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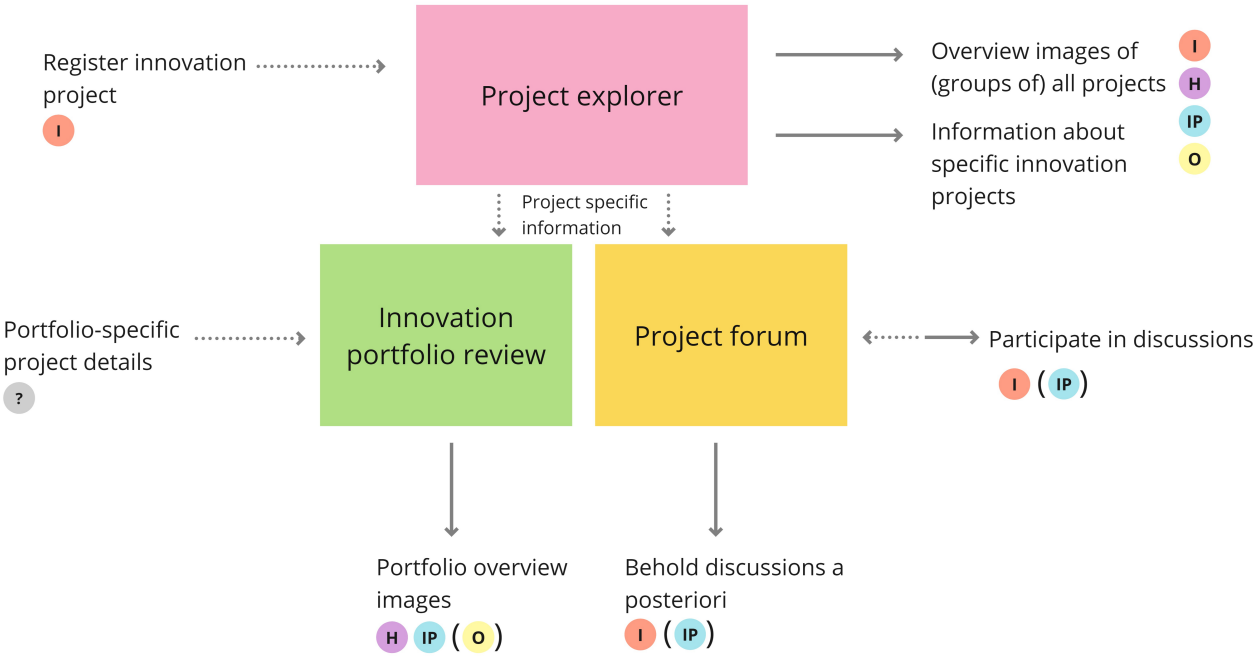

Design guidelines for a digital information exchange system

Exploring user needs for accessing collective information about innovation projects in VGR

MASTER'S THESIS IN INDUSTRIAL DESIGN ENGINEERING

NORA NYBORG

DEPARTMENT OF INDUSTRIAL AND MATERIAL SCIENCE
DEVISION DESIGN AND HUMAN FACTORS

CHALMERS UNIVERSITY OF TECHNOLOGY
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Supervisor: Siw Eriksson, Department of Industrial and Material Science
Examiner: Oskar Rexfelt, Department of Industrial and Material Science
Supervisor: Sandra Olsson, Innovationsplattformen i VGR

Department of Industrial & Materials Science
Division Design and Human Factors
Chalmers University of Technology
SE-412 96 Göteborg, Sweden
Telephone: +46 (0)31-7721000

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Nora Nyborg

Gothenburg, April 2024

Abstract

In the public healthcare sector of Västra Götalandsregionen (VGR), there are hundreds of ongoing innovation projects. These projects form the foundation for innovation work in the region. Besides the members of innovation projects, several other actors are involved in the innovation activity of VGR. These are for example innovation leaders, innovation coaches, innovation managers, heads of (medical) departments, support functions and people at other strategic positions. An obstacle for all these actors, including members of innovation projects, is the difficulty to access information about all the innovation projects that are or have been conducted in the sector, which complicates their work in various ways.

The aim of this study was to explore the needs of each user group regarding accessing and contributing to collective information about innovation projects in the healthcare sector of VGR. The objective was to design a concept of how to meet these needs.

The research study undertook an exploratory approach, including a user and context study comprising of 20 interviews, one focus groups and two surveys. Data from these activities created the foundation for mapping experiences and needs of each user group, which formed the basis for the design concept.

Three design goals for a digital information exchange system were stated, based on identified core needs of the user groups. These were:

- Facilitate for the user in finding projects that are potentially useful to know about in their innovation activities.
- Contribute to lowering the barrier for innovators to interact and share experiences with each other.
- Provide an overview of innovation projects with the purpose to facilitate leading and strategic work.

The design concept developed in this study consists of visualised design guidelines for a digital information exchange system. The system comprises three parts, each serving one of the design goals. Main features were outlined for each system part, along with system user processes for to each user group.

Key words

Public sector innovation, innovation projects, information sharing in organisations, innovation portfolio management.

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1.

INTRODUCTION

1. Introduction

Innovation plays a vital role on a global, national, and local scale in shaping society's evolvement. It includes efforts to enhance the quality of life for the world citizens and strengthen environmental sustainability (Organisation for Economic Cooperation and Development [OECD], 2018). According to the international government-related organisation OECD (2018), innovation is defined as the implementation of a novel or significantly improved product, service, or process. This encompasses both original developments and the adaptation of existing ideas from other contexts into new ones. Innovation can occur in small everyday situations as well as within well-developed innovation systems of large corporations and organisations (OECD, 2018).

A field where innovation is assessed crucial for tackling present and future challenges, yet also presents opportunities for improvement, is the public healthcare sector. In fact, OECD has identified this sector as one of the key areas for prioritising innovation activities and collecting statistics (OECD, n.d.). The public healthcare sector faces complex issues, including aging populations and the need for effective healthcare delivery, making innovation critical for addressing these challenges.

1.1 Background

In Sweden, the public healthcare sector is primarily organised by regional authorities. Innovation efforts are widespread across these regions and the responsible organisation *Sweden's municipalities and regions* (SKR) are actively promoting innovation initiatives (SKR, 2023). However, a notable obstacle in current innovation practices lies in the lack of documentation and statistical analysis of innovation activities. Effective innovation systems rely on robust data collection and sharing mechanisms to align efforts and achieve common goals (Statistics Sweden [SCB], 2016).

A report by the Swedish government agency *Statistics Sweden* (SCB) (2016) indicates that this deficiency can be partly attributed to the lack of government requirements for measuring innovation in the public sector. Consequently, it is a shortage of established procedures within public healthcare organisations for data collection and documentation (SCB, 2016). Collective efforts are therefore needed to develop comprehensive guidelines and frameworks for measuring innovation in the public sector. While progress is underway, with OECD guidelines emerging, addressing this challenge remains a priority for enhancing innovation effectiveness in the public healthcare sector (SCB, 2016).

1.1.1 The innovation system in the healthcare sector of VGR

In *Västra Götalandsregionen* (VGR), innovation efforts, particularly within the healthcare sector, are one of the most established in Sweden. *The Innovation platform* (translated from Swedish *Innovationsplattformen*) is a key function for promoting innovation activities in this sector. With a team of approximately 20 employees, the primary objective of this organisational unit is to promote a robust and sustainable innovation ecosystem within the region. Its responsibilities include providing financial and practical support to internal innovation projects, developing processes for innovation implementation, and facilitating collaboration among the business sector, academia, and public sector (The Innovation platform, 2023).

Innovation activity in the healthcare sector of VGR primarily stems from the hundreds of ongoing internal innovation projects within the sector. These projects are often initiated and led by healthcare professionals, involving one or two participants (here called innovators), and assisted by various support functions within VGR (The Innovation platform, n.d.). The support functions include the Innovation platform and additional units with special competences, for example digitalisation.

Moreover, other actors, like leaders and individuals on strategic positions, are involved in the innovation system.

Henceforth, the term "VGR" will be used to denote the healthcare sector within Västra Götalandsregionen.

1.1.2 Challenges in the innovation system in the healthcare sector of VGR

Despite the established innovation structure, weaknesses are observed regarding documentation and exchange of information concerning innovation activities in VGR, aligning with the observations of OECD and SKR described above. These weaknesses affect various individuals, representing different groups, who are involved in the innovation system. This is highlighted in a 2019 report by the Innovation platform, containing an analysis of the current state of innovation in VGR. The report indicates that both innovators and support functions encounter challenges in identifying ongoing projects or innovations within the organisation. It also presents that there is no overarching communication system for coordinating innovation activities. Consequently, there is an increased risk of developing parallel solutions and duplicating efforts. Additionally, the report notes an absence of a united innovation strategy within the organisation, which is crucial for guiding future prioritisation efforts. Thus, besides enhancing documentation of innovation activities, greater collaboration across the organisation regarding innovation is considered necessary (The Innovation platform, 2019).

The individuals foremost impacted by the lack of information exchange regarding innovation projects can be summarised as follows: *innovators, heads of departments, Innovation platform employees* (including *managers, innovation leaders, project managers* and *innovation coaches*) and *other relevant actors in VGR* (including *support functions* and *individuals on strategic positions*). These groups respectively constitute the user groups addressed in this study.

1.2 Aim and objective

The aim of the study is to explore the needs of each user group regarding accessing and contributing to collective information about innovation projects in the healthcare sector of VGR. The objective is to design a concept of how to meet the identified user needs.

Research questions that will be answered in the study are:

- What information is relevant to each user group?
- What barriers do the user groups experience when trying to access relevant information?
- How can user needs be translated into a design concept of a digital information exchange system?

1.3 Demarcations

Projects within business (including organisational and department) development is not included in the study. Neither are projects driven by the private sector in collaboration with VGR.

1.4 Report structure

The report will outline the methodology and results of the study. It will first detail the methodology and results of the first phase (*user needs and context mapping*). Following this, the methodology and results of the second phase (*design of concept)* will be presented. A more comprehensive explanation of the

overall study methodology and process will be provided in chapter 3. Certain figures and images included in this report, which are extracted from the design process, will be in Swedish.

2.

RELATED THEORY

2. Related theory

This chapter includes a more detailed description of the innovation system of VGR, including the different user groups. The chapter also presents literature that has been applied in the study, which involves creativity and innovation in organisations, sharing of information in organisations and portfolio management in public organisations.

2.1 Details about the innovation system of VGR

Innovation activities in VGR centres around internal innovation projects initiated by VGR employees, who consequently become innovators upon engaging in such projects. Typically, innovators devote part-time hours to their projects, alongside their regular work tasks. To compensate this resource allocation from the innovators' regular workplace, internal funds, such as the *Innovation fund* administered by the Innovation platform, often finance these projects.

Throughout the innovation project, innovators apply *VGR's Innovation process*, a structured workflow developed by the Innovation platform. This process equips innovators with tools, methods, and useful information essential for the successful execution of an innovation project (The Innovation platform, 2024). A visual overview of the phases in VGR's Innovation process is shown in figure 1.

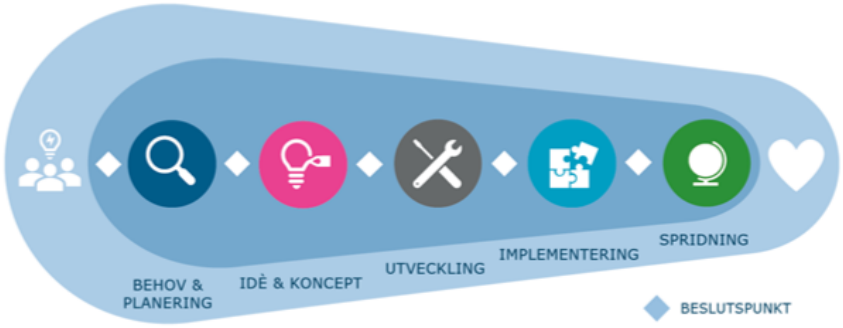

Figure 1. Showing the phases of VGR's Innovation process, developed for innovation projects in VGR. From The Innovation platform (2023).

An innovation project can last from a few months to several years. Determining which projects qualify as innovation projects is not always entirely clear within the region, as the subject often overlaps with other areas such as digitalisation and organisational development. Other projects, like digitalisation projects and organisation development projects, may therefore incorporate elements of innovation.

Below are details about the roles within the innovation system of VGR, which constitute the user groups in this study:

Innovators are members of innovation projects. They are often medical staff who has discovered an issue or idea of improvement in their daily work, which form the basis of the project.

Heads of departments lead and manage departments in VGR, including overseeing operations, activities, and personnel within their department. This study focuses on heads of departments where innovation projects are or have been undertaken. The primary responsibility of heads of departments within the innovation system is to evaluate and either approve or decline requests for innovation projects within their department. Additionally, they may coordinate replacements for innovators if needed.

Innovation platform employees include *innovation coaches, innovation leaders, managers* and *project managers*. These individuals fulfil various innovation supportive roles, collectively striving to enhance the innovation capacity within VGR. An innovation coach supports individual innovators in the project process by, for example, guiding them in the application of VGR's Innovation process and in framing the problem. An innovation leader does, among other things, plan and develop innovation activity in VGR. The Innovation platform manager lead the overall innovation work in the organisation and within the Innovation platform. Project managers lead and conduct innovation related projects within and outside the unit. The Innovation platform employees do also continuously lead and conduct a few bigger innovation projects themselves in the organisation.

Other relevant actors in VGR include *FoUUI, Koncernstab digitalisering (KSD)* and *organisational development managers*, all of which play a role in the innovation system. FoUUI is a unit in VGR responsible for research, education, development, and innovation across all sectors of VGR. KSD focuses on digitalisation matters within VGR and serves as a support function for innovation projects. Organisational development managers are responsible for facilitating progress within specific areas of institutions in VGR. For example, Sahlgrenska University Hospital, an institution within VGR, is divided into six sections, each with its own organisational development manager.

2.2 Innovation and creativity in organisations

Innovation capability in an organisation is the result of various factors working together to create an environment that encourages creativity and progress. Amabile and Pratt (2016) define creativity as "the production of novel and useful ideas by an individual or small group of individuals working together". Furthermore, they state that innovation is built on creative ideas as the basic elements and that organisational innovation, more specifically, is the successful implementation of creative ideas within an organisation. Thus, individual creativity is needed for the entire organisation to be innovative. According to Sundgren (2005), creativity is based on and supported by certain elements that disrupt and challenge established patterns, and thereby enhancing creativity. This includes informal networks, information sharing, and increased radical thinking, all of which are linked to internal motivation. Sundgren defines internal motivation as the aspiration to experience feelings such as satisfaction and happiness (Sundgren, 2005).

Amabile and Pratt (2016) highlights that individual creativity thrives when there's encouragement from colleagues, managers, and the organisation as a whole. They explain that employees are more engaged and cooperative when they feel listened to. Additionally, they note that employees seek a clear purpose and want to feel their contributions matter. Sundgren (2005) states that organisations with well-defined goals and shared values tend to have the most engaged employees.

In "Model of organisational innovation", presented in Figure 2, Amabile and Pratt (2016) describes the prerequisites for organisational innovation. The model illustrates the stages of an innovation process, encompassing both the organisation as a whole (organisational innovation, top row) and individuals or small groups (individual creativity, bottom row). Between these processes, boxes depict the three organisational components and the three individual components which are crucial for the success of an innovation attempt. The organisational components and the individual components are corresponding.

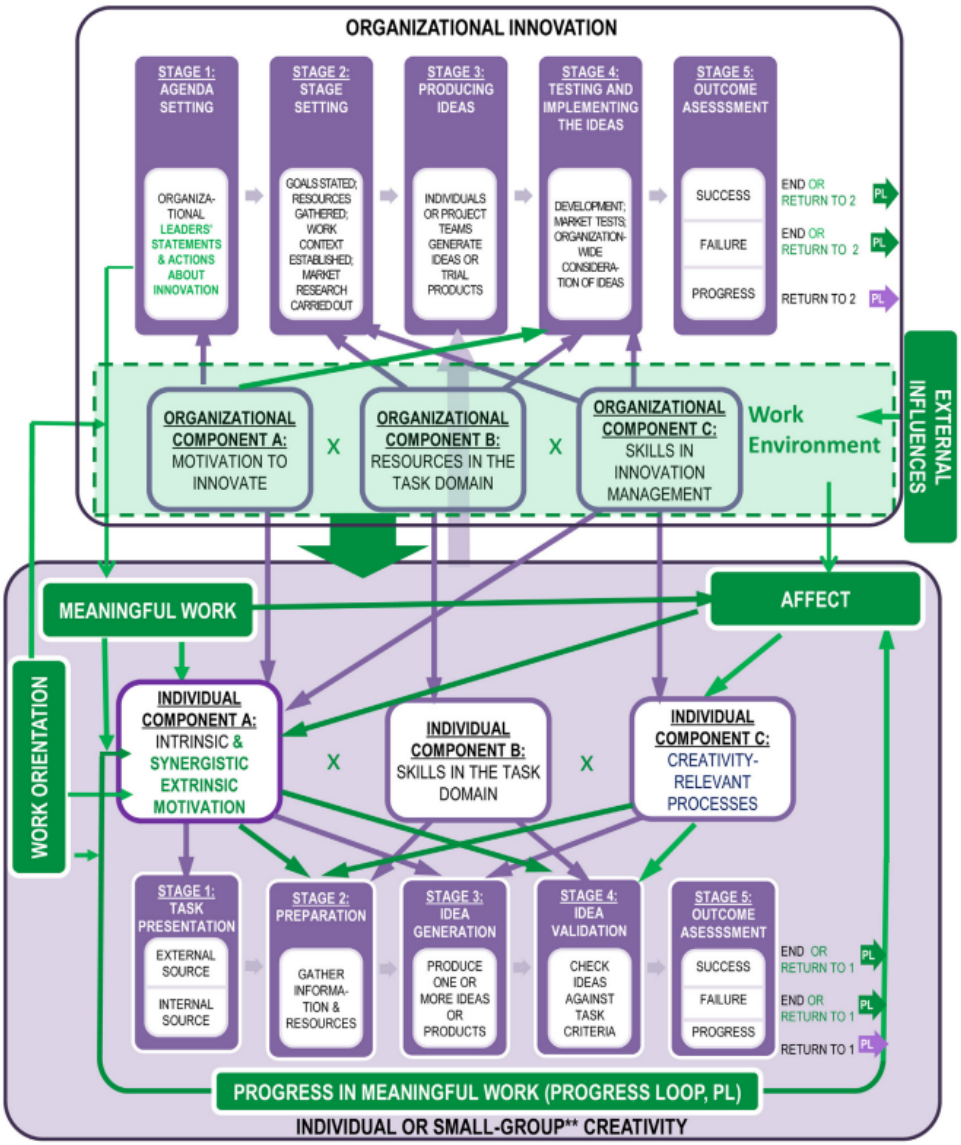

Figure 2. Model of organisational innovation. From Amabile, T. M., & Pratt, M. G. (2016), s.165.

The first organisational component described by Amabile and Pratt (2016) – *motivation to innovate* – involves the foundational attitude towards innovation in an organisation. This derives from the attitude of the organisational leaders. Leaders who value innovation and embraces risks will create bigger motivation to innovate in the organisation. The individual component *intrinsic motivation* refers to the individuals of the organisation's own motivation to do the task, including to solve a particular problem or tackle an intriguing opportunity (Amabile & Pratt, 2016). This aspect is crucial for starting a creative process.

The second organisational component described by Amabile and Pratt (2016) is *resources in the task domain.* It involves everything available within the organisation to facilitate the work related to the innovation. This includes, for example, individuals with relevant skills and contacts, financial resources, the opportunity to undergo training, as well as databases with relevant information. The individual component *skills in the task domain* entail an individual's knowledge within the domain and technical

skills to perform the task (Amabile & Pratt, 2016). Amabile and Pratt (2016) also state that skills in more than one domain increases the creativity and innovation capability.

The third organisational component described by Amabile and Pratt (2016) is *skills in innovation management*. It applies to the organisation as a whole, where good innovation management for example includes a good balance between freedom and constraints, open communication systems, and acknowledgment of work efforts. The individual component *creativity-relevant processes* refer to the processes or skills of individuals' in combining elements in novel ways (Amabile & Pratt, 2016).

Furthermore, Amabile and Pratt (2016) discuss the relationship between the organisational components. *Motivation* serves as the driving force behind innovation, acting as the catalyst that initiates change. However, for innovation to occur, *resources* and *skills* are equally essential. *Resources* are vital for conducting work in specific areas. How to use resources in a creative or innovative way is what they mean by *skills*. Any level of the three components is necessary for creativity or innovation to occur. Innovation potential is closely tied to the intersection of these components. The bigger the overlap of the three components are, the greater the innovation is. This is illustrated in Figure 3. The same reasoning applies to the individual components.

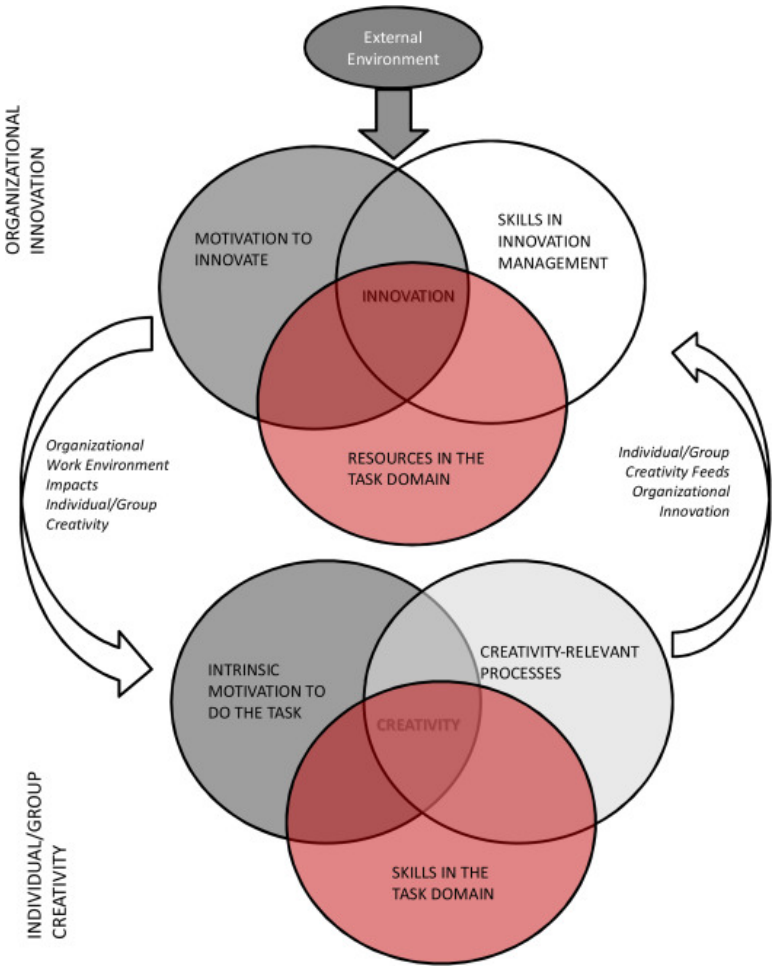

Figure 3. The intersection of the organisational and individual components respectively. From Amabile, T. M., & Pratt, M. G. (2016), s.161.

2.3 Information sharing and innovation

In addition to the foundational aspects discussed by Amabile and Pratt (2016), further research emphasises the importance of collaboration and information exchanges for enhancing innovation capability in an organisation. Sundgren (2005) explains that organisational creativity to a large extent depends on the ability to create opportunities for interaction between various scientific disciplines and projects. This is in line with Harley (2017), who states that more creative ideas and solutions can happen when people are exploring the problem by using outer inspiration. Furthermore, he discusses the risk of developing a limitation in the ability to explore solutions beyond the initial one. This tendency increases as a person becomes accustomed to and trained for a specific use of an object or solution in a particular situation. To avoid this, it is important to broaden one's perspectives through external input. Harley (2017) also writes that it is crucial within a group to include or engage with people from different departments and backgrounds, who followingly can bring in diverse perspectives. In line with this, SCB (2016) states that stimulating collaboration and idea exchanges among various actors within healthcare sectors, at both national, regional, and local levels, is likely to enhance innovation capability.

A prerequisite for fostering collaboration and creativity within an organisation is followingly awareness of other ongoing projects. This is supported by Wheatly (2011), who argue that limited access to and sharing of information and knowledge impedes individuals' ability to innovate within an organisation. However, information sharing appears to be a challenge in many organisations. Several factors influence the conditions for interpersonal information sharing, including individuals' motivations and approaches as well as their access to channels for sharing information with others (Wheatly, 2011). To enhance employees' motivations to share information, it is essential to establish a system of incentives (Buelens & Willem, 2007). Both implicit and explicit incentives can significantly enhance the degree of information and knowledge sharing.

When it comes to processing information, various factors impact the degree to which an individual engages in this process (Lagerström et al., 2015). One influential factor is the perceived value of the information to the individual. The more significant the individual considers the information to be, the more likely they are to acknowledge it. Additionally, the level of effort required to access the information is another critical aspect. If a considerable amount of effort is needed, individuals may decide not to pursue it.

2.4 Innovation portfolio management

Information exchange at a broader organisational level is facilitated by a central collection of data of the work conducted within an organisation. This includes measurements of various activities or projects, such as innovation projects, as discussed in section 1.1. One approach for presenting data measurement to facilitate strategic work is through *portfolio management*. Portfolio management is an approach where projects within a company or organisation are gathered in groups, each group referred to as a *portfolio*, and thereafter monitored according to shared goals and strategies. The approach facilitates executing and overseeing the implementation of the overall strategic plans within a company or organisation (Project Management Institute, 2017).

The *Observatory of Public Sector Innovation* (OPSI), a division of OECD, outlines several benefits of adopting an innovation portfolio approach. For example, this approach ensures that projects in an organisation do not conflict, facilitates the identification of potential collaborations and connections between projects, and visualises relationships across the ecosystem (OPSI, n.d.). OPSI (n.d.) further suggests that, from a strategic standpoint, a portfolio of innovation projects is more effective at achieving a purpose or goal than a single project. This is particularly relevant in uncertain environments,

where the need for innovation initiatives may arise unexpectedly, which is a common scenario in public sector organisations (OPSI, n.d.).

In order to apply innovation portfolio management, OPSI developed the *Innovation facet framework* (OPSI, n.d.) for public organisations to apply in order to understand their strategic goals and objectives of innovation. The framework identifies four facets, shown in Figure 4, which all equates to a certain type of innovation. By placing the innovation activities (such as innovation projects) of an organisation (or a part of the organisation) in the facet model, distribution of types of innovations among the activities are visualised. This can then be used as a starting point for a discussion about the structure of the desired innovation work.

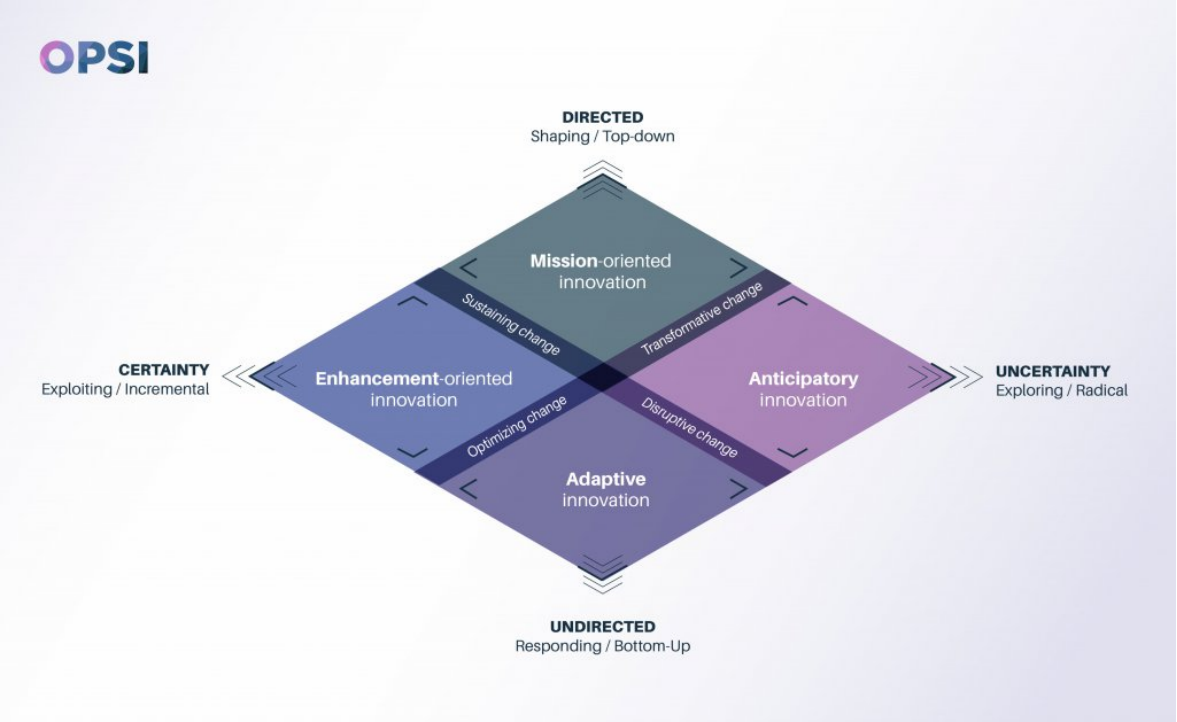

Figure 4. The Innovation facet framework. From OPSI (n.d.).

Digital tools are available for gaining overviews of innovation portfolios, primarily designed for the private sector. These tools visualise various aspects of the portfolio relevant to specific companies or organisations, including aspects similar to the elements in the OPSI model, and they vary in complexity. One such tool designed for the public sector in Sweden is "PIOS," developed by Dimatech (Dimatech, n.d.). This tool provides visual statistics on project efficiency, budget alignment, and other factors, although it does not specifically target innovation activities. A snapshot of PIOS is shown in Figure 5.

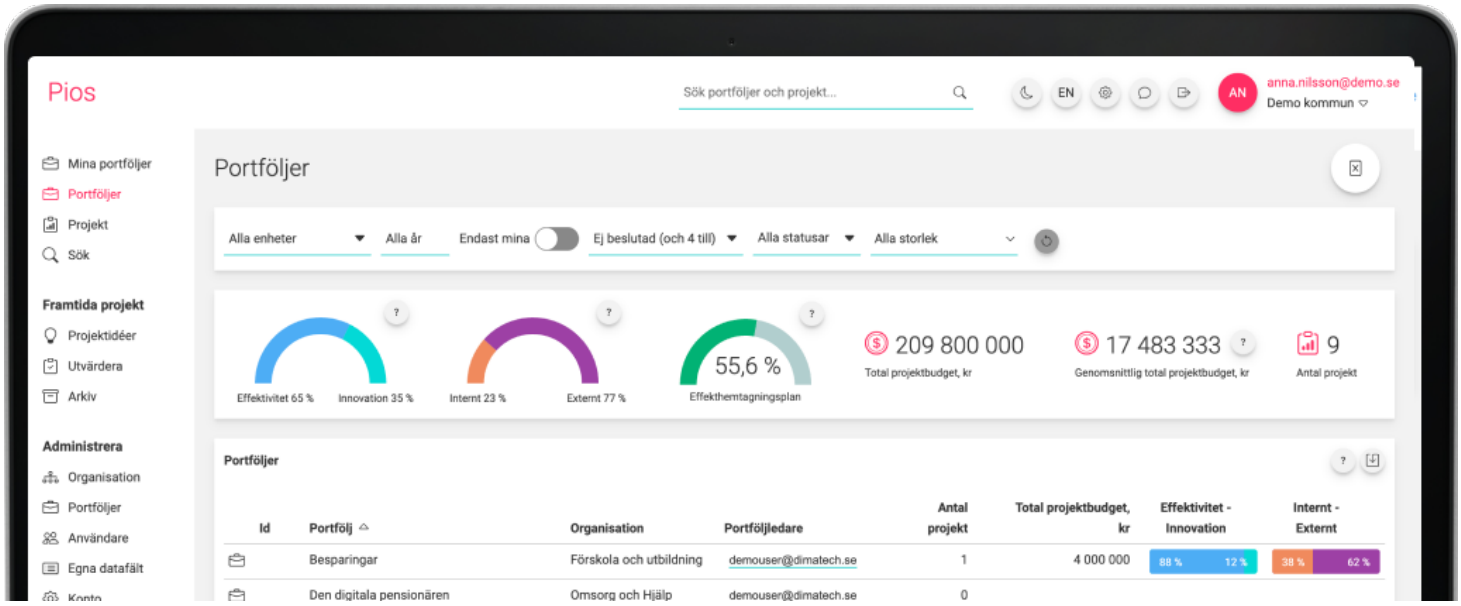

Figure 5. Snapshot of PIOS, a digital project management tool designed for public organisations. It includes aspects such as project efficiency, budget alignment, and the ratio of internal to external activities. From Dimatech (n.d.).

3.

STUDY METHODOLOGY AND PROCESS

3. Study methodology and process

The design process of the study consisted of two main phases – *1. User needs and context mapping* and *2. Design of concept,* where phase one constituted a major part of the study (see Figure 6). An initial study was conducted in the beginning of phase one, involving initial interviews with potential users and experts and a literature study. The purpose of the initial study was to gain a basic understanding of the users' experiences and the context, in order to identify the problem and set the frames for the study.

Besides an initial study, phase one consisted of deeper literature studies and qualitative and quantitative user research, with the latter involving semi-structured and in-depth interviews, focus group and surveys. Deliverables of this phase were identified user needs, core problems as well as goals and criteria for the design concept. Phase two involved idea generation and concept development, along with two interviews and a focus group. Deliverables of this phase were design guidelines, illustrated by a design concept, for a digital information exchange system.

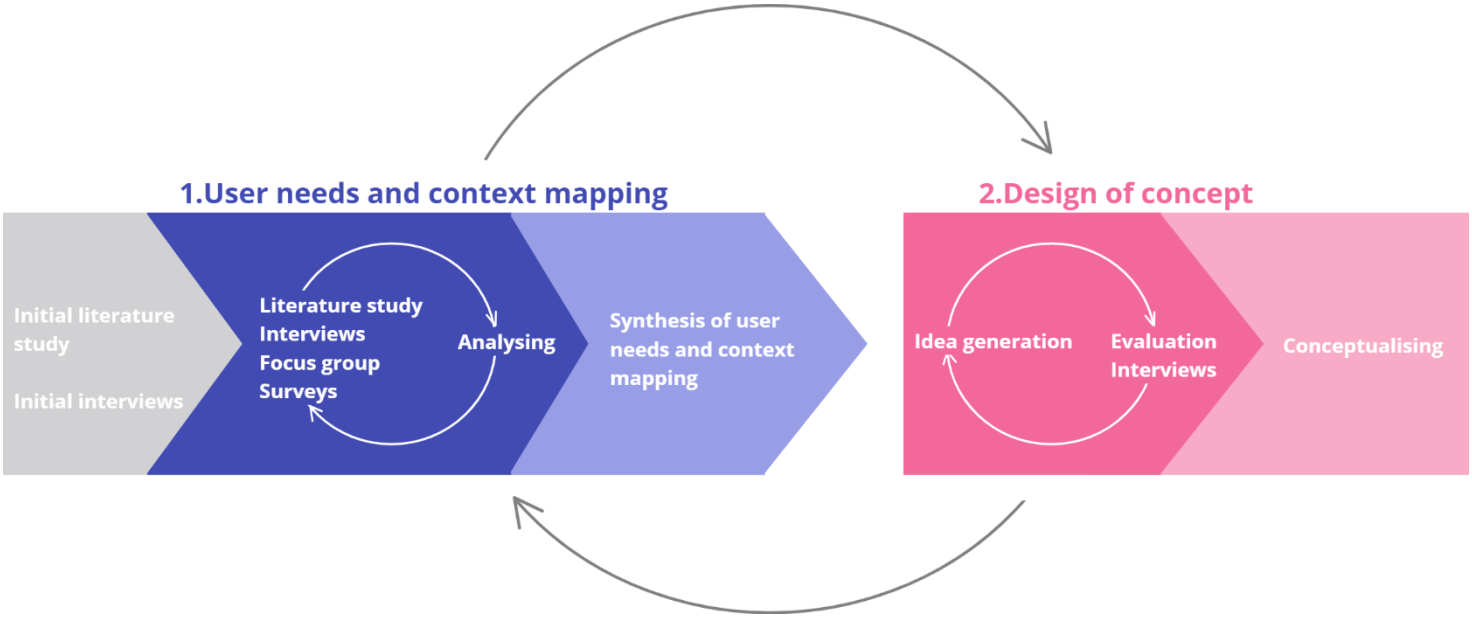

Figure 6. Process image showing phases of the project, including activities and deliverables within each phase.

Phases one and two overlapped and iterations between them were done continuously throughout the project. This is visualised by the circle-arrows in Figure 6.

4.

USER NEEDS AND CONTEXT MAPPING: METHOD

4. User needs and context mapping: Method

This chapter includes a presentation of the methodology and process of phase one, *user needs and context mapping*. This phase comprised the biggest part of the study.

4.1 Overview

The aim of phase one was to answer the first and second research question of the study – what information is relevant to each user group? and what barriers do the user groups experience when trying to access relevant information? Additionally, the following goals for this phase were stated:

- Understand the context: Gain insight into the organisational culture and structure, including how work roles are connected.
- Identify internal and external existing solutions.
- Understand the current experiences of user groups.
- Identify overarching core needs and challenges within the current context, while also defining goals and criteria for a design concept.

The phase *user needs and context mapping* involved two main parts – data collection and data analysis. Iterations between the two parts took place during the phase. Data collection consisted of both qualitative and quantitative methods, involving 19 individual, semi-structured and in-depth interviews one focus group and two surveys (see Figure 7). Participants in these activities were representatives from user groups, representative for an existing digital system in VGR and representatives from external public organisations. Interviews were carried out throughout the entire data collection process, while focus group sessions and surveys occurred later in the phase, shaped by the outcomes of the interviews.

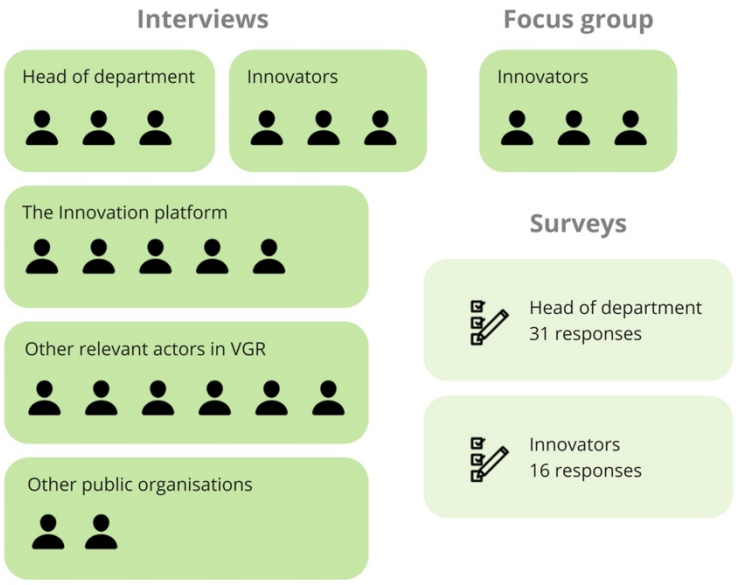

Figure 7. The image illustrates the data collection activities and participants involved in phase one.

Some of the participating users were knowledgeable about existing digital solutions in VGR. Consequently, these users not only provided valuable data on user experiences but also contributed to the mapping of internal digital information systems. This mapping was important for understanding current user experiences and prerequisites for introducing a new design concept.

Interviews with representatives from external public organisations yielded insights into the implementation of innovation portfolio management in such organisations, further deepening the understanding of how this approach can be effectively applied in VGR.

4.2 Individual interviews with users and externals

The purpose of the interviews was to collect qualitative data about the user experiences, context and existing internal and external solutions.

4.2.1 Participant recruitment

Purposeful sampling was applied to recruit participants representing the diverse range of user groups included in the study. Assistance in selecting representative participants was sought from employees of the Innovation platform, who possess extensive knowledge of the innovation system in VGR. Additionally, *convenience sampling* was applied due to the busy schedules and limited accessibility of most users. Given the initial limited knowledge of relevant target participants and data, *snowball sampling* was adopted. This method involved identifying additional relevant participants (especially within the user group "other relevant actors in VGR") based on insights gained from previously conducted interviews. A comprehensive list of individual interviewees in this phase is provided in Table1.

Role	Quantity
Innovator	3
Head of department	3
Innovation platform employees	
• Innovation coach	1
• Innovation leader	2
• Manager	1
• Project leader	1
Other relevant actors in VGR	
• Representatives from FoUUI	3
• Representative from Koncernstab digitalisering (KSD)	1
• Organisational development manager	1
Representative from an existing digital project management system in VGR	1
Representatives from external public organisations	2

Table 1. The table shows the roles and number of participants in the individual interviews.

The innovators who were interviewed were part of different innovation projects, which approached different problem areas and belonged to different parts of the organisation. The projects were also in different project process phases. They were all financially supported by the Innovation fund and were consequently in contact with an innovation coach at the Innovation platform. All projects were active at the time of the interviews.

The heads of departments who were interviewed worked in a wide spread of health care fields and at different administrative entities (in this case hospitals) in VGR. At the time of the interview, they all had active or recently active innovation projects at their department.

The Innovation Platform employees who were interviewed were selected to achieve a diversity of experiences and work roles, with all having worked at the Innovation Platform for a minimum of 5 years.

Among *the other relevant actors in VGR* who were interviewed, the FoUUI employees held different roles within the organisation. Specifically, one served as a senior manager, another was responsible for overseeing an organisation-wide digital project information system, and the third one was involved in the development of a project information system within a specific part of VGR. The interviewed employee from KSD worked with strategic matters in KSD, as program leader and with bridging innovation and development activities in the organisation. The organisational development manager was responsible for development within one section at Sahlgrenska University Hospital.

The representative from an existing digital project management system in VGR was involved in the development of this system, which were in late development stages.

The external public organisations that were interviewed consisted of one smaller municipality (here on referred to as organisation A) who is relatively new to innovation work, and one government-funded organisation (here on referred to as organisation B) connected to a middle-sized municipality which is prominent within innovation portfolio management.

4.2.2 Structure of interviews

An interview guide was created for each work role represented by the interviewees. All interviews were in-depth and semi-structured, enabling adjustment to emerging topics during the interviews. As the study progressed, the interview guides evolved through the iterations of the study. Initially, the interview questions were broader to explore unidentified issues in the early phase of the study. They gradually became more specific towards the end of the study, when more detailed information was sought.

The interviews, ranging from 20 minutes to 1.5 hours, were primarily conducted digitally through Microsoft Teams, where they were also recorded. They were facilitated solely by the author of this report. Transcriptions were later generated either manually by the facilitator or through Microsoft's automated transcription function. In cases where the automated transcription function was utilised, the transcript underwent review while listening to the recorded interview, and possible errors were corrected.

4.3 Focus group with innovators

The purpose of the focus group was to gain deeper understanding of the current challenges faced by innovators, and to explore how experience and knowledge exchange among innovators can strengthen their project processes.

4.3.1 Participant recruitment

The focus group was conducted with three participating innovators. To recruit potential participants, invitations were emailed to a large group of innovators, followed by a reminder email. Two participants signed up in response to these emails. The third participant was directly approached through contacts of employees at the Innovation platform. Thus, due to challenges in finding participants available for participation, convenience sampling was applied for the last participant. However, efforts were made to ensure diversity in innovation project domain, accountable health care departments, and professions among the participants during selection. Thus, also purposeful sampling was applied. The innovation projects of the participating innovators were also required to be ongoing or completed within one year

prior to the interview. Furthermore, all participants' innovation projects had received support from the Innovation fund.

4.3.2 Structure of focus group

The focus group was conducted via an online video meeting on Microsoft Teams, where it was also recorded. It was facilitated solely by the author of this report and lasted for one hour. The discussion centred on three open-ended questions: the prerequisites for conducting an innovation project, the potential benefits of support from other innovators, and the preferred methods for accessing knowledge or information from other innovators.

The focus group had an open character, where the questions served as guidelines rather than forming a strict template. Follow-up questions were asked, and probing techniques were used when the discussion deviated off topic. Throughout the discussions, the facilitator documented key points from the participants' responses, forming a mind map (see Figure 8). This mind map was shared live with the participants during the focus group session. The program used for this was *Miro*, a digital visual workspace. One purpose of this documentation was to ensure the facilitator's accurate understanding of the participants' viewpoints, while another was to stimulate new thoughts and associations among the participants.

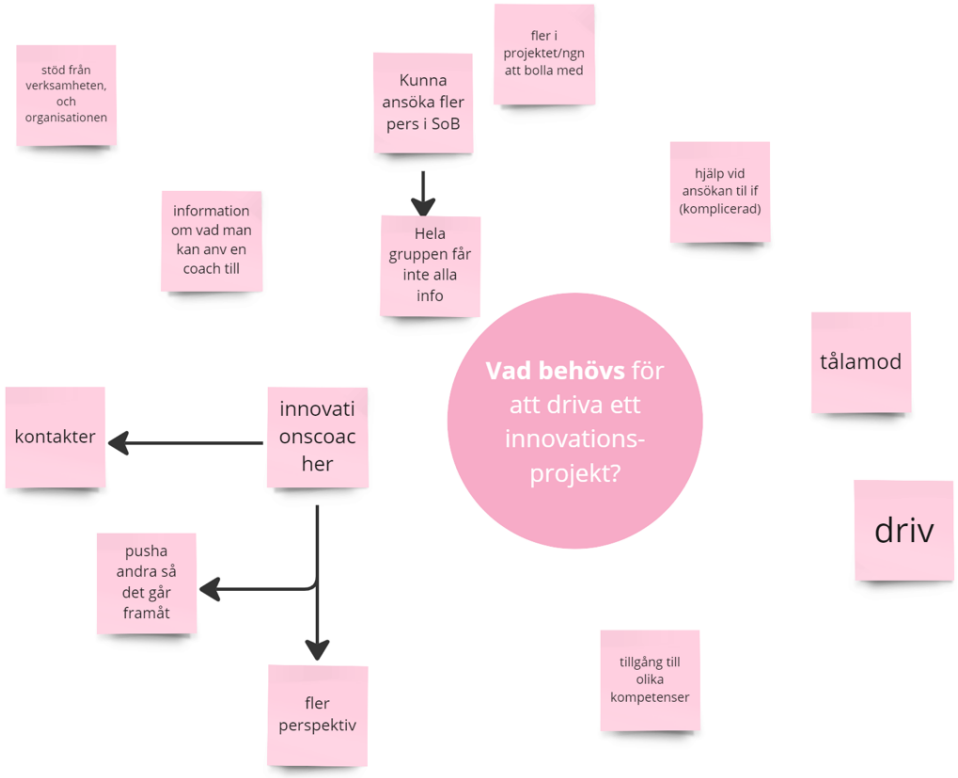

Figure 8. A snapshot of the mind map created in the focus group.

4.4 Surveys with innovators and heads of departments

After completing the first half of the interviews, two surveys were conducted. One targeted heads of departments, and the other aimed at innovators. The purpose of these surveys was to gather user experience data from a broader range of innovators and heads of department than could be achieved through interviews alone. This concerned the importance of having access to collective information about innovation projects, both in its current state and in a desired scenario. Additionally, it aimed to

identify the specific types of information that participants considered to be most crucial. Microsoft Forms served as the platform for conducting these surveys.

Heads of departments were approached by invitations through email. The email, including a link to the survey, was sent to approximately 120 heads of departments, where the ones who have had innovation projects at their departments within the past two years were asked to participate. Innovators were also approached by email, where the email including the survey link was sent to all innovators supported by several different VGR internal funds and that had been active within the past two years. The respondents were anonymous in both surveys.

The surveys took approximately 4 minutes each to fill out and were designed to collect both quantitative and qualitative data. They consisted of multiple-choice questions followed by the option to leave a comment after each question. The survey targeting heads of departments got 31 responses, and the survey targeting innovators got 16 responses.

4.5 Analysis of collected data

As previously mentioned, analysis was conducted iteratively during phase one. Initially, separate analyses were conducted for each user group. Subsequently, the focus group and surveys were analysed individually. Following this, the results from all data collection activities for each user group were combined to create a synthesis for each user group. Finally, the synthesis for each user group, including identified needs and experiences of them, were synthesised into a new collective analysis.

4.5.1 Interviews and focus group

For the analysis process, interviews were organised into the following divisions, encompassing the user groups and the external public organisations:

- Innovators
- Heads of departments
- The Innovation platform employees
- Other relevant actors in VGR
- External public organisations

The reason behind making several analyses encompassing these divisions was to make the analysis process manageable, but also to gain relevant results by grouping users with similar needs and prerequisites. However, roles of the users varied more in some groups than in others. Data from the focus group was analysed separately.

The transcriptions from the interviews and focus group were transferred to post-it notes in Miro, after which qualitative content analyses, more specifically KJ analyses, were performed for each group. The analysis involved clustering the quotes and finding overarching themes. A snapshot of a KJ-analysis for interviews conducted with one of the user groups is depicted in Figure 9. Each KJ-analysis was then summarised.

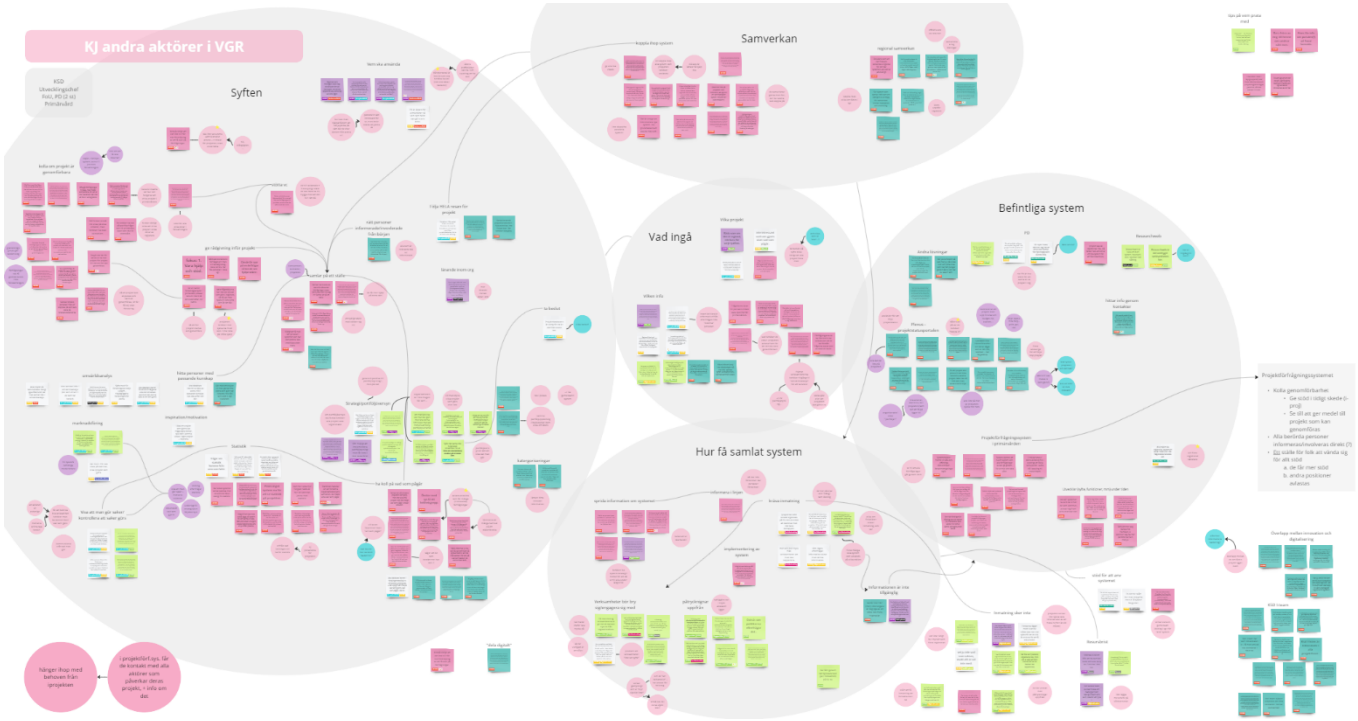

Figure 9. KJ analysis of the interviews of one of the user groups.

4.5.2 Surveys

The two surveys were analysed separately, following the same procedure. For each survey, the questions were first analysed individually, including retrieving statistics of multiple-choice question (quantitative content analyses), and clustering of comment responses (qualitative content analyses). After that, a general summary and conclusion of the whole survey was formulated, as well as reflections and questions that appeared during the analysis.

4.5.3 Synthesising experiences of all user groups

Synthesising was conducted in two steps. Firstly, experiences of each user group were formulated by integrating the results from all data collection activities specific to each user group, resulting in a summary of experiences for each user group. Figure 10 illustrates the outcome of this process specifically for innovators.

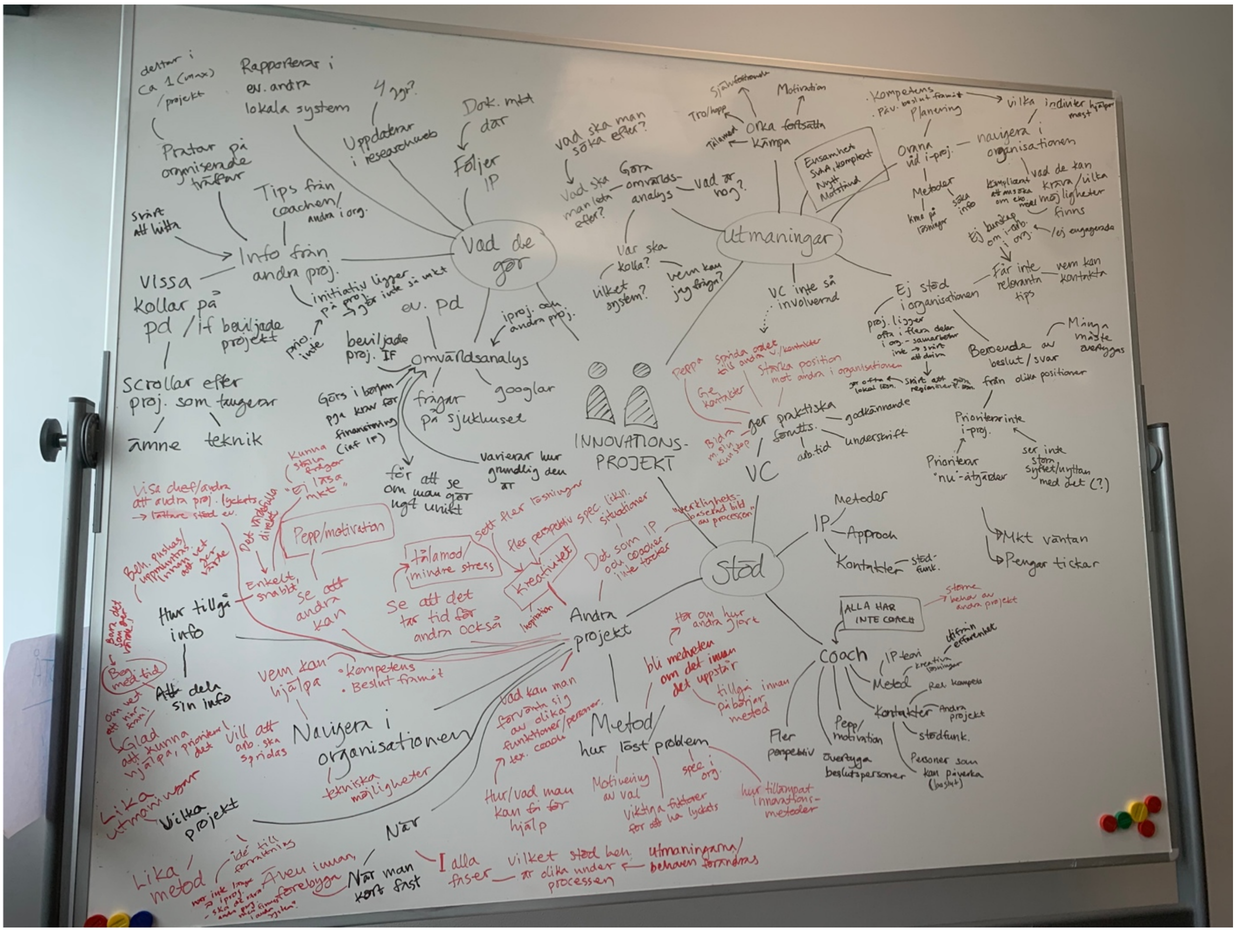

Figure 10. Synthesised experiences of innovators.

Secondly, the summarised experiences of each user group were synthesised together in a new KJ-analysis. The purpose of this step was to identify similarities and contrasts between the needs of each user group and followingly to identify needs of the whole innovation system. The process involved extracting key experiences and needs of each user group and analysing them collectively through a new KJ analysis. This step was executed analogously, using whiteboards, paper, and post-it notes. A glimpse of this process is depicted in Figure 11.

Figure 11. KJ-analysis aiming to synthesise the needs and experiences of all user groups.

The final part of the analysis resulted in an identification of a map of information and needs of the user groups, regarding accessing collected information about innovation projects in VGR. The needs were related to two main ways of displaying innovation project information: *information of specific innovation projects* and *overviews of (groups of) all innovation projects*.

4.5.4 Analysis of innovation capability and portfolio management potential

When user needs had been identified, the innovation system of VGR was evaluated using the individual and organisational components from Amabile and Pratt's "Model of organisational innovation" (2016). The purpose of this evaluation was to develop a more comprehensive understanding of VGR's innovation capability and the role of information sharing within the organisation. More specifically, it aimed to identify potential shortcomings and conditions for enhancing innovation within VGR. Furthermore, it aimed to highlight how various factors influencing innovation in VGR are interconnected.

In addition, an analysis of the potential of innovation portfolio management in VGR was conducted. This was done in order to examine whether the approach is valuable and feasible to VGR, and to explore potential implementation approaches. The analysis was done by comparing literature on the topic, results from interviews with representatives of external public organisations and identified user group experiences in VGR. Based on this, an idea of potential implementation of innovation portfolio management in VGR was outlined.

5.

USER NEEDS AND CONTEXT MAPPING: RESULT

5. User needs and context mapping: Result

In this section, results from the phase *user needs and context mapping* will be presented. The results include a description of the experiences of each user group, a mapping of relevant existing digital information systems in VGR and evaluations of innovation capability and portfolio management potential in VGR. Additionally, it includes a synthesis of the whole innovation system, involving identified user needs along with goals and criteria for the design concept.

5.1 Innovators

The study shows that innovators experience several challenges when conducting an innovation project. Many of these challenges are somewhat related to access to collective information about innovation projects. A snapshot of the thoughts of an innovator during an innovation project is shown in Figure 12.

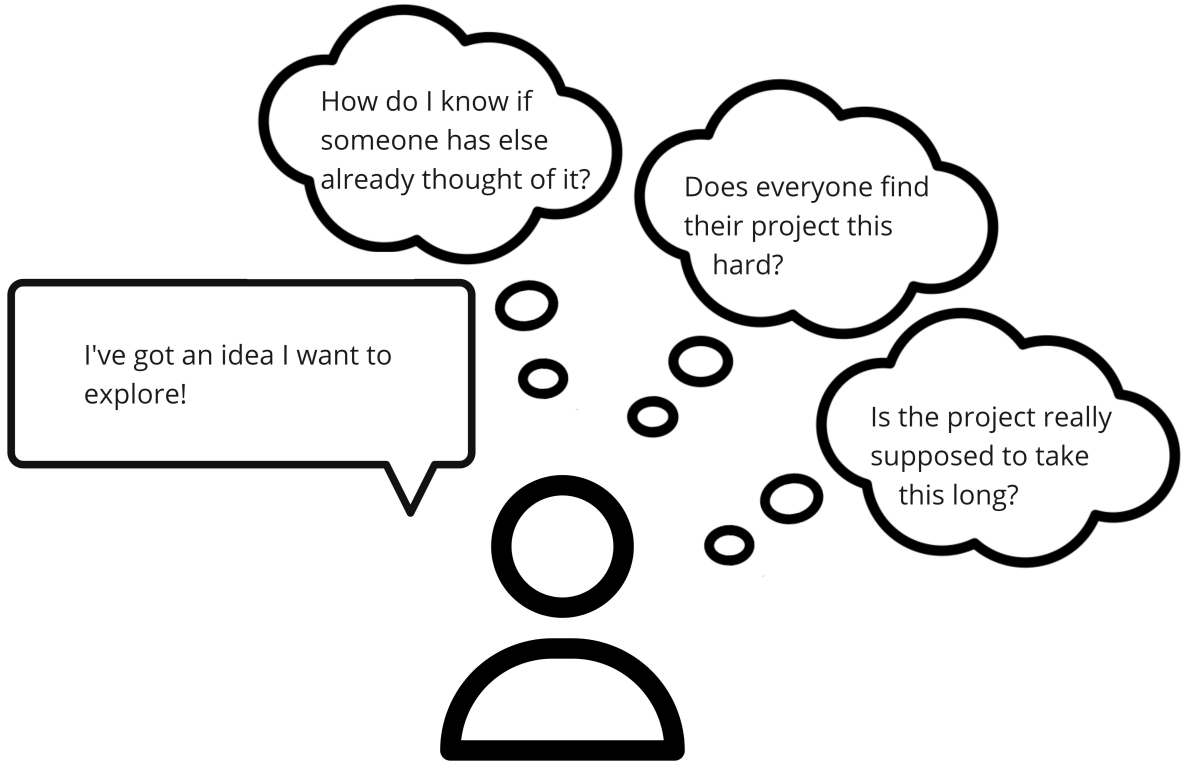

Figure 12. An innovator's thoughts during an innovation project.

One significant challenge that was identified is related to the innovators' limited experience of applying innovation methods. An innovation project process involves continuous decision-making and creative thinking which, in order to be handled with confidence, requires experience. Since many of the innovators have mainly been involved in clinical practice before the start of their innovation project, they lack this experience.

To compensate the lack of experience of the innovators, support is provided to the innovators by the Innovation platform. For instance, the innovators can use "VGR's Innovation process" (described in section 2.1), which is an innovation process and methodology tool developed by the Innovation platform and accessible for all employees in VGR. Despite the comprehensive and thorough information available in VGR's Innovation process, challenges remain regarding applying the process. The challenges

involve decisions on which of the available methods to apply and how to adapt them to the specific situation.

Because of the challenges described above, a possibility to discuss method usage with innovators who have similar experiences is perceived to be highly valuable by the innovators. It can enable gaining multiple perspectives on challenges, insights into various ways of solving problems, and valuable input related to their specific situation. As discussed in the literature in sections 2.2 and 2.3, observing others' solutions and approaches is also crucial for stimulating creativity. Additionally, it can contribute to a more reality-based understanding of how to apply VGR's Innovation process, and thereby to gain a deeper understanding of its process and methods.

"VGR's innovation process outlines well how things are done, the steps, and the planning. But it would be great to have some more personal or specific experiences. Like getting a glimpse of reality, how things actually are. How long it took for people, and so on... It also gives you motivation, which we need."
– Innovator, participant 1

"We talked with another innovation project, and they asked us, 'how did you solve this?' We said, 'well, we couldn't solve it that way, so we had to come up with this solution instead.' We also wished we could hear about things like that from other projects, like... 'it's not worth doing in this way, because it doesn't work with this module.' We had to figure all these things out on our own."
– Innovator, participant 3

Besides applying innovation methods, the innovators also experience challenges related to organisational matters. The innovators participating in this study express a feeling of isolation in their innovation project work, since colleagues and managers near them are not involved in their specific project or in nearly any innovation activity at all. This implies a potential lack of understanding and support from the surrounding, which is important in order to keep motivation, tackle obstacles and facilitate project practicalities.

The innovators perceive that knowledge about innovation projects and how they operate is low also among other managers and key persons in the organisation, who consequently do not prioritise innovation activities in their decision making and time management. Development of an innovation is, due to organisational matters, dependent on decisions from managers in various parts of the organisation, which complicates the project and prolongs its duration. It consequently strains project resources and leads to frustration among the innovators. In addition, development of the solution in an innovation project depends on the technical and legal possibilities in the organisation. These are elements that, despite assistance from support functions, are difficult for the innovators themselves to know about.

"We are struggling right now because we have support from our respective departments, from the heads of departments, but if we are to proceed with our solution, we need support from the hospital management, and we're not getting any answers from them. It's crucial now. We don't know how to proceed and whether to continue with involving the digital experts as planned or what should happen. It's so important to get support from managers when you do a project like this, not only from the nearest department but also from higher up in the organisation. It's crucial, especially in such a large organisation."
– Innovator, participant 4

"We needed help regarding a certain digital platform in VGR, because we put our program there. However, there weren't many opportunities in that platform or people working with it. Therefore, we had to wait a lot, and it's money ticking away for us."
– Innovator, participant 3

Regarding organisational matters, the innovators also express needs to exchange experiences with other innovators. This involves support in finding individuals with expertise in the domain of the specific project as well as individuals on leading positions that are attentive and prioritise innovation projects. In addition, sharing experiences with other innovators is expressed to be a crucial aspect in keeping motivation and being patient when resistance from the organisation is experienced.

All participating innovators expressed that their innovation coach from the Innovation platform was invaluable support, as they assist them in navigating most of the challenges described in this section. However, access to an innovation coach is limited, and challenges nevertheless remain for the innovators. Connecting with other projects can thus serve as an additional source of support and guidance.

5.2 Heads of departments

Most heads of departments in VGR are not involved in much innovation activities. However, their mission as head of department includes enhancing progress at the department, making sure that the employees are committed and enthusiastic, and that the innovation projects at the department are successful. Therefore, they are both influencing and influenced by innovation projects at the department.

The primary responsibility of heads of department regarding innovation projects is to approve or reject initiatives proposed by department employees. Typically, these decisions are based on the heads of departments' personal estimation of the project's feasibility, often formed by their accumulated working experience, and are rather intuitive. Decision-making is primarily informed by the project descriptions provided by the project initiators. The participating heads of departments do not express difficulties in making these decisions, instead they all express that because of their generally positive attitude towards innovation they approve more or less all innovation projects which they believe are viable and that are externally financially supported (for example by the Innovation fund). However, other actors, like Innovation platform employees and individuals in "other relevant actors in VGR", believe that decisions could benefit from being more informed. If so, they believe that project approvements would be more structured and rooted.

The heads of departments participating in this study expressed uncertainty regarding their awareness of all innovation projects within their department. Furthermore, they generally lack knowledge about innovation projects outside their own department. However, they perceive their knowledge to be sufficient. Thus, they do not perceive a personal need to be more informed or involved in innovation projects. This perspective contrasts with the desire expressed by innovators and Innovation platform employees, who wish for greater knowledge and engagement from heads of departments in innovation projects. One factor influencing the heads of departments' knowledge of conducted innovation projects within the department is the frequent turnover in their positions. As a result, they may not be informed about innovation projects completed before they started their roles.

When discussing a potential scenario with the heads of departments where they are more involved in innovation efforts, two clear requirements emerge. Firstly, they declare that more resources are needed. The heads of departments face pressure to accomplish numerous tasks with limited resources,

often in urgent matters. Given the general perception of innovation as a long-term endeavour, it may not be prioritised.

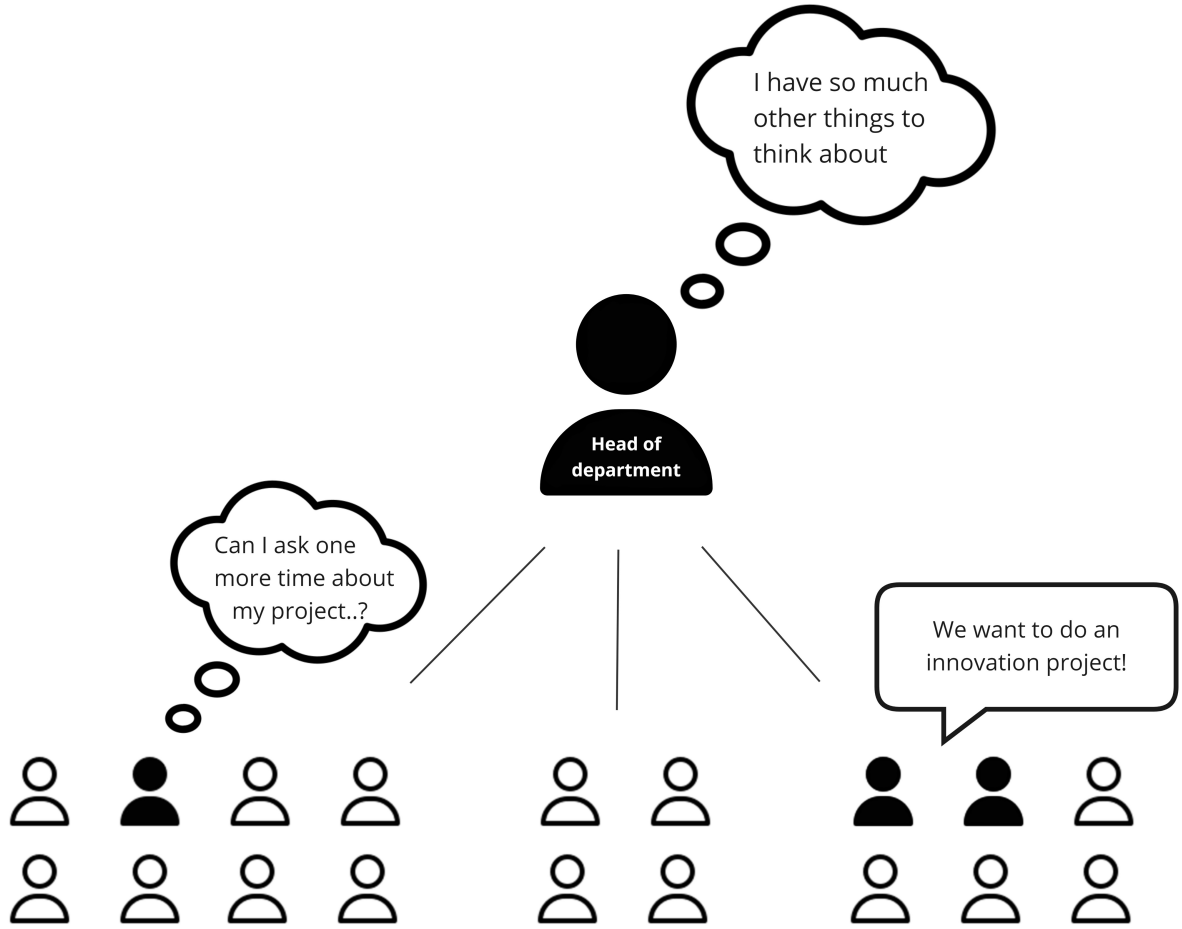

Figure 13. Illustrating the current situation of heads of departments regarding innovation projects.

"The classic dilemma is that the line management is already fully occupied just managing operations and all the problems that come with it. The entire public sector within healthcare is underfunded. So, you constantly have this... so then it becomes a matter of going to the head of department and saying, 'You're responsible not only for the current operations but also for developing for the future.' I don't know how they're supposed to cope with that."
– Head of department, participant 6

Secondly, the heads of departments would benefit from greater knowledge of innovation, along with a clear mandate and guidelines on what the involvement includes. Currently, they lack awareness of the possibilities related to innovation projects, such as available support, and they are uncertain about how they, as heads of departments, can or should contribute.

Resources and a clear mandate are also relevant in the matter of heads of departments engaging in strategic activities regarding innovation projects, and more specifically innovation portfolio management. They are generally not totally against the idea of this task falling on them, but they struggle with seeing how it should or could be implemented. This is primarily because, as mentioned, they have many other more urgent matters filling their time, but also because they struggle with envisioning what strategic innovation work and portfolio management would entail in terms of work tasks. They also believe that it would require significant organisational actions.

Although heads of departments do not experience a significant personal need for greater involvement in innovation projects, they see several potential opportunities of accessing information about innovation projects in the organisation. First off, it could support organisation development activity, which is a part of their mission as head of department. In order to enhance organisational development, the participating heads of departments express a desire for learning about organisational development projects of other departments, which they currently not know how to do. Since organisation development projects and innovation projects often overlap, improvement of organisational development can accordingly be achieved by learning about other innovation projects.

Besides improving organisational development, learning about innovation projects at other departments can also enhance the heads of departments' motivation and inspiration to improve innovation activity at their department. For example, seeing other departments' innovation projects can generate inspiration to recreate innovation projects at their own department, to join existing innovation projects or to apply existing solutions from other innovation projects.

"I definitely think it would be good and interesting to see what has been done in other departments. To think, 'oh, they've done that, maybe we could do that too,' and so on. See and learn from others."
- Head of department, participant 8

Heads of department participating in this study did also express an opportunity of information about innovation projects at the department to be used in marketing and recruitment. The heads of departments all agree that communicating the work of the department is important in order to retain and gain more resources to the department and to attract new and maintain current employees. Furthermore, they believe that communicating the innovation work of the department, in a manner accessible to the employees, can contribute to a sense of pride among the employees, and thereby strengthen their motivation to engage in innovation activities and other tasks at the department.

5.3 The Innovation platform employees

Since the mission of the Innovation platform is to strengthen innovation capability in the entire VGR, the Innovation platform employees are interested in improving conditions for innovation activities for all user groups. This includes enhancing accessibility to collective information about innovation projects. Moreover, greater access to information about innovation projects could potentially facilitate the daily work of Innovation platform employees.

The task of an innovation coach involves giving recommendations to innovators they are coaching about other projects that may be relevant for them to exchange experiences or collaborate with. Knowledge about these projects comes from their own experiences of coaching other innovation projects or from innovation projects they have heard about through other employees at the Innovation platform. They also sometimes hear about projects through other contacts in the organisation. Although innovation coaches possess extensive knowledge about innovation activities within the organisation, they do not have insight into all conducted innovation projects. As a result, innovation coaches see value in expanding their knowledge and perspectives, as well as accessing support to discover projects relevant to those they are coaching.

"I want to be able to find projects who can collaborate in some way"
– Innovation coach, participant 9

"It's unnecessary that many people are working on their own things in different places. There would be a lot to gain by connecting people with each other."
– Innovation leader, participant 10

In addition to broadening their awareness of innovation projects to recommend to innovators, enhancing knowledge relevant to coaching innovation projects can be achieved by learning from a larger number of such projects. This is because a significant part of innovation coaches' expertise comes from closely observing the processes of various innovation projects. It involves understanding how to apply innovation methods in different scenarios, knowing the support available within the organisation, and recognising common obstacles encountered by innovators and how to address them.

Innovation platform employees, including managers, innovation leaders, and project managers, require knowledge of present state to develop the overall innovation system in VGR. This involves identifying obstructive aspects, inequalities in conditions across various parts of the organisation, and recognising patterns in the success of innovation projects. Lack of access to comprehensive overviews complicates the access to this knowledge and thus the analysis of the current situation. Consequently, developing potential strategies for improving the present state becomes challenging. Additionally, an overview of innovation projects in the organisation can serve as a communication tool when interacting with different actors in VGR. In this sense, the overview can facilitate discussions and generate a shared understanding of the situation.

"You learn a lot by looking at what you have, makes you think about how you actually want to work."
- Manager, participant 12

"Perhaps one needs to look at trends. For example, if applications only come in from a certain hospital. Ask yourself what has happened there. Or if no one is getting funding from a specific domain - why is that?"
– Innovation leader, participant 10

In order to further enhance VGR's innovation capability, the management at the Innovation platform express a desire for greater collaboration in innovation efforts within VGR. This includes enhanced knowledge and experience exchanges, more project collaborations and implementation of unified goals and overarching strategies, in order to achieve maximum impact. As a mean for this, they would prefer portfolio management to be an established approach throughout the entire VGR. In addition to strategically aligning efforts and generating greater impact, they also hope that innovation portfolio management will make managers and other decision-makers in the organisation more engaged in innovation projects.

5.4 Other relevant actors in VGR

The roles the users within the group of "other relevant actors in VGR" play in the innovation system varies quite much, and thus do also their needs and prerequisites.

FoUUI is the unit responsible for research, education, development, and innovation in VGR. Their work includes gathering of data and statistics through the digital system "FoU Project database", on behalf of the management of VGR. This task is challenged by the fact that far from all projects register or update their project information in the system, even though they are intended to. This applies to all types of projects (research projects, innovation projects, development projects, etc.), and it is particularly difficult to obtain documentation from projects that are not required to register their

project in order to receive financial support. This challenge results in less accurate statistics and makes it difficult to map the overall organisational work effectively.

Koncernstab digitalisering (KSD) is the organisational unit responsible for digitalisation in VGR. Innovation and digitalisation often intersect, with many innovation projects containing aspects of digitalisation. For effective organisational functioning in VGR, it's crucial that actors within the fields of innovation and digitalisation have knowledge of each other's work. This involves identifying projects that are similar or beneficial to one's own project, facilitating knowledge exchange and collaboration. It also involves making strategic decisions informed by work in both fields. These tasks made more difficult by the lack of access to collective information about innovation projects.

“When you're working on a project, you want to find others who have done something similar, for example if someone who has purchased something similar."
– Representative from KSD, participant 15

Given the digital nature of numerous innovation projects, it is likely that once the solutions of these projects are integrated into the organisation, they will become KSD's responsibility. Because of that, KSD is interested in giving input in the early stages of these projects, to inform digital decisions which will impact future implementation, maintenance and, eventually, deactivation. Hence, awareness of relevant innovation projects is essential also in this matter.

The role of organisational development managers involves staying updated about organisational activities. This encompasses understanding the needs of employees, the actions being taken, and the future direction of the organisation. This followingly includes innovation projects. A fundamental aspect of organisational development is promoting learning within the organisation, which requires effective knowledge dissemination. Organisational development managers play a key role in facilitating this learning process, but they require access to information about ongoing work to do so effectively. This includes access to a comprehensive overview of all projects, including innovation initiatives, within VGR. The lack of access to this information consequently complicates this work.

"There's no place where we document the things we do. Then it doesn’t become any learning between or within areas of the organisation."
– Organisational development manager, participant 14

Similarly to organisational development managers, understanding future directions of the organisation is relevant also for the other actors in this user group, as it is for all actors in VGR. This knowledge is crucial when making decisions about ongoing work and planning for future activities. Understanding innovation projects can be particularly beneficial in this regard, as the needs and ideas emerging within the organisation are often first explored in these projects.

5.5 Current procedures for accessing collected information about innovation projects

There are several digital information systems in VGR that involves documentations of innovation projects. These operate at both regional and local levels, and they serve various and partly overlapping functions. However, none of the systems target multiple roles or parts of the organisation. Additionally, none of them include all innovation projects conducted in VGR.

This section describes the systems identified in this study, along with the experiences of the user groups with these systems and how the systems align with the respective needs of the user groups.

5.5.1 Existing digital information systems in VGR

Table 2 presents the relevant digital project information systems that were identified in this study.

Name	Function	Access
FoU Project database (Researchweb)	Collect and disseminate research, development and innovation project information. Gather data for organisational evaluations.	Public.
The Innovation fund's application system (Researchweb)	Managing and monitoring applications to the Innovation fund.	Innovation platform employees that are involved in the Innovation fund. Reviewers.
Project request system for Primary and local care (Researchweb)	Collect, monitor and manage project requests (from all types of projects).	FoUUI employees in Primary and local care. Other reviewers.
Project status portal (Plexus)	Collect, monitor and manage projects within KSD.	Full access: certain KSD employees. Limited access: All VGR employees.
SOFIA Sharepoint	Collaboration platform within units or groups.	VGR employees have access to assigned workspaces.
VGR Project centre	Project management tool. Will potentially include project overviews and portfolio overviews.	Full access: Employees involved in registered projects. Limited access: All VGR employees.
Lists of projects at VGR websites		All VGR employees.

Table 2. Identified digital project information systems, containing information about innovation projects.

Researchweb is a national digital system designed to facilitate grant applications, collaborative project submissions, and research management (Researchweb, n.d.). In VGR, there are 15 different entry points within Researchweb, accessible to those who have been granted access to them respectively. The entry points are separated, appearing like individual websites to the users, and there is currently no integration between them for data exchange.

One entry point for Researchweb in VGR is the *FoU Project database*, which is managed by the Research, Education, Development and Innovation unit FoUUI. This entry point is accessible to the public and aims to gather and disseminate information about projects within VGR. It was initially used for research projects but now it also includes innovation and organisational development projects. According to interviewees from FoUUI, all such projects should be registered in this database, although this is not currently the case. The database is designed to collect information required by management and for specific organisational evaluations. Consequently, the questions posed to project members during registration are formulated accordingly.

Another entry point for Researchweb, where innovation projects are registered, is the *Innovation fund's application system*. This platform is accessible to individuals involved in the Innovation fund's operations, primarily including specific Innovation Platform employees. It is mainly used for managing applications to the Innovation fund.

Another entry point for Researchweb is the *Project Request system for Primary and local care*. This system was initiated to address the need for centralising all requests to initiate projects in Primary and

local care. One of its purposes is to facilitate the supply of appropriate support early in the project processes.

An additional entry point for Researchweb is the *Project request system for Primary and local care*. The initiative for this system is a response to a need of gathering all requests to start (all types of) projects within this field in one place. One purpose for this is to enable providing the right support early in the project process.

Project status portal is a part of the digital system Plexus, in which KSD gather and manage the projects they are involved in. Some aspect of project portfolio management is also included in this system.

Another digital system for registering projects in VGR is *VGR Project centre*. This system is currently being developed and will soon be implemented. It is an organisation-wide initiative and will mainly serve as a project management system. However, project statistics and portfolio overviews are also planned to be included in the system.

Beyond the digital system described above, there are lists of projects at different websites of VGR. One of them is the list of previously granted Innovation fund projects at the website of the Innovation platform.

5.5.2 How the user groups experience and use the digital systems

This section will describe the current experiences of the user groups regarding accessing information about innovation projects. It includes the user groups' usage and experiences of the digital systems outlined in the previous section.

Innovators

All innovators who participated in this study state that it is difficult to gain awareness about other innovation projects. The greatest effort to obtain this information is generally made during the competition analysis, which they conduct in the beginning of the project, although it varies somewhat among the innovators and depends on their own motivation to seek information. One tool in this process is Google's search engine, but some innovators do also check the FoU Project database and in the list of previously granted projects at the Innovation fund's website. Many innovators are however not aware of the FoU Project database. The ones that have used it express difficulties in finding relevant projects, mostly because of deficiencies in the search engine and problems with navigating the search results. Also scrolling through titles of projects at the Innovation platform's website is considered demanding, since they experience difficulty in differentiating what projects are relevant to oneself to read about through this method.

However, the innovators' primary source of information about other innovation projects is typically their innovation coach. Moreover, innovators seek information from other contacts within VGR, and it is not uncommon for them to come across relevant information "by chance."

The innovators also express discomfort with having to input the same or similar information into multiple digital systems. They do this because different parties within VGR require this information from them. Additionally, they question the purpose of documenting this information and whether it will be reviewed by anyone.

Heads of departments

Heads of departments generally do not actively seek out information about innovation projects in VGR, and they often lack familiarity with methods to access such information. If they have had prior contact

with the Innovation platform, they may reach out to them. Otherwise, they rely on other contacts within VGR for information.

Innovation platform employees

When seeking information about innovation projects, Innovation platform employees primarily ask their colleagues within the unit, as they collectively hold extensive experience with various innovation initiatives. Additionally, they reach out to other contacts within the organisation. Besides this, they can look for projects in the Innovation fund entry point in Researchweb. However, this method is rather complicated due to the absence of a search engine in the program. Moreover, only innovation projects funded by the Innovation fund during the relevant funding period are registered in this program. To some extent, they also use SOFIA Sharepoint to access documented information about activities or projects they have been involved with within the unit. They generally do not use the FoU Project database or other digital systems. In fact, many of them are unaware of the existence of these systems.

Other relevant actors

For accessing information about innovation projects, KSD primarily utilises their own program, Project Status Portal in Plexus, specifically for the innovation projects in which they are involved. For other types of innovation projects, they primarily ask contacts in VGR or discover relevant projects by chance. The same applies to organisational development managers.

The representatives from FoUUI primarily accesses innovation project information through their own systems, for example FoU Project database and Project request system for Primary and local care. However, they struggle with the fact that many projects do not register or update project information in these systems. This is perceived as a challenge especially for the FoU Project database, since a main function of the system is to gather data of all registered projects in VGR. Furthermore, FoUUI employees also commonly ask contacts in the organisation when seeking information of projects.

5.5.3 Summary of the experience and usage of the digital systems

Exploring the user groups' experiences and usage of the existing digital project information systems reveals that they are rarely used. One explanation for this is that users are often unaware of their existence, but it can also be an indication of the systems' insufficiency. According to the experiences of user groups, it appears that the systems' design is not aligned with the needs of the user groups. This notion is reinforced by the fact that the most common method among all user groups for accessing this type of information is to turn to personal contacts within VGR.

The big number of similar systems indicates that the need for collecting project information exists in several parts of the organisation. An issue with having numerous similar systems is the increased demand for resources to maintain them. Additionally, it results in innovators having to input identical or similar information into multiple systems. Furthermore, a large number of systems raises the risk that not all projects will be registered in each system. Figure 14 illustrates the utilisation of existing digital project information systems in VGR. Apart from the duplication of project information entry across several systems, the visualisation also highlights that user groups who manage project information utilise different systems, indicating a lack of collaboration in this aspect.

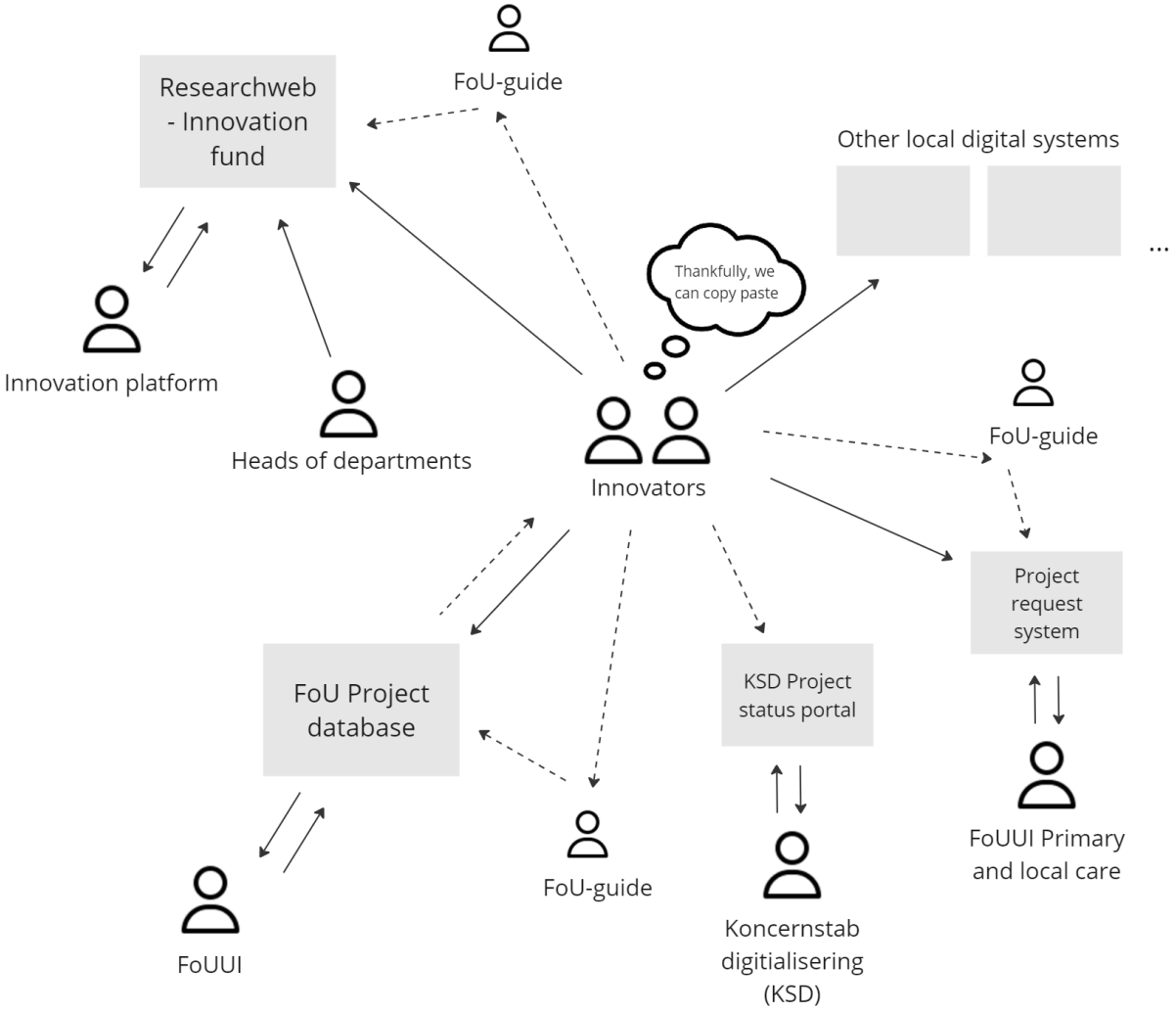

Figure 14. An illustration of the user groups' input and output of innovation project data into the existing digital project information system.

5.6 Innovation capability in VGR

When analysing the innovation capability of VGR through Amabile and Pratt's (2016) "Model of organisational innovation", both assets and limitations were identified. These exist in all three components (see Figure 15) of Amabile and Pratt's model and are related to collecting and sharing of innovation project information.

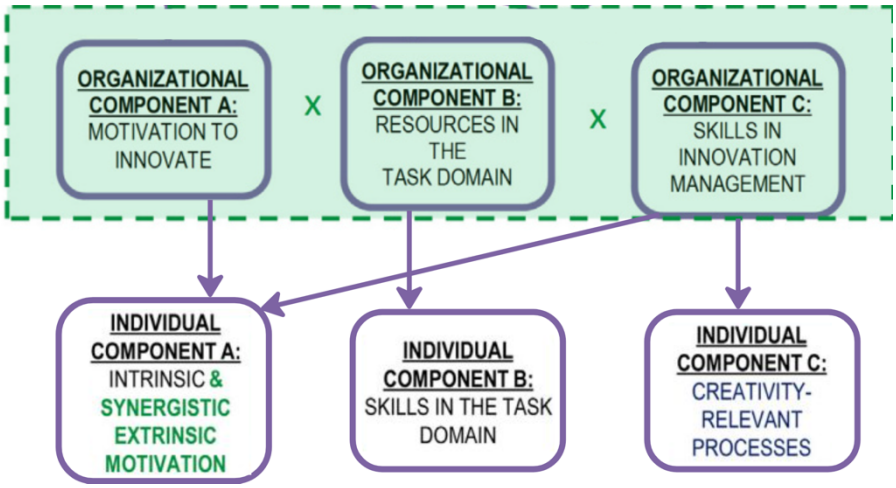

Figure 15. The organisational and individual components in the "Model of organisational innovation". From Amabile, T. M., & Pratt, M. G. (2016), s.165.

The *intrinsic motivation to innovate* is generally strong among innovators, but it is, however, undermined by lacking support from the organisation. This leads to struggles in conducting the project. In other words, the organisational component *motivation to innovate* is rather low. The lack of support can also be attributed to a general lack of *skills in innovation management* in the organisation, since most managers do not prioritise or actively work to facilitate innovation activities. This does however not include the Innovation platform, where both the motivation to innovate and skills in innovation management is very strong. This is key to somewhat maintaining the intrinsic motivation to innovate of the innovators.

Since the innovators are individuals who has discovered an issue or opportunity within their field of work, from which they often have long experience, they have strong *skills in the task domain*. Since they have initiated the project themselves and have come up with the idea or problem statement, they are also creative persons. Nevertheless, their level of *creativity-relevant processes* is deducted by the fact that their experience of conducting anything like innovation project is generally very limited.

The Innovation platform plays an important role in the organisational component *resources in the task domain* in VGR. They provide innovation competence, innovation tools and information and financial support, and more. Beyond the Innovation platform, there is additional financial support to apply for in VGR, as well as competence and education within specific fields. However, these resources are only relevant if the individuals in the organisation know about them, which is often not the case. In fact, most members of the organisation are not aware of the possibility to conduct an innovation project. Consequently, VGR possess many resources in task domains but there is an issue in accessing these resources.

5.7 Potential of innovation portfolio management in VGR

The exploration of implementation of innovation portfolio management in external public organisations, combined with other findings from *user need and context mapping* and a literature review on the topic, forms the basis for evaluating its potential in VGR.

5.7.1 How do external public organisations incorporate innovation portfolio management?

The external public organisations that were approached in this study showed to have quite dispersed purposes and roles for innovation portfolio management. In the case of organisation A, a smaller municipality that is relatively new to innovation work, a prominent function of portfolio management is to communicate innovation activity to employees and external stakeholders. By labelling innovation projects with the factors of OPSI's Innovation facet framework, described in section 2.4, the collective information of innovation projects is figured to be easier to grasp. In this case, projects along with their OPSI-label are presented on the website of the municipality and thus publicly accessible.

Organisation A's objective in communicating innovation activity is partly to attract new employees and external partners, and partly to inspire, motivate and unite current organisation members. By categorising projects according to the OPSI model, they aim to convey that these projects are. By labelling projects according to the OPSI model, they aim to convey that these projects are part of a cohesive and unified system. They believe this could convey a more serious impression of the organisation, while also stimulate a sense of greater involvement and responsibility among employees for the complete system. Essentially, it communicates that employees are empowered to make meaningful impacts.

The target user for portfolio management in organisation A is every organisation member. They wish for the employees to feel inspired to proceed or start their own project, and potentially also make project decisions based on the complete picture. Thus, organisation A does not primarily use innovation portfolio management for strategic matters. However, the interviewee from this organisation expressed a desire for everyone in leadership positions, including politicians in the municipality and region, to take part of the portfolio visualisations. This is to gain insights into the innovation efforts and to establish priorities and make future decisions informed by them.

The other interviewed organisation, Organisation B, which is more experienced with innovation activities, differs slightly in the purpose and application of innovation portfolio management compared to Organisation A. Their intended purpose for innovation portfolio management is to serve as a foundation for making informed decisions. Currently, they are undertaking a research project to develop a tool that facilitates strategic decision-making about portfolios through visual portfolio overviews. However, this tool has not yet been implemented. In the tool, the projects will be tagged based on several aspects and the portfolios are then visualised in various charts. Examples of aspects included in the tool are placement in OPSI Innovation facet framework, name of actor, type of activity and development stage. Until now, focus has been on visualising portfolios, and they have so on not yet explored how to practically operate based on them.

Like in organisation A, organisation B also desires all organisation members to be engaged in the portfolio overviews. The aim is to inspire, motivate, and encourage employees to adapt their own projects to the overarching context. Additionally, they wish for external actors to be informed by the portfolios. However, the primary target users in organisation B are the leaders of each portfolio. These leaders consist of representatives from each project or activity within the portfolio. Their responsibility is to ensure that the portfolio adheres to the stated guidelines for the portfolio and to decide on follow-up actions and plans.

5.7.2 How could and should innovation portfolio management be implemented in VGR

Based on the information gathered in the literature study (section 2.4), there are several significant benefits of applying innovation portfolio management in a public sector organisation, as it is assessed to enhance the innovation capability of an organisation. It appeared in *user needs and context mapping* that implementation of innovation portfolio management is explicitly desired by several actors in VGR, primarily at the Innovation platform. Advocating for this approach, as expressed by these actors, reflects the necessity for a more cohesive and goal-oriented approach to innovation within the organisation. The people who are involved in innovation activities but is not working closely to strategic matters, for example heads of departments and innovators, are generally not oppose implementation of portfolio management. However, they struggle with envisioning how it could be achieved and are thereby hesitant to its feasibility.

Since the context of VGR differentiates from the contexts of the public organisations described in the previous section (5.7.1), the implementation of innovation portfolio management in those organisations cannot be directly translated to VGR. The biggest difference might be the size of the organisations. Since VGR is much larger than the studied organisations it includes much more innovation projects. It also involves a more complex organisational structure including more management levels. Consequently, it is harder for managers in VGR to be aware of and control all projects, which therefore might be a more prominent need regarding innovation portfolios than for the other organisations.

The size of the organisation also implies more stakeholders and potentially a broader range of interests in the organisation. This will, presumably, make it harder to achieve an organisation-wide implementation of innovation portfolio management. The studied organisations and VGR do however share the needs of creating the experience of community, have a more united approach and to communicate innovation activity both internally and externally.

The complexity of the organisational structure and the absence of a united vision of innovation portfolio management in VGR makes it hard to define tangible criteria for such approach in the present situation. However, an overview of innovation activities based on portfolios, rather than a management system, could serve several of the organisational needs and work as a basis for gradually developing such approach.

5.8 Synthesis and implications for design

This section presents a synthesis of the experiences and needs of the user groups, along with goals and criteria for a new design.

5.8.1 Information needed by the user groups

All user groups are affected to varying extents by the lack of access to collective information about innovation projects. The users' roles in the information system vary among them, and thereby also their needs. This makes the overall system complex. They do, however, collectively experience a large barrier for getting awareness and information about innovation projects. The barrier is biggest for the ones who do not feel a necessity for this in their current day-to-day tasks and therefore have not explored how to proceed.

Based on identified user needs, information about innovation projects is relevant to present in two ways: 1. As detailed information about specific innovation projects and 2. as overview images of (groups

of) all projects. These represent the two main branches in the “map of information needs”, illustrated in Figure 16. The map specifies the users' intentions or objectives for utilising the information, based on the two ways of presenting information about innovation projects. Additionally, it includes details about which user group has what intention or objective, as indicated by the coloured circles. Circles outlined in black signify that the intention or objective is particularly relevant for that user group.

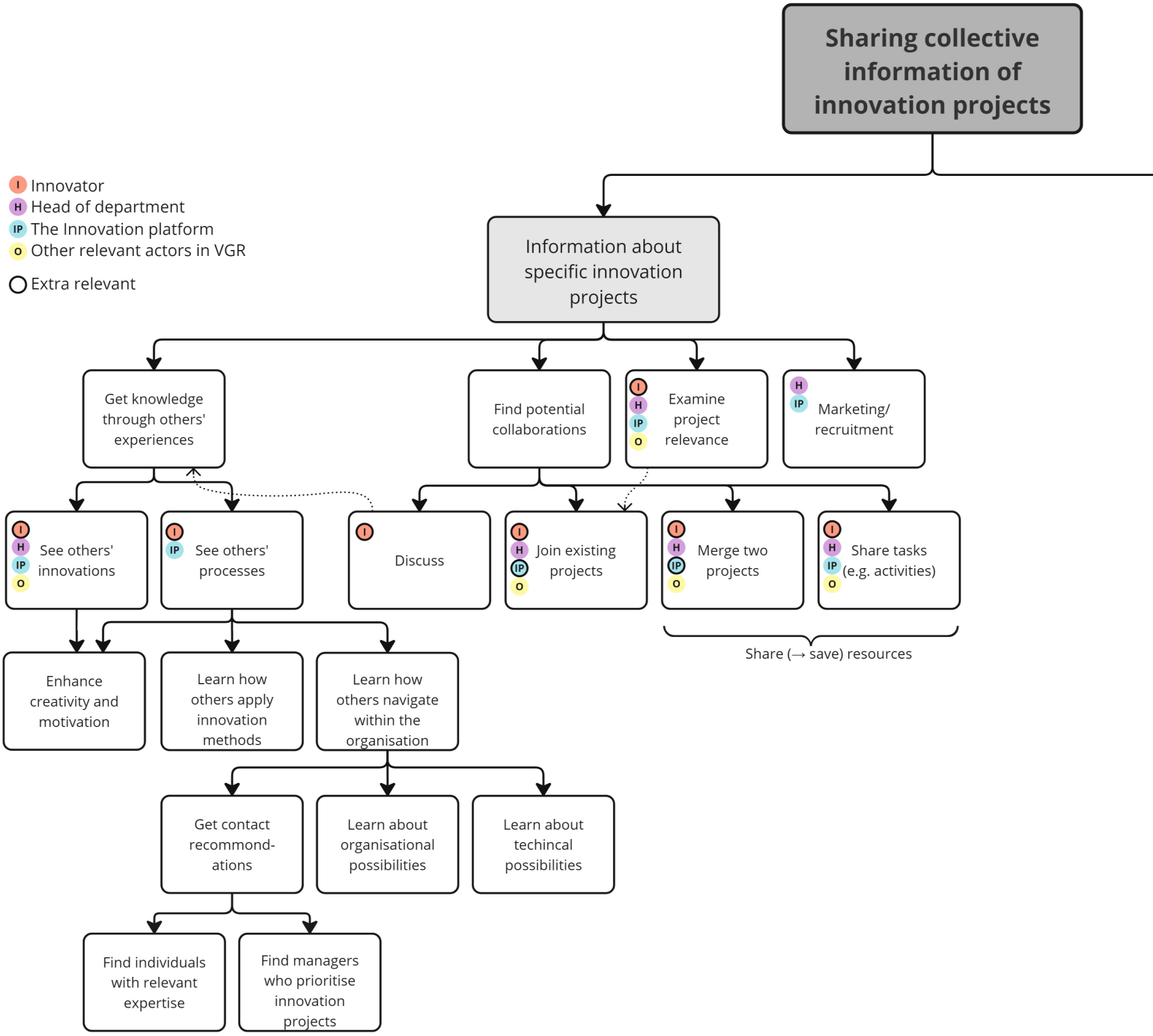

Figure 16 A. The “map of information needs”, showing how user groups will apply information about specific innovation projects.

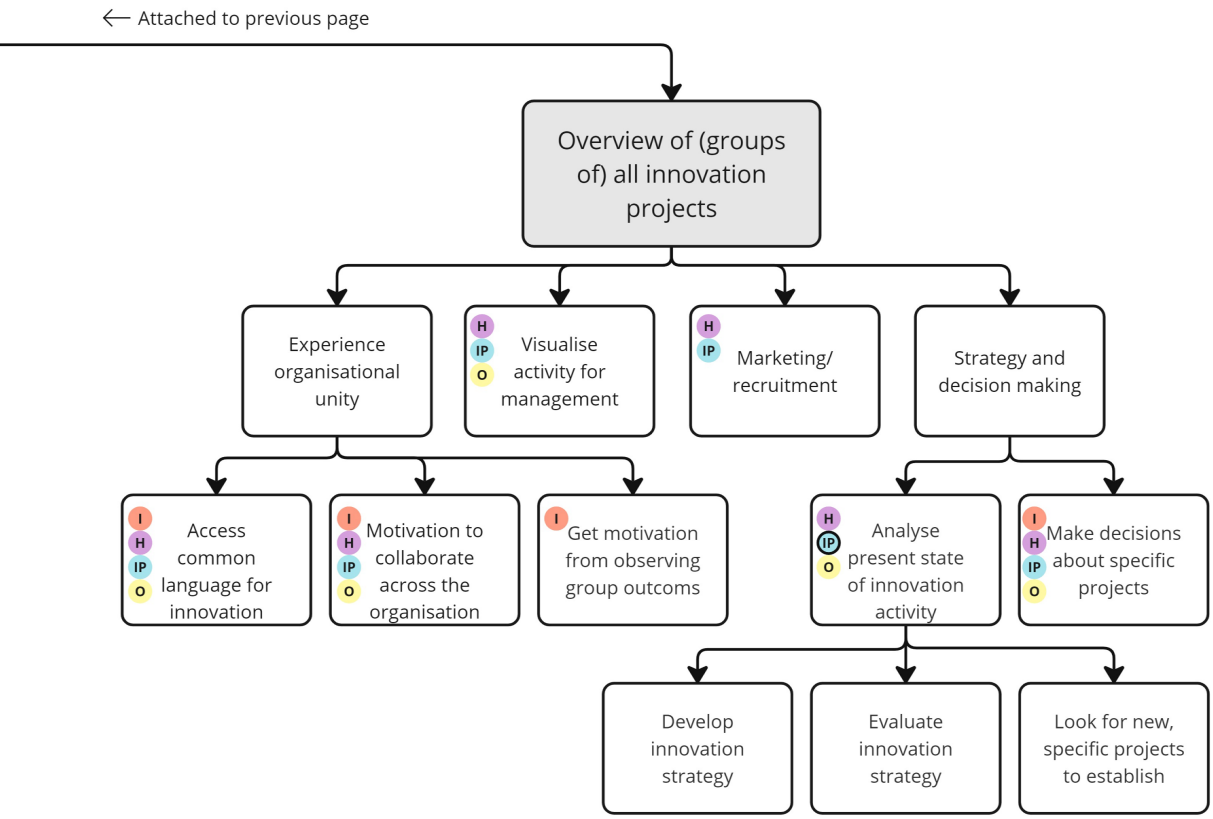

Figure 16 B. The "map of information needs", showing how user groups will apply overview images of (groups of) all innovation projects. A complete image of the map, including both branches on one page, can be found in Appendix 4.

Observing the map reveals that many intentions or objectives for using the information are applicable to multiple user groups. However, it reveals that the left branch of the map primarily is relevant to innovators, while the right branch is generally more relevant to the other user groups.

5.8.2 Barriers for accessing information by different user groups

According to the identified experiences of the user groups, described in this chapter, they encounter barriers for accessing information about innovation projects in VGR. These barriers vary for accessing information about specific innovation projects compared to overview images of all or groups of projects.

For accessing information about specific innovation projects, the main barriers of the user groups are:

1. Difficulties in knowing how to find relevant projects or information.
2. Difficulties in knowing which projects could be useful to obtain information about.
3. Uncertainty about how to utilise the accessed information.
4. Believing it will take more time than it gives in value to obtain the information.

For accessing overviews of groups of projects, the main barriers of the user groups are:

1. Difficulties in knowing how to find the information.
2. Difficulties in knowing how to utilise the accessed information.
3. Regarding strategic operations: Lack of clear mandate and responsibilities and therefore lack of motivation to seek the information.

5.8.3 Goals and criteria for the design

Based on the "map of information needs" (Figure 16) and the identified barriers in section 5.8.2, main goals for a design of a digital information exchange system were identified, which aims to fulfil the user needs. These follow below.

The digital system should:

1. Facilitate for the user in finding projects that are potentially useful to know about in their innovation activities.
2. Contribute to lowering the barrier for innovators to interact and share experiences with each other.
3. Provide an overview of innovation projects with the purpose to facilitate leading and strategic work.

Based on the identified user needs, additional design criteria were formulated for the digital system, ensuring it should:

1. Minimise the input of data required, including reducing the amount of data and the number of input events.
2. Minimise administrative requirements.
3. Present only the most relevant information to the users.
4. Present information in an easily digestible manner, incorporating visual elements.
5. Inspire to increased innovation activity.
6. Be integrated with or connected to existing digital systems to the greatest extent possible.

6.

DESIGN OF CONCEPT: METHOD

6. Design of concept: Method

The purpose of the phase *design of concept* was to serve the third research question of the study: *How can user needs be translated into a design concept of a digital information exchange system?* This was done by applying several design methods along with two additional interviews and a focus group. This chapter contains the methodology and process of this phase.

6.1 Idea generation and concept development

The results from the phase *user needs and context mapping* provided the foundation for generating ideas regarding the flow of information and the features of the desired system. This process involved mapping out the desired information flow, including all relevant output and input information and features for each user group. More specifically, what information do the user groups require and who should consequently enter this information. Snapshots of this process are depicted in Figure 17 and Figure 18. Idea generation was conducted both analogously and digitally, utilising whiteboard and Miro. The process was mainly done by the author of this study alone, although there were occasional discussions with the author's supervisor and fellow students.

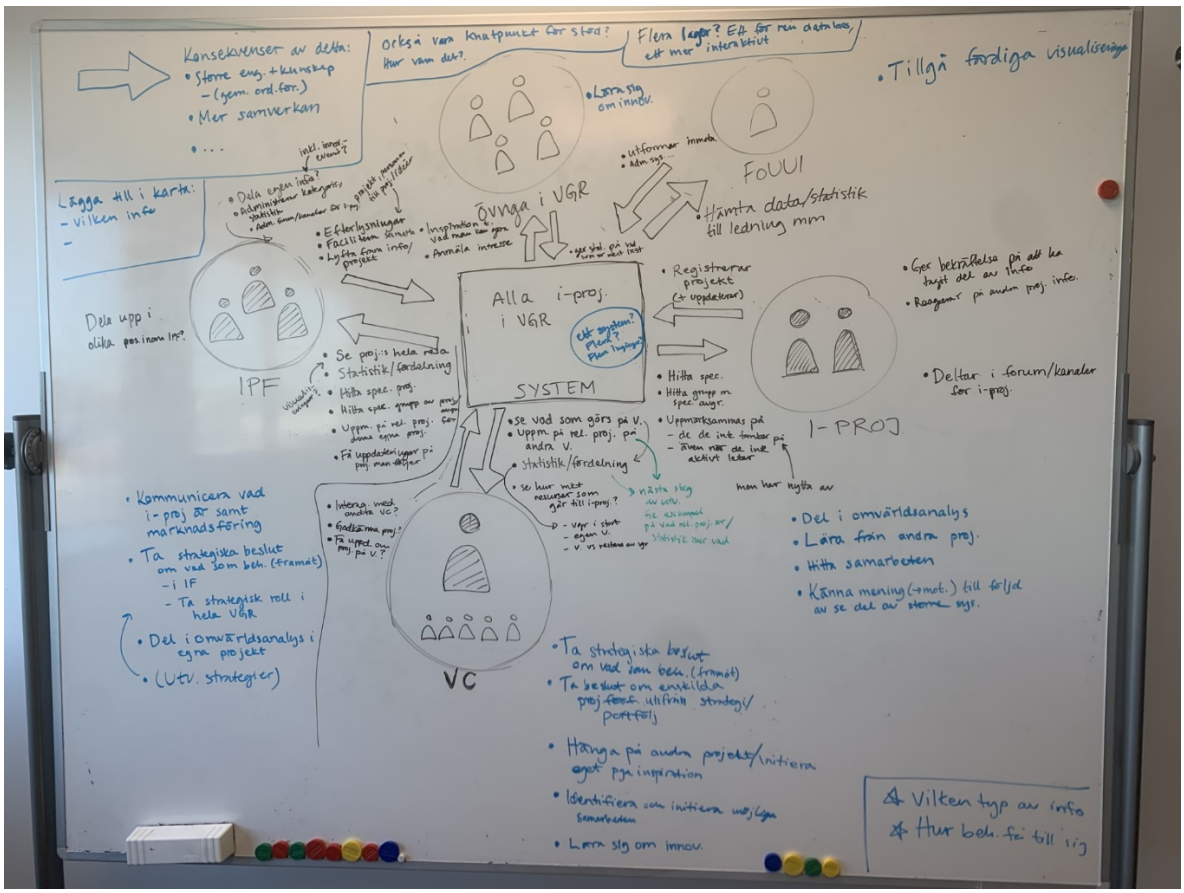

Figure 17. The idea-generated information flow in analogue form. The central square represents the system, with the surrounding circled characters symbolising the user groups.

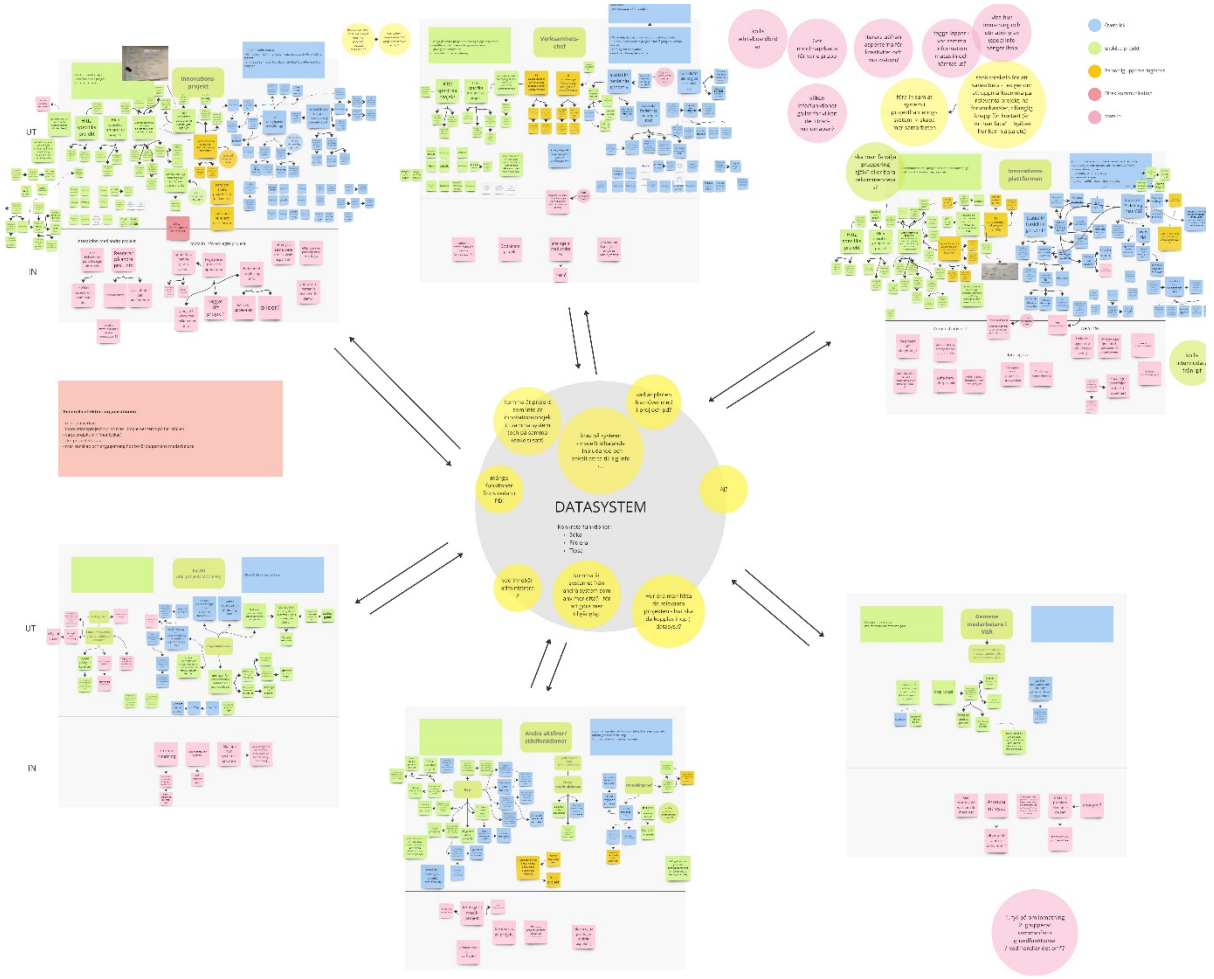

Figure 18. A zoomed-out view of the information flow in the system, during idea generation process. The six larger squares represent the user groups. Each note on these squares contains specific information or features relevant for that user group.

The mapping, displayed in Figures 17 and 18, comprises the system positioned at the centre, surrounded by the different user groups. Relevant output information was categorised as either *detailed information about specific projects* or as *overview images of (groups of) all projects*. The notes were color-coded in the digital map (Figure 18) according to these categories. Input information required for generating the desired output was also color-coded and positioned in the lower section of the squares representing the user groups in Figure 18.

The information and features of the system were subsequently clustered within and across the user groups, aiming to identify overlaps and core features. After several iterations, the final concept was formulated. It was concluded that the system should consist of three system parts – namely, *Project explorer, Project forum,* and *Innovation portfolio review*. Each system part serves one of the design goals presented in section 5.8.3 and is accessible to different user groups.

6.2 Evaluation and additional interviews

In the process of designing the concept, evaluation of design concept as well as additional interviews regarding portfolio management were held. This was done in order to gain deeper understanding of potential implementation and to improve the concept.

In the middle of the phase *design of concept,* an early version of the design concept was evaluated in a focus group. The participants of the focus group were three Innovation platform employees, each occupying different roles within the unit. These are presented in Table 3. Neither of them had previously participated in the study. The purpose of the evaluation was to assess the concept with users. This involved gathering input on various aspects of the concept and ideas for improvement. The participants provided insights based on their roles as users, as well as their experience of working closely with other user groups and their understanding of VGR's innovation system. The evaluation consisted of discussions on how the concept features and information flow would meet the user needs and questions regarding implementation of the system.

Role	Quantity
Project leader	1
Manager	1
Innovation coach	1

Table 3. Participants in the focus group in the phase *design of concept*, where a concept draft was evaluated.

In addition to the focus group, two interviews were held in the middle of this phase. The first interview was held with a manager at the Innovation platform. The second interview involved two VGR employees who were currently engaged in developing a portfolio management approach in another section of VGR. Participants are shown in Table 4. Both interviews focused on purpose and implementation of Innovation portfolio management in VGR. The purpose of the interviews was to gain a deeper understanding of the potential role of innovation portfolio management within VGR and the necessary requirements for its implementation. This understanding served as the basis for further development of the design concept.

Role	Quantity
Developing portfolio management at another department	2
Manager at the Innovation platform	1

Table 4. Interviewees in the phase *design of concept*.

Insights from the evaluation and the interviews gave rise to new ideas and design decisions which progressed the development of the design concept.

7.

DESIGN OF CONCEPT: RESULT

7. Design of concept: Result

The design concept consists of visualised design guidelines for a digital information exchange system, comprising of three parts. Description of the design concept, including functionality and interactions of user groups, will be presented in this chapter. The chapter also presents conclusions from the evaluation of the early version of the design concept.

7.1 Evaluation of early version of design concept

The evaluated version of the design concept generally aligned with the participants' perceptions of obstacles and user needs in the context of VGR. However, they provided insights that significantly influenced further development of the design concept.

Firstly, the participants emphasised the importance of minimising administrative tasks in the digital system. This is due to limited organisational resources and could consequently enhance the likelihood of successful system implementation and long-term sustainability. One suggested measure to achieve this was by utilising data algorithms to automate as many tasks as possible, thereby creating a more self-sustaining system.

Secondly, the participants suggested that innovators should only be required to provide input information at the beginning and end of the innovation project. Additional input was viewed as unnecessary and non-essential for the system's functionality. Moreover, more input events could become overwhelming for innovators and increase the risk of no input occurring.

7.2 Overview of design concept

The design concept presented in this chapter is a visualisation of design guidelines for a desired digital information exchange system. It aims to illustrate the implications of the design goals presented in section 5.8.3, and how they can be applied in VGR. Therefore, the design concept remains at a relatively abstract level, demonstrating the content of a desired digital system from a user's perspective. Specifically, it outlines the types of features and information to be included.

The digital system is divided into three parts: the *Project explorer, Project forum* and *Innovation portfolio review*. These parts are intended to utilise data from the same database, but have distinct functionalities and user accesses. The design concept should ideally be integrated with existing systems within VGR.

Figure 19 depicts an illustration of the design concept, including the system parts and the information flow, in relation to each user group.

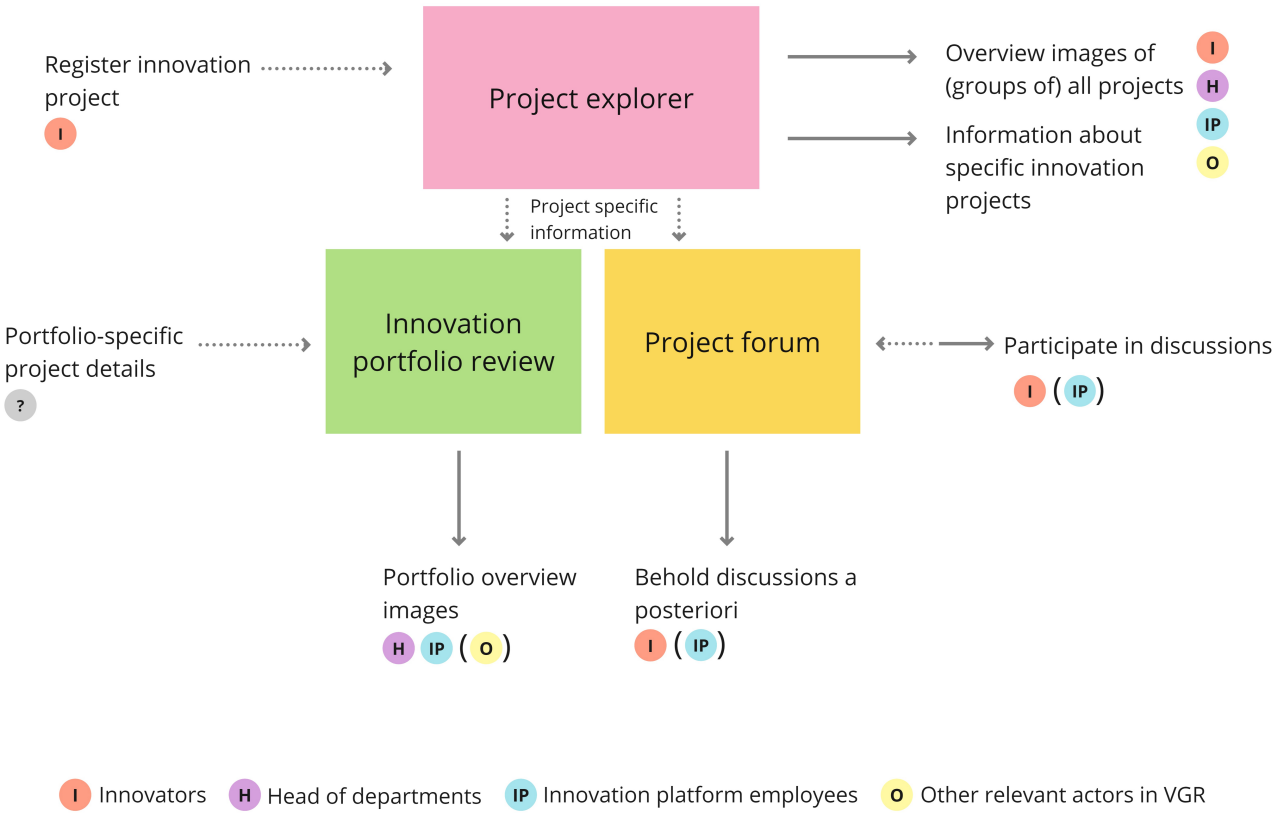

Figure 19. An illustration of the design concept, including information flow and system parts.

Each system part serves one of the three design goals presented in section 5.8.3. This division is primarily based on the relevance of the goals to different user groups, thus requiring each part of the system to have a customised level of user access. Another reason for the division is the diverse nature of the design goals. By gathering features related to each goal in separate system parts, it may be perceived as more intuitive for users.

Project explorer constitutes the main part of the system. Its primary purpose is to provide employees in VGR with insights into the organisation's innovation activities. Here, they can access concise information about all innovation projects within VGR, presented in an easily understandable and inspiring format. Additionally, users can view overviews and statistics of all projects, categorised based on various aspects. A key feature of this section is to support related projects in finding each other. This is important since projects need to be aware of each other's existence in order to exchange experiences and collaborate effectively. Thus, this part primarily serves the first design goal, which is to *facilitate for the user in finding projects that are potentially useful to know about in their innovation activities.*

Project forum consists of a platform where innovation projects can engage in conversations and learn from other innovation projects, in an accessible way. It is accessible only for innovators and potentially certain support functions (for example innovation coaches). It serves the second design goal, which is to *contribute to lowering the barrier for innovators to interact and share experiences with each other.*

Innovation portfolio review is accessed by leaders of project portfolios and offers visual overviews of the collection of projects within a specific portfolio, based on various portfolio-related aspects. It serves the third design goal, which is to *provide an overview of innovation projects with the purpose to facilitate leading and strategic work.*

Further detailed descriptions of the system parts are presented in the following sections.

Figure 20 shows how the system parts relate to the information needs of the user groups, presented in the "map of information needs" in section 5.8.1. The pink part corresponds to *Project explorer*, the orange part to *Project forum* and the green part to the *Innovation portfolio review*.

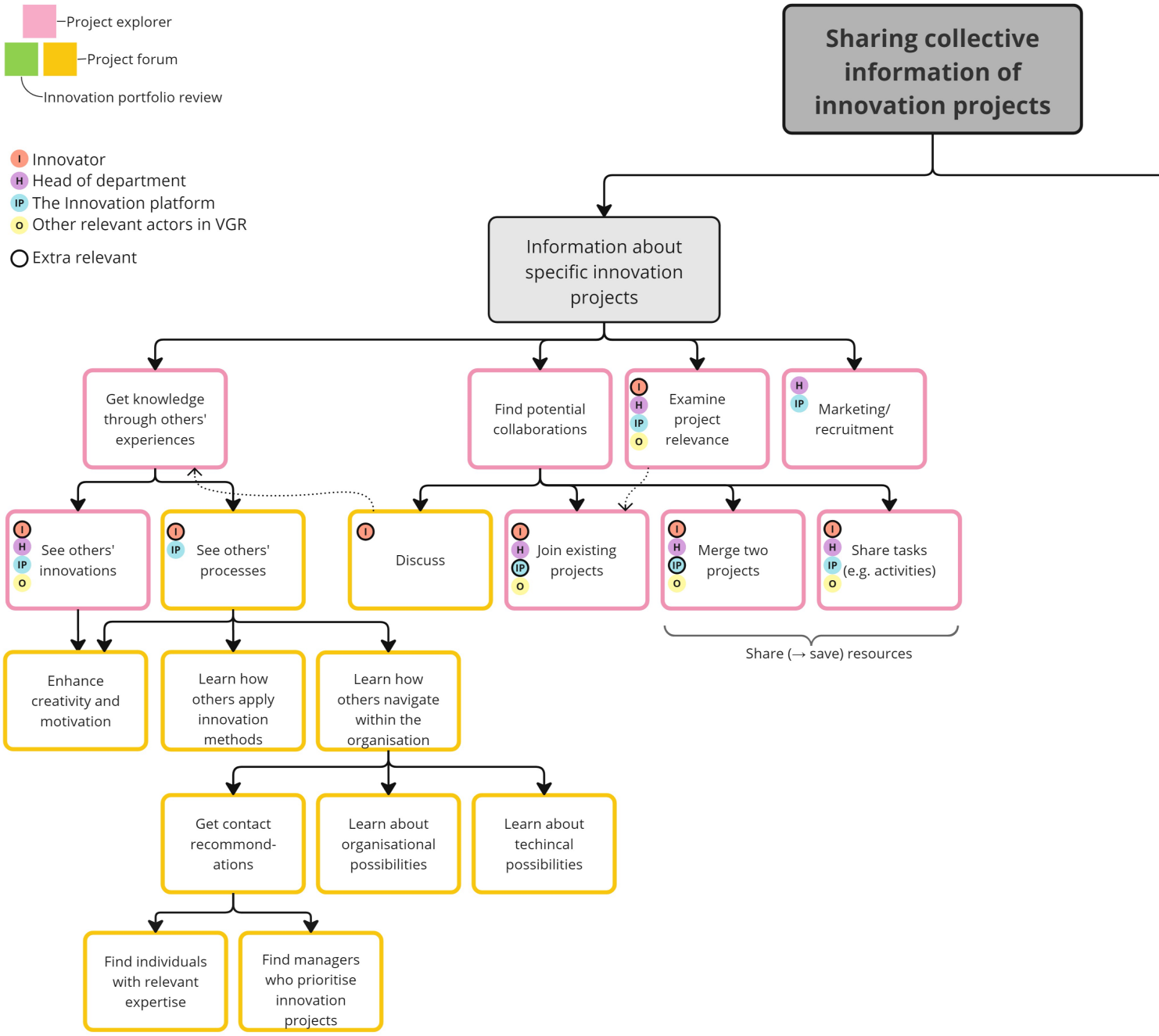

Figure 20 A. Illustration of how the system parts of the digital system relate to the "map of information needs", outlined in section 5.8.1.

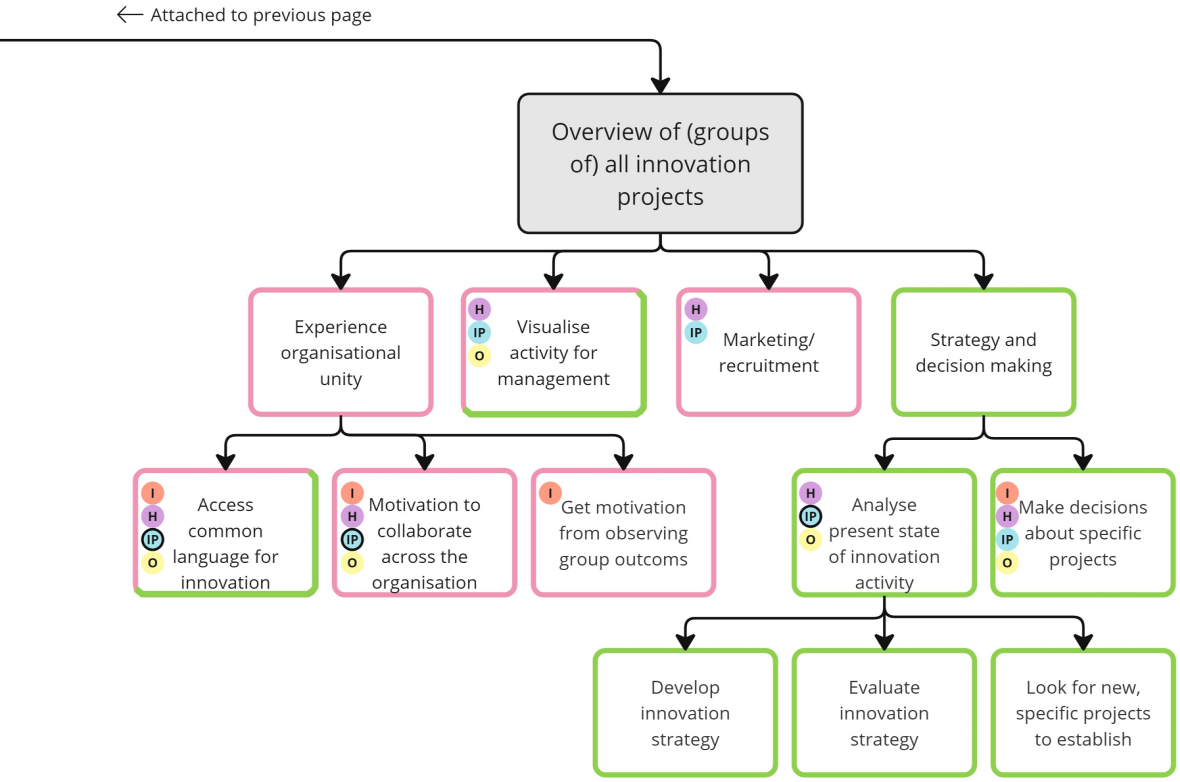

Figure 20 B. Illustration of how the system parts of the digital system is related to the "map of information needs", outlined in section 5.8.1. A complete image of the map, with both branches on same page, can be found in Appendix 5.

7.3 Project explorer

The first interface you encounter when opening *Project explorer* contains inviting images and easily understandable text showcasing sample projects currently underway in VGR, alternatively projects specifically relevant to the user. The aim of this interface is to inspire and facilitate easy access to innovation information. The overall features, input and output information in this system part are shown in Figure 21.

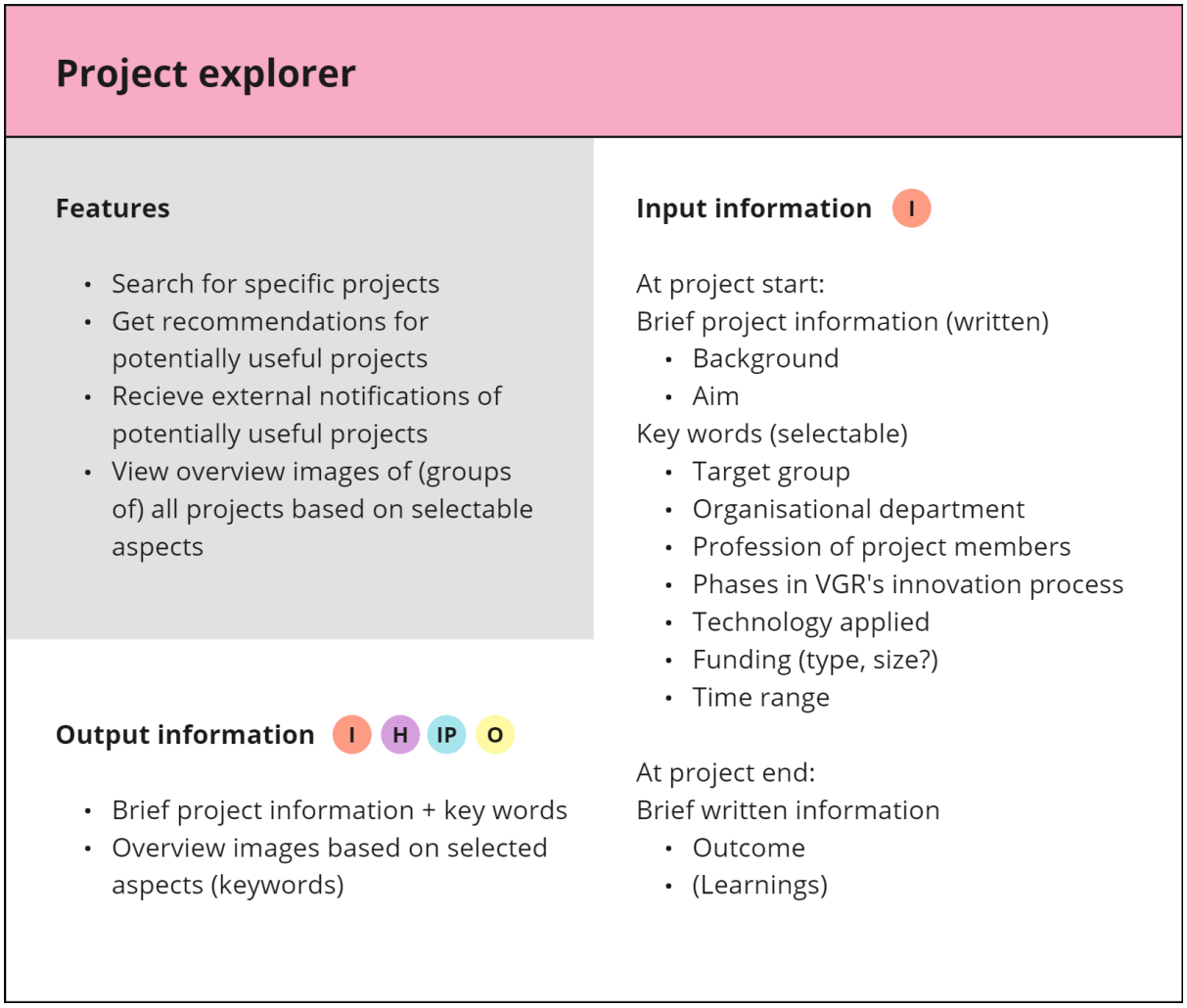

Figure 21. The features, input and output information of *Project explorer*.

When a project is started, it is registered in a digital system, such as Researchweb or directly within this system. The registration involves entering concise project details, including background and objectives, and selecting relevant keywords. The selectable keywords are however suggestions and need to be explored further. The registration occurs at the start and potentially at the end of the project's process.

A reason for not requiring more input information, aside from the increased workload for innovators, is that it results in a larger volume of output information. This increased volume requires greater effort from the user and, according to the literature in section 2.3, decreases the likelihood of their engagement with the information. Furthermore, results from *user needs and context mapping* indicate that the users prefer to access detailed project information, such as methodology and process, through direct communication with project members rather than retrieving publicly entered information.

Users should be able to easily find basic information about specific innovation projects that they have in mind, such as contact details for project members and project department belonging. Therefore, the system should include a well-designed search engine and filtering options.

However, since using a search-engine is limited to finding projects that users are already aware of or believe could be useful, the system should assist the user in discovering potentially useful projects for that specific user. *User needs and context mapping* shows that all user groups struggle with knowing what projects are relevant to access information about, and section 6.8.3 outlines that this is one of the barriers for accessing the information. Recommending relevant projects can also increase the likelihood of innovators sharing information across departments, which according to the literature in section 2.2 is a key factor in stimulating innovation. A technical solution for assisting users in discovering relevant projects is to link projects with similar keywords.

Since users currently are not accustomed to actively seeking information about innovation projects, it might be beneficial to draw their attention to useful projects also at times they are not actively using the digital system, like through email notifications.

The overview images available in this system part are intended to be generated based on the same keywords used to link the projects. Here, users can select the specific factors they wish to see statistics on. For example, they can inquire about if there are any projects in the implementation phase that are targeting child patients.

The statistic overviews in this system part addresses the needs of the users regarding recognising their role within the broader innovation system, and providing an overview of what is happening in VGR at a holistic level. The overviews can also be utilised by Innovation platform employees or heads of departments for communication purposes, marketing, and recruitment efforts.

7.4 Project forum

Results from the phase *user needs and context mapping* indicate that innovators experience several barriers when attempting or considering interacting with other innovation projects. This includes uncertainty about the potential value and procedure of the interaction, as well as time and effort required. This is addressed in *Project forum*, whose purpose is to facilitate and encourage the exchange of experiences between innovation projects. Features, input and output information in *Project forum* is presented in Figure 22.

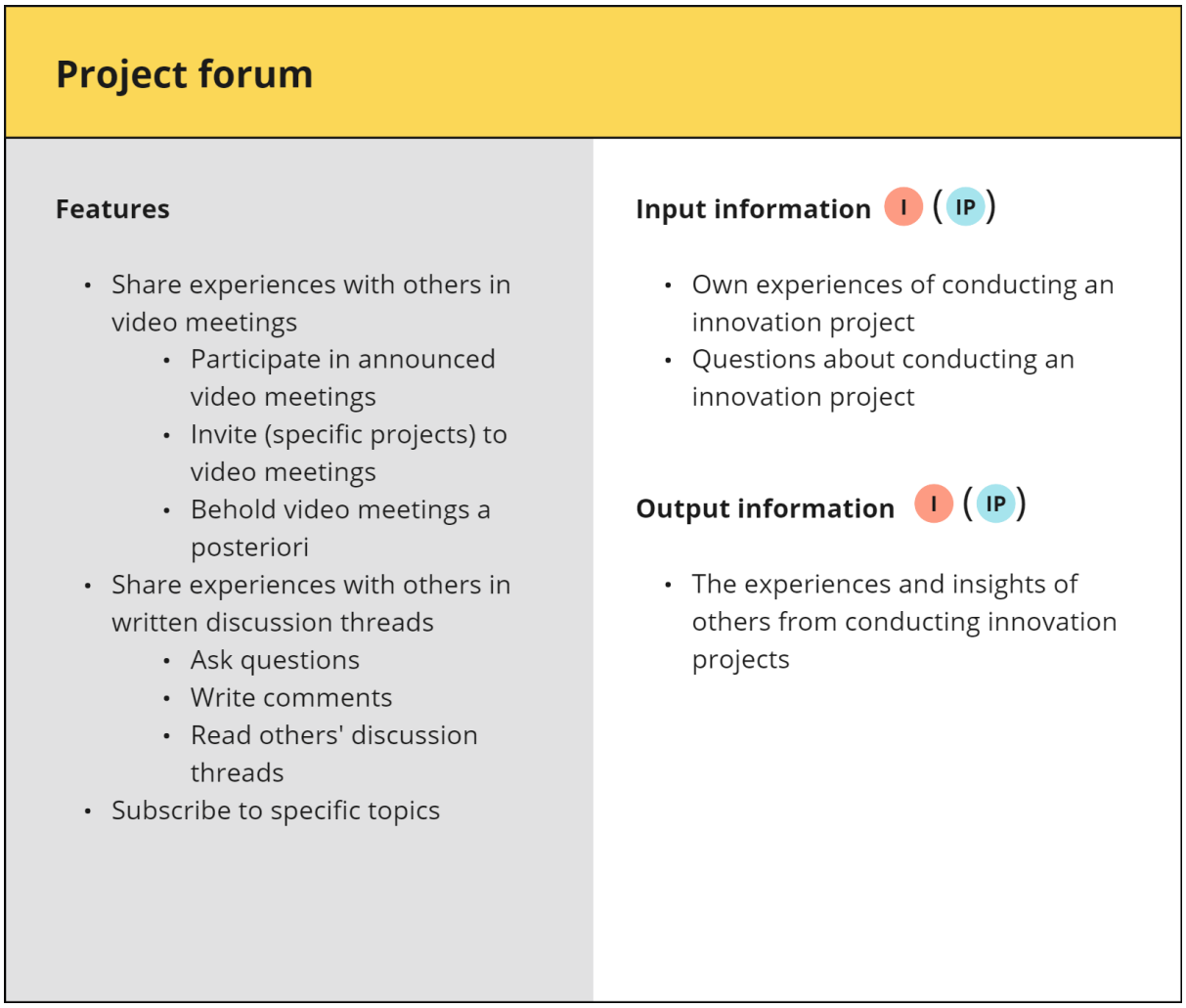

Figure 22. The features, input and output information of *Project forum*.

The platform should preferably include regular video meetings that addresses different specific topics, the possibility to ask written questions and answer by commenting and read existing threads of discussion. The users could preferably also be able to subscribe to certain topics and get notifications (for example by email) when it has been activity within it.

An important criterion for this system part is that participation is voluntary and adaptable to when and to what extent it suits the individual user. The digital nature of the interactions reduces the time required and provides greater flexibility. Thus, the users are not restricted to participate on certain places or dates, instead they can take part of interactions a posteriori.

Additionally, the information users receive must be highly relevant to them individually. This is to minimise the time required in order to engaging with useful information and to motivate them to enter information themselves. Ensuring the information provided to users is highly relevant can be achieved by offering a diversity in discussion topics, have narrow focused topics, and allowing users to initiate topics themselves. Moreover, offering various ways to interact is believed to enhance opportunities and, consequently, increase the likelihood of greater participation.

7.5 Innovation portfolio review

As mentioned previously, a portfolio comprises a set of projects united by common overarching goals. According to the literature in section 2.4, the adoption of project portfolios is advantageous for structurally organising projects and connecting them to various areas of responsibility. Given the results from the phase *user needs and context mapping*, which revealed that innovation efforts in VGR are scattered and that multiple actors wish for greater cohesion and strategic alignment, the implementation of portfolios appears to be well-suited for VGR. However, in contrast to the other system parts, which address shortcomings in the existing user work processes, *Innovation portfolio review* relates to the potential implementation of a future work process. Consequently, its implementation and development should occur gradually and evolve over time.

The *Innovation portfolio review* is primarily accessed by portfolio leaders and potentially by individuals involved in the projects within the portfolio. Further exploration is needed to determine whether individuals should have access to overviews of portfolios they are not involved in. Similarly, the decision regarding who should lead each portfolio requires further consideration.

Figure 23 shows the features, input and output information in *Innovation portfolio review*.

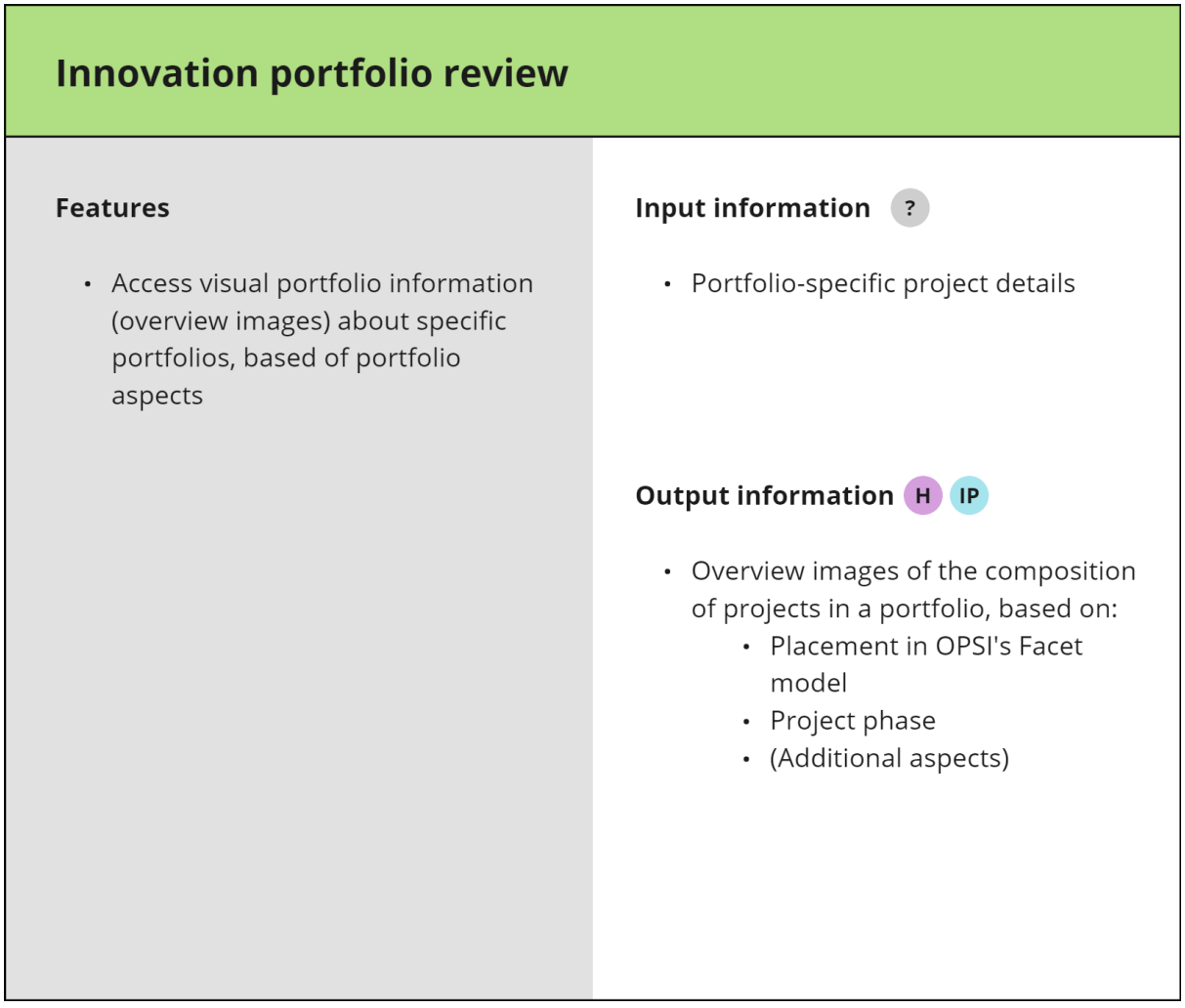

Figure 23. The features, input and output information of the *Innovation portfolio review*.

The portfolio overviews accessed in this system part can be designed in various ways but should, as previously mentioned, include visualisation of certain portfolio-related aspects. What aspects to include depend, according to literature in section 2.4, on the nature of the strategic work and thus the intended use of the portfolio. Since results from *user needs and context mapping* indicate that the organisational conditions of VGR make it difficult, at the present state, to implement a unified portfolio management approach, it is suggested that the first version of portfolio visualisation is simple and include only a few aspects.

As outlined in section 2.4, OPSI (n.d.) suggests that a fundamental aspect in visualising innovation portfolios is the "type of innovation" of the projects. This could include determining whether a project aims to change a large system or focuses on improving a specific part of an existing solution. Categorisation based on this aspect can be facilitated using OPSI's Facet model (see section 2.4). Results from *user needs and context mapping* indicate that this aspect is of particular interest to individuals in current and potential future strategic positions, including heads of departments, Innovation platform employees, and other relevant actors in VGR. Furthermore, this aspect is utilised in portfolio visualisations by the external public organisations interviewed in this study, as detailed in section 5.7.1. For one of the organisations, it is the sole aspect used in their portfolio visualisation. An example of a portfolio overview visualisation based on OPSI's Facet model, to be used in the *Innovation portfolio review*, is illustrated in Figure 24.

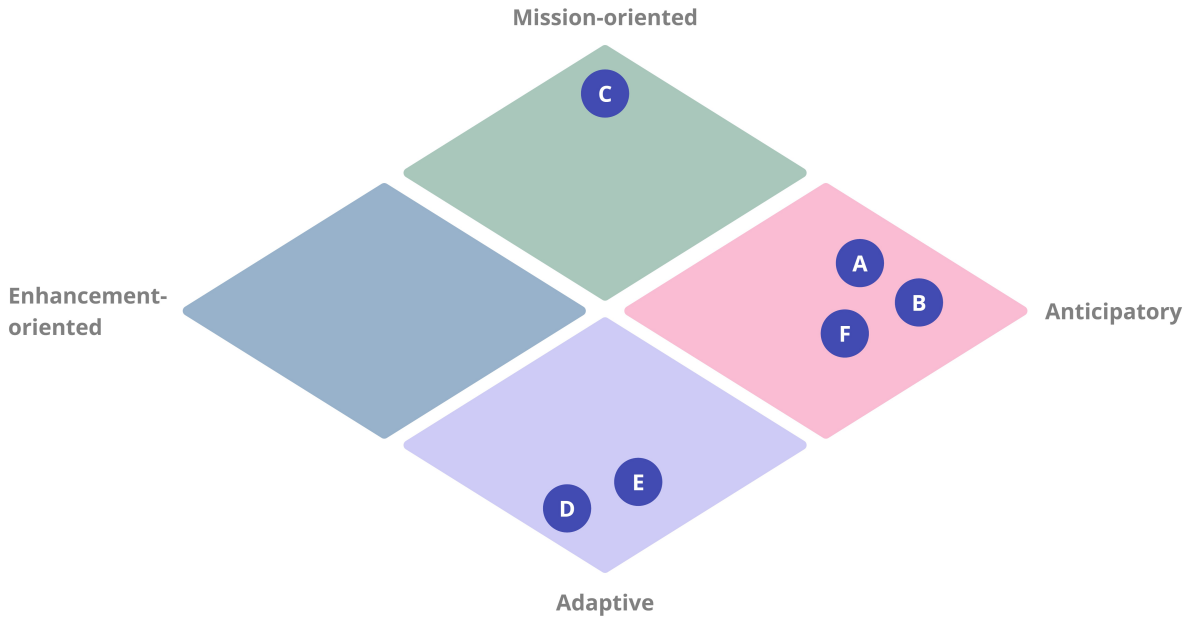

Figure 24. A visual overview of projects in a portfolio based on OPSI's Facet model (OPSI, n.d.). Each project is represented by a blue circle with a letter.

Figure 24 depicts innovation projects represented by letters in blue circles, each letter corresponding to a project. These projects are positioned based on their placement in OPSI's Facet model. The image provides an overview of the allocation of OPSI aspects among the projects, allowing users to compare whether the allocation matches the desired composition or if actions should be taken. Consequently, it can serve as a foundation for upcoming decisions.

Another aspect of interest to the potential users of this system part, as discovered in *user needs and context mapping*, is the "project phase" of the projects in the portfolio. This aspect is valuable for economic decisions; for example, limited financial resources might prioritise projects whose solutions

can be implemented soon. Given the indications from user needs and context mapping that project placement in OPSI's Facet model and project phase are perceived as the most crucial aspects for making strategic decisions about portfolios, it is recommended that these aspects be included in the portfolio overview visualisation in the initial version of the *Innovation portfolio review*.

portfolios, they are suggested to be the aspects in the portfolio overview visualisation in the initial version of the *Innovation portfolio review*. An example of such a portfolio overview, incorporating both aspects, is shown in Figure 25.

Figure 25. A visual overview of projects within a portfolio, categorised by the phases of the VGR Innovation process. The colour of each project, denoted by the circled letters, indicates its placement in the OPSI Facet model.

In Figure 25, projects in the portfolio overview are represented by circled letters, with colours representing their placement in OPSI's Facet model. The sections of the timeline represent the phases of an innovation project process based on the *VGR's Innovation process* (see section 2.1).

Questions regarding how the placement of each project in OPSI's Facet model should be determined and registered, and by whom, remain unanswered. This also applies to project phase, which, like project placement in OPSI's Facet model, can be challenging for innovators themselves to discern. In further development of this system part, additional aspects could be incorporated into the portfolios, such as budget and time periods for each project, providing portfolio leaders with a greater foundation for strategic decisions. However, this would require more input from innovators or other individuals responsible for this task. As previously mentioned, increased input is critical for the system's feasibility. It would also entail further adaptations of the organisational structure.

7.6 User interactions with the digital system

As outlined earlier in this chapter; the utilisation of the digital system varies among the user groups. This section elaborates on how usage of the system will be integrated in the normal work process of each user group.

7.6.1 Innovators

Innovators primarily use the digital system for tasks or issues related to their own project process. It spans across all stages of the innovation project process and concerns the system parts *Project explorer* and *Project forum*. This is illustrated in Figure 26, where the innovation project process is depicted by a timeline, and the tasks for which they use the system are presented in boxes. These boxes are color-coded based on the specific system part they pertain to and are positioned along the timeline. The dashed segments of the timeline represent the time before and after an innovation project officially proceeds.

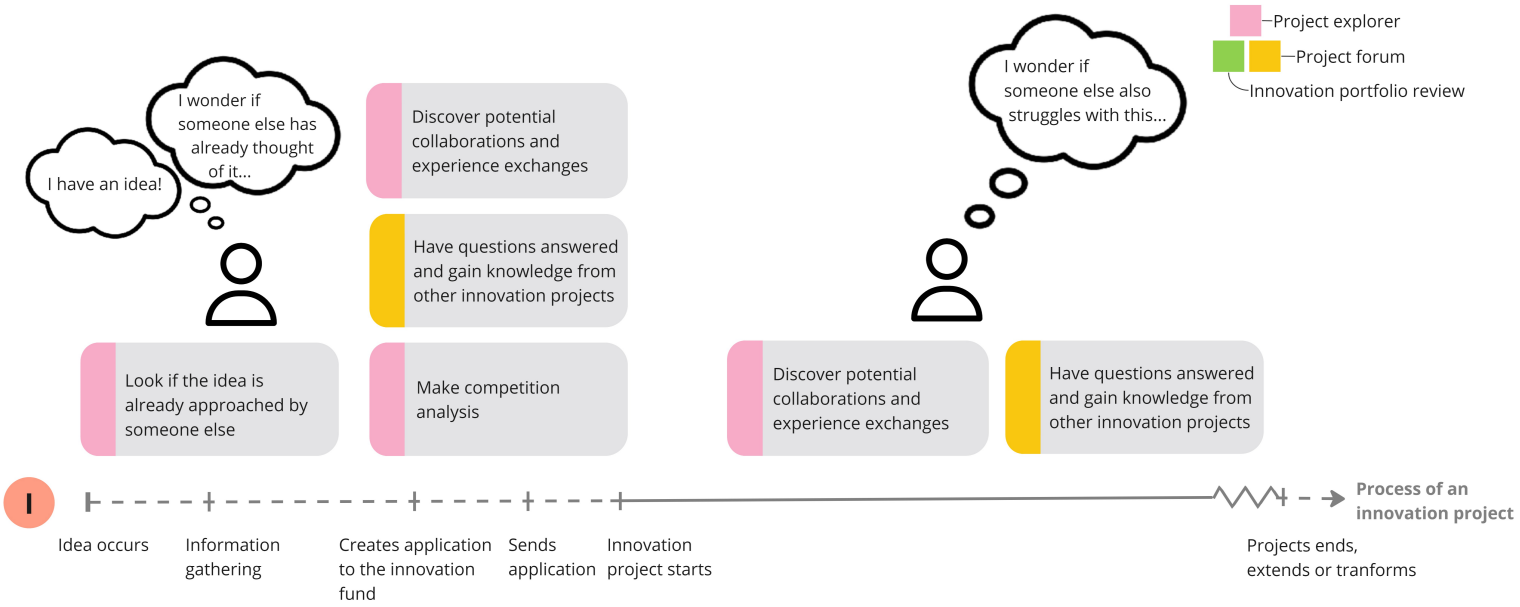

Figure 26. Illustration of the innovators' usage of the digital system, in relation to their project process.

Before an innovation project is started, innovators can utilise the digital system for facilitating information gathering and fund application. As an idea arises, they will preferably begin with using the *Project explorer* to ascertain whether the specific issue has been addressed previously, thereby assessing the relevance of the idea. They may also explore existing projects or solutions for potential implementation. Furthermore, engaging with the *Project forum* can offer insights into the nature of innovation projects and available opportunities, both of which they have little prior knowledge of.

If the innovator find that the idea is unique and worth exploring further, they will proceed to create an application for financial support, such as to the Innovation fund. By discovering similar or relevant projects in the *Project explorer*, the innovator gain input for making the project description and gather data for competitive analysis. Also the *Project forum* can be valuable during these steps, through facilitating discussions with other innovators.

Furthermore, the *Project explorer* will prove useful for innovators during the procedure of the project. By regularly being informed about potentially beneficial projects through this system part, they can identify opportunities for collaborations and knowledge exchange. The *Project forum* also remains relevant throughout the project, by facilitating discussions and allowing access to supportive information.

As declared in the literature in section 2.3, exposure to a diverse range of approaches is crucial for cultivating creativity. This is highly relevant for innovators as they conduct their innovation projects, especially considering their limited experience of creative tasks required in innovation projects. They

need to be creative both for generating new ideas and for tackling project challenges effectively. Therefore, facilitating access to a wide array of innovation projects through the digital system can significantly enhance these processes.

Moreover, innovators participating in this study noted that being informed about other innovation projects enhances their motivation. This includes recognising that other innovators encounter similar challenges and have successfully overcome them. Observing these experiences can lower the threshold for individuals to start their own projects and encourage innovators to be persistent and patient when faced with challenges in their projects.

The study also showed that innovators' need for accessing information about other innovation projects occur at times when they encounter specific questions or issues, when they are implementing new innovation methods, when they face challenges in the process, or when they feel stuck. These are examples of situations when innovators will interact with the digital system. In addition, system interactions may be prompted by external notifications (such as via email) about relevant projects to check out, or when their innovation coach recommend them to use the system. The study also showed that innovators' need for accessing information about other innovation projects occur at times when they encounter specific questions or issues, when they are implementing new innovation methods, when they face challenges in the process, or when they feel stuck. This is followingly the times they will interact with the digital system. In addition, system interactions may be prompted by external notifications (such as via email) about relevant projects to check out, or when their innovation coach encourages them to explore the system.

7.6.2 Heads of departments

Heads of departments will feasibly be active in the system periodically during the whole process of a specific innovation project within their departments. This primarily involves interactions with the *Project explorer* and the *Innovation portfolio review*. These interactions are illustrated in Figure 27.

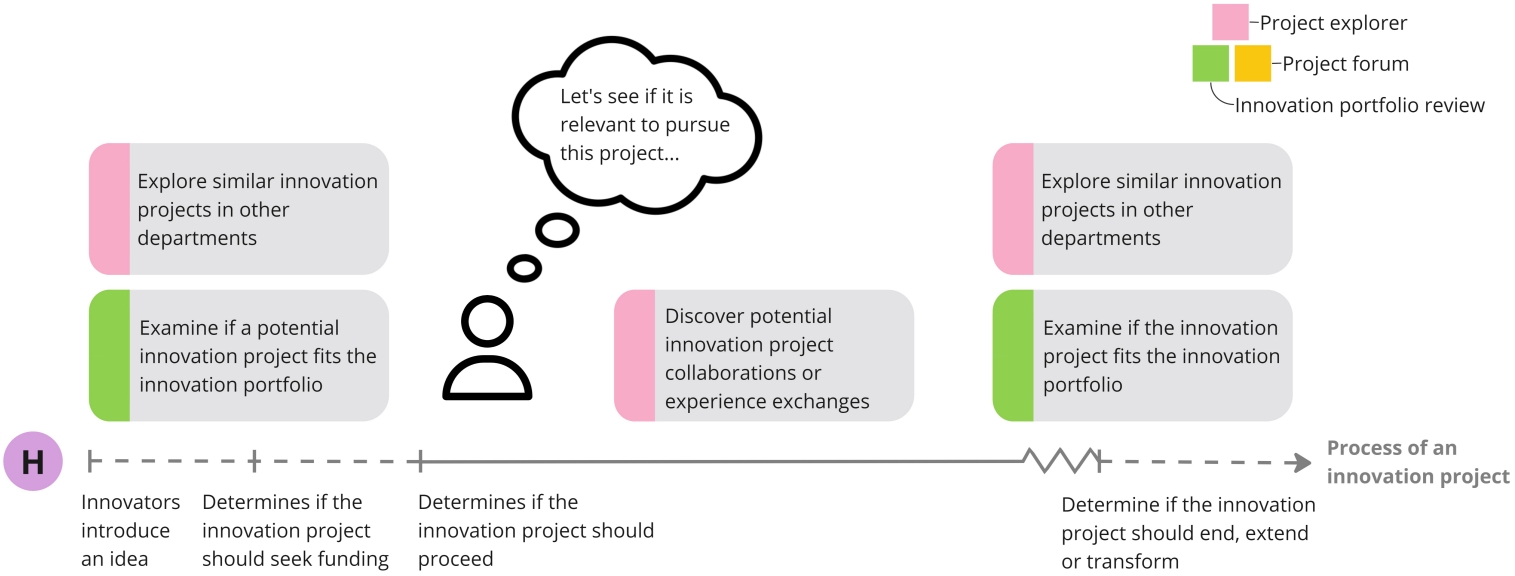

Figure 27. Illustration of the heads of departments' usage of the digital system, in relation to specific innovation projects at their department.

To ensure informed decisions regarding the approval or rejection of an innovation project initiative, heads of departments can utilise visual portfolio information within the *Innovation portfolio review*.

This allows them to evaluate how the potential innovation project aligns with the existing portfolio. Additionally, the *Project explorer* enables the heads of departments to identify similar projects, supporting estimation of the relevance of the potential project and exploring potential collaborations or exchanges. Similarly, the system assists heads of departments in deciding whether to conclude or extend projects as they approach their predetermined end dates.

Heads of departments can also advantageously utilise the digital system in their other regular work processes within the department. Examples of such activities are depicted in Figure 28.

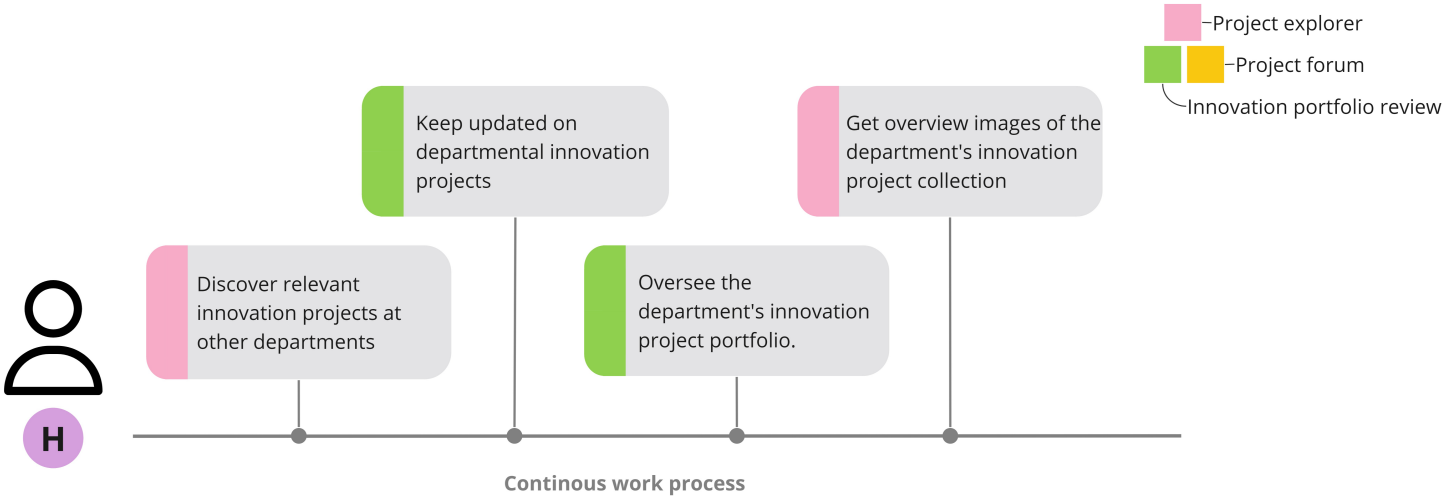

Figure 28. Illustration of the heads of departments' usage of the digital system in their regular work processes at the department.

Regular interactions with the digital system can enhance the inspiration for innovation among heads of departments. By discovering innovation projects in the *Project explorer* that are relevant to their department, they might gain ideas for potential innovation projects at the department or influence how they manage existing projects. This exposure may also prompt them to participate in projects from other departments or adopt existing solutions developed elsewhere. Furthermore, the digital system can improve the heads of departments' understanding of the overall innovation work in VGR. By filtering for their own department in the *Project explorer* and/or reviewing the *Innovation portfolio review*, heads of departments can stay updated on the ongoing innovation projects within their department. Similarly, they can familiarise themselves with the past projects undertaken by their department.

The *Innovation portfolio review* can also be utilised by heads of departments to ensure that departmental innovation projects align with portfolio guidelines, and if not, take appropriate actions. The overview images provided in this system part also serve as a foundation for analysing the current situation and developing innovation strategies for the department. Through this, they can identify innovation-related needs within the department, used in determining desired new projects and prioritising upcoming decision-making processes.

Another valuable function of the *Project explorer* for heads of departments is the ability to extract statistics, visual overviews and specific project information for use as communication materials. This feature allows them to clearly demonstrate departmental activities, which is useful for marketing the department, recruitment efforts and discussions with management.

7.6.3 The Innovation platform employees

Since the work of the Innovation platform employees involves supporting both specific innovation projects and the overall innovation system of VGR, the digital system is relevant for them to use for various tasks. Innovation coaches can benefit from utilising the system for various tasks related to specific innovation projects. Examples of these tasks are depicted in Figure 29.

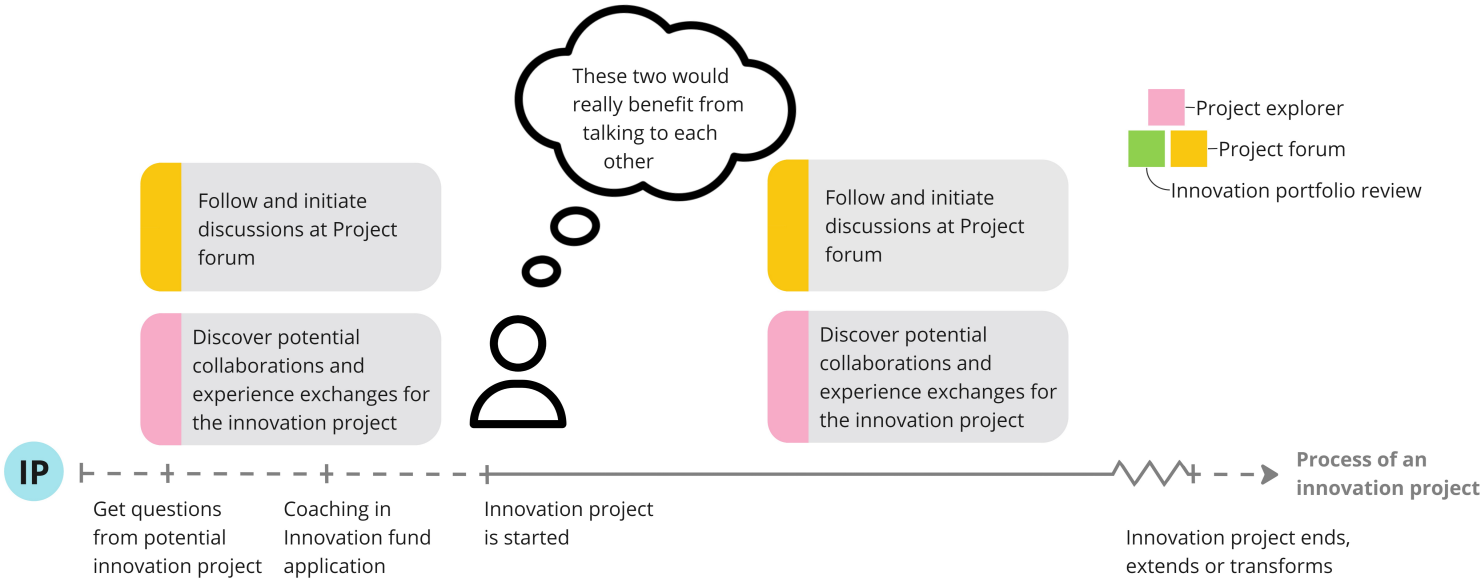

Figure 29. Illustration of the Innovation coaches' usage of the digital system, in relation to specific innovation projects they are coaching.

Project explorer can be beneficially utilised to discover projects that hold potential for collaboration or exchanging experiences with the projects they are coaching. This applies to several stages in the innovation project process, such as creation of Innovation fund application, initial considerations for starting an innovation project and addressing challenges encountered during project execution. Additionally, they might monitor, participate in, and initiate discussions on the *Project forum*. However, their primary role regarding the system will likely be to remind and encourage innovation projects to actively engage with the system parts themselves.

All Innovation platform employees can be supported in tasks unrelated to specific innovation projects through the digital system. These tasks are illustrated in Figure 30.

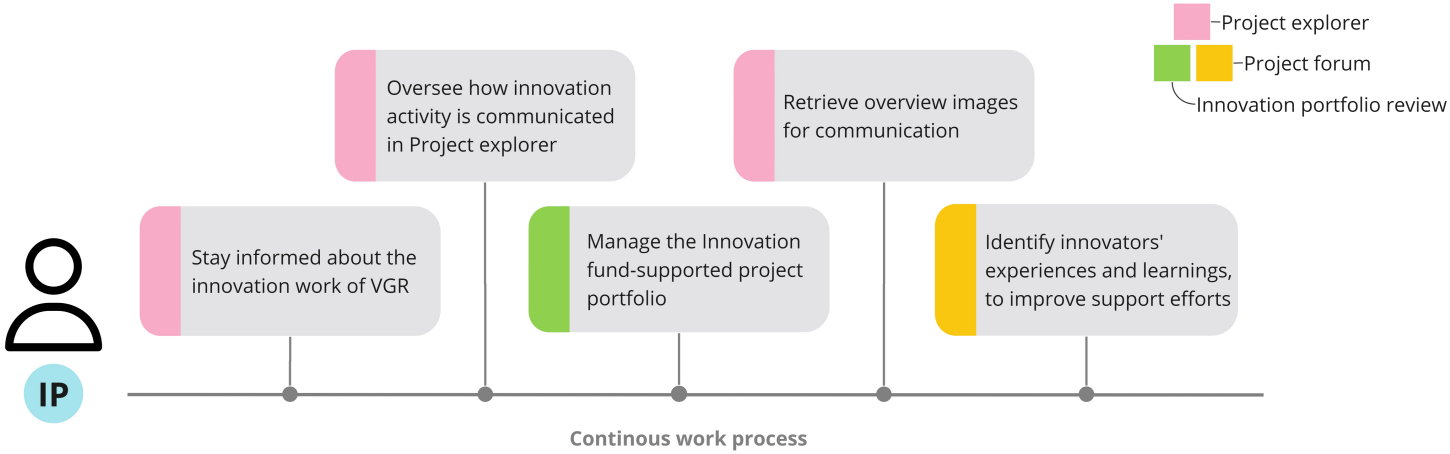

Figure 30. Illustration of the Innovation platform employees' usage of the digital system in their regular work processes.

By regularly exploring the *Project explorer* to review statistics and stay updated on activities in different areas, Innovation platform employees can deepen their knowledge of VGR's overall innovation activities. This applies to all members of the innovation platform. They can also use the *Project explorer* to stay updated on specific innovation projects or refer to it when they receive inquiries from other actors in VGR. Additionally, observing Innovators' interactions in the *Project forum* can provide insights into innovators' experiences, supporting Innovation platform employees in refining their own work.

The *Innovation portfolio review* can be used, for example, to analyse portfolios of innovation projects funded by the Innovation Fund. For the management of the Innovation fund, this analysis can serve as a basis for discussing the desired distribution of the collection of projects. It can also be used to communicate with the steering committee of the Innovation fund (who are not part of the Innovation platform) or other leading positions in VGR. Additionally, it can help in developing strategies and portfolio guidelines, and serve as the basis for prioritisation and decision-making regarding new projects. Insight into various innovation project portfolios in VGR can also be a crucial starting point for developing the overall innovation work in the organisation.

Retrieving statistics and visual overviews from the *Project explorer*, and potentially from the *Innovation portfolio review*, of the work conducted or contributed by the Innovation platform can be valuable in other communication efforts. This includes resource-related discussions, recruiting new employees, and other communication activities aimed at spreading awareness of innovation within the organisation.

7.6.4 Other relevant actors in VGR

The user group consisting of "other relevant actors in VGR" typically has limited involvement in specific innovation project processes. Their interactions with the digital system are more likely to occur continuously in their normal work processes. As illustrated in Figure 31, these interactions occur in the *Project explorer*.

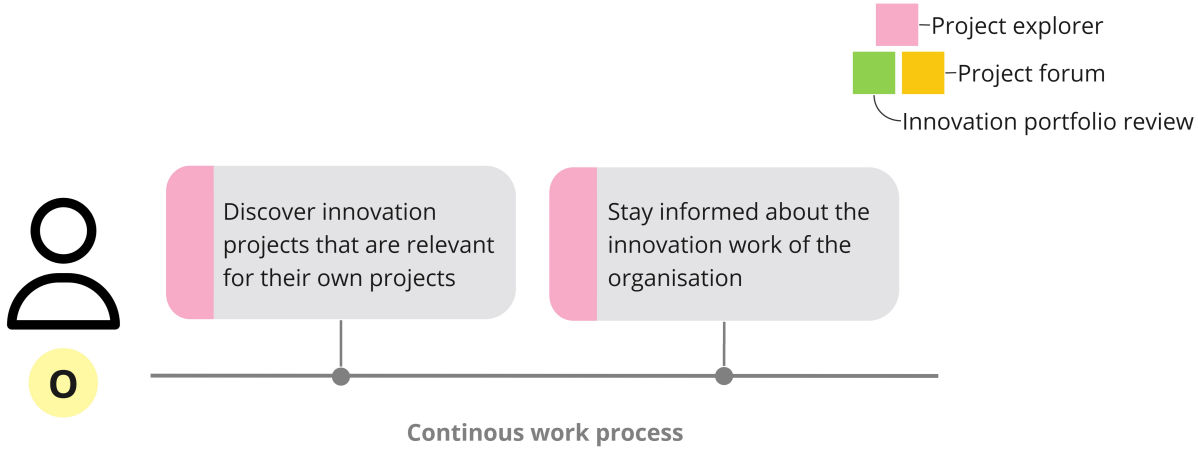

Figure 31. Illustration of the other relevant actors in VGR's usage of the digital system.

By learning about specific innovation projects and viewing the overview images in the *Project explorer*, also this user group will enhance their understanding of VGR's overall innovation efforts. Through the same system part, they may also discover innovation projects that are useful for (other types of) projects at their own units or departments. Additionally, insights into the overall innovation work in VGR is an important aspect when making strategic decisions about their own work. They can use this knowledge for developing strategies and modifying specific projects based on the portfolio.

8.

DISCUSSION

8. Discussion

This chapter entails discussions on the methodology and results of the study, including an analysis of the potential influence of the design concept on innovation capability and implementation of design concept.

8.1 Methodology and process

In any design process, compromises must be made to accommodate the needs of individual users. The diversity among the user groups in this study amplifies the challenge of making such simplifications and compromises. Certain user groups, such as the “other relevant actors in VGR” and to some extent, the Innovation platform employees, demonstrate more significant diversity. Focusing exclusively on one of the user groups could have provided a deeper understanding of the needs of these users and their specific context, potentially resulting in a design concept better suited to their requirements. However, such an approach risks overlooking the impact on other user groups as well as important user experience connections and organisational dynamics. The result of this study shows that multiple user groups are affected by lack of access collective information about innovation projects, emphasising the need for a comprehensive approach to developing feasible and valuable solutions. The approach of the study implies that it can beneficially serve as a starting point for delving deeper into each of the user groups and developing feasible and valuable solutions tailored to their specific needs.

8.2 Design concept

The digital system comprising the design concept has potential to increase information exchange, collaboration and strategic alignment in VGR, thus enhancing overall innovation effects in the organisation. However, this potential can only be realised if users actually engage with the digital system after implementation. Whether they will do so depends on two key factors – their awareness of the digital system's existence and their incentives for using it.

Raising awareness about the system is challenging due to VGR's large organisational structure, requiring information to pass through multiple hierarchical levels and involving stakeholders with varying interests. This challenge is elevated by the relatively non-uniform nature of VGR’s operations, as identified in this study.

As stated in the literature in section 2.3, individuals' likelihood of accessing information from a source depends on their perception of its value and effort required to retrieve it. Therefore, users' preconceptions of the system must be considered, both in further design of the system and in communication strategies for it.

Since the study has explored the needs of various user groups, it increases the likelihood that incentives have been created for them to use the digital system. However, this needs to be further investigated through user testing and evaluations. Furthermore, it is likely that the perceived value of and incentives for using the system will vary among the user groups. Innovators frequently face challenges during the execution of their innovation projects, which they perceive could be mitigated through improved access to information about other innovation projects. Conversely, heads of departments typically do not experience significant challenges in their current responsibilities regarding innovation activities. The usage of the system also introduces new work tasks for heads of departments, including increased participation in innovation projects and more strategic work. As a result of this, heads of departments might be less inclined to use the system voluntarily and thus have weaker incentives to do so compared to innovators.

Additionally, all user groups may hold some level of scepticism regarding the adoption of a new digital system because of the large number of existing systems. This highlights the importance of integrating the digital system into the existing ones, and of making the system inviting and easy to use, especially in its initial version.

8.3 Potential impact of design concept on innovation capability in VGR

The design concept holds the potential to enhance several organisational and individual components outlined by Amabile and Pratt (2016) (see section 2.2 for a more detailed description of the model). For innovators, *creativity-relevant processes* could increase by learning about processes and method applications from other innovation projects, facilitated through the *Project forum* and interactions with innovators found in the *Project explorer*. Additionally, their *intrinsic motivation to innovate* may strengthen as they interact with fellow innovators through these platforms. This can occur through receiving support from other innovators and relevant individuals in VGR they encounter, as well as through a reduced sense of isolation stemming from awareness of the challenges faced by other innovators. Additionally, observing solutions from other innovation projects could serve as inspiration and consequently enhance motivation.

The design concept does not directly address the component of *skills in the task domain*, as innovators already possess expertise in their respective domains. However, through the *Project forum* and interactions with innovators discovered in the *Project explorer*, they may gain more awareness of resources and how to access them. This could followingly increase the application of *resources in the task domains* in the organisation.

Accessing the information in the *Innovation portfolio review* can increase *skills in innovation management,* since it provides knowledge and clear work processes. This system part along with *Project explorer* enable leaders at various levels to become more involved in the VGR's innovation efforts. Increased awareness of ongoing innovation projects can also raise overall *motivation to innovate* within the organisation.

8.4 Implementation

Since the design concept presented in this study is in a very early stage, additional development is necessary before any implementation can be considered. The design concept needs to be tested with users and to undergo several iterations. This does for example involve deeper explorations about what type of information is most relevant to each user group, encompassing both information of specific innovation projects and overview images. Furthermore, further development of the design concept involves creating user-friendly interfaces that support an easy access to information and inspires to more innovation activities.

In connection with further development of the concept, some organisational matters need to be addressed. Primarily, decisions need to be made regarding who will take ownership, and thus be responsible for, the development of the digital system. It is also crucial to consider in what way it should be integrated with the other existing digital systems within the organisation. Given the scope and functionality of both the "FoU Project database" and the "VGR Project centre", it is estimated that both of these digital systems are suitable for accommodating the features of the design concept.

Regarding innovation portfolio management, a big portion of additional studies and organisational adoptions is required to enable the implementation of this approach. This involves determining how

decisions regarding the registration and decision of related aspects in OPSI's Facet model (see section 7.5) for each innovation project should be made, as there are currently no applicable processes in place for this. Furthermore, it is necessary to delve further into the purpose and application of innovation portfolio management in VGR. This entails exploring how innovation projects should be grouped into portfolios, how missions and guidelines should be established for each portfolio, and identifying the individuals responsible for each portfolio as well what actions they should take based on the portfolio.

Furthermore, unlike the other system parts, the *Innovation portfolio review* does not immediately address a specific gap in current user work processes. Instead, it serves future work processes related to innovation portfolio management. Consequently, implementing this system part will likely require more extensive organisational measures and adjustments from users, potentially resulting in a longer implementation timeline.

In the development of the *Innovation portfolio review*, it is also necessary to consider the overlap of functionality with the overview images in the *Project explorer*. In the current design, these system parts are separated because they serve different purposes and partly utilise different data. More specifically, several user groups would benefit from accessing overview images of the overall work in VGR, and these cannot access the *Innovation portfolio review*. The portfolio overviews in the *Innovation portfolio review* may contain more detailed information that may not be suitable for public display. Additionally, the presentation of information in the overview images in each system part is tailored to their respective purposes. However, depending on the results of further studies on innovation portfolio management in VGR and iterations and user testing of both the *Innovation portfolio review* and the *Project explorer*, the conclusion may be that they could be integrated into one.

In further development of the *Project explorer*, exploration is also needed regarding the functionality of recommending innovation projects that are relevant to the specific user. While likely technically straightforward, this task presents several possibilities. Iterations and user testing will be valuable for determining the most effective approach. One aspect to consider is how the system should prioritise relevant project matches when presenting results. For instance, should projects with the highest number of matching keywords be listed first, or should certain keywords carry more weight than others? As previously mentioned, these keywords can encompass both (medical) domains and applied methods, etcetera. Further research is required to assess the most relevant keywords and potentially establish a ranking system. Additionally, another possible approach, aside from keyword matching, involves analysing project descriptions and establishing connections between projects. AI could potentially play a role in this process.

When further developing the design concept, it could be advantageous to prioritise among the design goals and core user needs (presented in section 5.6). The design concept presented in this study aims to address the needs and challenges of various user groups within a broad context, and while delving deeper into each of the three system parts is essential in development of them, it is not necessary to implement all system parts collectively or even simultaneously. Allocating resources to one part at a time may prove more effective. Additionally, the system parts of the design concept do not necessarily have to be integrated into the same digital system, since the features are rather diverse. This means that they may have different entry points. Nevertheless, results from *user needs and context mapping* emphasise that users should not have to input data into multiple systems.

Furthermore, the design does not have to be fully realised before implementation. Instead, starting with a simple version that includes only the most relevant features and refining it over time can be beneficial. This approach is particularly useful due to the high complexity in the usage context -

including many influenced user groups, a big number of existing system and a large organisational structure - making it particularly challenging to estimate how the new system will function in practice prior to implementation.

9.

CONCLUSION

9. Conclusion

The aim of the study was to explore the needs of each user group regarding accessing and contributing to collective information about innovation projects in the healthcare sector of VGR. The results of the study highlight the complexity of user needs and organisational conditions for enhancing access to this information, with differing levels of necessity observed across all user groups. Moreover, it highlights the interconnectedness of these user groups, underscoring the importance of a holistic consideration when designing a solution to meet the user needs.

The objective was to design a concept of how to meet the identified user needs. Design guidelines for a digital system for information exchange about innovation projects have been established, encompassing the tasks relevant to each user group. The identified main design goals for the digital system are:

- Facilitate for the user in finding projects that are potentially useful to know about in their innovation activities.
- Contribute to lowering the barrier for innovators to interact and share experiences with each other.
- Provide an overview of innovation projects with the purpose to facilitate leading and strategic work.

Throughout the study, it became apparent that the organisational structure and dynamics of VGR significantly influence the feasibility of implementing such digital system, necessitating substantial organisational adjustments. This involves clearer definition of work roles and work tasks to facilitate information sharing. Development of the digital system will require further iterations, user testing and studies to determine the best approach.

Although solely providing a user-friendly digital information exchange system will not resolve the issue of information sharing in VGR, it is nevertheless a crucial prerequisite for facilitating such sharing. Moreover, it can serve as a starting point for discussions on organisational adjustments. In conclusion, when integrated with comprehensive organisational development efforts, a well-designed digital information exchange system has the potential to enhance collaboration and align efforts within VGR, thereby contributing to even more impactful innovations.

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Appendix

Content:

For coloured pages, please refer to the digital version of the report.

1. Interview guide for focus group with innovators, in phase one of the study. The guide is in Swedish.

1. Intro + uppvärmning/presentera sig

2. Behov vid drift av innovationsprojekt
   Först tänkte jag att vi ska prata liten stund om vad som behövs för att driva innovationsprojekt. Både av er själva, men också i form av tillgång till viss kunskap eller information. Eller något helt annat annat.
   a. Jag antecknar på post-it:s i Miro. Mest som stöd när vi pratar, allt behöver inte dokumenteras på dem nu. Ni kan också bara säga vad ni tänker, ej bundna till post-it:s.
   b. Ex om de inte förstår/kommer på:

      - Kunskap om hur man planerar ett innovationsprojekt
      - Tillgång till metoder och verktyg
      - Kreativitet

3. Stöd från andra projekt
   a. Vad av det här, eller något annat, skulle kunna underlättas av information från eller kontakt med andra innovationsprojekt?

      - Hur?
      - Vad vill man se/höra om från andra projekt?

   b. Vad för projekt vill man komma i kontakt med för att få stödet?

      - (Vilka aspekter ska vara "lika"?)
      - Skiljer sig för de olika faktorerna vi har skrivit ut?

   c. Vad skulle vara mest betydelsefullt för innovationsprojektet? Vad ska läggas vikt på?
   d. Hade interaktionen eller informationsdelningen passat att ske i något slags system (digitalt system eller annat nätverk eller aktiviteter osv)?

      - Hur?
      - Hur ska infon tillgås (olika för olika info?)?

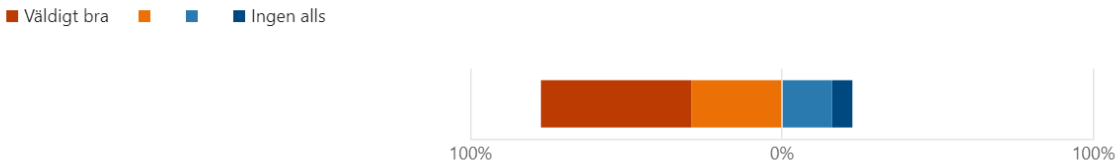
   e. Vad är andra viktiga egenskaper hos ett sådant här system?

4. Sammanfattning/avslutning.

2. Survey for heads of departments. Questions and responses are in Swedish.

1. Hur bra kännedom upplever du att du har om vilka innovationsprojekt som gjorts och görs i din verksamhet?

Mer information

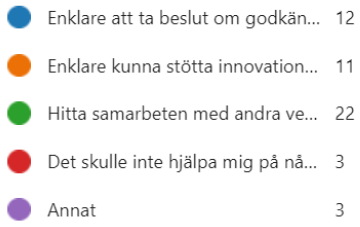


2.Comment

Ett av projekten får jag väldigt lite information om eftersom ansvarig medarbetare undviker kontakt med chef.
En medarbetare arbetar med ett innovationsprojekt sedan två år tillbaka. Vi har möten regelbundet då hon håller mej uppdaterad om projektet. Jag har också bjudits in och deltagit på en del möten med Innovationsfondens handledare och med andra samarbetspartners i projektet.
Jag önskar att det var lättare att starta inovationsprojekt.
Har en nära dialog med de som arbetar med innovationsprojektet på xxx. Har deltagit på några av deras presentationer. Samt deltagit på någon arbetslunch på enheten med medarbetarna och de som driver projektet.
Digital Hälsodeklaration
God kännedom inom den egna verksamheten men inte på SU i stort.
Vissa projekt drivs inom förvaltningen som jag/ vi i verksamheten inte har tillräcklig information om
Jag har ständig dialog med alla första linjens chefer i mitt VO och de brukar vara angelägna om att informera mig när de hittar på något innovativt.
Inom verksamheten pågår många utvecklingsprojekt varav vissa säkert skulle kunna gå under benämningen innovationsprojekt.
Ny på jobbet, och ingen information alls har nått mig.
Verksamhetschef med långvarigt kliniskt intresse i ämnet

3. Hur skulle en enkel tillgång till samlad information om innovationsprojekt i VGR kunna hjälpa dig i ditt arbete?

Mer information



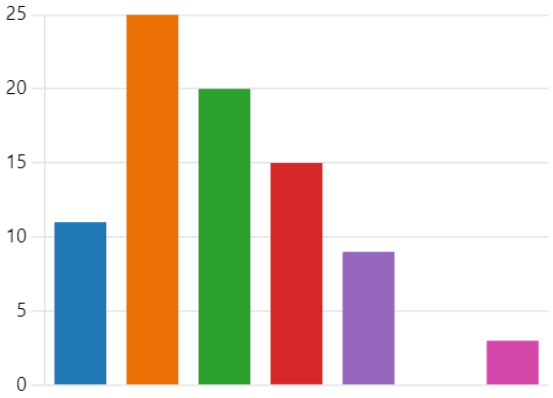
4.Comment

En enkel överblick vore bra, så man snabbt ser om något har anknytning till den egna verksamheten
Vet ej
Jag har begränsad möjlighet att hålla mej uppdaterad på alla olika innovationsprojekt, utan har tillit till min medarbetare att hålla sig uppdaterad om det och att involvera mej om hon anser att det ger mervärde.
Dels inspirera till nya arbetssätt i verksamheten samt identifiera möjliga samarbetspartners.
Det leder till snabbare beslut
jag ser en viss nytta i att kunna ta del i andra innovationsprojekt. Att samla den typen av information skulle dock kräva att vi alla rapporterar in våra egna innovationsprojekt för att göra dem synliga på samma vis. Jag tycker inte att den arbetsinsatsen skulle motsvara ev nytta av tillgång till samlad information.

5. Vilken information är viktigast för dig att se om enskilda innovationsprojekt?

Mer information

Kontaktuppgifter	11
Syfte och bakgrund	25
Tillvägagångssätt	20
Vilken status det har - idé, pågå...	15
Typ av finansiering	9
Jag behöver inte någon informa...	0
Annat	3



6.Comment

Ofta tänker man mycket på vad man själv vill ha med, mer än vad den som läser letar efter. Vi behöver korta beskrivningar, ett par rader om ämne, innehåll. Då vet man om man ska titta vidare.

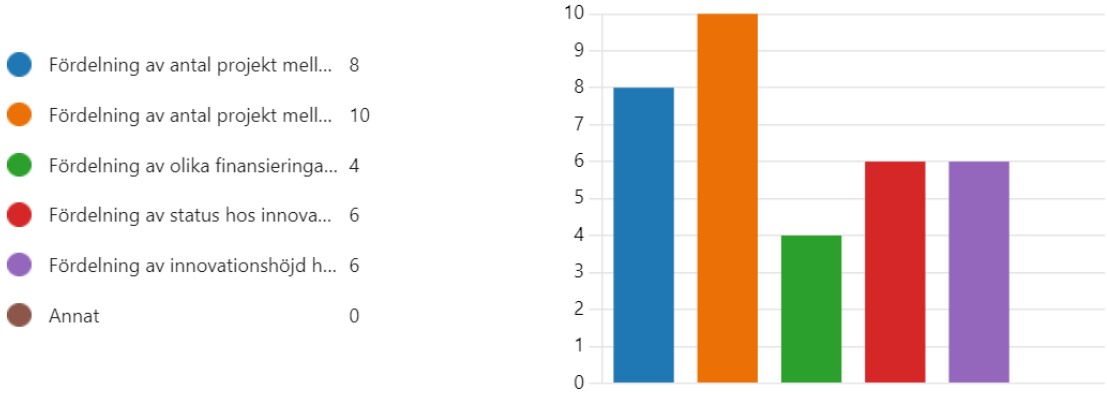
7. Skulle du ha nytta av att se statistik över innovationsprojekt?

Mer information

Ja	13
Nej	18

8. Vilken statistik är viktigast för dig att se?

Mer information

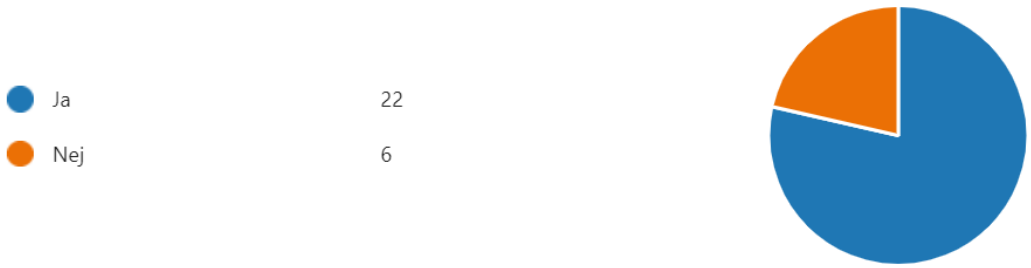


9.Comment

Jag tänker att överblicken främst är till nytta för chefer på högre nivå. Som verksamhetschef har man ju oftast god inblick i egen verksamhet men förvaltning/region som helhet har inte överblick. För mig vore nyttan att inte behöva rapportera utan det finns redan samlat. Allt som minskar rapporteringsbehov är av godo om det inte kräver en större insats per se. Sedan är detta med gränsdragning innovation/verksamhetsutveckling/utvecklingsarbete mycket svår. Inom ex laboratorieverksamheter driver vi ständigt högteknologisk utveckling och utvecklinsgarbete, det ingår liksom i drift/ordinarie uppdrag. som del av ordinarie verksamhet - att sammanställa allt det arbetet är kanske inte rimligt? Definitonen blir viktig.
Jag tror inte det i alla fall.
Se ovan, tiden räcker inte till för att engagera mej mer än vad jag gör i Innovationsfondens arbete
Svårt - jag vill hellre se vad som pågår enl ovan. Vi är rädda för att få mer "onödiga arbetsuppgifter" som tar tid och kanske är till nytta för någon annan.

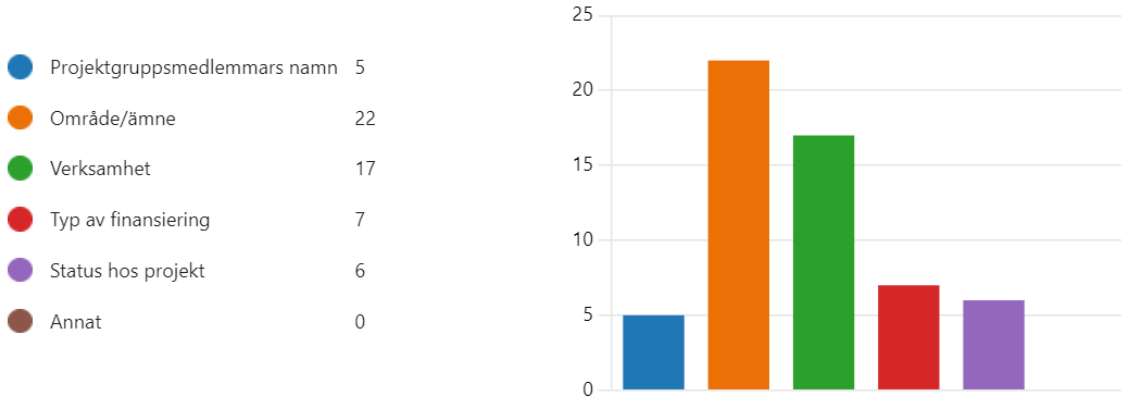
10. Vill du genom en sökmotor kunna hitta specifika (grupper av) innovationsprojekt?

Mer information



11. Vilka faktorer vill du söka på?

Mer information



12.Comment

Önskvärt med tips kring hur extern finansiering av tjänster med inriktning innovation kan fås.

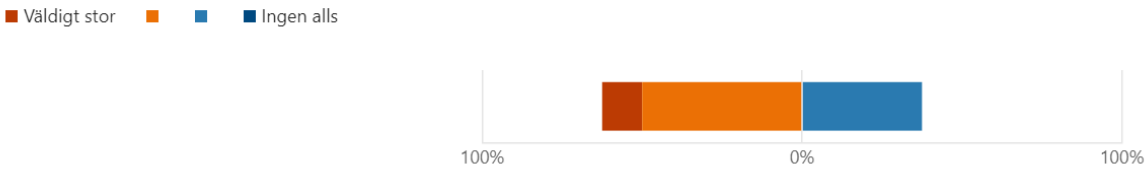
13.Other thoughts

Hur håller vi tempo och hur prioriterar vi dessa projekt när vi är ålagda att pausa i princip allt pga ekonomiska begränsningar?
Ett ev arbete där man samlar in uppgifter om projekt måste vara enkelt med få frågor och göras av personalkategori som inte är i vårdnära arbete. Helst skulle vi vilja lämna över inmatning om projektuppgifter till någon annan enhet eller så måste det finnas smarta funktioner där man bara kopierar av sin projektplan och lägger in i ett system utan tusen andra uppgifter.
Tanken med detta är god men jag ser stora problem med att belägga verksamheten med beting att rapportera in data för alla pågående innovationsprojekt.

3. Survey for innovators. Questions and responses are in Swedish.

1. Hur stor nytta skulle du, i ditt innovationsprojekt, ha eller haft av att ta del av mer information om andra innovationsprojekt?

Mer information

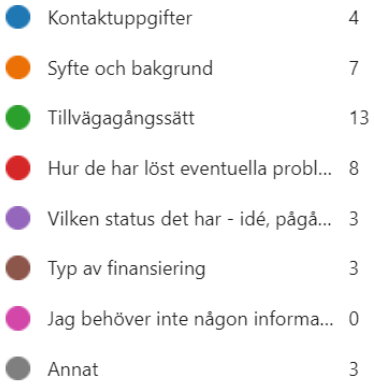


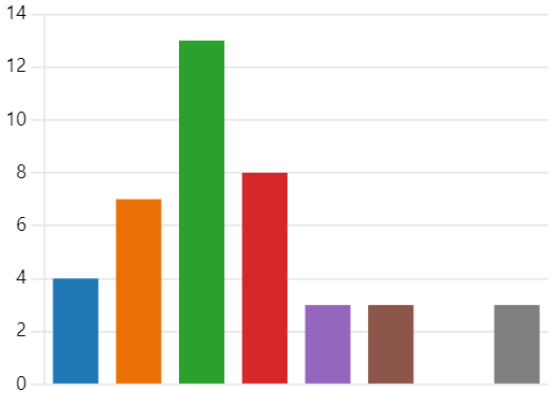
2.Comments

Det hade underlättat att förstå hur man söker framgångsrikt, men gällande ämne och innehåll tror jag inte att det hade hjälp mig specifikt då det jag gör/gjorde var unikt i Sverige.
Det beror på hur detaljerad informationen är. Jag tycker vi har en övertro på att tillhandahålla superdetaljerad info om vissa projekt men det kanske inte är det jag egentligen vill veta.
Viktigt för att lära av andra innovatörer samt att få kännedom om hur komplext det är att innovera i stora komplexa organisationer.
Hade varit bra att kunna söka efter liknande projekt för inspiration, dela erfarenheter och kunskap.
Tips och idéer om tex information till patienter men även hur man gått tillväga när man startade upp sitt innovationsprojekt. Mer kunskap om hur stöd och behandlingsplattformen är uppbyggd så att man kan få en hum om hur man ska utforma ett arbete som ska läggas där.
Det hade varit värdefullt att få idéer och inspireras av andra innovationsprojekt, kanske hade vi kunnat ta del av andra erfarenheter av användning av stöd- och behandlingsplattformen etc.
Det tror jag hade varit väldigt bra då jag vid första ansökan ej hade någon erfarenhet/förförståelse gällande Innovationsprojekt
Enkelt tillgång till översiktlig information om alla innovationsprojekt borde vara en självklarhet i VGR, för att lära över gränser och som del i löpande verksamhetsutveckling.

3. Vilken information är viktigast för dig att se om andra innovationsprojekt?

Mer information





4.Comment

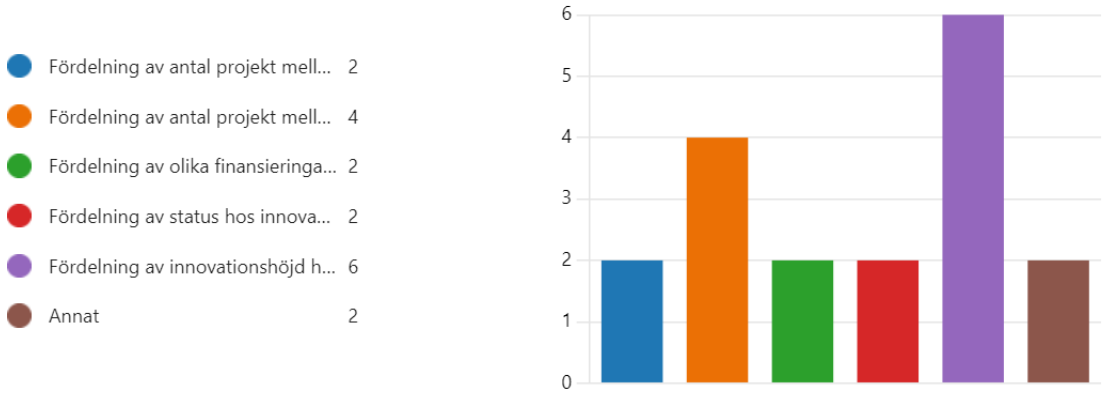
Ofta räcker det med ett syfte/en titel för att kunna sålla i om det är något som är aktuellt, sedan kan man höra av sig till någon och diskutera vidare om det är relevant.
Att få ta del av andra innovatörers innovationsresa...det är ingen enkel resa utan lång....kanske omöjlig innan innovationen har implementerats och att frågor kring förvaltning, drift, ägande är löst.
Coachen var ett stort stöd i framdriften. Det hade även varit bra att ha ett liknande Innovationsprojekt som är slutfört att jämföra med. Det var mycket lättare vid mitt andra projekt naturligtvis. Hade jag inte haft coachen så tror jag inte jag vågat söka en andra gång.

5. Skulle du ha nytta av att se statistik över innovationsprojekt?

Mer information Insikter

6. Vilken statistik är viktigast för dig att se?

Mer information

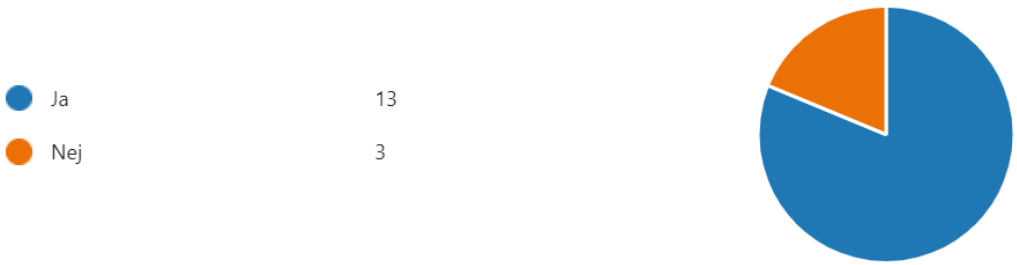


7.Comment

Hur många innovationsprojekts som implementerats och att frågor kring förvaltning, drift, ägande är löst
Oklart vad som menas med statistik här? Statistik över vad? Hur många innovationsprojekt som genomförts? Inom olika ämnen eller annat? Statistik över hur mycket pengar som godkänts? Men oavsett så kommer jag inte på någon särskild statistik som jag skulle ha behov av att se.
Det skulle inte haft någon betydelse för vårt arbete.
Intressant att få ta del av liknande projekt för att knyta kontakter.

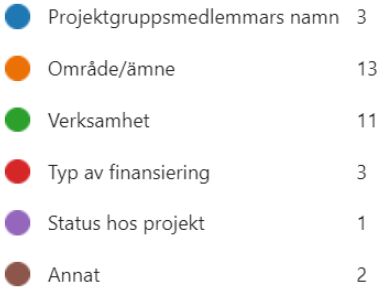
8. Vill du genom en sökmotor kunna hitta specifika (grupper av) innovationsprojekt?

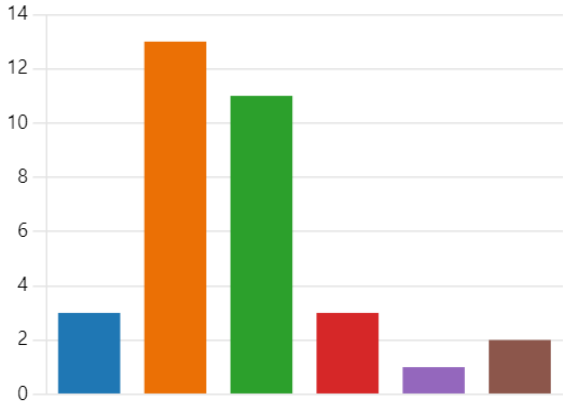
Mer information



9. Vilka faktorer vill du söka på?

Mer information



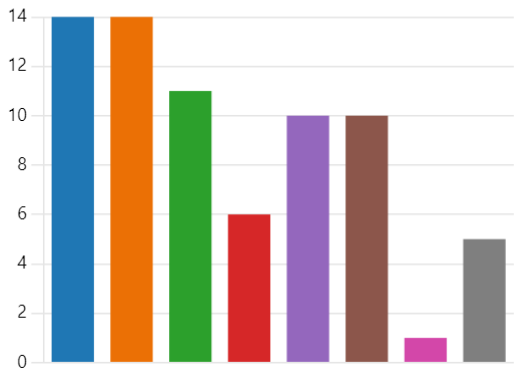


10.Comment

Jag vill ha en sökfunktion för projekt, inte bara innovationsprojekt.
Hur många innovationsprojekts som implementerats och där frågor kring förvaltning, drift, ägande är löst
Jag vill att det ska vara lätt att söka information om liknande projekt. I mina projekt har tiden att arbeta med projektet varit väldigt splittrat då detta har skett mellan olika larm (arb som ambulansssk). Några timmar i månaden på avsatt tid. Arbetar man i projektform med tidsplan måste det vara enkelt att få stöd i processen

11. Vilken information om ditt innovationsprojekt skulle du vara bekväm med att andra medarbetare i VGR har tillgång till?

Mer information



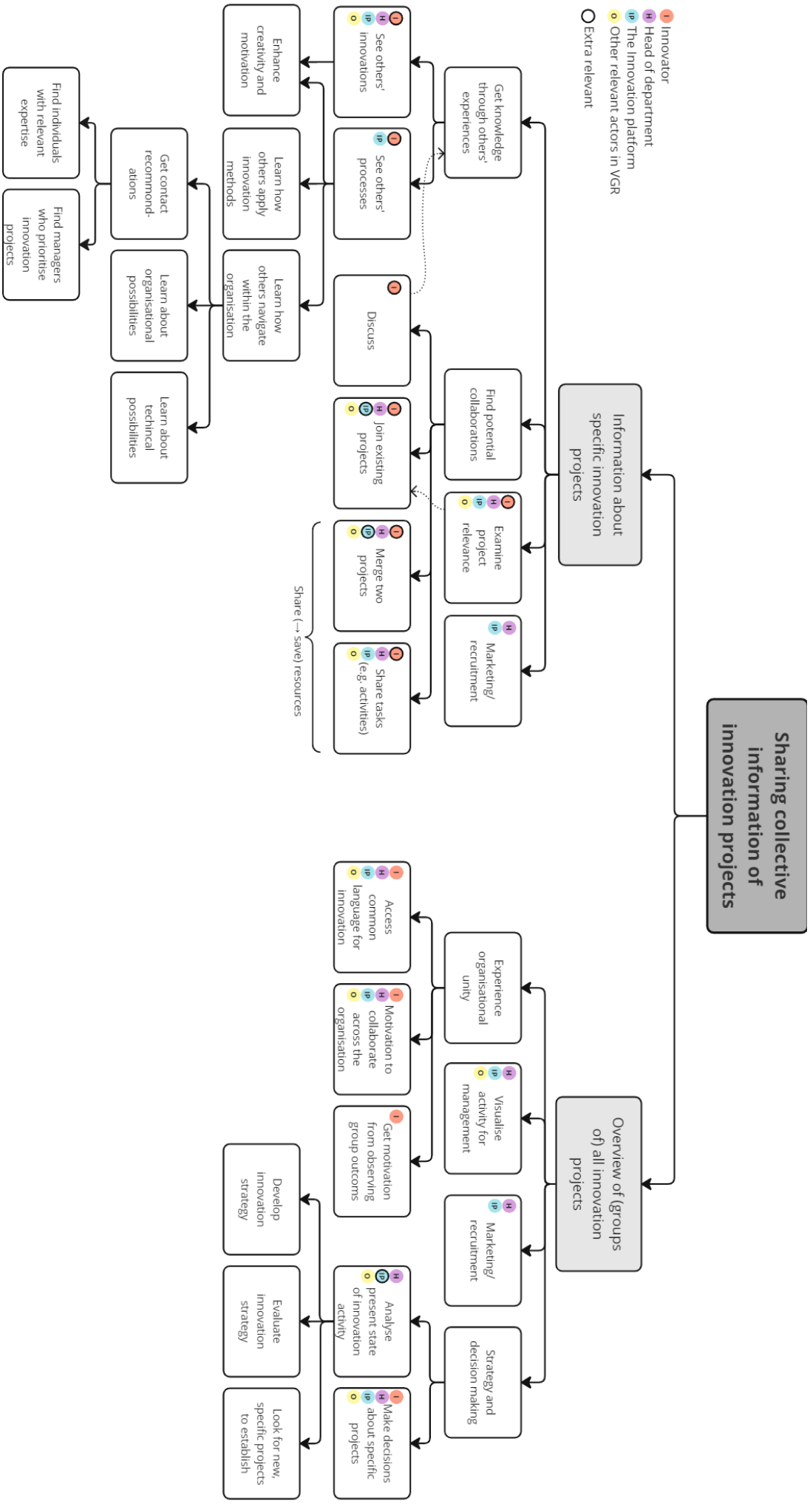
12.Comment

Hur många innovationsprojekts som implementerats och där frågor kring förvaltning, drift, ägande är löst
Förutsatt att det är ett enkelt system man anger informationen i, det ska inte bli administrativt jobbigt.... =)
Önskar uppmuntra andra ”vanliga kollegor” att söka Innovationsprojekt. Min känsla är att många tror/förutsätter att det inte är möjligt. Man måste bara vilja och man behöver vara förberedd.

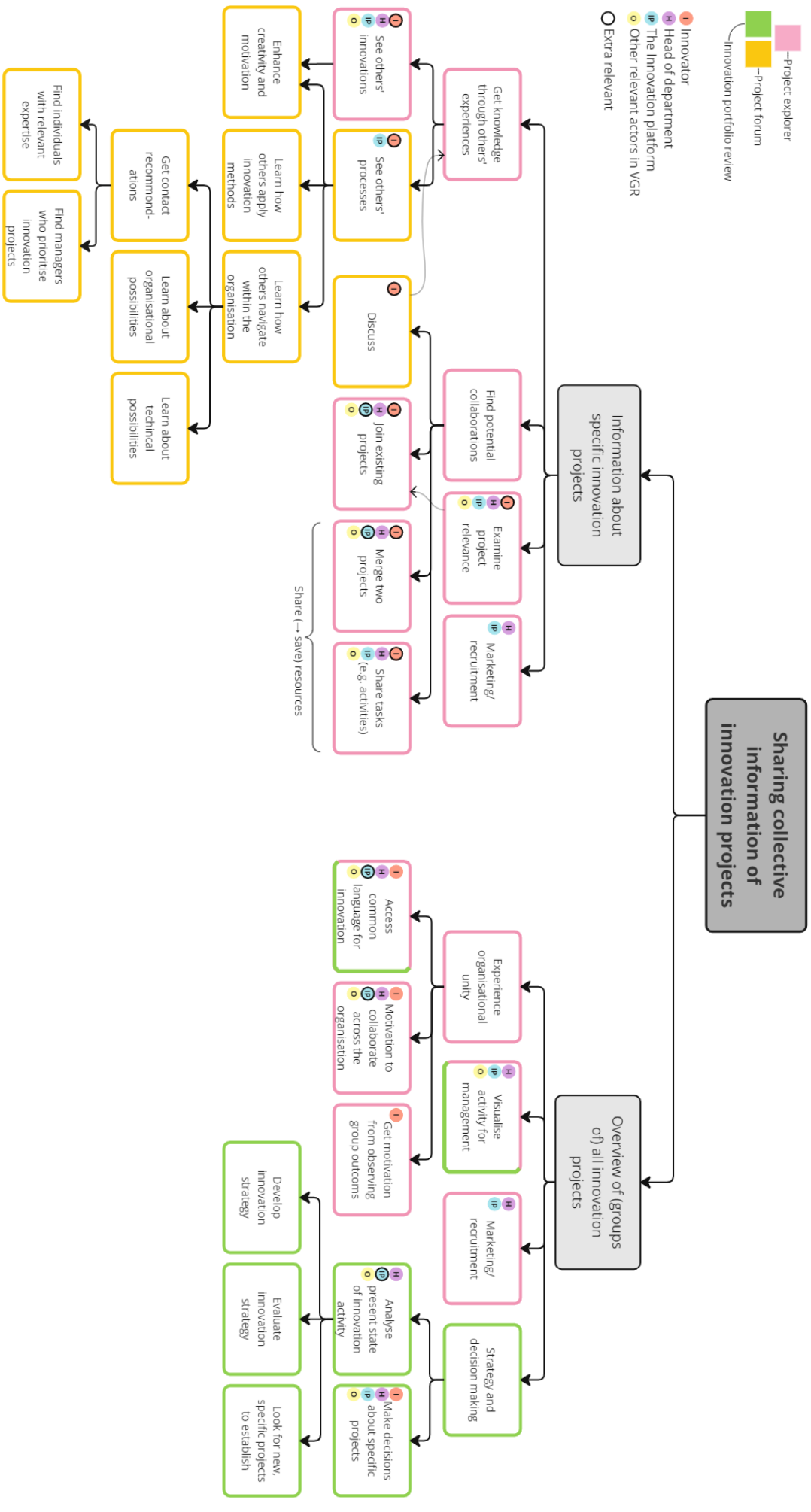
13.Other thoughts

Att tidigt i innovationsresan få verktyg som kan vägleda innovatören mot implementering och där frågor kring förvaltning, drift, ägande är löst.
Alla ansökningar som beviljats medel från innovationsfonden borde ju vara sökbara (nyckelord etc) i detta framtida system i så fall...
Vi var tidiga med vårt projekt och hade inte tillgång till all den information som nu finns på Innovationsfondens hemsida och ska gås igenom inför start. Jag tror att det var tur för annars hade vi nog aldrig satt igång.
Det skulle även vara intressant att träffa andra som innoverar under tidpunkten för sin egen pågående innovation, för att dela tankar, idéer och erfaranheter.
I mina projekt blev det lite oklart med redovisningen av timmar och utbetalning till kostnadsstället. Det är bra att tänka på tydligheten hur och när pengarna ska ”hämtas hem” och vad det innebär för aktiviteter bakom det förfarandet och detta ska ske i god tid innan deadline.

4. A complete image of the “map of information needs”.



5. A complete image of how the “map of information needs” relates to the system parts of the digital system.



DEPARTMENT OF INDUSTRIAL AND MATERIAL SCIENCE
DEVISION DESIGN AND HUMAN FACTORS
CHALMERS UNIVERSITY OF TECHNOLOGY
Gothenburg, Sweden 20xx
www.chalmers.se

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