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Managing Innovation in Occupational Health Care System for the Future

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Abstract: Occupational Health Care System (OHS) will by law concern every citizen in working age. The role of OHS is work-related and proactive by nature. The co-operation with actors like basic health care and rehabilitation is in key role in keeping people at work. The aim of project TYÖKE is to develop functional integration between OHS and other services in order to manage the wellbeing of people in working age. The basic questions in this paper are as follows: What is the role of OHS in general social and health care ecosystem and how do they co-operate across the boundaries in this context; What kind of innovations will be needed to meet the challenges from citizens´ and professionals´ perspective in different futures scenarios? and finally, Who will play the main role in the ecosystem to fulfil the requirements for the new situation?

Keywords: Future; innovation; scenario; visionary concept; occupational health care; ecosystem; renewal; innovation management.

1 Introduction

The social and health care system is in transition because of megatrends like urbanization, aging population, digitalization and changes in working life, having an impact on wellbeing. In Finland, the reform of social and health care system has been going on years during several government periods in 2000s. It includes the reform of social and health care services and the regional reform as well. As a part of the reform the occupational health care system (OHS) has to consider its position. OHS should look for an integrated status in the ecosystem as a whole. This means co-operation across the boundaries, focus in the holistic view of citizen´s perspective. Social and health care

reform has been failed because of the lack of commitment in political parties. Recommendations have been returned from the parliament to the government.

OHS will by law concern every citizen in working age. The role of OHS is work-related and proactive by nature. The co-operation with actors like basic health care and rehabilitation is in key role in keeping people at work. This reform is one of the biggest ever administrative overhauls in Finland. The aim of project TYÖKE is to develop functional integration between OHS and other services in order to manage the wellbeing of people in working age.

2 The aim and the research questions

The goal of this paper is to present a conceptual framework for future-oriented OHS, create scenarios for it and to describe innovative solutions needed in different cases, i.e.

1. What is the role of OHS in general social and health care ecosystem and how do they co-operate across the boundaries in this context?

2. What kind of innovations will be needed to meet the challenges from citizens´ and professionals´ perspective in different futures scenarios?

3. Who will play the main role in the ecosystem to fulfil the requirements for the new situation?

3 Research design

Background is in the project TYÖKE, coordinated by Finnish Institute of Occupational Health Institute and financed by European Social Fund 2017-2020. The partners are Helsinki University, University of Eastern Finland, Central Finland Health Care District and Laurea UAS. The challenges for the OHS will be recognized at structural, operational, educational and personal levels. We are looking for innovative solutions to meet these challenges.

Reseach data for this work consists interviews and workshops among OHS experts in Uusimaa district and web survey at national level in Finland concerning the whole ecosystem in this field, including educational and research actors. Research team in TYÖKE project consists of OHS experts both from theory and practise and futures research experts, too. As an additional resource there has been a group of MBA students in spring 2018 from the future leadership program in Laurea UAS.

The research process (Figure 1) consists of various phases with intensive co-operation in OHS field. Data collection, data analysis and conclusions have formed a hermeneutic spiral in the course of time. The intuitive and visionary understanding of the future challenges and opportunities as well as of the driving forces has become more visible during the first year of the research project. This is an ongoing project where we will

approach the final scenarios and those visionary concepts needed in each scenario alternative to meet the future challenges.

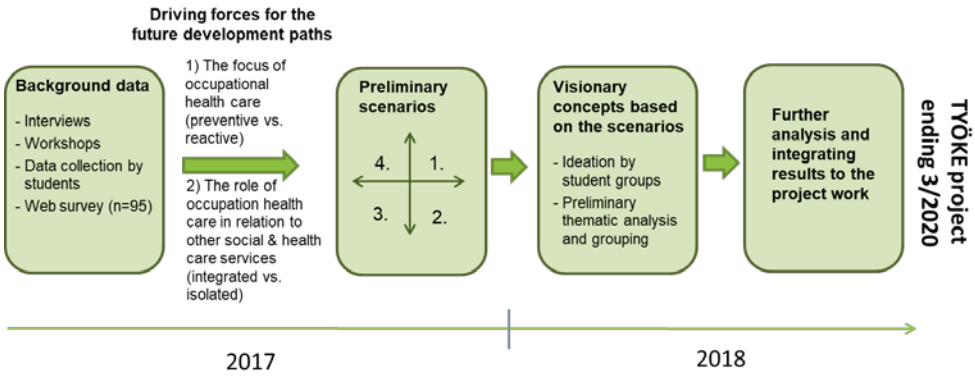

Figure 1 The process of visionary concept design in TYÖKE project.

The methods applied in this study are scenario approach and visionary concept design. Scenario working is a method within the field of futures research (Bell 1997, Masini 1993). Scenario working includes mapping alternative futures, identifying factors and development paths leading to different future outcomes. The action scenario approach (Meristö 1989) incorporates also the evaluation of the significance of the scenarios for the user. Finally, based on the evaluation necessary actions are suggested.

Scenarios are descriptions of different futures. Besides including the description of the competitive environment with factors like politics, economy, society, technology and environment the approach also incorporates the process of development. Scenarios are different from forecasts, as scenarios are usually not measured by their probability of occurrence (Schwartz 1996). Scenarios are not either exact descriptions of the future; they are rather verbal descriptions of both qualitative and quantitative nature. Our framework is based on a multiple scenario approach i.e. at least two alternative scenarios are constructed. Furthermore, each scenario leads to various possible choices of strategies and alternative visionary concepts based on need in alternative futures (Kokkonen et al. 2005).

The method for creating visionary future product concepts consists of five main steps. The first step is the identification of change factors, which forms basis for the second step i.e. scenario building. The third step is the identification of product needs in each scenario. The fourth step is the actual generation of future product concepts based on the market need identified in each scenario. The fifth and last step of the method is the timing of R&D –activities and operations. This step also includes other considerations concerning the contribution the visionary concepts might have to the company's business planning or strategy (Kokkonen et al. 2005).

The time perspective of the visionary concepts is long which has several benefits. Visionary concepts enable systematic examination of alternative future developments because future scenarios are illustrations of the operational environment in the future. It

also takes into account the driving forces as well as market potential, uncertainty and challenges related to future in alternative scenarios. Moreover, visionary concepts enable product concept design and R&D for the future, over next product generation visualizes the future as products which are corresponding to the future needs (Leppimäki et. al. 2008).

In this paper, we have focused on the themes concerning occupational health care. Scenarios will serve as wind tunnels to test ideas and concepts, but also as and ideation source to design visionary concepts, i.e. future-oriented concepts that are based on the future needs identified in different scenarios (Kokkonen et al. 2005; Leppimäki et al. 2008; Laitinen & Meristö 2016). Scenario work will give as broader framework to get new insights (Tuohimaa et. al. 2011). Futures workshops are a part of the visionary knowledge creation to complete the facts and figures. Web-surveys on the other hand will strengthen the data basis for innovations needed when managing change in technology, organisation and in the market place (Tidd et. al. 2005).

4 Results and findings

The scenarios in the visionary concepts process are based on two main drivers which are the focus of OHS activities (vertical axis) and the OHS's role in relation to general social & health care (horizontal axis). As a result, there are four alternative scenarios which are introduced in Figure 2. At this phase of the ongoing TYÖKE project the scenarios are preliminary versions and they will be specified in later phases of the project.

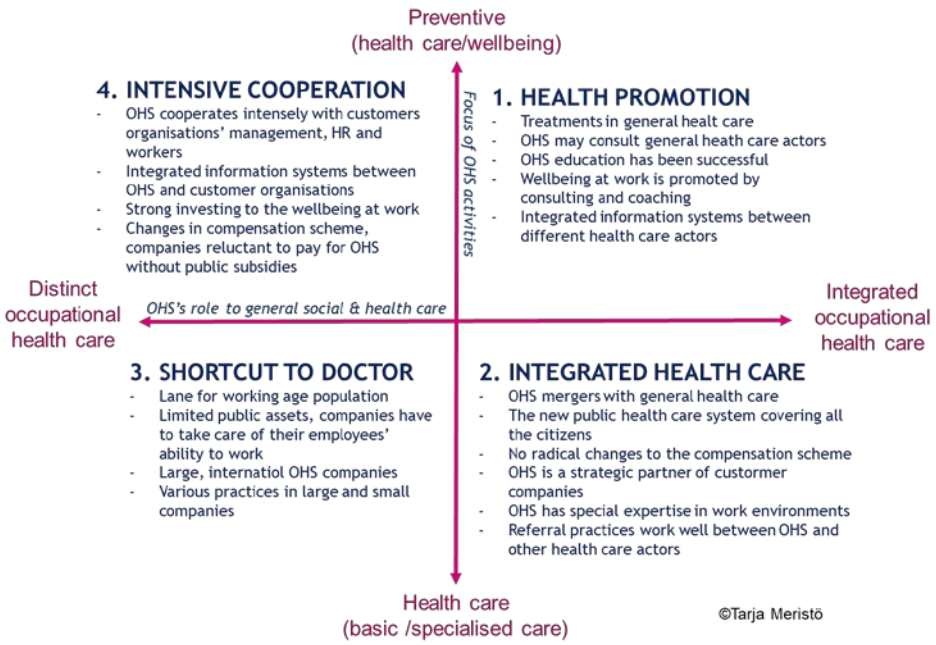

Figure 2 Alternative scenarios for the occupational health care.

Scenarios 1. Health promotion and 4. Intensive cooperation have their focus on on preventive health care and wellbeing where as in Scenario 2. Integrated health care and in Scenario 3. Shortcut to doctor the focus is on basic and specialized health care.

Visionary concepts were created for each scenario which are illustrated in Figure 3. The concepts have been grouped to technological and economic concepts.

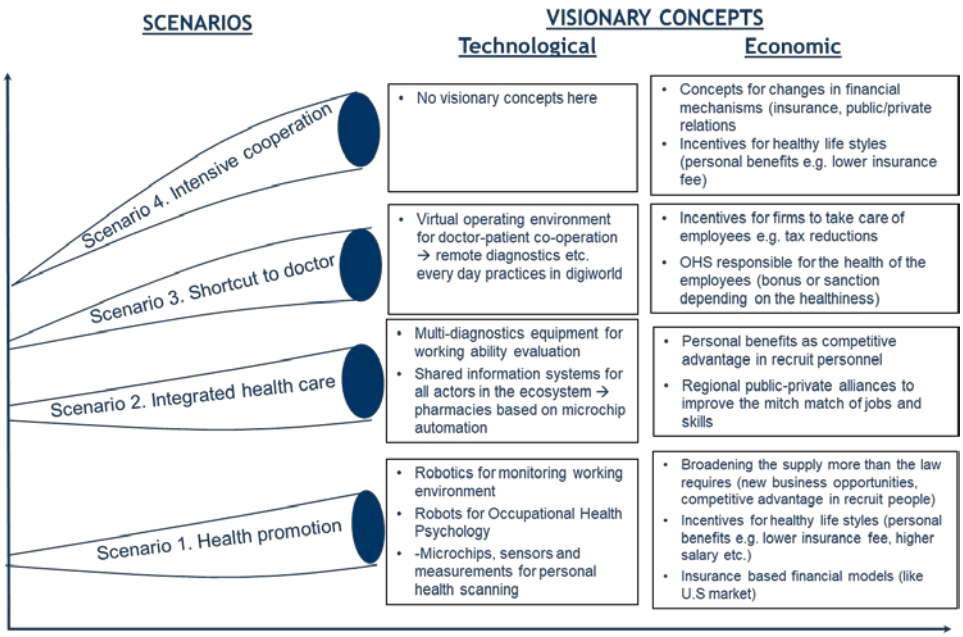

Figure 3 Visionary concepts related to occupational health care scenarios.

In our web-survey, which was carried during the spring 2018, we studied future aspects related to the OHS including e.g. different stake holders' power to affect to the future development of OHS. We received altogether 95 answers. The most of the answers came from OHS professionals (60,6 %). Other answerers presented research & education (9,4 %), decision makers in OHS (7,4 %), decision makers in other health care sectors (6,4%). Other answerers included e.g. financial insurance experts related to OHS.

According to the web survey results, the most powerful actor group in the field is national level decision makers (Figure 4). Additionally, big OHS companies as well as the owners and management of customer organisations were seen important. Also, employers' organisations and both public and private financial & insurance organisations were seen remarkable groups when considering the future of OHS. Instead, third sector actors, small

OHS companies and municipal level decision makers were seen not so powerful stake holder groups.

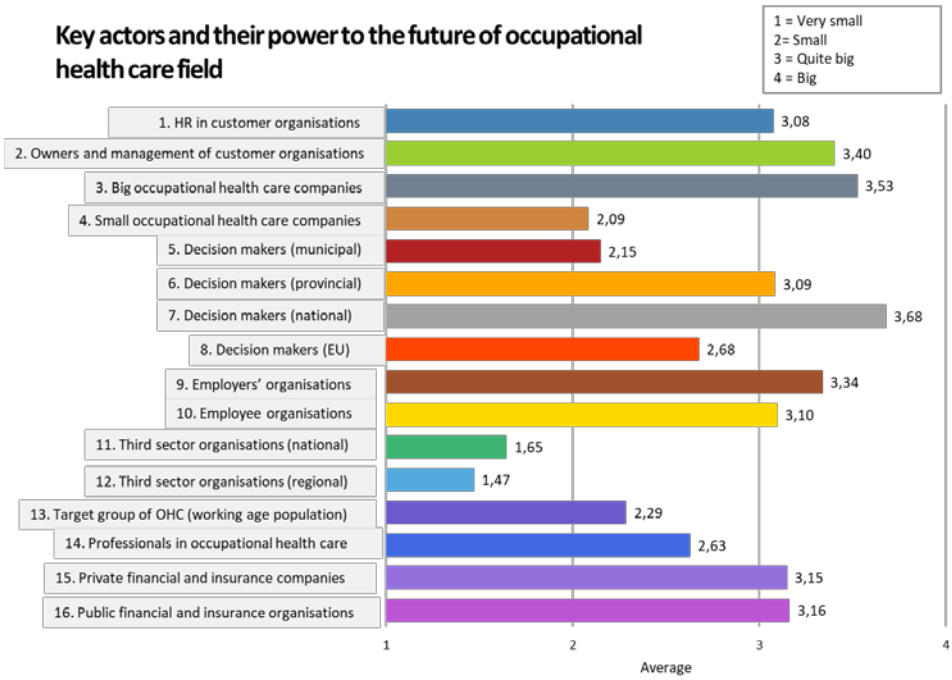

Figure 4 Key actors and their power to the future of occupational health care field.

This is an ongoing project. The findings are preliminary from three categories: 1. Use of creative tools to produce innovative insights to OHS in long run 2. Recognizing the critical points of the development path towards the desirable OHS. 3. Ecosystem structure and needs for network based innovation management for OHS.

First, the innovation tools will make invisible things visible. Two tools were used: taboos (Kettunen 2008) and animal analysis (Kets de Vries 1995). From taboos rose up e.g. innovation needs for curriculum updating. Animal farm showed the gap between the present and the desired future. OHS today is a dog, but in changing world the need for agility (gazelle), strength (lion), capabilities for deep diving (whale) or long jumping (kangaroo) is essential.

Second, the innovation needs towards vision will culminate to three steps: Attitudes will require new perspectives for OHS as a strategic partner. Awareness of different views has to be distributed with innovative lobbying. Multi-voiced process will postulate changes requiring radical innovations in leadership models.

Third, need for network-based innovation management is essential (Tuohimaa & Pirilä 2014). Co-operation in preventive and proactive way will change the whole system architecture. Futures work will bring a shared vision to all actors in the ecosystem.

To summarize, we have combined our findings together with our research questions (Table 1).

Table 1 The summary of the results.

Research questions / Findings	1. What is the role of OHS in general social and health care ecosystem and how do they co-operate across the boundaries in this context?	2. What kind of innovations will be needed to meet the challenges from citizens´ and professionals´ perspective in different futures scenarios?	3. Who will play the main role in the ecosystem to fulfil the requirements for the new situation?
1. Use of creative tools to produce innovative insights to OHS in long run	• Taboos • Animal analysis	• Visionary concepts in alternative scenarios	• Technology developers (firms)
2. Recognizing the critical points of the development path towards the desirable OHS.	Scenario drivers • OHS - integrated or not (x-axes) • health promotion (preventive) vs. health care (y-axes)	• Shared information platform (and shared vision)	• Governmental actors at national level in social and health care renewal process • Large corporations in the health care market
3. Ecosystem structure and needs for network based innovation management for OHS.	• Based on web-survey, internal hierarchy among professionals within OHS is important to solve	• From hierarchies to networks in structure • Better information flow from one actor to another, including frim citizens to professionals	• The trust builders in the network (who will be that?)

5 Conclusions and practical implications

Regarding innovation management, the main outcomes are related to the future driven thinking in the OHS context. At the national level the transformation is large-scale by nature, and the goal is to be better than earlier. Based on Jordan (2006) this will require radical innovations. The innovation culture in social and health care field is conservative and political by nature. Our research will open new opportunities for radical innovations as mini pilots in alternative futures. Innovation management in network-based ecosystem (Wallin 2006) is conceptualized with changes in society, working life, technology and in individual values. Social innovations and innovations for holistic wellbeing are key elements.

Practical implications will vary from case to case. The education in this field has to be adapted to multidisciplinary challenges. Companies, governments and universities have to build flexible co-creation processes for proactive customer-oriented solutions. We have focused on the themes driving new perspectives for OHS in the global context. Scenarios will open alternative paths to the future. They will serve as wind tunnels to test new ideas and concepts to improve the system to meet the future challenges (Leppimäki et al. 2008). Scenarios will act as an ideation source to innovate new services and structural changes needed in the future.

6 Feedback

The useful feedback to our work in progress would be from the field of questions as follows:

1. What kind of new innovations there could be for groups to improve and maintain occupational health (not only personal meters)?

2. What kind of innovations are needed in multi-professional networks and teams to to manage big organizational changes?

3. Who could be the key persons in renewing the occupational health care system?

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