

## MANAGEMENT INNOVATION - THE STUDY OF VIEWS AND THE CONCEPT OF METHODOLOGY OF INDEPENDENT RESEARCH

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**Purpose:** The article is aimed at ordering the views about management innovativeness and the ways of measuring it, as well as presenting the general idea of the original methodology of assessing the enterprise managing system (MS).

**Design/methodology/approach:** The paper presents the results of stage analyses concerning management innovativeness confronted with the results of studies in diagnostics and managing system designing.

**Findings:** The main effect of the achievement is the idea of the multi-dimensional MS innovativeness model, constituting the key component of the original methodology. That model was created through overlapping seven components of managing innovativeness on six MS subsystems, thus identifying 42 areas of formulating assessment criteria.

**Research limitations/implications:** The proposed assessment criteria for MS innovativeness in isolated areas, however, the practical application of methodology will require giving measurable indicator form to these criteria.

**Practical implications:** The presented methodology will provide for multi-criteria assessment of innovativeness level in enterprise MS and seeking its connections with the characteristics of organizational context and enterprise effectiveness.

**Originality/value:** The article presents the original idea of methodology applied diagnosing the innovativeness of management system.

**Keywords:** management innovation, diagnosis methodology of MS innovativeness.

**Category of the paper:** Literature review/Conceptual paper.

## 1. Introduction

The key concepts for this publication are innovation and innovativeness. The term **innovation** (from Latin *innovatio*, i.e. renewal) was introduced to economics and treated as the engine of the economic growth in the 1930s by J.A. Schumpeter (1960), who indicated five cases of its occurrence: the creation of a new product, the application of a new technology or a production method, the creation of a new market, the acquisition of hitherto unknown raw materials, the reorganisation of a particular branch of economy. Innovation is also defined as the intentional introduction and application of ideas, processes, products and procedures, in a workplace, work team or an organisation, which are new and designed to bring profits to the workplace, the work team or the organisation. Hence, innovation embraces creativity and the application of its products (Schippers et al., 2012). **Innovativeness** is the capacity to generate and diffuse (product, technology, marketing and organisational) innovations, as well as to acquire and exploit external knowledge. Therefore, it is a feature which reflects readiness and capacity to change, take action in a precarious situation, predict the development of market conditions, break the routine, habits, etc. (Francik, 2003).

Innovativeness is commonly referred to as both the source of companies' competitive success as well as the engine of countries' economic and civilization progress. Its role, also in the conditions of the Polish economy, is still growing (at least declaratively), which is indicated, for instance, by the clauses of Morawiecki's plan or in the acceptance for execution of the EU Smart Growth Operational Programme (SGOP), planned for the years 2014-2020 and oriented towards supporting projects connected with building knowledge-based economy, the competitive science sector as well as efficient institutions of the business environment. These are important courses of action since the Polish economy is still characterised by low innovativeness<sup>1</sup> resulting from, on the one hand, minimal R&D investment (approximately 1% GDP) as well as from a limited range of application of novel solutions in company management.

Research on organisation's innovativeness concentrates, to a great extent, on the search for its sources and on the possibilities to manage innovative processes. The development of the theory and the practice in this field takes place also through identification of further aspects/ areas of functioning of organisations, which can undergo innovative transformations. Therefore, it is possible to talk about various categories of innovativeness. Although, in the beginning, innovativeness was identified with the progress concerning products and technology, the Oslo Manual, the OECD reference document defining methods of measuring and interpreting data regarding innovativeness, distinguishes: product, process, organisational and marketing innovations (Oslo, 2005). Its fourth edition from 2018 proposes two typologies:

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<sup>1</sup> Poland came 25 in the scoreboard of 28 EU countries according to synthetic value of innovation index (Summary Innovation Index).

object innovation as well as innovation of novelty and impact. The object typology identifies product and process innovations, where six groups of business processes are distinguished, which allowed classifying innovative actions and scientific output in this scope in more precise terms than before.

The type of innovation which was not clearly distinguished in the earlier editions of the Oslo Manual is management innovation. This kind of innovation was placed among organisational innovations. However, in the literature on the subject, the rationality of distinction and specification of this category has been more and more commonly noticed (Hamel, 2006; Kraśnicka, 2018). And, even though, in general terms, management innovativeness can be defined as ‘a marked departure from traditional principles, processes and management practices or customary organisational forms, which significantly alters the approach to work management’ (Hamel, 2006, p. 4), in the definitions of various researches, referents of this term vary significantly, which is characterised more extensively in the next part of this research paper.

This situation, to a certain extent, is the heritage of the discussion concerning the term and typology of innovativeness in general terms; to a greater extent, it is the immaturity of the theory of management innovativeness, revealed by certain incoherence as well as term and conceptual gaps, among which the most essential are: a significant capacity and interpretive variety of such terms as management and the management system as well as, related to it, different views in respect of the identification of innovative management initiatives as well as difficulties in identifying the outcomes of implementing such initiatives, which result from, inter alia, the lack of objective assessment tools. In a lot of research not only is the range of management innovations assessed subjectively, or with the use of indirect measures, but also their results and the degree of reciprocal correlation.

The described situation indicates a need to develop a coherent, integrative approach to the question of management innovativeness, which would comprise a multi-faceted definition of this term and include the proposal of tools for measuring its characteristics as well as a method of assessing effects. It constitutes both an inspiration as well as the overall objective of this research paper.

The aim of this research paper is to try to systemize views on management innovativeness and its measurement methods as well as to present a general concept of the independent methodology for assessing innovativeness of companies’ management systems (MS) (it was assumed that every modernisation of management processes, including innovations, leads to the reconfiguration of the organisation’s MS). It is anticipated that the developed formula of the methodology will be used in empirical research, whose aim would be to answer three fundamental questions:

- What is the level/degree of MS innovativeness in Polish companies?
- Is the level of MS innovativeness conditioned by the characteristics of the companies' organisational context?
- If, and to what extent, the innovativeness of MS influences company efficiency, understood multi-dimensionally?

In the next sections the research paper presents: the study of the question of organisational and management innovations, selected issues regarding the measurement of innovativeness and the general concept of the methodology of MS innovativeness assessment. The research paper concludes with a summary and the bibliography.

## 2. Management innovations

Product and technological innovations are the initial and still intensively developed research streams relating to innovativeness (Birkinshaw et al., 2008). The search for possibilities of intensifying innovative processes in these spheres has drawn researchers' attention to their context, namely, the organisation in which they are developed and implemented. A. Lam indicates the bi-directionality of the relationship between technological and organisational innovations. On the one hand, organisational changes result from technological changes, but they also constitute the key condition for technological changes as transformations of organisational solutions in respect of, for instance, learning processes, shared values or power division, they can contribute to an increase in the organisation's capacity to generate technological innovations. A. Lam constructs the term of an organisation as the context for innovativeness on 3 research streams: the stream studying the influence of an organisational structure on organisation's predispositions for innovativeness, the stream focused on examining organisation's cognitive abilities, organisational learning and knowledge management as well as the stream regarding organisational change and adaptability (Lam, 2005). Further research on non-technological innovativeness distinguished administrative innovativeness, understood as 'orientation towards efficiency and effectiveness of the processes and systems used to manage an organisation' (Kraśnicka et al., 2014, p. 336), and, finally, management innovativeness, whose definition of G. Hamel was included in the introduction.

According to G. Hamel (2006), not every management innovation must translate into an increase in competitive advantage, yet the greatest potential to create such advantage lies in management innovation, rather than in simple replication of innovative products. T. Kraśnicka (2018) ascribes the positive impact of management innovations on product innovativeness to improvement in the organisation's capabilities to acquire external knowledge and to an increase in the efficiency in exploiting its own internal resources, including generating organisational competences and knowledge as significant factors of competitiveness. Management

innovations are mainly strategic innovations and innovative business models. The referents of the term of management innovations mentioned in the definitions of various researchers vary considerably. For instance, they write about:

- changes in the methods of the organisation of company business practices (Kraśnicka et al., 2014),
- identifying them with organisational and marketing innovativeness (Heker, and Ganter, 2013) as well as administrative innovativeness (Dubouloz, 2012),
- new managerial activities in respect of setting goals, motivating employees, coordinating actions and making decisions (Hollen et al., 2013),
- management practices, processes, structures and techniques (Birkinshaw et al., 2008),
- changes within procedures that form employees' behaviours (Vaccaro et al., 2012).

Furthermore, various perspectives of perception and creation of management innovations are indicated, such as (Birkinshaw et al., 2008, p. 827):

- Institutional perspective, which concentrates on institutional conditions, owing to which new ideas and management practices are generated and disseminated.
- Fashion perspective, which concentrates on the dynamic interplay between users and providers of new management ideas.
- Cultural perspective, which shows how new management practices shape and get shaped by culture.
- Rational perspective, which shows how management innovations deliver improvement in organisational efficiency.

Another proposal of perspectives is based on two criteria: the range of innovations (intra- and interorganisational) as well as the type of innovation (structural or procedural). It allowed isolating four groups of organisational innovations (Armbruster et al., 2008, p. 647):

- Intraorganisational innovations of structural character such as the establishment of interdisciplinary teams, decentralisation, flattening of the organisational structure.
- Interorganisational innovations of structural character such as networks of cooperation (for instance regarding R&D, production, service, sales), outsourcing, offshoring and other forms of relocation of activities.
- Intraorganisational innovations of procedural character such as teamwork in production, job enrichment, concurrent engineering, organisation's continuous improvement (KAIZEN), quality circles, audits and quality certifications (ISO), etc.
- Interorganisational innovations of procedural character such as the application of just-in-time system in cooperation with customers or providers, value chain management, supplier quality management, etc.

The differences between the definitions of management innovations mentioned in the publications result from the focus of the authors of each approach on specific aspects of a particular type of innovation. Table 1 summarises the characteristics of innovations that appear in the definitions.

**Table 1.**  
*Aspects of management innovations*

Aspects	Examples of realization	Authors
Behaviours	Change in daily managerial practices in respect of establishing targets, motivation, work coordination and decision-making.	Hollen et al. 2013
Knowledge and people	Along with the real and financial capital, they constitute the organisation's innovative potential.	Zastempowski, 2013
Processes	Changes in the contents of procedures, instructions and all other documented organisational routines.	Birkinshaw et al., 2008
Management practices	The adaptation and implementation of management practices that changes the way work teams operate. Creation of new knowledge and legitimacy of new practices that initiate process innovativeness.	Birkinshaw et al., 2008; Hamel (2006); Hollen et al., 2013
Relations	Developing interorganisational relations and using them for the development of innovations through cooperation or knowledge and inspiration acquisition.	Kraśnicka 2018; Armbruster et al., 2008
Management methods and techniques	The introduction of new management methods and techniques of formalised and procedural character.	Damanpour and Aravind, 2012; Armbruster et al. 2008
Culture	Pro-innovativeness of organisational culture. The diffusion of cultural models supporting creativity, knowledge acquisition as well as experimenting and risk-taking.	McCabe, 2002
Strategy	Creating new markets or a new class of products. Reaction to market opportunities.	Damanpour and Aravind 2011; Dobni 2008
Structure	Flexibility, cooperation and a sense of common direction are the features of an innovative organisation.	Salesh and Wang 1993
Resources	Scientific knowledge and experience in management, means of production, better access to capital and the like. Often, a certain degree of monopoly, which increases probability of investing in innovations.	Damanpour and Aravind 2011

Source: own elaboration.

Nevertheless, the differences in the definitions do not translate into the perception of management innovations. It is agreed that their main results are: a rise in the organisation's operational efficiency and its market competitiveness as well as an increase in the capacity to adapt and to generate technological innovations (Armbruster et al., 2008).

In the summary of this part of the research paper there should be a reference to the general classification of non-technological innovations, among which we distinguish: organisational, management and administrative innovations. S. Dubouloz (2012) points out that, considering their remarkable similarity, the difference between these categories comes down to the issues on which the attention is focused. For organisational innovations these are usually workplace organisation and work performance methods, for management innovations – all management aspects, whereas for administrative innovations – the social system. F. Damanpour and D. Aravind (2011) consider the distinction between technological and non-technological

innovations, the latter being management innovations, to be crucial. It seems that, starting from the sanctioned definition of the term *management*, which embraces organisation and personal (social) functions, labelling all non-technological innovations as management innovations would not be a mistake. The authors of this research paper are leaning towards this point of view.

### 3. The question of measuring organisational and management innovations

The Oslo Manual, a tool published by OECD and Eurostat, constituted a common starting point for projects aimed at measuring innovativeness. The most popular approach to measuring and assessing organisational innovativeness is the use of output metrics, which include (Pichlak, 2012, pp. 42-43):

- The metrics of intellectual property based on the number of patent applications, the number of obtained patents, registered industrial designs, utility models, trademarks or copyright registration.
- The number of introduced innovations in a specified period of one, three or five the years. Time for generating innovations – from the concept creation to its launch on the market. Also their degree of novelty, as well as ‘radicality’ (Pichlak, 2012, p. 46) can undergo assessment.
- Sale value of new or considerably improved products and/or services in a certain period, the rate of return on R&D investment or on other kinds of assets (Rosenbusch et al., 2011).
- The amount of income/profits connected with investing activity as well as with market capitalisation based on return and profit such as return on assets (ROA), return on sales (ROS), or development-oriented, like increase in sales and market share as well as market capitalisation, like Tobin’s Q (Rosenbusch et al., 2011, p. 448).

However, these metrics are burdened with certain flaws; for example: some innovative actions do not meet the criteria applied to inventions or they are not reported for patenting. There are also some significant inventions which have never been patented (Pichlak, 2012, p. 44). The increase in the activity in respect of intellectual property protection can be driven by, for instance, the will to get a bargaining chip in negotiating potential alliances or to impede competitors’ innovative activity. Time measures can be unreliable in case of organisations which adapt, rather than generate innovations. Furthermore, the significant influence of contextual factors on values of company efficiency financial ratios results in the fact that they often fail to reflect the relation to organisational innovativeness and they can lead to wrong conclusions.

Another problem is posed by the innovativeness assessment realised by means of subjective assessment, which is carried out by the employees of examined enterprises. G. Dess and R. Robinson (1984) proved that the subjective assessment of the entire organisation's efficiency level (*organisational performance*) conducted by senior managers is strongly correlated with objective efficiency metrics, such as rise on assets (ROA) and sales increase, but it seems that the conclusions drawn from that cannot be directly transferred to the questions of measuring organisational innovation.

The literature on the subject provides examples of a number of approaches in respect of organisational innovativeness assessment. Kraśnicka and Ingram (2014, p. 79) mention examples of tools dedicated to this objective. These are:

- Alegre, Lapiedra, Chiva (2006): A tool assessing innovativeness in view of market competition, oriented towards measuring 'innovative efficiency'.
- Danneels, Kleinschmidt (2000): A vast tool concentrated on fitting and the dimensions of product and marketing innovations.
- Dobni (2008): An elaborate tool for measuring pro-innovative culture, 70 questions in total, including 9 regarding innovativeness.
- Garcia, Calantone (2002): A tool concentrated on marketing, technological and technical metrics, radical and incremental innovations.
- Innovation Evaluation Tool: A simple, yet extensive tool with an on-line procedure for interpreting results.
- Terziowski (2010): A tool concentrated on five dimensions: strategy, structure, customers and providers, culture, technology.
- Wang, Ahmed (2004): A tool for examining organisational innovativeness based on factor analysis of five dimensions of innovativeness.

Armbruster et al. (2008, pp. 647-649) mention a number of large-scale surveys dedicated to organisational innovativeness:

1. Research NUTEK, *Towards Flexible Organisations*, conducted in Sweden in 1995. The first part of the questionnaire consisted in characterizing an organisation with regard to the staff and qualifications, work organisation, technology and the development of product and services as well as relations with external entities. The second part concerned, in general, significant changes in work organisation that took place in the years 1990-1994.
2. DRUID *Disco-project*. In 1996 a Danish research unit for industrial dynamics (DRUID) established its own research which was part of a *Danish Innovation System in a Comparative Perspective* project (*DISCO*) and focused mainly on flexibility. The questionnaire included questions about implemented organisational changes as well as the use of such solutions as: delegating responsibility, working parties connecting



employees of various specializations, quality circles, functional integration, job rotation and the systems of collecting ideas from employees.

3. EPOC survey. Research initiated as part of a project contracted by the European Foundation for the Improvement of Living and Working Conditions (1996). The aim of that project was to study direct employee participation in organisational change (EPOC).
4. Project INNFORM of the Economic and Social Research Council in Great Britain (1997). The research covered the questions of decentralization of the decision-making process of business units, their links with the headquarters, the use of IT, practices within HRM, and the like. The questionnaire referred to organisational and management innovations at three levels: unit, organisational and interorganisational.
5. Research *Changements Organisationnels et l'Informatisation* (COI). Realised in France in 1998. Organisational changes as well as technical support for management processes were examined, with particular reference to information and communication technologies (ICT).
6. Community Innovation Survey (CIS) – the main statistical tool of EU for measuring innovative activities at company level. The Oslo Manual constitutes the methodological base of CIS while the exemplary questions regarding organisational innovativeness in the research from 2006 concerned the type and range of changes which companies introduced in respect of work organisation and widely understood management procedures.

Among research projects realised in Poland and devoted to organisational, and, to be exact, management innovativeness, we can indicate, for instance, two:

The research of M. Pichlak (2012) from the years 2007-2010. The author established a complex model of determinants of organisation's innovativeness, which took into consideration research resources, communications systems, the type of organisational culture, the style of leadership, the features of board members, the set of dimensions characterizing the organisational structure as well as the intensity of cooperation in an innovative activity. The model also took into account the characteristics of the environment as well as the organisation's strategy as factors moderating the level of its organisational innovativeness. A set of financial and non-financial metrics was proposed for assessing the innovativeness of an organisation. The results of the research confirmed the impact of organisation's innovativeness on its efficiency.

In 2014 T. Kraśnicka (2018) conducted research in 301 companies across the country. The research concerned management innovativeness and the research questionnaire was developed on the basis of a multidimensional concept of innovation management. Five dimensions of innovativeness were distinguished: strategic, structural, the dimension of methods and practices for employee motivation and development, interorganisational dimension and ICT dimension. In order to capture the relationships with management

innovativeness, the research model also encompassed external factors of innovativeness, process and product innovations as well as financial and non-financial company results.

The examples of the research concepts and projects presented above give a picture of both: the way the term of management innovativeness is understood by researchers and the metrics used for its assessment as well as the range of empirical studies of this phenomenon in various types of organisations. They display both: discrepancies in the way this innovativeness category is defined as well as advancing integration of views and ideas in this respect. It appears that the significant share of subjective assessment and indirect measures in diagnosing this phenomenon is a considerable deficiency of the presented research. Moreover, an integrative, systemic concept, incorporating all the key aspects of the company management process and defining management innovativeness, is missing. By referring to the concept of the management system – the term generating and integrating the totality of company management activities, the concept of the methodology presented in the next part of the research paper is conceived as a step towards further systematization of the question. It is also an attempt to develop an objective tool for measuring the level of management innovativeness.

#### **4. The general concept of diagnosis methodology of MS innovativeness**

The aim of elaborating the presented original concept of diagnosis methodology of MS innovativeness is to use it for assessing the level of MS innovativeness of Polish companies and to combine it with an attempt to define its contextual conditions as well as efficiency consequences.

The following methodological assumptions have been adopted:

- The methodology will be based on the philosophy of the situational approach to management and will use elements of quality evaluation theory, measurement theory, ratio analysis, expert evaluation as well as selected methods of statistical analysis.
- Three groups (areas) of characteristics: MS characteristics, the characteristics of the organisational context and the characteristics of company efficiency will be the subject of objective assessment and analyses.
- The methodology will be characterized by multidimensionality and complexity of analyses understood as: a possibility of measuring and assessing MS innovativeness in many subsystems in the context of a considerable number of assessment criteria and a possibility of correlational analyses between many measures of MS innovativeness, the organisational context and company efficiency.
- Objective, direct assessment, and not indirect measures or respondents' subjective evaluation of particular characteristics, will be the foundation of the assessment process.

- Possibility of quantification and normalization of the assessment process is assumed, namely, expressing the intensity of features as well as the degrees of criteria fulfilment in the form of absolute numbers (indicators) from a certain range of variability (compare: Gliszczyński, 2013).

The general structure of methodology will consist of the following main elements:

- Defining the idea of MS by distinguishing subsystems and structural variables.
- Formulating the criteria of MS innovativeness assessment (synthetic, area and partial).
- The quantification of the assessment criteria – formulating criteria indicators.
- Choosing the characteristics of the organisational context and company efficiency metrics.
- Preparing a diagnostic questionnaire.
- The selection of mathematical tools for analysing research results.

It has been adopted that MS will be defined as a set of structural, procedural and implemental characteristics (of dimensions and variables) distinguished within **six key subsystems**:

- strategy and planning subsystem – a set of characteristics describing the structure of company's long-term goals, resource acquisition and ways of achieving objectives,
- the subsystem of organisational structure – a set of characteristics describing the internal structure and company organisation,
- the subsystem of processes – a set of characteristics describing the structure of business and supporting processes included in the realization of a value chain for an organisation and its customers,
- HR subsystem – a set of characteristics describing recruitment as well as effective and creative employee motivation,
- the subsystem of control – a set of characteristics describing sections of analysis (assessment) of the company condition as well as the key procedures and methods of such analyses,
- the subsystem of tools – a set of characteristics describing the range of assistance to management processes through documentation, technical means, software and formal management procedures.

The scope of decomposition of the term of MS into a series of variables will have impact on precision in formulating the assessment criteria of its innovativeness.

The **criterion of MS innovativeness**, understood as an organisation's capacity to generate and diffuse new solutions regarding products, technologies, organisational processes as well as to absorb external knowledge, has been accepted as the statutory synthetic criterion of assessment. The innovation capability results from certain (structural, procedural, leadership, cultural and implemental) management solutions.

On the basis of the literature review and the authors' previous research experience connected with MS quality assessment, **seven components of MS innovativeness**, which constitute **area assessment criteria** in the research methodology, have been distinguished. These are:

- Knowledge transfer and creativity understood as a company's capacity to gain and transform knowledge, information and experience into new and useful ideas (Oslo, 2018, p. 128).
- MS flexibility understood as a capacity to quickly react to environmental change, defined through structural and functional changes of MS (Krupski, 2005).
- The digitalization of MS reflecting the range and rate at which a company adapts new digital technologies connected with management.
- The pro-innovativeness of organisational culture understood as cultural support for creative processes, teamwork, knowledge-sharing (O'Dell, Hubert, 2011).
- The pro-innovativeness of leadership expressed by building employee subjectivity and by supporting their learning processes and the formation of an attitude open to novelties as well the search for creative solutions.
- The application of formal standards of innovativeness understood as a range of implementation and actual adaptation of seven standards with symbols from CEN/TS 16555-1 to CEN/TS 16555-6, which support organisation's innovativeness in management practice (Wyroba, Tkaczyk, 2015).
- The scope of interorganisational relations reflected in the number, range, duration and outcomes of strategic alliances as well as other forms of interorganisational cooperation.

In table 2 the general concept of **diagnostic model of MS innovativeness** is presented, which resulted from the overlap of two sets of characteristics discussed above – the components of MS innovativeness and the subsystems distinguished in the MS model. **The characteristics of MS innovativeness** placed in the matrix cells are preliminary proposals of the assessment criteria, which, in the final version of the research methodology, will be completed with further criteria and will undergo expert assessment of relevance.

The criteria regarded as the most significant will constitute the foundation for formulating specific criteria in the form of **assessment indicators**. The quantification and standardization of the criteria will allow for MS innovativeness evaluation within a specific assessment criterion in the form of an absolute number from a range of variabilities (0,1).

The term of **company efficiency** will be treated in the methodology in a multidimensional way as it is possible to talk about various categories of efficiency and its corresponding attributes such as:

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- result efficiency described as a degree of plan realization, plan implementation, production volume, financial result,
  - system and contextual efficiency, reflecting duration, market share, new goods share, frequency of changes in technology,
  - efficiency in a praxeological sense, equated with the efficiency in achieving objectives, adaptability to the environment, resource productivity,
  - economic efficiency, reflecting the economic results of an activity such as profitability, financial liquidity, increase in company value,
  - social efficiency indicating a degree of organisation acceptance by its stakeholders – job satisfaction, employee turnover rate, client satisfaction, and the like (compare: Bielski, 1986; Gliszczyński, 2013).

**Table 2.**

*Conversion of the term of management system innovativeness into a series of assessment criteria (diagnostic variables)*

		<b>Subsystems of Management System</b>					
		<b>strategy and planning subsystem</b>	<b>the subsystem of organisational structure</b>	<b>the subsystem of process management</b>	<b>the subsystem of HR and motivation</b>	<b>the subsystem of control</b>	<b>the subsystem of management tools</b>
<b>Components of MS innovativeness</b>	<b>knowledge and creativity transfer</b>	the number of planned and introduced (technological, product) development projects	the level of delegating decision-making competencies in respect of innovative project launch	the level of process changeability (e.g. the number of changes, the dynamics of achieving set targets)	employee participation in research and academic conferences, courses and skill trainings	the type of methods used in task performance control (functional, hierarchical, self-, reciprocal control)	the range of support from formalised management processes for organisational creativity
	<b>MS flexibility</b>	the number and range of strategy changes	changes in the organisational structure (decentralisation, level of specialisation, hierarchy)	the range of implementation of the process approach (maturity of IMS)	linking the formal system of assessment and promotion with creativity and innovativeness of managers	the range of alternative forms and methods of control	the number and range of formalized procedures for organisational changes
	<b>MS digitalisation</b>	the application of advanced tools of data analysis to planning processes	the degree of realisation of the concept of e-business and m-business	the use of specialised software for managing processes (e.g. ADONIS, ARIS, own software)	using social media for recruiting candidates	control over development dynamics and the range of IT tools' modernisation	share of investment in IT in the general budget
	<b>pro-innovativeness of organisational culture</b>	the degree of organisational culture support for the realised strategy	cultural differences between structural subsystems	the degree of organisational culture support for process approach	the range of preferences for the task culture	the range of monitoring cultural changes	the number of procedures of creation and of organisational culture diagnosis

Cont. table 2.

	<b>pro-innovativeness of leadership</b>	the range and degree of leader participation in planning processes	the range of the use of innovative structural forms (fractal, hypertext, virtual solutions)	the degree of the autonomy of processes' owners	the range of formation and support for innovation leaders	the range of control over processes of creation and rotation of leaders, relationships between leadership and creativity	the range of formal supporting tools for organisational leadership
	<b>application of formal standards of innovativeness</b>	new domains in strategic plans	the existence of formal workgroups	the implementation of an integrated management system	rewarding for quality in the remuneration system	the range and tools of strategic control	the range of application of tools for decision support
	<b>scope of inter-organisational relations</b>	the number, range and duration of strategic alliances	the existence of organisational structures of joint ventures	the range of links between processes and processes of contractors and suppliers	using external cooperation to recruit staff and improve staff performance	the assessment of the functioning of alliances as a factor in strategic success	the level of IT tools' integration (software, extranet, databases) with the tools of cooperating IT firms

Source: own elaboration.

It is assumed that the **organisational context** of diagnosed companies will be described by such characteristics as: industry, company type (production, service, trading), size, duration, market share, legal and organisational form, the form of ownership, the degree of organisational autonomy (corporation, subsidiary) and, possibly, others.

In empirical research the values of company efficiency metrics as well as of the contextual characteristics will be obtained from company documentation, whereas a **diagnostic questionnaire** will be designed to measure the characteristics of the management system and to allow for their numerical conceptualization.

## 5. Summary

The concept of management innovativeness presented in the article, on the one hand, refers to prior, numerously mentioned in the article, conceptualisations and models used in the research on innovativeness; on the other hand, it proposes new quality. Each of the hitherto developed concepts of management innovativeness relates, in some way, to the management system, yet, at least according to the authors' knowledge, so far a model of innovativeness which adopts the management system as the starting point has been missing and, indeed, such an approach is proposed in this research paper. Its application in the diagnosis methodology will allow company's management innovativeness to be precisely examined and categorised as the highlighted components of MS innovativeness in number of seven and six management subsystems, making it possible to define at least forty-two criteria for assessing the condition of the management system. Thanks to supporting the model of MS innovativeness on a multidimensional concept of the system, one can be sure that, in such research, no manifestation of company's management innovativeness will, colloquially speaking, pass unnoticed. The authors predict that, due to the specificity and systematicity of the presented model, not only will it be possible to diagnose the degree, but also the profile of innovativeness of the management system, understood as a model of links between high and low values of innovativeness indicators, characteristic for a particular company. In the long term, identification of relations between the level and the profile of MS innovativeness and the characteristics of the organisational context and company efficiency metrics is expected.



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