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Developing Concepts

D3.1: A concept for the Learning Innovation Unit (LIU)

A support for healthcare operators to lead successful technology
implementation processes

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1. Introduction to the Learning Innovation Unit (LIU) concept

1.1 Definition of the LIU

Learning Innovation Unit (LIU) is an **organisational concept** providing a framework for co-creation which fosters multidisciplinary collaboration, innovative attitudes and team learning. A LIU can be established every time a new technology¹ is to be implemented by healthcare operators. In the multidisciplinary framework of the LIU, on-the-job training will take place providing conditions for better development and uptake of technologies and digital solutions within the healthcare sector.

NB: The LIU may also be used as an inspiration for testing of new technology but might not include the right tasks and/or domains.

1.2 Objectives of the LIU

- a. To stimulate explorative behaviour
- b. To support implementation and change management processes
- c. To support competence/skills development and capacity building in a team rather than in the individual
- d. To enhance collaboration between healthcare professionals and enterprises and a better understanding of needs

1.3 The structure of the LIU concept

The LIU is organised in **8 domains**. Across the 8 domains you have **3 tracks** indicating at which level the task is focused. The **tasks** in domain 1 to 8 should be handled/clarified every time a Learning Innovation Unit is established.

1.4 Introduction to the domains

For each domain you find the **summarised content** and the **expected achievement** of the domain. The tasks will be organised in **3 fixed tracks**: tasks related to the **organisation**; tasks related to the **healthcare professionals in the team** affected by the new technology. Finally you have a fixed track in each domain running **shared decision** making process with all the staff affected by the new technology. The major objective of this track is one the one hand on-boarding, giving the healthcare professionals an opportunity to contribute and to be heard, and on the other hand qualifying the solution to the tasks in that domain. In each domain there is a possibility to download a **checklist** for the tasks, and to **publish documents or tools** that might be useful support for solving the tasks.

¹ *The DISH project is not about developing new technology but about implementing already known technology, either in a new setting or in an already known setting. The LIU can after the DISH project ends be used as a concept that can also be useful in terms of working innovatively with new technology. The DISH concept is thus about training based on concrete technology, which has either been introduced but is not in use or which should be introduced into clinical practice.*

1.5 Applicability of the tasks in the domains

The tasks mentioned in each of the 8 domains are inspirational and not obligatory to carry out. They should all be considered, but the LIU can at any time decide that a certain task is not relevant for their particular implementation process or not appropriate for their particular organisational setting, etc.

1.6 Introduction to the LIU document

The LIU document contains the current introduction with all the definitions. Thereafter 8 spreadsheets give an in depth explanation for each of the domains 1-8. The final chapter shows the relation between the three concepts, namely the Learning and Innovation Unit, the On-The-Job Training concept, and the Assessment concept.

2 Domain 1: Value Propositions

Domain 1 Value propositions	
Summarised content: Why should healthcare professionals spend their valuable time on collaborating in a LIU? Description of how we engage the participants in the LIU, and how the LIU contributes to a successful implementation process.	Expected achievements: That the participants in the LIU have a clear understanding of the value that the LIU has to deliver and how it will provide value for each of the groups that the participants are representing.
Organisation	
Task Describe how and when is the effect of the implemented technology observed. Reference to the Assessment Concept and the On-the Job Training Concept.	Task explained It is important to up front create a shared understanding of what the organization will look like after a successful implementation. Reference to the Assessment Concept and the On-the Job Training Concept.
Which challenge is the solution going to address/ what is the purpose of the technology?	Usually defined in the business case, often referred to as the needs analysis. BUT LIU should keep focus on the GOLDEN WHY. Why are we implementing this technology? And how are we continually making sure that the technology provides us with the benefits/value that are expected. Reference to the On-The-Job-Training concept.
Identify/describe the processes/workflows that will be affected.	Part of the business -case. Ideally the workflows have been identified up-front before the on-set of the implementation process
Describe the need for change in management that the changes in workflow are leading to.	It is necessary to look at current management and identify what should be included in the future and what is no longer necessary.
Describe the added value that the LIU is expected to create.	It is important to create a shared understanding of what the LIU will do for the implementation process. Create a shared vision of the success.
What are the success criteria of the LIU	How does staff reflections concerning the functionalities of a technology, or reflections on adjacent needs, flow to the enterprise, and why is that important?
Describe how the company can benefit from collaborating in the LIU.	How can you enhance engagement for the different professional groups?, and how can their roles in the "new" workflows be made attractive?
Identification of motivational factors for each group of healthcare-professionals.	How can on the job training and use of new technology be converted in to an attractive competence in a career context? - NB: might be different for different professional groups. Nurse level and upwards might be motivated by CET points. Reference to the assessment concept.
Recognition of new skills.	
Healthcare professional / Team	
Task Find out if it is immediately obvious for the (end) users which value the technology is providing and design dissemination communication.	Task explained A clear advantage of a technology is an important factor in the implementation. Check if the company has any experiences that can be transferred. Shared vision of when a success can be announced.
Define the success criteria of the technology implementation.	Which values should be enhanced for staff to explore new features of a technology or to explore the use of the technology in new workflows.
Discuss and decide on how you can stimulate the explorative behaviour among Healthcare staff.	Which level of skills are needed for the healthcare professionals to feel secure/professionally able while working with the new technology? Reference to the On-The-Job-Training concept.
What are the desired/ needed changes in competences/skills amongst the healthcare professionals?	
Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")	
Opportunity to be heard	Opportunity to contribute
Tools: Checklist download Link to useful documents	





3 Domain 2: Key Activities

Domain 2

Key Activities

Summarised content:

The mandate given and the activities that the LIU is going to address.

Expected achievements:

The members of the LIU have a clear idea of the activities they are expected to address.

Organisation

Task

Analyse the product to be implemented

Analysis of IT infrastructure, qualification of process, and adaption of IT and equipment.

Adaption of solution

Change of workflows.

Identification and update of affected instructions

New organization

Confirmation of management assuming the technology implementation

Alignment of managers expectations and agreement of role in change management

Development of an implementation plan - incl. On the job training

Test 1 and test 2 before implementing

Monitoring after 2 months of implementation

Task explained

Is it sold with implementation support, what does that contain and can you predict

Does the product come with its own support / helpdesk function?

Does the product provide guidelines?

Does the company offer training of staff?

The IT infrastructure has to be prepared for the new solution. OBS! The task is not part of the LIU but they should make sure that it is in place and time for the implementation.

Company may have to adapt solution to the specific organisation and/or workflows that it will be interjected in. The task is not part of the LIU but they should make

What are the central workflows affected? What do the new workflows look like

All the instructions affected by the change of workflow and the new technology

What does the organisation look like after the change of workflows?

Is it a priority?

Does it contribute to executing the strategy?

Does it have an allocated budget?

Is it planned in the annual cycle?

Is there an administrative and political ownership to it?

It is important that the managers very clearly know where the organisation is heading and lead accordingly. The managers have to accept a reduction in effectivity, they have to consult the key participants in the LIU, and they have to be aware about the resources needed for the given change project.

The entire period of the change project should be included in the plan in detail incl roles, responsibilities etc.

Plan the tests and evaluation as part of the implementation plan (OBS! Only in the case of a new technology)

Is everything as expected, if not what differs? How should it be handled? Plan the monitoring as part of the implementation plan (evaluation WPG)

Healthcare professionals/ Team

Task

"Demystification"

Identifying existing values and cultures in the implementing team.

On-boarding of Healthcare professionals

Describe which measures are taken to ensure that a sustainable peer learning culture is in place.

Identification of Superusers and/ or Ambassadors

Identification of opponents

Learning from other teams (that successfully have implemented the technologies/ eHealth solutions)

Exploring the solution, new functionalities/ opportunities?

Training needs assessment

Communicate where and how the health-care professionals can get access to support for using the technology.

Task explained

What is the new technology about, what is going to happen, and what will our organisation and our workflows look like after implementation. The Healthcare staff must be made aware that a change will occur, and that the change is important and relevant. **CHANGE COMMUNICATION** is important. **Story Telling** can also be a tool for conveying information about the benefits and disadvantages related to the technology.

Make sure that existing values are taken into account.

Throughout the implementation period, focus should be on pragmatists. It is important that this group find that the implementation of the new technology is a good idea/beneficial. The focus should neither be on enthusiast, nor on conformists.

It is important that you identify a peer learning or super-user system that will allow new staff to be introduced to the technology after the end of the implementation process. The peer learning should not be vulnerable to frequent substitution of key staff.

The use of super-users and/ or ambassadors depend on the implementation plan and training strategy. Sustainability should be central.

It is important that opponents understand the opportunities in a new technology.

Motivational interview can be used as a technique:
<https://sharepoint.washington.edu/uwpsychiatry/SPIRIT/resources/Documents/Car%20Manager%20Resources/What%20is%20Motivational%20Interviewing-Handout.pdf>

Either by visit or virtual meetings. Perhaps ambassadors/ superusers can be identified and given mandate to visit other teams?

How do all the functionalities of the technology work? Does that provide opportunities beyond first envisioned?

IT skills in healthcare professionals varies a lot! The management team should also undergo the training. Reference to the On-The-Job-Training concept.

The Healthcare professionals need to be reassured that they will be able to perform professionally during the implementation process.

Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")

Opportunity to be heard

Opportunity to contribute



Tools:
Checklist download
Link to useful documents

4 Domain 3: Key Participants

Domain 3 Key Participants

Summarised content:

Who are leading/facilitating the LIU? What are the competences needed in The LIU? Which staff groups are present? Who are representing each staff group? Who will be present from the company? Who are the end-users? and how are they involved?

Expected achievements:

Clear definition of competences, participants and roles in the LIU

Organisation

Task

Identify the most important participants in the LIU.

Task explained

Recommended composition of the LIU:

- 1 Leader driving the process
- 1 admin/organizational/IT representative
- 1 representative from healthcare professionals (1 from each professional group)
- 1 company representative
- 1 end-user representative (not always relevant)

Describe the roles of the participants in the LIU.

Each participant should have a clearly defined role.

Describe the activities that each participant is responsible for carrying out over time.

Each participants need to be able to plan the tasks that they have over time.

Describe qualification and time allocation for needed for each participant.

What kind of resources do the participants need to bring into the LIU? (qualifications and time)

Availability of IT-Help desk or other helpline for Q&A during the initial implementation

Describe the collaboration between the IT -helpdesk and the company. Describe the "help-desk" facility available for Healthcare professionals during implementation. Predict moments of extraordinary loads - and make sure that resources are available to deliver throughout a peak period.

Healthcare professional / Team

Task

If a super-user model is implemented, the super-users need to be identified.

Task explained

Some recommend superusers. There should be superusers representing all types of healthcare professionals in the team. They should also represent, day, evening and night shifts. The profile should never be the technology enthusiast - but rather a person who is: a) in the middle group with respect to digital readiness, b) has strong professional competences, c) has good relations to colleagues and managers.

Prepare a discussion paper for the team allowing the discussion of "what is my new role if the technology is going to take over my work/ some of the tasks I used to do?"

The healthcare professionals need to understand the roles of the different staff groups in the implementing team during and after implementation.

Provide change communication about the new roles of staff after implementation. The follow up can be "success" stories.

How does the technology affect the relation between the different staff groups and between healthcare professional and the patient/citizen?
Reference to the On-The-Job-Training concept and the Assessment Concept.

Analyse the interests of the end-user and the need to develop interventions to make sure that the interests of the end-user are ever present in the implementation process.

The healthcare professionals will often associate to end-users and if needed speak for them. They need to be assured that the end-user aspect is taken into account in the implementation process.

Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")

Opportunity to be heard

Opportunity to contribute



Tools:

Checklist download
Link to useful documents

5 Domain 4: Key Resources

Domain 4 Key Resources

Summarised content:

What are the resources you need to allocate to deliver the value propositions? There should be a differentiation between the cost of running the LIU and the cost of implementation including training.

Expected achievements:

That the management level is fully aware of and have set aside the resources needed to run the LIU and the implementation process.

Organisation

Task

Evaluate the need for competences with respect to the product, the service/support to the implementation, etc.

Prepare a detailed budget including all costs, staff hours, etc.

Calculate the resources are needed over time for each of the activities and each participants in the LIU and the implementing team.

Specify the expected number of hours needed per participant

Plan for logistic needs

Plan for a continued realization of benefits after implementation.

IT-helpdesk

Task explained

Do we have the competences we need inhouse or do we need to hire external consultants? Are there companies providing the product or service we need?

A frame budget will usually be part of the approval of implementation. The frame must be applied in a detailed budget.

Budget should reflect the activities in the implementation plan

Each participant need to know how many hours they are expected to allocate to the LIU.

Budget and booking of meeting facilities etc.

Are there resources put aside for a continued focus on realization of benefits ?

Has budget been set aside for the help-desk to respond throughout peak periods?

Healthcare professional / Team

Task

Prepare adequate change communication concerning time, costs and loss of efficiency.

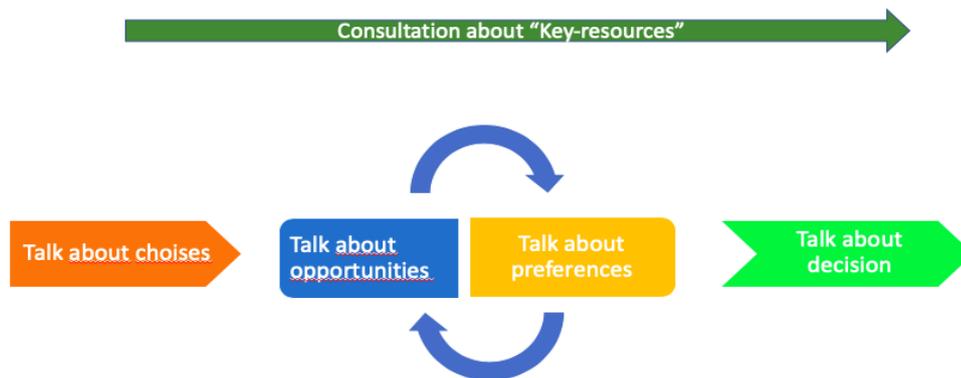
Task explained

Are involved healthcare professionals aware that managers are expecting a loss of efficiency in production during the implementation, that budget has been set aside for training and participating in the implementation process.

Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")

Opportunity to be heard

Opportunity to contribute



Tools:

[Checklist download](#)

[Link to useful documents](#)

6 Domain 5: Mechanisms of Technology Adoption

Domain 5 Mechanisms of technology adoption

Summarised content:

How does the value propositions reach the healthcare professionals and/or the end-users? and what are the mechanisms of technology adoption?

Expected achievements:

Technology adoption is about human anchoring. Implementation of technology is a change process and the expected achievement is a change in behaviour among the healthcare professionals.

Organisation

Task

Design interventions that encouraged the team to keep a continued focus on realization of benefits during and after implementation?

Define and communicate how proposal of new application/ functions are communicated to management level.

If possible identify a gross list of related or similar processes / workflows where the new technology might be of relevance.

Make a plan that allow a sustainable peer-learning culture to be established in the team and maintained over time.

Task explained

How is this task organised? Who will be involved? How often will they meet? What is the expected result? And how are findings taken up by the organisation?

It is important that staff is encouraged to think of an extended use of a new technology, and that their proposals are easily conveyed to management level.

The gross list of processes represent "low hanging fruits" where the new technology also might be relevant to introduce.

Technology adoption and continued adherence to technology depends on the user proficiency. The peer learning should not be vulnerable to rotations or frequent substitution of key staff.

Healthcare professional / Team

Task

Set-up a system that captures new exploratory ideas and thinking in relation to the technology.

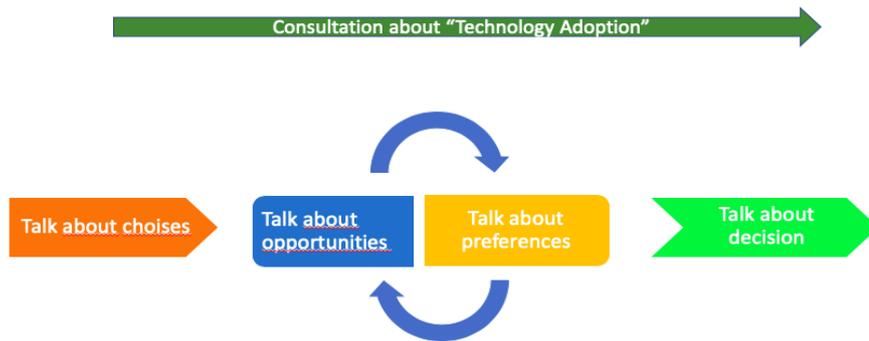
Task explained

Exploratory ideas concerning the use of technology could flow to the Superusers, who in turn will contribute at "follow up" meetings focusing on realization of benefits

Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")

Opportunity to be heard

Opportunity to contribute



Tools:

Checklist download

Link to useful documents: <https://www.ehealthcluster.org.uk/arl-tool/>

7 Domain 6: Frame for multidisciplinary collaboration/organisation

Domain 6
Frame for multidisciplinary collaboration/organisation

<p>Summarised content: How the participants can explore new opportunities / Share exploratory ideas / contribute</p>	<p>Expected achievements: That it is clear for everybody involved when and how they can contribute.</p>
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Organisation	Task explained
<p>Task Describe the organisation of the multidisciplinary collaboration. ----- Develop procedures for Shared decision making processes in each of the domains. ----- How does the communication flow between the multidisciplinary participants?</p>	<p>How is it organised, What are the rules for meetings (agendas, minutes etc.) ----- How and who are in charge of preparing and running the shared decision making processes that involves the team of healthcare professionals? ----- Rules for communication, focal points for specific topics etc.</p>
Healthcare professional / Team	Task explained
<p>Task Prepare adequate change communication concerning multidisciplinary collaboration</p>	<p>Are involved healthcare professionals aware that managers are expecting spend time on participating in multidisciplinary collaboration and shared decision making activities and which outcome does the management expect.</p>

Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")

Opportunity to be heard
Opportunity to contribute

Tools:
[Checklist download](#)
[Link to useful documents](#)

8 Domain 7: Change / Effect

Domain 7
Change / Effect

<p>Summarised content:</p> <p>Is the learning innovation unit achieving improved results in terms of explorative behaviour amongst healthcare professionals, implementation and change management processes, competence/skills development and capacity building in a team rather than in the individual? And has it enhanced the collaboration between healthcare professionals and companies and has it lead to a better understanding of clinical needs?</p>	<p>Expected achievements:</p> <p>A shared understanding of the values that the learning innovation unit creates.</p>
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Organisation	Task explained
Task	Task explained
Predict the expected outcome, and set up an adequate monitoring system	Has the LIU increased the technology uptake readiness amongst the healthcare professionals
Predict the expected outcome, and set up an adequate monitoring system	Has the LIU increased the explorative behaviour amongst the healthcare professionals?
Predict the expected outcome, and set up an adequate monitoring system	Has the increased explorative behaviour lead to realisation of more benefits?
Predict the expected outcome, and set up an adequate monitoring system	Has the LIU increased the flow of needs from the healthcare staff to the enterprise?
Predict the expected outcome, and set up an adequate monitoring system	What are the acquired skills in relation to the implementation of the given technology? Development of the skills of the healthcare professionals should be perceived of as part of the realised benefits

Healthcare professional / Team	Task explained
Task	Task explained
Prepare an evaluation session for the team	Has it provided added value to the team that the implementation has been lead by the LIU? Which value?

Shared Decision Making (ref. Glyn Elwyn: "Three-talk model")

Opportunity to be heard Opportunity to contribute

➔ Consultation about "Change / Effect" ➔

```

graph LR
    A[Talk about choices] --> B[Talk about opportunities]
    B --> C[Talk about preferences]
    C --> D[Talk about decision]
    B <--> C
            
```

Tools:
[Checklist download](#)
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9 Relation Between the Three Concepts

