teams** are the most dominant, for within them participants stimulate each other's growth by challenging each other, encouraging each other to expand the borders of what is known and discover new insights and solutions.

Thus, **a horizontal innovation infrastructure** is being established in support of the innovation process and development of the innovation culture. The innovation infrastructure helps maintain transparency and visibility of innovation proposals and ensures a unified model for assessing innovation proposals, as well as provides tools and knowledge resources for encouraging out-of-the-box thinking.

By establishing mass innovation and appropriate absorption capability of the ecosystem we do not merely insure the growth in the generation of innovation proposals, but also simultaneously ensure a suitable environment for the development of premium innovation, the so-called **breakthrough innovation**, which is thus able to gain broader support and readiness for successful implementation on the level of the entire company and ecosystem.

To summarize: successful implementation and market manifestation of innovation proposals requires a suitable environment and certain preconditions: innovation culture and awareness, appropriate resources for creating added value and open markets (globalisation). Sustainable generation of innovation proposals is increased by raising the

awareness of a mass of people, and this is, in turn, a precondition for ensuring an appropriate absorption capability of the environment to implement the necessary changes. It needs to be emphasized that innovation can generate added value only if the other two key forces of business success (i.e. productivity and quality) are successfully managed.

# 2 Mass innovation

Today, mass innovation is recognized as one of the key characteristics of successful innovation ecosystems. For innovation to be considered "mass" within a company, ideas need to be generated by more than 60% of employees, each proposing 3 ideas a year. This includes improvements, inventions and innovations.

## 2.1 Dynamic environment

Providing a **dynamic environment** is one of the key challenges of mass innovation and absorption capability of people. Among other things, this means breaking the routine and stepping out of the comfort zone into constant motion, adaptation, transformation and progression into the new. All of the above is a particularly difficult challenge for people trained for industrious and learning environments (Figure 2).

So far, our experience gained from 7 Slovenian examples<sup>6</sup> confirms the above statement. These experiences served as the basis for creating the **12 Innovation Infrastructure** model<sup>7</sup>. The **dynamic environment** for supporting mass innovation within an innovation infrastructure<sup>8</sup> is **provided through four points of entry**:

1. Model of criteria for assessing innovation proposals

<u>Explanation</u>: the model of criteria must integrate key strategic goals of the company that the employees need to be made aware of when shaping their ideas; the model can be changed and adapted according to the current strategic goals or company vision; I recommend a set of **7-9 criteria** with an **1 to 3** assessment scale. The model should apply uniformly to all employees regardless of their role in the organisational structure. I recommend that the criteria are categorised in relation to the complexity of the proposals: a special set of criteria for **more straightforward** innovation proposals (the activity level) and another set for **more complex** innovation proposals (the project level).

2. **Motivational methods** supported with innovation communication and innovative communication

<u>Explanation</u>: motivational approaches within an innovation process need to be **adapted** constantly otherwise they lose effectiveness. Experience shows that motivational measures need to be refreshed and/or upgraded at least **once a year**. The individual, team and organisational needs of a business environment need to be identified and addressed simultaneously. Motivational measures may comprise of: monetary and non-monetary incentives, interesting experiences, presentations, innovative communication about people, innovation proposals, weak signals, breakthrough technology, examples of best practices and other similar topics that help provide the employees with inspiration and moral support. The **attitude of superiors** 

<sup>6</sup> BTC d.d., Petrol d.d., Elektro Maribor d.d., Lek d.d., TPV d.d., "Srce Slovenije" (Heart of Slovenia) development partnership, InCo movement

<sup>7</sup> http://www.vibacom.si/page.php?54

<sup>8</sup> Innovation infrastructure is a formal environment with a set of rules that provide all participants within the innovation ecosystem with equal access to the process of generating ideas, as well as in the assessment and implementation of the ideas. It comprises of: steps, leverage, building blocks, business effects and manifestations.

towards innovation, errors and success is extremely important for motivation. Business is people. People are unpredictable, physical, intellectual, emotional, spiritual and social beings who perceive their environment on all of these levels and make decisions/adapt according to the received impulses and their own genetic memory. Motivational measures must break through the **walls of the familiar** and stimulate the need of the individual to be constantly transformed.

#### 3. Methods for generating ideas and innovation proposals

<u>Explanation</u>: similar to motivational methods, methods for generating ideas require constant creation of **new approaches**. The most effective method for generating ideas is playing **games** that help us shed our habitual patterns, release our adrenaline and open the world of **lateral thinking**. A few methods that have been proven in practice: »Krea Natura« (a psychology-based approach that helps us achieve the maximum results in a creative process), »Open Innovation« (a global approach to the development of open innovation based on the stake-holders model), »Different Thinking in Business« (ensuring sustainable competitive advantages), structured innovation methods and processes (Lead Users Research, Blue Ocean Strategy, Synectics, Stage Gate, TRIZ, Structured Management of Ideas, Idea Pool, Innovation Risk Management). The **role of management** is also important in the idea generation process, as their **body language** and **active communication** on the role of innovation in achieving good business results can encourage innovative thinking.

#### 4. Inter-structural teams

Explanation: nowadays, it is hard to imagine successful mass innovation without inter-structural teams. The core philosophy behind them is that a creative team must comprise of individuals with different knowledge, from different fields and cultural backgrounds. This ensures **diversity** with respect to the chosen reality. And it is precisely this diversity that triggers various lateral thought correlations, which lead to breakthroughs in thinking. Practical experience has clearly showed that challenges, e.g. in sales, are difficult to overcome by the sales department alone. Only if presented with views from the financial, production, purchasing and other departments can they achieve a breakthrough in thinking and find comprehensive solutions. The same holds true on the levels of projects, processes and communities. There are no wrong or stupid questions in inter-structural teams. It often happens that a seemingly inappropriate or unrelated question triggers an intensive storm of thoughts in someone else. Participants in inter-structural teams often feel that: "It is unimportant who comes up with the breakthrough thought, as long as someone does. The person who comes up with it can explain it to the others." Together we create the conditions for new awareness and new insights. This is why it is so important to encourage a mass approach to the shaping of innovative awareness and endeavour to reinforce our environments as a whole.

## 2.2 Safe environment

The next challenge of mass innovation is to create a safe environment. **Only a person** with a sense of security can realize their full creative potential. A sense of security is established when we feel we are appreciated, heard and considered. When we feel a field of trust and respect.

A safe environment is not ensured merely through financial security. When we asked employees in **12 Slovenian companies** as to how do they perceive a safe environment

that would enable them to release their maximum creative potential only two participants in all twelve groups stated that money was a precondition for this and only three participants mentioned material means. Other participants listed basic human values and types of information necessary for goal-oriented thinking: team spirit, management support, effective task delegation, good relationships, information quality , openness to new ideas, mutual respect, ability to reach decisions, professionalism, clearly set goals, information on customers, positive charge, tolerance, enough time for quality work, etc. The above allows us to conclude that financial security is not a precondition for creativity. Our creative spirit is most significantly influenced by **mutual relationships and clear information**, which allow us to **understand the environment** in which we work and for which we create.

Based on my experience I suggest that when we find ourselves in the most perturbing moments, i.e. when we are pressured by the market, suppliers, partners, owners, etc., we invite people into an orderly and safe environment that has been established on the base of their values and ask them to join the creative process. I am confident that the results will not be disappointing and that the collective consciousness will exhibit its true creative power. Through the inspiration of an individual.

## 2.3 Innovative leadership and innovation leadership

Mass innovation requires a **new leadership style**. It requires a constant interaction between the characteristics of innovative leadership and innovation leadership. Often, both roles are enacted in the same person. The role of the **innovation leader** is to establish the rules and conditions for effective creativity of individuals. The role of the **innovative leader** is to constantly monitor the stakeholders and the situation within and outside the company, and to identify the opportunities for new business models, new definitions of processes and new work methods, to drive towards the new borders of what is known, to define new ecosystems, etc.

In both cases, leaders in innovation ecosystems must motivate, encourage, connect and clearly communicate the needs and goals of the company as the fundamental stimulus for successful innovation.

Experience has taught us that the role of an innovation leader is a difficult one for individuals who have not tried innovative leadership, or at least innovation on the level of products and services, i.e. individuals who have not previously practiced innovation. Only personal experience in innovation can truly enable a person to understand the requirements, opportunities and pitfalls of innovation ecosystems and later contribute to the effective drafting of rules and the creation of a safe environment for the development of innovations.

## 2.4 Innovative communication and innovation communication

Special communication forms were developed to support mass innovation. **Innovation communication**<sup>9</sup> deals with the appropriate representation of **innovation topics**. This is communication on the topic of innovations. It encourages telling a story in a way that highlights the following aspects:

- clearly defines the level of development of the relevant innovation subject (regardless whether the story presents the idea, invention or innovation);
- describes the stakeholders contributing to the story (presents the contributors of knowledge, experience and resources necessary for success);

<sup>9</sup> Innovation communication (www.incogibanje.si) is a comprehensive process of identifying, understanding and promoting innovation through comprehensive and systematic communication. In practice, it is a movement that integrates all stakeholders in the innovation environment and strengthens the network of interdisciplinary connections and relationships, both in the sense of content and structure.

- defines the influence the story will have on the fields it belongs to as well as other fields;
- defines the duration of the effects (whether the subject will have a short- or longterm life cycle; whether the subject is a current impulse or something with lasting effects on the field or society);
- forecasts the future topics that the story might inspire (possibilities for development).

**Innovative communication**<sup>10</sup> holds special significance for the development of an innovation environment and mass innovation. Innovative communication seeks suitable tools and communication channels and adapts them according to the needs and/or behaviour of the target customer segments, thus repeatedly reshaping the communication environment in an innovative manner.

In Slovenia most experience in innovative communication and innovation communication comes from the activities performed by the **InCo** movement between 2006 and 2011. The InCo movement systematically promoted the development of innovation culture in Slovenia through both types of communication and dismantled taboos of the new innovation paradigm by setting an example. One of its important insights was that a **common language** was necessary for the development of mass innovation. When the InCo movement defined various stakeholder groups<sup>11</sup> we found that they used different jargons and terminologies that were specific to their internal use and often foreign to external observers. A public debate on the glossary of terms and continuous creation of new environments for inter-structural communication stimulated the cooperation between stakeholders and provided new views on the known and new challenges.

A unified language brings various groups closer together and creates an arena for sharing thoughts. Furthermore, it encourages massive dissemination of innovative ideas by simultaneously sending the same information through different communication channels, to different target audiences and in their authentic languages. This produces a **network effect** that horizontally connects the environment through the transmitted information.

## 2.5 The mass innovation model

Figure 4 shows a generic model for the development of mass innovation. It highlights the elements that are directly connected to successful management and the development of multiplicity. However, the essence of the solution lies at its heart, which is **unique and specific to every company**. None of the above listed companies share the same approach to the development of the innovation ecosystem and multiplicity. Each company has taken into account their specific corporate culture, evolution level and previous experience with innovation. **Cultural sensitivity** is an important aspect of success, for it is tied to people and their perception of the conscious and the unconscious.

The implementation of the innovation model and innovation infrastructure should take into account the specific key abilities of the company, its values, history and ambitions. Petrol, for example, applied the concept of promoters to encourage mass innovation; BTC used strategic workshops and motivational visits; Elektro Maribor named innovation ambassadors in each of their organisational units. The above examples show that different criteria and motivational systems were used for assessing innovation proposals. In one of the examples the incentives were non-financial, while elsewhere they were predominantly financial. Their forms and methods of communication were also different. Some relied on the personal presentation of information and assessment results, while

<sup>10</sup> Innovative manner of communication.

<sup>11</sup> departments, communities, teams, companies, regions



other published everything online. There are also noticeable differences in the formal organisation of the innovation environment. Some manage innovation through an actual or virtual project office, while others use the change management process or formal linear structures. The "right/wrong" concept does not apply to these solutions. In the end all that matters are the results.

# 3 Conclusion

Systematic management, leadership and development of mass innovation are the key guarantees for sustainable success in the age of globalisation and open markets. This is directly linked to the absorption capability of the environment; therefore, they need to be addressed and developed simultaneously. New types of leadership, communication and tools for establishing dynamic structures for the implementation of change provide great help in this endeavour. Nevertheless, we have to constantly keep in mind that people are the key generator of innovation proposals. Therefore, the methods and approaches for the development of innovation environments should be adapted to the corporate culture, the evolution level and the environment in which the innovation is developed and implemented.

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