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Implementation and Policy Recommendations, Good Practice Examples & Sustainability and Sector Skills Strategy

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Background

The main purpose for developing the DISH process tools is to ensure that the health care services maximise the investment when introducing digital solutions, through better planning, execution and assessment of digital skills training. The overall objective of work package 5 (WP5) is to ensure that the material we have developed is presented in a coherent and inspiring way for stakeholders beyond the partnership, facilitating the European sustainability and transferability of the project results. Accordingly, this WP will present the results from WP4 (see D.4.4 Implementation Report) in an inspiring way beyond the DISH- partnership. This WP 5 report gives an overview of the lessons learned in the project in relation to the use and implementation of the DISH process tools being the following 1) Preparation tool for innovation and digital skills adoption 2) Process tool for on-the-job training 3) Process tool for assessment and recognition (*note that these concepts were originally named 1) Learning innovation unit (LIU), 2) On-the-job training 3) Assessment*). Thereafter, we present recommendations targeting health care staff (e.g project leaders, change management, facilitators) in hospitals, primary care or health and social care services. Finally, we present an overview of policy recommendations targeting policy makers on the European level, unions, lobby groups, bureaucrats etc. That is, the ones who influence, plan and decide policy frames for digital skills development and uptake in the health services. This WP5 also contains examples of “Good practice stories” for inspiration beyond the partnership, and an overview of how the project sustains and have developed a sector skills strategy.

This figure gives an overview of the objectives of the tasks and expected outcomes from WP 5 as a task charter:

Table 1:

Goal	Ensure that the promising eHealth learning strategies recommendations developed in DISH is presented in a coherent way for stakeholders beyond the partnership, to ensure European sustainability and transferability of the project results.
Tasks	<p>Create storytelling templates for ‘Good practice examples’ - video & written stories (1-2 good stories by each partner)</p> <p>Develop implementation and policy recommendations for uptake and skills development</p> <p>Present for free download on website in collaboration with WP 7</p> <ul style="list-style-type: none">➤ Preparation tool for Innovation and Digital Skills Adoption (IDSA)➤ Process tool for on-the-job Training (OTJT)➤ Process tool for Assessment and Recognition (A & R) <p>Create a sustainability document and sector skills strategy</p>
Outcome	A coherent and inspiring presentation of DISH results across the partnership

Working methods

Three templates (see Appendix A, B, C) and one roadmap (see Appendix D) were formulated to structure the work in WP 5 as follows;

- 1) A Roadmap for each Triple Helix showing the objectives, deliverables and expected outcomes from the testing and implementation phase (Appendix D)
- 2) A template for filling in examples of good story examples and implementation- and policy recommendations (Appendix A)
- 3) A template for formulating a good story worth sharing and a show case for external stakeholders (Appendix B)
- 4) A template for formulating policy recommendations to an external target audience on different levels (local, national and European) (Appendix C)

In the early phases of the project, we presented what to be expected from this WP in three different partners meetings (Aabenraa January 2019, online meetings July 2020 and December 2020) for input and amendments. These inputs discussed resulted in a revised roadmap (see Appendix D) and template for partners to fill in. The questions to be answered in the template reflected the experiences from the testing phase in WP4: 1) Examples of good practice stories 2) Implementation and policy recommendations formulated as five key recommendations or statements (see Appendix A). The good example stories did not fully reflect the overall experiences and were formulated in a way that were not easy to understand. Therefore, we decided to formulate a new good story template and a show case for partners to follow and be inspired by (see Appendix B). Formulation of the good stories were done in close collaboration with one or two persons from each Triple Helix partners based on the template. Each partner got 4-6 supervision sessions by WP 5 leader and communication partner from ECHAlliance from WP 7. Likewise, the recommendations formulated were often implicitly formulated and not easy to “catch”, so a template framing the recommendations were formulated (see appendix C). In addition, the recommendations were “checked out” and discussed during the partner meetings in Krakow (November 2021) and in Brussels (March 2022). Based on these discussions we came up with more tangible recommendations and more precise policy recommendations. For example, we divided the recommendations into two different types of recommendations based on the target audience. Moreover, “new” policy recommendations were formulated more precisely not stated clearly in the template, e.g the policy recommendations on formulating an over-national European digital skills certificate.

Good practice examples

Based on the examples from the testing phase in WP4, good practice stories have been formulated as written material or videos (see Appendix B). These audience-specific and concept-focused good practice stories provide the insights and promising practices bridging the gap between progressive digitalisation of the healthcare sector and the lack of change management skills, digital skills and innovation skills (Triple Helix Skills) among health and social care professionals.

The material for inspiration is available for free downloading and reuse from the DISH-website, <https://www.dishproject.eu/>. The website launches good practices stories which shows promising practices of how to (1) prepare for innovation and digital skills adoption, (2) workplace learning as how to plan, develop and execute on-the-job training (3) how to assess and recognise the learning that took place. The objective with the good stories is to inspire health care professionals such as health care planners, leaders and facilitators in health care institutions such as in hospitals or health and social care services, to support innovation and uptake of digital solutions, and skills adoption in clinical practice. In addition, we anticipate to inspire educators in higher education who educate health and social care staff for the same reason. The material of the practical examples as good stories show how the triple helix partners have used the DISH tools as an integrated tool-set for professional training of health care professionals. Based on the triple helix partner learnings all partners have come up with good practices examples formulated as good stories. The good stories comprise a series of experiences acquired and lessons learned by European healthcare institutions that were involved in the DISH project, aiming to integrate digital tools or technologies amidst various barriers in such settings. Lack of readiness and/or digital competence; varying organisation practices and management models; and cultural and regional differences represent just some of the many obstacles that delay and prevent the successful implementation and upscaling of digital solutions.

The good stories presented reflects the more promising practices of using the DISH process tools. However, there are also examples of less promising practices and learnings using the tools, and these learnings are shown in other reports such as the D.4.4 Implementation Report. The less promising practices reflects the times of uncertainty related to the covid-19 pandemic, such as putting testing among the triple helix partners on hold and replanning the training several times due to covid-restrictions, or changing the training into online training, which needs other kinds of material and teaching styles. Nonetheless, the good stories reflect creative solutions in times of crisis, and hopefully the material will be of inspiration to also use the tools in a creative way adopting them to the situation at hand. From experiences, we know that health care professionals often have a heavy workload and competing tasks may put other “surplus” tasks such as training health care professionals on hold. Moreover, health care services are often very busy places and unpredictable incidences may occur. Therefore, planned training or follow-up training procedures are put on hold. These are well known barriers that all the partners experienced, more or less during the entire project period.

Overview of the available good stories:

Table 2:

Triple helix partners	Good story theme/title
Germany	1) All Together for One Aim – Cross-Professional Planning of the Implementation Process of a Digital Solution (Sepsis Score) 2) Preparation tool for Innovation and Digital Skills Adaption supports start-up in roll-out of patient-nurse communication system In University Medical Centre

Denmark	1) Cross-sectorial project including video for planning discharge saves time and resources
Spain	1) How to improve health care provision and digital skills in the health staff through a certified course
Poland	1) DISH in Action: Implementing Innovations in healthcare
Norway	1) How Moments of Crisis Can Become Opportunities to Develop Effective and Creative Ideas 2) Video Implementing e-locks in home based care (3 minutes)
UK	1) Tailoring On the Job Training (OTJT) Delivery to the Needs of the Primary Care Workforce

Based on the good stories, formulated by the partners, the triple helix partners were supposed to come up with formulations of policy recommendations. However, these recommendations reflect the overall experiences from using the DISH tools, and not only based on the experiences shown in the good stories. Therefore, the recommendations are based on learnings from promising practices as well as learnings from the barriers experienced when planning and executing the training.

Lessons learned across partnerships

The lessons learned are based on the partners experiences with using the concepts in the toolbox also reported in WP 4. All the partners filled in a template (see Appendix A) highlighting their overall experiences preparing, executing and assessing the staff training. In addition, they wrote about the lessons learned in relation to each concept and based on this we have formulated common lessons learned across partners. The common experiences based on using the tools are as follows:

Preparation tool for Innovation and Digital Skills Adoption (IDSA)

- Hand-pick the IDSA-questions adjusting to context
- Identify relevant stakeholders and clarify value
- Identify participants learning needs

Process tool for On-the-Job Training (OTJT)

- Introduce the training in a simple, comprehensive and practical way
- Identify barriers and modify training accordingly
- Activate champions to follow-up training

Process tool for Assessment and Recognition (A & R)

- Adjust assessment to the target group
- Assessing if digital skills are ensured and follow-up
- Monitoring the achievements with positive feedback and certification

Recommendations

This section gives an overview of recommendations based on the lessons learned during the testing of the concepts, and as you can see the main common recommendations are similar to the lessons learned. The objective of formulating recommendations is to motivate European stakeholders beyond the triple helix partnership to work more strategically when planning, executing and assessing digital skills in the workplaces. The experiences and recommendations reflect a diversity of experiences from the partner countries. The partners have used the DISH tools differently and therefore, the recommendations are not based on the same use of the tools. Bearing this in mind, many of the partners state that they have adjusted the tools to the situation at hand as well as to the group of professionals to be trained. Accordingly, a strong recommendation from the partners is to use the tools in a flexible way and adjusted to contextual conditions (health care systems, structures barriers and promoters).

All countries have been delayed and the training has been put on hold due to other priorities during Covid-19. Nevertheless, there are some recommendations that are similar from all countries (shown in the table below) and some recommendations that are more Triple Helix and nation related. As such, some partners have emphasised the preparation and planning phase, putting a lot of effort to plan the training (see UK), while others have been more occupied developing the assessment tool (see Spain). Accordingly, the recommendations will be based on differences in focus and efforts using each tool, or using the different tools as an integrated whole.

The table shows the recommendations from each country in relation to the revised concepts as it was formulated in the template from WP4, 5 & 6:

Table 3:

Triple Helix partnership	Preparation tool for Innovation and Digital Skills Adaption (IDSA)	Process tool for On-the-job Training (OTJT)	Process tool for Assessment and Recognition (A&R)
Denmark	<p>Identify competences needed among target staff</p> <p>Identify relevant stakeholders such as managers, health care professionals and IT-supporters</p> <p>Identify champions for follow-up training on the ward</p>	<p>Identify the best place to execute the training</p> <p>Involving relevant stakeholders (e.g ward managers and champions) to follow up the initial training in near time of the training</p>	<p>To assess if the digital solutions are in actual use and if the competencies are achieved</p>
Norway	<p>Hand-picking the questions in the IDSA tool adjusted to context</p>	<p>Create a safe environment for staff allowing them to make mistakes</p>	<p>Continuously assessment to ensure that digital skills are obtained</p>

	<p>Identify key stakeholder and collaborate closely with these</p> <p>Clarify purpose and value for all involved stakeholders</p> <p>Formulating a communication plan addressing different stakeholders for engagement and active participation</p>	<p>Training should be available ad hoc whenever a spare moment supervised by champions</p> <p>Using creative methods to ensure available training at the spot</p>	<p>Monitoring the actual use of technology in practice in order to offer follow-up training</p> <p>Formal assessment and certification not important, rather a celebration of achieved results</p>
Poland	<p>Following the pre-defined structured steps in the planning process</p> <p>Analysing the participant's training needs</p> <p>Design the training based on identified barriers of the trainees</p>	<p>Structuring the training process based on training goals and identified barriers</p> <p>Adjust the training in accordance with training demands</p> <p>Modify the training in accordance with the audience</p>	<p>Monitoring the achievements of the results of the training</p>
Spain	<p>Identify key stakeholders at an early stage</p>	<p>Introduce the on-the - job training concept in a simple and comprehensive way</p> <p>Make the training as practical as possible</p>	<p>Adapt and adjust the assessment to the target group</p> <p>The assessment should be done in simple way due to workload</p>
Germany	<p>Identify at an early stage the relevant stakeholders</p> <p>Identify and communicate the relevance and advantages for the different stakeholder groups</p> <p>Change management should be involved and integrated into the curricula</p>	<p>Identify learning needs among staff</p> <p>Champions to follow-up initial training</p>	<p>Training sessions should be evaluated on a regular basis to identify further training needs, as well as barriers and facilitating factors to ensure uptake of digital skills</p> <p>For some trained staff a diploma is important</p>

UK	Establish good communication channels	Using available learning platforms to make the training accessible through familiar cases	Tap into any continuous professional development opportunities
	Ensure that all relevant stakeholders are engaged at an early stage	Assign digital champion roles to support trainees and help with the practical application for the training	Liaise with local professional bodies to explore validation options
	Promoting the core purpose of training	Identify barriers such as competing priorities among staff	Ensure that assessment methods are tailored to the needs of the trainees
	Identify any negative perceptions of the technology, e.g staff may see the technology as a threat to their role	Be aware that self-lead learning depends on the individual's motivation and commitment	
		Address any negative perceptions of the technology providing reassurance and examples of how the technology can enhance the roles of staff rather than threaten	

Preparation tool for Innovation and Digital Skills Adoption (IDSA)

All partners agreed that well spent time in the preparation and planning phase paid off when executing the actual training. However, not all partners found the entirety of the questions in the 8 domains that are presented in the IDSA relevant when preparing the introduction of digital solutions and the definition of future skills. Therefore, only the questions from the in the 8 domains, that is found relevant for the specific context should be chosen, so that specific training needs can be identified, as well as the training situation at hand and the setting in which the training takes place. In Denmark they recommend that the facilitators in the planning phase should identify the specific training needs and goals. That is, what is the actual competences staff have on beforehand, and what is the competences needed for the training to be relevant. There are incidents of training where staff had gone through training that did not reflect their learning needs, either the training was too complicated for their level of experience or the opposite; a waste of time when the training were experienced to be on a too low level. Overall, most of the triple helix partners state that there is a need to work closely with stakeholders when planning and executing the training to ensure the relevance of the training. Yet, not all partners managed to involve stakeholders closely as anticipated (e.g Poland). A strong recommendation is therefore:

- Involve stakeholders in the preparation phase to ensure relevance and training needs

- Adjust the questions in the IDSA-toolbox to the training needs and training situation

Process tool for On-the-job Training (OTJT)

The on-the-job training took place in very different locations, targeting different staff groups and were delayed or hindered by various reasons, although Covid-19 being the most important reasons for delays (see D.4.4 Report). Accordingly, many used ad hoc and creative methods in order to fulfil the training obligations, planning for the training to go online or in smaller groups. In Norway they planned for online training, small groups training follow-up by installing an exercise door to have continuously training using an electronic door-lock after the initial training was completed. Others such as Spain, were not able to execute the training in-situ so the training went online. Despite differences in training methods, many of the partners experienced that identifying and engaging champions to follow-up the initial training could ensure uptake and sustainability of digital skills (e.g Denmark, Norway, Germany, UK). However, contextual barriers such as availability of champions and other competing tasks could make the follow-up training a difficult task (e.g UK, Germany, Spain). Therefore, the recommendations to identify barriers and ensure enough resources is crucial for successful uptake of digital skills. A strong recommendation is therefore:

- To engage champions to follow-up training
- Identify barriers such as competing priorities among staff and leaders and ensure enough resources

Process tool for Assessment and Recognition (A & R)

The A & R concept is the tool that reflects the diversity of experiences across partners the most. Some partners used the tool by monitoring if the digital skills are ensured (e.g Poland) and in actual use in practice (e.g Norway), while other partners used the opportunity to evaluate the training by asking for course satisfaction, experienced skills and knowledge adoption (e.g Spain and Germany) or recognition for further professional career (e.g Spain). We found a diversity in the expectations of assessment and formal recognition of digital skills, while some preferred to celebrate in staff groups achievements when technologies were in use (e.g Norway), others underscored the importance of formalising the competences. Most partners could see a benefit from formalising the assessment procedure on a European level – not least for the purpose of supporting work mobility across countries. Nonetheless, not all partners saw the benefit of formalising digital skills based on workplace training. For instance, in Norway and Denmark there is *not* a clear expectation to receive a certificate after completed training, while this was stated as more important in UK and Germany for some health care staff. Albeit, in Spain they recommend that the assessment concept should be adjusted to the target group, e.g check if there is an expressed need or not of assessing the digital competences. Moreover, the Spanish partners recognised the digital skills by merit the training by 5.8 ECTS validated by Valencian School of health Studies. A recommendation is therefore:

- To monitor if digital skills are in actual use in practice
- To recognize workplace training by formulating a validated certificate

Recommendations using the concepts interrelated

The main objective of the DISH-project is to provide health care professionals with digital skills by formulating and testing out a process tool formulated as a three-level concept reflecting different phases in the process of enhancing digital skills. Therefore, the concepts should be understood as interrelated and as an integrated whole. Some partners have used the concepts not only integrated and interrelated, but also used the concepts interchangeable in time. For instance, the Spanish

partners used tools in a flexible manner by adapting the assessment tool to the training and target group. As such, the tools should be used flexible and tailored based on the main purpose of the training, target group and situation at hand by contextualizing the training. A recommendation is therefore:

- Flexibility in using the concepts interchangeably adjusting to the context and target group being trained

Recommendations in relation to target audience

Based on these overall lessons learned across partners we have formulated recommendations to use when planning, preparing, executing and assessing staff training. The audience for these recommendations is mainly local and regional managers and leaders on different levels, digital innovation and project managers, as well as facilitators with a daily responsibility to prepare, train and assess the digital learning processes. The recommendations stated must be understood as examples of recommendations for inspiration:

Table 4:

	IDSA Tool	OTJT Tool	A & R Tool	Audience
Recommendation	To ensure optimal training for uptake of digital skills; innovation managers should involve relevant stakeholders in a co-creating process (e.g. health care staff, technicians, managers at different levels) to identify learning needs and ensure resources	To enhance optimal uptake of digital skills; change management in municipality health and social care services could plan for champions to be available for ad hoc training whenever care staff have a spare moment (e.g. by always having a champion at each shift)	To ensure optimal uptake of digital skills; digital project managers in hospitals should define multiple follow-up assessment points (e.g., days +7, +30 and +90)	Managers, Digital innovation managers, Facilitators

Policy recommendations

In the following we have formulated policy recommendations that target primary policy makers on the European level. Nonetheless, these recommendations are also meant to inspire persons in professional

unions, lobby groups as well as bureaucrats. Moreover, these recommendations are based on common lessons learned across partnerships and nations in relations to the different DISH-concepts:

	IDSA Tool	OTJT Tool	A & R Tool	Audience
Policy recommendations	To enhance optimal training for uptake of digital skills; change management in health services should identify training needs among staff by involving them as stakeholders	To promote optimal areas of training; managers should arrange for multiple follow-up trainings (e.g., days +7, +30 and + 60)	To ensure optimal uptake of digital skills; policy makers should recognise certification of workplace learning and formulate a certificate on the European level to support mobility of health care staff	EU Policy makers Unions Lobby groups Bureaucrats

We have also formulated some recommendations which are not aligned with each DISH tool or toolbox as such. Rather, the recommendations are based on the overall experiences from the Triple Helix Partnerships. These recommendations were formulated based on group work across partners in March 2022 and the target audience will be policy makers on national and European level:

- Triple helix partners (e.g digital health provider, health care provider, educational and research staff) should be actively encouraged to engage in future partnerships for truthful project documentation and life-long learning processes taking place in workplaces
- Encourage change managements and planners to do needs analysis on national or regional level to identify possible missing links, e.g if there are already existing frameworks or toolsets for digital skills adoption on health care workplaces
- Invite stakeholders to an advisory board consisting of health care professionals to advise on-the-job training guidelines nationwide
- Formulate a charter for on-the-job training recognition on the European level

Sustainability

A main aim of the DISH-project is to ensure sustainability by developing an open learning and resource platform for relevant stakeholder in Europe and beyond for inspiration, and re-use. A fine-tuned and final version of the DISH training materials are available in English as well as national languages on the DISH-website (see <https://www.dishproject.eu/resources/>). The training materials can be used as part of Local, National and European skills strategies in the health sector in the years to come in order to enhance digital skills and solutions among health and social care staff. The DISH-report WP2 showed “missing links” in the partner countries for digital competence initiatives and tools, despite tools and frameworks being available in some partner countries (e.g ALTAS where UK and Spain were partners) as well as internationally (see Baseline report WP2, <https://www.dishproject.eu/wp-content/uploads/2021/04/DISH-D2.1-Baseline-Report.pdf>). The report concluded that there is a need for more comprehensive tools to enhance uptake of digital skills targeting health care staff and successful implementation of digital solutions in the health sector. Therefore, the triple helix partners have worked to ensure that the DISH-toolbox have an impact in their countries by working with stakeholders within and beyond the partnership. For instance, the German partners have launched a cross-sectional plan within the region of Mecklenburg Vorpommern, while Norway are working to get the DISH-toolbox to be included in the National Welfare Technology Program. Other partners have developed sustainable courses giving credits, e.g the Spanish partners have developed a 5.8 credit course for re-use or simply use the experiences in existing curriculum in higher education, e.g Denmark and Norway. In Germany the University of Lübeck and the hospital have further developed collaboration in digital teaching. Moreover, Denmark’s and Norway’s higher educational partners have established a research partnership by engaging a PhD-student in the project comparing the digital training with cases from both countries (Funded by Western Norway University of Applied Sciences). Further research and innovation collaboration has and will be developed between some of the partners from the DISH-project (e.g EUVEKA project, Research innovation collaboration UCL and HVL, EU-project proposal INTERREG Baltic Sea Region Programme/German partners). In addition, many of the countries highlight the importance for further development of the DISH-concept through collaboration in regional and national clusters and partnerships, e.g Poland, Norway and Denmark.

Overview of the Triple Helix Partners work on sustainability and impact:

Table 5:

Triple helix partners	Sustainability and impact
Germany	Introducing the DISH-concepts as part a cross-sectional area “Digital Transformation” and Masterplan Gesundheits wirtschaft Mecklenburg-Vorpommern 2030 (MPGW-MV 2030, Masterplan Health Economy 2030 of the Federal State Mecklenburg-Vorpommern) Further collaboration with national and international partners in the ERASMUS + EUVEKA-project, and teaching agreements between the University of Lübeck and the hospital.
Denmark	Developing further cluster collaboration nationally by for instance innovating a clickable tool to be embedded at a homepage in the region of South Denmark. Developing further research and innovation collaboration in the field of implementation of digital solutions in the health sector.
Spain	Developing further the 5.8 credits course a second time based on the experiences from the DISH-project. The Hospital La Fe Research Group are using the DISH-concepts in collaboration with other hospitals for re-use of the online course targeting hospital staff.

	Introducing the DISH-concepts in the Strategic Plan for Health at the Valencia Region 2022-2030 by the DISH-project's local manager.
Poland	Re-building and expanding a cluster for knowledge transfer and further training initiatives targeting health staff based on the experiences from the DISH-concepts and implementation phase. Developing and undertaking activities in the framework of Special Interest Group "Digital health" with a special attention to strengthening talents. Participating as a leader in the European Digital Innovation Hub (EDIH) offering digital training targeting health care staff.
Norway	Introducing the DISH-concepts and toolbox in Norwegian as part of the "National Welfare Technology Program". Working further in clusters consisting of 20 municipalities being part of E-helse Vestland (Westcoast eHealth collaborative) for re-use and further development of the DISH-toolbox. Engaging a PhD-student doing research in Norway and Denmark on digital skills adaption using the DISH-concepts comparing the Norwegian and Danish cases.
UK	Introducing and developing further the DISH concepts to the NHSX "What Good Looks like", NHS Digital "Digital inclusion for health and social care" and NHS Improvement "Digital Clinical Safety Strategy" Sustain the Triple helix partnership for further collaboration to implement the DISH-concepts in education and training programs

The final results of the sustainability and impact of the DISH-concepts and toolbox beyond the partnerships, will not be fully known before the end of this project. Nevertheless, the table above shows the partners attempts to sustain the DISH-concepts and partnerships. The DISH toolbox will be translated from English to the national languages in order to be more available and sensitive to national contexts. To conclude, all the partners have experienced spin-off effects for further sustainment and sector skills collaboration and strategy. That is, further development and implementation of the DISH-concepts will continue based on collaboration regionally, nationally and internationally.

Sector skills strategy

Background

One of the key challenges facing the European society, is the demographic change and the ageing population, and the effect that this change risks having on the European health care system. The demographic changes will increase demands from elderly people that need health care and social care at a time when there are fewer staff members and less public funding to meet the needs and demands or high quality care.

As a consequence, and in order to stay sustainable, the health care sector has changed and will change further during the years to come. The major changes which affect the working life and thus requires new competences and skills among the health care professionals (in both primary and secondary care sectors) are the following:

- Patients are rapidly released from hospital, and the transition of patients from one care facility to another, requires effective communication and coordination among staff.
- A more holistic and personalized view on the patient which requires more interdisciplinary collaboration, communication and coordination.
- Empowering of patients and better use of relatives' resources, requiring effective communication and new ways of monitoring.
- A massive application of new technologies in the healthcare sector, which requires new ways of working and communicating with colleagues and with patients and relatives.

Retour on Investment

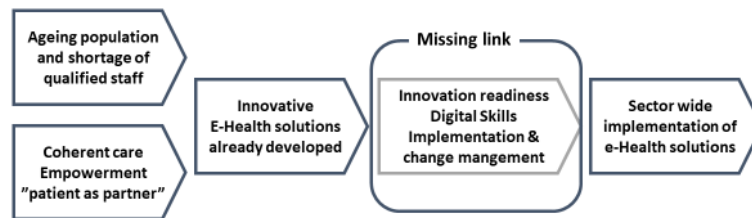
Many innovative eHealth solutions have already been developed and many health care providers have invested in implementing these into the clinical practice. However, time after time it turns out that the solutions are not being implemented or are only partly implemented, hence the full potential of innovation is not exploited. This despite that many projects have shown that the use of eHealth solutions in health care can assist to ensure the sustainability of the health care sector by a) increasing the flexibility of care and treatment, b) increasing the involvement of the patient / citizens and c) providing increased quality, security and knowledge sharing across the sectors.

Challenge

One of the main reasons for the lack of implementation and use of new digital solutions, is the lack of relevant skills within the health care professionals on all levels. In the DISH project, we call this "the missing link".

From the needs analysis that was carried out in the first part of the DiSH project, we have seen, that skills training in concrete digital solutions is often neglected in a busy working day, as the planning of this kind of "tailormade" training is seen as timeconsuming and complicated. Opting out on skills training, leaves the health care sector with a lot of digital solutions, which are not exploited fully, and therefore the return on investment in digital solutions becomes less evident. The DISH process tools have though been developed to accommodate this position by offering a set of process tools that can turn the complexity and the time-consuming constraint into a more manageable task.

Figure 1 – The missing link



Skills training as a response to the challenge

The main motivation for the development of the DISH process tools is thus to ensure that the health care sector gets the maximum return on investment from the digitalization of the health care products, by making it easier for the health care providers **to plan and execute continuous skills training** to health care professionals on all levels.

Skills training is something which is highly related to the feeling of “urgency” in the daily work situation, which is the reason the skills training needs to take place close to the everyday work and in concrete and realistic work situations. We know from experience and from the needs analysis carried out in the DISH project, that skills training often somehow is neglected in the busy everyday routine within health care providers, because it takes time to plan in a good way and keep track of the needs and demands.

Skills training is normally a response to a concrete need. It cannot be a “standard product”, but needs a flexible approach, and needs to be planned and developed close to the everyday work situation, in order to provide best possible return on investment. This means that detailed and complex planning as well as more interprofessional communication is needed, which takes time. The DISH process tools have been developed with the objective to provide the health care sector with some concrete process tools in order to structure the complexity and the needed flexibility, which can help the trainers and make them gain time and overview, so that skills training does not become a forgotten and “opted out” activity.

Recommendations

Based on the experiences from the implementation and testing phase we have come up with a set of recommendations for digital skills development and uptake and implementation of digital tools which is part of a more sustainable, efficient and resilient health and social care system. Hopefully, our experiences with planning, developing and implementing work based skills training will promote digital health literacy to ensure a more sustainable health care system in the future.

The different national triple helix partners have somewhat different experiences, but as an overall experience we could see that it is difficult to have a successful implementation of digital solutions and skills development if managers on different levels are not dedicated and involved in the arrangement of training all the way along from the initial planning to the assessment phase.

Many partners experienced that despite good planning, preparing and executing the training, the uptake and sustainability of digital skills training was not successful if the training was not followed up

by local managers to assess if the skills actually were in use on a daily basis. Therefore, all stages in a training process are crucial to emphasize with a clear responsibility of managers to follow-up the initial training. In addition, managers on different levels should ensure enough resources for the initial digital competence to be implemented in practice.

In prolongation of this a strong sector recommendation is to involve stakeholders of different levels to ensure relevance, commitment and understanding of possible values and benefits of the training. However, as earlier stated the toolbox should be adjusted to the setting where the training takes place, and therefore not all the prompts and questions in the toolbox is necessary to follow. Rather, the DISH process tools should be adjusted in accordance with the health care professionals training needs for inspiration and relevance.

Moreover, to ensure a legitimization of digital skills training, a skills strategy should be in place and integrated into the workplaces. Partner institutions that had a clear and integrated strategy for digital skills uptake and implementation seemed to be more successful, than the ones that did not have such a strategy and integrated plan.

Accordingly, our overall strategy recommendations targeting health policy makers and managers are as follows:

- All stages in a training trajectory (preparing, executing and assessing) should be emphasized with a clear responsibility for managers to follow-up and ensuring enough resources
- Involve a broad set of stakeholders when planning and preparing the training to ensure relevance, responsibility and further on successful implementation
- Adjust the DISH tools to the training needs and context for inspiration and relevance
- Develop a strategy for digital skills uptake and implementation on local, regional, national and EU-level to ensure legitimization and commitment

European Influence

The European skills agenda sets up 4 concrete objectives to be achieved by 2025, whereas two of them are very relevant for the application and upscale of the DISH tools.

First of all, an objective is that 50 % of adults aged 25 – 64 participate in learning during the last 12 month.

The DISH tools focus on providing and improve skills training of health care professionals, meaning that the project works with adult learners. The health care sector employs nearly 15 mio European citizens, which is app. 7 % of the European population. If the DISH tools are applied on a larger scale within the European health care sector, we will be able to reach a high number of adult learners and contribute to the objective of reaching 15 % of adult learners participating in lifelong learning.

Secondly, an objective is to raise the share of adults aged 16 – 74 having at least basic digital skills.

The DISH tools take their starting point in one of the main challenges within the health care sector, which is the digitalisation of the sector and the close collaboration between health care professionals and the patients, which will be increasingly based on digital solutions. In order to exploit the full potential of these solutions, the health care professionals need more skills on how to apply digital solutions and work together with colleagues and patients to make them work. Hence, through an upskilling of the health care workers through the application of the DISH tools and a further application of digital solutions that are actually being used, the DISH tools will clearly contribute to this objective.

Another part of the European skills agenda is the creation of Skills Pacts, and especially for the DISH tools the “Pact for skills for the health care ecosystem” is relevant. The skills pacts are initiatives where

relevant stakeholders from a given sector collaborates to identify challenges, needs and solutions for the future skills provision in the sector.

As for the Pact for skills for the health care ecosystem, a roundtable has been organised with the relevant stakeholders and the emphasis has in the first place been put on the “potential for digital technologies and digital skills to transform the health practitioner-patient relationship, improve health outcomes, support interdisciplinary working and strengthen the resilience of health systems”, as expressed in the report from the roundtable.

The report from the roundtable also expresses that it is evident that there is a need to upskill and reskill healthcare workers, and this especially goes for the digital skills required in order to create the needed technological progress in the health care sector, which has been further demonstrated through the Covid-19 pandemic. Apart from the needs and gaps in digital skills, other mismatches were identified in skills in health innovation in primary care, soft skills, leadership and advocacy, collaborative competencies and others.

The DISH tools clearly support the objective of the pact for skills, as the preparation tool for innovation and digital skills adaption and the process tool for on-the-job training explicitly takes all these expressed needs and challenges from the pact for skills into consideration.