ICT PSP – Empowering patients and supporting widespread deployment of telemedicine services

MOMENTUM

European Momentum for Mainstreaming Telemedicine Deployment in Daily Practice
(Grant Agreement No 297320)

Deliverable *D3.3*

Report on ***WP3*** – *"Test methodology": Towards an action plan for testing the MOMENTUM approach*

Version 10

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Abstract
This deliverable describes the methodology to be used during the test phase of MOMENTUM. It introduces the logic behind the test phase, including its aims and objectives. Details about the United4Health (U4H) test site in Kristiansand, Norway are given, and the organisation of the testing is explained with a particular focus on how questions about MOMENTUM's 18 critical success factors are being developed. A provisional outline of the content of the final test phase report is offered. An action plan for the entire handling of this phase of the project is outlined. The deliverable also gives a background account of why and how the decision was made to use Kristiansand in Norway as a test-ground (see in ANNEX).

Key Word List
Blueprint, critical success factors, MOMENTUM, personalised blueprint, questionnaire, scale-up, special interest groups, testing, TREAT, validation, workshop.

About the title

In the Description of Work the title of deliverable D3.3 was to be "Validation methodology". After further consideration, the project opted to re-name this deliverable "Test methodology" to consistently separate the "validation" (the confirmation with stakeholders of the content of the MOMENTUM blueprint drafts and critical success factors) from the "test" phase (the application of the blueprint and the critical success factors in a real-life setting).

Change History

Version History

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Version Changes

01	Initial draft version.
02	Revised version subject to revisions.
03	Version revised with added aims, goals and expectations.
04	Version revised with regard to objectives, testing organisation, the Kristiansand test site, added, following request by project co-ordinator.
05	Comments on duplication and structure, and the need for a description of the content/structure of the final report to emerge from MOMENTUM-TREAT.
06	Section on adapting TREAT tool revised. Section on expected outcome and outline of final report added. Cross references added to text.
07	General suggestions for revisions, including structure, argumentation and content to both the main body of the report and its end-matter and annexes.
08	Merging and rewriting of chapters in order to avoid repetitions.
09	Abstract and executive summary added. Sections 5 and 6 revised. Revised draft of questions for the testing added as annex. Time table for testing process updated. Updated version of section on test site.
10	Quality review

Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both. The TREAT tool was developed in cooperation between CISCO and the Region of Southern Denmark in the Renewing Health project. Material concerning the TREAT tool was originally presented as part of Renewing Health.

List of abbreviations

COPD	Chronically Obstructive Pulmonary Disease
CSF	Critical success factor
EIP AHA	European Innovation Partnership on Active and Healthy Ageing
EXCO	Executive Committee
GP	General Practitioner
Momentum	European Momentum for Mainstreaming Telemedicine Deployment in Daily Practice
NST	Norwegian Centre for Integrated Care and Telemedicine
PSC	Project Steering Committee
RSD	Region of Southern Denmark
SIG	Special Interest Group
SSHF	Hospital of Sørlandet
TREAT	Telemedicine REadiness Assessment Tool
U4H	United4Health

Table of Contents

Table of Figures

Executive summary

The three-year MOMENTUM thematic network is now at the point where it will test the main outcomes of its consortium's work: the draft versions of the blueprint and the set of 18 critical success factors (CSFs) that will help provide guidelines on how to scale-up telemedicine deployment. In the previous "test phase", earlier blueprint versions and the CSFs were shared with telemedicine stakeholder organisations and competence centres for their feedback and critical input. In this test phase, the blueprint and the 18 CSFs will be tested in a real-life setting and serve to further validate the outcomes of MOMENTUM's work.

This test phase is led by WP3 (Region of Southern Denmark (RSD)) in conjunction with a number of other players from Norway. It takes place in the municipality of Kristiansand, Norway.

This deliverable describes the MOMENTUM test phase methodology. Besides its introduction, it consists of five main parts that:

- Introduce as background the logic behind the test phase, including its aims and objectives.
- Offer details about the United4Health (U4H) test site in Kristiansand, Norway
- By highlighting the involvement of the TREAT model, describes the organisation of the test process, and concentrates on the development of a set of questions about MOMENTUM's 18 critical success factors.
- Lay out the provisional content of the final test phase report.
- Outlines an action plan for the handling of this phase of the project.

In addition, the report gives some background into why and how the decision was made to use the U4H project in Kristiansand in Norway as a test-ground (see ANNEX 2).

The final test phase report, which is described briefly in this report, will consist of six parts: an introduction to the preparation of the workshop which is the core of the test phase, the three steps involved, some post-workshop reflection, and a conclusion on the learning points that have emerged from the MOMENTUM test phase and further work that needs to be done.

1. Introduction

This deliverable describes the methodology for the test phase of MOMENTUM. Ultimately, it lays out an action plan for the test methodology that will be used to test the appropriateness of these MOMENTUM CSFs and the resulting MOMENTUM blueprint.

The deliverable is structured in the following way. It contains:

- An introduction to the MOMENTUM test phase, including its aims and objectives.
- An account of the decision-making process used to determine why Kristiansand in Norway will be used as a test-ground.
- A description of the Kristiansand test site.
- An explanation of how the test is organised.
- An explanation of how questions on MOMENTUM's 18 CSFs are being developed.
- A provisional outline of the content of the final report.
- An action plan.

2. The MOMENTUM test phase

MOMENTUM is a thematic network which has run over a three-year period. The project is now at the point where it needs to test the main outcomes of the work on which the consortium has focused: this is called the "test phase". Principally, these outcomes are a set of CSFs that will help provide guidelines on how to scale-up telemedicine deployment.

Throughout 2014, the MOMENTUM consortium has focused the content of its personalised blueprint on a set of 18 critical success factors: http://telemedicine-momentum.eu/18-factors/. This list of 18 factors was first released publicly on 14 May 2014. The current version of the critical success factor list is included in ANNEX 1 of this report.

2.1 Background to the MOMENTUM test phase

The testing of the MOMENTUM project findings will be done in an appropriate physical setting where a telemedicine project is being run, but where the decision of whether or not to start large-scale deployment of telemedicine has yet to be made.

Various sites and options were considered for the purpose of the MOMENTUM test phase. MOMENTUM identified and worked with a number of fully-functioning telemedicine deployment initiatives (e.g., in Israel, Norway, Sweden and Spain).

The deliberation process with regard to appropriate tools or methods to be use, and suitable test sites, took place between September 2013 and May 2014. In the context of various project steering committees, the MOMENTUM consortium was introduced to the benefits of the use of the TREAT methodology: as a result, it was decided that this methodology is the best way in which MOMENTUM, its outcomes and benefits, will be introduced to the test site. The TREAT tool is introduced in section 5.

A specific site in Kristiansand, Norway, has been identified as the location on which to undertake the testing of the MOMENTUM outcomes. In section 3, the process leading to the choice of test site is described followed by descriptions of both the test site and the U4H telemedicine project itself.

The test phase is led by WP3 (Region of Southern Denmark (RSD)). In addition, MOMENTUM network members are providing coaching, specialised feedback or other support that is needed by the site. Specific SIG or consortium members also act as coaches.

2.2 Aims and objectives of the MOMENTUM test phase

The overall aim is for MOMENTUM's outcome to act as a "toolkit" or "toolbox". Therefore, the task of this phase is ultimately to test whether the MOMENTUM toolkit is usable by a site "on its own" (i.e., it can be described as a "self-managing tool"). The MOMENTUM toolkit should therefore be independently usable on a telemedicine scale-up site. As already indicated, the initial test site for the toolkit's usability is in Kristiansand, Norway.

The more specific objectives behind testing MOMENTUM in Kristiansand, Norway are the following:

- **Undertaking a test exercise**: The exercise will involve both
  i. the test of the wider MOMENTUM toolkit "package" (the TREAT method of a questionnaire supplemented by a workshop);
  ii. the test of the MOMENTUM guidelines, i.e., the 18 CSFs. The test phase will incorporate both the actual content of the CSFs and the potential for their use;
  iii. writing up the experience in an outcome report.
- **Posing some test questions**: Four sets of questions will be answered by the test site. They will relate to:
  i. the usability of the MOMENTUM pre-workshop questionnaire;
  ii. the ease-of-use of the MOMENTUM workshop;
  iii. the applicability of the MOMENTUM 18 CSFs to a scale-up site, and
  iv. the value offered by the MOMENTUM "toolkit" to the telemedicine doers.

The possible questions to be used during the test exercise and the proposed structure and content of the final report on the test phase are reported on in section 6 of this report.

3. Decisions on a test site for MOMENTUM

This section of the deliverable lays out the way in which the decision on how to test the MOMENTUM findings was made. It identifies how the shift in location of the proposed test-site occurred, and how the test phase which is now located in Kristiansand, Norway, was justified.

3.1 Original proposed test site

The site that was initially identified as the location for the purpose of testing the MOMENTUM method was Estonia. The original concept – as described in the project's Description of Work – was that the testing would be led by Estonian eHealth Foundation (EeHF). Originally, it was conceived that, once the testing had been conducted, Estonia's experiences and issues would, first, be documented and, second, shared with the MOMENTUM consortium, and wider.

According to the initial plan, the test phase of the blueprint had to start by spring 2014 and projects were identified in Estonia that would have been suitable for running the test phase at that time. When the delay encountered during the first period of the project postponed this milestone for six months, the consortium was informed that the new timing was no longer appropriate for the initially considered projects. It was therefore decided that the MOMENTUM consortium would explore the potential appropriateness and availability of other sites to test the MOMENTUM approach. All these discussions and decisions took place in both EXCO meetings and in PSC meetings, and with the ultimate approval of the project co-ordinator.

The decision to use the TREAT model as a basis for testing the MOMENTUM results was made in a formal PSC meeting in the fall of 2013. It was decided that the TREAT tool, described in chapter 5, would be a useful supplement to the 18 CSFs.

3.2 Presentation of various possible test sites

There were three stages of decision-making about alternative test sites for the MOMENTUM findings: a *presentation* stage, a *reflection* stage, and an *exploration* stage. This sub-section outlines all three of these stages.

Presentation stage: As a result of the decision to seek another test site, a range of other potential test sites needed to be identified. Services were invited to present their cases at a MOMENTUM PSC workshop held in Athens on 15 May 2014. These cases included:

- a cardiological telemedicine support provided by Deutsche Gesellschaft für Patientenhilfe (Germany);
- KSYOS presented by its Dutch organisational owner;
- Cardio Online Europe, a smart ambulance service operating in the province of Puglia in southern Italy; and
- a chronic obstructive pulmonary disease (COPD) initiative in the municipality of Kristiansand in Southern Norway.

The Norwegian initiative forms part of the U4H project (www.united4health.eu). One of its main benefits is that it is a case which has yet to decide whether to expand and to deploy its telemedicine services, and to what extent.

Reflection stage: This stage followed the 15 May 2014 presentation of the Kristiansand COPD initiative. The project co-ordinator and the knowledge gathering and consolidation team (WP3) of MOMENTUM noted that the Kristiansand, Norway, COPD telemedicine services could be a very good and timely candidate for testing the MOMENTUM method. The Kristiansand personnel were informally approached, and appeared open to the proposal of testing MOMENTUM's 18 critical success factors using the "Telemedicine REadiness Assessment Tool (TREAT) as a method (see ANNEX 2).

Exploration stage: Throughout June 2014, an exploration stage followed. WP3 of MOMENTUM, together with the MOMENTUM project coordinator, investigated the advantages and disadvantages of the various alternative sites available to MOMENTUM for the purposes of testing.

Selection stage: The selection process followed. The team came to the conclusion that the Kristiansand pilot project in U4H is the best option for testing.

4. The U4H project test site in Kristiansand

Kristiansand is one of the locations of the U4H project. Kristiansand is considered to be the best pilot site to test the MOMENTUM model and findings for a number of reasons. They relate to the project stage in terms of scale-up, the staff and location openness, and a number of practical elements related to language and communication. Specifically, they involve:

- The stage at which the Kristiansand U4H site is at in terms of scaling-up.
- The willingness of its personnel to consider testing.
- The availability of Norwegian NST staff on-site to support the local telemedicine doers.
- The opportunity for promoting the MOMENTUM method and findings inside the wider, large-scale pilot of U4H: www.united4health.eu.
- The way in which this approach might therefore assist other pilot site initiatives to scale-up.
- The use of the English language by both local Norwegian staff and Danish RSD staff.
- The familiarity with which Norwegian and Danish staff understand each other's languages.

The MOMENTUM team will support the Kristiansand U4H site with its expertise. Its three main areas of expertise are (1) at the general level of understanding scale-up; (2) the handling of the MOMENTUM critical success factors; and (3) the interface with the TREAT method. The process is described in more detail in section 5.

Clearly, as explained below, the Region of Southern Denmark (RSD) will play a strong role in the test phase, as the testing process is led by WP3 (coordinated by RSD). However, also in particular, the Norwegian partner in MOMENTUM, the Norwegian Centre for Integrated Care and Telemedicine (NST), has been positively involved in negotiations regarding the MOMENTUM test site and is willing to support this exercise through its local representative. During this testing process, MOMENTUM network members – and in particular the WP leaders of the four work packages (WP4-WP7) – will make themselves available to provide coaching, specialised feedback or other support needed by the site. Specific SIG members may also be drawn on to act as coaches.

The initial concept for this test phase is the following:

- RSD (WP3) will hand over the MOMENTUM "toolkit" to Kristiansand, Norway.
- RSD (WP3) will support Kristiansand in the design of the pre-workshop questionnaire inspired by the Momentum 18 CSFs, i.e., by sending a first list of possible questions that can be adapted.[1]
- RSD (WP3) will prepare an electronic questionnaire using the SurveyXcact tool and distribute it to respondents pointed out by the Kristiansand team.

[1] These are questions to be posed prior to the workshop being held.

- RSD (WP3) will offer to Kristiansand the tools needed to analyse the questionnaire results.
- RSD (WP3) will coach Kristiansand in how to run the MOMENTUM workshop.
- Kristiansand will become self-sufficient and autonomous as a result of the above coaching.
- Kristiansand will obtain from this exercise a stakeholder consensus on a list of issues and actions points to be considered for it to be organisationally ready to move to deployment on a large scale and apply the changes needed for successful deployment.
- RSD (WP3) and Kristiansand will co-author a short "lessons learned" report on the process used, the questions posed, the workshop run, and the implications considered for the 18 CSFs.

4.1 Characteristics of the test site

The purpose of the Kristiansand test site project in U4H is to implement large-scale telemedicine solutions within the fields of chronic obstructive pulmonary disease (COPD), diabetes and heart failure. The U4H project runs from 1 April 2014 to 31 December 2015.

The Kristiansand test site area has the following general population and geographic characteristics:

- Population: 292,225 inhabitants.
- Area: 16,493 square kilometres.
- Two counties.
- 30 municipalities.
- A large variation in the size of municipalities: The smallest has 929 inhabitants, and the largest has 84,476 inhabitants.
- A coastline with a high population density, and – inland – mountainous, rural areas.

4.2 The aims of the U4H test site

The project has the following aims, in its own right:

- To develop and test coherent and cost effective clinical pathways for COPD patients by means of telemedicine solutions.
- To improve quality of life and increase COPD patients´ responsibility for their own health.
- To prevent a loss of functions and worsening of the COPD condition on the part of the patients.

See the figure below for the project setup.

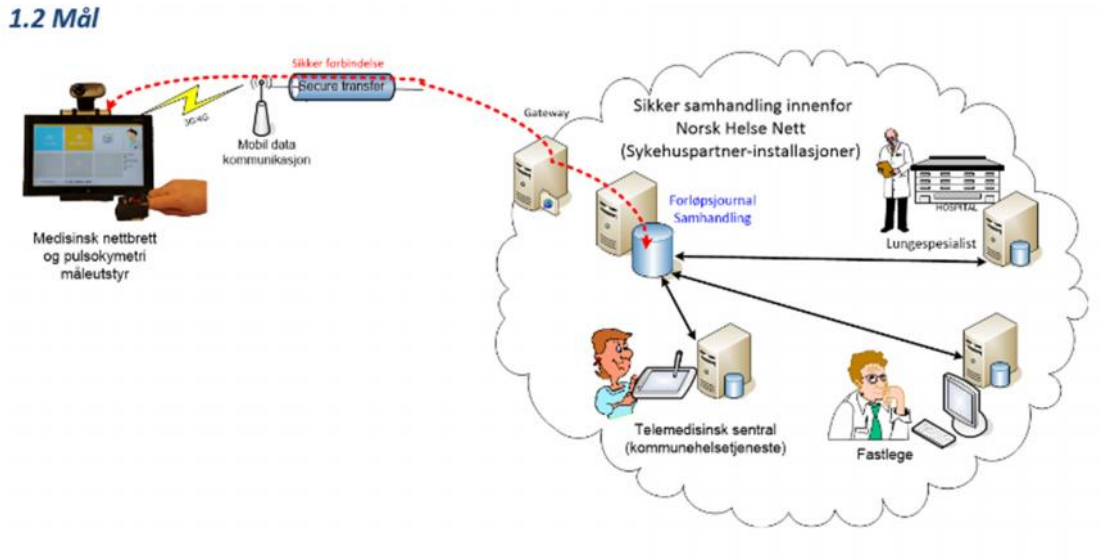

Figure 1: The Kristiansand U4H setup

The health care professionals carrying out the U4H project involve municipal home care nurses, general practitioners and hospital staff. The intervention enables the patients to communicate with health care professionals and perform certain measurements online via a tablet and a secure server.

The interventions that are included involve daily video/telephone communications and the taking of patients' pulse, and other statistics gathered by posing six separate questions, and optional weekly text messages and prompts. These differ in intensity over periods related from admission to discharge.

The patient´s data travel via a secure network to a gateway. The data is collected in a health record which can be accessed by a municipal health worker, the patient´s GP and a hospital based lung specialist, as shown in the above illustration.

The Kristiansand area has experienced up to 365 hospital admissions related to this particular disease. See the figure (below) for more details.

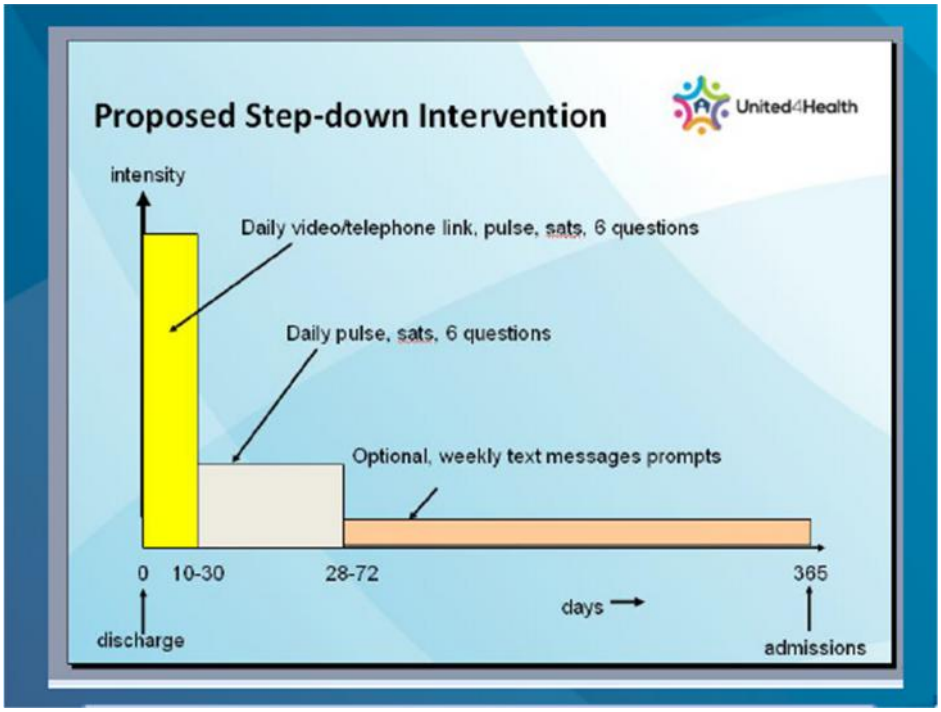

Figure 2: The Kristiansand U4H intervention

The intervention is to last for 12 months after the discharge of the patient(s), but there will be a decreasing intensity of contact. This is called a step-down intervention.

The Kristiansand project includes:

- Testing telemedicine equipment for follow-up of 200 COPD patients after discharge from hospital.
- Providing the basis for decisions on the planning of telemedicine centres.
- Reducing readmissions for the 200 project patients (compared to historical data from 100 patients).

4.3 Organisation of the Kristiansand U4H project:

The partners in the U4H project are the Hospital of Sørlandet, the University Hospital of Northern Norway, the University of Agder, the NST, and the municipality of Kristiansand.

The project organisation is illustrated in the following figure.

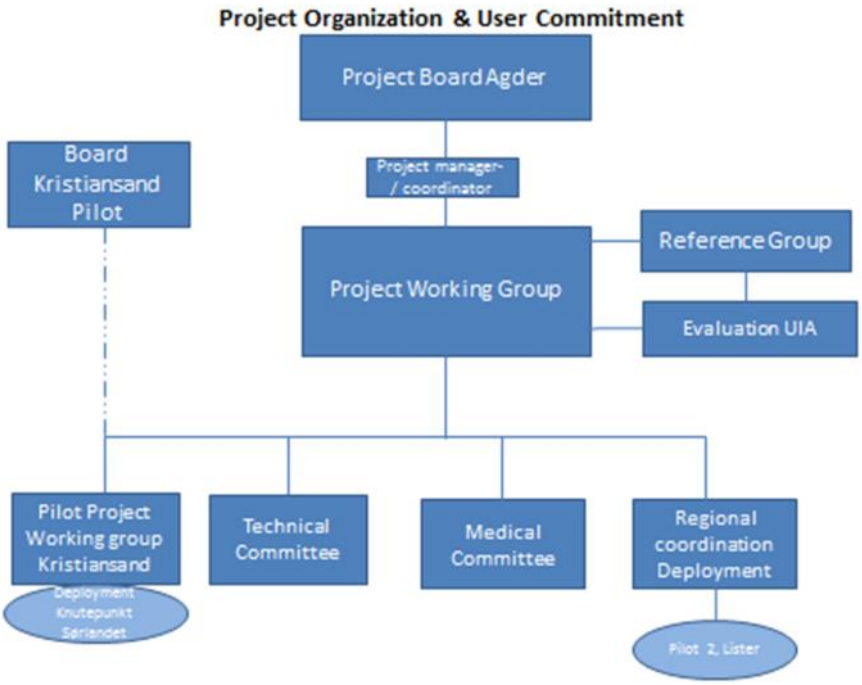

Figure 3: Organisation of the U4H project

Participants from all levels of the project organisation will be asked to take part in the MOMENTUM/TREAT survey and subsequent workshop.

5. Introduction to the TREAT tool

In this section, the TREAT tool is described, covering its objectives, its process and expected outcome. In sections 6 and 7, the adaption of the application of TREAT to the Kristiansand case and the time table are described more specifically.

The objective of TREAT (Telemedicine REadiness Assessment Tool)[2] is to offer a standardised assessment tool to help leaders in regions, health and care organisations, and their funding partners (such as local and national authorities and insurers) assess their readiness to implement telemedicine solutions. The main issue addressed by TREAT is whether the partners in question are organisationally ready to deploy such services.

TREAT is an assessment tool for helping all the key stakeholders in a telemedicine project to work together to optimise a Proof of Concept roll-out. It has been created jointly by the IT company Cisco and RSD in the context of their collaboration on eHealth and is made available to third parties such as MOMENTUM, provided there is no commercial use made of the tool.

The TREAT assessment is based on the key assumption that telemedicine solutions provide value for citizens, providers, and payers in the following ways:

- They improve access to services (locally or in the home).
- They reduce costs (reduced home visits, better control of inappropriate use of primary or secondary care facilities by patients, and fewer emergency admissions to hospital).
- They improve quality (more personalised and tailored care, easier involvement of family and informal carers).

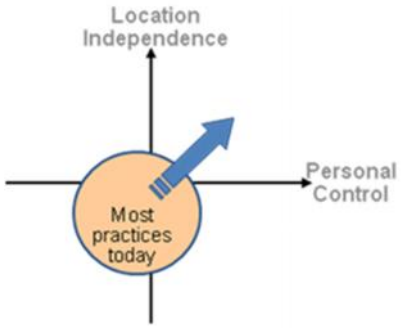

Figure 4: TREAT's underlying assumptions

TREAT is a two-step process. Step one is an online tool for readiness assessment, and step two is a facilitated leadership workshop.

[2] This section of the report builds on materials developed in the Renewing Health project, and also submitted to the European Commission for review and accepted by the project's annual technical review team, as MOMENTUM Deliverable 3.1b "Outline of the Momentum Blueprint: *Towards a Personalised Blueprint*" (v0.8).

5.1 The TREAT online tool

The original online tool is a pre-formatted questionnaire that has three to five general questions per concept. The tool allows a health region to add a further two questions per concept of its own.

Each section of the questionnaire contains questions on those baseline issues that are considered necessary for a telemedicine service, and a section on existing desirable tools which could be leveraged to develop a telemedicine programme in situations where the baseline is poorly developed.

In the online tool, each question is answered on a simple 1-5 scale where 1 = do not agree and 5 = fully agree. See the figure below.

Figure 5: TREAT scale of responses to questions

The results generated by the users of this online tool will help the decision-makers (in this case, in Kristiansand, Norway) to assess the current attitudes towards telemedicine on the part of the key stakeholders in the region. They will then lead to discussions which will help the region identify changes and prioritise actions to be taken before a telemedicine solution can be scaled-up and rolled out.

The various components of the set of questions posed in the online tool are outlined in the figure below.

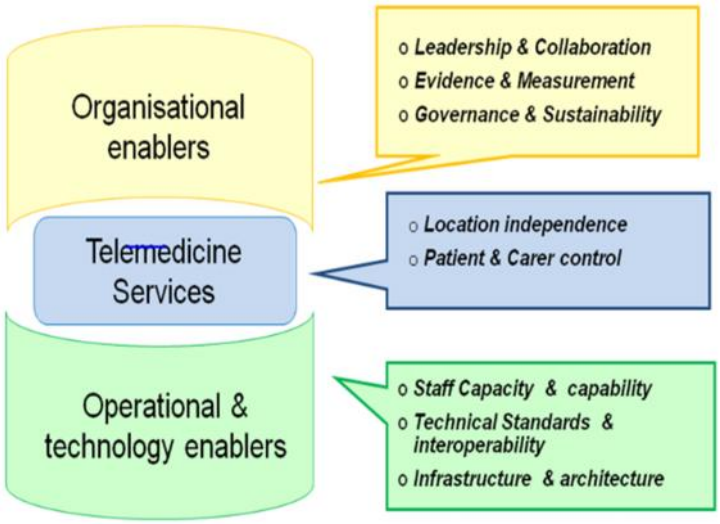

Figure 6: Components of the TREAT tool

As can be seen from this figure, the TREAT tool operates based on three sets of enablers which all play an important part in deciding the level of readiness of the test site for scale-up, and which should all be identified for the TREAT analysis.

Posing these questions, and examining their results, then leads to a TREAT workshop.

5.2 The TREAT workshop

The TREAT workshop will be based on the results from the online self-assessment. For the purpose of this workshop, key players in the telemedicine project using TREAT will be brought together to work on issues that can be categorised under the following headings:

- Their current maturity in terms of organisational enablers.
- The telemedicine solution itself.
- Operational enablers for implementing telemedicine solutions.

The TREAT tool is designed to facilitate a workshop with key players. The tool invites workshop participants to examine their local strategy under each heading and their execution targets. Having identified where they stand in relation to the strategy and execution targets, the stakeholders then work together to identify the main gaps, constraints and challenges to achieving their goals. The tool and the results of the online evaluation provide input for starting the discussion.

The expected outcome of the workshop to be organised will include:

- A common understanding between central stakeholders of the challenges that they are facing.
- A first draft of an action plan for the large-scale implementation of telemedicine.
- Input for issues that need to be changed or adapted in existing strategies.

5.3 Adapting the TREAT tool for use in the MOMENTUM project

The connection between TREAT and MOMENTUM is illustrated below.

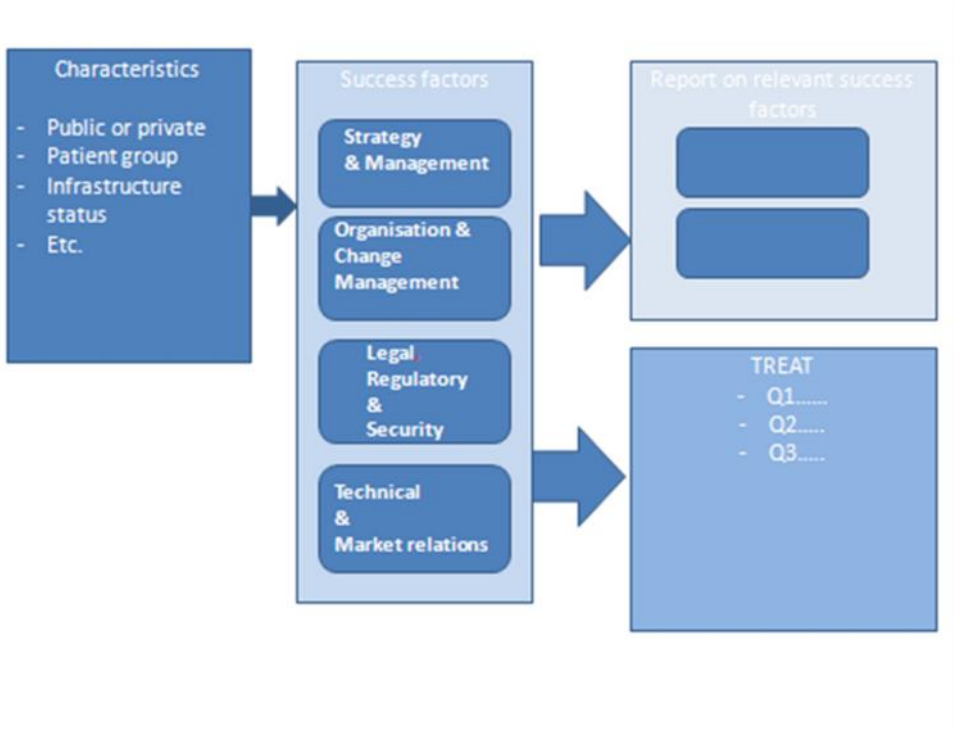

Figure 7: The connection between TREAT and MOMENTUM

The above figure shows that MOMENTUM's approach permits certain stages to be achieved when applying the MOMENTUM-TREAT model. The 18 CSFs identified by MOMENTUM will feed into the kinds of contextual questions posed in the TREAT online tool. See section 5 for detail on the process of developing these questions.

In order to use the TREAT tool in the MOMENTUM project, a new set of survey questions has been developed. The questions are based on the work of the four SIGs of MOMENTUM, which worked in-depth on four aspects of successful telemedicine deployment:

- Strategy and management.
- Organisation and management.
- Legal, regulatory and security issues.
- Technical and infrastructural issues.

Each SIG has produced two outcomes: a report under one of these short headings, and a list of CSFs which must be present for large-scale implementation of a telemedicine solution to be effective. Together, the four groups have produced a list of 18 CSFs.

The MOMENTUM-TREAT survey is based on the 18 CSFs and the four in-depth reports produced by the SIGs. Each question relates to one of the CSFs. When needed, more than one question may be posed with regard to each CSF. The SIG reports have been consulted throughout the drafting and writing process to make sure that the questions asked will actually cover the issues included in the CSFs.

RSD has developed two sets of questions: one in English and one in Danish. As the SIG reports and all deliveries are in English, it follows naturally that an English list is needed first. The Norwegian test site team is convinced that an English language questionnaire will be an obstacle to the Kristiansand participants´ freely stating and discussing their opinions, and therefore prefers to develop a Norwegian language questionnaire. This constraint has been known from early discussions between the RSD team and the Norwegian project manager. The RSD team has no Norwegian language skills. However, since the Danish and Norwegian languages are quite similar, especially in terms of their two written languages, the Kristiansand test site team will be able to translate the Danish-based questions quickly and easily.

The MOMENTUM-TREAT workshop will be based on the results from the online self-assessment. For the purpose of this workshop, key players in U4H will be brought together to work on the results of the MOMENTUM-TREAT survey.

6. Expected outcome of the test and outline of the final report

In this section the expected outcome of the MOMENTUM-TREAT test phase and process in Kristiansand, Norway is described, and the draft structure and content of the final report is outlined.

The RSD team will prepare a final report outlining the experiences of the Kristiansand test site concerning the use of the tool, analysing the results, preparing and running the workshop, and evaluating the process.

After running the questionnaire on the CSF questions and the MOMENTUM-TREAT workshop, the Norwegian project team members will write a report on their experiences with the tools and their applicability to the U4H project. This report will be written in Norwegian.

Afterwards the RSD team will interview the project leaders from the Kristiansand project. The main focus will be on the applicability of the MOMENTUM-TREAT tool, especially the questions on the CSFs posed to the Kristiansand project.

This final report, which will be entitled “Learning points from the MOMENTUM test phase” will form part of the background material to the report to be delivered in WP3.4, due in month 35 of the project and provisionally entitled “Consolidated and validated Blueprint”. It will include the Kristiansand report (in Norwegian, with a summary in English) and a learning point report organised as a semi-structured interview with the Kristiansand project team. The proposed interview questions are listed below, grouped under six headlines:

1. **Overall first impression**
   - Overall usefulness of the MOMENTUM tool kit.
   - Relevance of the four main areas and the CSFs covered in SIG reports.

2. **Step 1 - Preparation of the questionnaire**
   - Relevance of the SIG questions.
   - The selection process; how did you set up criteria and assess the relevance of individual questions?
   - Are there CSFs and their underlying questions which you have chosen to leave out entirely?
   - If yes, why?
   - Selection criteria for respondents.

3. **Step 2 - The questionnaire phase**
   - Receiving the results of the questionnaires.
   - Analysing the answers, usefulness of the SurveyXcact tool.

4. **Step 3 - Preparing and running the workshop**
   - Usefulness of the answers to the questionnaire.
   - Usefulness of guidance from RSD team (if relevant).

5. **Step 4 - After the workshop**
   - Value of the practical outcome of the workshop.
   - Which parts of the MOMENTUM-TREAT toolkit were useful?
   - Which parts of the MOMENTUM-TREAT toolkit were not useful?
   - Any suggestions for improving the MOMENTUM-TREAT toolkit?
   - Has the MOMENTUM-TREAT toolkit helped you get a clear picture of your readiness for upscaling/deploying your telemedicine solution?
   - Does the MOMENTUM-TREAT toolkit work "on its own" i.e., can it be described as a "self-managing tool"?
   - Would you consider using the MOMENTUM-TREAT toolkit for a future project?
   - Would you recommend others to use the MOMENTUM-TREAT toolkit for a project?

6. **Conclusion: Learning points from the MOMENTUM test phase and further work to be done**
   - The most important learning points from the Kristiansand test.
   - List of any further future revisions that need to be made to the 18 CSFs.
   - List of any further possible in-depth research that needs to be undertaken on the 18 CSFs (e.g., as part of potential PhD-related research).

The final report is expected to provide useful insights into the strengths and weaknesses of the MOMENTUM-TREAT toolkit, suggest revisions, and point out what needs to be considered before making the toolkit available to other telemedicine deployment projects.

Currently the TREAT tool is being adapted for its use in the MOMENTUM project. In RSD, a group of programmers is developing a MOMENTUM-TREAT website which will contain the original TREAT questions as well as a new set of questions developed specially for the MOMENTUM project. These questions are based on the work of the four SIGs with a number of questions to represent each CSF in order to test whether a telemedicine solution is ready for large-scale deployment. When ready, the MOMENTUN-TREAT questionnaire will be accessible from the MOMENTUM website.

7. An action plan for the MOMENTUM test phase

This action plan outlines provisionally the test methodology intended for the MOMENTUM test phase.

The objective of the test phase is to ask a number of actors – that MOMENTUM calls telemedicine doers – in Kristiansand to look at the 18 MOMENTUM CSFs and identify what still needs to be done locally to prepare the scaling-up of the Kristiansand service.

The plan involves over ten tasks that were described more fully in the previous section of the report. Due to the tight timing of this last phase of the MOMENTUM project, they will take place on a weekly basis during weeks 35 to 45 (i.e., from mid-August 2014 to end October 2014).

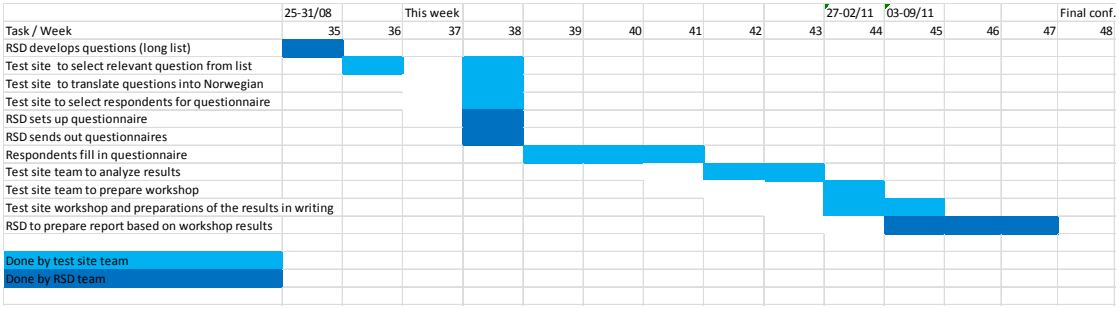

Figure 8: Schedule for the MOMENTUM test phase

7.1 Concerns regarding the MOMENTUM test phase and site

The MOMENTUM test phase is viewed as a learning exercise by the MOMENTUM consortium. While there may be concern that there is insufficient time remaining at the end of the MOMENTUM project for in-depth exploration of the MOMENTUM potential, the consortium's intention is to maximise these results within the remaining project timeframe.

7.2 After the end of the MOMENTUM project

Ultimately, a variety of telemedicine deployment initiatives, regions or countries may wish to test the MOMENTUM consolidated blueprint, complete with its 18 CSFs. Without commitment at this stage, a possible approach to this testing could take place in the following way.

For example, further post-MOMENTUM testing could be done in close collaboration with the original (Kristiansand) test site, and with other former MOMENTUM WP leaders. It might therefore take place in the context of other initiatives such as the European Innovation Partnership on Active and Healthy Ageing (EIP AHA). Exploration of these possibilities with the EIP AHA could occur following the end of the MOMENTUM project.

Through its final workshop and some dissemination activities, MOMENTUM will encourage this process to happen, but the project cannot make any commitment to its support, since the project itself is due to end at the end of January 2015. The members of MOMENTUM, as well as the Kristiansand team, may provide support if they wish to do so and under conditions that they will themselves define.

ANNEX 1: MOMENTUM's 18 critical success factors

Wording of each critical success factor as per 5 September 2014:

- Assure that there is a cultural readiness for the telemedicine service.
- Ensure leadership through a champion.
- Coming to a consensus on the advantages of telemedicine in meeting compelling need(s).
- Pull together the resources needed for deployment.
- Address the needs of the primary client(s).
- Involve healthcare professionals and decision-makers.
- Prepare and implement a business plan.
- Prepare and implement a change management plan.
- Put the patient at the centre of the service.
- Assess the conditions under which the service is legal.
- Identify and apply relevant legal and security guidelines.
- Involve legal and security experts.
- Ensure that telemedicine doers and users are "privacy aware".
- Ensure that appropriate information technology infrastructure and eHealth infrastructure are available.
- Ensure that technology is user-friendly.
- Put in place the technology and processes needed to monitor the service.
- Maintain good procurement processes.
- Guarantee technology has the potential for scale-up.

The wording of each critical success factor, as per their launch on 6 May 2014, are available on the project website:

http://telemedicine-momentum.eu/18-factors/

http://telemedicine-momentum.eu/wpcontent/uploads/2014/05/Momentum_CSFs_v01_6may2014.pdf

ANNEX 2: Draft of long list of questions reflecting on the critical success factors

Please note that all the questions in this list relate to the **current** project and the telemedicine services applied within it. You should not answer any questions based on the general conditions for or your general attitudes towards the telemedicine solutions in your region or organisation.

Bemærk at alle spørgsmål i det følgende omhandler den eller de telemedicinske løsninger, der anvendes i det aktuelle projekt. Spørgsmålene skal altså ikke besvares ud fra de generelle forhold for eller holdninger til telemedicin i din organisation eller region.

Critical success factors relating to strategy and management

1. Assure that there is cultural readiness for the telemedicine service

- In my organisation/region doctors and other healthcare professionals are ready to share clinical information with each other and with the patient i.e. there is a level of trust among all the stakeholders.[3]
- In my organisation/region patients and providers (healthcare professionals) are ready to use ICT (e.g., computers, tablets, mobile phones).
- In my organisation/region financial and other incentives are aligned with the service to be deployed.
- In my organisation/region an underpinning culture embraces technology.
- In my organisation/region an underpinning culture welcomes and even promotes change, innovation and shows openness to new ideas.

- I min region/organisation er læger og andre sundhedsprofessionelle villige til at dele klinisk information med hinanden og med patienten, idet der er et tillidsforhold mellem de involverede parter.
- I min region/organisation er patienter og sundhedsprofessionelle villige til at anvende informationsteknologi, fx computere, tablets og mobiltelefoner.
- I min region/organisation bliver økonomiske incitamenter tilpasset den service, der udrulles.
- I min region/organisation understøtter den underliggende kultur teknologianvendelse.
- I min region/organisation tager den underliggende kultur godt imod ændringer, innovation og viser åbenhed overfor nye idéer.

[3] This success factor is relevant in both provider-provider services and provider-patient services. However, in a provider-provider service, the willingness to share information with the patient is less important.

2. Ensure leadership through a champion

- In my region/organisation there is one or several influential person(s) who take(s) on a leading role and leads the way towards deployment of the telemedicine solution tested in our project.

- I min organisation/region er der en eller flere indflydelsesrige personer, som går forrest i projektet og sætter retningen for implementering af den telemedicinske ydelse, vi har testet i projektet.

3. Come to a consensus on the advantages of telemedicine in meeting compelling need(s)

- In my region/organisation there is general consensus on the current telemedicine solution being the best available solution for meeting a compelling need.
- The current telemedicine solution is the best available solution for meeting a compelling need.

- I min region/organisation er der enighed om, at den aktuelle telemedicinske ydelse er den bedste tilgængelige løsning på et presserende behov.
- Den aktuelle telemedicinske ydelse er den bedste tilgængelige løsning på et presserende behov.

4. Pull together the resources needed for deployment

- In my region/organisation the financial resources needed for deployment of the telemedicine solution are available.
- In my region/organisation the IT competences needed for deployment of the telemedicine solution are available.
- In my region/organisation enough time for the training needed in order to implement the telemedicine solution is available.

- I min region/organisation har vi de økonomiske ressourcer til rådighed vi skal bruge for at sikre udbredelse af den telemedicinske løsning.
- I min region/organisation har vi de it-kompetencer til rådighed vi skal bruge for at sikre udbredelse af den telemedicinske løsning.
- I min region/organisation har vi afsat tilstrækkelig tid til uddannelse for at sikre udbredelse af den telemedicinske løsning.

Critical success factors relating to organisation and management

5. Address the needs of the primary client(s).

- The telemedicine solution addresses the needs of the primary clients.
- The telemedicine solution is sufficiently adapted to the needs of the primary users.

- Den telemedicinske ydelse er rettet mod den primære aftagers behov.
- Den telemedicinske ydelse er tilstrækkeligt tilpasset de primære brugeres behov.

6. Involve healthcare professionals and decision-makers.

- Healthcare professionals have been involved in the development of the content of this project.
- Healthcare professionals have been involved in the development of the process and time schedule for this project.
- Decision-makers have been involved in the development of the content of this project.
- Decision-makers have been involved in the development of the process and time schedule for this project.

- Sundhedspersonale har været involveret i udvikling af indholdet i dette projekt.
- Sundhedspersonale har været involveret i udvikling proces og tidsplan for dette projekt.
- Beslutningstagere har været involveret i udvikling af indholdet i dette projekt.
- Beslutningstagere har været involveret i udvikling proces og tidsplan for dette projekt.

7. Prepare and implement a business plan.

- A business plan for the project has been developed.
- A business plan for the project has been implemented.
- The business plan has been approved by the relevant management level.

- En business plan for projektet er udarbejdet.
- En business plan for projektet er implementeret.
- Business planen er blevet godkendt på det relevante ledelsesniveau.

8. Prepare and implement a change management plan.

- A change management plan for the project has been developed.
- A change management plan for the project has been implemented.
- A change management plan has been approved by the relevant management level.

- En change management plan for projektet er udarbejdet.
- En change management plan for projektet er implementeret.
- Change management planen er blevet godkendt på det relevante ledelsesniveau.

9. Put the patient at the centre of the service.

- In this project the patients have been sufficiently involved in the development of the telemedicine solution.
- In this project telemedicine service is based on the patient´s needs.
- In this project enough information and training is provided for the patients in order for them to obtain the best results possible from using the telemedicine solution.

- I dette projekt har patienterne været tilstrækkeligt involveret i udvikling af den telemedicinske løsning.
- I dette projekt er det patienternes behov, der ligger til grund for udformning af den telemedicinske service.
- I dette projekt leveres tilstrækkelig information og træning til patienterne, så de får det bedst mulige resultat ud af at bruge den telemedicinske løsning.

Critical success factors relating to legal, regulatory and safety issues

10. Assess the conditions under which the service is legal

- Prior to the project we assessed the conditions under which the service is legal.

- Forud for projektstart har vi undersøgt under hvilke omstændigheder, det er lovligt at levere denne service.

11. Involve legal and security experts

- We have received advice on the project from legal experts.
- We have received advice on the project from experts on data security matters.
- In this project we are not experiencing any data security problems.
- I have confidence in the legality of this project.
- I have confidence in the security of this project.

- Vi har rådført os om projektet med juridiske eksperter.
- Vi har rådført os om projektet med eksperter i datasikkerhed.
- I dette projekt oplever vi ikke problemer med datasikkerheden.
- Jeg er tryg ved lovligheden af dette projekt
- Jeg er tryg ved de valgte sikkerhedsløsninger.

12. Identify and apply relevant legal and security guidelines.

- The project is carried out in accordance with the relevant guidelines on legal matters.
- The project is carried out in accordance with the relevant guidelines on security matters.

- Projektet bliver udført efter relevante juridiske guidelines.
- Projektet bliver udført efter relevante guidelines for datasikkerhed.

13. Ensure that telemedicine doers and users are "privacy aware"

- In this project the telemedicine doers are aware of protecting the patients´ privacy in terms of health information and other information collected during the course of the project.

- I projektet er de sundhedsprofessionelle (udøverne af telemedicin) opmærksomme på at beskytte patienternes private helbredsoplysninger og andre oplysninger som er indsamlet i løbet af projektet.

Critical success factors relating to technical and infrastructural issues

14. Ensure that the information technology infrastructure and eHealth infrastructure are available

- We have ensured that the IT infrastructures needed are in place for deployment and large-scale implementation.
- We have ensured that the eHealth infrastructures needed are in place for deployment and large-scale implementation.

- Vi har sikret os, at de nødvendige informationsteknologi-infrastrukturer er på plads til implementering i stor skala af vores telemedicinservice
- Vi har sikret os, at de nødvendige eHealth-infrastrukturer er på plads til implementering i stor skala af vores telemedicinservice

15. Ensure that the technology is user-friendly

- The telemedicine technology used in our project is user-friendly for patients
- The telemedicine technology used in our project is user-friendly for health professionals.
- The telemedicine technology used in our project does not need an extended training process prior to using it.

- Den telemedicinske løsning vi bruger i projektet er let at anvende for patienter.

- Den telemedicinske løsning vi bruger i projektet er let at anvende for sundhedsprofessionelle.
- Den telemedicinske løsning vi bruger i projektet kræver ikke et omfattende træningsforløb for brugerne.

16. Put in place the technology and processes needed to monitor the service

- We have set up a system to monitor our telemedicine service ensure that it is running smoothly at all times.
- We have set up a system to solve any incident that may occur during the service
- We have a system which supports the end-users in resolving any doubts that they might experience with the telemedicine solution

- Vi har et system der sørger for løbende at overvåge den telemedicinske service og sikre, at den fungerer uden problemer
- Vi har et system, der sørger for at løse ethvert problem, der dukker op ved brug af den telemedicinske service.
- Vi har et system til støtte for slutbrugerne i alle tvivlsspørgsmål, der må opstå.

17. Maintain good procurement processes

- We have clear agreements regarding the quality of the deliveries provided by our vendors
- We have clear agreements regarding the service level provided by our vendors

- Vi har klare aftaler med vores leverandører om kvaliteten af den leverede ydelse
- Vi har klare aftaler med vores leverandører om serviceniveauet for den leverede ydelse

18. Guarantee that the technology has the potential for scale-up

- We are fully aware of what it takes for the technology to be deployed on a large scale.
- In our region/organisation we are ready for large-scale deployment of the technology.
- The project will supply the documentation needed to ensure that there is a basis for large-scale deployment of the project.

- Vi har gjort os klart, hvad der kræves for at teknologien kan rulles ud i stor skala.
- Vores region/organisation er klar til at implementere teknologien i stor skala.
- Projektet vil levere den nødvendige dokumentation til at sikre at der er baggrund for udbredelse af teknologien i stor skala