# Leadership and managerial challenges to ensure agile management as a method to enable business success: a Delphi study of the Slovenian health organisations

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#### **Abstract**

Purpose – This study aims to apply the Delphi method to explore the possibilities for implementing agility management concepts in Slovenian health-care organisations.

Design/methodology/approach - The research is based on a qualitative Delphi study encompassing 15 employees in different Slovenian health-care organisations.

Findings - Slovenian health-care organisations need to be more agile currently. For this reason, it is necessary to begin with organisational changes and organisational learning concepts to educate employees about the meaning and content of agile processes. It is essential to ensure that accepting employee mistakes and offering help to employees becomes normal practice, and it is necessary to ensure the greater trust of the management towards the employees.

Originality/value - The research empowers health-care professionals with new management and leadership concepts, such as agile management, sustainable leadership and leadership development methods in health care.

**Keywords** Agile management, Delphi study, Health-care organisations, Organisational transformation, Slovenia, Change management, Leadership, Health services sector Paper type Research paper

## 1. Introduction

The study focusses on developing a seamless health-care model that will provide the blueprints for identifying a health-care organisation as agile. Thus, it will be possible to prepare the model that will present which changes are needed in strategies so that it can implement agile management concepts in health-care organisations. The goal of this exploratory study is to explore the consensus among employees in health-care organisations regarding pragmatic transformational approach, which will enable the implementation of the development of agile concepts, which will be based on innovation, ensuring well - being both patients and employees, continuous learning, ensuring the quality of services, etc. (Fischer and Sitkin, 2023), which will make it possible to change the organisational culture in Slovenian health-care organisations, which is a prerequisite for the implementation of agile concepts in Slovenian health-care organisations. For this reason, the study aims to answer two research questions:

RQ1. What challenges do Slovenian health-care policy leaders and managers of Slovenian health-care organisations face to introduce agile management to enable business success?

(Information about the authors can be found at the end of this article.)

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RQ2. What is the current situation of the implementation of agility in Slovenian health-care organisations?

The goal of developing and implementing an organisational culture must be based on the fact that it must positively influence the development of an agile health-care organisation (Shakhour et al., 2021). The emergence of a new organisational culture will also contribute to the efforts of employees, which are necessary to ensure the successful transformation of a health-care organisation into an agile one (Roblek et al., 2023). The design of the organisational culture model must be based on organisational goals, based on which it will be possible to understand what needs to be changed in the organisation so that this will influence the emergence of a positive organisational culture that will enable the process and successful completion of the transformation of the organisation into an agile one. In preparing the study, we focussed on the following published studies: Suresh et al. (2021) focus on analysing factors influencing the agility of COVID-19 patients. Patri and Suresh (2017) set out to model the factors that enable agile operation in a health-care organisation. In the third study, Brosseau et al. (2019) deal with the issue of transforming a health-care organisation into an agile one. In doing so, the authors rely on the results of analyses of studies carried out in a specific health-care organisation. Vaishnavi et al. (2019) note that the health-care sector can implement agility processes to upgrade services and achieve a competitive advantage. Sindhwani et al. (2019) discover factors influencing agility in the health-care organisation and explain their mutual relationships. The authors include organisational structure, management, patient assumption and hospital judgement among these factors: health-care organisations, the management flow chain in a health-care organisation, implementation of clinical management, technological upgrading, awareness of the conditions in the health-care services market, outsourcing of services, mental support of patients, employees with more skills and greater scope of knowledge. Based on a review of the literature in Google Scholar and Cobiss (Slovenian libraries database), we found that research has yet to be conducted in Slovenia regarding agility in Slovenian health-care organisations. That is why we decided to prepare a study that includes a Delphi study conducted among employees in Slovenian health-care organisations and related to organisational changes in health-care organisations and the importance of knowledge management in ensuring the agility of health-care organisations.

The paper is organised in five sections as follows. After the introduction, an overview of the theoretical findings is presented in Section 2. Section 3 focusses on the presentation of the methodology. Section 4 includes the discussion. Section 5 presents the study's theoretical and managerial implications and limitations and suggests further research.

## 2. Theoretical background

In the third decade of the 21st century, health-care organisations also found themselves in an uncertain environment in which they were exposed to various factors and risks that occur both internally and externally in the organisational environment. Internal organisational risks can be divided into basic health activities, management processes, support processes and documentation management (Pirc and Stromajer, 2018). While external risks are, for example, political risks, natural disasters and disease outbreaks (pandemics such as COVID-19). All these factors and risks affect organisational performance in such a complex, volatile, ambiguous and turbulent environment. As part of the search for solutions that will ensure that the organisation becomes resilient to various risks, management is faced with the complexity of changing decisions, and these are often unclear. It is important for management to accept risks as a challenge and to ensure that the organisation responds to these factors promptly and that organisational changes occur as quickly as possible, which will provide both the recovery of the organisation and its long-term resistance to various risks, thus enabling the final goal this is to ensure sustainable organisational growth (Jiao et al., 2023). It will ensure organisational stability compatible with agility because agility

requires strength for most organisations. Agility is thus understood as the ability of a healthcare organisation to quickly renovate, adapt and change. Agility has been gaining importance in health care in recent years due to takeovers and mergers of health-care organisations, independent health-care practices by insurance companies and larger health-care organisations and the need for adjustments to the added value of health-care services. The patient becomes the central person who is empowered to shape health decisions. At the same time, health-care organisations face increasing financial pressures and regulatory requirements (Brosseau et al., 2019). Despite all these disturbances requiring immediate action, it is necessary to be aware that adopting agile principles in health care is taking place more slowly, even though it benefits the health-care system's stakeholders. The concept of organisational agility enables health-care organisations to adapt more quickly to the needs of health-care users, competitors and regulatory rules. It is important for health-care organisations that, as part of these adjustments, they do not need to go through the entire process of changing business processes and the organisation itself. Agility ensures that organisations become responsive and nimble, enabling them to respond to the challenges of a constantly evolving and increasingly complex external organisational environment (Prashar, 2023). Agility thus becomes an increasingly important critical ability of an organisation to detect disruptions in the market (risks) in time and to ensure rapid organisational changes that will reduce the consequences of risks and enable the development of organisational resilience. We can, therefore, speak of agility as the ability of an organisation to respond quickly and successfully to the challenges brought by increasingly rapid changes in an increasingly vulnerable and fragile environment (Cascio, 2020). Management must thus ensure stability and dynamism in business and take care of the reorganisation of the bureaucracy in the context of changing the existing organisational form into a lean organisation (Roblek et al., 2022). Lean and agile approaches will ensure the organisation can respond to changing market conditions. This, in turn, also has significance for the very success and flawlessness of the health system, which must focus on ensuring quality approaches in the context of the provision of health care and the transfer of industrial processes of organisation and operation (D'Andreamatteo et al., 2015). Thus, it is necessary to shift from the functional functions characteristic of health-care organisations (Parnaby and Towill, 2008) to very well-defined processes that enable the provision of high-quality health-care services in the shortest possible time (Aronsson et al., 2011).

## 3. Methodology

### 3.1 Research design

3.1.1 Delphi study and research process. The Delphi study was used to research the possibilities for emerging agile management principles in Slovenian health-care organisations until 2027. The Delphi method is an interactive multi-level forecasting method that relies on experts' opinions on strategic managerial decisions and technological developments (Kameoka et al., 2004). The Delphi method is considered a research technique that enables the development of reliable group opinions with the help of expert panels (Landeta, 2006). This method's essential advantage is providing a space for subject matter experts to discuss in a structured environment and communicate with each other.

During the preparation of the Delphi study, a questionnaire was created based on the prediction of future scenarios of the development of organisational culture and organisational agility. The future is considered uncertain and often unpredictable. Part of this uncertainty is technological development, which increasingly dictates the speed and pace of organisational change. Thus, there is an increasing need for all stakeholders to manage this change and uncertainty. Forecasting studies, however, are complex and only sometimes accurate in depicting the future. Thus, studies can only try to predict future developments as best as possible (Saritas and Oner, 2004). The basic idea of forecasting

as a tool for long-term planning (Courtney et al., 1997) is to guide decision-makers in certain directions within political, economic, socio-cultural and technological developments and to support them in times of high uncertainty (Powell, 1992). At the same time, forecasting methods should facilitate discussion between decision-makers and current experts to understand better the paths and possible futures that result from technological development and population ageing in the health-care field.

The survey questionnaire was prepared based on the questionnaires and analysis of the results of the research on agility in health-care organisations, which was carried out by the consulting group McKinsey (Brosseau et al., 2019), and the basis of the questionnaire and analysis of the results of the research on the importance of agility for innovation in healthcare organisations by the Bain consulting group (Jonnalagadda et al., 2019). Based on the questionnaires and the results of both surveys, sets of 20 structured and 3 unstructured questions were prepared. Structured questions include anticipated scenarios of changes within the organisational culture and readiness for changes and agile transformation:

- agility of the organisational culture;
- competencies of organisational culture;
- willingness to change;
- steps and roles; and
- measurements and evaluations.

The questionnaire was tested on a sample of 6 people. According to the participants' comments on the questionnaire testing, minor errors were corrected and additional material was added to individual questions following the research topic.

The Delphi method was conducted in two rounds to obtain data on the importance of agility and the influence of organisational culture on the successful transformation of health-care organisations.

The method's purpose is to enable the collection of opinions and views of a limited number of experts. In this case, medical and professional staff are employed in Slovenian health organisations. When determining 15 participants, it was taken into account that Delphi studies involving between 15 and 30 participants had already been conducted in the past (McMillan et al., 2016). The questions were sent via the 1Ka platform. Thus, the Delphi study is based on the statistical processing of collected opinions obtained from health-care employees who perform various health care-related tasks and are used at different organisational levels.

The experts answered the questionnaire in two rounds. The very goal of conducting two rounds was that the second round would allow for more unified positions. In this particular case, the use of the study is appropriate because the study itself is based on the search for consensus. Participating experts could independently express their views and give their ideas and suggestions. With the help of a questionnaire, in the first round, we obtained the views and opinions of employees in health-care organisations about the level of agility, the importance of agility, the need and possibility of changing organisations to agile and the importance of organisational culture in this regard. After completing the first round of surveying, we analysed all the obtained data and sent them with a questionnaire to the respondents in the second round. In the second round, the respondents were asked to check the first survey's results and judge them again. Thus, in the second round, we tried to influence the respondents to unify their answers as best as possible, according to the results of the first round.

3.1.2 Target population. A total of 15 employees in Slovenian health-care organisations took part in the survey. A total of 13 of them were female and 2 were male. Of these, 7 were between 35 and 45 years of age, 4 were between 46 and 55 and 4 people were between 56 and 60 years of age.

The average age of women was 45 years and of men was 48 years. The educational structure of the employees was as follows: Bologna level - 7 respondents; 2nd Bologna level – 5 respondents; and 3rd Bologna level – 3 respondents.

The structure of the respondents according to their position in the health-care organisation is presented in Table 1.

Table 2 shows the organisational forms in which the respondents are employed.

# 4. Delph study results

The first scenarios were related to organisational culture agility. The results show that a maximum of 40% of respondents think that it is necessary to introduce processes in their organisations in the next five years that will stimulate organisational changes and learning (acquiring new knowledge). The normal practice must become the managerial acceptance of employee mistakes. Consequently, these changes must lead to greater trust in employees. A total of 27% of those polled believe that by 2027, in their organisation, it will be necessary to ensure that the importance of the dynamics of development focusses on a growth mindset, using failure for innovation and strengthening resilience. Due to the increasing digitalisation of work processes, it will be necessary to focus on the perception of technology to enable the increase of human abilities but not its replacement. It will also be required to increase the appreciation of empathy itself. A total of 20% of respondents believe that by 2027, it will be necessary for the organisation to ensure that the presence of elements of organisational culture, such as fear and lack of communication, which hinder agility, will be rare, minimal, if not even zero. Management must, therefore, reduce control over employees and increase their availability and level of cooperation and communication. At least 13% of respondents think it will be necessary to decentralise decision-making in the organisation in the next five years. Respondents believe that making partial decisions should be left (within their professional competence) to agile teams. At the same time, the respondents reached a unanimous consensus that in their organisations, until 2027, it is unnecessary to bring decision-making processes as close as possible to employees and thus increase cooperation between employees.

Table 1 Respondents' workplace			
Workplace	Frequency	Percentage	Cumulative
Head of the unit	1	7	7
BA in health care – work with emergency patients at the secondary level of health care	2	13	20
Medical doctor Administration in a health-care facility	2 1	13 7	33 40
Work coordinator  BA in health care – in the intensive care unit	2	13 7	53 60
BA in health care – specialistic ambulatory	4	27	87
BA in health care – work in the field of endoscopy Total	2 15	13 100	100
Source: Authors' own work			

Table 2 The structure of the organisations in which the respondents are employed				
Organisational form	Frequency	Percentage	Cumulative	
Hospital Private health ambulatory with concession A private medical institution with a concession	6 2 7 15	40 13 47 100	40 53 100	
Source: Authors' own work				

In the context of the second scenario, we assumed that by 2027, there will come changes in organisational culture competencies. Only these will lead to organisational changes that are important for the growth of the organisation and the satisfaction of both employees and customers. Of the total respondents, 67% believed that by 2027, organisational processes will have to be transformed. Strategies will have to be transformed into easier, less detailed ones and may vary within the organisation depending on the context the organisation will face. Organisational values must become transparency, learning, openness, teamwork, improvement, ownership, responsibility, self-reflection, self-leadership and empowerment. A total of 20% of respondents believe that by 2027, the development of an agile culture will need to focus more on people in their organisation - which includes customers, stakeholders and the people who deliver the services. Thus, creating added value for all stakeholders will come to the fore. Only 13% of respondents think that by 2027, they will have regular or frequent and transparent communication in the organisation will become a normal phenomenon. In the next five, it will also be necessary to ensure that organisational processes are based on trust with minimal (if any) control and minimal bureaucracy. Measures will thus have to be based on results and not on methods. It will be necessary to establish risk tolerance in the organisation. The importance and attitude towards learning and continuous improvement of work processes must also increase. None of the respondents believes that by 2027, it is necessary to ensure that organisational goals are expressed as relative and dynamic – the shorter the period, the more variable they will be. This would allow objectives and key results to replace performance indicators. Likewise, no one expressed the need to transform the organisation's personnel and management role. The roles of personnel and management should go in the direction of coaching. The role of managers should more closely resemble the role of a trainer of agile employees.

In the context of the third scenario, we assumed that by 2027, there will be an increase in employees' willingness to change. Increased readiness will enable organisational changes to occur, which are important for the growth of the organisation and the satisfaction of both employees and customers. All three assumptions received the same number of, i.e. 33%, respondents' suggestions. Thus, the respondents believe there should be organisational changes in their organisations in the following years due to the complexity and variability of the health-care situation. As well as that by 2027, their organisations will be able to implement the changes necessary to transform into an agile organisation. Thus, the characteristics of an agile organisation, such as maintaining strong teams, the breakdown of work and the transfer of work to teams, will also apply to my organisation.

Moreover, by 2027, it will be possible to introduce organisational changes and change the organisation to an agile one in the following cases: by increasing people's abilities and helping management to change its thinking and the nature of practices paradigmatically. Management must move from management processes that include planning, directing, telling and coordinating to management that focusses on creating the conditions and establishing practice bases with which employees can develop skills and competencies within their framework and in a mutual partnership. Important to the vision and goals of the organisation.

In the context of the fourth scenario, we assumed that by 2027, steps will be taken to lead to agility in the organisation. The establishment and execution of actions will lead to the emergence of agility, which will enable the further growth of the organisation and affect the increase in satisfaction of both employees and customers. At most, 47% of respondents believe that by 2027, their organisation will transition to agile only if the very top of the organisation accepts agility as its goal, and the management team will thus work more agilely. The management must stop interfering too often in the work of the departments because by doing so, they can cause a departmental war. All managers at all organisational levels must communicate and work following the commitment to the organisation's strategic direction. 33% of respondents believe that by 2027, the organisation will transition to agile, provided that agile transformation will mean not only technological development and adaptation of employees to

new technological work guidelines but also the transformation of the importance of employees, who must be defined as human capital (social capital) of the organisation in which it is necessary to invest. It will be possible to increase efficiency and profitability. As can be seen from the analysed results, 20% of the respondents believe that the organisation will become agile by 2027 if the management commits itself to agile transformation processes and insists on implementing the strategies. The results are visible in actual actions. Management will also have to focus more on creating new employee skill sets. However, only some of the respondents predicted that by 2027, their organisation would transition to agile if it focussed on improving overall results rather than specifically on agile techniques.

In the context of the last, i.e. the fifth scenario, we assumed that by 2027, there will be the implementation of measurements (performance) and evaluation of the implementation of steps that will lead to agility in the organisation. Measurements and assessments will help increase the organisation's growth and make it possible to adopt further organisational changes and adjustments based on the criteria and evaluations of the satisfaction attitudes of both employees and customers. Such a process will likely increase the satisfaction of both employees and customers. Based on the analysis of the results, it can be seen that 40% of respondents believed that by 2027, they would implement the following evaluation criteria in their organisation: indirect cultural indicators based on the survey analysis, including teamwork culture, improvement culture, culture imperatives, a culture of vision and a culture of focus; analysis metrics include process efficiency (e.g. value-added effort as a proportion of total time); direct quantitative metrics such as period distribution, replenishment and release frequency. Likewise, 40% of respondents believed that 2027 customer satisfaction should become a key criterion in their organisation. Satisfaction must also be reflected in their opinions and willingness to return. Another criterion will be employee satisfaction. The third criterion will include an approach to innovative solutions and the emergence of the newest digital technologies. At least 20% of the respondents believed that by 2027, if they want to become agile, it will be necessary to distinguish between what "is" and what "should" be measured in their organisation.

#### Discussion and conclusion

The article is based on implementing, analysing and explaining a Delphi study conducted among employees in Slovenian health-care organisations. Within the framework of the study, two research questions were formulated. RQ1: What challenges do Slovenian healthcare policy leaders and managers of Slovenian health-care organisations face to introduce agile management to enable business success?; RQ2: What is the current situation of the implementation of agility in Slovenian health-care organisations?

As part of the justification of RQ1 and RQ2, it is necessary to highlight the situation presented by Slovenian health professionals and what the study results also show. It is a paradox of Slovenian health-care organisations, which came to the fore during COVID-19, and Slovenian health care is feeling its consequences in the post-pandemic period. It is a good indicator of the problems of Slovenian public health care, in the framework of which it is necessary to point out the lack of personnel and the space constraints themselves, as well as the lack of new equipment, which in turn affects the deterioration of the quality of health-care services and increases operational costs (Bizjak, 2021). Such a situation has arisen due to inadequate health-care financing, which is beyond the scope of this article. All these reasons give a good reason why it is also necessary for Slovenian health care to focus more on service innovation and, within this context, the importance of agility as a competence for innovation in the services field. Indeed, service innovation represents a key challenge in ensuring health-care agility and organisational learning about agility, patient agility, enabling organisational flexibility and interaction capability (Noč, 2021). Fortuna (2017) states that Slovenian health care is in crisis due to poor management. This leadership crisis results from political staffing and the lack of highly educated personnel in the direction of health-care organisations at reputable global universities. Slovenian health care has thus fallen into clientelism, nepotism and corruption. The commitment to conduct business following international standards for ensuring safe and high-quality medical care, such as the international standard for hospitals American Accreditation Commission International and ISO standard 9001:2015, does not help to solve the situation. The results of the study, which was carried out both in public health-care and private health-care organisations, show that in health-care organisations, it is not possible to talk about agile processes at this moment, and even less that health-care organisations are agile.

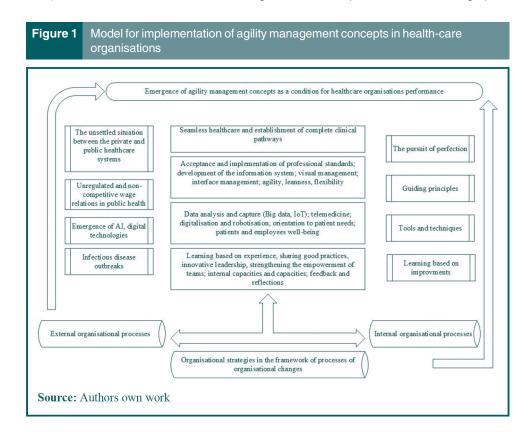
The employees also do not think that health-care organisations can be defined as attractive to a work environment oriented towards sustainable development at a given moment. The study's results are based on a scenario that should be introduced in Slovenian healthcare organisations in the next five years, showing the real state of Slovenian health-care organisations in 2022. The results highlight all the organisational shortcomings, which, according to the respondents, stem from the management of organisations. Thus, in the framework of the open question, where the respondents were asked to give their views on the agility processes in their organisation, they only gave different opinions. Thus, most individuals find that agility processes are only minimally present in their organisation or are still in their infancy, and employees perceive them only in individual moments. The respondents emphasise that it would be necessary to educate the management about agility, and only then would it be possible to hope for fleeting changes. Agility processes are essential for appropriately developing process implementation because of ever-increasing requirements - digitisation, higher quality of work, etc. Respondents further state that their organisations try to be innovative and flexible, but more is needed. Although this area is changing slowly with the introduction of new technology, no investment is being made in educating personnel who could use it. According to the respondents, management should detail how they plan to implement changes regarding agility processes in their organisation. The key weaknesses of the current leadership of health-care organisations are also shown by the fact that as many as 67% of the respondents believe that their organisations will have to transform organisational processes in the next five years. The processes must thus become easier and simpler, not so detailed, and it will be possible to differentiate them according to the context the organisation will face at a given moment. It is also evident that the values of health-care organisations are based on something other than learning, openness, teamwork, responsibility and self-reflection. The management and empowerment of employees also need to be improved. The ownership of health organisations is also open because a certain degree of privatisation of state institutions is also open. It should be based on the coownership of employees and not only on health insurance companies. This would solve the complex problem of poor management and thus enable a faster adaptation of the health system to the requirements of solving internal and external organisational challenges (Fortuna, 2017).

Within the study framework, we addressed the issue of agility in Slovenian health-care organisations. We simultaneously answered the two research questions, representing the study's fundamental goal. In the end, it must be emphasised that it will be necessary to assign a greater role to agility in Slovenian health care, both in the context of scientific research work and in the field of management, the course of operational management processes, the development of human resources and the very attitude of work within healthcare organisations. In recent years, the economic and management literature has largely stressed the importance of knowledge assets for organisations' competitiveness. Grounded in the knowledge-based view of the firm, which interprets narcissistic personality disorder (NPD) as a cognitive process characterised by the use, development and management of knowledge assets, this paper, using a multi-case studies analysis, stresses the importance of considering knowledge assets as value drivers that can support NPD process performance improvements.

## 5.1 Theoretical implications

The research aimed to obtain information about the current organisational culture and determine what organisational changes and adoptions would be necessary for health-care organisations to achieve an agile business model or to transform from classic to agile organisations. The obtained empirical data created a scenario based on which it will be possible to assume what changes will be necessary in the context of the organisational culture to ensure the successful implementation of the concepts of agility in the context of mediumterm strategic planning. Created scenarios will serve managers in preparing new strategies and challenging already established ones. Researchers can use the scenarios as a starting point for further studies on developing organisational culture, which enables and ensures the transformation of a health-care organisation from classical to agile and leanness. For this purpose, a theoretical model (Figure 1) was developed to explain which external and internal processes must be considered when preparing organisational strategies due to changes and adjustments. The model is based on four foundations that enable the achievement of these goals, including the introduction of agility management concepts, which are expected to influence the design and improvement of the capacity of the health-care provision process. Within the framework of the model, the health-care organisation is justified as a learning organisation (Jovanov Oblak, 2022). Therefore, it is important that, within the framework of the development of agile approaches, management also ensures the internal and external organisational processes of continuous learning that cover R&D (Harsch and Festing, 2020).

In the context of ensuring a learning health-care organisation (Figure 1), it will be necessary to develop appropriate strategies for further development, including support for lifelong learning (both professional, soft social skills and health-care management and teamwork) and an environment that supports the implementation of digital technologies, robotics (where appropriate) and digital transformation itself (focussing on changing business models while digitising) (Schiuma et al., 2022). To this end, it makes sense for the larger Slovenian hospitals to consider setting up an



innovation lab. It can be organised as a public-private partnership and be controlled by a public hospital (e.g. a larger regional or university hospital or clinical centre). Such a lab is a space for collaborative working and systems thinking. It should provide lab members with access to modern digital tools for teamwork and remote working, as well as access to prototypes. The Innovation Lab aims to create a centre for digital innovation (Schiuma and Santarsiero, 2023). The lab should foster innovation capacity, improve products, processes, services and business models and ensure greater competitiveness within the organisational community (Santarsiero et al., 2022). Such a regional or national centre should involve health-care organisations (both public and private), clinicians, researchers, developers, consumers and end-users. In this way, it will be possible to encourage health-care organisations, individual experts and technology companies to pool their knowledge and transfer it to start-ups, encouraging networking and the application and preparation of joint development projects (Santarsiero et al., 2023). Such a laboratory would, under its organisational and contextual characteristics, offer rapid solutions to unforeseen health situations (such as viral outbreaks, problems of increasing resistance to bacterial infections, etc.), as well as to foreseeable organisational and technological changes related to changes in the organisational climate, to prepare employees for changes in business models due to the introduction of new technical solutions (reducing the consequences of employee resistance in advance) and agile principles in organisational management as a condition for ensuring a positive attitude of both employees and patients towards the new business-technological solutions. Both the emergence of agile management principles and technological innovation must also aim at the emergence of an organisational culture based on respect for the patient, ensuring the reduction of waiting lists, the removal of medical errors related to treatment, changes in work processes due to the increasing ageing of the population, the reduction of bacterial infections and the increase in the importance of knowledge management in the health sector (Adams, 2022; Lerro, 2012). Of course, these changes cannot be implemented or be sufficient to deliver the required quality of service without also changing the health-care organisation's internal processes during the digital transformation period (Santarsiero, 2023). These are the prerequisites for a successful change in the overall corporate culture, which is a sufficient condition for a health-care organisation to strive for improvement-based learning (from work processes to interpersonal relationships, patient relationships, clinical pathways, technological innovations, management approaches, knowledge management and communication tools, etc.) as a learning organisation, which is also committed to the criteria of quality assurance and business performance. In this way, the health-care organisation will become agile, flexible and lean in the long term, striving for perfection in all areas (Schiuma et al., 2022).

### 5.2 Managerial and policy implications

As part of the study, it was established that Slovenian health-care organisations need to be more agile. This is also indicated by the fact that none of the respondents expressed the need for their organisation to move to agile by focussing on improving overall results rather than specifically on agile techniques. Indeed, we perceive the need to introduce agile techniques and processes that can only be submitted through changes in the organisational culture, which must ensure that employees become aware of the importance of agile processes and that they acquire appropriate competencies that will enable organisational changes and adjustments that will lead to agility in the organisation. It is necessary to emphasise that the management of organisations will first have to acquire appropriate skills in agility and then enable employees to develop the skills needed for implementing agile processes as part of lifelong learning. It is indicated by the views expressed in the context of the respondents' open questions about their organisation's agility. Within the framework of the results of the study, it is necessary to highlight the following in terms of managerial implications:

There is a need to promote organisational change and organisational learning in healthcare organisations. It is necessary to ensure that accepting employee mistakes and offering help to employees becomes a normal practice. We must also emphasise that in health-care organisations, it is essential to ensure greater trust of the management towards the employees.

- The digitalisation of work processes requires the management to perceive technologies as a tool that will increase human abilities rather than their replacement.
- Empathy is not valued enough in health-care organisations, which must change.
- Top management must embrace agility as their goal. It is necessary to stop too frequent interference in the work of departments. All managers at all organisational levels must perform interpersonal communication and work following the commitment to the organisation's strategic orientations.
- Establishment of an innovation lab as a central point for the management of digital transformation processes and the flow of knowledge between all stakeholders.

# 5.3 Study limitations and future research

Among the study's limitations, it is necessary to point out the geographical boundary and the choice of research method. The study was conducted in Slovenia, and therefore, its results are specific to the problems of Slovenian health care, which are largely similar to the problems of neighbouring central and southern European countries. Another limitation is of a research nature. The Delphi study covers a limited number of health-care institutions and health-care workers. Therefore, in the future, it will be necessary to carry out research that will include in-depth interviews and quantitative methods that cover a larger number of people. The research results must be properly evaluated following the comparison with neighbouring countries such as Austria, Italy, Croatia, Hungary and Germany.

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#### References

Adams, D.E. (2022), "Leadership for reducing medical errors via organisational culture: a literature review", Measuring Business Excellence, Vol. 26 No. 2, pp. 143-162.

Aronsson, H., Abrahamsson, M. and Spens, K. (2011), "Developing lean and agile health care supply chains", Supply Chain Management: An International Journal, Vol. 16 No. 3, pp. 176-183.

Bizjak, R. (2021), "Z (de)regulacijo do učinkovitega zdravstvenega sistema (through (de)regulation to an efficient healthcare system)", Master Thesis, Pravna fakulteta, Univerza v Ljubljani, Ljubljana.

Brosseau, D., Ebrahim, S., Handscomb, C. and Thaker, S. (2019), "The journey to an agile organisation", available at: www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/ the-journey-to-an-agile-organization (accessed 15 July 2023).

Cascio, J. (2020), "Facing the age of chaos", available at: https://medium.com/@cascio/facing-the-ageof-chaos-b00687b1f51d/(accessed 17 July 2023).

Courtney, H., Kirkland, J. and Viguerie, P. (1997), "Strategy under uncertainty", Harvard Business Review, Vol. 75 No. 6, pp. 67-79.

D'Andreamatteo, A., Ianni, L., Lega, F. and Sargiacomo, M. (2015), "Lean in healthcare: a comprehensive review", Health Policy, Vol. 119 No. 9, pp. 1197-1209.

Fischer, T. and Sitkin, B.S. (2023), "Leadership styles: a comprehensive assessment and way forward", Academy of Management Annals, Vol. 17 No. 1, pp. 331-372.

Fortuna, M. (2017), "Slovensko zdravstvo je v krizi zaradi krize vodenja (Slovenian healthcare is in crisis due to a leadership crisis)", Dnevnik, 22 March, available at: www.dnevnik.si/1042766488/mnenja/ odprta-stran/slovensko-zdravstvo-je-v-krizi-zaradi-krize-vodenja (accessed 17 July 2023).

Harsch, K. and Festing, M. (2020), "Dynamic talent management capabilities and organisational agility a qualitative exploration", Human Resource Management, Vol. 59 No. 1, pp. 43-61.

Jiao, L., Harrison, G. and Chen, J. (2023), "Revenue growth in not-for-profit organisations: the effects of interactive and diagnostic controls and organisational culture", Accounting & Finance, Vol. 63 No. 2, pp. 2273-2294.

Jonnalagadda, K., Fleisch, D., Hultman, P. and Berez, S. (2019), "How agile is powering healthcare innovation", available at: www.bain.com/insights/how-agile-is-powering-healthcare-innovation/ (accessed 17 July 2023).

Jovanov Oblak, K. (2022), "Agilni management kot imperativ v zdravstvenih organizacijaj (agile management as an imperative in healthcare organisations)", Master thesis, University of Maribor, Faculty of Faculty of Organizational Sciences, Kranj.

Kameoka, A., Yokoo, Y. and Kuwahara, T. (2004), "A challenge of integrating technology foresight and assessment in industrial strategy development and policymaking", Technological Forecasting and Social Change, Vol. 71 No. 6, pp. 579-598.

Landeta, J. (2006), "Current validity of the Delphi method in social sciences", Technological Forecasting and Social Change, Vol. 73 No. 5, pp. 467-482.

Lerro, A. (2012), "Guest editorial - Knowledge-based perspectives of innovation and performance improvement in health care", Measuring Business Excellence, Vol. 16 No. 4, pp. 3-13.

McMillan, S.S., King, M. and Tully, M.P. (2016), "How to use the nominal group and Delphi techniques", International Journal of Clinical Pharmacy, Vol. 38 No. 3, pp. 655-662.

Noč, M. (2021), "Medicinske sestre in zdravstveniki vsak dan odhajajo (nurses and medical professionals are leaving every day)", Delo, 21 August, available at: www.delo.si/mnenja/gostujoce-pero/medicinskesestre-in-zdravstveniki-vsak-dan-odhajajo/ (accessed15 July 2023).

Parnaby, J. and Towill, D.R. (2008), "Seamless healthcare delivery systems", International Journal of Health Care Quality Assurance, Vol. 21 No. 3, pp. 249-273.

Patri, R. and Suresh, M. (2017), "Modelling the enablers of agile performance in healthcare organisation: a TISM approach", Global Journal of Flexible Systems Management, Vol. 18 No. 3, pp. 251-272.

Pirc, N. and Štromajer, D. (2018), "Predstavitev sistema obvladovanja tveganj na kirurški kliniki v univerzitetnem kliničnem centru ljubljana (presentation of the risk management system at the surgical clinic in the university clinical Centre ljubljana)", in Jerebic, S. (Ed.), Risks in Healthcare: Do we Recognise Them, Treat Them, Reduce Them? Angela Boškin's 11th Day, Gozd Martuljek, Slovenia, pp. 78-91.

Powell, T.C. (1992), "Research notes and communications strategic planning as competitive advantage", Strategic Management Journal, Vol. 13 No. 7, pp. 551-558.

Prashar, A. (2023), "Modeling enablers of agility of healthcare organisations", International Journal of Quality & Reliability Management.

Roblek, V., Dimovski, V., Mesko, M. and Peterlin, J. (2022), "Evolution of organisational agility: a bibliometric study", Kybernetes, Vol. 51 No. 13, pp. 119-137.

Roblek, V., Dimovski, V., Oblak, K.J., Meško, M. and Peterlin, J. (2023), "Knowledge management and leadership development methods for agile healthcare organisations", in Carlucci, D., Lerro, A. and Schiuma, G. (Ed.), 18th International Forum on Knowledge Asset Dynamics (IFKAD). Institute of Knowledge Asset Management (IKAM), Matera, Italy, pp. 520-532.

Santarsiero, F. (2023), "Developing a strategic planning model for developing, monitoring and evaluating digital transformation initiatives: a soft system approach", *Measuring Business Excellence*, Vol. 27 No. 3, doi: 10.1108/MBE-02-2023-0023.

Santarsiero, F., Lerro, A., Carlucci, D. and Schiuma, G. (2022), "Modelling and managing innovation lab as catalyst of digital transformation: theoretical and empirical evidence", *Measuring Business Excellence*, Vol. 26 No. 1, pp. 81-92.

Santarsiero, F., Schiuma, G., Carlucci, D. and Helander, N. (2023), "Digital transformation in healthcare organisations: the role of innovation labs", *Technovation*, Vol. 122, p. 102640.

Saritas, O. and Oner, M.A. (2004), "Systemic analysis of UK foresight results: joint application of integrated management model and road mapping", *Technological Forecasting and Social Change*, Vol. 71 Nos 1/2, pp. 27-65.

Schiuma, G. and Santarsiero, F. (2023), "Innovation labs as organisational catalysts for innovation capacity development: a systematic literature review", *Technovation*, Vol. 123, p. 102690.

Schiuma, G., Schettini, E., Santarsiero, F. and Carlucci, D. (2022), "The transformative leadership compass: six competencies for digital transformation entrepreneurship", *International Journal of Entrepreneurial Behavior & Research*, Vol. 28 No. 5, pp. 1273-1291.

Shakhour, N.H.T., Obeidat, B.Y., Jaradat, M.O. and Alshurideh, M. (2021), "Agile-minded organisational excellence: empirical investigation", *Academy of Strategic Management Journal*, Vol. 20, pp. 1-25.

Sindhwani, R., Singh, P.L., Iqbal, A., Prajapati, D.K. and Mittal, V.K. (2019), "Modeling and analysis of factors influencing agility in healthcare organisations: an ISM approach", in Shanker, K., Shankar, R. and Sindhwani, R. (Eds), *Advances in Industrial and Production Engineering: Select Proceedings of FLAME 2018*, Springer., Singapore, pp. 683-696.

Suresh, S., Siddiqui, M., Ghanimeh, M.A., Jou, J., Simmer, S., Mendiratta, V. and Zuchelli, T. (2021), "Association of obesity with illness severity in hospitalized patients with COVID-19: a retrospective cohort study", *Obesity Research & Clinical Practice*, Vol. 15 No. 2, pp. 172-176.

Vaishnavi, V., Suresh, M. and Dutta, P. (2019), "Modelling the readiness factors for agility in healthcare organisation: a TISM approach", *Benchmarking: An International Journal*, Vol. 26 No. 7, pp. 2372-2400.

### Further reading

Kraus, S., Schiavone, F., Pluzhnikova, A. and Invernizzi, A.C. (2021), "Digital transformation in healthcare: analysing the current state-of-research", *Journal of Business Research*, Vol. 123, pp. 557-567.

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