Strategos, 7(2), 2023, 59-78
UDK 32
UDK 355/359
Review scientific paper

STRATEGOS

# Organizing for Innovation: A Fundamental Review

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## Abstract

*Innovation is highly sought by organisations and is one of the key factors in boosting effectiveness, performance, and sustainability across businesses, both in commercial and defence contexts. Absence of innovation can affect organisations in a number of ways, including the wasting of opportunities for greater operational effectiveness and improvement of internal processes, with a negative impact on the motivation of human resources, the main repositories of knowledge, values, and organisational culture. Innovative organisations generate a strong sense of belonging across their ranks and convey an image of effectiveness and fulfilment. The objective of this text is to analyse the fundamental tenets and trends in organizing for innovation through a fundamental literature review and critical analysis. The results characterise and update an overview of current thought on the subject of organizing for innovation, encompassing culture, processes, and leadership towards a higher innovation maturity level within organisations, and providing guidelines.*

## Keywords

*innovation, culture, organization, leadership, organizing for innovation, process*

## Introduction

Innovation encompasses challenging the *status quo* and introducing new and better products, processes, services, or management approaches that add value (Deschamps, 2008). Innovation is, above all, transformation (Vilà, 2012). It may take several forms, including new technology, production processes, organisational change, systems, and programmes (Çokpekin and Knudsen, 2012). It is possible to distinguish between organizing for innovation and innovation itself. An innovative organisation is one that continuously seeks change. Conversely, innovation is anything – material or not – that results from the integration of one or more ideas. For an idea to be considered an innovation, it must be characterised by adding value to the organisation after its implementation (Miller and Brankovic, 2010).

Organisations that innovate typically design and implement strategies aimed at better results (Looy, Martens, and Debackere, 2005). Innovation outcomes can be incremental or radical, oftentimes classified as disruptive (Vilà, 2012). If an organisation seeks incremental innovation, it will usually recombine processes and improve products or services. According to O'Reilly and Tushman (2004), incremental innovation entails small improvements to existing products, services, or operations, which will become more efficient and add value to the organisation. On the other hand, if an organisation pursues radical innovation, it has to select ideas that have the power to change its competitive advantage, sometimes changing the economic structure of the industry (Skarzynski & Gibson, 2010).

According to Looy et al. (2005), it is difficult for the two types of innovation to coexist within the same organisation; however, this is what happens in so-called *ambidextrous organisations* (O'Reilly and Tushman, 2004). These organisations are characterised by having two distinct structures. One is in charge of maintaining the traditional business based on incremental innovation, which requires commitment, convergence, and dependence on actions, and another structure is dedicated to radical innovation, thus exploring new paths for innovation and fostering flexibility and divergence.

According to O'Reilly and Tushman (2004), ambidextrous organisations are the optimal choice because there are no contamination effects but rather

fertilisation from the radical into the incremental one. Looy et al. (2005) suggest, however, that these organisations may lose sustainability by being overtaken by others that focus only on one innovation typology.

As for innovation categories, one can also consider the following: (1) process innovation; (2) product innovation; and (3) business model innovation. *Process innovation* is understood as the introduction of new elements into operations or services to make them more efficient (Çokpekin and Knudsen, 2012). *Product innovation*, in turn, consists of new technologies or combinations of technologies to meet business or market needs (Çokpekin and Knudsen, 2012). As for *business model innovation*, Deschamps (2008) defines it as the creative reorganisation of a business model in order to improve its current business competitiveness.

Non-innovative organisations can, however, become success cases if they achieve a systematic ability to innovate. Accordingly, the first step towards sustained innovation capability is the commitment of top leaders to such a strategy. Vilà (2012) further argues in favour of a path that will lead to the maturity of the innovation process within the organisation. Such maturity goes through three stages: *awareness of* the current state of innovation, *systematisation of* the innovation process, and *consolidation of* the new stage of maturity in what innovation concerns.

An organisation can stimulate innovation by following two broad strategies: top-down and bottom-up (Deschamps, 2008). The *bottom-up innovation* strategy assumes that creativity within the organisation may be based on an innovation culture promoted by the employees across the organisation. On the other hand, *top-down innovation* is intrinsic to a certain organisational discipline, imposed by the innovation process put in place. These two different approaches depend on each other to survive and, together, may contribute towards a more innovative organisation.

Organizing for innovation is therefore dependent on a *culture of innovation*, the *innovation process*, and *leading change* within an organisation. Hence, the main research question puts focus on how the literature addresses the subject of organizing for innovation from the perspective of innovation cultures, innovation processes, and change management.

In order to answer such a question, this text was divided into four sections. In this section, the general context for *Organizing for Innovation* was laid out, and the research question that guided the literature review was established. The second section describes the selected methodology used to collect existing information on the subject. The third section summarises the main contributions and analyses on the subject of organizing for innovation, specifically in the areas of organisational culture, processes, and change management. The last section, *Conclusion*, summarises the main contributions.

## Methodology

The research methodology used critical thinking together with a Systematic Literature Review (SLR) comprising the three stages of planning, development, and reporting (Kitchenham and Charters, 2007). The planning phase is framed by the need that motivates the literature review. In this phase, the criteria for the search for articles were defined by using keywords to answer the main research question, concluding with the performed review according to the SLR reference selection. The development phase materialises with the search itself. To this end, the articles to which the selection and extraction criteria would be applied were defined. It was decided to apply the search criteria to the article titles and abstracts, taking into account their publishing dates. Digital libraries were consulted, using filters and successive iterations.

The chosen key words for the search, as applied to the title and abstract of the articles, were *organizing for innovation*. In the first iterations, the period of publication was defined between 2010 and 2021; however, as a result of this search, it was not quantitatively relevant. Consequently, the period was extended, ranging from 2000 to 2021. Posters, presentations, and other texts that were not written in English were excluded from the selection. After assessing the quality of the obtained articles, a group of 37 articles was deeply reviewed. In addition, structuring books on the organizing for innovation theme was also selected and included in the reference list. The reporting phase of the SLR methodology was carried out after a full reading of the selected texts. It was possible to synthesise and list conclusions as an answer to the departing research question: *How to organise for innovation*?

## Organizing for innovation

### *Innovative Culture*

An innovative culture is evidenced when members of the organisation, individually or in groups, come up with innovative solutions to existing problems (Miller and Brankovic, 2010). According to Deschamps (2008), an innovative culture is characterised by exploration, experimentation, and entrepreneurship. Such a culture emphasises learning, optimisation, and knowledge sharing (Love, Roper, and Magniarotti, 2006), which encourages risk and is fault-tolerant (Cheltenham, 2016). Rao and Weintraub (2013) suggest that an innovative culture is characterised by six elements: resources, processes, values, behaviours, climate, and success, all dynamically interconnected in a systemic way.

In innovative organisations, creativity must predominate, being an effect of the freedom that must be experienced in such endeavours (Boeddrich, 2004; Çokpekin and Knudsen, 2012). Creativity is of the essence, as it is the main source of innovation using the generated ideas. Without ideas, there is no innovation (Boeddrich, 2004). Creativity is disseminated through knowledge sharing and formal and informal communication (Miller and Brankovic, 2011).

Creativity may arise from multiple sources. This happens especially in contexts where people are more connected, increasing sharing and communication more frequently (Água and Correia, 2020). Therefore, organisations have adapted, and ideas no longer come just from their Research and Development units but from other approaches, such as *collaborative innovation* (Bogers, Ollila, and Ystrom, 2016; Ollila and Ystrom, 2016), *open innovation* (Lakhani, Lifshitz-Assaf, and Tushman, 2013; Goglio-Primard and Crespin-Mazet, 2015; Winsor *et al.*, 2019), or *employee-led innovation* (Tirabeni, Soderquist, and Pisano, 2016). Each type of innovation corresponds to a source, i.e., a space where freedom has been given to sharing and communication and where networks have been formed. Such networks give rise to ideas, which, after going through the whole process, become innovations (Mascia, Magnusson, and Bjork, 2015). Organisational and cross-organisational networks also help

create and sustain innovation, which depends on these dynamics for thought flows across organisations (Kaminska and Borzillo, 2017).

Networks established inside and outside organisations can generate epistemic communities and communities of practice (Kaminska and Borzillo, 2017). Such communities are bound together by the knowledge that their members share (*Colombo et al.,* 2011). Epistemic communities are associated with knowledge exploration by heterogeneous members and are characterised by informality. However, there is a more formal aspect to this type of community: multidisciplinary teams (Love, Roper, and Magniarotti, 2006). These teams are known to achieve the objectives more creatively, faster, and with higher quality.

*Communities of practice*, on the other hand, are networks with less heterogeneity and are formally assembled for a purpose. Communities of practice enable collaborative innovation and open innovation (Goglio-Primard and Crespin-Mazet, 2015) since they have two types of actors: skilled and knowledge actors. *Skilled members* are those who identify knowledge and disseminate it within or outside the organisation. *Knowledge-linked members,* on the other hand, are the ones who typically create the knowledge. This type of community leads to the creation of innovation networks, which are structures that develop and implement innovation through cooperation and coordination (Goglio-Primard and Crespin-Mazet, 2015). From the perspective of Arena et al. (2017), organisational networks may have three categories of actors: *brokers, central connectors,* and *energizers*. These actors act in what is called an *adaptive space*. This adaptive space is characterised by the diffusion of resources, ideas, and information throughout the organisation to enhance successful innovation. *Brokers* are individuals who form links between communities inside and outside the organisation. *Central connectors* are those who disseminate and implement ideas, fostering trust, learning, and taking risks. *Energizers* are those who provide energy to projects, challenging top management to accept and allocate resources to radical innovations.

An organisation that aspires to innovate shall have the starting engine for that journey – leaders willing to innovate. Innovative leaders must have certain qualities that distinguish them from traditional leaders.

There are six characteristics that innovative leaders share (Deschamps, 2008). In other words, they:

- balance creativity and discipline well;
- accept risks, failures, and uncertainty while promoting learning;
- are committed to the mission of innovating and able to spread this dedication among the employees;
- show a willingness to acquire external technology and ideas, implement them, and experiment within the organisation;
- have the courage to stop projects; and
- have the talent to build and lead teams, as well as retain staff capable of fostering innovation within the organisation.

To practise innovative leadership, it is necessary to give purpose to innovation, direct workers, and introduce a sense of focus. Hence, Deschamps (2008) suggests the following imperatives for innovation leadership:

- have an urgency to do new things;
- have the courage to take risks;
- have criteria regarding risk management; and
- be agile in finding opportunities and executing projects.

According to Vilà (2012), an innovative leader must have emotional intelligence, political and influencing skills, and the ability to listen. To succeed, an innovative leader must be able to trust their employees, because only then will they be able to have the freedom to be creative.

Innovative leadership has to build a shared vision through values, which go along with innovation. However, more important is to demonstrate to employees that the decision-making processes are in line with those values (Palmisano, Hemp, and Stewart, 2005). With this stance, leaders will create a culture based on the values, attitudes, policies, and processes they practise (Deschamps, 2008; Schmiedel, Spiegel, and Brocke, 2017; Sull, Sull, and Turconi, 2020). When these values are assimilated within an organisation, it is possible to exercise *collaborative leadership* (Nanita, 2018) rather than the typical top-down management control.

The values that are intended to be intrinsic in an innovative culture shall meet with creativity and improvisation. However, these two features are not sustainable if there is no trust among an organisation's employees, so they are critical for an innovative culture. Miller and Brankovic (2011) highlight typical behaviours of innovative leadership culture, such as being a good listener, being humble, encouraging, rewarding, and being open to change. Incentives are also essential for creativity because they encourage employees to take responsibility, experiment, and take risks (Fonseca, 2018). Fault tolerance and extended time horizons to deliver results are part of the culture of an organisation that aims to be innovative (Manso, 2017). The rewards, which come after success, are equally important for all employees to realise that it is possible to bring value to the organisation through innovation (Rao and Weintraub, 2013).

Skarzynski and Gibson (2010) highlight some mechanisms that should be in place to promote innovation as a core value within the organisation:

- Leaders must behave in accordance with the values they express so that all employees understand the message, which must be conveyed with consistency.
- The presentation of new ideas should be made at all organisational levels, and top leaders should have an open-door policy for all ideas.
- There must be a recruitment plan that encourages entrepreneurship and risk-taking criteria when selecting recruits.

Another dimension that encourages the proliferation of an innovative culture is training. One of the most impactful examples of training that fosters innovation is that of the Whirlpool company. This organisation has divided training into three levels: the innovation ambassador, the innovation mentor, and the innovation consultant. The *innovation ambassador* is the lowest level that any employee should have. The training and certification of ambassadors is elementary regarding innovation competencies. The ambassador must recognise the value of innovation, and the company's process for innovation, and know how to use the tools the company makes available to innovate. An *innovation mentor* is someone equipped with innovation and leadership skills. The *innovation consultant* is someone who is exclusively dedicated to

innovation within the organisation. The aim is to ensure that the process of systematising innovation is underway and well-developed. The innovation consultants are the ones who deliver training to the other levels (Skarzynsky and Gibson, 2010).

An innovative culture that combines the above-mentioned characteristics will have a higher probability of success. However, another pillar of innovation, the innovation process, which is closely linked to culture, should be consistent and flexible.

### *Innovation Process*

The innovation process is a set of actions aimed at fostering innovation within the organisation. The deployment of the innovation process has to be adapted to each organisation, ensuring a balance between quality and focus on organisational goals (Ende, Frederiksen, and Prencipe, 2015). Typically, three main phases are required for the implementation of an innovation process: idea elicitation, selection, and implementation. These phases need to be transparent and structured without restricting creativity or discouraging innovators (Boeddrich, 2004). The lack of methodical, systematic, and structured procedures at the beginning of the innovation process has a critical impact on the management of the innovation process.

The first phase of the innovation process, *idea gathering*, needs to be fed by a sustainable flow of ideas (Boeddrich, 2004) in order to create a portfolio that will be submitted to the next phase. Leaders should consistently elicit urgency from sources about the need for ideas. However, the pressure should not be too much. If this happens, creatives may become inhibited from producing radical innovations, which will consequently add little value to the organisation (Skarzynsky and Gibson, 2010; Tirabeni, Soderquist, and Pisano, 2016). Hence, it is important to give employees time to explore their ideas, recombine them with ideas from others, experiment with them, and connect within their networks. Google, for example, allows about 20% of its employees' weekly time to focus on creativity (Skarzynsky and Gibson, 2010; Tirabeni, Soderquist, and Pisano, 2016). It is important to empower the frontline employees as the main creatives within companies (collaborative

innovation and open innovation). Seeing ideas implemented is motivating for employees, perhaps more so than monetary rewards (Boeddrich, 2004; Manso, 2017). It is also necessary to support employees and their ideas throughout the process, which benefits both the innovator and the organisation. This support is provided by teams of trained innovation mentors, also referred to as *innovation champions* (Martin, 2011). Such individuals should be the first ones to attend innovation training outside the organisation in order to introduce new concepts. Soon after this training, they return to the organisation and implement innovation processes. Subsequently, they usually return to their former roles, where they have the objective of gathering, selecting, and implementing the ideas of frontline workers (Skarzynsky and Gibson, 2010). Innovation champions accelerate the innovation process as well as de-bureaucratise it (Boeddrich, 2004). The benefit of this approach for the organisation is to observe more quickly the implementation of ideas and, consequently, to respond to problems that may arise more quickly.

The idea-gathering phase draws resources from the organisational culture, which, desirably, should be innovative. Creativity, the involvement of many brains, the opening of opportunities to develop ideas, and potential recombination are key to this phase of the process (Skarzynsky and Gibson, 2010). Boeddrich (2004) defined general requirements for managing an idea portfolio as including:

- definition of strategic guidelines for innovative ideas;
- gathering a lot of ideas;
- systematic *clustering* of ideas; and
- predefined and transparent criteria for selecting and implementing ideas.

Moreover, some constraints are usually at play, and contrary to what may seem, they facilitate creativity (Wedell-Wedellborg and Miller, 2014; Acar, Taracki, and Knippenberg, 2019). One of the proposed constraints is the reduction of resources employed in the implementation of ideas, such as financial and human resources. In other words, the scarcity of resources reinforces the need for creativity to emerge to solve problems (Caniëls and

Rietzschel, 2015). Middle managers should implement constraints based on the directives from the top managers.

The fundraising phase is followed by the *selection of ideas*. After the portfolio is created, it is necessary to select the best ideas according to certain criteria. The selection is important because resources will be committed to the selected ideas. If the selection is not carried out, the ideas that do not add value to the organisation will continue to be discussed, which leads to a waste of time and resources (Boeddrich, 2004). The ideas chosen according to the organisation's criteria will have the quality to be implemented. This situation leads to an "internal market of ideas" (Skarzynsky and Gibson, 2010). A market of ideas, as in a normal market, suggests that demand has an impact on the selection of products. However, no even minimally reasonable idea should be wasted, so all of them should be inserted into a portfolio for possible recombination (Vilà, 2012).

The first criterion for idea selection, that is, the first filter, shall be guided by the difference between what the organisation wants from the innovation effort and the content of the idea. This difference, if large, may cause the idea to be removed from the innovation process (Boeddrich, 2004). Therefore, this situation leads the organisation to two commitments: the communication of what is intended with the innovation and the acceptance of the ideas based on a selection criterion. The second selection criterion relates to the risk inherent in an idea. If an idea is too risky for the parameters previously established by the organisation, it should normally be discarded (Day, 2007; Jay, 2016). The risk associated with an idea is measured by the number of resources the organisation is willing to spend on something new that may not add value. The third selection criterion includes putting the idea to the test on the field. Innovation champions have supported and accompanied the entire process of innovation thus far. Such individuals act as energizers and central connectors, as they must have good relationships across the organisations and persuade top managers to accept the associated risks. At this stage of experimentation, champions leave the idea in the hands of the process. Rao and Weintraub (2013) suggest that this phase should take place in "innovation islands". These spaces are typically small units where mistakes can be made without major consequences for the organisation.

Another advantage of these islands is rapid learning, which allows for quick correction of existing problems with the idea (Skarzynsky and Gibson, 2010). This phase may have several iterations until the innovation is ready to be implemented throughout the organisation.

The results that come from the successive failures are important and should be shared with the rest of the organisation so that they are not committed to again while providing lessons learned. Skarzynski and Gibson (2010) suggest a different sequence of concepts, proposing first to question the importance of the idea, i.e., to what extent the organisation is interested in the idea. The second question is the feasibility of the idea, that is, to assess the possibility of executing the idea with the existing resources. Finally, the last question related to the assessment of the idea's profitability, i.e., whether it will really add value to the organisation.

Before an idea is implemented, it must go through the last stage, the *innovation council*, a mechanism that hosts the responsibility for selecting the best conditions to support an idea, both in space and time (Deschamps, 2008). This council should be composed of senior managers with diverse knowledge and credibility within the organisation.

The implementation phase shall be conducted with caution because the acceptance of the process or product may not be immediate, which can become an obstacle to innovation. However, Deschamps (2008) suggests a stepwise solution that should be taken to mitigate resistance to change. The *first step* suggests an incubation of the innovation idea, which will serve to develop and test the product, process, or service. The *second step* is industrialization to produce and disseminate innovation. The *third step*, which relates to the introduction into the organisation or market, may take place naturally or slowly. Finally, there is the phase of implementation and integration of the innovation, where everyone is familiar with the innovation and accepts it. The time spent in this last phase is uncertain because resistance to change is different in all organisations (Skarzynsky and Gibson, 2010).

Innovation is a process in which new ideas are created and successfully deployed, despite barriers, internal or external, to the organisation (Deschamps, 2008). However, the transformation to an innovative organisation

is not just about designing an innovation process and, alongside it, building an innovative culture. The most difficult part is changing people's ways of thinking into a paradigm of *continuous change*. Hence, leadership is essential to creating fertile ground for innovation (Vilà, 2012). Some obstacles impose themselves on innovation, which may restrain the initiative to innovate. As such, it is necessary to identify them to mitigate them.

Barriers to innovation are generally imposed by people and the organisation in general, which hinder creativity as well as the discipline required for the innovation process to prosper and achieve the paradigm shift that innovation requires. Miller and Brankovic (2011) list seven constraints to innovation:

- Managers waste time on dazzling technological innovations that add no value to the organisation.
- There is too much bureaucracy in the innovation process.
- There is little time to make connections within potential networks, which hampers creativity.
- There is a lack of immediate results from innovation, which may lead organisations to return to the traditional way of working.
- There is inconsistent allocation of resources to innovation.
- There is a cultural barrier between the new way of solving problems and the traditional one.
- There is a lack of collaborative effort caused by silo cultures.

A changing culture goes through these obstacles; however, to overcome them, managers have to rely on the employees (Tietz *et al.*, 2018). Hence, to mitigate the obstacles, these authors mention six aspects where a greater effort should be made to achieve an innovative culture:

- definition and communication of innovation opportunities to clarify the organisation's objectives with innovation;
- delegation of responsibilities for innovation; a structured, rigorous, and centralised process for radical innovation; and an emergent, distributed, and localised process for incremental innovation situations;
- availability of resources for innovation (time, space, opportunities);

- organisation of the innovation process in a manner appropriate to the organisation;
- promotion of innovative behaviour (constructive criticism, monitoring of ideas, mutual help in overcoming organisational obstacles, and bureaucracy); and
- measuring innovation performance to celebrate every little achievement.

Obstacles to innovation do not suddenly disappear after taking certain measures. An organisation with a creased culture and dysfunctional routines is itself an obstacle to innovation (Garvin and Roberto, 2005). However, culture is not immutable, and although this is a goal that may take years to achieve, it is possible to make any organisation more innovative.

According to Whittinghill et al. (2015), mechanistic cultures are not conducive to innovation (Tsai, Chuang, and Hsieh, 2009). They are cultures characterised by control, formalism, and regulation (Reigle, 2003). Hence, they operate to follow orders, i.e., hampering creativity. On the other hand, organic cultures facilitate innovation (Prakash and Gupta, 2008; Robbins and Judge, 2009). These structures easily adapt to change and unstable conditions and are flexible. The intrinsically organic culture practises values that encourage creativity and innovation, as well as innovative behaviours (Lamore, 2009). A transformation will have to take place for innovation to become a systemic capability within an organisation. Therefore, the organisation will have to go through a process of change that will be conducted according to a plan. This process must be led in a chained and comprehensive way across the organisation.

## Conclusion

Organizing for innovation goals aims at the introduction of new and better products, services, or processes. This is true for both the commercial and defence sectors, as it allows an organisation to deliver greater value. To move up on an innovation maturity ladder, organizing for innovation requires a culture of innovation, adequate innovation processes, and effective organisational change management.

The culture of innovation assumes an interest in pursuing innovative solutions to existing problems using exploration, experimentation, and entrepreneurship, emphasising learning, optimisation, knowledge development, the assumption of risks, and tolerance for failures that may occur during the process. Linking elements such as resources, processes, values, behaviours, and success all contribute to an innovative culture. The use of networks for sharing knowledge in formal and informal ways is needed to encourage the freedom to create and sustain innovation, which may occur through collaborative innovation, open innovation, and employee-led innovation. Networks established within and outside organisations can generate epistemic communities and communities of practice. The existence of an adequate leadership style willing to innovate is critical for a culture of innovation, complemented by a strategy that is supported by training.

The innovation process is a set of steps under the leadership of top managers. The implementation of the innovation process is carried out in phases: (1) gathering of a portfolio of ideas; (2) selection of suitable ideas according to added value criteria while weighing potential risks; and (3) implementation safeguards, internal or external to the organisation. A transformation has to occur for innovation to become a systemic capability within an organisation. Therefore, the organisation must go through a process of change that must be properly planned and managed, and this process must be led systemically and comprehensively across the entire organisation.

## References

Acar, O.A., Taracki, M. and Knippenberg, D.V. (2019). Why Constraints Are Good for Innovation, *Harvard Business Review* [Preprint].

Água, P.B. and Correia, A. (2020). Innovation governance in practice: A business policy approach, *Corporate Board: Role, Duties and Composition*, *16*(2), 54–64. Available at: https://doi.org/10.22495/cbv16i2art5.

Arena, M. *et al.* (2017). How to Catalyze Innovation in your organization, *MITSloan Management Review*, *58*(4), 39–47.

Boeddrich, H.J. (2004). Ideas in the Workplace: A New Approach Towards Organizing the Fuzzy Front End of the Innovation Process, *Creativity*

*and Innovation Management*, *13*(4), 274–285. Available at: https://doi.org/10.1111/j.0963-1690.2004.00316.x.

Bogers, M., Ollila, S. and Ystrom, A. (2016). Designing and being designed: Organizing complex collaborative innovation in a societal challenge, in *Best Paper Proceedings of the Academy of Management*. Anaheim, California, United States of America. Available at: https://doi.org/10.5465/ambpp.2016.224.

Caniëls, M.C. and Rietzschel, E.F. (2015). Organizing creativity: Creativity and innovation under constraints, *Creativity and Innovation Management*, *24*(2), 184–196. Available at: https://doi.org/10.1111/caim.12123.

Cheltenham, E.E. (2016). Corporate Venturing: Organizing for Innovation, *Science and Public Policy*, *43*(4), 576–578. Available at: https://doi.org/10.1093/scipol/scv066.

Çokpekin, Ö. and Knudsen, M.P. (2012). Does Organizing for Creativity Really Lead to Innovation?, *Creativity and Innovation Management*, *21*(3), 304–314. Available at: https://doi.org/10.1111/j.1467-8691.2012.00649.x.

Colombo, M.G. *et al.* (2011). Organizing Inter- and Intra-Firm Networks: What is the Impact on Innovation Performance?, *Industry and Innovation*, *18*(6), 531–538. Available at: https://doi.org/10.1080/13662716.2011.601958.

Day, G.S. (2007). Is it real? Can we win? Is it worth doing?, *Harvard Business Review*, *85*(12), 110–120.

Deschamps, J.P. (2008). *Innovation Leaders: How Senior Executives Stimulate, Steer and Sustain Innovation*. San Francisco, USA: Jossey-Bass.

Ende, J.V.D., Frederiksen, L. and Prencipe, A. (2015). The front end of innovation: Organizing search for Ideas, *J Prod Innovation Management*, *32*(4), 482–487. Available at: https://doi.org/10.1111/jpim.12213.

Fonseca, F. (2018). *Innovation in the Management of Public Administration*. Lisbon: INA Editora, 24.

Garvin, D.A. and Roberto, M.A. (2005). Change through persuasion, *Harvard Business Review*, *83*(2), 104–112.

Goglio-Primard, K. and Crespin-Mazet, F. (2015). Organizing Open Innovation in Networks- the role of boundary relations, *International Management*, *19* (special issue), 135–147.

Jay, J. (2016). Sustainability-Oriented Innovation: A Bridge to Breakthroughs, in *The Sustainability Learning Forum*. CSR Academy, Germany.

Kaminska, R. and Borzillo, S. (2017). Organizing for sustained innovation: the role of knowledge flows within and between organizational communities, *Knowledge Management Research & Practice*, *14*(1), 46–54. Available at: https://doi.org/10.1057/kmrp.2014.31.

Kitchenham, B. and Charters, S. (2007). *Guidelines for performing systematic literature reviews in software engineering*, *Software Engineering Group, Keele University and Department of Computer Science*. University of Durham, United Kingdom.

Lakhani, K.R., Lifshitz-Assaf, H. and Tushman, M.L. (2013). Open innovation and organizational boundaries: task decomposition, knowledge distribution and the locus of innovation, *Journal of Organizational Design*, 355–382. Available at: https://doi.org/10.4337/9781782548225.00030.

Lamore, P.R. (2009). *An empirical investigation of the antecedents of market orientation and organizational effectiveness*. University of Alabama.

Looy, B.V., Martens, T. and Debackere, K. (2005). Organizing for Continuous Innovation: On the Sustainability of Ambidextrous Organizations, *Creativity and Innovation Management*, *14*(3), 208–221. Available at: https://doi.org/10.1111/j.14678691.2005.00341.x.

Love, J.H., Roper, S. and Magniarotti, G. (2006). Organizing innovation: complementarities between cross-functional teams, *Technovation*, *29*(3), 192–203. Available at: https://doi.org/10.1016/j.technovation.2008.07.008.

Manso, G. (2017). Creating Incentives for Innovation, *California Management Review*, *60*(1), 18–32. Available at: https://doi.org/10.1177/0008125617725287.

Martin, R.L. (2011). The Innovation Catalysts, *Harvard Business Review* [Preprint].

Mascia, D., Magnusson, M. and Bjork, J. (2015). The Role of Social Networks in Organizing Ideation, Creativity and Innovation: An Introduction, *Creativity and Innovation Management*, *24*(1), 102–108. Available at: https://doi.org/10.1111/caim.12111.

Miller, P. and Brankovic, A. (2010). *Building a 'Creative Culture' for Sustainable Innovation*. Barcelona, Spain: IESE Business School.

Miller, P. and Brankovic, A. (2011). Building a Creative Culture for Innovation, *IESE Insight*, *11*, 51–58. Available at: https://doi.org/10.15581/002.ART-2049.

Nanita, P. (2018). *Inovação na Gestão da Administração Pública*. Lisbon: INA Editora, 21.

Ollila, S. and Ystrom, A. (2016). Exploring Design Principles of Organizing for Collaborative Innovation: The case of an Open Innovation Initiative, *Design Principles for Collaborative Innovation*, *25*(3), 363–377. Available at: https://doi.org/10.1111/caim.12177.

O'Reilly, C.A. and Tushman, M.L. (2004). The Ambidextrous Organization, *Harvard Business Review*, *82*(4), 74–81.

Palmisano, S.J., Hemp, P. and Stewart, T.A. (2005). Leading change when business goes well, *Harvard Business Review*, *82*(12), 60–70.

Prakash, Y. and Gupta, M. (2008). Exploring the relationship between organisation structure and perceived innovation in the manufacturing sector in India, *Singapore Management Review*, *30*(1), 55–76.

Rao, J. and Weintraub, J. (2013). How Innovative is your company's culture?, *MITSloan Management Review*, 29–38.

Reigle, R.F. (2003). *Organizational Culture Assessment: Development of a Descriptive Test Instrument: A Dissertation*. University of Alabama in Huntsville.

Robbins, S.P. and Judge, T.A. (2009). *Organizational behavior*. Edited by 13. Upper Saddle River, NJ: Prentice Hall.

Schmiedel, T., Spiegel, M. and Brocke, J.V. (2017). What Makes Change Harder - or Easier, *MITSloan Management Review* [Preprint].

Skarzynsky, P. and Gibson, R. (2010). *Innovating in the essentials. Transform the way your company innovates*. Lisbon: Actual Editora.

Sull, D., Sull, C. and Turconi, S. (2020). When it comes to culture, does your company walk the talk?, *MITSloan Management Review* [Preprint].

Tietz, M.A. *et al.* (2018). Six Innovation Pain Points and How to Overcome Them, *IESE Insight*, *38*, 54–61.

Tirabeni, L., Soderquist, K.E. and Pisano, P. (2016). Driving Innovation by Enhancing Employee Roles: The Balancing Act of Employee-Driven Innovation, *International Scholarly and Scientific Research & Innovation*, *10*(1), 148–156.

Tsai, M., Chuang, S. and Hsieh, W. (2009). Prioritization of organizational innovativeness measurement indicators using analytic hierarchy process, *The Business Review, Cambridge*, *72*(1), 250–256.

Vilà, J. (2012). Normalize innovation to transform your firm. A customized road map, *IESE insight*, *14*, 36–43. Available at: https://doi.org/10.15581/002.ART-2151.

Wedell-Wedellborg, T. and Miller, P. (2014). Get More Actionable Ideas from Your Employees, *Harvard Business Review* [Preprint].

Whittinghill, C., Berkowitz, D. and Farrington, P.A. (2015). Does your Culture Encourage Innovation?, *Defense Acquisition Review Journal*, *22*(2), 26–239.

Winsor, J. *et al.* (2019). Overcoming cultural resistance to open-source innovation, *Strategy & Leadership*, *47*, 28–33. Available at: https://doi.org/10.1108/sl-08-2019-0114.

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## Organiziranje radi inovacija – načelni prikaz

## Sažetak

*U organizacijama su inovacije izrazito poželjne. One su jedan od ključnih čimbenika u jačanju učinkovitosti, provedbe i održivosti u poslovanju, i u komercijalnom i u obrambenom kontekstu. Nedostatak inovacija može utjecati na organizacije na više načina, uključujući gubitak prilika za veću operativnu učinkovitost i poboljšanje unutarnjih procesa, s negativnim utjecajem na motivaciju ljudskih resursa – glavnih repozitorija znanja, vrijednosti i organizacijske kulture. Inovativne organizacije stvaraju snažan osjećaj pripadnosti u svojim redovima i odražavaju sliku učinkovitosti i ispunjenja. Cilj je ovog teksta analizirati temeljna načela i trendove u organiziranju radi inovacija temeljnim pregledom literature i kritičkom analizom. Rezultati prikazuju i osuvremenjuju pregled trenutačnih promišljanja o temi organiziranja radi inovacija. Obuhvaćaju kulturu, procese i vođenje prema višoj razini zrelosti inovacija unutar organizacija, a u konačnici pružaju smjernice.*

## Ključne riječi

*inovacija, kultura, organizacija, vodstvo, organiziranje radi inovacija, proces*