URBAANIA
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NEW COMPETENCIES FOR GROWTH

SOLUTIONS FOR SMALL AND MEDIUM ENTERPRISES FROM THE URBAN GROWTH VANTAA PROJECT

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Separate issue, Laurea University of Applied Sciences

This publication takes a pragmatic approach to the competence development of small and medium enterprises (SMEs), and is suitable for anyone interested in this topic. The material is compiled from lessons learned in the Urban Growth Vantaa project. The publication has been co-created by the project partners.

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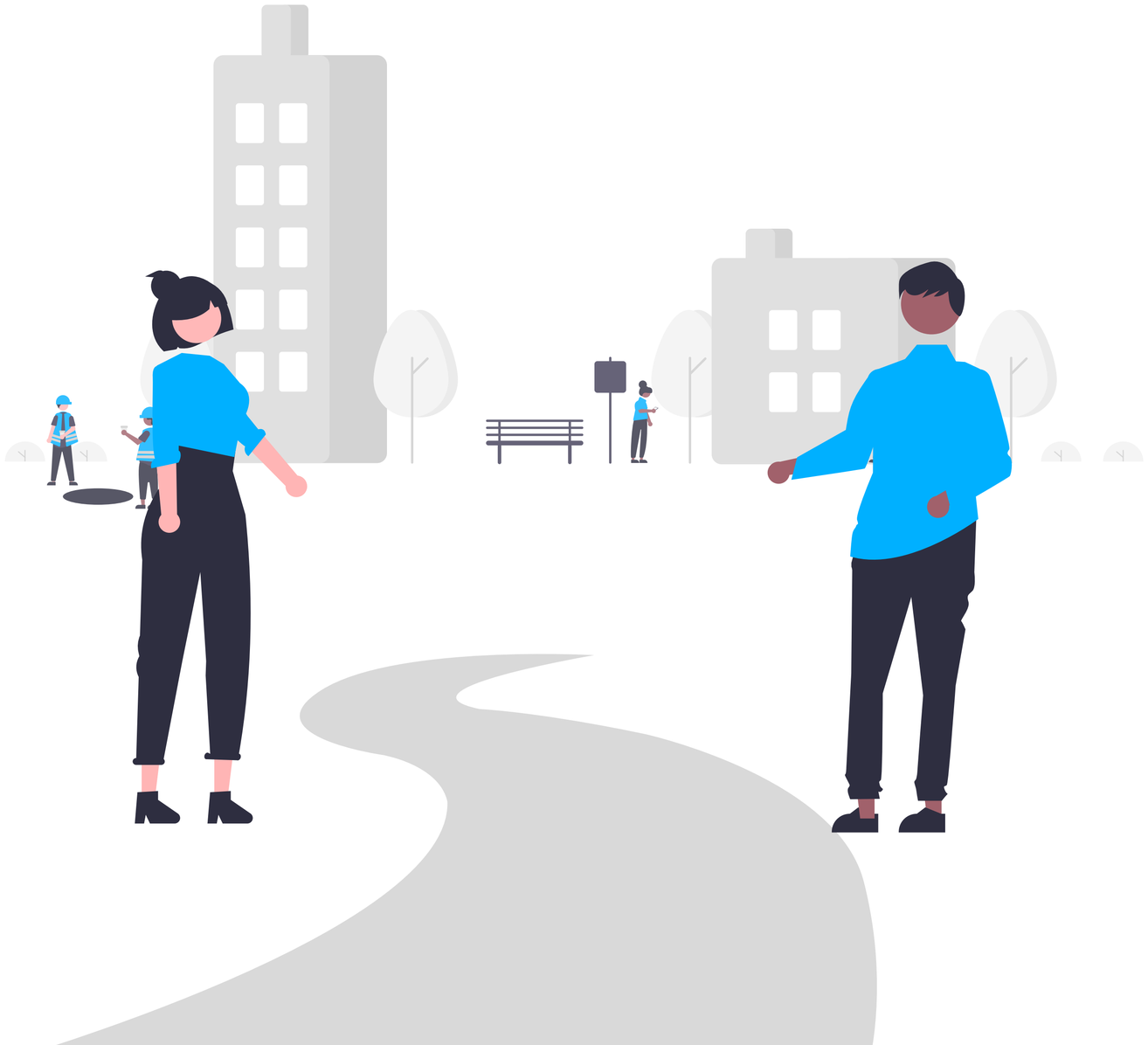


INTRODUCTION

Working life is in a state of accelerating change, which poses many challenges for companies. In the future, successful companies will be the ones that recognise that skilled and motivated personnel are a company's most important asset. These companies invest in continuous learning at work, and prepare for their future competence needs. By developing the competence of personnel, companies can respond to the changes arising from technological changes, as well as support the company's socially responsible growth. As such, the company promotes a working culture that values people and improves wellbeing. However, for small and medium enterprises (SMEs), the resources and skills available are not sufficient to promote continuous learning, which can threaten the development of companies and the vitality of cities.

The Urban Growth Vantaa project developed solutions particularly for the challenges of working life that Vantaa faces. In Vantaa, companies are facing a challenge due to their low level of competence compared to other large cities in Finland. One third of the workforce is in the labour market without a post-comprehensive school education. At the same time, shifts in working life and technological development change the way we work. The majority of new jobs are in SMEs, but many SMEs find it challenging to support continuous learning.

URBAANIA KASVUA VANTAA PROJECT

Goal

The project seeks to create new solution proposals for the upskilling of company personnel, preparing for technological changes and increasing employment. These proposals support the development of small and medium enterprises and accelerate their sustainable growth.

Why

One third of the workforce in Vantaa is in the labour market without a post-comprehensive school education.

Who

Random sample of approximately 390 companies operating in Vantaa with 10–200 employees.

Where and when

Vantaa 1/2019 - 7/2022

How

Developing service packages (Growth Deals) for the needs of SMEs to support their growth and social responsibility.

Growth Deals

1. Recruitment and training of workforce
2. Updating the competence of personnel
3. Supporting the processes of technological changes and coaching for competence development

Funding

80% UIA Jobs and Skills programme, 20% stakeholders' own funding. Urban Innovative Actions (UIA) is an initiative of the European Commission, funded with the ERDF.

Budget

EUR 5 million

URBAN GROWTH VANTAA PROJECT PARTNERS

Main coordinator

City of Vantaa
- Economic Development Services
- Employment Services

Educational institutions

Laurea University of Applied Sciences
Metropolia University of Applied Sciences
Vantaa Vocational College Varia
Helsinki Region Chamber of Commerce

Research institutes

ETLA
LABORE

Partner companies

Finnair Cargo Ltd.
InfoCare Ltd.
ISS Services Ltd.
Solteq Plc.
Vantaan tilapalvelut Vantti Ltd.

The Urban Growth Vantaa project sought solutions for the rapidly evolving challenges of working life.

Workforce supply and demand

Many companies face the challenge of finding the right employees. There may be deficiencies in recruitment competence, which can easily lead to poor job matching. It is especially important for companies in industries suffering from a labour shortage to recruit people through different channels and make sure they tap into the full workforce potential. New competence needs can be met through the upskilling of existing personnel.

Digitalisation

Digitalisation poses challenges for employees' competence and the company's ability to manage change. Making use of new technologies is an essential part of a company's competitiveness. It requires companies to have courage and curiosity, and to engage in continuous development – one digital step at a time.

Changing working life

Companies' business environments are rapidly changing, so keeping up with the changes requires updating ways of working and developing the competence of personnel. This requires the company and personnel to be flexible, agile, resilient, bold and innovative.

Continuous learning

A working adult in a changing business environment must continuously develop their competence. This also requires competence management from companies, particularly for supporting employees in continuous learning and preparing for future competence needs.

Social responsibility of companies

Companies are expected to operate responsibly and with an employee-driven work culture. By improving the competence of personnel, a company can support the employees' capacity for change and work, as well as their wellbeing. Additionally, making use of the diverse labour potential is a profitable and socially responsible business practice.

The challenges of the low level of competence of the Vantaa workforce are part of a complex problem for which there are no easy solutions. As such, intersectional cooperation and systemic solutions are required. The Urban Growth Vantaa project is one of the flagship projects of the City of Vantaa, making use of co-creation methods and seeking solutions for upskilling company personnel, increasing employment and meeting the competence needs arising from technological changes. The project partners, representing a wide variety of sectors, include: the City of Vantaa, educational institutions, research institutes and companies operating in Vantaa.

Three service packages, or Growth Deals, were co-created during the project. The purpose of the Growth Deals is to simultaneously support business growth and social responsibility. Growth Deal 1 offered companies services supporting recruitment, as well as training and coaching services supporting growth. Growth Deal 2 supported companies in competence development. The service package consisted of company-specific group coaching and professional skill development services. Growth Deal 3's services supported companies in promoting technological change projects and the development of competence management methods.

Agile testing methods were used in the development of the Growth Deal services. The services were first tested in the partner companies participating in the project. Then, the services were developed further and used in pilot testing in SMEs operating in Vantaa. The experiences from previous Growth Deals were harnessed in the development of the following Growth Deals.

GROWTH DEAL 1

RECRUITMENT AND TRAINING OF WORKFORCE

Growth Deal 1 combined recruitment services supporting the acquisition of new employees with training and coaching services supporting growth. The goal was to particularly support companies that have faced obstacles to growth due to a lack of new personnel.

GROWTH DEAL 2

UPDATING THE COMPETENCE OF PERSONNEL

Growth Deal 2 supported companies' sustainable growth by developing the competence of personnel. The service package consisted of company-specific coaching services focusing on identified business development issues. The Growth Deal also included services for the development of employees' professional skills.

GROWTH DEAL 3

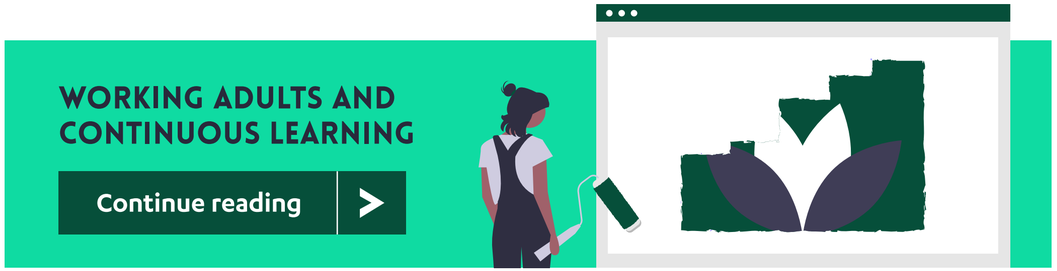
SUPPORTING THE PROCESSES OF TECHNOLOGICAL CHANGES AND COACHING FOR COMPETENCE DEVELOPMENT

Growth Deal 3 supported companies in technological changes. The expert services offered to companies focused on advancing the companies' ongoing technological transformation projects, as well as competence management.

The project has been a unique journey with many lessons, and a testing ground for a diverse set of services. Based on the lessons learned from the project, we have compiled the New Competencies for Growth publication to serve as a pragmatic introduction to anyone interested in developing and supporting the competence of SMEs. These lessons are useful for the management, HR and employees of SMEs, as well as organisations interested in developing SME competence and supporting sustainable growth.

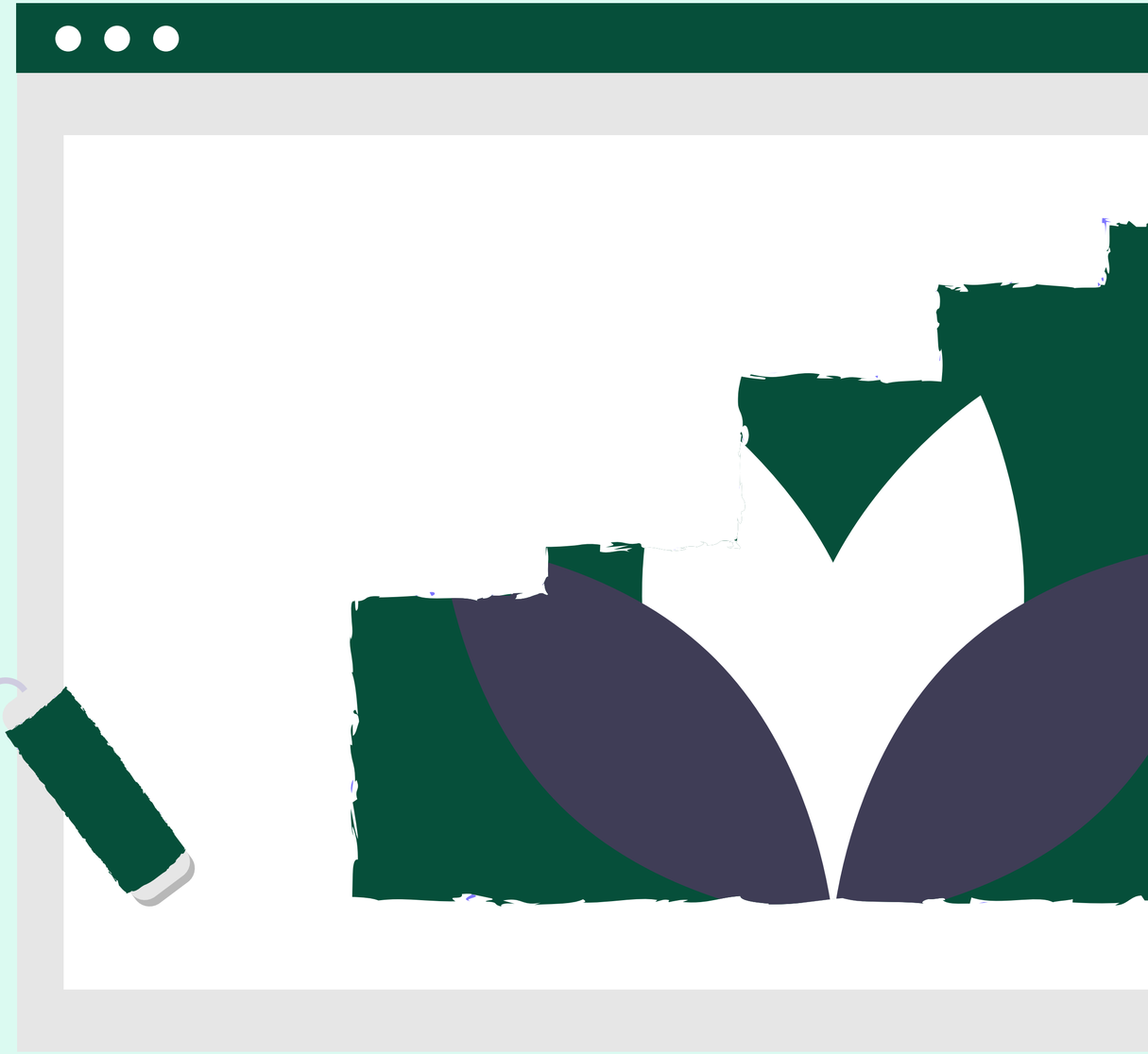
The first part of the New Competencies for Growth publication discusses competence development from an individual's perspective. An understanding of working adults and their different needs and wishes is helpful for finding ways to support the continuous learning of adults. The second part discusses competence development from the perspective of a company's sustainable growth and competence management. It is particularly intended for the management and HR specialists of SMEs who want to improve the company's capacity for change and develop their competence management methods.

The third part introduces the digital tools developed in the project, which can be used to support the company's processes of competence development. The fourth part introduces the key lessons from the project's service development and co-creation work, as well as experiences from its impact assessment. It is intended for projects, organisations and service providers that support the sustainable growth and development of SMEs.



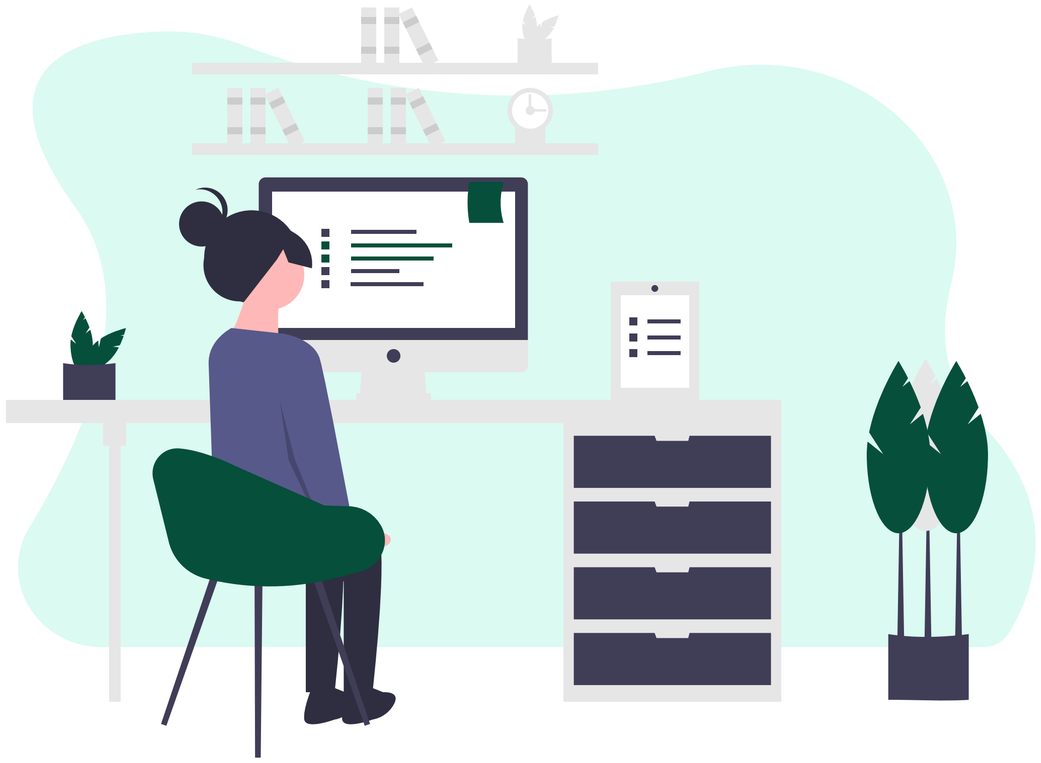
WORKING ADULTS AND CONTINUOUS LEARNING

In order to enable continuous learning and create new and effective practices, the needs of individuals (working adults) must be taken into account. An understanding of the starting points of working adults helps in creating a company culture that supports learning and competence development.



Continuous learning challenges working adults >

Supervisor support methods for employees' continuous learning >



CONTINUOUS LEARNING CHALLENGES WORKING ADULTS

The accelerating change of working life challenges working adults to constantly learn new information and skills. Because of this, continuous learning reforms have been implemented on the national and regional levels. However, approaching the issue only from the perspective of education and training providers will not solve the problem of continuous learning. An understanding of working adults and their different needs and wishes is helpful for finding effective ways to support the continuous learning of adults.

WORKING ADULTS' STARTING POINTS FOR CONTINUOUS LEARNING

Self-management in seeking out education

Working life requires more and more self-management, both for learning new things and updating old competences. Seeking out degree-based education and training programmes also requires a level of technical skills and initiative to find suitable education options. For some adult learners, studying is a challenge by itself, and independently seeking out the right kind of education is challenging. Furthermore, if it has been a long time since the working adult was last in education or training, learning methods may also have changed. A working adult may need support for starting education or choosing between different education or training options. The support of an employee's immediate supervisor and practices to support learning are also important at a workplace community.

Self-efficacy and learning experiences

When working life and work tasks change, a working adult must think about their own capacity for learning and studying. The concept of self-efficacy* means an individual's understanding of their own capacity to succeed at various tasks, such as studying. Without belief in your capacity to learn, persistence by itself is not always enough for independent studying and competence development. An employee's immediate supervisor and workplace community can encourage a working adult's studying by supporting their sense of self-efficacy and belief in their own capacity to learn. Gradually, the accumulated experiences of success in studying grow the individual's faith in their own capacity to learn.

*Source: Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.

Life situation and the environment

Adults' life situations and starting points for competence development vary. Time limitations in particular are a common obstacle to learning. As such, it should be ensured that competence development is possible in a variety of work and family situations. Additionally, the environment has a great impact on whether a working adult will choose to pursue competence development. Colleagues, friends and family can support or hinder an individual's willingness to learn. An organisation's methods for supporting learning play a central role. A workplace culture that encourages learning motivates employees to learn.

The material consisted of interviews with employees of various project partner companies' units and positions. Participant selection was randomised to ensure the diversity of the material. In other words, the interviews also included groups that are underrepresented in education and training, and not just continuous learners who are active and self-managing.

WHAT MOTIVATES PEOPLE TO LEARN?

The Urban Growth Vantaa project has used **surveys and interviews** to examine how working adults feel about learning and studying, and what motivates them to learn. According to the findings of the project, a working adult expects learning to have tangible and immediate benefits. Knowledge and skills learned through studying must be directly relevant and applicable to the individual's own work. Often, new competencies are sought out for a clear need, such as executing new or changed work tasks.

The effect of education and training on the individual's salary or career development is also a motivating factor. The goal of learning may also be maintaining your own labour market value, especially if cooperation negotiations are ongoing or expected at the workplace. Updating competences is thought of as beneficial for securing your employment and thus protecting against unemployment. On the other hand, the prospect of variety and new perspectives also motivate people to learn.

An adult learner considers the benefits of learning as well as its costs, such as time expenditure. Studying outside of work hours means giving up a portion of your free time. Studying can be challenging to fit in with your life situation and different family and work obligations. When making choices related to studying, working adults consider the benefit-cost ratio. A supervisor can encourage employees towards learning by explaining the need for and benefits of competence development.

WHAT DO WORKING ADULTS EXPECT FROM EDUCATION?

Working adults have many different options for competence development. According to estimates, the majority of continuous learning takes place informally while performing work tasks. However, both **formal and non-formal learning** and competence development have their places. The project surveyed participants of the project's theme training courses to chart their wishes and needs regarding training content, implementation methods and personal development. The goal was to gather information on what is important and useful to working learners, what motivates them, and what they expect from training.

Formal, non-formal and informal learning

Formal learning is structured learning, organised by an educational institution and resulting in a degree. It is usually full-time and goal-oriented in nature. It is essential for formal learning that the goals of the educational institution and learner are aligned. For example, this could mean completing a course or degree. Non-formal education can also be structured, but it does not result in a degree. Non-formal education includes education and training organised at workplaces or by non-governmental organisations, as well as supplementary training. Informal learning means all learning taking place in everyday life, such as learning during work. In other words, informal learning takes place outside of educational institutions, and is often sporadic. According to estimates, the majority of the learning of working adults takes place informally.

What do working adults expect from education?

Education should not strain the learner's daily life

An adult learner expects the education methods to be flexible. Particularly valued elements include motivating contact learning sessions and sufficient time between contact lessons in order to digest new information. Ideally, learning takes place in interaction with others, while still considering individual needs such that the implementation of the education does not cause challenges for the learners' daily lives.

Practical tools for your work

Education is expected to provide practical tools and models that are immediately applicable to your own work. The content of the education is expected to meet the needs of both the employee and company, to ease work and motivate towards it. Continuous learning is often thought of as the acquisition of practical and precise information.

Inspired by a sense of community and educators with expertise

A sense of community makes learning inspiring. A working learner learns not only from an educator, but also from their peers. Peer conversations and shared ideas make learning more interesting and give it added value. Additionally, adult learners appreciate educators with expertise, who are able to challenge ingrained ways of thinking, to spar with the learners and, optimally, individually direct learners to the most up-to-date information. Educators are expected to provide encouraging and individual feedback.

Learning accelerates professional development

At its best, education sparks ideas, improves the individual's confidence in their own capacity to learn, and increases their desire to learn new things and seek out new challenges. Insights and new ideas provide motivation and the courage to enact change and develop workplace practices. The immediately gained new information is not necessarily the only benefit of education – it may also provide the spark for continuous learning.

EXAMPLE OF SERVICES DEVELOPED IN THE PROJECT

PROFESSIONAL COMPETENCE DEVELOPMENT SERVICE

Service needs

It is difficult for companies and employees to find information on vocational education and apprenticeship trainings. Additionally, the selection of vocational education and training programmes is broad, complicated and, at times, difficult to understand. The goal of the professional competence development service was to incentivise company management towards competence development, and to motivate employees to participate. Additionally, the service provided more practical information about vocational education, and made it easier to discover education options.

Service implementation

At the start of the service, an expert of vocational education conducted an initial discussion with the management and supervisors of the company. The discussion charted the employees' needs for professional competence development. Based on the needs charted, tailored information sessions were organised for the employees and supervisors. Additionally, the expert assisted the company in finding and planning suitable education. Individual discussions and guidance were also available.

LESSONS FROM THE SERVICE

- Tailoring the options together with the employer ensures that the information sessions meet the needs of the employees.
- The expert's personal guidance, tailored education and peer support from colleagues are motivating factors towards studying.
- The initial discussion gives a better understanding of the need for competence development in the company, and the ways to support the employees' studies. At the same time, the management commits to competence development.
- The challenges discovered included finding information on the various education options, seeking out the education, eLearning and insufficient digital skil
- The positive attitude of supervisors and management towards the education is a prerequisite for success.

EXAMPLE OF SERVICES DEVELOPED IN THE PROJECT

FROM THEME-BASED TRAINING TO GROWTH COACHING

Theme-based training

Service needs

Companies in Vantaa have a need for their employees' competence development in order to grow their business. The project conducted a comprehensive charting of competence at the companies. Based on the charting, a set of theme-based training courses were designed and implemented.

Service implementation

The theme-based training courses included both independent eLearning and contact sessions with an educator. The content of the training included communications, Lean philosophy, supervisor work and management, training for Office suite tools, and customer insight.

Lessons from the service

The training courses were marketed and broadly offered to all employees of the participating companies, but not everyone had the time or opportunity to participate in them. The theme-based training courses did not reach all employees in need of competence development. Additionally, making use of the employees' new competence in company operations was challenging without the company's systematic support.

Growth coaching

Service needs

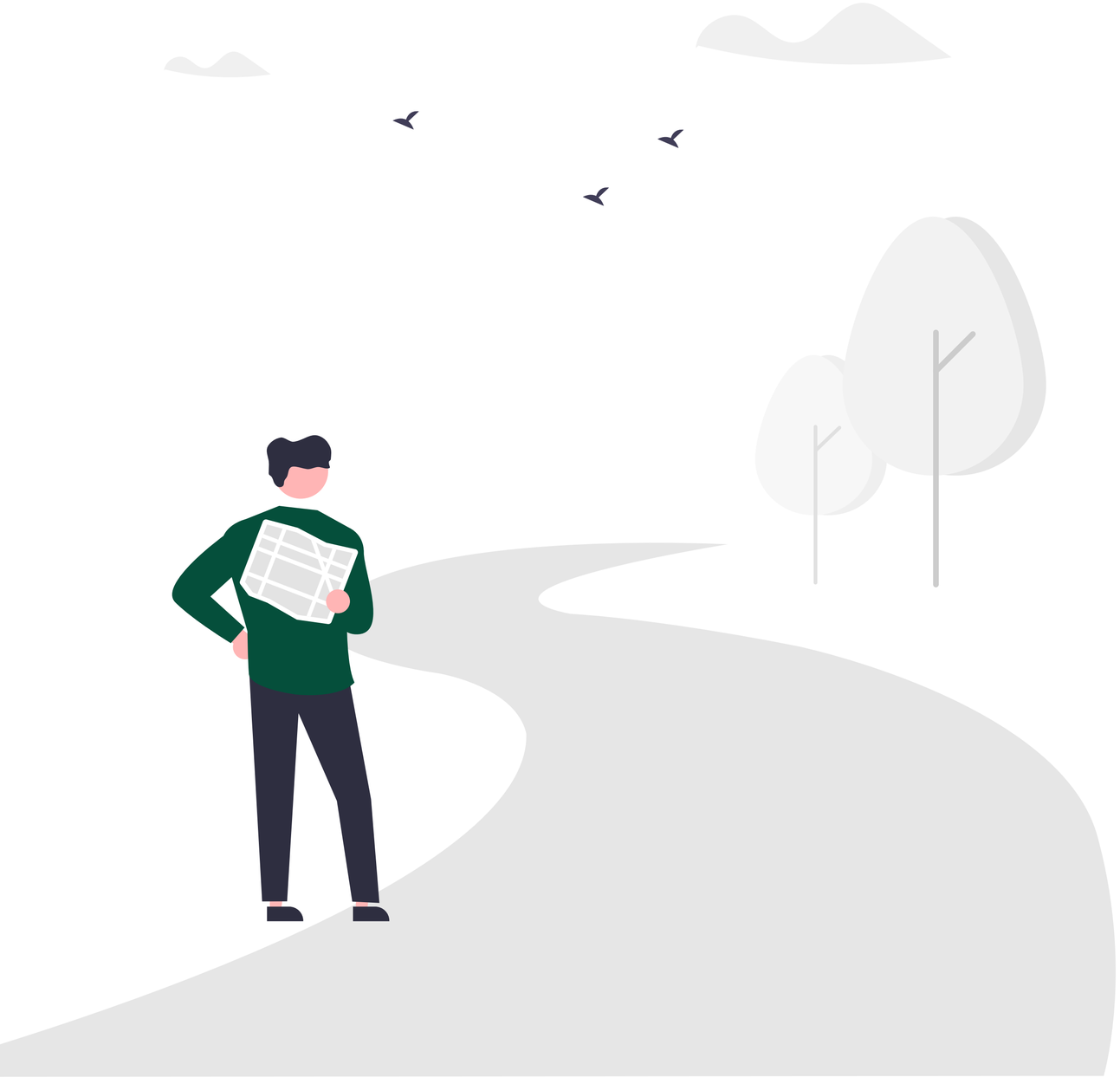
Although the theme-based training courses were able to directly meet the needs of companies, the content of the courses was not adopted as part of company operations. Instead of training individual employees, the project's goal was more broad competence development at the company.

Service implementation

The growth coaching was designed as company-specific group coaching. By targeting entire teams instead of individuals, the coaching was able to support the creation of a culture of learning, and to develop learning practices.

Lessons from the service

Workplace coaching provided more employees with the opportunity to learn. One of the benefits of the group coaching model was that the participating teams were able to continue learning together even after the coaching. Additionally, conducting the coaching in a company-specific fashion allowed the coaching to be tailored to the company's needs, and the participants considered the learned information and skills to be highly relevant to their work.



SUPERVISOR SUPPORT METHODS FOR EMPLOYEES' CONTINUOUS LEARNING

Working adults are often expected to be self-managing in developing their competence. However, very few of us are entirely self-managing. Adult learners need support for tasks such as identifying competence development needs and learning benefits. The employer and supervisor play a key role in offering this kind of support. Supervisors can also make use of the support of educational institutions and experts when investigating suitable study paths for employees. By investing in first-line management work, the company can guide the employees' learning to support the company's development needs. This improves the company's competitiveness and helps remove obstacles that hinder growth.

First-line management supporting continuous learning

1

Create an open channel for discussion

Competence management requires continuous and open discussion between an employee and supervisor. Discussion builds trust and enables the identification of core competences, competence needs and competence deficit – both for the employee and company. An open channel for discussion lays the foundation for all competence development.

2

Identify and explicate the company's competence need

A supervisor can support employees in choosing study paths that are in line with company goals and needs. Supervisors also have a big picture understanding of the entire workplace community's competence and competence deficit. This enables systematic competence management.

3

Identify and explicate the employees' competence and competence needs

Explicating employees' existing competence is the first step in making a learning plan. At its best, this enables the employees' learning and company's competence needs to be aligned and to support each other.

4

Support employees in their learning

Learning new information and skills is challenging. Employees may need encouragement or motivation for learning. In order to learn, working adults need a strong sense of self-efficacy when it comes to learning. Supporting experiences of efficacy may be necessary when starting the learning process, as well as for maintaining it.

5

Explicate the benefits of learning

Employees may need clear reasons as to why the learning is necessary, and what practical benefits it will have for the continuity of their work or career, work efficiency or coping with work.

6

Guide employees to suitable study paths

Supervisors may be able to identify the development needs and possibilities of employees better than the employees themselves. When defining study paths and investigating options, SME supervisors can make use of the support of educational institutions and experts.

7

Support the continuity of learning

Developing employee competence is a continuous process. A supervisor showing interest in an employee's learning process supports the continuity of the learning process.

SUCCEEDING IN THE DEVELOPMENT AND MANAGEMENT OF COMPETENCE

Rapidly changing business environments, technological development and unexpected challenges like the coronavirus pandemic require companies to adapt. Ensuring competitiveness requires the continuous development of the company, where competence management plays a central role. A responsible company invests in the competence development of its personnel.

Continuous development is important for a company’s success >

Competence management improves a company’s competitiveness >

Competence development is socially responsible >

CONTINUOUS DEVELOPMENT IS IMPORTANT FOR A COMPANY'S SUCCESS

The role of a company's management is essential when the company is navigating the continuous transformation of working life. It is the management's responsibility to ensure continuous and long-term development work to remain competitive and succeed. Development work starts with identifying needs and directing work in line with a strategy. In addition to committed management, success also requires goal-oriented management methods.

Furthermore, it is important for management to ensure that the company's personnel are also included in the development work and committed to it. The genuine participation of employees requires an open and discussion-oriented atmosphere at the company, and the management plays an essential role in creating such an atmosphere. A sense of **psychological safety** is also required in order to test the new ideas created in the development work. If that sense of safety is missing, the fear of making mistakes may prevent new working methods from taking root.

The project found that it is often challenging for the management in SMEs to commit to development work, because they do not always have sufficient time, development skills and financial resources. The management may recognise the development needs, but they cannot afford to take time away from their operational tasks.
Even so, rapid changes in the business environment may force companies to seek out new solutions and working methods. When a company's development is systematic, they can both anticipate changes better and react to them faster. The management's important task is to guide the development in a long-term manner, and to ensure that its goals remain clear.

Psychological safety in a workplace community means a shared understanding that everyone can be themselves and express their ideas, thoughts, concerns and questions, even if they are not fully formed. In a psychologically safe workplace community, you can also ask for help and admit to your mistakes without fear of being shamed, denigrated or punished.

Source: Finnish Institute of Occupational Health 2022. Pelotta töissä - psykologinen turvallisuus työyhteisössä. (Finnish Institute of Occupational Health website)

BUILDING BLOCKS FOR EFFECTIVE DEVELOPMENT WORK

The commitment of management, including development work as part of the company's strategy, and creating an open and discussion-oriented atmosphere are basic prerequisites for effective development work at a company. In a psychologically safe organisational culture, everyone feels safe in expressing their own opinions and ideas. Without these factors, attempts at development can often fail. When the foundation is solid, building on it is easy. Successful development work also requires the following building blocks identified in the project: definition, time, inclusion, objectivity, challenging and effectiveness.

COMMITTED MANAGEMENT, STRATEGY

Definition

Development starts with identifying the company's needs. The most important area of development is prioritised first, and a common goal is agreed on. The development work can focus on small things that make daily work easier, such as acquiring new skills or automating functions.

Time

Development work often gets buried under daily challenges. Long-term development requires time for employees to stop and engage in the development work together.

Inclusion

Often, companies are aware of their biggest challenges, and they may have already tried to work on them in small groups, with limited results. The key to a successful end result is to include all parties that the development concerns, so that you can create a full understanding of the situation and work together to develop suitable solutions.

Objectivity

The best results require open discussion, equally listening to all ideas, and making use of everyone's expertise. The value of a person's ideas should not be determined by their status.

Challenging

You have to be able to let go of old ways of thinking and working. Boldly experiment with new ideas and make use of the lessons learned in development work. You can discover the keys to new solutions by taking inspiration from other companies in the same industry, or even a different one.

Effectiveness

Finally, the value of the development work is measured by its effectiveness. If there is no plan for the implementation of the results, with schedules and persons responsible, no practical benefits will come from the development work. If this happens, it is harmful to the employees' motivation to participate in further development work. Monitoring and measuring help to develop the work further.

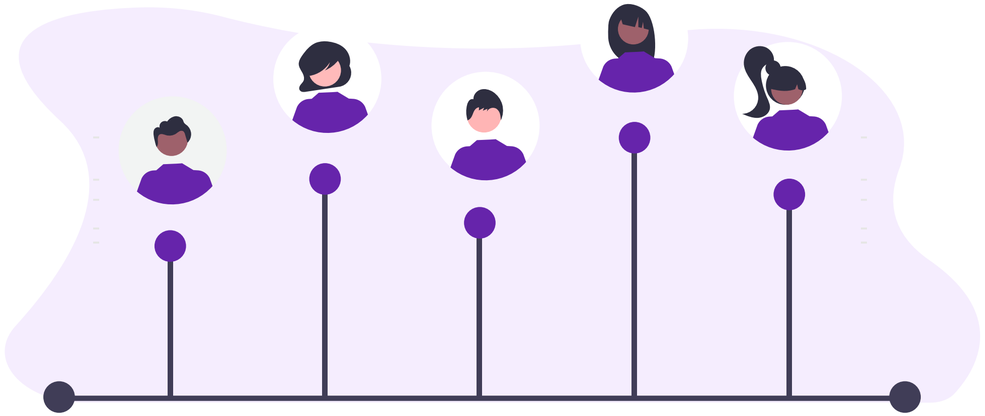
OPEN, DISCUSSION-ORIENTED ORGANISATIONAL CULTURE - PSYCHOLOGICAL SAFETY

SPARRING BY AN EXTERNAL COACH CAN BOOST DEVELOPMENT WORK

The project found that external partners can provide good support for the company's management in competence development, sparring with technological solutions and coaching for processes of change. The partner helps to turn the development needs into practical goals, as well as to prioritise and start the development work with inclusive methods.

The facilitation of an external coach helps to reduce the impact of company hierarchies. A coach ensures that everyone is included, and that everyone's opinions are equally considered. If necessary, small group work can also be used to ensure everyone's opinions are heard.

Sparring helps management to identify organisational development needs. An external coach can help with the development work, but if the management is not committed to the development work, the results of the coaching will not take root in the company.



Coach:

- Spars with management
- Helps to identify and prioritise development subjects
- Ensures that there is sufficient time for coaching and development work
- Invites concerned parties to participate in the development work
- Facilitates development workshops with inclusive methods
- Challenges ideas and ways of working
- Provides tips on methods and practices used elsewhere
- Ensures that results are documented
- Ensures that results are turned into implementation plans with responsible persons and monitoring points

EXAMPLE OF SERVICES DEVELOPED IN THE PROJECT

BOOSTING FOR TECHNOLOGICAL LEAP SERVICE

Service needs

Companies need help making use of technology in their business operations. Implementing technological solutions is a way to improve the competitiveness of a company. The service helped companies to identify an area of development, create a plan for carrying out the development, and updating competence needs.

Service implementation

The service employed external experts to help the company examine how their competitiveness could be improved at a reasonable cost by using new technology. The goal was to help the company to identify and define their development needs and to draft a project proposal.

The project proposal created as part of the service included:

- scheduling and responsibilities
- preliminary budget and support for seeking out funding
- plan for developing competence needs related to digitalisation
- other information required by the company to carry out the project proposal

TIPS FOR SME GROWTH THROUGH TECHNOLOGICAL INVESTMENTS:

1. Define a goal that you want to achieve with the investments, such as cost-efficiency, scalability or increased automation.

2. Recognise that technological investments by themselves do not incur benefits. Investments enable process automatisation, which in turn enables a competitive advantage.

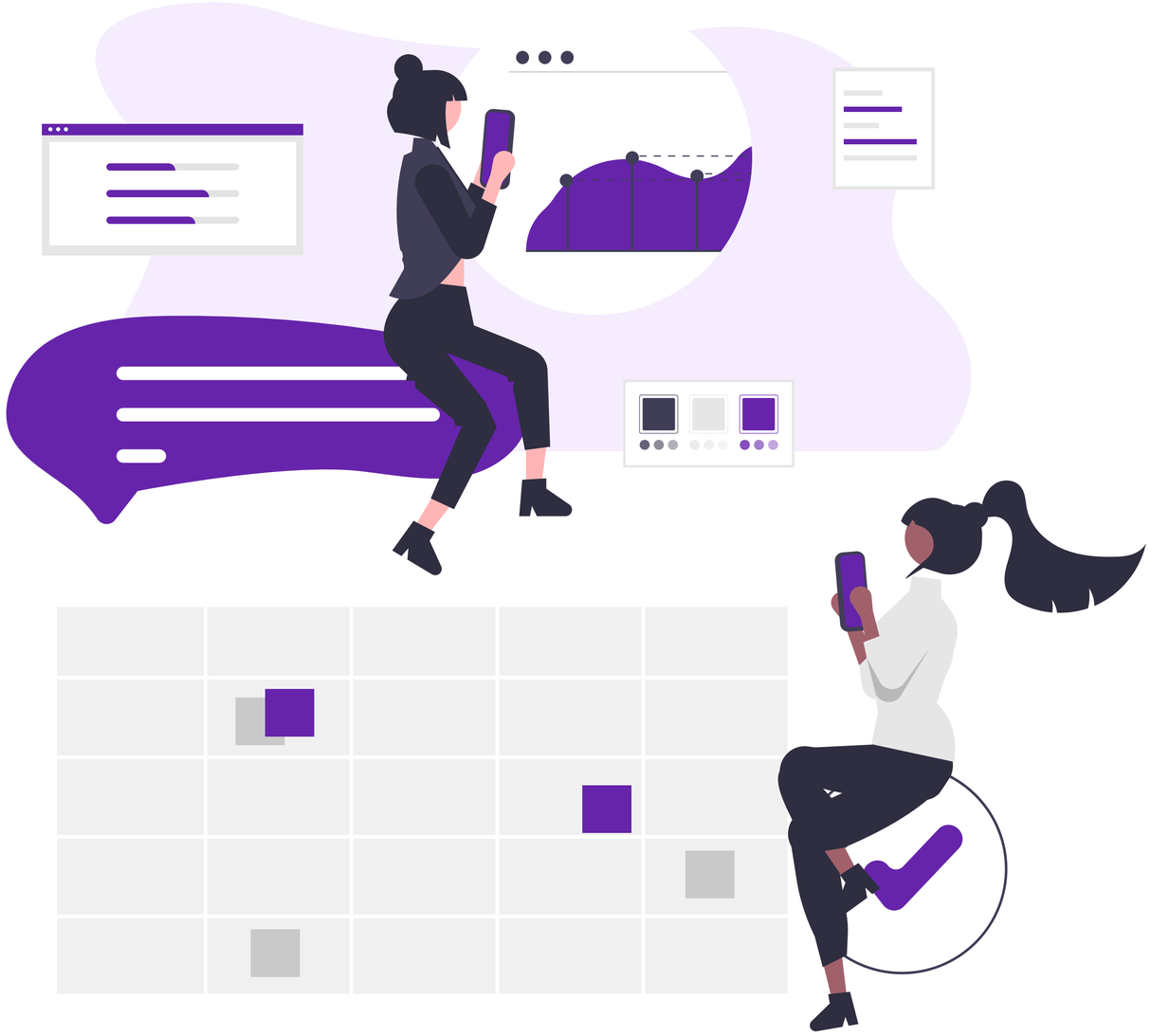
3. Before choosing technologies, you should check and potentially define your basic processes and business models. You should only proceed with technological process development after all of these prerequisites have been clearly recognised.

4. The implementation of new software requires assessments of whether they can be smoothly integrated with other systems both immediately and in the future.

5. Continuous dialogue with people in your business environment is a factor for success. Spar with others to understand their views and seek out constructive feedback. External support can boost your confidence and help you make bold investments.

6. Technological investments require you to consider people, and technological changes often mean changing the corporate culture, as well. The key to success is including and coaching personnel right from the start of the change process.

Source: Growth Deal 3 conclusion dialogue: Biila's Aapeli Kallunki and Profiant's Mika Yletyinen



COMPETENCE MANAGEMENT IMPROVES A COMPANY'S COMPETITIVENESS

The purpose of competence management is to update, develop and acquire competence as determined by the strategy. Competence management needs were identified in the companies participating in the project, but many companies did not yet have a systematic plan for competence development. The coaching increased the companies' awareness of how competence management should be in line with the strategy and a stable part of the company's development.

Competence recognition is a prerequisite for appropriate competence development. The competence of personnel should be charted regularly, and the results used to consider how the existing competence can be utilised. Future competence needs should also be anticipated. Instead of recruiting new personnel, future competence needs can also be met by offering new challenges to existing employees and training them for new tasks. Offering development opportunities to employees usually improves their commitment to the company.

Companies should pursue the most suitable competence development solutions for their needs and implement them accordingly. It is advisable to implement a systematic long-term competence development plan as a continuous process, while including the entire workplace community.

COMPETENCE DEVELOPMENT REQUIRES CONTINUOUS LEARNING

Competence development is long-term work. Even if you have an excellent plan, no progress can be made if the company's structures and practices do not support learning within everyday operations. The companies participating in the project services understood that the majority of learning takes place at work. It is important for company management to work together with employees to create an agile culture of continuous learning, which means having seamless practices for learning and knowledge sharing at work.

According to project observations, small companies' competence development is hindered by the fact that no one has been designated as responsible for its systematic promotion. Additionally, there is often insufficient time set aside for competence development due to pressing operational tasks. Competence development requires long-term work and a procedural approach, while taking agile methods into account.

It is important to recognise how the development of an individual employee's knowledge and skills improves the competitiveness of a company. Often, companies consider competence development as just training, even though training is only one of several methods of competence development. The project found it more useful for the development of companies and teams to organise common training for all employees rather than train individual employees, which may often result in the competence not taking root.

The majority of learning takes place in small steps in everyday work. The project services employed and developed various methods of competence development with the companies:

- **Learning by doing**
- **Mentoring**
- **Training**
- **Reflecting on lessons together**
- **Dialogue with workplace community**
- **New projects**
- **Knowledge sharing and skill coaching**
- **Giving and receiving feedback**
- **Induction**
- **Job rotation**
- **Learning from others and sharing of competence**
- **Sharing of best practices and methods**
- **Passing on the implicit knowledge of experienced employees**

EXAMPLE OF SERVICES DEVELOPED IN THE PROJECT

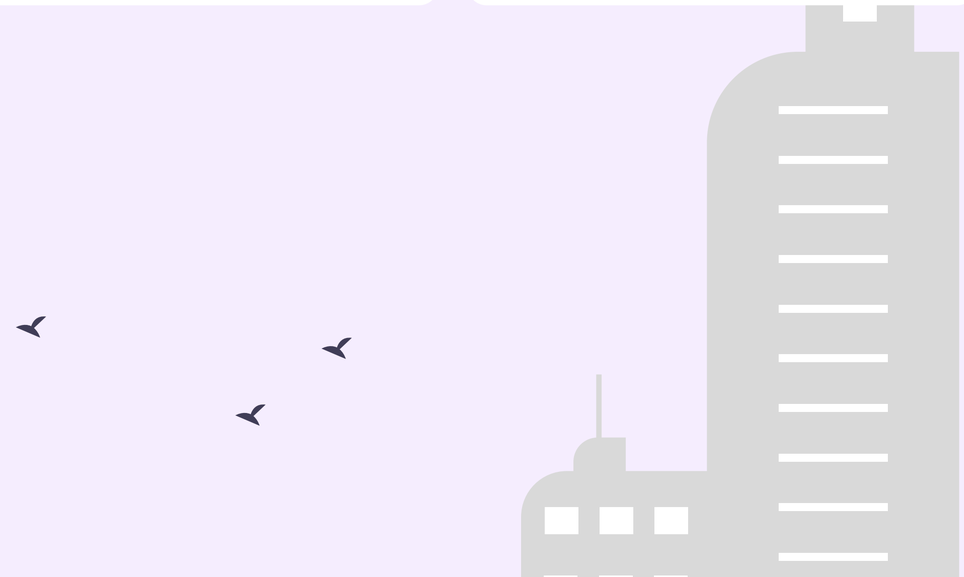
COMPETENCIES FOR GROWTH! COACHING

Service needs

Technological transformation creates a need for new competence. The Competencies for Growth! coaching was designed to improve the resilience of SMEs and their employees in the face of change. Improving resilience in companies requires skilled competence management, competence development and competence recognition.

Service implementation

The coaching developed the companies' competence management, and the coaches helped companies to create new methods for the competence development and continuous learning of personnel. Additionally, companies were supported in recognising existing competence. The coaching was designed and implemented according to the needs of the companies.



THE KEYS TO COMPETENCE MANAGEMENT:

- Include competence management in your strategy
- Determine the company's competence needs based on the strategy and recognise the existing competence of personnel
- Make a long-term plan for competence development, create processes and reflect
- Develop the company's structures to support learning and create practices for learning in everyday work
- Set aside sufficient time for learning at work
- Ensure sufficient resources, coordination and progress
- Take bold action and focus on small, continuous progress without being afraid of mistakes
- Encourage personnel to learn and share their knowledge

COMPETENCE DEVELOPMENT IS SOCIALLY RESPONSIBLE

The competence development of personnel is one way for an SME to be socially responsible. Through competence development, a company can support the employees' capacity for change and work, as well as their wellbeing. The Urban Growth Vantaa project was able to provide new competence to SMEs through personnel training, coaching and recruitment support. As such, the project sought to strengthen the socially responsible growth of SMEs.

Based on the findings of the project, social responsibility is a concept that is difficult to grasp from an SME perspective, and it is often thought of as a source of expenses. However, socially responsible measures, such as the competence development of personnel, are profitable for companies. Employees with good well-being are often more efficient, flexible and motivated. Thus, they also have better readiness and capacity to positively influence a company's competitiveness and growth.

According to the project findings, increasing the visibility of practical measures and their benefits is an impactful way of supporting SMEs in carrying out socially responsible measures.

Benefits of socially responsible business operations:

Adaptability

The competence development of personnel improves an organisation's adaptability and capacity to react to future business challenges and unexpected situations, such as the coronavirus pandemic.

Anticipation

The competence development of personnel helps companies to anticipate and prepare for a shortage of labour. Instead of recruiting new personnel for new competence needs, ensure that the existing personnel's competence is properly updated and train them for new tasks. A change in job description and job rotation can also increase the motivation of personnel.

Commitment

Competence development makes employees more committed. When an employer invests in training for employees, employees feel that their work contribution is valued. When an employee can trust in their competence development, it removes one reason for seeking out new employment.

Occupational well-being

Developing management and an open organisational culture, and including personnel in decision-making increase the occupational well-being of employees. At the same time, you get a broader perspective for the organisation's development.

Corporate image

Investing in social responsibility improves a company's corporate image, creating a competitive advantage. A socially responsible company also attracts good talent, making recruitment easier.

EXAMPLE OF SERVICES DEVELOPED IN THE PROJECT

RECRUITMENT SERVICES FOR SMES

The need for the service

Recruitment is one area that companies can manage in a socially responsible way. During the project, a service concept was developed to help companies with the different stages of a recruitment process and with finding new channels and services for recruitment. SMEs were also supported with making use of a variety of potential labour. SMEs need assistance with formulating what kind of competence they are looking for, so that they can find employees to match their needs. By widening their view of the potential workforce, companies can find employees for positions that were previously difficult to fill, particularly in fields with labour shortage.

Service implementation

Employee search: Companies received help for finding employees via employment services and networks. Services were also offered related to other areas, such as interviewing.

Information and guidance: Companies were provided with information about financial assistance for recruiting, such as pay subsidy, and related services.

Recruiting through apprenticeships: Companies were helped with mapping out suitable tasks and students for apprenticeships. Vocational College Varia was responsible for the courses.

Reorganising and reformulating needs: Companies received help for clarifying and formulating what kind of skills they need.

LESSONS LEARNED

The process that was created proved effective in getting companies to join the services. The recruitment services helped companies formulate their job postings in a way that corresponds to their actual needs. The services also encouraged the companies to hire people with partial work ability and people from disadvantaged groups. New employees were found especially in fields with labour shortage, and for positions that had been difficult to fill.

DIGITAL TOOLS SUPPORTING THE PROCESSES OF COMPETENCE DEVELOPMENT

The digital tools developed in the project make the processes of competence development smoother and more automatic. The purpose of the tools is to help companies and employees in the bottlenecks of competence development, such as competence recognition and looking for suitable training options. The tools also help experts working with competence development.

Personal Digital Coach >

Competence Mapping Portal >

Dashboard >

UKV bot >

2018

Vision for project plan

The original vision was to create a digital model where the service packages developed in the project would assist parties providing corporate services with artificial intelligence.

2019

Design phase

The vision of automating the service packages was redefined. The project charted existing development projects and sought to identify development needs in the current business environment. The goal was to generate new innovations and supplement the existing digital solutions. The progress plan and ideas for the first digital tools were created by charting the various possibilities for cooperation.

2020

Re-evaluation phase and selection of the PoC approach

The project found that it was not possible to automate all service packages within the project, and that services produced by people were needed in parallel with the digital tools. The decision was made to proceed with the digital tools through proof of concept (PoC) testing.

2022

Results: Implementation plans for digital tools

The tools developed in the project were based on the project services and needs identified in the participating companies. The digital tests were documented as implementation plans which can be used to develop applications.

What is a proof of concept?

A proof of concept, or PoC, means the rapid testing of a concept. In a proof of concept approach, a final application is not produced, but rather the purpose is to prove the functionality of the concept and identify potential needs for further development. The project's proof of concept testing was conducted with demo versions on a test platform.

Digital tools developed in the project

Personal Digital Coach
is a tool that supports the competence development of personnel by charting the challenges related to the learning process and offering solutions for them.

Competence Mapping Portal
highlights employees' strengths and development opportunities and can link their expertise to open positions at the company.

Dashboard
is a tool for municipal administrations that helps to produce the right kinds of services.

UKV bot
charts the technological and business needs of companies through automated path-like dialogue with a chatbot.

PERSONAL DIGITAL COACH

Supporting the learning process of employees

Development of the Personal Digital Coach tool started with the project's observation that learners need support for their competence development. The idea of the tool is to stay with the employee and offer support regardless of time or place. Working learners are the target demographic for the tool.

The original idea was to support employees in accomplishing competence development goals related to their own work. However, setting personal goals was considered difficult, so the tool was further developed so that the goals were determined through the company's needs.

The tool was developed in three stages with different project partners. Finnair Cargo Ltd., Vantti Ltd. and Varia participated in the development. The following diagram presents the different versions of the tool, the lessons learned from them and development decisions made with them. The final version of the tool is presented in the implementation plan, which is appended to this document.

STAGE 1

Supporting employees' competence development

At this stage, the tool offered general encouragement and instructions based on behavioural studies to help achieve the learning goals set by the employee.

Lessons:

- Defining personal goals was considered difficult
- Commitment to use of the tool was poor: even at its best, response rates were 30%

STAGE 2

Supporting employee induction

The tool was developed further so that instead of following a personal learning goal, the tool supported induction to new work tasks. This iteration also sought to improve the user's level of commitment by making participation in the tool's use public.

Lessons:

- User activity significantly improved
- Employees wanted more human support in induction, rather than support through a tool

STAGE 3

Forwarding support needs to an expert

In the third stage, the tool was developed so that it would no longer send messages to the user, but instead would forward the information about a user's support needs to the appropriate expert. The application also offered the possibility for discussions with peers.

Lessons:

- Contact by email was difficult, SMS worked better
- Motivating users to install the application was difficult: an SMS-based service would remove the need for an installed application

COMPETENCE MAPPING PORTAL

Support for the company's internal career paths

The Competence Mapping Portal is a tool for the company and the employee, and it was developed to support competence management in companies. The portal increases a company's awareness of their existing competence, and what kind of competence is needed to support the company's business operations. The portal highlights employees' competence, strengths and development opportunities. Additionally, the portal contains information on local education and training, as well as positions currently open at the company. The portal connects open positions and employees with suitable expertise, supporting the company's internal career paths and the employees' commitment to the company.

Ideas for further development

Use of open data APIs with a standardised data format

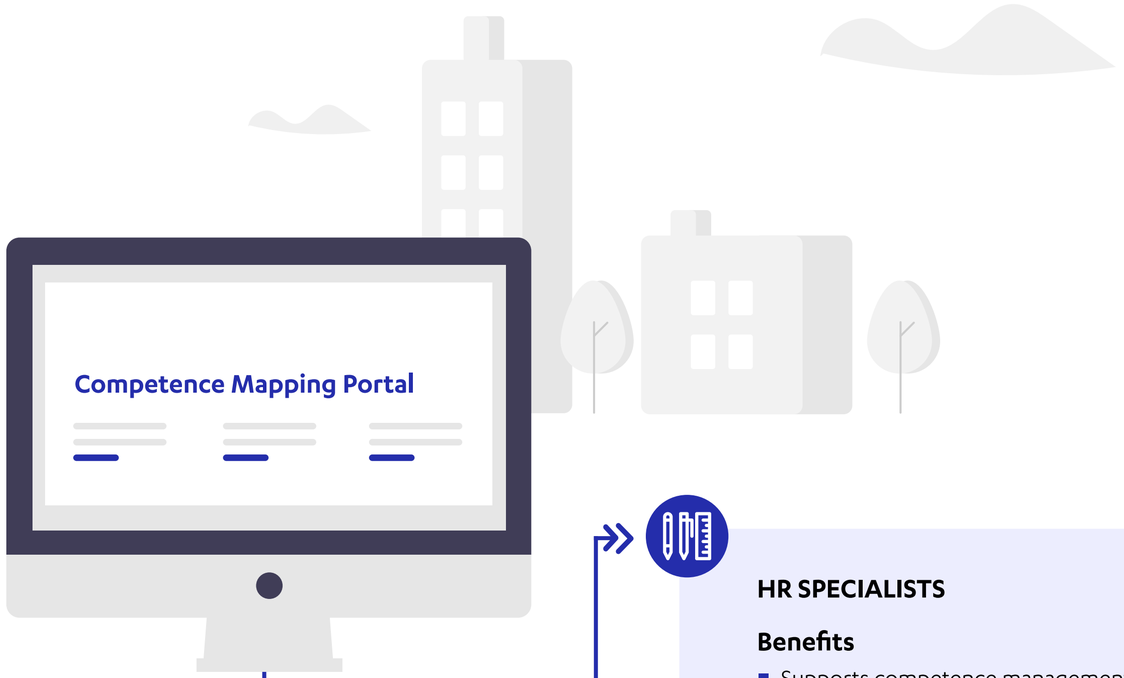
Information collected through APIs should be entirely freely usable. Permissions and permission management may be required for the use of open APIs from a private company. Defining the data to be collected through the APIs in a standardised form makes the API planning of the information providers easier and improves integrability.

Utilising a national application platform

A national application platform would offer uniform application development models for projects and enable faster and more affordable tests.

Strong national user identification

A strong national identification solution makes the system's use more scalable. Anonymous identities help employers focus on seeking out competence instead of persons.



HR SPECIALISTS

Benefits

- Supports competence management

EMPLOYEES

Benefits

- Helps to chart personal strengths and competence
- Helps to find suitable open positions
- Helps to find different education and training options

DEVELOPMENT PARTNERS

InfoCare Ltd.

Vantti Ltd.

LESSONS

Continuity

A permanent implementation organisation makes continuous development projects easier.

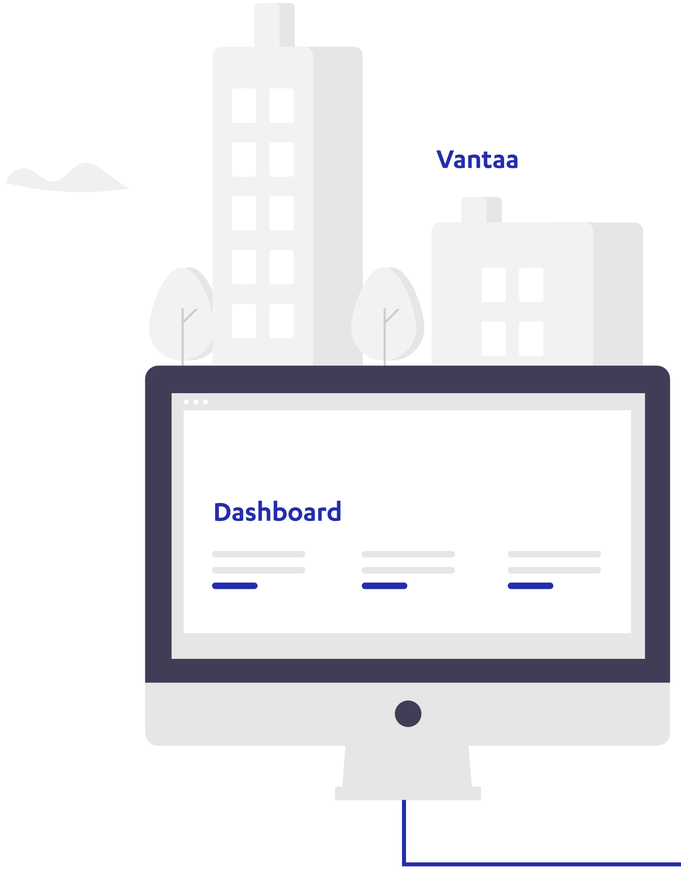
Technological planning

Implementation of digital tools and automation requires an understanding of the possibilities of technology and careful planning, such as for the usability of information sources (job and education information). Conducting tests like this is likely to require significant investments.

DASHBOARD

Support for the city's business cooperation

The idea of the Dashboard came from the need for an application to assist in the work of municipal personnel serving companies. The Dashboard compiles data from different sources and thus helps in producing the right kinds of services to client companies. Companies' needs can be related to factors such as growth, labour needs or the training of personnel.



GROWTH TEAM

Need

- There is a lot of information available on companies and different education and training options. The Dashboard compiles information from several sources in one place, which makes it easier to find the right information, reducing the workload of municipal personnel serving companies.

Benefits

- The information available on the Dashboard can be used to support companies' operations and competitiveness by, for example, connecting people with suitable expertise with companies, or planning apprenticeships or other training options for company personnel.

DEVELOPMENT PARTNERS

City of Vantaa
Economic Development Services and Employment Services

LESSONS

Continuity

A digital tool compiling information from multiple sources would benefit many parties and organisations. The development and maintenance of this kind of digital tool require that it has a committed owner. However, finding a party willing to take ownership of the tool may be difficult.

Technological planning

Implementation of digital tools and automation requires an understanding of the possibilities of technology and careful planning, such as for the usability of information sources (job and education information). Additionally, as the tool has many functionalities, the development should be scheduled for a longer time period. Stable application development platforms should definitely also be utilised.

Ideas for further development

Use of open data APIs with a standardised data format
Information collected through APIs should be entirely freely usable. Permissions and permission management may be required for the use of open APIs from a private company. Defining the data to be collected through the APIs in a standardised form makes the API planning of the information providers easier and improves integrability.

Utilising a national application platform
A national application platform would offer uniform application development models for projects and enable faster and more affordable tests.

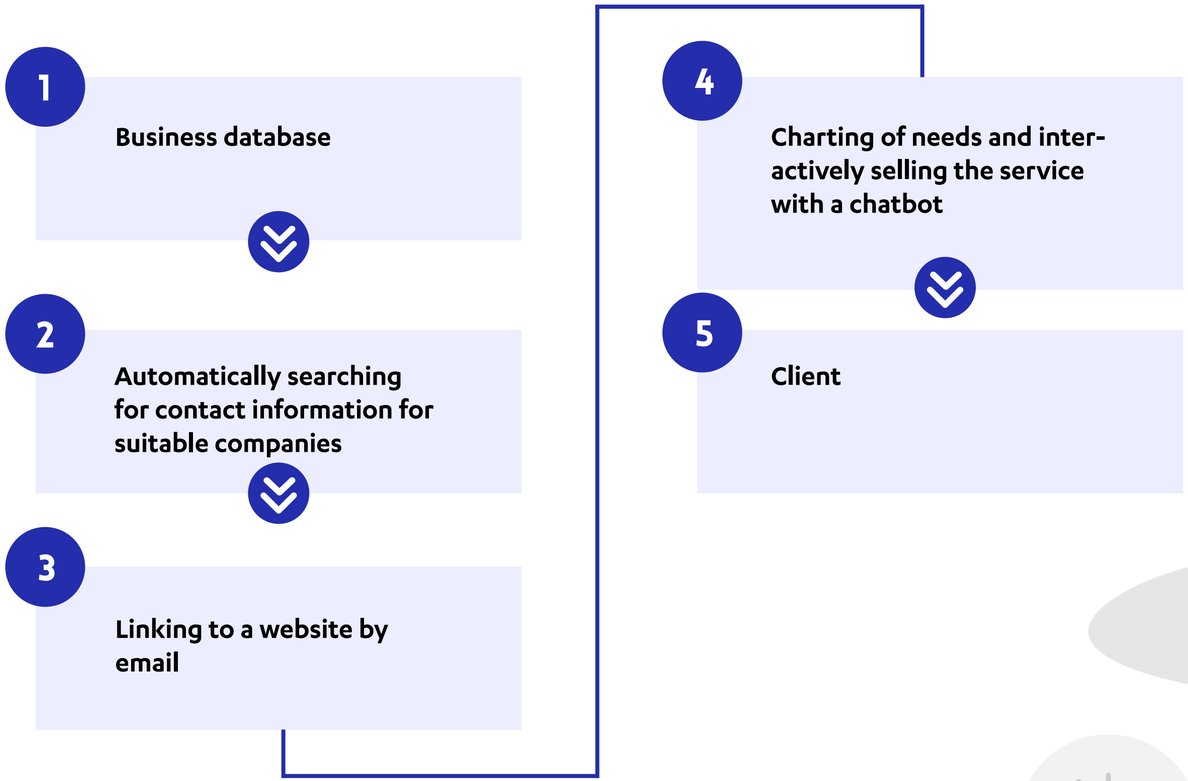
Strong national user identification
A strong national identification solution makes the system's use more scalable.

UKV BOT

Support for charting company needs

The UKV bot charts the technological and business needs of companies through automated path-like dialogue with a chatbot. The UKV bot can, for example, help with client acquisition and enable needs-oriented and targeted contacting of clients.

The idea for the UKV bot comes from the Boosting for technological leap service, which was developed as part of the project. Based on experiences from the service, SMEs need support for technological transformation projects. At first, the concept development focused on a technological leap website that would have compiled advice and instructions for technological transformation projects to support companies. However, the idea ended up being developed further in a more innovative and interactive direction to function as a chatbot that connects companies and parties providing corporate services in an automated manner.



LESSONS

- The use of the chatbot should be as easy and useful as possible for the users.
- It is advisable to use the chatbot as a continuous channel for client acquisition and to broadly include it in marketing communications. For example, the chatbot could be added to an email signature and other communications material.
- Sufficient time should be set aside for finding contact information for companies, because the contact information in business databases may be lacking.

HOW TO SUCCESSFULLY DEVELOP DIGITAL TOOLS

- Ensure sufficient resources and expertise. A programming expert should be involved in the software development project from the start.
- Ensure continuous and appropriate division of roles and responsibilities. Ownership of the project is important – commitment of the organisation is a prerequisite for a successful development project.
- Invest effort towards defining the goal, make it concrete and clarify targets and milestones. Re-clarify targets whenever necessary. Ensure a shared understanding with common discussions
- Create synergy between different project functions. There should be a strong connection between the service and application development.
- Ensure that the limits of the project scope are defined well. Project scopes that are too large are difficult to achieve.
- Include the client in the planning from the start. The development of digital solutions should be based on needs.
- Recognise the principles of co-creation and iterative working methods – the end result is a combination of several people's visions. Changing the plan as you gather more information is part of the process.
- Remember that not everything should be automated. There is a place for human encounters and interaction. You can reach the best end result when you combine services produced by people with the appropriate digital tools.

SUPPORTING SERVICE DESIGN THROUGH CO-CREATION

The Urban Growth Vantaa project was conducted using co-creation methods. Emphasis was also placed on impact assessments and promoting the continuity of the best practices found in the project. The project produced many kinds of lessons, both on the benefits of co-creation and encouragement of SMEs towards socially responsible growth.

Co-creation in the Urban Growth Vantaa project >

Evaluation of success and impact >

Lessons from encouraging SMEs towards socially responsible growth >

From agile operations to lasting results >

Better solutions for companies' competence needs through cooperation >

CO-CREATION IN THE URBAN GROWTH VANTAA PROJECT

Together with the project partners and partner companies, the project co-created three service packages with different themes, called Growth Deals. The Growth Deals focused on the recruitment of new employees, competence development of the existing personnel, and supporting the digital development of companies in technological transformation. The Growth Deals sought to support companies' growth conditions through social investments.

The service planning made use of service design, including the partner companies in the process from the beginning. This ensured that the services would be based on actual needs. The development work of each service package began with a charting of needs at the partner companies before proceeding to a shared innovation phase with the project partners and partner companies, conducted with co-creation methods at various workshops. Next, the services were tested at the partner companies.

The development work continued while utilising the experiences gained, followed by a pilot test of the services with a broader group of SMEs operating in Vantaa. The pilot testing was conducted by tailoring the solutions to the needs on a company-specific basis. After implementation, the SMEs were asked for feedback, which was then analysed in aggregate. This ensured that the experiences and lessons from the tests and pilot phase could always be utilised in an agile manner in designing the next Growth Deal.

Service co-creation process

The spiral diagram of the process chart reflects the growth process of the service development work. The points of the Growth Deals reflect individual Growth Deal services. Phases 1–4 reflect the respective phases of the Growth Deal service development process.

GROWTH DEAL 1

Recruitment and training of workforce

The goal was to particularly support companies that face obstacles to growth due to a lack of new personnel. The Growth Deal offered companies support for recruiting new employees, as well as training and coaching services.

GROWTH DEAL 2

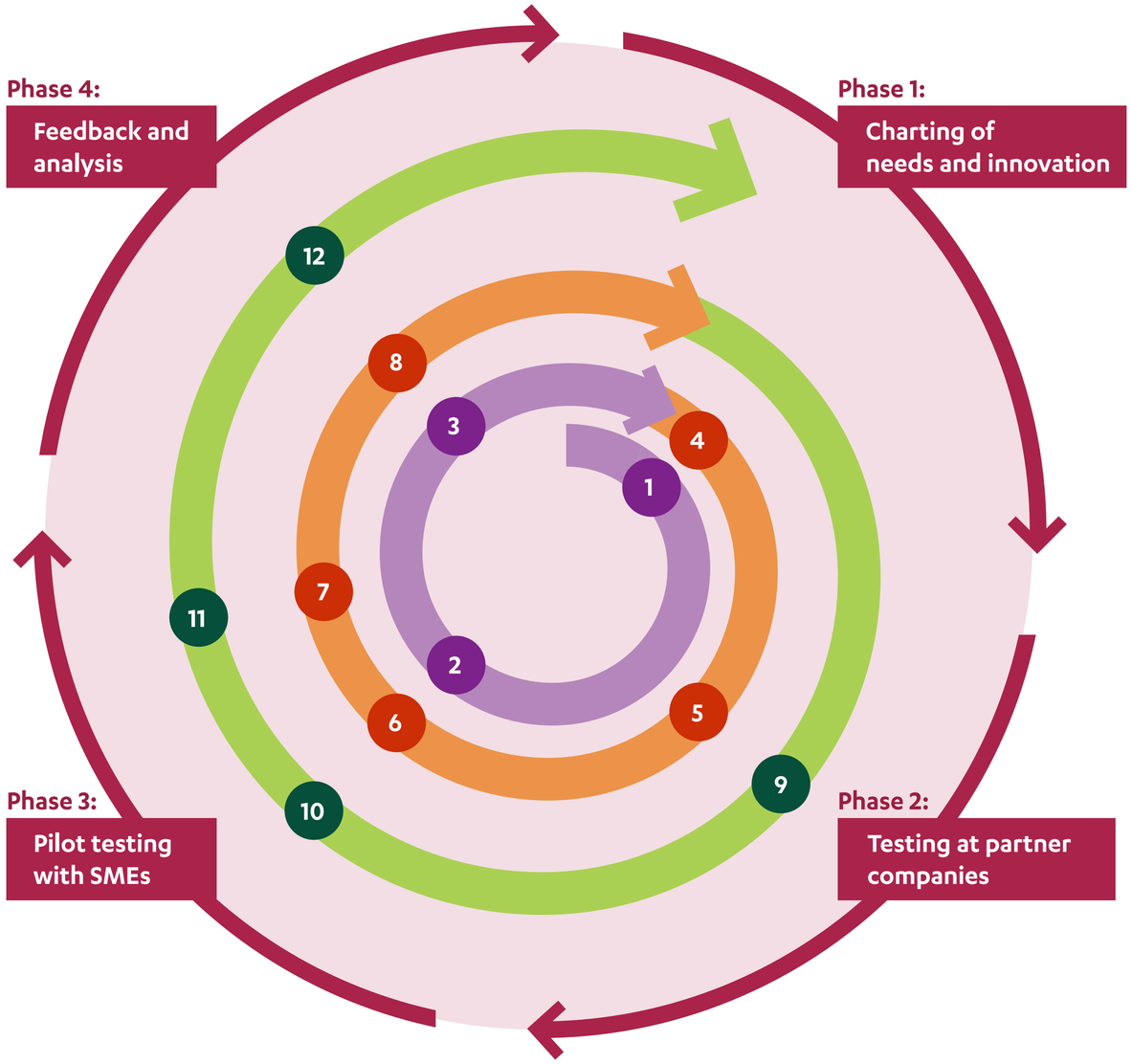
Updating the competence of personnel

The goal was to support the sustainable growth of companies by developing the competence of personnel. The Growth Deal offered company-specific coaching packages and professional competence development services for personnel.

GROWTH DEAL 3

Supporting technological transformation processes

The goal was to help companies utilise technology to support the development of business operations. The Growth Deal offered company-specific sparring for technological transformation projects, coaching for competence management and development, and online services for the personnel's competence development.



Service co-creation process

PHASE 1

Charting of needs and innovation

- Workshops and interviews were conducted with the personnel of partner companies in order to chart needs.
- Based on the customer insight produced, a number of ideas were generated together and formulated into services based on the needs.

PHASE 2

Testing at partner companies

- It was essential for the further development of the services to gain experience and feedback on the various implementation methods and their effectiveness, so the services developed were tested with the personnel of partner companies.
- The experiences and feedback from the testing were utilised in the further development of the content and implementation methods of the services, in cooperation with the partner companies. Based on this development work, the services were developed for use with SMEs in the pilot phase.

PHASE 3

Pilot testing with SMEs

- At the start of every service package, Account Managers charted the needs of the pilot companies and connected the services developed in the testing phase with the companies' needs.
- The charting of SMEs' needs was utilised in the tailoring of the service packages.

PHASE 4

Feedback and analysis

- Representatives of the SMEs participating in the pilot phase gave feedback in various ways: verbally at feedback discussions and in written form through feedback surveys. The companies' management and employees who participated in the services were separately asked for feedback to gain a broader understanding.
- The feedback was analysed quantitatively and qualitatively to support further development work.

Service co-creation process

GROWTH DEAL 1

1. **Recruitment services for SMEs:** The service package included labour services, support guidance, service guidance and an apprenticeship recruitment service. Additionally, the companies had the possibility to receive assistance with arrangements and planning related to competence needs.
2. **Theme-based training:** The SME employees were offered training courses on various business themes.
3. **Training courses for SME personnel:** The themes of the training courses were tailored on a company-specific basis and focused on developing a corporate image and sales.

GROWTH DEAL 2

4. **Management coaching:** The goal of coaching was to support the company's management and provide them with tools to develop business operations in change or crisis situations. The service was developed at the start of the coronavirus pandemic to support the management of SMEs in the project.
5. **Professional competence development service:** A professional training expert helped SMEs to identify the competence needs of personnel and to plan out training options for personnel. Employees were advised on the various options of professional training and apprenticeship training.
6. **Growth coaching:** The coaching provided companies with sparring and external support for challenges they were facing, or for identified business development needs.
7. **Growth clinic:** The goal of the event was to motivate company management, supervisors and employees to update their competence and learn new skills. The theme of the event was Towards the future! – Growth for your business.
8. **Online morning coffee:** Experts of various fields discussed topical subjects related to work and competence development.

GROWTH DEAL 3

9. **Boosting for technological leap service:** Companies received sparring for technological development projects. The end result was a project proposal for use by the company.
10. **Competencies for Growth! coaching:** The coaching created methods for systematic competence management and continuous competence development.
11. **Personal competence development:** The information sessions of the service package provided information on vocational education and training, as well as continuing education programmes of Universities of Applied Sciences. Additionally, the participants were offered the Chamber of Commerce's TrainingOnline courses and education on transformation communication.
12. **Growth clinic:** From words to action! The online event Investment stories for growth and development inspired the decision-makers of companies towards technological leaps. The goal was to highlight the practices and experiences of various organisations of utilising technology to support growth.

Essential project elements

Cooperation and inclusion

The project was conducted with co-creation methods and its design and idea phases included a diverse set of experts representing the various organisations participating in the project. Inclusion, creating a shared understanding and working towards common goals over organisational boundaries all played a central role in the project. During the project, innovation work was conducted in various groups and workshops to create solutions for SMEs' competence needs, which meant that mutual interaction and communication were key to the success of the project.

Communication

Communication on the results and lessons of the project was conducted through articles, blogs, social media and events. Additionally, the Finnish-language podcast Mythbusters of continuous learning was produced, discussing myths related to competence development from the perspectives of a working adult learner and employer.

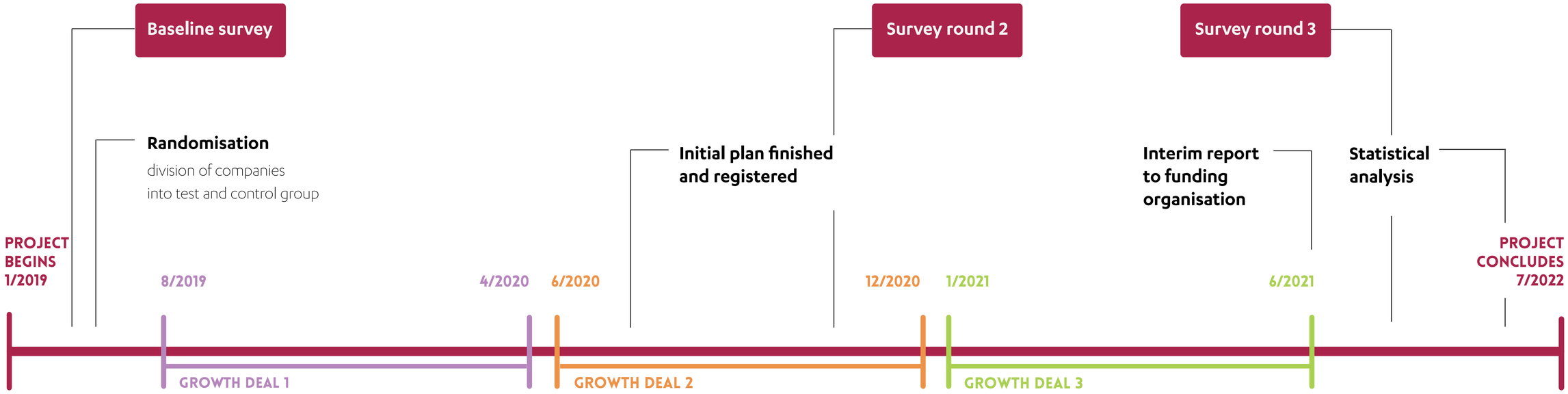
Evaluation

The results and impact of the project were evaluated with systematic data collection and analysis.

- Impact assessment: The ETLA and LABORE institutes evaluated the project's results and impact with randomised controlled trial methods.
- Self-evaluation: The internal monitoring and evaluation examined the impact of services through various feedback surveys and interviews. The results were reported on articles published on the project's website, and in the online publications for organisations participating in the project.
- External final evaluation: An external organisation supplemented the project partners' impact assessment and self-evaluation in accordance with the defined evaluation criteria.

EVALUATION OF SUCCESS AND IMPACT

The parties responsible for the impact assessment of the Urban Growth Vantaa project were the Labour Institute for Economic Research LABORE and ETLA Economic Research. The impact of the project's Growth Deals was assessed with a randomised trial where SMEs with 10–200 employees operating in Vantaa were divided into two groups: the test group and control group. Of these groups, only the test group companies were offered services, so participation in the test was not only a matter of the company's willingness. After randomisation, the groups were similar on average. The purpose of the trial was to produce reliable information on how successful the measures offered in the services were. The study utilised survey material and broad registry material regarding the companies and personnel.



Lessons from the project's impact assessment

Before sending the project application

- Ensure the availability of a company register, and the quality of its data or variables.
- Ensure the availability of other necessary statistical material and their updating schedules from the perspective of the project's goals.
- Calculate preliminary statistical power to check if your area has sufficient companies for statistical analysis. In other words, check that your material can provide a sufficiently large data set to assess the expected impact.

Start of the project

- Reserve time and resources for conducting a baseline survey.
- Ensure that the randomisation of companies is successful and that the project partners are committed to the research method.
- It is advisable to have a pre-plan for the impact assessment drafted well in advance, preferably during the application phase.

End of the project

- The completion of statistical material is not in the hands of the researcher, but it does determine the schedule of the final assessment. It is advisable for a researcher to prepare for the possibility that statistical material is not available and survey material needs to be used instead.
- Be prepared to develop and change the assessment approach if the original plan is not feasible.

LESSONS FROM ENCOURAGING SMES TOWARDS SOCIALLY RESPONSIBLE GROWTH

The goal of the project was to encourage SMEs operating in Vantaa towards socially responsible growth and competence development. Originally, the Growth Deals or service packages developed in the project had a separation of socially responsible services and services supporting growth. The aim was to design the Growth Deals to be conditional so that the company is supported in its growth if it makes social investments, such as developing the competence of personnel or recruiting personnel with partial work capacity. However, this kind of generalised incentive model proved to be challenging, because companies' situations, needs and opportunities are unique. The Growth Deals were developed so that all of the project's services simultaneously included elements of growth and social investment.

Based on the project's findings, the most successful incentive for companies towards developing the competence of personnel and other socially responsible acts is diverse and active customer service with a one-stop principle. The time that companies spend looking for services is valuable, so high-quality customer service and making things easier for them has a big impact.

Based on the project's findings, SMEs are interested in training services tailored to their own needs. The tailoring makes the benefits of the training clearer, so that the time spent on the training is seen as a profitable investment instead of an expense. As such, tailored training services may also serve as an incentive to SMEs for developing the competence of personnel.

Lessons from the project:

SMEs value active services and dialogue

- SMEs value easy interaction
  The project developed an Account Manager model where the contact person for a company was an Account Manager who had an understanding of the company's situation. The Account Manager served as the company's contact person and helped to look for solutions for the company's needs. The effortlessness and personal contact with the Account Manager helps companies to commit to long-term competence development.
  The most effective way of starting cooperation is to show an interest in the company's growth goals and methods. At its best, active contact and creation of solutions means serving as a growth partner for the company.

SMEs value tailored services

- Training being free of charge is not a sufficient incentive for companies. The time spent by employees on training is seen by companies more as an expense than an investment in competitiveness.
  The training services that are developed should meet the genuine needs of the company, and the benefits of the services should be clearly presented.

FROM AGILE OPERATIONS TO LASTING RESULTS

The project particularly paid attention to agile and client-oriented co-creation and the continuity of good practices. Learning through agile testing supported the client-oriented development of services. The work utilised the experiences, opinions and expertise of all project partners. Additionally, a comprehensive, well-resourced plan was drafted to ensure the continuity and sustainability of the project results. This plan for ensuring that the project functions take root included measures to improve the impact of project services, to scale up the effective service models, and to distribute the results of the project.

AGILE AND CLIENT-ORIENTED DEVELOPMENT

Clarifying goals

Changes in the business environment occasionally require the clarification and redefining of goals. The shared discussions with project partners and experts sought to ensure a shared understanding on the goals and way forward. Boldly trying new solutions to achieve the goals was a prerequisite for success.

Agile working method

As external circumstances changed, the project's agile working method enabled rapid reactions in the service development work. For example, at the start of the coronavirus pandemic, a new service was designed to support the management of SMEs in the changed conditions.

Account Managers' contact with SMEs

The work of Account Managers played a key role in marketing the services and staying in active contact with companies. The project found that sufficient resources and time should be reserved for client work. The personal contact of Account Managers helped SMEs to commit to the project services, made communication more effective and improved the customer experience. Additionally, it created continuity between the various services.

Tailoring services to the needs of clients

Tailoring the services required resources for the coaches who defined the service content to meet the needs of the company.

"With our generational change, we overhauled our processes, and our internal communication has improved. We've noticed what our strengths are and what we should develop. We've received good tools for further development, so it's easy to continue from here.

"From the first services, we got the feeling that this could be useful. We also got positive feedback from our personnel. Competence development has been the focus the entire time. It sparked a dialogue with our personnel, and the organisation has been updated, as well.

ENSURING CONTINUITY AND SUSTAINABILITY OF PROJECT RESULTS

Improving effectiveness of services

The Growth service 2.0 coaching was designed to support the development work of SMEs. During the coaching, the progress achieved after previous services was discussed and sparring was provided for company personnel regarding further measures.

Scaling service models for broader use

The project's co-created services were further refined through service design methods to serve as concepts that other organisations could also use. Additionally, work was conducted to develop and distribute the lessons and good practices from the project through further projects.

Distribution of project results and lessons

Systematic communication and active publications raised the visibility of the project's results and lessons and distributed them for use by others. The lessons from the project were compiled in the New Competencies for Growth publication. Additionally, action proposals for decision-makers were drafted to pursue a lasting impact.

ECOSYSTEM – BETTER SOLUTIONS FOR COMPANIES' COMPETENCE NEEDS THROUGH COOPERATION

The results of the cooperative network of project partners in the co-creation process are an example of a local ecosystem of continuous learning. According to the findings of the project, working in an ecosystem promotes the development of solutions and innovations that address companies' competence needs.

The cooperative relationships formed between the various partners within the ecosystem foster agility and diversity, especially for services offered to SMEs. SMEs' resources for competence development are limited, and the services offered have to be flexible and react to the companies' needs and changes in them. Because the companies' needs are different, the competence development services have to be tailored specifically to each company. The SMEs in the ecosystem's cooperative network can be referred to the right organisations with the best capabilities of meeting the needs of the company in question.

Working in an ecosystem fosters cooperation between educational institutions and companies, which in turn foster the co-creation of training services. The cooperation provides valuable information to the educational institutions on changes in working life and the competence needs of companies. At the same time, the companies become more aware of the various options of competence development and the services of educational institutions. Based on experiences from the project, there should be continuous dialogue regarding needs and services between educational institutions and the working life.

In other words, an ecosystem also promotes the continuity of training service development work. The challenge in development projects is their short implementation cycle, which is harmful to the long-term development and implementation of innovations. Cooperation in an ecosystem ensures continuity, proactivity, and reactions to changes in the business environment through continuous dialogue and cooperation.

URBAANIA KASVUA VANTAA

UIA URBAN INNOVATIVE ACTIONS

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European Regional Development Fund

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URBAN GROWTH VANTAA PROJECT

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INFOCARE Technology Services
ISS
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ATTACHMENTS

Personal Digital Coach >

Competence Mapping Portal >

Dashboard >

UKV bot >

PERSONAL DIGITAL COACH

Implementation plan

URBAANIA
KASVUA
VANTAA

UIA URBAN INNOVATIVE ACTIONS

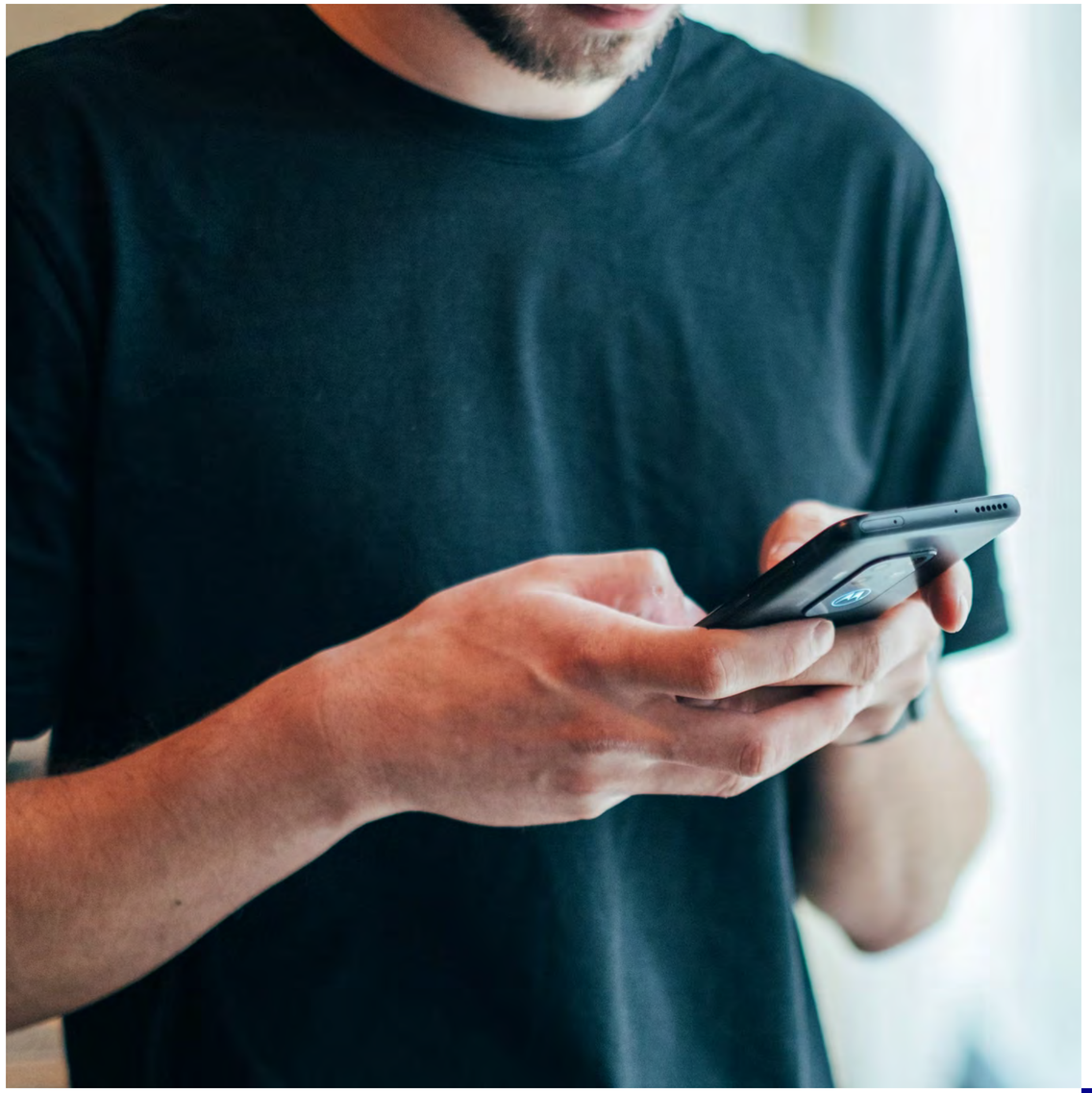
INTRODUCTION

The aim of this document is to describe how the Personal Digital Coach tool can be developed further and implemented. It also offers guidelines more generally for developing a tool to support students who are doing apprenticeships.

An apprenticeship differs in many ways from studying for a degree. Whereas degree students interact constantly with their teachers and service providers related to their studies, in an apprenticeship the student is working for an employer and does not have such a support network. There is less interaction between the educational institution and the student, which can hinder or delay the transfer of information regarding any challenges faced by the student. Such delays can lead to an increased burden for the student, and this in turn can affect the progress made during the apprenticeship.

Personal Digital Coach is a tool that helps increase the flow of information. It offers support to students by regularly following up with them regarding potential issues or problems. This happens over the mobile phone, which makes it easy for the student to have the tool readily available and to report any issues regardless of time and place.

CONTENTS



BUSINESS OPPORTUNITIES

Companies that employ apprentices can use PDC to make their work more efficient by

- systematically following up with a larger number of apprentices
- using the collected data to identify and solve problem areas
- preventing dropouts
- making apprenticeships more compelling by increasing student satisfaction

A license-based service for companies that employ apprentices

- facilitates following up on apprenticeships
- enables timely support for apprentices
- provides information for improving processes

RISKS

The risks related to the development of the tool
can include the following:

The existence of the service is dependent on the provider

- The service will not continue for example if the provider undergoes bankruptcy

On an organizational level

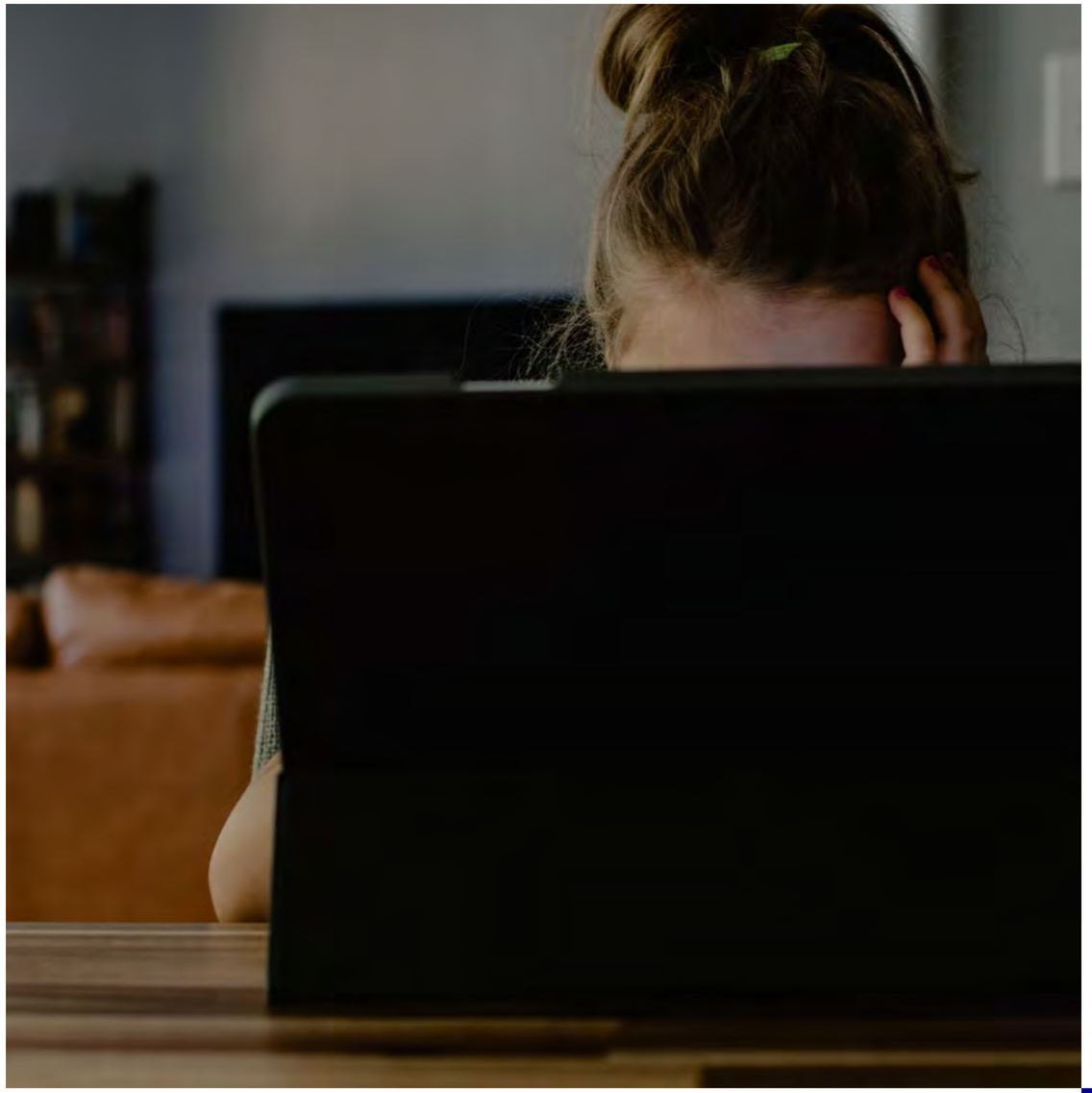
- loss of core resources
- lack of commitment from the management

On a financial level

- lack of funding for the development leads to insufficient resources
- funding is cut and the tool can no longer be used

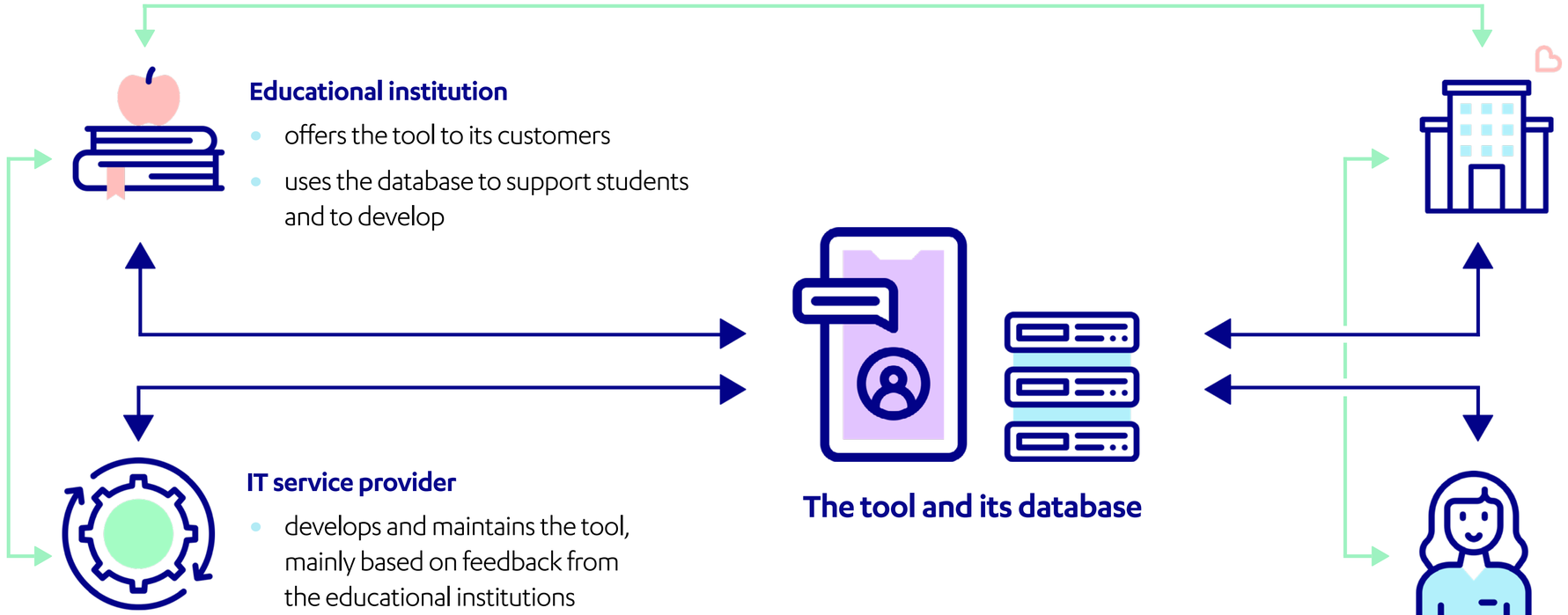
On a technological level

- breach in data protection
- problems caused by technical errors



ARCHITECTURE

STAKEHOLDERS AND USERS



Educational institution

- offers the tool to its customers
- uses the database to support students and to develop

IT service provider

- develops and maintains the tool, mainly based on feedback from the educational institutions

The tool and its database

Client companies

- agree on the use of the tool with the educational institution
- use the tool database and offer services to apprentices

Apprentices

- use the tool during their apprenticeship
- produce information for the database
- interact with the company as directed by the tool

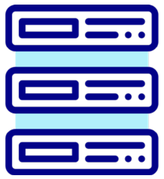
ARCHITECTURE

ROLES AND DEVELOPMENT PROCESS

SYSTEMS

Student database

The database of the educational institution includes the data on students who are doing an apprenticeship.



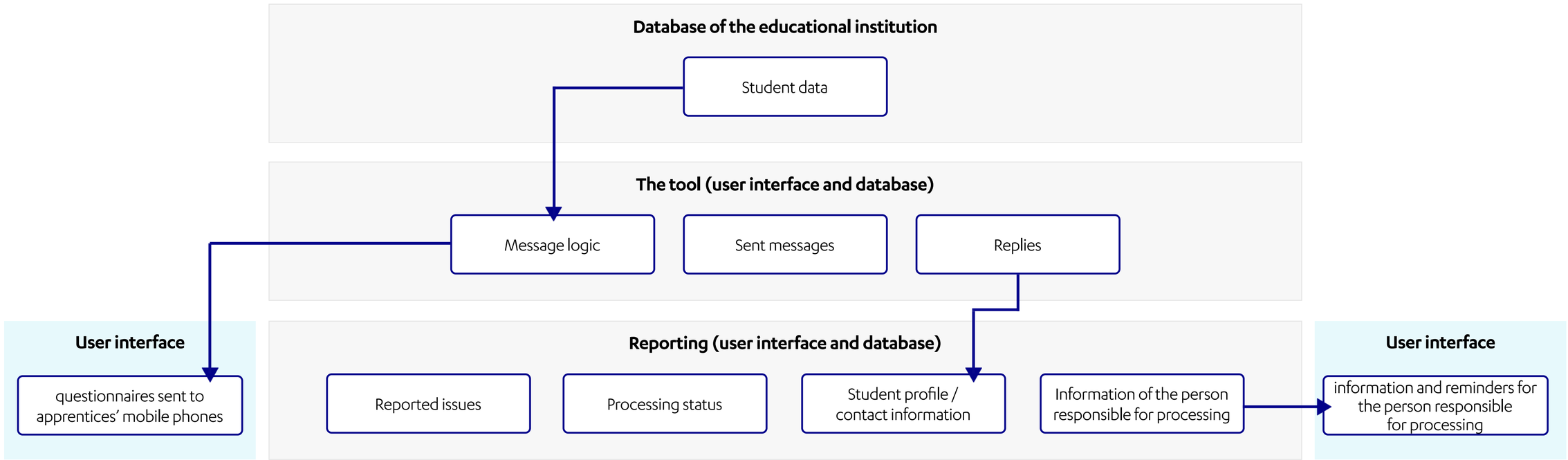
The database of the tool

The database of the tool includes the logic of its functions: what the tool sends, when, and how it processes the replies.

The database of reported issues

The database includes the information about reported issues and their status.

APPLICATION LOGIC AND INTERFACES



APPLICATION LOGIC AND INTERFACES: DESCRIPTIONS

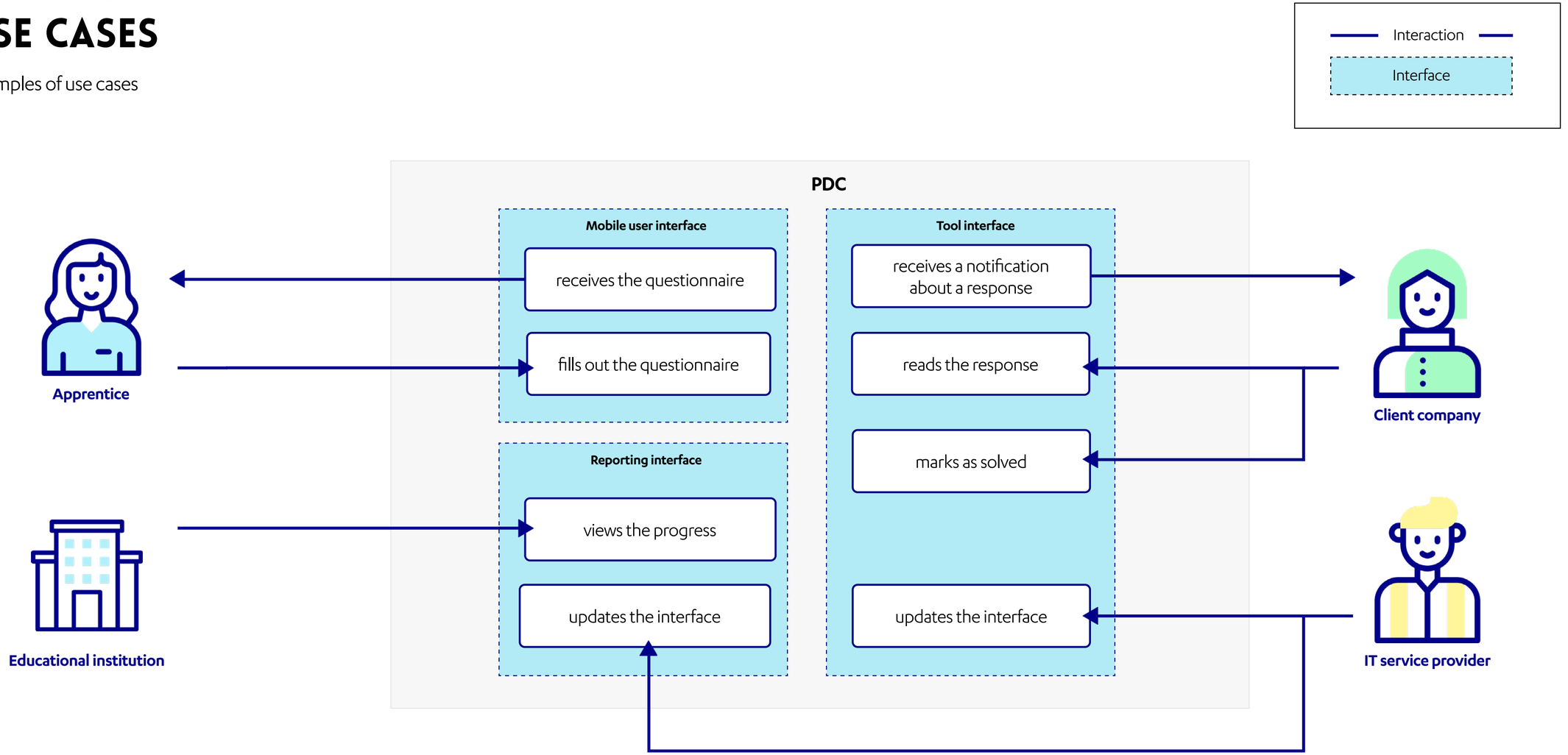
ROLE	DESCRIPTION
IT service provider	maintains and updates the user interfaces
Representative of the educational institution	Uses the user interface and follows up on the progress by using the reporting interface
Representative of the company	contributes to creating the message path, uses the user interface
Apprentice	Responds to messages sent to their mobile device by the tool
The apprentice's supervisor	works as a supervisor and uses the user interface of the tool
The apprentice's workplace instructor	Guides the apprentice in their work and uses the user interface of the tool

TERM	DESCRIPTION
Questionnaire	a short questionnaire regarding progress with the studies, sent to the mobile phone
Student information	Information regarding the studies of the apprentice, e.g., period of working for a company
Message logic / message path	the logic by which the messages are categorized and forwarded to the correct party
Reported issues	Problems or issues reported via the questionnaire, forwarded to the person responsible for solving them
Processing status	indicates whether the reported issue is active or resolved
Student profile	Information about how many times the student has filled out the questionnaire, their responses and reported issues

ARCHITECTURE

USE CASES

Examples of use cases



ARCHITECTURE

FURTHER DEVELOPMENT

Moving away from applications and towards messages via SMS

- no need to install an application, or to “sell” this to the user
- the user does not need a smart phone, mobile data, or storage space for the application
- reaches a wider audience: an SMS can be sent to the whole target group

ARTICLES

30.10.2020

Tilanteiden mielekkyys käyttäytymisen vaikuttimena työpaikoilla.

26.1.2021

Personal Digital Coach tekee tavoitteista totta

7.6.2021

Kännykkäsovellus osaamisen kehittämisen tavoitteiden saavuttamiseksi

10.6.2021

Case Finnair Cargo: Personal Digital Coach -sovellus perehdytyksen tueksi

20.9.2021

Tekoäly ei korvaa inhimillistä tukea uuden työn opettelussa

5.10.2021

Personal Digital Coach – could an application help the competence development of the worker?

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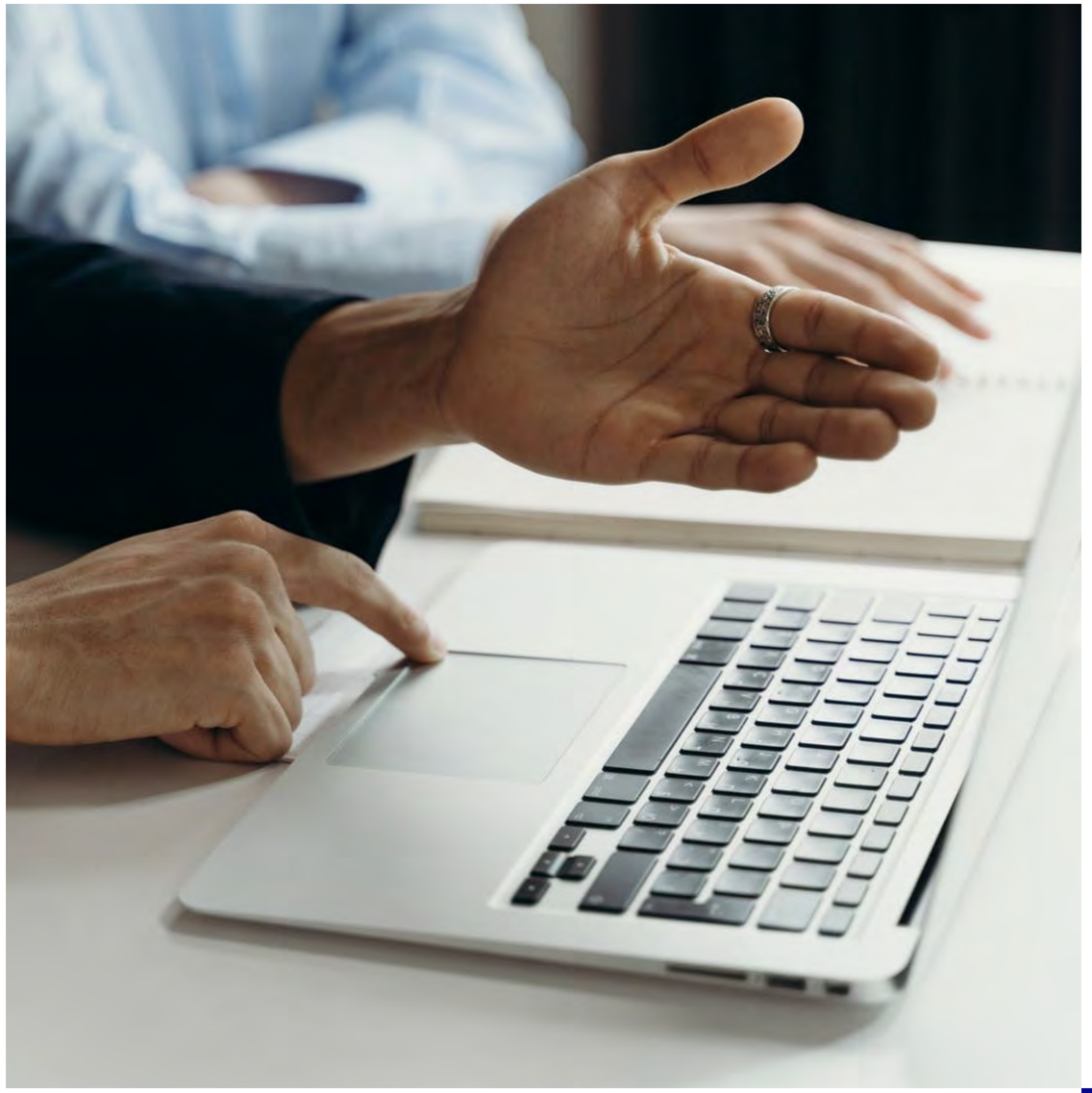
COMPETENCE MAPPING
Implementation plan
URBAANIA
KASVUA
VANTAA
UIA
URBAN
INNOVATIVE
ACTIONS

INTRODUCTION

The purpose of this document is to describe the most relevant aspects for the implementation of the Competence Mapping portal. This description enables further development of the tool as such or works as a guideline for planning and developing a competence mapping tool in general.
Developing competence within a specific geographical area requires collaboration between different sectors and combining their services into a whole. The different actors in this collaboration know the local labor market and industries. Services and processes for competence development need to be developed, as well as the tools to support these processes, for the services to be delivered and managed efficiently.

Competence Mapping is a tool that has been developed as part of the services for competence development within the Urban Growth Vantaa project. The project has explored what demands such a tool should meet for competence to be managed in a way that corresponds to the job market. For example, the functionality of saving the dialogue between an employee and their supervisor in connection with the competence mapping has been seen as a useful for competence management.

Competence mapping offers an easy way for an employee to save the information about their own competence and skills. It also shows the employee, how their skills currently correspond to different jobs, and what kind of courses they could take to meet the requirements of a specific job.



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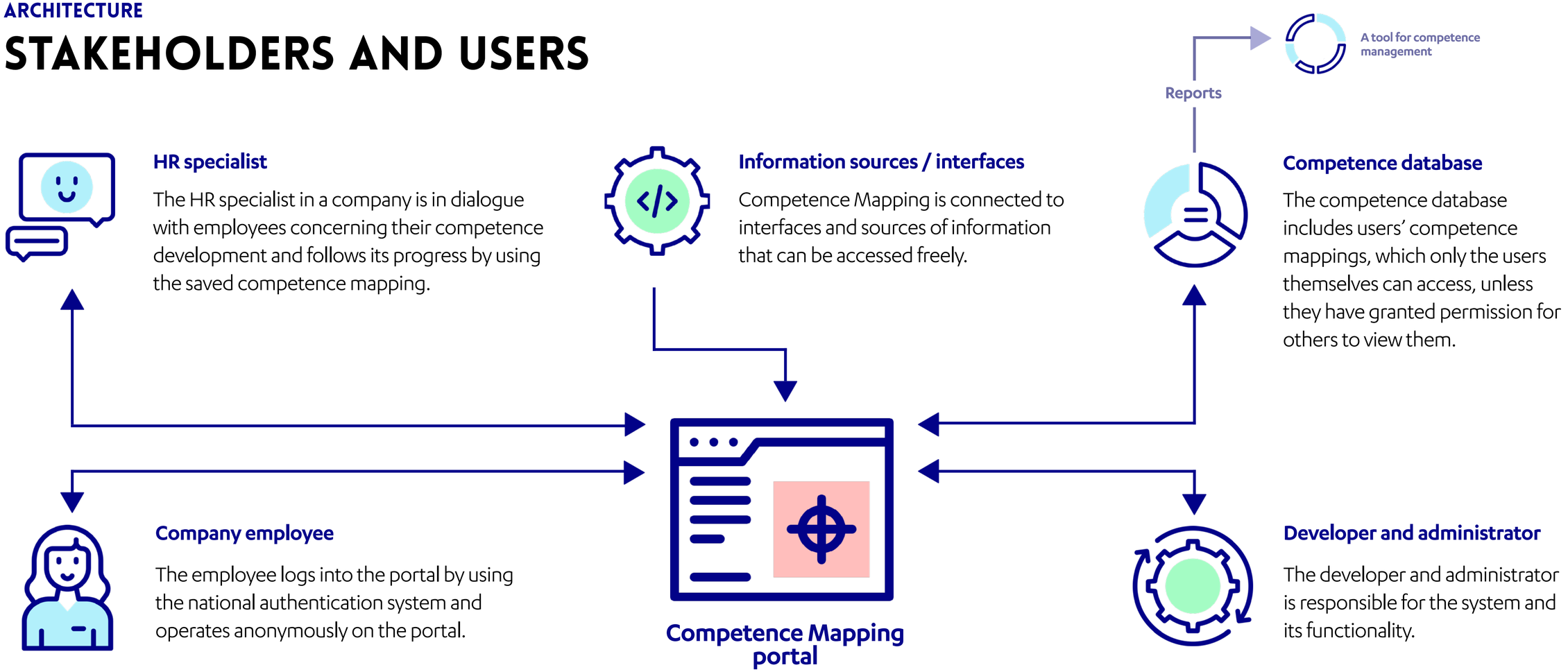
STAKEHOLDERS AND USERS



HR specialist

The HR specialist in a company is in dialogue with employees concerning their competence development and follows its progress by using the saved competence mapping.

Information sources / interfaces

Competence Mapping is connected to interfaces and sources of information that can be accessed freely.

Competence database

The competence database includes users' competence mappings, which only the users themselves can access, unless they have granted permission for others to view them.

Company employee

The employee logs into the portal by using the national authentication system and operates anonymously on the portal.

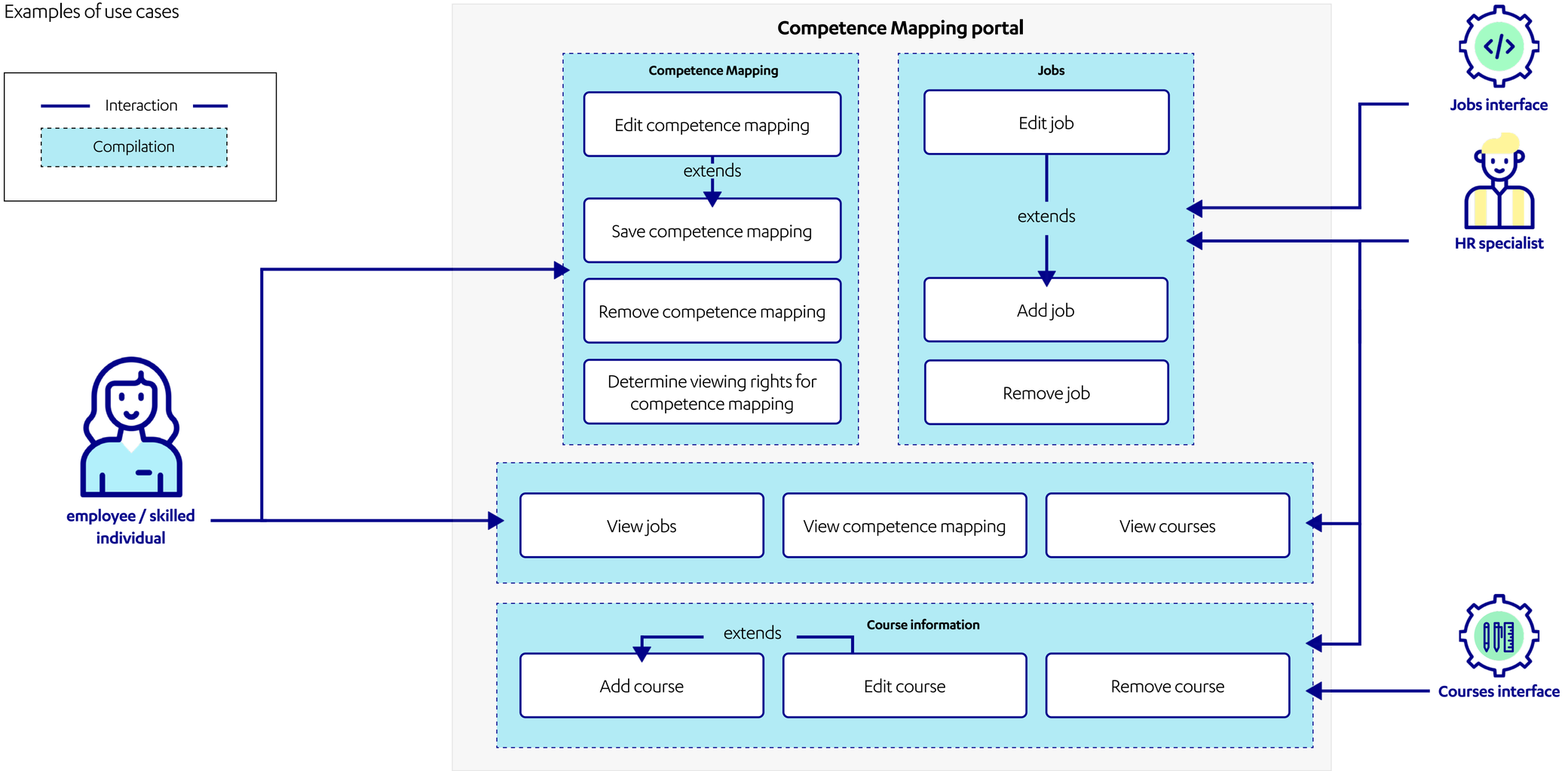
Developer and administrator

The developer and administrator is responsible for the system and its functionality.

ARCHITECTURE

USE CASES

Examples of use cases



ARCHITECTURE

DESCRIPTION OF USE CASES

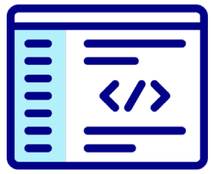
USE CASE	DESCRIPTION
Save competence mapping	The employee / skilled individual saves their competence mapping into the system
Remove competence mapping	The employee / skilled individual removes their competence mapping from the system
Edit competence mapping	The employee / skilled individual edits their competence mapping in the system and saves it
Set viewing rights for competence mapping	The employee / skilled individual chooses which information the HR specialist can view
View job	The employee / skilled individual or the HR specialist views a job description
View competence mapping	The employee / skilled individual or the HR specialist views the competence mapping
View course	The employee / skilled individual or the HR specialist views a course description

USE CASE	DESCRIPTION
Add job	The HR specialist adds a job into the system
Remove job	The HR specialist removes a job from the system
Edit job	The HR specialist edits a job in the system
Add course	Course information is imported via the courses interface
Remove course	Course information is removed via the courses interface
Edit course	The HR specialist edits the course information in the system

SYSTEMS AND TECHNOLOGY

Application as a cloud service

The web portal is based on a Software as a service (Saas) system, which offers the necessary programs for the development of a web application, as well as flexibility and scalability.



Web portal

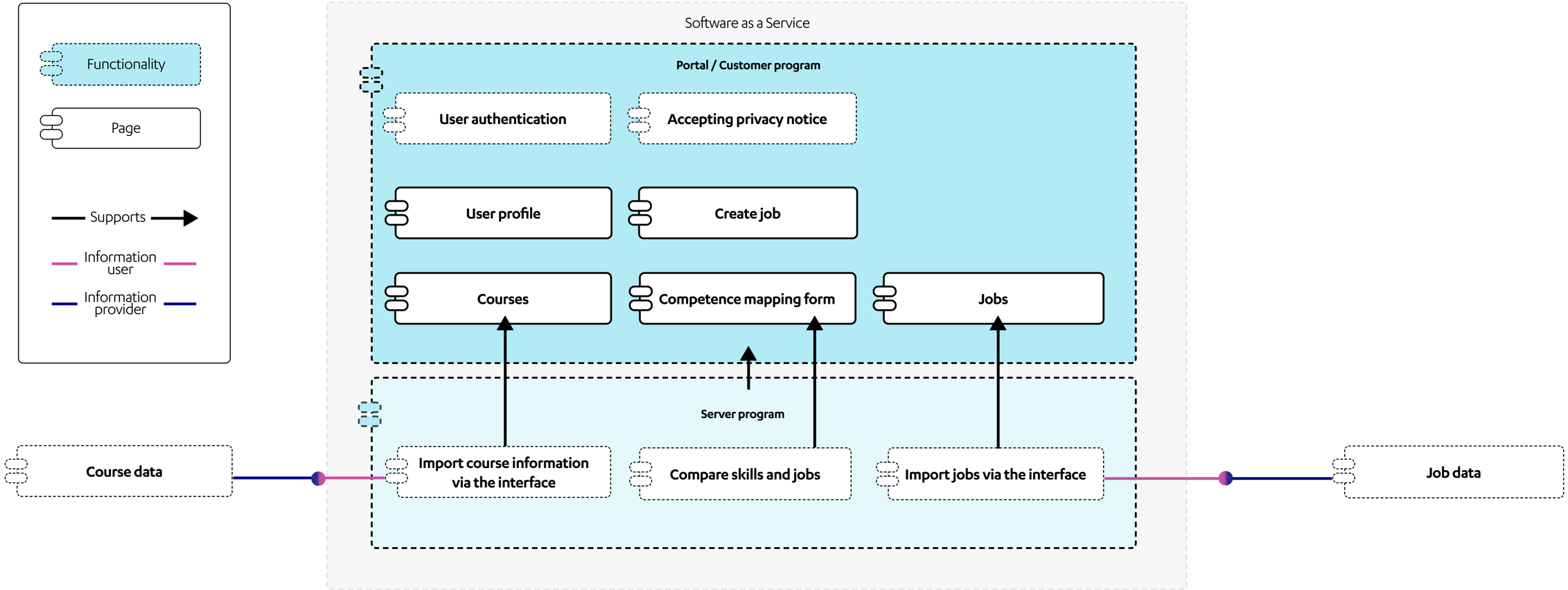
The implementation of the web portal is based on Javascript software development, which accommodates a server program and a customer program. The implementation of the user interface within the customer program can be realized with Javascript, HTML, or CSS technology.

Application interface

The application interface provides a way to search data (http resource), for Competence Mapping.

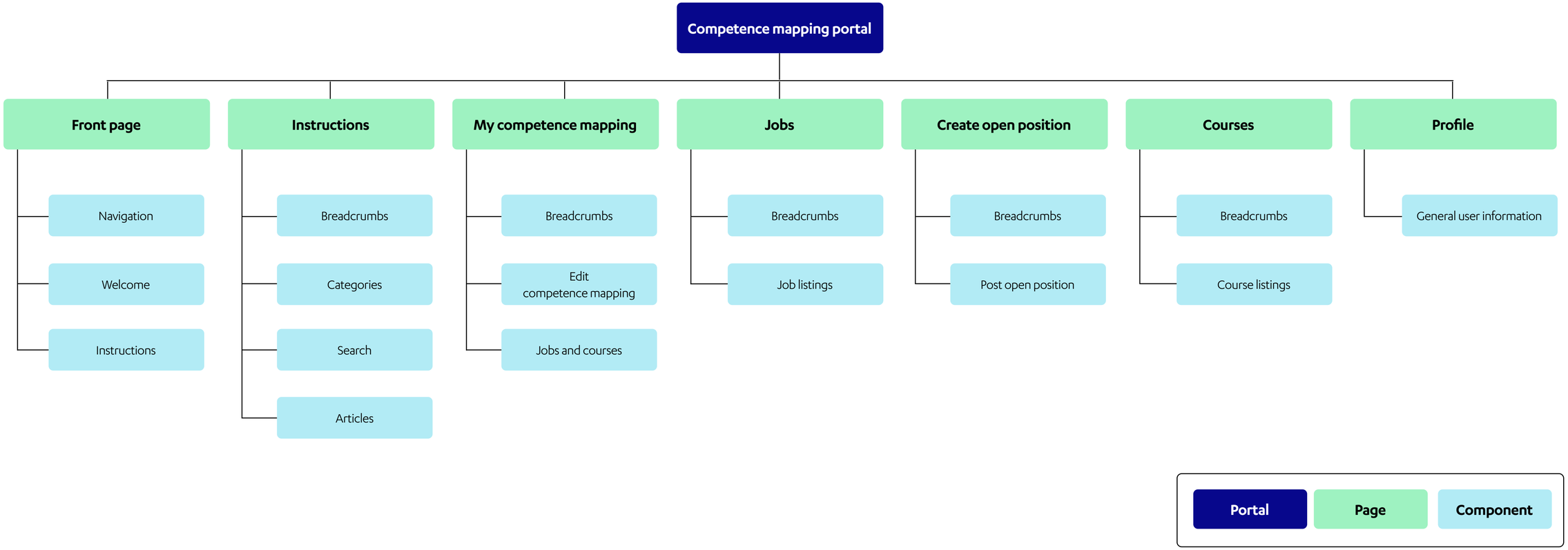
APPLICATION LOGIC AND INTERFACES

An example of the structure of the program, its functionalities, and interfaces



ARCHITECTURE / IMPLEMENTATION

PAGE HIERARCHY



DESCRIPTION OF COMPONENTS

COMPONEN	DESCRIPTION
Front page navigation	Button 1 (if the user has not yet filled out the competence mapping): “Start competence mapping”. Button 1 (if the user has already filled out the competence mapping): “My competence mapping”. Pressing the button takes the user to the competence mapping form. Button 2: “Browse jobs”, pressing the button takes the user to the jobs page.
Welcome	A presentation of the tool in text form
Instructions	A list of the five most recent articles containing instructions, the headings link to the articles
Breadcrumbs	A hierarchical view of the navigation structure
Categories	A listing of the categories within the instructions
Search	Search the content of the pages

COMPONEN	DESCRIPTION
Article list	Short descriptions and author information of the articles
Job and course listings	Show the jobs and courses that are of interest to the user, based on their competence development plan
Edit my competence mapping	Directs the user to the competence mapping form (the filled form if the user has filled it out; an empty form if the user has not yet filled it out)
Job listings	Lists all jobs and vacancies
Post vacancy	A form to create a new vacancy
Course listings	Lists all courses categorized by type
General user information	The user’s information that can be edited by the user. The system uses the information e.g., to prefill the competence mapping form.

ARCHITECTURE

FURTHER DEVELOPMENT

Utilizing a national application platform

- A national application platform would offer uniform models for application development in projects and make quicker and more cost-efficient trials possible.

A strong national user authentication and anonymity by default

- Using the national system of strong user authentication would bring scalability. Anonymity of the users enables recruiters to focus on skills rather than persons.

Utilizing open data interfaces in a standardized form

- The data that is imported across interfaces should be freely accessible. Using open interfaces provided by private companies can require permission, and management of such permissions. If the data that is imported via the interface is in a standardized form, it is easier to plan interfaces with data providers and to integrate the data.

BUSINESS OPPORTUNITIES

A company-level competence mapping tool (SaaS)

- A user interface with the company's logo and colors
- A database with the personnel's competence information and the company's jobs
    - AI can combine them and suggest who could take on which tasks
- Field-specific study paths for employees
- Saving the dialogue between the employee and their supervisor for future development discussions

RISKS

Developing the application requires a solid revenue generation model or secure financing.

The national educational data needs to be made uniform so that it can be easily imported into the application. This process requires a separate project.

The national job data needs to be made uniform so that it can be easily imported into the application. This process requires a separate project.

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DASHBOARD

Implementation plan

URBAANIA KASVUA VANTAA

EUROPEAN UNION
European Regional Development Fund

UIA URBAN INNOVATIVE ACTIONS

INTRODUCTION

Dashboard works as an internal tool for a Growth Team within a city administration. The purpose of a Growth Team is to assist companies in meeting their need for skilled work force and in enhancing business growth.

Dashboard includes information about training programs and companies, as well as current and potential employees and their skills. Based on this information, companies can find the skill set they need and plan apprenticeships and other training programs for their employees. This enhances the company's competitiveness.

This implementation plan describes the idea and implementation of Dashboard and gives a basis on which the application can be developed further. It also gives guidelines for planning and developing a tool that searches for information.

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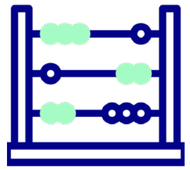
ARCHITECTURE

STAKEHOLDERS AND USER

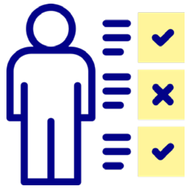


Growth Team

The Growth Team offers services to companies that are recruiting and utilizes Dashboard to support these services.

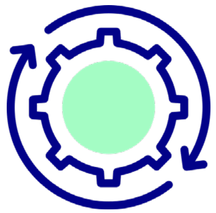
Data sources / interfaces

Dashboard is connected to interfaces and sources of information that can be accessed freely.



Competence database

The competence database includes user's competence mappings, which only the users themselves can access, unless they have granted permission for others to view them.



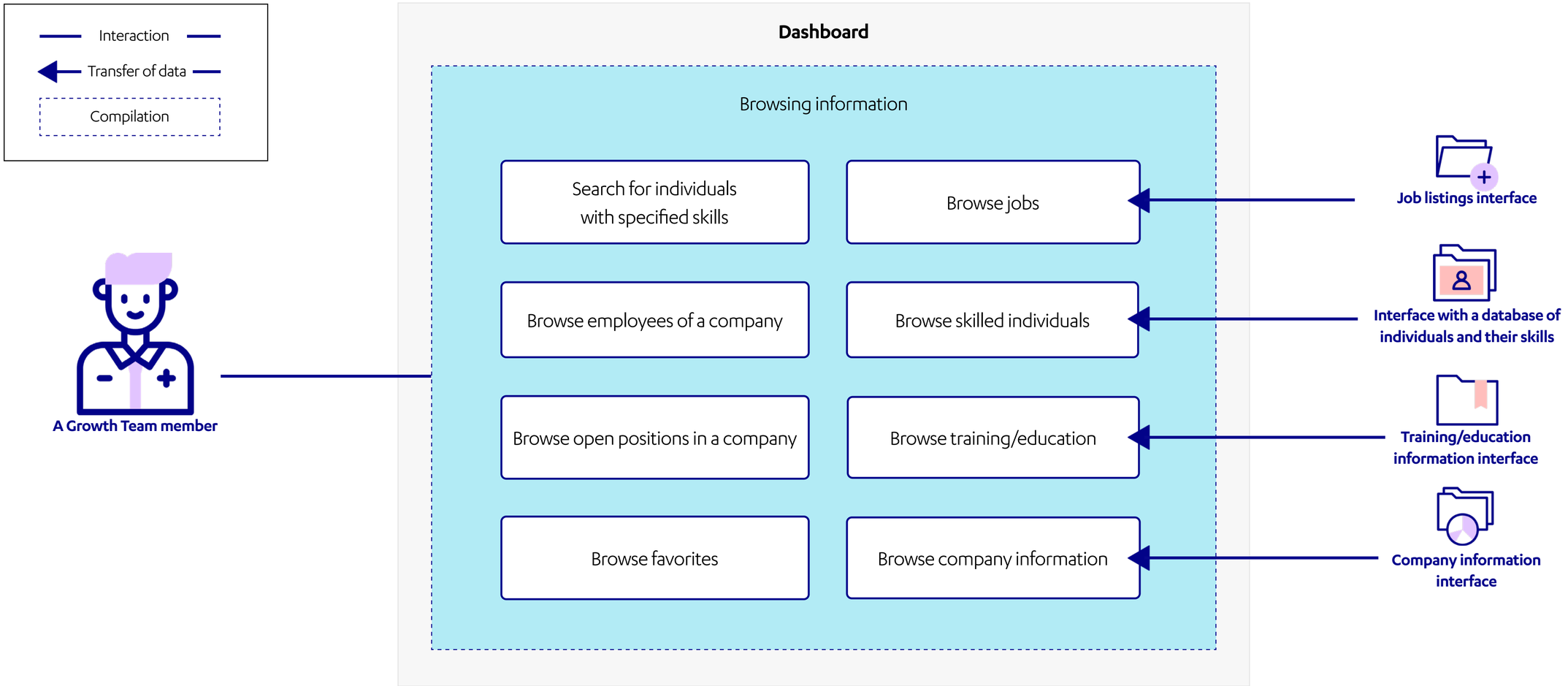
Developer and administrator

The developer and administrator is responsible for the system and its functionality.

ARCHITECTURE

USE CASES

An example of possible use cases for the application



ARCHITECTURE

DESCRIPTION OF USE CASES

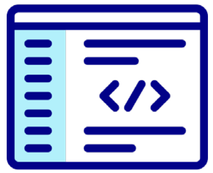
USE CASE	DESCRIPTION
Search for individuals with specified skills	A Growth Team member uses search terms to find individuals with specific skills.
Browse employees of a company	A Growth Team member searches and selects a company from the listing and finds employees with skills that correspond to the search term.
Browse open positions in a company	A Growth Team member browses a company's job listings and selects them onto a separate list.
Browse favorites	A Growth Team member browses saved favorites, such as relevant companies, jobs, or trainings.
Browse company information	A Growth Team member browses information about a selected company, such as contact information and financial information.
Browse jobs	A Growth Team member browses all open positions.
Browse skilled individuals	A Growth Team member browses all skilled job seekers.
Browse training/education	A Growth Team member browses all training programs.

ARCHITECTURE/IMPLEMENTATION

SYSTEMS AND TECHNOLOGY

Application as a cloud service

Dashboard can be based on a Software as a service (Saas) system, which offers the necessary programs for the development of a web application, as well as flexibility and scalability.



Dashboard

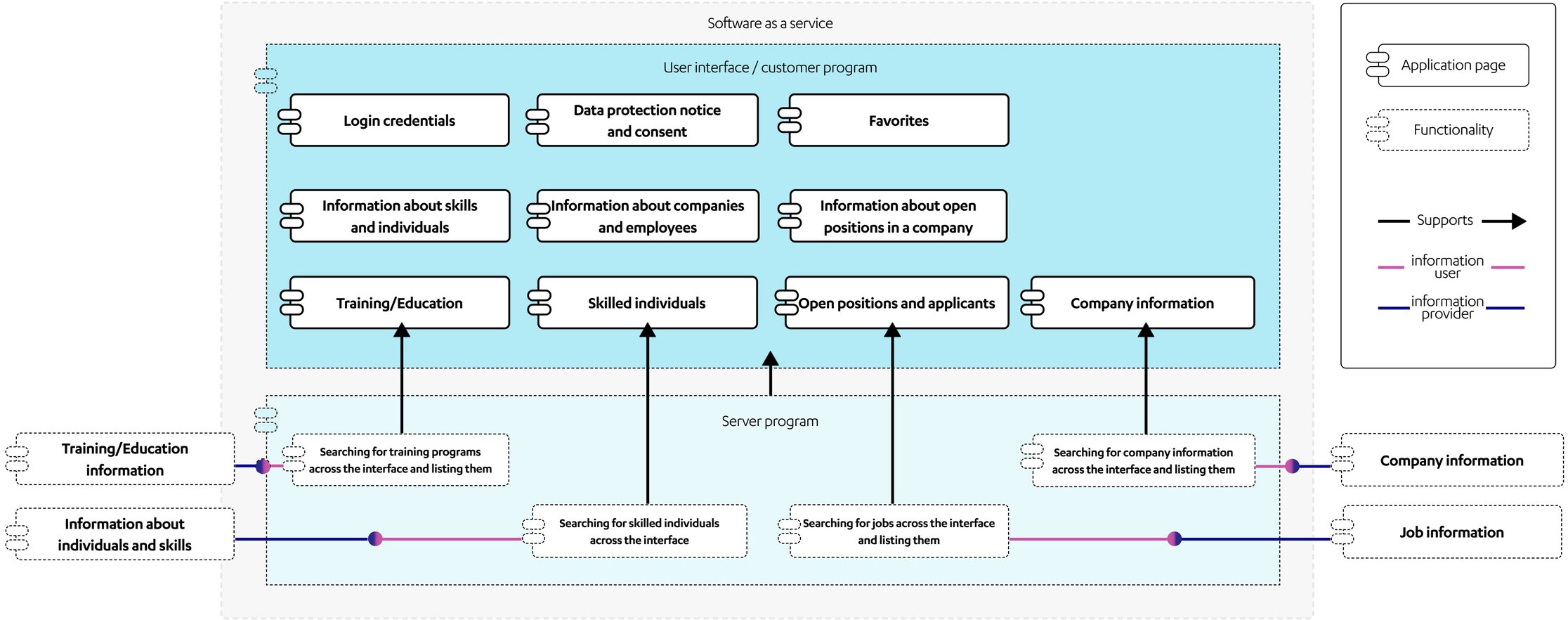
The implementation of Dashboard can be based on Javascript software development, which accommodates a server program and a customer program. The implementation of the user interface within the customer program can be realized with Javascript, HTML, or CSS technology.

Application interface

The application interface provides a way to search data (http resource), for Dashboard.

APPLICATION LOGIC AND INTERFACES

An example of the structure of the program, its functionalities, and interfaces



APPLICATION LOGIC AND INTERFACES, DESCRIPTION OF THE PAGES

PAGE	DESCRIPTION
Favorites	The user can browse saved favorites, such as jobs, employees, or training programs.
Information about skills and individuals	The user can browse specified skills and individuals with those skills.
Information about companies and employees	The user can browse information about a specific company, including its employees and their skills.
Information about open positions in a company	The user can browse open positions within a company, including the skills required.
Training/Education	The user can use search terms to look for information about training/education.
Skilled individuals	The user can browse the information on individuals, such as their skills and educational background.
Open positions and applicants	The user can browse a list of all open positions, select a specific position, and see the applicants for it.
Company information	The user can browse a list of all companies in the database (or narrow it down by field), select a company, and browse its contact information and financial information.

ARCHITECTURE/IMPLEMENTATION

APPLICATION LOGIC AND INTERFACES, DESCRIPTION OF FUNCTIONALITIES

FUNCTIONALITY	DESCRIPTION
Training/Education information	An open interface that provides data about education and training, for example secondary and higher education
Information about individuals and skills	An open interface that provides data on individuals and their skills. Personal data can be anonymized if necessary.
Company information	An open interface that provides data on companies (for example in a specific city/area), with the basic information (contact information and addresses) and financial information as a minimum.
Job information	An open interface that provides data on open positions (for example in a specific city/area), including for example the company and its contact information, job requirements and the application deadline.
Searching for training programs across the interface and listing them	A functionality of the server program that imports data on education/training programs and produces information for the page “Training/Education”, according to the user’s search criteria.
Searching for skilled individuals across the interface and listing them	A functionality of the server program that imports data on skilled individuals and produces information for the page “Individuals and skills”, according to the user’s search criteria.
Searching for jobs across the interface and listing them	A functionality of the server program that imports job data and produces information on the page “Open positions and applicants”, according to the user’s search criteria.
Searching for company information across the interface and listing them	A functionality of the server program that imports company data and produces information on the “Company information” page, according to the user’s search criteria.

ARCHITECTURE

FURTHER DEVELOPMENT

Utilizing a national application platform

- A national application platform would offer uniform models for application development in projects and make quicker and more cost-efficient trials possible.

A strong national user authentication

- Using the national system of strong user authentication would bring scalability.

Utilizing open data interfaces in a standardized form

- The data that is imported across interfaces should be freely accessible. Using open interfaces provided by private companies can require permission, and management of such permissions. If the data that is imported across the interface is in a standardized form, it is easier to plan interfaces with data providers and to integrate the data.

BUSINESS OPPORTUNITIES

Dashboard software as a service (SaaS) for city administrations

- User interface with the logo and colors of the city
- Local jobs, companies, and trainings listed
- Charged based on licenses

RISKS

Developing the application requires a solid revenue generation model or secure financing.

The national educational data needs to be made uniform so that it can be easily imported into the application. This process requires a separate project.

The national job data needs to be made uniform so that it can be easily imported into the application. This process requires a separate project.

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UKV BOT

Implementation Plan

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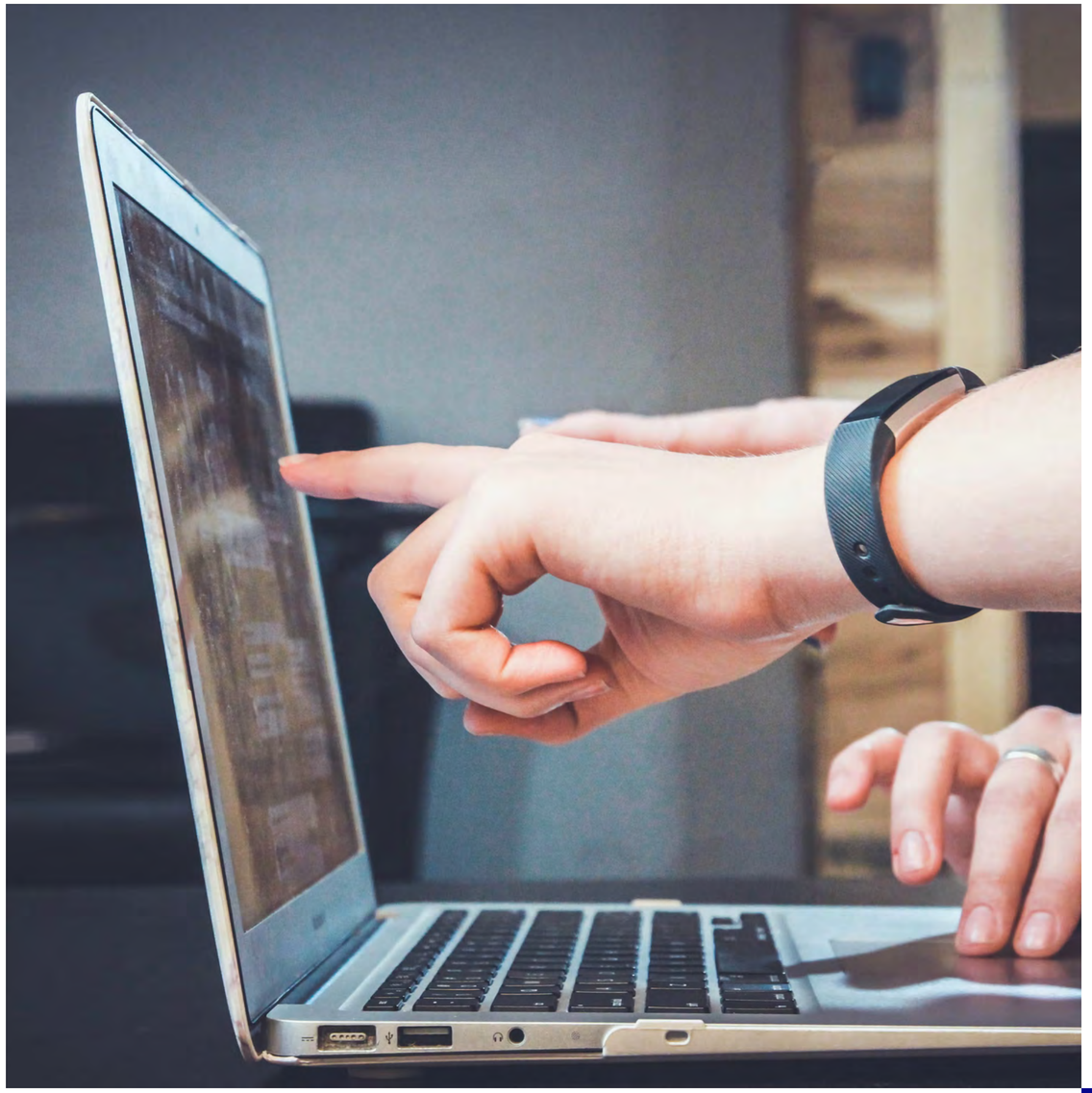
UIA URBAN INNOVATIVE ACTIONS

INTRODUCTION

The Urban Growth Vantaa project developed a chatbot to map out technical and business-related challenges that companies face by using an automated dialogue path. The chatbot can be used for customer acquisition, and it enables a needs-based and targeted approach for contacting potential customers.

The idea for the chatbot stems from the services of the Urban Growth Vantaa project, particularly those related to facilitating a technological leap in SMEs. The experiences of this service show that SMEs have a growing need for support when it comes to technology projects in their organization. To offer such support, a website was conceptualized that would include tips and instructions for technological change projects. This idea was further developed in a more innovative and interactive direction, becoming a chatbot that connects companies and service providers in an automated way.

CONTENTS



DEMO

Below is a link to a demo version of the chatbot (in Finnish), which was built based on the Proof of Concept that the Urban Growth Vantaa project developed.

GO TO DEMO

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UIA URBAN INNOVATIVE ACTIONS

USE CASES

THE OWNER OF THE CHATBOT
logs into the dashboard of the chatbot
on the dashboard, edits the chatbot dialogue paths
on the dashboard, edits the chatbot website
on the dashboard, includes links in the chatbot dialogues
on the dashboard, includes images in the chatbot dialogues
downloads the responses to the chatbot as an Excel file
on the dashboard, analyzes the statistics collected by the chatbot

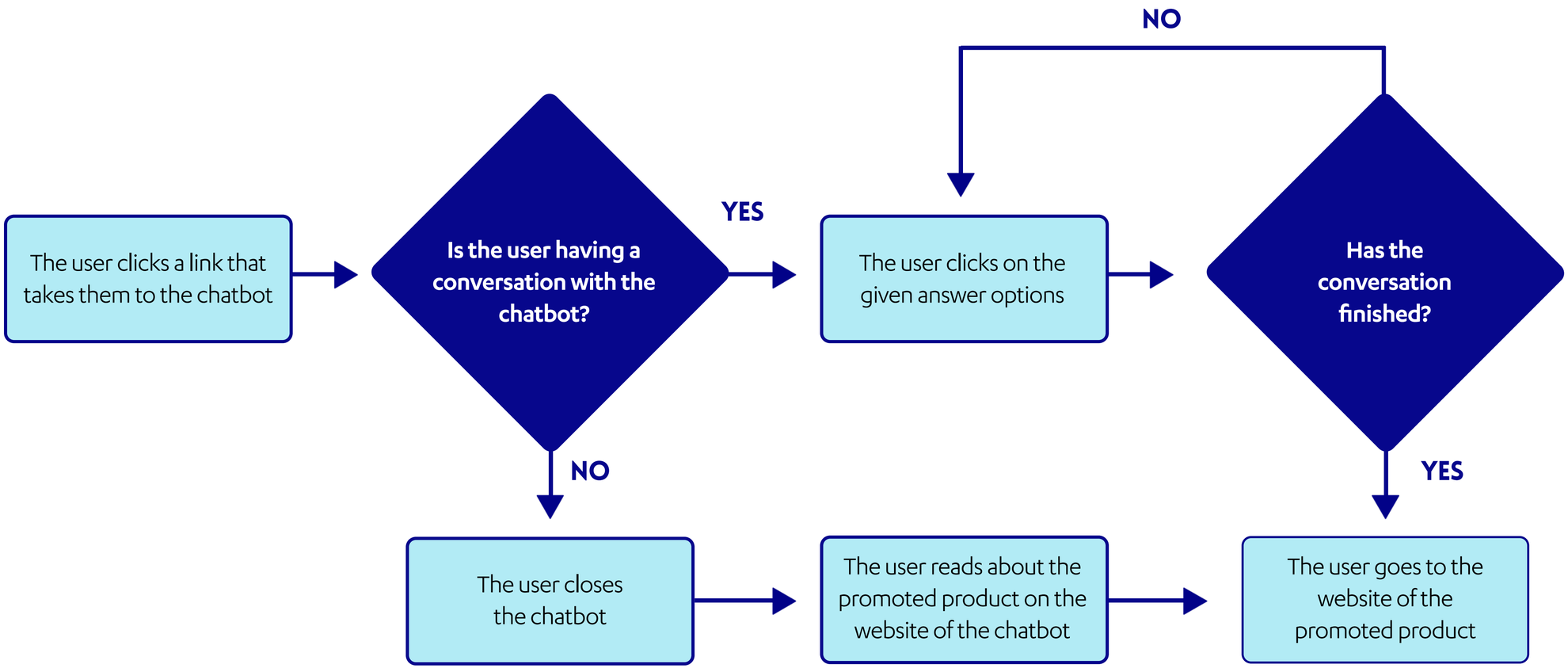
THE USER
clicks the link they received by email to have a conversation with the chatbot
closes the pop-up window of the chatbot to read the text on the website
has a conversation with the chatbot using the given answer options
moves to the website of the promoted service via a link provided by the chatbot

***The owner of the chatbot:** a representative of the company

***The user:** the person having a conversation with the chatbot

PROCESS DIAGRAM

The path of the user in the system



IMPLEMENTATION

The chatbot works as a Software as a Service (SaaS), which companies can use for interactive customer acquisition. The MIT licensed source code of the chatbot is available in the link below. The source code and the demo version can be used as a basis for further development, in accordance with the license.

PoC functionalities

- A chatbot based on a conversation tree
- Building and editing several conversation trees with the editor
- Creating a website
- Reports and analytics

Developing the chatbot further would require an estimated three months of work.

SOURCE CODE

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EUROPEAN UNION

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IMPLEMENTATION

SYSTEMS AND TECHNOLOGIES

Firebase hosting, firestore

- page maintenance
- database
- analytics

Vue3

- appearance of the website
- functionalities

D3.js

- editing the conversations
- visualizing statistics

Markdown

- appearance of the conversations
- appearance of the website

FURTHER DEVELOPMENT

Using the service widely in connection with a company's regular customer service, supporting continuous automation

- a separate version of the chatbot attached to the company's website
- a more extensive automation of customer contacts
- using machine learning to advance the efficiency of the system
- implementing a chatbot without prior knowledge in programming
- releasing the editor of the conversation trees to be used freely within public administration

BUSINESS OPPORTUNITIES AND RISKS

Risks

- preconceived notions of chatbots may reduce usage
- a chatbot requires a larger number of customers than personal contacts
- poorly planned communication negatively affects the use of the chatbot

Benefits

- efficiently supports normal sales work
- provides an interactive way to fill out forms
- easy to use as part of multichannel communication
- a user friendly way to map out extensive company registers

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