



D5.1 Online Self-Assessment Tool

WP 5 Refinement of the B3 Maturity Model



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1 Introduction

Deliverable 5.1 is the online Maturity Assessment tool available at: <http://scirocco-project-msa.inf.ed.ac.uk> This document is a short introduction to the tool and its use. The use of the tool in the context of the Maturity Model is defined more extensively in the Appendix: Guide to the Maturity Model of this document. In addition, the tool is self-documenting in the sense that all the main functions have help associated with them that provides an explanation of the function by clicking on the help button. This help is useful in the immediate context of trying to recall the function of a particular part of the tool but the overall process of using the tool is better described in the annexe to this document.

The SCIROCCO tool (Figure 1) is intended to support users to carry out assessments using the Maturity Model (MM) for the adoption of integrated care in Health Systems. The MM arose from work in the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA). This work was driven by the B3 action group and incorporates related ideas that emerged in other EIP on AHA action groups.



Figure 1: SCIROCCO Maturity Model

The idea of the MM arose because the EIP on AHA generated a large number of descriptions of Good Practices but there was relatively little interchange of good practices between Health Systems because it was difficult to assess whether a particular health system would be likely to be able to adopt a particular good practice.

The idea of the Maturity Model is to provide a number of dimensions along which it is possible to assess the readiness of a Health System to adopt integrated care. A series of interviews undertaken with Health Systems across Europe and subsequent analysis of those interviews led to the current model comprising 12 dimensions and six assessment levels along each dimension (ranging from 0 - the Health System is completely unprepared to adopt Integrated Care in this dimension to 5 - the Health System is fully prepared to adopt integrated care on this dimension.) The measure of Maturity of a Health System to adopt integrated care allows the Health System to make a more informed judgement on whether it is capable of adopting new good practices.

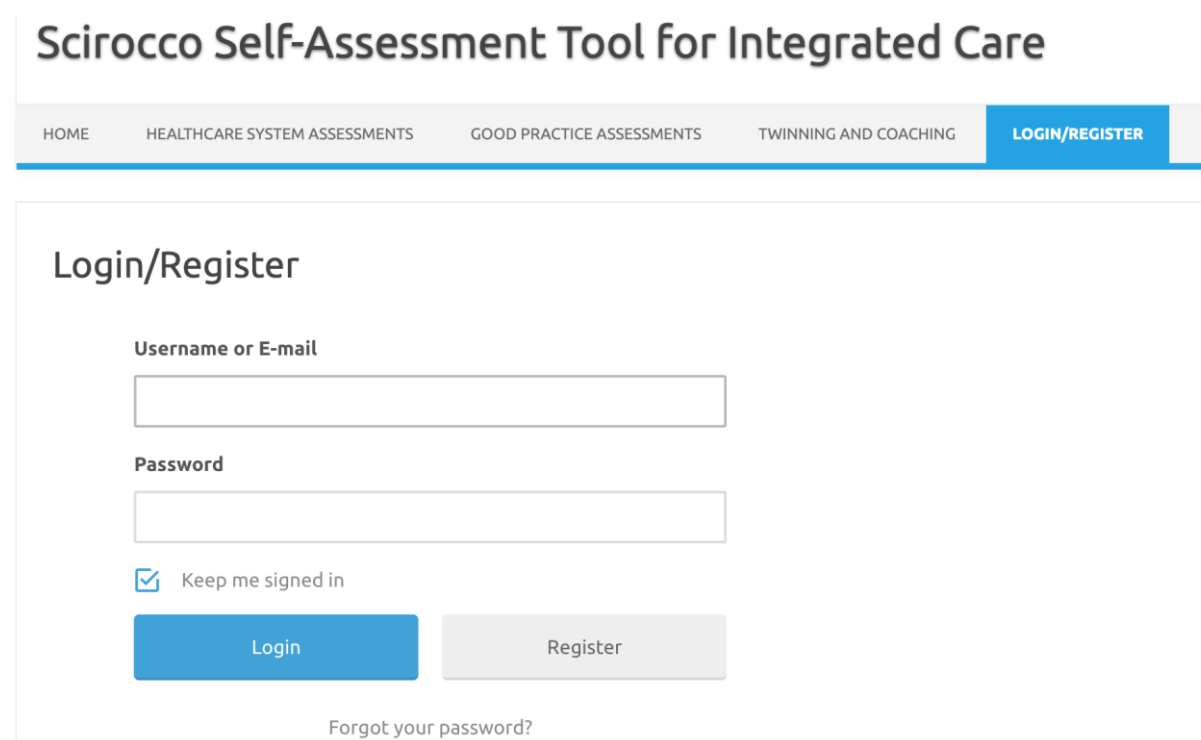
As the work on Health Systems progressed it became clear that some good practices fitted well with some Health Systems and less well with others. In particular, some Good Practices appeared to need good maturity in some dimensions but less maturity in other dimensions. The work led to the development of the idea of **maturity requirement** and an extension of the tool to allow us to assess Good Practices for the level of maturity they require on each of the dimensions of the model. This notion is helpful in determining whether it is likely that a good practice could be adopted by a particular health system. The SCIROCCO tool supports the assessment of the maturity requirements of a good practice.

Finally, the SCIROCCO Tool includes some functions to help support Twinning and Coaching as a means to transfer good practices from one health system to another. In this section the tool helps support a coaching or twinning relationship between health systems by allowing the comparison of the maturity requirements of a good practice with the maturity of a health system. This allows a structured discussion using the dimensions of the maturity model as the main structure to investigate what needs to be done to achieve transfer of practice from one health system to another.

The remainder of this document is focussed on the presenting a summary of the use of the SCIROCCO tool to support these three areas of activity. Deeper descriptions of the Model and the evaluation of the performance of the model and the SCIROCCO tool are contained in other deliverables.

2 Registering, setting up your Profile and Logging In

On first accessing the tool at <http://scirocco-project-msa.inf.ed.ac.uk>, you are automatically taken to the login page as illustrated in **Error! Reference source not found..** If you have an account, entering your username and password here allows the SCIROCCO tool to identify you and give you access to the rest of the website. If you do not have an account yet, click on “Register” which will take you to the registration page illustrated in Figure 3: Registration Page. This page requests some personal, professional and contact details that will be used to set up a profile for you on the tool. Subsequently entering a username (or the email specified in the profile) and corresponding password enables login to the tool. The data in profiles and gathered during the use of tool are stored securely and are not used for any other purpose than the provision of the services of the tool.



The screenshot shows the 'Scirocco Self-Assessment Tool for Integrated Care' website. The header includes navigation links: HOME, HEALTHCARE SYSTEM ASSESSMENTS, GOOD PRACTICE ASSESSMENTS, TWINNING AND COACHING, and a highlighted LOGIN/REGISTER button. The main content area is titled 'Login/Register' and contains two input fields: 'Username or E-mail' and 'Password'. Below these fields is a checkbox labeled 'Keep me signed in' which is checked. At the bottom of the form are two buttons: 'Login' (blue) and 'Register' (grey). A link 'Forgot your password?' is located below the buttons.

Figure 2: Login/Register Page

Registration

First Name

Last Name

Institution

Health System

Country

Sector(s) ?

☐ Health

☐ Social Care

☐ Voluntary

☐ Other(s)

Role(s) ?

☐ Health Professional

☐ Care Professional

☐ Health ICT

☐ Management

☐ Sponsor

☐ Health Administrator

☐ Care Administrator

☐ Regulator

☐ Academic

☐ Other(s)

Position ?

Phone Number

Email (used as username)

Password

Confirm Password

Language of Choice

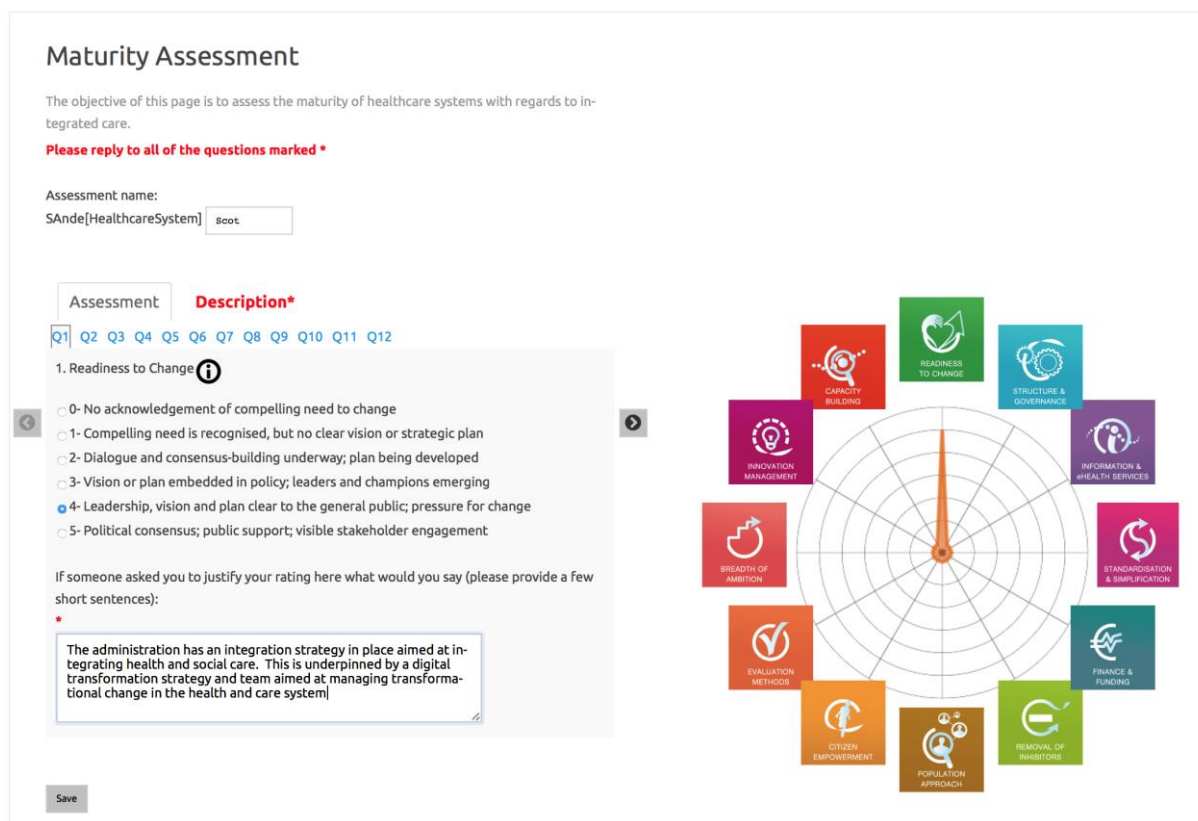
Figure 3: Registration Page

3 The Maturity of Health Systems

The online tool provides support in the use of the EIP on AHA B3 action group Maturity Model for the adoption of integrated care. The Model provides twelve dimensions against which a health system can be assessed for maturity in the adoption of integrated care. The tool provides an online version of the questionnaire assessing maturity along each dimension. This section offers an introduction to the use of the tool in assessing the maturity of a health system.

3.1 Completing an Individual Questionnaire

Figure 4: Health System Maturity Questionnaire shows an incomplete assessment questionnaire. To complete this we choose a particular dimension and select the level of maturity in that dimension either by clicking directly on the dimension in the diagram or by selecting the narrative description on the left of the screen. A key part of this process is completing the narrative in the free text box. This is the justification for the rating, which provides a record of why the particular level was chosen. It is useful in presenting the questionnaire or in discussing it with others.



Maturity Assessment

The objective of this page is to assess the maturity of healthcare systems with regards to integrated care.

Please reply to all of the questions marked *

Assessment name:
SAnde[HealthcareSystem] Scot

| Assessment | Description* |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 | |
| 1. Readiness to Change ⓘ | <p>0- No acknowledgement of compelling need to change</p> <p>1- Compelling need is recognised, but no clear vision or strategic plan</p> <p>2- Dialogue and consensus-building underway; plan being developed</p> <p>3- Vision or plan embedded in policy; leaders and champions emerging</p> <p>4- Leadership, vision and plan clear to the general public; pressure for change</p> <p>5- Political consensus; public support; visible stakeholder engagement</p> |

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

The administration has an integration strategy in place aimed at integrating health and social care. This is underpinned by a digital transformation strategy and team aimed at managing transformational change in the health and care system

Save

Figure 4: Health System Maturity Questionnaire

Completing the questionnaire involves choosing a level of maturity for each dimension and providing a justification for each choice, like in Figure 5: Completed Maturity Questionnaire. Thus, the final questionnaire provides a rich picture of the maturity of the health system being assessed. In general, the justification should be sufficient to allow a reader to appreciate why the particular rating is correct for the dimension.

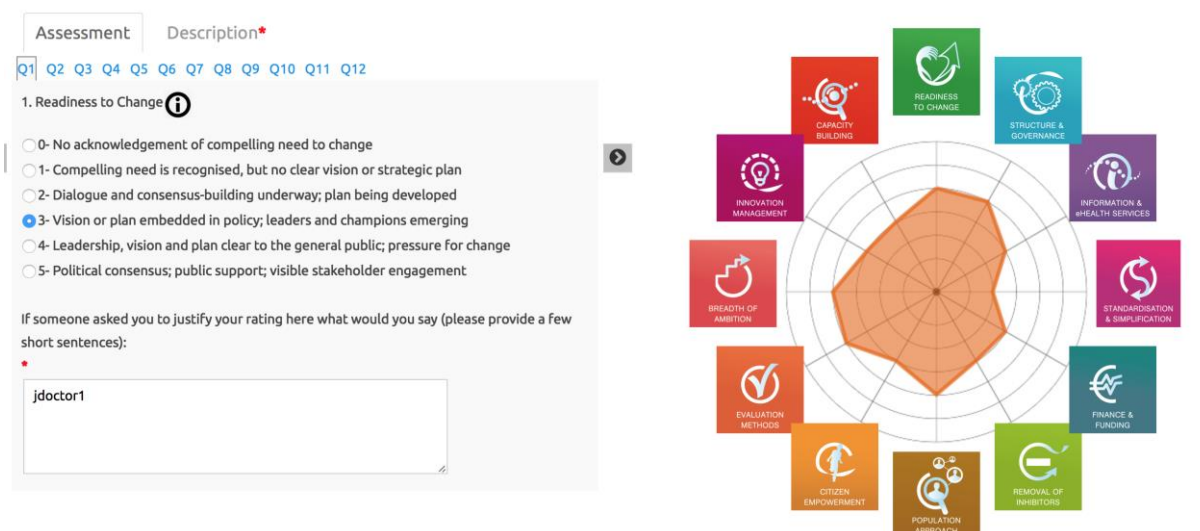


Figure 5: Completed Maturity Questionnaire

The questionnaire page has two tabs; so far we have been looking at the “Assessment” tab that records the ratings along each of the dimensions for the health system. The other tab, “Description”, is the description of the Health System the questionnaire relates to.

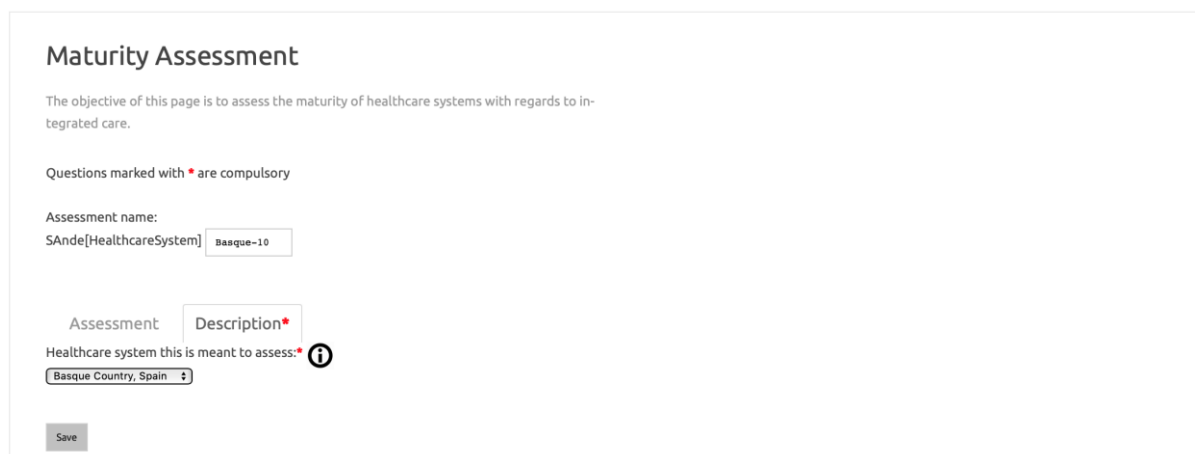


Figure 6: Description Tab

Figure 6: Description Tab shows the Description Tab of the Maturity Assessment page. There is a pull-down menu that allows the selection of the health system the questionnaire relates to. In addition, when filling a new questionnaire the system generates an automatic name for it, consisting of your initial, last name and the selected health system, and additionally allows adding a suffix to this name.

Once at least the required questionnaire fields have been completed, we can save it. Questionnaires can be saved at any point and when we return to a questionnaire after some time it will be in the last saved state.

Once a questionnaire is saved it is added to our personal list of questionnaires that we have created. The next section deals with how we can manage our collections of saved questionnaires and what we can do with collections of questionnaires.

3.2 Managing and Sharing Questionnaires

On the bar at the top of the Maturity Model Online tool there are a number of tabs. The health system assessment questionnaires we have access to are revealed under the “HEALTH SYSTEM ASSESSMENTS” tab.

Figure 7: Healthcare System Assessments illustrates the arrangement underneath that tab. The Health System Assessment Questionnaires we have access to are split between “INDIVIDUAL HEALTHCARE SYSTEM ASSESSMENTS” - this is the list of assessments that we have originated and “SHARED HEALTHCARE SYSTEM ASSESSMENTS” - this is the list of assessments we are able to access but did not originate.

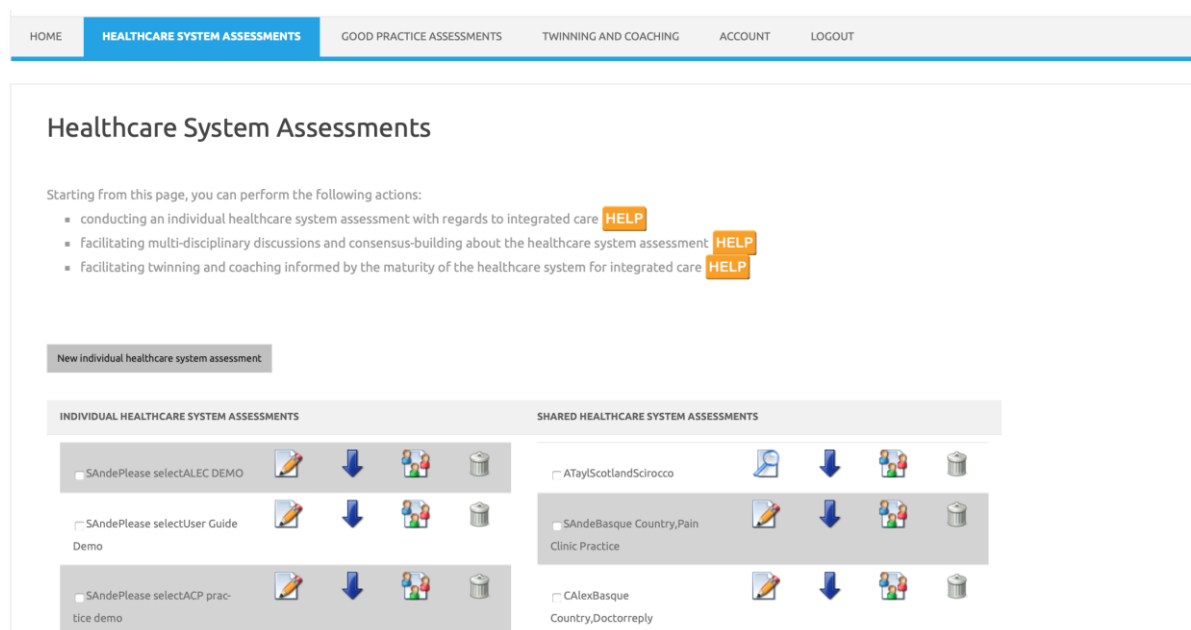


Figure 7: Healthcare System Assessments

3.2.1 Your Individual Questionnaires

The individual questionnaires we have created and have not ever chosen to share with any other user are listed as “INDIVIDUAL HEALTHCARE SYSTEM ASSESSMENTS”. **Error! Reference source not found.** is an example of the list of questionnaires assessing the Maturity of Healthcare Systems to adopt integrated care. This is the list of questionnaires we have originated as the currently logged in user. As the originator, we can do several actions that change how the questionnaires can be accessed and used by other users in the system. These are controlled by clicking on the icons that appear after the names of the questionnaires:

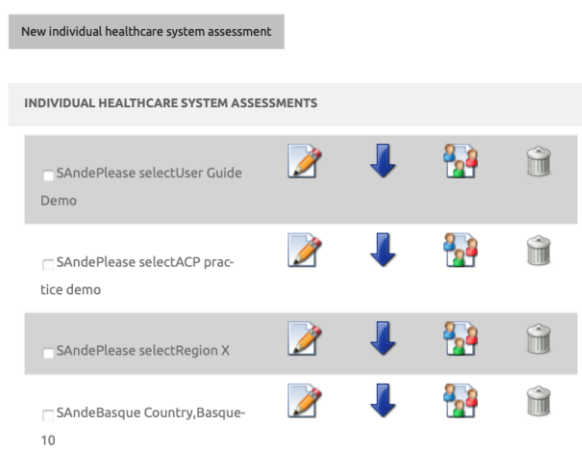


Figure 8: Individual Questionnaires

- The “pencil” icon allows us to make changes to the questionnaire.
- The “down arrow” icon creates an external copy of the questionnaire as a PDF report that we can share or include in other documents. This means the products of the tool can be utilized outside of the tool in reports and other documents.
- The “people” icon allows us to share the questionnaire with other users in the system. The next section will illustrate how this works.
- The “trashcan” icon allows us to hide a questionnaire in the trashcan. The trashcan is never emptied, so we can always recover things from our trashcan if necessary.

In the following section we consider how to manage who can see questionnaires and how to transfer the ability to modify questionnaires to other users.

3.2.2 Sharing your Individual Questionnaires

An important part of the Scirocco tool is the ability to manage who can see and manipulate a questionnaire. There are three different relationships a user can have with a questionnaire. These are:

- **Viewer:** A viewer can view a questionnaire but is not permitted to change the questionnaire.
- **Owner:** Each questionnaire is owned by exactly one owner. Owners are allowed to modify the questionnaires they own. The owner also has the right to transfer ownership of a questionnaire to a different user who then becomes the owner of the questionnaire.
- **Originator:** The user who created the questionnaire in the first place is the originator of the questionnaire. When the questionnaire is created initially the originator is also the owner. The originator can transfer ownership but always remains the originator. The originator always retains the right to recover ownership from whoever is the owner at any time.



Figure 9: An Individual Questionnaire Listing

If a user does not have one of these relationships with a questionnaire, that user will not be able to see the questionnaire in any of the listings available to them. **Error! Reference source not found.** shows a listing from our list of individual questionnaires. From the list of icons following the name of the questionnaire we can see that we can edit, export, change ownership or trash the questionnaire. If we click on the share icon, then we are shown the screen illustrated in **Error! Reference source not found.**. This screen invites us to nominate another particular user who will be given some access to the questionnaire.

Share Assessment

This page allows you make your assessment visible to somebody else who has an account, by providing his/her email address in the text field below. Once this email address gets populated in the table, you can also make that person the sole editor of the assessment by making him/her an owner. If you have originally created the assessment, you will always be able to edit who is the owner. If not, you will lose this right once you have made somebody else the owner.

Users who share assessment **S**AndePlease selectRegion **X**

| USER | ROLE |
|------------------------------|-------------------|
| soa@staffmail.ed.ac.uk (you) | Owner, originator |

The assessment is not currently shared with other users

Please indicate the email address of ONE (other) user whom you would like to share the assessment with:

Figure 10: Choosing to Share

In order to share this questionnaire with another user we need to know their email address (or at least its first few letters because the system will attempt to complete the email address once we have specified the first few letters of the email address). If we decide we want to share with Cristina we start to type her email into the address box and select her address (if we do not know the address or the user we are attempting to share with does not have an account we will not be able to share with them.) Clicking on the share button changes the relationship between the named user and the questionnaire, giving view access to the named user, as is immediately reflected in the table above (**Error! Reference source not found.**). At the same time the named user and the owner of the questionnaire are informed of the change of status of the questionnaire by email.

| USER | ROLE | | |
|------------------------------|-------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| soa@staffmail.ed.ac.uk (you) | Owner, originator | | |
| Cristina.Alexandru@ed.ac.uk | Viewer |  |  |

Figure 11: A shared questionnaire

Once we have shared with Cristina, we can see that she is able to view the questionnaire (**Error! Reference source not found.**), but we are still the **owner** of the questionnaire and we are the **originator** of the questionnaire.

Once a questionnaire is shared it appears in our list of shared questionnaires. Because it appears in this list, we know we are possibly sharing this information with other users. Figure 12 shows how this appears in the listing. If we click on the share button again, we can see the list of whom we are sharing the questionnaire with, and we can add more users to share with.



Figure 12: Shared Questionnaire Listing

This means that Cristina can view the questionnaire and see what information is associated with it, but she cannot change any of that information. By contrast, because we are the **owner**, we can still edit the questionnaire and we are always the **originator** which means we can always regain control over the questionnaire at any time. We have two actions that allow us to control Cristina's access to the questionnaire. We can "un-share" the questionnaire thereby depriving her of the possibility to view the questionnaire. We do this by clicking on the icon with the red cross. Alternatively, we can make Cristina the owner of the questionnaire which means she has the extra ability to edit the questionnaire and we can only view the questionnaire.

| USER | ROLE | |
|------------------------------|--------------------|--------------------------------------------------------------------------------------|
| soa@staffmail.ed.ac.uk (you) | Viewer, originator |  |
| Cristina.Alexandru@ed.ac.uk | Owner | |

Figure 13: After Changing Ownership

Error! Reference source not found. illustrates the state of sharing of the questionnaire after we have made Cristina owner. This means Cristina can now edit the questionnaire. However, we are still the originator and by clicking on the remaining icon we can recover ownership at any time. The originator can never be transferred.

3.2.3 Other people's Questionnaires and Sharing

The owner of a questionnaire can choose to share it with any other user of the SCIROCCO tool, transferring the capacity to view a questionnaire and if necessary, the ownership of the questionnaire so that a different user can add information to a questionnaire. At any time, the owner of a questionnaire can enable others to see the questionnaire and can transfer ownership to a new user. To share a questionnaire the SCIROCCO tool requests the email address with whom the questionnaire is to be shared. The SCIROCCO tool will suggest auto completions after the first few characters of an email have been entered to ensure the transfer is to an email address that is registered in the tool. Any ownership changes are notified via email so those concerned users have confirmation of changes outside of the SCIROCCO tool.

The originator of a questionnaire is always able to recover ownership and it is not possible to change the originator of a questionnaire.

3.3 Reaching Consensus on the Maturity of Health Systems

Health systems are complex organisations and in assessing maturity to adopt integrated care it is often necessary to consider different perspectives in order to gain a rounded assessment. For this reason, the SCIROCCO tool supports negotiation between different users in order to arrive at a consensus view on the maturity of the health system to adopt integrated care. Figure 14: Selecting Assessments to Compare is an image of the list of assessments available to a particular user. Notice that each questionnaire in the list has a check box next to it and the last five on the list have been selected. Usually this list of shared questionnaires will have been constructed by a group carrying out the assessment for a particular health system (or part of a Health System). Each person will have carried out an assessment individually and then shared it with the rest of the group.

Once a group has completed their individual questionnaires, it is time to compare the assessments along each of the Maturity Model dimensions. This is usually done via a group meeting, either face to face or via a teleconference. To do the comparison the SCIROCCO tool enables several questionnaires to be superimposed. In the example, five questionnaires have been selected to be superimposed.













































| INDIVIDUAL HEALTHCARE SYSTEM ASSESSMENTS | SHARED HEALTHCARE SYSTEM ASSESSMENTS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> SAndePlease selectACP practice demo     | <input type="checkbox"/> SAndePlease selectALEC DEMO     |
| <input type="checkbox"/> SAndeBasque Country,Basque-10     | <input type="checkbox"/> SAndePlease selectUser Guide Demo     |
| | <input type="checkbox"/> SAndePlease selectRegion X     |
| | <input type="checkbox"/> ATaylScotlandScirocco     |
| | <input checked="" type="checkbox"/> SAndeBasque Country,Pain Clinic Practice     |
| | <input checked="" type="checkbox"/> CAlexBasque Country,Doctorreply     |
| | <input checked="" type="checkbox"/> CAlexBasque Country,Adminreply     |
| | <input checked="" type="checkbox"/> CAlexBasque Country,Nursereply     |
| | <input checked="" type="checkbox"/> CAlexBasque Country,ITreply     |

Figure 14:Selecting Assessments to Compare

Once we have selected the questionnaires to be compared, the SCIROCCO tool allows two actions:

- **Compare only:** This action provides the view on the selected questionnaires as presented in Figure 15: Comparing Questionnaires.

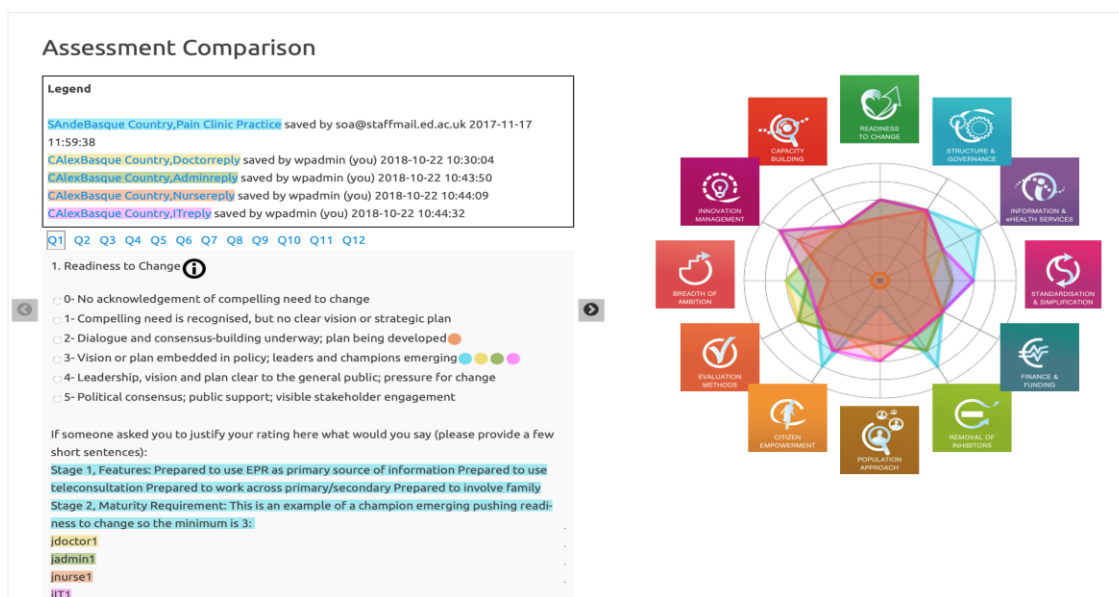


Figure 15: Comparing Questionnaires

In this presentation, each questionnaire is presented using a different colour. Looking at a particular dimension there are coloured blobs, corresponding to the response on a particular questionnaire and the justifications for each questionnaire is reproduced. This provides a good basis for discussion of how each individual user sees the Health System in that dimension.

- Compare and Enter Consensus:** This is similar to the compare action but in addition it allows the creation of a new questionnaire that is intended to capture the “consensus view” of the group carrying out the assessment of the health system. Figure 16: Creating a Consensus Questionnaire illustrates what the tool provides when this action is selected. It is similar to Figure 15 but there are additional opportunities to supply information. These are:
 - On each question in the questionnaire it is possible to record a consensus response to the question. This is to support the group in recording their agreed response to the question.
 - On each question in the questionnaire it is possible to record a justification. In this section the group should record some justification for why they have recorded the response they have chosen. This might be to record some part of the discussion where some clarification of views took place, or it may be to justify considering that some group members have closer experience of the dimension under consideration than other members of the group.
 - The spider diagram also has a new black line on it that records the results of the response to the questions so the group can see how their pattern of responses compares to the responses of the individual group members.

Consensus Maturity Assessment

This page allows you to reach a consensus amongst your team as to the level of maturity of your healthcare system with regards to integrated care, considering the views of the different individual respondents or sub-teams.

Legend

[SAndeBasque Country,Pain Clinic Practice](#) saved by soa@staffmail.ed.ac.uk 2017-11-17 11:59:38

[CAlexBasque Country,Doctorreply](#) saved by wpadmin (you) 2018-10-22 10:30:04

[CAlexBasque Country,Adminreply](#) saved by wpadmin (you) 2018-10-22 10:43:50

[CAlexBasque Country,Nursereply](#) saved by wpadmin (you) 2018-10-22 10:44:09

[CAlexBasque Country,ITreply](#) saved by wpadmin (you) 2018-10-22 10:44:32

Questions marked with * are compulsory

Assessment name:
Cons-[HealthcareSystem] 10chars max

| Assessment | Description* |
|----------------------------------------|--------------|
| Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 | |

1. Readiness to Change ⓘ

- ☐ 0- No acknowledgement of compelling need to change
- ☐ 1- Compelling need is recognised, but no clear vision or strategic plan
- ☐ 2- Dialogue and consensus-building underway; plan being developed
- ☒ 3- Vision or plan embedded in policy; leaders and champions emerging
- ☐ 4- Leadership, vision and plan clear to the general public; pressure for change
- ☐ 5- Political consensus; public support; visible stakeholder engagement

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

Stage 1, Features: Prepared to use EPR as primary source of information Prepared to use teleconsultation Prepared to work across primary/secondary Prepared to involve family

Stage 2, Maturity Requirement: This is an example of a champion emerging pushing readiness to change so the minimum is 3:

doctor1
admin1
nurse1
jit1

Mark 'Readiness to Change' as your number one priority




Figure 16: Creating a Consensus Questionnaire

In building consensus responses, the SCIROCCO tool “freezes” the individual questionnaires that contribute to the consensus. It is as if the tool has taken a snapshot of the questionnaire at the time the consensus questionnaire is being constructed. The tool does this in such a way that it is still possible for the individual questionnaire to be edited further to reflect changes in the Health System over time. In the tool each questionnaire has a “history” associated with it. This could allow users to survey the development of the health system over time. In future versions of the tool this facility will be available.

This completes consideration of how the SCIROCCO tool supports the evaluation of Health Systems to support the adoption of integrated care. The view of the SCIROCCO team is that the assessment process is inherently cooperative and the design of the tool is intended to facilitate an open and cooperative approach to the development of assessments and to acknowledge that Health Systems are in a constant state of development and the tool must be capable of fitting into a range of contexts depending on the structure of the health system under consideration and the organisation of the assessment process. This has motivated an intentional avoidance of the imposition of a particular workflow into the SCIROCCO tool. Rather, it provides particular functionality that supports maturity assessment.

4 The Maturity Requirements of Good Practices

The Maturity of Health Systems section considered how to assess the maturity of Health Systems to adopt integrated care practices. This section shifts the focus to consider Good Practice and assessing whether a particular Health System is ready to adopt a particular good practice. To deal with this we introduce the idea that a good practice will have “maturity requirements” that is, a good practice will have developed in the presence of some “features” of the health system and these “features” are more likely to be present in the health system the higher the level of maturity of the health system along particular dimensions.

Overall the structure of the SCIROCCO tool is similar in assessing the maturity of a Health System to adopt integrated care and in assessing the maturity requirements of a good practice that contributes to the implementation of integrated care in a health system. The main difference is this shift for “maturity” of a health system to “maturity requirement” of a good practice. In assessing good practices, the goal is to identify what is needed in the health system in order for it to be adoptable by a particular health system

4.1 Completing an Individual Questionnaire

The good practice questionnaires accessible to a particular user are listed under the “Good Practice Assessments” for the tool. Under this tab the user can create a maturity requirements questionnaire.

4.1.1 Maturity Requirements

Health Systems are complex organisations that have many features associated with them. These include things like resources (human, ICT, financial), plans, policies, processes, organisations, buildings, ... This is an incomplete list and for most health systems, If we believe we have listed these exhaustively, the list can almost always be extended by considering another perspective on the health system. When a good practice is identified in a health system the process of identification establishes a boundary between what is included as part of the good practice and what is provided by the health system. For example:

- When we identify a good practice, we almost never consider the Human Resources operation of the system as part of the good practice. It is seen as clearly part of the Health System the good practice is embedded within. The good practice may be dependent on the HR system, but it is not considered part of the good practice. However, many good practices are dependent on the HR system they make use of. For example, some HR systems are capable of flexible reallocating people while others are more rigid. If a good practice makes use of the flexibility of an HR system, it may be difficult to move to a different Health System where the HR system is more rigid.
- Good practices often depend on some form of patient record that is included in the Health System the good practice is embedded within. Generally, the patient record system is not considered to be part of the good practice, but it is a feature of the

Health System. If a good practice depends on a patient record system this may or may not be an issue in moving the good practice into a Health System that does not have a full patient record system:

- If the patient record system is used by the good practice exclusively to keep track of the activities of the good practice and does not require information flows into from, or out of into, surrounding activities in the health system it may be possible to substitute a simple local record that is used exclusively by the good practice.
- However, if the good practice makes use of the patient record as a means of sharing information across activities in the health system then the patient record is an essential feature of the Health System and this could inhibit the transfer of the good practice to a Health System without full patient record system.

So, in assessing the maturity requirements of a good practice, it is necessary to try to discern how a good practice depends on the surrounding health system. To help with this, we introduce the idea of “feature” of a health system. “Feature” is a deliberately vague term since it is possible for a good practice to depend on many different sorts of thing. We use the term “feature” to cover this range. A policy is a feature of a Health System but so is a particular building, or funding system.

4.1.2 Features

In developing a maturity requirements questionnaire for a good practice in a particular health system the key activity is to identify how the good practice depends on features of the health system. To emphasise this need to capture dependency on the health system the “justification” part of the Maturity questionnaire is replaced by a section asking the for the features the good practice depends on in the Maturity Requirements questionnaire.

4.1.3 Assessment of the Maturity Requirements of a Good Practice

Error! Reference source not found. illustrates the use of an individual Maturity Requirements questionnaire. This is assessing a good practice that has been introduced but the practice is still being implemented. Here under the readiness to change dimension of the Maturity Model the user completing this questionnaire has identified a plan as a critical feature the good practice depends on but has also identified that the plan is not yet in place in the Health System. In creating the Maturity Requirements questionnaire for a good practice, the user considers each dimension in turn and for each dimension identifies the key features the good practice depends on in the health system. When the questionnaire is complete it captures how the good practice depends on the Health System from the perspective of the user who has completed the questionnaire.

Maturity Assessment (View Only)

The objective of this page is to assess the maturity requirements of good practices. This is what the good practice needs from its environment in order for it to be possible to carry out the good practice.

Questions marked with * are compulsory

| Assessment | Description* |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 | |
| 1. Readiness to Change ⓘ | <p>0- No acknowledgement of compelling need to change</p> <p>1- Compelling need is recognised, but no clear vision or strategic plan</p> <p>2- Dialogue and consensus-building underway; plan being developed</p> <p>3- Vision or plan embedded in policy; leaders and champions emerging</p> <p>4- Leadership, vision and plan clear to the general public; pressure for change</p> <p>5- Political consensus; public support; visible stakeholder engagement</p> <p>Please indicate the features of the domain which justify your reply: ⓘ*</p> <p>A strategic plan is not in place yet</p> |




Figure 17: Maturity Requirements Questionnaire

4.2 Managing and Sharing Maturity Requirements Questionnaires

Just as in the questionnaires for Health System maturity assessments, there are three lists of questionnaires:

- Individual questionnaires: this is the list of questionnaires that have been created by a user but have not, so far, been shared with any other user.
- Shared Questionnaires: This is the list of questionnaires that a particular user has shared with other users or questionnaires that have been shared with the user by other users.
- Consensus Questionnaires: This is the list of questionnaires that have been constructed from a collection of individual questionnaires using a consensus-reaching process similar to that described for Health Systems.
- Under this tab there is also the function to create a new maturity requirements questionnaire for a good practice relative to a Health System. As part of this process the Health System and Good Practice are specified.

The notions of “originator”, “owner” and “sharing” are all identical to those for maturity questionnaires and the functions for managing maturity requirements questionnaires are identical to those for maturity questionnaires.

4.3 Reaching Consensus on Maturity Requirements of a Good Practice

Error! Reference source not found. illustrate a typical consensus questionnaire for Maturity Requirements of a good practice.

Consensus Maturity Assessment

This page allows you to reach a consensus amongst your team as to the maturity needs of your good practice with regards to integrated care, considering the views of the different individual respondents or sub-teams.

Legend
 CAlexBasque MalnutriBDoeBCGP saved by wpadmin (you) 2018-04-04 17:23:08
 CAlexBasque MalnutriCDoeBCGP saved by wpadmin (you) 2018-04-04 16:50:58
 CAlexBasque MalnutriDDoeBCGP saved by wpadmin (you) 2018-04-04 16:54:51

Questions marked with * are compulsory

Assessment name:
 Cons-{GoodPractice} 10chars max

| Assessment | Description* |
|----------------------------------------|--------------|
| Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 | |

1. Readiness to Change ⓘ

- ☐ 0- No acknowledgement of compelling need to change
- ☐ 1- Compelling need is recognised, but no clear vision or strategic plan
- ☐ 2- Dialogue and consensus-building underway; plan being developed
- ☐ 3- Vision or plan embedded in policy; leaders and champions emerging
- ☐ 4- Leadership, vision and plan clear to the general public; pressure for change
- ☐ 5- Political consensus; public support; visible stakeholder engagement

Please indicate the features of the domain which justify your reply: ⓘ*

A strategic plan is not in place yet
 To have the need to change, a defined plan and leaders that promote the implementation
 There is a plan, and leaders promoting the implementation, but no clarity for the general public yet

Feature 1 name:
 Strategic plan

Feature 2 name:
 Leaders and champions

Feature 3 name:




Figure 18: Consensus Maturity Requirements Questionnaire

The structure and operation of this questionnaire are similar to those for Health Systems. This questionnaire differs in the following ways:

- In the Maturity Questionnaire the justifications are listed for each of the individuals completing the questionnaires. For the Maturity Requirement questionnaire, the features the good practice depends on in the Health System are listed. In completing the individual Maturity Requirements questionnaires, the users respond with free text and there is no attempt to constrain the form of response and so the list of individual features is quite diverse.
- The second feature is the invitation to provide a list of names for the features the good practice depends on for this dimension. Here, there is some attempt to constrain the responses. When completing the text in a Feature Name box, a list of suggestions appear and the user can select one of the list to complete the box. It is still possible to add a new name, but the idea of the list is to try to channel users into using a more restricted choice of names. The text of for the individual questionnaires is still available to expand on the meaning of the name.

This completes the description of the creation and management of Maturity Requirements questionnaires in the SCIROCCO tool. This section is briefer than the one for Maturity questionnaires because much of the use of the tool is similar to Maturity questionnaire functionality. The resources of Maturity questionnaires and Maturity Requirements questionnaires provide the basis for the twinning and coaching activities considered in the next section.

5 Support for Twinning and Coaching

We define **twinning and coaching** as the process by which a healthcare system is matched with another healthcare system or good practice (“twinning”) and through discussion with it (“coaching”) learns what it needs to implement, change or improve in order to improve with regards to its integrated care maturity. There can be two types of twinning and coaching processes, depending on the aims of the healthcare system:

- If its aim is adopting a good practice, the healthcare system will be twinned with the wanted good practice, and learn what actions it needs to take to meet the requirements of that good practice from its environment. In particular, it will learn what dimensions it needs to act upon, what rankings it needs to achieve at minimum and how it could work towards achieving those rankings such that the good practice can work in it. We call this a **healthcare system to good practice (HS-GP) twinning and coaching process**.
- If its aim is improving one priority dimension with regards to integrated care, the healthcare system will be matched with other healthcare systems which perform better on that dimension, and a decision will be made for it to be twinned with one of them. It will learn from the experience of the twinned healthcare system what actions it could take to improve on that priority dimension. We call this a **healthcare system to healthcare system (HS-HS) twinning and coaching process**.

The following sections describe how the tool supports these two types of twinning and coaching processes.

5.1 The Healthcare System to Good Practice (HS-GP) Twinning and Coaching Process

If a decision was made for a healthcare system to adopt a certain good practice with support from the Scirocco tool, this process needs to be conducted by the current owner (i.e. editor) of the healthcare system’s consensus assessment as starting from that particular good practice’s consensus assessment, which must have been shared with him/her. To this end, the owner needs to click on the “Good Practice Assessments” tab from the bar at the top of any page, scroll down to the “Consensus good practice assessments” section (an example of how it is represented is given in Figure 19: Consensus Good Practice Listing), and identify the consensus assessment for the wanted good practice.

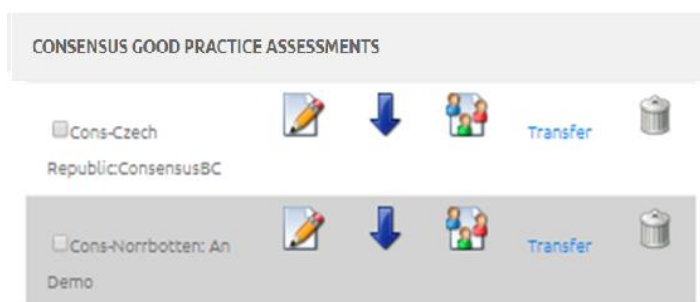


Figure 19:Consensus Good Practice Listing

Then, the owner can initiate the process by clicking on the blue “Transfer” button next to it. This leads to the “Transfer Good Practice to Healthcare System” page. Here, a list containing all of the matches between the consensus good practice assessment and the owner’s consensus healthcare system assessment(s) is provided (**Error! Reference source not found.**).

Transfer Good Practice to Healthcare System

Choose the healthcare system assessment to compare with the good practice assessment Cons-Norrbotten: An Demo:

[Cons-Basque Country,Demo \(of healthcare system Basque Country, Spain\)](#)

[Invite the owner of Cons-Basque Country,Demo for twinning and coaching](#)

Figure 20:Transfer Good Practice to Healthcare System

Clicking on any of the links in this list opens up into a separate tab the comparison, both in terms of the form and spider diagram representation, of the consensus good practice and healthcare system assessments (**Error! Reference source not found.**). (If the owner has been involved into several consensus healthcare system assessments, and there is doubt where to transfer the good practice to, the owner can thus open up all comparisons which will help reach a decision, however we only see this as a special case).

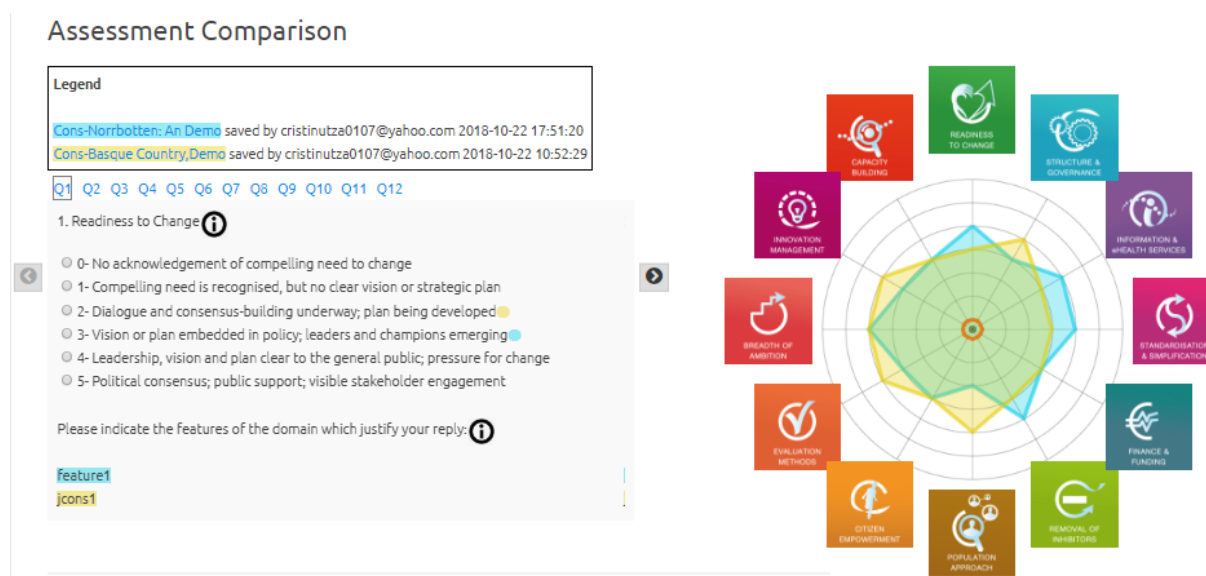


Figure 21:Consensus HS-GP assessment comparison

If there is certainty about initiating twinning and coaching between the good practice and a healthcare system, the owner can return to the “Transfer Good Practice to Healthcare System” page and click on the button inviting the consensus good practice assessment owner for twinning and coaching with that particular healthcare system he/she owns (**Error!**

Reference source not found.). This will result in both a confirmation on the page, as well as automated emails being sent both to the initiator and the recipient of the invitation.

Transfer Good Practice to Healthcare System

Choose the healthcare system assessment to compare with the good practice assessment Cons-Norrboten: An Demo:

Cons-Basque Country,Demo (of healthcare system Basque Country, Spain)

Invite the owner of Cons-Basque Country,Demo for twinning and coaching

Figure 22:Inviting the owner of the consensus good practice assessment for twinning and coaching with the healthcare system

Apart from this feedback, a very important result to this action is that a twinning and coaching meeting record will automatically be generated for the initiator and recipient (i.e. the owners of the twinned consensus healthcare system and good practice assessments) under the “Twinning and Coaching” tab from the top bar. This record will be placed in the right, “Good practice- Healthcare system” column, and its name will consist of the combined names of the consensus good practice and healthcare system assessments (**Error! Reference source not found.**).

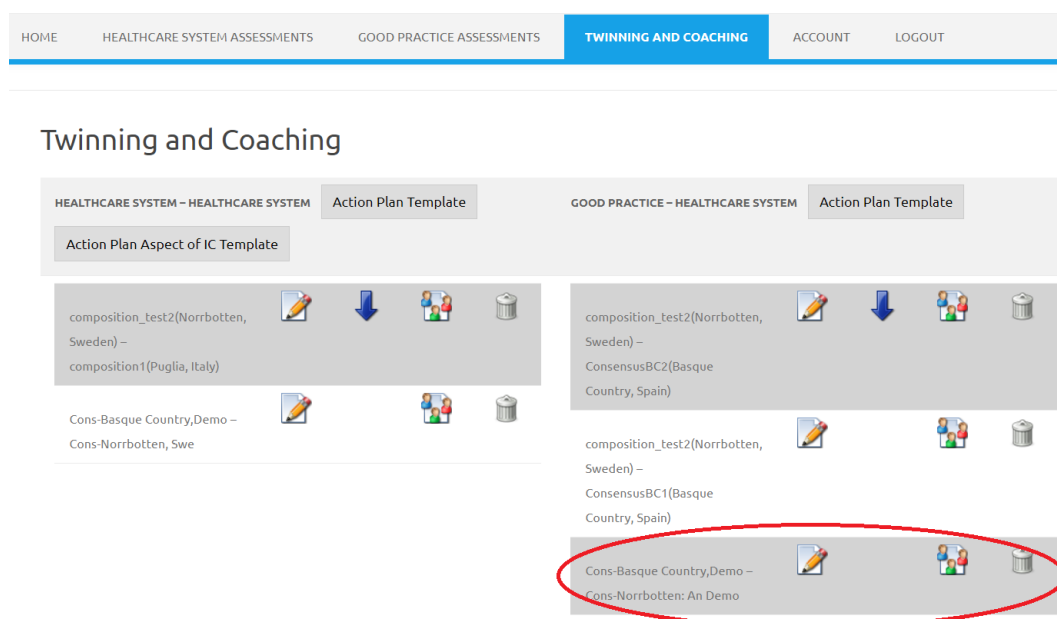


Figure 23:The HS-GP twinning and coaching meeting record set up

The aim of the twinning and coaching meeting record is to be used either during or after a physical twinning and coaching meeting between the healthcare system and good practice teams. Then, any of the two owners can click on the “pencil” icon to open the meeting record (**Error! Reference source not found.**). They can see there a comparison of the consensus good practice and healthcare system assessments, as they were when the twinning and coaching process was initiated. This is meant to be used as a basis for discussion between

their teams. Moreover, the meeting record contains fields for features that would need to be implemented or improved in the healthcare system in order for it to be able to adopt the good practice, which the teams could fill in as initial outcomes of their discussion. The teams can also consider for each feature whether it is already partially implemented in the healthcare system, how feasible it is and how it could be made possible, and record this for it. Clicking on “Save/update meeting notes” saves the entered features and their details.

Twinning and Coaching Meeting

Legend

Cons-Basque Country, Demo saved by cristinutza0107@yahoo.com 2018-10-22 10:52:29

Cons-Norrbotten, An Demo saved by cristinutza0107@yahoo.com 2018-10-22 17:51:20

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12

2. Structure & Governance

- 0- Fragmented structure and governance in place
- 1- Recognition of the need for structural and governance change
- 2- Formation of task forces, alliances and other informal ways of collaborating
- 3- Governance established at a regional or national level
- 4- Roadmap for a change programme defined and accepted by stakeholders involved
- 5- Full, integrated programme established, with funding and a clear mandate

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

Q2

feature1

Which features need to be implemented/improved in the receiving healthcare system (Basque Country, Spain) for the “Structure & Governance” dimension in order to respect the good practice requirements and thus make the transfer of the good practice possible?

| Feature name | Already partially implemented? | Feasibility | Adaptation | |
|----------------|--------------------------------|-------------|----------------------|---|
| Governance via | no | possible | We need to change... | ✗ |
| | | | | ✗ |
| | | | | ✗ |

[Add more features](#)

[Save/update meeting notes](#)

[Download Action Plan Template](#)

Upload/tranplanr Action Plan PDF (max 2MB):

[Choose File](#) | No file chosen | [Upload](#)




Figure 24: The HS-GP twinning and coaching meeting

Finally, the twinning and coaching meeting record contains download/upload facilities for the HS-GP action plan, which teams should use to capture detailed outcomes of the twinning and coaching process. The action plan template is downloadable in a Microsoft Word version. Once filled in on their personal computers, any of the two owners should convert it to PDF format, and then use the same page to upload it. Once uploaded, the PDF action plan is available for opening by both of the owners (**Error! Reference source not found.**). For ease of navigation, the action plan template is also downloadable from the “Twinning and coaching” page (**Error! Reference source not found.**).

Download Action Plan Template

Action plan: APCons-Basque Country,Demo – Cons-Norrboten: An Demo.pdf

 Upload/replace Action Plan PDF (max 2MB):

Browse...

Upload

Figure 25:Action plan available for viewing

HOME HEALTHCARE SYSTEM ASSESSMENTS GOOD PRACTICE ASSESSMENTS TWINNING AND COACHING ACCOUNT LOGOUT

Twinning and Coaching

HEALTHCARE SYSTEM – HEALTHCARE SYSTEM Action Plan Template

Action Plan Aspect of IC Template

composition_test2(Norrboten, Sweden) –
 composition1(Puglia, Italy)

Cons-Basque Country,Demo –
 Cons-Norrboten, Swe

GOOD PRACTICE – HEALTHCARE SYSTEM Action Plan Template

composition_test2(Norrboten, Sweden) –
 ConsensusBC2(Basque Country, Spain)

composition_test2(Norrboten, Sweden) –
 ConsensusBC1(Basque Country, Spain)

Cons-Basque Country,Demo –
 Cons-Norrboten: An Demo

Figure 26:HS-GP Action Plan downloadable from the "Twinning and coaching" page

5.2 The Healthcare System to Healthcare System (HS-HS) Twinning and Coaching Process

If a decision was made to improve the integrated care maturity of a healthcare system on a certain dimension, by learning from a more progressive healthcare system, we must follow the Health System to-Health System (HS-HS) twinning and coaching process instead. A preparatory action for the process - if not already covered during the consensus making process- is setting up the wanted dimension as a priority on the consensus healthcare system assessment. To do this, the owner of this assessment (i.e. the only user who can edit it) can open for editing the consensus assessment from within the “Healthcare System Assessments” tab, then from the opened assessment open the wanted dimension, tick from the bottom of the form the radio button for the statement “Mark [dimension] as your number one priority”, and save by clicking “Update composite questionnaire”. This will lead to the text “Priority” appearing as overlaid over the label for that dimension from the spider diagram. **Error! Reference source not found.** shows the dimension “Citizen Empowerment” being set up as a priority.

Assessment

Description*

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12

8. Citizen Empowerment ⓘ

☐ 0- Citizen empowerment is not considered as part of integrated care provision
☐ 1- Citizen empowerment is recognised as an important part of integrated care provision but effective policies to support citizen empowerment are still in development
☒ 2- Citizen empowerment is recognised as an important part of integrated care provision, effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data 🟡🟡
☐ 3- Citizens are consulted on integrated care services and have access to health information and health data 🟢🟡
☐ 4- Incentives and tools exist to motivate and support citizens to co-create healthcare services and use these services to participate in decision-making processes about their own health
☐ 5- Citizens are fully engaged in decision-making processes about their health, and are included in decision-making on service delivery and policy-making

If someone asked you to justify your rating here what would you say (please provide a few short sentences):
*

jdoctor8
jadmin8
jnurse8
jIT8
jcons8

Mark 'Citizen Empowerment' as your number one priority ⓘ

Update composite questionnaire

Share



Figure 27:Recording one priority dimension

To then initiate HS-HS twinning and coaching, the owner must this time start from his/her consensus healthcare system assessment itself. It is accessible by clicking on the “Healthcare system assessments” tab from the top bar, scrolling down to the “Consensus healthcare system assessments” section (an example of how it is represented is given in **Error! Reference source not found.**), and identifying it in that section. Even with the user being its owner, the button next to the assessment, named “Twin”, is only active for him/her if the preparatory step above- setting the priority dimension- had been achieved. Figure 28 shows two active buttons and one inactive one.













| CONSENSUS HEALTHCARE SYSTEM ASSESSMENTS | | | | | |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|
| <input type="checkbox"/> Cons- Norrbotten, Swe |  |  |  | Twin |  |
| <input type="checkbox"/> Cons- Norrbotten, Sweconsensus 3 |  |  |  | Twin |  |
| <input type="checkbox"/> Cons-Basque Country,Demo |  |  |  | Twin |  |

Figure 28:Consensus Healthcare System Assessment Listing

When clicking on the active “Twin” button for the consensus healthcare system assessment, the owner is taken to the “Twin Healthcare System to other Healthcare Systems” page. Here, a list containing all of the matches between the owner’s consensus healthcare system assessment and other consensus healthcare system assessments which perform better (i.e. have a higher ranking) on the priority dimension is provided (**Error! Reference source not found.**). Please note the difference to the HS-GP process, where all matching assessments were produced- here they are instead filtered based on their ranking for the priority dimension.

Twin Healthcare System with Other Healthcare Systems

Candidate healthcare system assessments to contact for twinning the healthcare system assessment Cons-Basque Country, Demo on dimension Citizen Empowerment:

Cons-Norrbotten, Swecomposition2

This assessment is not accessible to you

[Request access](#)

Cons-Norrbotten, Sweconsensus 1

This assessment is not accessible to you

[Request access](#)

Cons-Norrbotten, Sweconsensus 2

This assessment is not accessible to you

[Request access](#)

[Cons-Norrbotten, Sweconsensus 3](#)

[Invite for twinning and coaching](#)

[Cons-Norrbotten, Swe](#)

[Invite for twinning and coaching](#)

Figure 29: Twin Healthcare System with other Healthcare Systems

Clicking on any of the links in this list opens up into a separate tab the comparison, both in terms of the form and spider diagram representation, of the owner’s and the better-performing consensus healthcare system assessments (**Error! Reference source not found.**). However, as can be noticed from Figure 29, not all links are necessarily active. This is because the matching consensus healthcare system assessments may be owned to someone else (different to the HS-GP twinning and coaching process) and these users may not have shared them with the owner. In this case, the owner can click “Request access”, which sends an email asking those users to share their consensus assessments, and wait for them to do this on the tool.

Once a satisfactory number of matching links are available, the owner and his/her team can click on all of them to study the comparisons and decide which healthcare system to invite for twinning and coaching with their own. To record this decision and invite the owner of the chosen healthcare system’s consensus assessment and his/her team for twinning and coaching, the owner needs to return to the “Twin Healthcare System with other Healthcare Systems” page and click on the “Invite for twinning and coaching” button (**Error! Reference**

source not found.). As for the HS-GP process, this will result in a confirmation on the page and automated emails being sent to both the initiator and recipient of the invitation.

Also similar to the HS-GP process, as soon as the invitation button is pressed, a twinning and coaching meeting record with a name made up of the two names of the consensus healthcare system assessments will automatically be generated for the initiator and recipient under the “Twinning and Coaching” tab from the top bar, this time in the “Healthcare system-Healthcare System” column (Error! Reference source not found.). This meeting record (Error! Reference source not found.) has very similar purposes and can be used in the same way as for the HS-GP process. The main difference is that features this time will be chosen for the receiving healthcare system through it getting coached by (i.e. transferring knowledge from, getting inspiration from) the better performing healthcare system. Moreover, for the action plan an HS-HS template, as well as an “aspect of integrated care” template for twinning around the third sector moving beyond good practice, are provided, both on the “Twinning and coaching meeting” page, as well as from the base “Twinning and coaching” page (Error! Reference source not found.).

Assessment Comparison

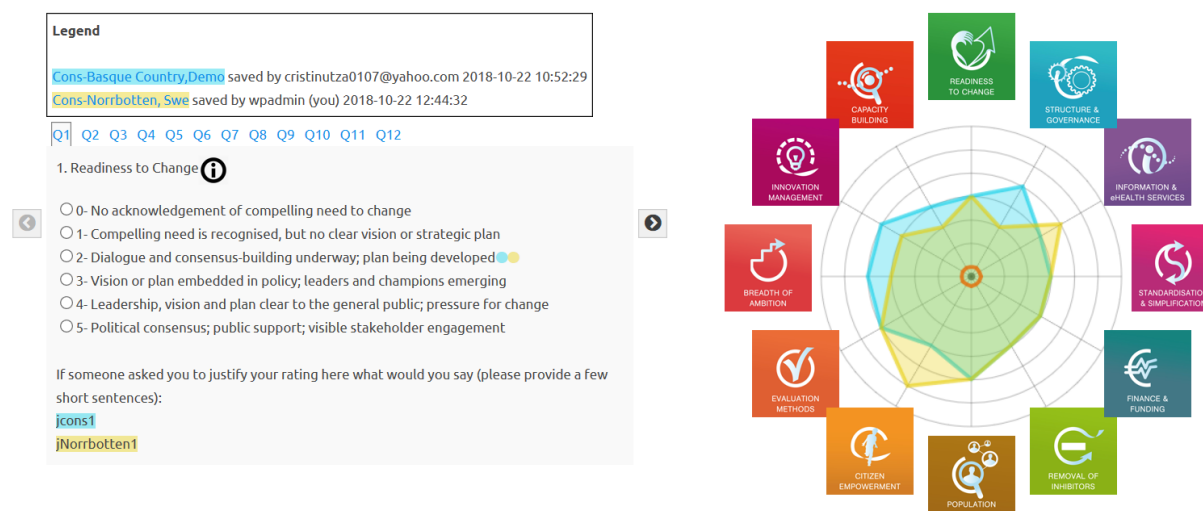


Figure 30:HS-HS consensus assessment comparison

Twin Healthcare System with Other Healthcare Systems

Candidate healthcare system assessments to contact for twinning the healthcare system assessment Cons-Basque Country,Demo on dimension Citizen Empowerment:

Cons-Norrboten, Swecomposition2

This assessment is not accessible to you

[Request access](#)

Cons-Norrboten, Sweconsensus 1

This assessment is not accessible to you

[Request access](#)

Cons-Norrboten, Sweconsensus 2

This assessment is not accessible to you

[Request access](#)

Cons-Norrboten, Sweconsensus 3

[Invite for twinning and coaching](#)

Cons-Norrboten, Swe

[Invite for twinning and coaching](#)

Figure 31:Inviting the owner of the consensus healthcare system assessment for twinning and coaching with the healthcare system

[HOME](#)
[HEALTHCARE SYSTEM ASSESSMENTS](#)
[GOOD PRACTICE ASSESSMENTS](#)
[TWINNING AND COACHING](#)
[ACCOUNT](#)
[LOGOUT](#)

Twinning and Coaching

HEALTHCARE SYSTEM – HEALTHCARE SYSTEM

Action Plan Template

GOOD PRACTICE – HEALTHCARE SYSTEM

Action Plan Template

Action Plan Aspect of IC Template

composition_test2(Norrboten, Sweden) – composition1(Puglia, Italy)

Cons-Basque Country,Demo – Cons-Norrboten, Swe

composition_test2(Norrboten, Sweden) – ConsensusBC2(Basque Country, Spain)

composition_test2(Norrboten, Sweden) – ConsensusBC1(Basque Country, Spain)

Cons-Basque Country,Demo – Cons-Norrboten: An Demo

Figure 32:The HS-HS twinning and coaching meeting record set up

Twinning and Coaching Meeting

Legend

Cons-Basque Country,Demo saved by cristinutza0107@yahoo.com 2018-10-22 10:52:29
 Cons-Norrbottn, Swe saved by wpadmin (you) 2018-10-22 12:44:32

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12

1. Readiness to Change ①

☐ 0- No acknowledgement of compelling need to change
☐ 1- Compelling need is recognised, but no clear vision or strategic plan
☐ 2- Dialogue and consensus-building underway; plan being developed
☐ 3- Vision or plan embedded in policy; leaders and champions emerging
☐ 4- Leadership, vision and plan clear to the general public; pressure for change
☐ 5- Political consensus; public support; visible stakeholder engagement

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

Cons1
 Norrbotten1

Which Features need to be implemented in the receiving healthcare system (Basque Country, Spain) in order to improve its maturity assessment for the 'Readiness to Change' dimension?

| Feature name | Already partially implemented? | Feasibility | Adaptation |
|--------------|--------------------------------|--------------------------|------------|
| | <input type="checkbox"/> | <input type="checkbox"/> | |
| | <input type="checkbox"/> | <input type="checkbox"/> | |
| | <input type="checkbox"/> | <input type="checkbox"/> | |

[Add more Features](#)

Save/update meeting notes

Download Action Plan Template Download Action Plan Aspect of IC Template

Upload/replace Action Plan PDF (max 2MB):

[Browse...](#) [Upload](#)



Figure 33: The HS-HS twinning and coaching meeting

HOME HEALTHCARE SYSTEM ASSESSMENTS GOOD PRACTICE ASSESSMENTS **TWINNING AND COACHING** ACCOUNT LOGOUT

Twinning and Coaching

HEALTHCARE SYSTEM – HEALTHCARE SYSTEM **Action Plan Template** GOOD PRACTICE – HEALTHCARE SYSTEM **Action Plan Template**

Action Plan Aspect of IC Template


















| | | | |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| composition_test2(Norrbottn, Sweden) – composition1(Puglia, Italy) |     | composition_test2(Norrbottn, Sweden) – ConsensusBC2(Basque Country, Spain) |     |
| Cons-Basque Country,Demo – Cons-Norrbottn, Swe |    | composition_test2(Norrbottn, Sweden) – ConsensusBC1(Basque Country, Spain) |    |
| | | Cons-Basque Country,Demo – Cons-Norrbottn: An Demo |    |

Figure 34: HS-HS Action Plan downloadable from the "Twinning and coaching" page

6 Conclusion

This concludes the exposition of the operation of the SCIROCCO tool. The evaluation of the use of the tool can be found in other deliverables. Through the SCIROCCO project we discovered that the Maturity Model appears to be useful in many contexts around understanding how to transfer good practice. As these were uncovered the tool was adapted to support new activities. Thus, the tool was driven by the needs of the users rather than by the designers of the tool. Inevitably this means that at some points the design of the tool is compromised in order to meet the needs of the SCIROCCO project and its primary users. However, the main concepts are quite sound and robust and we believe the tool is usable by a wide range of health systems as evidenced by the large user group currently making use of the tool.

Appendix: Guide to the Maturity Model

This appendix contains the text of the advice on the use of the tool that supported the use of the tool in the self-evaluation of the maturity of Health Systems to adopt integrated care. This has been copied here verbatim. There are small differences between the details of the operation of the tool when this guidance was developed and the current state of the SCIROCCO tool as described above. In particular the SCIROCCO tool was entirely focussed on the evaluation of the Maturity of Health Systems at this point. Nonetheless this is a useful document, mainly because Section 3 outlines the formation of the team to carry out the assessment and provides some advice on how to carry out the assessment.

1 How to use this guide

This guide is a short introduction to the use of the EIP on AHA Maturity Model for the assessment of the Maturity of Health Systems for the adoption of Integrated Care.

2 Tool Support

The SCIROCCO project has developed an online tool to assist with the completion of MM-assessments. As the project progresses the tool will be developed to offer additional support for the assessment and transfer of good practices between health and care systems.

The online tool tutorial can be found here: <http://www.scirocco-project.eu/online-tool-tutorial/> and the online tool can be found here: <http://scirocco-project-msa.inf.ed.ac.uk/>.

When accessing the tool, users are first taken to the “Login/Register” page (Fig. 1). To be able to log in, they must first set up an account by clicking on the “Register” button and then filling in the registration form (Fig. 2).

Once logged in, users can click on the “Maturity Model Questionnaire Index” tab, and from there on the “Create new questionnaire” button in order to be taken to the interactive maturity model page where they can create a new questionnaire. This page (Fig. 3) contains on the left the Maturity Model questionnaire, and on the right a spider diagram the axes of which correspond to the different questions (i.e. dimensions) from the questionnaire. In the questionnaire, one question (i.e. dimension) and its different answers (i.e. ratings) are displayed to the users at any one time. Navigating to a different question with its answers can be done in the questionnaire by clicking on the Q1...Q12 tabs or using the arrows, through the spider diagram or by clicking on the label of the axis corresponding to it. In the questionnaire, an explanation for each question pops up when clicking on the “i” icon next to the question.

Scirocco Project Maturity Assessment

HOME MATURITY MODEL QUESTIONNAIRE INDEX **LOGIN/REGISTER**

Login/Register

Username or E-mail

Password

☒ Keep me signed in

Login **Register**

[Forgot your password?](#)

Fig. 1- The Login/Register page

Scirocco Project Maturity Assessment

HOME **MATURITY MODEL QUESTIONNAIRE** LOGIN/REGISTER

Registration

First Name

Last Name

Institution

Health System

Country

Choose a Country ▼

Sector(s) ?

☐ Health

☐ Social Care

☐ Voluntary

Fig. 2- The registration form

Scirocco Project Maturity Assessment

HOME MATURITY MODEL QUESTIONNAIRE ACCOUNT LOGOUT

New Maturity Model Questionnaire

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12

1. Readiness to Change (to enable more integrated care) *

- ☐ No acknowledgement of compelling need to change
- ☐ Compelling need is recognised, but no clear vision or strategic plan
- ☐ Dialogue and consensus-building underway; plan being developed
- ☐ Vision or plan embedded in policy; leaders and champions emerging
- ☐ Leadership, vision and plan clear to the general public; pressure for change
- ☐ Political consensus; public support; visible stakeholder engagement

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

How confident are you of your rating?

Who do you think could provide a more confident judgement?

Questionnaire name: *

Save questionnaire



Fig. 3- The “New Maturity Model Questionnaire” page

When selecting an answer (i.e. rating) for a question from the questionnaire, this answer is also represented visually onto the spider diagram for that question. Users can also click on a point on the axis corresponding to a question directly on the diagram in order to have this answer recorded for the question in the questionnaire. For example, if we select the third item on the readiness to change dimension in the form then this will cause that choice to be displayed on the spider diagram (Fig. 4). As users answer to more questions, their individual representations on the diagram unify to form something which is similar to a spider web and which is indicative of the level or requirements for maturity (Fig. 5). A result covering the whole area of the spider diagram would indicate full maturity.

In order to cater for users with different expertise and experience, the questionnaire also includes fields for a justification, an indication of the level of confidence and whether somebody else could provide a better judgement for each question. More detail about the motivation for these fields is provided in the next section. At the bottom of the page users can provide a name for the questionnaire (if several questionnaires are created, each


questionnaire name must be unique). Once they finish thus filling out the questionnaire, they can click on the “Save questionnaire” button to save the questionnaire. If they then want to update anything, they can make any changes and click 'Update questionnaire'.

Scirocco Project Maturity Assessment

HOME MATURITY MODEL QUESTIONNAIRE INDEX ACCOUNT LOGOUT

New Maturity Model Questionnaire

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12

1. Readiness to Change (to enable more integrated care) * 

☐ No acknowledgement of compelling need to change
☐ Compelling need is recognised, but no clear vision or strategic plan
☒ Dialogue and consensus-building underway; plan being developed
☐ Vision or plan embedded in policy; leaders and champions emerging
☐ Leadership, vision and plan clear to the general public; pressure for change
☐ Political consensus; public support; visible stakeholder engagement

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

How confident are you of your rating?

Who do you think could provide a more confident judgement?





Fig. 4- One answer recorded for the first question on the “New Maturity Model Questionnaire” page

Scirocco Project Maturity Assessment

HOME MATURITY MODEL QUESTIONNAIRE INDEX ACCOUNT LOGOUT

New Maturity Model Questionnaire

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12

12. Capacity Building * 

☐ Integrated care services are not included in capacity building
☐ Some systematic approaches to capacity building for integrated care services are in place
☒ Cooperation on capacity building for integrated care is growing across the region
☐ Systematic learning about IT; integrated care and change management
☐ Knowledge shared, skills retained and lower turnover of experienced staff
☐ A 'learning healthcare system' involving reflection and continuous improvement

If someone asked you to justify your rating here what would you say (please provide a few short sentences):

How confident are you of your rating?

Who do you think could provide a more confident judgement?




Fig. 5- “Spider web” forming as answers are recorded on the “New Maturity Model Questionnaire” page

Each saved questionnaire gets added as an individual (i.e. belonging only to the user who created it) questionnaire to the list of individual questionnaires from the “Maturity Model Questionnaire Index” page (Fig. 6). Users can then use the icons attached to the individual questionnaire in this page in order to:

- Edit the questionnaire
- Download a pdf of the answers provided in it and spider diagram generated
- Share it with other users
- Hide it (i.e. take it to the recycle bin).

Once a questionnaire is shared (functionality explained below), it gets transferred from the user’s list of individual questionnaires to a list of shared questionnaires on the same page. For shared questionnaires, users have available similar functionality as for individual questionnaires, with the exception that some users may only be able to view (and not edit) shared questionnaires if they do not have an ownership right (as explained below). A screenshot of the “Maturity Model Questionnaire Index” page for a user who has both individual and shared questionnaires is provided in Fig. 6.

Clicking on the “Edit” icon for an individual or shared questionnaire leads users back to the “New Maturity Model Questionnaire” where they can view the existing answers and diagram, make changes and click “Update questionnaire” when they are ready in order to save these changes.

Clicking on the “Share” icon for an individual or shared questionnaire leads users to a “Share Questionnaire” page where they can provide the email address other users whom they would like to share the questionnaire with. If a provided email address is formatted correctly and belongs to another user of the tool, the page gives a confirmation and the email address is added to a list indicating the users whom the questionnaire is shared with. Also, the new user will have the questionnaire added to his/her list of shared questionnaires from the “Maturity Model Index” page from him/her account. He/she will have by default viewer rights to the questionnaire, meaning that from the “Maturity Model Questionnaire Index” page he/she will only have available a “View” icon for the questionnaire. The initial owner of the questionnaire can, however, also use the “Share questionnaire” page to give up ownership and transfer it to this new user (by clicking on the “Make owner” icon next to the new user’s email address from the list), meaning that the new user will have the “Edit” icon available for the questionnaire in his/her account. A questionnaire can only have one owner (i.e. be editable by one person) at any one time. Users can also un-share questionnaires with other users at any one time by using the “Un-share” icon. A screenshot of the “Share questionnaire” page with one sharing user is provided in Fig. 7.

Clicking on the “Hide” icon from the “Maturity Model Questionnaire Index” page for an individual or shared questionnaire asks for a confirmation for moving the questionnaire to the recycle bin. The “Recycle bin” page can be accessed by using the link from the bottom of the same page. From this page users can see the questionnaires that they have chosen to hide. They can click on the “Restore” icon next to a questionnaire to make it active again and returned to the “Maturity Model Questionnaire Index” page. Questionnaires cannot be completely removed, but just hidden on the “Recycle bin” page. A screenshot of this page containing one individual and one shared questionnaire is provided in Fig. 8.

Apart from the “Maturity Model Questionnaire Index” page and its subpages, which are the most important in the website because they contain the whole functionality for maturity assessment, the tool also includes two more pages:

- The homepage which links to a discussion forum that users can use to ask questions and discuss issues about the tool and its use;
- The “Account” page where users can update their account information and change their password.

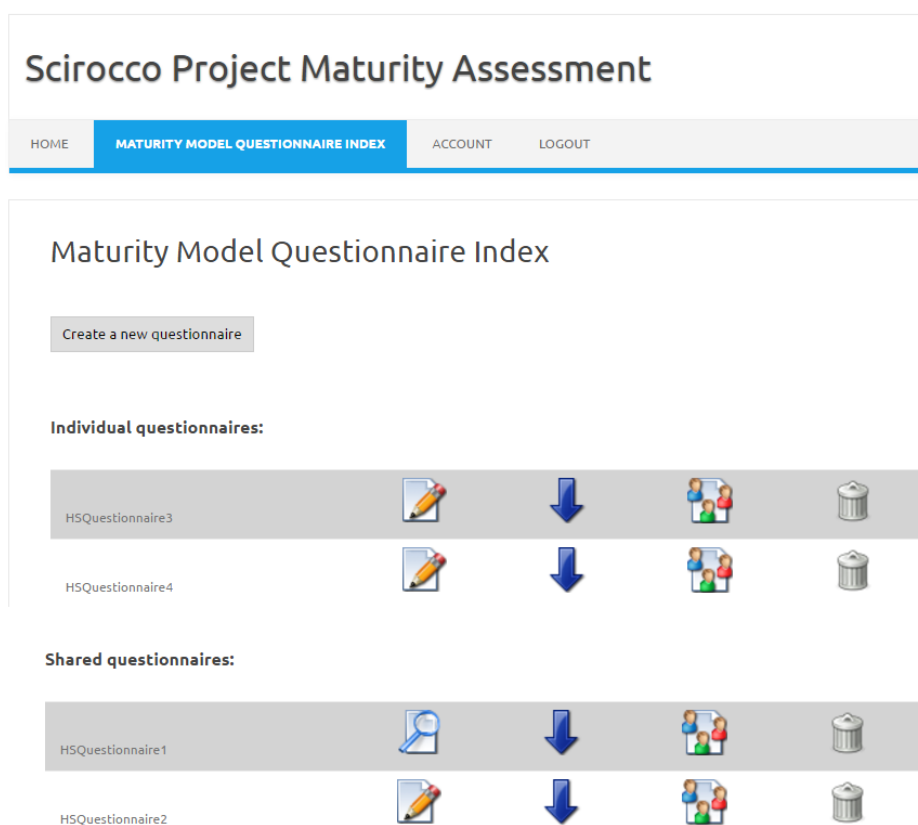


Fig. 6- The “Maturity Model Questionnaire Index” page with individual and shared questionnaires

Scirocco Project Maturity Assessment

HOME MATURITY MODEL QUESTIONNAIRE INDEX ACCOUNT LOGOUT

Share questionnaire

Sharing options for questionnaire HSQuestionnaire2

| USER | ROLE | | |
|----------------------|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| [redacted]@yahoo.com | Owner | | |
| [redacted]@yahoo.com | Viewer |  |  |
| | | Make Owner | |

Please indicate the email address of ONE (other) user whom you would like to share the questionnaire with:

[Share](#)

Fig. 7- The “Share Questionnaire” page with one sharing user

Scirocco Project Maturity Assessment

HOME MATURITY MODEL QUESTIONNAIRE INDEX ACCOUNT LOGOUT

Recycle bin

Individual questionnaires in the Recycle Bin:

| | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------|
| Questionnaire HSQuestionnaire4 |  Restore |
|--------------------------------|------------------------------------------------------------------------------------------------------------------|

Shared questionnaires in the Recycle Bin:

| | |
|--------------------------------|---------------------------------------------------------------------------------------|
| Questionnaire HSQuestionnaire5 |  |
|--------------------------------|---------------------------------------------------------------------------------------|

Fig. 8- The “Recycle Bin” page containing one individual and one shared questionnaire

3 Assessing the Maturity of Health and Care Systems

This section deals with assessing the maturity of a health and care system to adopt good practices in integrated care. The model used here is the EIP on AHA Maturity Model for Adoption of Integrated Care (MM). The MM comprises 12 dimensions each rated on a 0-5 scale that indicate the level of maturity for adoption of Integrated Care. These dimensions were the outcome of 12 structured interviews with representatives of health and care systems across Europe. The dimensions are summarised in this diagram and will be considered in detail in the following sections when we consider how to complete the assessment process.



3.1 The composition of the Team

Assessing the maturity of a regional or national health and care system is a considerable undertaking and no single individual has the knowledge necessary to carry out an assessment. We suggest that an interdisciplinary team carries out the assessment. Considering any health and care system we see that the system:

- sits inside a framework of rules controlled by a range of institutions (e.g. the law, health care professional bodies, ethical bodies, public bodies, ...)
- has some organisational structure that may involve several relatively independent organisations each with some level of autonomy that employ people directly involved in service delivery as well as policy, planning, infrastructure and other
- has additional structure around the delivery of particular services that provides support for individuals that deliver service to users (possibly involving cooperation across several organisations).

All of these layers of structure influence the maturity of the health and care system to adopt Integrated Care practices.

Thus, in selecting the members of an interdisciplinary team to assess a health and care system we need to consider two critical dimensions:

- Specialism: there should be a good spread of knowledge e.g. clinical, nursing, social care, ICT, managerial, planning, policy, governance...
- Proximity to the delivery of service: service users, those directly involved with users, managers, planners, policy workers, etc.

In constructing the team, the goal should be to have balance along both of these dimensions while balancing the size of the team. Avoiding excessively large teams will make it easier to reach consensus across the perspectives. Ideally the team should be small, say less than seven people.

The goal is to construct the MM assessment for the healthcare system you are considering. This will comprise a rating for each of the dimensions in the model. In the tool you will also be asked to *justify* each of the ratings you arrive at. Here you should construct a short account of why you think your score is appropriate. This will involve combining expertise and experience from various members of the team. In each of the dimensions we try to provide some guidance on how to consider the different sorts of justification that are likely to come forward in discussion.

Many of the team members work in complex organisations and the way knowledge flows in such organisations is not necessarily smooth or predictable. In developing the justification for a particular rating, you will need to consider the extent to which a general rule or practice has diffused through the organisation. It may be that there is a general policy but if managers are unaware or are implementing the policy inconsistently or incorrectly this will not be affecting practice. Similarly, a particular barrier or problem reported from practice may not generalise across the whole system just as a particularly beneficial aspect of practice may not have diffused across the whole system. So, care is needed in combining evidence generated from top down or from bottom up. Additionally, care is needed in combining different expert perspectives on a particular aspect of the system.

In working as an interdisciplinary team, you should try to observe some principles in order to construct a fair assessment of the Health system you are considering:

1. Respect expertise: some of the dimensions will almost be “owned” by a particular member of the team whose role is strongly focussed on the particular dimension. It is perfectly fine to declare that you have no opinion on the score for a particular dimension or that you have low confidence in your opinion.
2. Respect experience: members of the team with direct experience of service delivery have very valuable insight into service delivery and this needs to be incorporated into any justification. In doing this it is necessary to consider the extent to which a

particular experience can be generalised to different parts of the system. This will take careful discussion between different members of the team.

3. Respect knowledge: some members of the team will come with data and other forms of evidence that can be trusted. This should be respected and included where appropriate.
4. Gather and critically evaluate: there should be an open and inclusive process of gathering views from all the members of the team on a particular dimension that precedes discussion on how to combine the views into the justification of a particular grade for the dimension.
5. Reflect and revise: once the full evaluation is complete the team should take time to reflect and revise their grades and justifications in the light of the overall evaluation they have arrived at.

3.2 Strategies for Deploying the Team

The way of working on developing your assessment according to the MM will depend on how easy it is to get the group together and for how long. In every case the group should respect the work principles outlined above. Here are some suggested approaches:

1. Working together face-to-face discuss and arrive at a grading for each dimension.
2. Initially each member of the group could work independently to create their assessment and justifications before bringing the models together to consider how to combine the gradings and justifications into a consensus assessment. Here the online tool can support each individual and will support working together to create a consensus assessment.
3. In situations where the team comprises members from two or three locations each could have a face-to-face meeting to create an assessment and then the whole team could combine these to create the overall assessment.
4. In all of these cases there is a need to involve service users at some point in the process either as full members of the team or as reviewers to see that the service user perspective is represented in the final assessment.

3.3 Discussion of Each Dimension

In this section we consider each of the dimensions in turn and discuss how to go about completing the assessment for each. The balance of expertise, experience and ownership of evidence will vary across the team and the different perspectives of the team members will help to make a balanced judgement of the maturity of the health and care system along each dimension.

For each dimension we suggest the team follow this procedure:

1. **Read the Narrative:** At the beginning of the section there is a brief narrative that describes the motivation for the inclusion of the dimension in the model.
2. **Expertise, Experience and Evidence:** In this section we ask the team to gather together all the potential elements to justify a particular rating. This should first be a gathering process that does not attempt to judge or give differential weight to possible evidence. This should then be followed by an attempt to synthesise the available information by assessing how strongly it influences the overall judgement.

In this section we provide a collection of **prompts** to help elicit expertise, experience and evidence that bears upon the particular dimension under consideration.

3. **Assessment Scale:** in this section the assessment scale is introduced along with guidance of how to map from the items elicited in the previous stage to an assessment score in the model together with a justification for the grading in terms of the expertise, experience and evidence available to the team.

The remainder of this section consists of 12 subsections, one for each of the dimensions. Each dimension has a narrative, collection of prompts and discussion of how to map from information developed in response to the prompts to a grading on the assessment scale for that dimension.

3.3.1 Readiness to Change to enable more Integrated Care

This dimension is particularly concerned with the overall institutional framing of integrated care. Of particular importance is the engagement of political and organisational leadership and the promotion of the move to integrated care at a system-wide level.

If the existing systems of care need to be re-designed to provide a more integrated set of services, this will require change across many levels, the creation of new roles, processes and working practices, and new systems to support information sharing and collaboration across care teams. This will be disruptive and may be viewed negatively by workers, press and public, so a clear case needs to be made for those changes, including a justification, a strategic plan, and a vision of better care.

- Creating a compelling vision, with a real sense of urgency, and enlisting stakeholder support including political leadership, management, care professionals, public and press.
- Accepting the reality that care systems are unsustainable and need to change.
- Publishing a clear description of the issues, the choices that need to be made, and the desired future state of the care systems, stating what will be the future experience of care.
- Creating a sense of urgency to ensure sustained focus, and building a ‘guiding coalition’ for change.

3.3.1.1 Expertise, Experience and Evidence

The role of prompts is to stimulate the assessment team to identify expertise, experience and evidence that are relevant to the dimension. One approach to these is to consider each in turn and for each team member to contribute what they can that is relevant to the prompt.

- **evidence of public consultation:** Are there documents that have been publicly available? How widely available have they been? Has there been discussion in the media etc.? Has there been discussion inside the health and care services?
- **a published plan with clear strategic goals & milestones:** Has the plan been subject to scrutiny? Has the plan been modified to take account of critiques? How robust is the plan?

- **a plan embedded in national/regional health policy:** How much is a plan to move towards integrated care embedded in policy for the health and care system? What are the issues restricting this?
- **evidence of effective stakeholder engagement:** Are people involved in the delivery of health and care services and service users aware of the plan and how it might affect them? Are the middle management engaged? How aware are people across health and care? Are national, regional, municipal leaders engaged?
- **emergence of leaders and champions of change:** Are there champions inside the health and care system? Are there political champions? Are there other champions?
- **broad political and public support:** How much evidence is there of public support? Are there activists campaigning for change? How many political parties include discussion in their literature? How much media coverage is there?

3.3.1.2 Assessment Scale

This is the assessment scale for this dimension. This scale has face validity and has been validated by a multi-stage Delphi process using experts drawn from across Europe. As a team you should now consider how to translate the evidence you have generated into a grading on this scale:

0. **No acknowledgement of compelling need to change:** this should only be selected if there is no evidence of concern to transition at the level of the health and care system.
1. **Compelling need is recognised, but no vision or strategic plan:** this should be selected if there is possibly some consultation evidence but there is no evidence that this has been consolidated into something that could be taken as a set of steps towards integration.
2. **Dialogue and consensus-building underway; plan being developed:** this should be selected if the team has knowledge of plans that are in development but are insufficiently mature to be considered for adoption as policy.
3. **Vision or plan embedded in policy; leaders and champions emerging:** this should be selected if the team has knowledge of plans that are sufficiently developed to be beginning to be adopted as policy and there is some evidence of leadership in politics or in the health and care organisations.
4. **Leadership, vision and plan clear to the general public; pressure for change:** for this to be selected, the team should be aware of leadership in their areas of expertise and that the leaders are beginning to exert pressure for change.
5. **Political consensus; public support; visible stakeholder engagement:** this should be selected if there are no major dissenting political or organisational voices. Consensus does not need to be complete but should be considerable. The public should be aware and supportive and all the major stakeholders should be supportive of the change to integrated care.

Once the team has agreed on a particular grade for this dimension they should enter the grade using the tool and should write a short justification that mentions the support the team identified for the grade agreed on. This should be as concrete as possible citing expertise, experience and evidence that supports the chosen point on the evaluation scale.

3.3.2 Structure & Governance

The integration of health and care will usually involve changes in the operation of institutions charged with controlling the delivery of health services and with those controlling care services. This will involve structural change and the creation of new harmonised approaches to governance that span previously independent services.

The broad set of changes needed to deliver integrated care at a regional or national level presents a significant challenge. It needs multi-year programmes with excellent change management, funding and communications, and the power to influence and (sometimes) mandate new working practices. This means alignment of purpose across diverse organisations and professions, and the willingness to collaborate and put the interest of the overall care system above individual incentives. It also means managing the introduction of eHealth services to enable integrated care in a way that makes them easy to use, reliable, secure, and acceptable to care professionals and citizens alike.

- Enabling properly funded programmes, including a strong programme, project management and change management; establishing ICT or eHealth competence centres to support roll-out; distributed leadership, to reduce dependency on a single heroic leader; excellent communication of goals, progress and successes.
- Managing successful eHealth innovation within a properly funded, multi-year transformation programme.
- Establishing organisations with the mandate to select, develop and deliver eHealth services.

3.3.2.1 Expertise, Experience and Evidence

The **prompts** below should be used by the team to capture the extent to which the structure and governance of health and care is being revised in order to allow integration to take place.

- **Evidence of effective planning and management of change, including stakeholder involvement:** integration requires significant changes in the way services are delivered. In order for this change to take place there needs to be systematic change management underway in the organisation. Here the team should try to identify the extent of change management initiatives in their organisations oriented towards integrating the delivery of health and care.
- **Collective decision making:** one significant move towards integration is the development of decision making process that involve a wider range of professionals in order to take account of the social context in medical decision making and vice versa. Again, the team should identify examples of collective decision-making and should try to assess the extent of collective decision-making both in terms of geography and in terms of the organisational structure of the health and care services.
- **Benefits realisation:** Is there a clear route to identify the benefits of integration and distribute them in order to match demand in the system. The team should be looking for experiences and evidence of benefits realisation in the system.

- **Regular communication of progress:** Are there established mechanisms that communicate the goals and achievements of integration initiatives across the organisations involved and the wider community? The team should try to gather experiences and evidence of a systematic approach to communication.
- **Establishment or re-orientation of e-Health competence centres and usability labs:** Is there evidence of the establishment of organisational support for technologies and processes that support integration? The team will have experience of such centres that support new technologies and processes and should be able to spell out examples of the existence of such centres and the extent of their focus on integration as a key issue. For example, TicSalut (the eHealth and innovation agency for Catalonia), Kronikgune (support organisation for chronic care in Basque), and the National eHealth Board and National eHealth Network of Greece are organisations that have been created to help drive Integrated Care.

3.3.2.2 Assessment Scale

0. **Fragmented structure and governance in place:** Typically, there will be some structure and governance around specific projects and pilots in Integrated Care but there is no structure or governance that extends beyond specific activities. This is the score to record for this level of Structure and Governance.
1. **Recognition of the need for structural and governance change:** If the team has evidence (probably from the experience of the more senior members of the team) that Structure and Governance is recognised as an issue within the Health and Care system. Being on the agenda
2. **Formation of task forces, alliances and other informal ways of collaborating:** Here the team should be able to reference experiences of such task forces and alliances and give evidence of activities like this.
3. **Governance established at a regional or national level:** The team should have evidence that a national or regional framework for governance has been established and organisations engaged in the delivery of health and care are beginning to migrate to the new structure and governance arrangements.
4. **Roadmap for a change programme defined and broadly accepted:** The transition roadmap for the adoption of Integrated Care is in place and has been agreed by a broad consensus of service providers. The team should have evidence of this being able to point to documents recording the plan/roadmap for change.
5. **Full, integrated programme established, with funding and a clear mandate:** The team should be able to provide evidence of the existence of the programme and should be able to point out that the level of funding is adequate to allow the implementation of the programme.

3.3.3 Information & e-Health Services

This section considers the e-Infrastructure supporting the delivery of Health and Care and the extent to which this infrastructure is capable of supporting the Integration of Health and Care services. This involves assessing the capacity of individual systems to support Integrated Care and the extent of planning to integrate the e-Infrastructure of different services. For example, if systems already have a unique identifier for an individual then it

may be unnecessary to have new arrangements for managing identity but in some cases, it may be necessary to adapt systems to use a new unique identifier across all systems.

Integrated care requires, as a foundational capability, sharing of health information and care plans across diverse care teams. This sharing leads progressively to systems for enabling continuous collaboration, measuring and managing outcomes, and enabling citizens to take a more active role in their care. This means building on existing eHealth services, connecting them in new ways to support integration, and augmenting them with new capabilities, such as enhanced security and mobility.

- Essential components to enable information sharing, based on secure and trusted services.
- ‘Digital first’ policy (where possible, move phone and face-to-face services to digital services to reduce dependence on staff and promote self-service).
- Availability of fundamental building blocks to enable eHealth and eServices (‘infostructure’).
- Confidentiality and security designed into patient records, registries, online services etc.
- Enabling of new channels for healthcare delivery to replace face-to-face and telephone contact.

3.3.3.1 Expertise, Experience and Evidence

- **unique citizen ID:** having a unique identifier for individuals is a key element in enabling information sharing across systems. Identifying capacity to do this is critical to the development of health information systems. Some States have such arrangements enshrined in law while others have no universal identifier.
- **linked health records:** with a unique identifier it becomes possible to link records from many different information sources and build a composite record based on information held in many previously independent information systems. Linkage is an important step towards good health information services.
- **regional/national longitudinal EHR:** an electronic health record that provides a electronic record that is available to all health (and care) organisations across the region or state is evidence of well-developed support for health information.
- **at-scale teleservices:** the existence of such services demonstrates that the information systems in the region or state are sufficiently well developed that it is possible to deliver at-scale services using the information systems as a basis.
- **ability to combine health and social care information:** this demonstrates strong capacity to support integration across health and care.
- **care collaboration platforms:** this demonstrates that the capacity to share information across health and care is being exploited to provide services that deliver integration.

Many regions have been investing in these capabilities over several years and are now in the process of linking them or aggregating data from them to improve care integration. Good

examples include the widespread use of national patient/citizen identifiers, the Emergency Care Summary (ECS) in Scotland, and the national e-Prescription systems in Greece and Denmark.

3.3.3.2 Assessment Scale

0. **Information systems are not designed to support integrated care:** This should be the response if there is no evidence of support for integrated care in the information systems.
1. **Information and eHealth services to support integrated care are being piloted:** There is evidence that the region is experimenting with information systems and services, but this is yet to be a planned system-wide service.
2. **Information and eHealth services to support integrated care are deployed but there is not yet region wide coverage:** In this case it is clear that there is a commitment to deploy system-wide services, but they are yet to be available in all locations.
3. **Information and eHealth services to support integrated care are available via a region-wide service but use of these services is not mandated:** In this case the service is deployed and available but has yet to be fully incorporated into the practice of health and care delivery.
4. **Mandated or funded use of regional/national eHealth infrastructure across the healthcare system:** In this case there is clear pressure to adopt where adoption will improve health and care delivery.
5. **Universal, at-scale regional/national eHealth services used by all integrated care stakeholders:** here the services are deployed and have been adopted across health and care where they have benefit in the delivery of integrated health and care.

3.3.4 Standardisation & Simplification

In health and care practice there can be considerable variability in practice across the system. Standardisation and simplification support the move to integrated care by adopting standards and simplifying processes where this will aid the interaction between services delivered by health and care in the region.

When considering eHealth services and how they can support the information sharing and collaboration needs of integrated care, the task can be made easier if the number of different systems in use, and the formats in which they store data, can be simplified. Practically, this means trying to consolidate data centres, standardising on fewer systems, and agreeing on what informatics standards will be used across a region or country.

- Simplification of infrastructure; fewer integration points to manage; easier interoperability.
- Consolidation of applications and data centres into fewer sites.
- Regional standardisation on fewer (or single) solutions.
- Ability to view and exchange medical data from different systems across diverse care settings.

3.3.4.1 Expertise, Experience and Evidence

The following prompts should be used to stimulate discussion around the extent to which standardisation and simplification are in process in the health and care systems:

- **use of international standards (e.g. HL7, ICD9/10, SNOMED/CT) and profiles (e.g. IHE XDS, Continua Design Guidelines etc):** This should prompt an investigation of the extent to which standards are already in place and the extent to which the health and care system is aware and sensitive to the use of standards.
- **reduction in total number of different applications:** This is one indication of the pursuit of a simplification agenda. In particular if there is some pressure to move from several applications that support similar tasks to a smaller collection then this is good evidence of work on simplification.
- **regional procurements to replace diverse applications with more integrated systems (e.g. regional EPR):** This is another indicator of attempts at simplification and standardisation. By adopting a smaller number of applications that integrate previously uncoordinated applications this can indicate a willingness to move to more integrated approach to health and care.
- **policy mandates requiring information to be made available in agreed formats:** Policy on formats is a good indicator that the region is aware of the need to ease interaction across units to support integration.

For example, Galicia has developed a single regional EPR to meet the needs of primary and acute care, and the region of Skåne uses the Swedish National Patient Summary (NPO) system for summary medical records, whilst South Denmark uses standards developed over 20 years by the national Danish eHealth standards body, Medcom.

3.3.4.2 Assessment Scale

0. **No standards in place or planned that support integrated care services:** This should be the response if there is no evidence of preparation for or use of standards and simplification.
1. **Discussion of the necessity of ICT to support integrated care and of any standards associated with that ICT:** This should be the response if there is evidence of awareness of the use of standards and simplification but there is no plan in place to roll out standards and simplification.
2. **An ICT infrastructure to support integrated care has been agreed together with a recommended set of information standards - there may still be local variations:** This response should be chosen if there is evidence of the roll out of agreed standards and a simplification framework in place, but it not yet adopted fully across the system
3. **A recommended set of agreed information standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway:** This response indicates that a standards and simplification framework is in place and has funding to allow significant procurements in support of standardisation and simplification.
4. **A unified set of agreed standards to be used for system implementations specified in procurement documents; many shared procurements of new systems;**

consolidated data centres and shared services widely deployed: Here an agreed standardisation and simplification framework should be in place and this is informing procurement systematically but is yet to be mandatory across the system.

5. **A unified and mandated set of agreed standards to be used for system implementations fully incorporated into procurement processes; clear strategy for regional/national procurement of new systems; consolidated datacentres and shared services (including the cloud) is normal practice:** This response indicates a mandatory standardisation and simplification process is in place and is mandatory across the system.

3.3.5 Finance & Funding

Having funding in place for integrated care is a strong indicator that integrated care is a high priority for policymakers and that initiatives in integrated care have a good chance of becoming established and sustainable.

Changing systems of care so that they can offer better integration requires:

- initial investment funding;
- a degree of operational funding during transition to the new models of care; and
- ongoing financial support until the new services are fully operational and the older ones de-commissioned.

Ensuring that initial and ongoing costs can be financed is an essential activity, using the full range of mechanisms from regional/national budgets to ‘stimulus’ funds, European Union investment funds, PPP and risk sharing mechanisms)

3.3.5.1 Expertise, Experience and Evidence

The following prompts should be used to help elicit evidence to support a particular choice on the evaluations scale:

- **use of regional or national stimulus funds:** here attempting to characterise the scale and scope of funding planned and committed to integrated care will help arrive at a score on the evaluation scale.
- **innovative procurement approaches (PPP, risk sharing, multi-year contracts for IT service provision etc):** identifying the use of novel funding approaches that can help build appropriate investments for integrated care should be identified.
- **access to European Structural Investment Funds (where relevant), or other external sources of finance linked to regional development programmes:** identifying good use of development funding will also help identify the extent to which integrated care funding is in place to undertake a significant transformation in health and care services.

Good examples include the use of innovative procurement in Galicia, involvement of the private sector in providing telemedicine services in Greece and Saxony, and EU funded eHealth innovation in Scotland and N Ireland (INTERREG programme).

3.3.5.2 Assessment Scale

0. **No additional funding is available to support the move towards integrated care:** This response should be selected if no systematic approach to the funding of integrated care can be identified.
1. **Funding is available but mainly for the pilot projects and small-scale implementation:** This response indicates that integrated care is gaining some funding but mostly via “standard” routes that fund service innovation or other forms of development.
2. **Consolidated innovation funding available through competitions/grants for individual care providers:** This response indicates that integrated care has dedicated sources of funding that can support innovation in integrated care, but this innovation is not necessarily at a systematic level.
3. **Regional/national (or European) funding or PPP for testing and for scaling-up:** This response indicates that there is funding available for at-scale developments but the route to sustainable implementation is yet to be fully established.
4. **Regional/national funding for scaling-up and on-going operations:** This response indicates that there is at-scale funding available and there are routes to ensure the sustainability of initiatives.
5. **Secure multi-year budget, accessible to all stakeholders, to enable further service development:** This response indicates that integrated care is an established and significant part of the health and care budget.

3.3.6 Removal of Inhibitors

Even with political support, funded programmes and good eHealth infrastructure, many factors can still make integrated care difficult to deliver, by delaying change or limiting how far change can go. These include legal issues with data governance, resistance to change from individuals or professional bodies, cultural barriers to the use of technology, perverse financial incentives, and lack of skills. These factors need to be recognised early, and a plan developed to deal with them, so as to minimise their impact.

- Actions to remove barriers: legal, organisational, financial, skills.
- Changes to the law concerning e.g., medical acts, information governance, data sharing -factors which may hold up innovation.
- Creation of new organisations or collaborations to encourage cross-boundary working (‘normative integration’).
- Changes to reimbursement to support behavioural change and process change.
- Education and training to increase understanding of ICT and speed up solution delivery.

3.3.6.1 Expertise, Experience and Evidence

The aim of this set of prompts is to identify the extent to which inhibitors are recognised as an issue in integrated care and measures have been taken to overcome these inhibitors.

- **changes in the law (or interpretation of it) to enable data sharing:** Often health and care organisations have grown up with separate governance arrangements that

block transfer of information between organisations. To what extent have such blockages been removed?

- **financial incentives aligned to teamwork and outcomes (value) rather than volume:** Financial structures may encourage unhelpful practices e.g. moving users from one responsible organisation to another to transfer costs to another organisations budget. To what extent is the financing of health and care structured to encourage integration?
- **training programmes to fill skills gaps:** Both established and new staff (and users) will need new skills and orientation to ensure the adoption of integrated care. Are such training programmes in place to support the spread of the new practices necessary to implement integrated care?
- **formation of new organisational structures or contracts between organisations to deliver integrated care:** It may be necessary to re-shape the organisation of health and care to enable the delivery of integrated care. For example, creating a single health and care organisation rather than having separate organisations. To what extent has this work been carried out?

Examples of activities to remove inhibitors include changes in the law to encourage information sharing across boundaries (primary-acute care, or healthcare-social care) in Catalonia, Galicia & Scotland, and use of secure telematics infrastructure in Saxony (Gematik eGK) to support privacy and confidentiality laws.

3.3.6.2 Assessment Scale

0. **No awareness of the effects of inhibitors on integrated care:** This response should be selected if there is no consideration of inhibitors to the development of integrated care.
1. **Awareness of inhibitors but no systematic approach to their management is in place:** This should be selected if there is discussion of inhibitors and some have been identified but there is no systematic way of identifying inhibitors to integrated care.
2. **Strategy for tackling inhibitors is agreed at a high level:** This response should be selected if there is a systematic approach to identifying inhibitors and their effects but there is not systematic approach to ensuring their removal.
3. **Strategy for removing inhibitors agreed at a high level:** This response should be selected where the strategy to identify and remove inhibitors is established but has yet to be systematically implemented.
4. **Solutions for removal of inhibitors developed and commonly used:** This response is appropriate where the approach to identification and removal of inhibitors is well established across the system.
5. **High completion rate of projects & programmes; inhibitors no longer an issue for service development:** This response is appropriate where the strategy for identifying and removing inhibitors is well established and the benefits are observable in increased success rates for projects and programmes in integrated care.

3.3.7 Population Approach

Modern health systems will make effective use of the growing volume of health and care data available for service users. This will enable management at a population level and the development of more preventative and anticipatory approaches to integrated care.

Integrated care can be developed to benefit those citizens who are not thriving under existing systems of care, in order to help them manage their health and care needs in a better way, and to avoid emergency calls and hospital admissions and reduce hospital stays. This is a practical response to meeting today's demands. Population health goes beyond this, and uses methods to understand where future health risk (and so, demand) will come from. It offers ways to act ahead of time, to predict and anticipate, so that citizens can maintain their health for longer and be less dependent on care services as they age.

- Understanding and anticipating demand; meeting needs better.
- Improving the resilience of care systems by using existing data on public health, health risks, and service utilisation.
- Taking steps to divert citizens into more appropriate and convenient care pathways based on user preferences.
- Predicting future demand and taking steps to reduce health risks through technology-enabled public health interventions.

3.3.7.1 Expertise, Experience and Evidence

The following prompts can be used to stimulate discussion that identifies evidence of the use of population approaches in a health and care system:

- **use of risk stratification models:** Is there evidence of systematic use of risk stratification to help predict and understand the demands placed on the health system in order better to manage the delivery of integrated care.
- **a range of care pathways available for different groups (needs) of citizens:** Are there different care pathways in integrated care that are linked to the risk stratification work?
- **strong public health and prevention programmes:** Public Health and prevention programmes are usually closely linked to some understanding at a population level. Is this expertise being developed and spread more widely as part of the development of integrated care?
- **feedback available about effectiveness of new pathways and interventions:** Is population scale analysis well established and is it possible easily to incorporate the measures necessary to understand the effects of new interventions at a population level?

Some aspects of PHM, such as risk stratification, are being used today in the Basque Country, Catalonia and Scotland.

3.3.7.2 Assessment Scale

- 0. Population health approach is not applied to the provision of integrated care services:**
This response should be chosen if there is no evidence of the use of population-based approaches in the system.
- 1. A population risk approach is applied to integrated care services but not yet systematically or to the full population:** This is the appropriate response if there is evidence of an understanding of the use of a population approach but its application is patchy.
- 2. Risk stratification is used systematically for certain parts of the population (e.g. high-use categories):** This response is appropriate if there is good evidence of systematic use of population approaches to selected populations but the rationale for which populations are chosen for the approach is not clear or systematic.
- 3. Group risk stratification for those who are at risk of becoming frequent service users:**
This response is appropriate if a population approach is not universal but there is a clear rationale for the selection of target populations.
- 4. Population-wide risk stratification started but not fully acted on:** This response is appropriate if there is a full-population approach to risk stratification, but the results have yet to be fully integrated into decision taking.
- 5. Whole population stratification deployed and fully implemented:** This is the appropriate response if a full-population approach to risk stratification is implemented and the results are used systematically in the health system.

3.3.8 Citizen Empowerment

Integrated care brings with it a more “whole-person” view of the service user because its implementation tends to break down silos between services. Part of this view is the understanding that service users can, and want to, do things for themselves with appropriate support from the health and care system.

Health and social care systems are under increasing pressure to respond to demands that could otherwise be handled by citizens and carers themselves. Surveys suggest that many individuals would be willing to do more to participate in their care if easy to use services were available to them, such as appointment booking, self-monitoring their health status, using alternatives to medical appointments etc. This means providing services and tools which enable convenience, offer choice, and encourage self-service and engagement in health management

3.3.8.1 Expertise, Experience and Evidence

The following prompts list some features of health and care systems that offer some autonomy to service users to help co-produce the services in cooperation with health and care professionals and integrated care information systems.

- **large-scale use of teleservices:** Teleservices generally improve access and responsiveness of services and encourage more initiative from service users. Evidence of such systems indicates thinking towards citizen empowerment.

- **multi-channel ways to access care services:** Multichannel access improves accessibility since particular sub-populations have different preferences for the use of particular channels.
- **citizen portals offering booking & prescription refills:** The development of “self-service” offerings allow service users choice in when and where to make use of services and so increases their autonomy. Self-service approaches can help develop citizen empowerment.
- **online access to health records:** The availability of records will help develop a more informed group of services users who are capable of a more constructive dialogue over their health and care.
- **recommended health and wellness apps and health management services, which are also integrated with medical records:** There is a very large array of potential apps and that very extensive choice can result in difficulties in deciding what apps to choose. Help in selecting apps can empower people to use apps to participate effectively in their health and care.

3.3.8.2 Assessment Scale

0. **Citizen empowerment is not considered as part of integrated care provision:** This response should be selected if there is no evidence of engagement with citizens in the delivery of their health and care.
1. **Citizens are consulted on integrated care services but are not involved in cocreation and coproduction of services:** This should be selected if there is consultation but there is no citizen participation in the design of services and services are not designed to allow citizens to participate in the production of their health and care.
2. **Citizen empowerment is recognised as important but effective policies to support citizen empowerment are still in development:** This response is appropriate if the service has the intention to engage with citizens but a definite policy designed to achieve this is still under development.
3. **Incentives and tools to motivate and support citizens to co-create health and participate in decision-making processes:** This is an appropriate response if a policy on citizen empowerment is in place and there is patchy implementation where some parts of the service are pursuing citizen empowerment while other parts are less active.
4. **Citizens are supported and involved in decision-making processes, and have access to information and health data:** This is an appropriate response where the system has an EHR that can be shared with citizens and this can form the basis for a more system approach to citizen empowerment.
5. **Citizens are involved in decision-making processes, and their needs are frequently monitored and reflected in service delivery and policy-making:** This is an appropriate response when there is a policy and systematic co-design and co-production of health and care.

3.3.9 Evaluation Methods

Evidence is a key element in decision taking at a regional or national level and a key aspect in the scaling up of integrated care is the systematic gathering of evidence to evaluate initiatives in order to identify successful initiative in terms of cost effectiveness and quality

improvement. This section assesses the extent to which such evaluation processes are in place.

As new care pathways and services are introduced to support integrated care, there is a clear need to ensure that the changes are having the desired effect on quality of care, cost of care, access and citizen experience. This supports the concept of evidence-based investment, where the impact of each change is evaluated, ideally by health economists working in universities or in special agencies. Health technology assessment (HTA) is an important method here and can be used to justify the cost of scaling up good practices to regional or national level.

- Establishing baselines (on cost, quality, access etc.) in advance of new service introduction.
- Systematically measuring the impact of new services and pathways using appropriate methods (e.g., observational studies, incremental improvement, clinical trials).
- Generating evidence that leads to faster adoption of good practice.

3.3.9.1 Expertise, Experience and Evidence

The following prompts provide a starting point for discussion on the extent to which the health and care systems has good evaluation processes in place to ensure decision taking can be evidence-based.

- **establishment of academic or specialist institutes and agencies with experts in health economics and health technology assessment (HTA):** Do such organisations exist in the system under consideration and what is their scope and capability? Are they centres of excellence? To what extent is their work used to inform decision taking?
- **published health impact measurements:** Is there a culture of openness around evaluation work that allows informed discussion on the basis of open evidence?
- **measurable care cost/quality improvements:** Has there been discussion over how this might be measured and appropriate development of metrics and publication with appropriate support on how to interpret such data?

Examples of successful established evaluation agencies include Avalia-T in Galicia, AQUAS in Catalonia, in addition to many academic centres who offer evaluations, such as the University of Dresden in Saxony.

3.3.9.2 Assessment Scale

- 0. No evaluation of integrated care services is in place or in development:** This response is appropriate if there is no understanding of the need for evaluation in the development of integrated care.
- 1. Integrated care services evaluation is not seen as distinct from standard evaluation approaches:** This response is appropriate if there is evaluation in place but there is no systematic attempt to deal with the particular needs of integrated care initiatives.
- 2. Evaluation established as part of a systematic approach:** This response is appropriate if evaluation is part of the policy framework established for the development of integrated care but this has yet to be realised.

3. **Some initiatives and services are evaluated as part of a systematic approach:** This response is appropriate if evaluation is incorporated into the policy but there is patchy use of evaluation.
4. **Most initiatives are subject to a systematic approach to evaluation; published results:** This response is appropriate if the policy framework is well established and there is public scrutiny of the evaluation results.
5. **A systematic approach to evaluation, responsiveness to the evaluation outcomes, and evaluation of the desired impact on service redesign (i.e., a closed loop process):** This response is appropriate if evaluation of integrated care initiatives is almost universal and the results of evaluation are used to inform the development of the integrated care programme and to refine the service offering of integrated care.

3.3.10 Breadth of Ambition

Integrated care is very broad concept and it is easy to restrict the scope and thereby exclude key stakeholders from the dialogue on the development of integrated care services. Getting the scope of engagement right is essential to the effective implementation of integrated care.

Integrated care includes many levels of integration, such as integration between primary and secondary care, of all stakeholders involved in the care process, or across many organisations. It may be developed simply for healthcare needs (i.e., vertical integration) or it may include social workers, the voluntary sector, and informal care (i.e., horizontal integration). The broader the ambition, the more numerous and diverse the stakeholders who have to be engaged. Similarly, integration may include all levels of the system or may be limited to clinical information sharing. The long-term goal should be fully integrated care services which provide a complete set of seamless interactions for the citizen, leading to better care and improved outcomes.

- Integration supported at all levels within the healthcare system - at the macro (policy, structure), meso (organisational, professional) and micro (clinical) levels.
- Integration between the healthcare system and other care services (including social, voluntary, informal, family services).
- Seamless transition for the patient between and within care services.

3.3.10.1 Expertise, Experience and Evidence

These prompts are intended to provoke discussion on what evidence there is for appropriate breadth of ambition in the implementation of integrated care.

- **evidence of successful integration and a seamless experience, as viewed by the citizen:** To what extent have boundaries between services been removed? Does the service user see more “joined-up” practice? What are examples of good and bad practice?
- **both vertical and horizontal integration:** Is progress being made vertically (primary, secondary, tertiary health and care integration) and horizontally between silos both in health and care and across health and care?
- **strong connections between organisations based on protocols, service level agreements, contracts and (if required) mergers:** Have previously independent

agencies started to establish formal ways of working together? To what extent is that formalised? Is it proving to be successful? Is there good evaluation of progress?

Examples of innovation in this dimension include the formation of cross-sector Integrated Care Partnerships in N Ireland, and controlled access to the Galician EPR, IANUS, for authorized social care workers in elderly homes.

3.3.10.2 Assessment Scale

0. **Integrated services arise but not as a result of planning or the implementation of a strategy:** This is the appropriate response if there is no overall direction of integration.
1. **The citizen or their family may need to act as the integrator of service in an unpredictable way:** Services are still quite siloed and the service user integrates services as they use them.
2. **Integration within the same level of care (e.g., primary care):** This is an appropriate response if integration is occurring but is being driven from a single organisation that is responsible for a particular level of care but there is no cross-organisational integration.
3. **Integration between care levels (e.g., between primary and secondary care):** This response is appropriate if there is evidence of integration being introduced across organisational boundaries.
4. **Integration includes both social care service and health care service needs:** This response is appropriate if integration extends across health and social care and there is evidence of a seamless user experience across those services.
5. **Fully integrated health & social care services:** This response is appropriate if there has been organisational restructuring and the new structures are all oriented to delivering integrated care.

3.3.11 Innovation Management

Many of the best ideas are likely to come from clinicians, nurses and social workers who understand where improvements can be made to existing processes. These innovations need to be recognised, assessed and, where possible, scaled up to provide benefit across the system. At the same time, universities and private sector companies are increasingly willing to engage in open innovation, and innovative procurement, in order to develop new technologies, test process improvements and deliver new services that meet the needs of citizens. There is also value in looking outside the system to other regions and countries that are dealing with the same set of challenges, to learn from their experiences. Overall, this means managing the innovation process to get the best results for the systems of care, and ensuring that good ideas are encouraged and rewarded.

- Adopting proven ideas faster.
- Enabling an atmosphere of innovation from top to bottom, with collection and diffusion of best practice.
- Learning from inside the system, as well as from other regions, to expand thinking and speed up change.
- Involving universities and private sector companies in the innovation process (i.e., 'open innovation').
- Using innovative procurement approaches (Pre-Commercial Procurement, IPP, PPP, Shared Risk, Outcome-Based Payment)

- Using European projects (e.g., Horizon 2020, EIP, CEF).

3.3.11.1 Expertise, Experience and Evidence

These prompts are intended to support discussion over the extent of the introduction of effective innovation management within the health and care system around integration and what evidence there is for this.

- **proven innovation management methods:** Is there a systematic approach to identifying potential innovation in integrated care? Does it look at the overall impact of innovations rather than just looking at numbers of innovations? Does it also consider the cost-effectiveness of innovations?
- **outreach to regions:** Is there a willingness to look outside of the region or state to see what other health and care systems have done to innovate in health and care integration?
- **creative involvement of academic & industry relations:** Do health and care organisations look outside of their organisation for help with innovation in health and care integration? Is this systematic or opportunistic?
- **innovative procurement methods:** Are approaches such as pre-competitive procurement used to help the adoption of innovative approaches?

Examples observed in this study include the Connected Health Ecosystem in N Ireland, the Digital Health Institute in Scotland, the Office of Innovation in Basque, and Innova-Saude in Galicia (innovative procurement).

3.3.11.2 Assessment Scale

0. **No innovation management in place:** This is the appropriate response if there is no awareness of the need for innovation management in the organisations involved in delivering health and care.
1. **Innovation is encouraged but there is no overall plan:** This response is appropriate if there is some access to advice and help with innovation but it is not systematically applied in the organisations involved in health and care.
2. **Innovations are captured and there are some mechanisms in place to encourage knowledge transfer:** This response is appropriate if there is awareness that innovation should be captured and in order to scale up successful innovation there should be ways of transferring experience.
3. **Innovation is governed and encouraged at a region/country level:** This is an appropriate response where the awareness of innovation extends to the regional or national level and this gives a good context for scaling up innovation.
4. **Formalised innovation management process in place:** This is an appropriate response if there is a fully systematic approach to innovation management in place that takes account of appropriate measures of the effectiveness of innovations and manages the coordination of innovation across the health and care system.
5. **Extensive open innovation combined with supporting procurement & the diffusion of good practice:** This is an appropriate response if the innovation system is systematic and open to inputs from employees and others.

3.3.12 Capacity Building

As the systems of care are transformed, many new roles will need to be created and new skills developed. These will range from technological expertise and project management, to successful change management. The systems of care need to become ‘learning systems’ that are constantly striving to improve quality, cost and access. They must build their capacity so as to become more adaptable and resilient. As demands continue to change, skills, talent and experience must be retained. This means ensuring that knowledge is captured and used to improve the next set of projects, leading to greater productivity and increasing success.

- Increasing technology skills; continuous improvement.
- Building a skill base that can bridge the clinician-technologist gap and ensure that needs are understood and addressed by ICT.
- Providing tools, processes and platforms to allow organisations to assess themselves and build their own capacity to deliver successful change.

Creating an environment where service improvements are continuously evaluated and delivered for the benefit of the entire care system.

3.3.12.1 Expertise, Experience and Evidence

This set of prompts should help stimulate discussion on the extent to which the health and care system is being proactive in identifying the demands for new skills and capacities as integrated care is deployed.

- **capturing knowledge from every project:** Are there approaches in place to gather information from projects that can help to predict what skills will be necessary and how it is possible to source those skills?
- **nurturing deployment skills:** Is there understanding how Integrated care deployment places new demands on systems and what new roles and skills are needed to enable effective deployment?
- **creating new roles that bridge the gap between clinician and ICT technologist:** Is there a good understanding of the extent to which ICT is embedded in the delivery models of integrated care?
- **self-assessment tools to identify readiness, expose gaps, and acquire expertise:** Are there tools in place to allow organisations to assess their level of readiness to adopt integrated care?
- **workforce development programmes:** Is there appropriate training and development in place to allow scaling up of integrated care approaches?

Good examples include the ARCHO self-assessment tool in the Basque country, and the role of the Catalan agency TicSalut in scaling up good practice.

3.3.12.2 Assessment Scale

0. **Integrated care services are not included in capacity building:** This is the appropriate response if there is no recognition of the need to develop capacity for integrated care.

1. **Some systematic approaches to capacity building for integrated care services are in place:** This response is appropriate if there is some recognition of the need to capacity building but that is not developed at a regional or national level.
2. **Cooperation on capacity building for integrated care is growing across the region:** This is an appropriate response if capacity building is recognised as a regional priority.
3. **Systematic learning about IT; integrated care and change management:** This is an appropriate response if there is a systematic, region-wide approach to identifying training and development needs and there is transfer of learning from project to project.
4. **Knowledge shared, skills retained and lower turnover of experienced staff:** This is an appropriate response if the health and care system captures knowledge from its operation and uses this to share experience, build expertise and predict demand for trained staff in new skills and competences.
5. **A 'learning healthcare system' involving reflection and continuous improvement:** This response is appropriate if the system in addition to point 4 below also reflect on the way it gathers and analyses information and continuously improves methods.

3.4 Documenting, filling questionnaire

In completing the questionnaire there are two main points:

- You should record your score on each of the dimensions, taking care to record how confident you feel about your judgement.
- You should try to fill out the justification box provided. This need not be in sentences but could just be a collection of points that came up during discussion of the prompts and that you used to justify your rating.

3.5 Reviewing the Review

Once you have completed the questionnaire, you should attempt to review the questionnaire responses. This could be done by getting colleague to read your responses and respond to them or you could attempt to do this yourself. If you do it yourself, you should leave a day or two between completing the questionnaire and carrying out the review. A review should:

- Querying the rating dimension by dimension - trying to find counterexamples that indicate the rating is too low or too high
- Testing the rating against an already rated good practice to see if the rating of the health systems is justified. In other words, if you have a rated good practice that has particular maturity requirements. If it is supported in your health and care system, then the maturity of the system has to at least meet the maturity requirements of the good practice.