



TOOL SUPPORT FOR ASSESSING THE MATURITY OF A HEALTH SYSTEM

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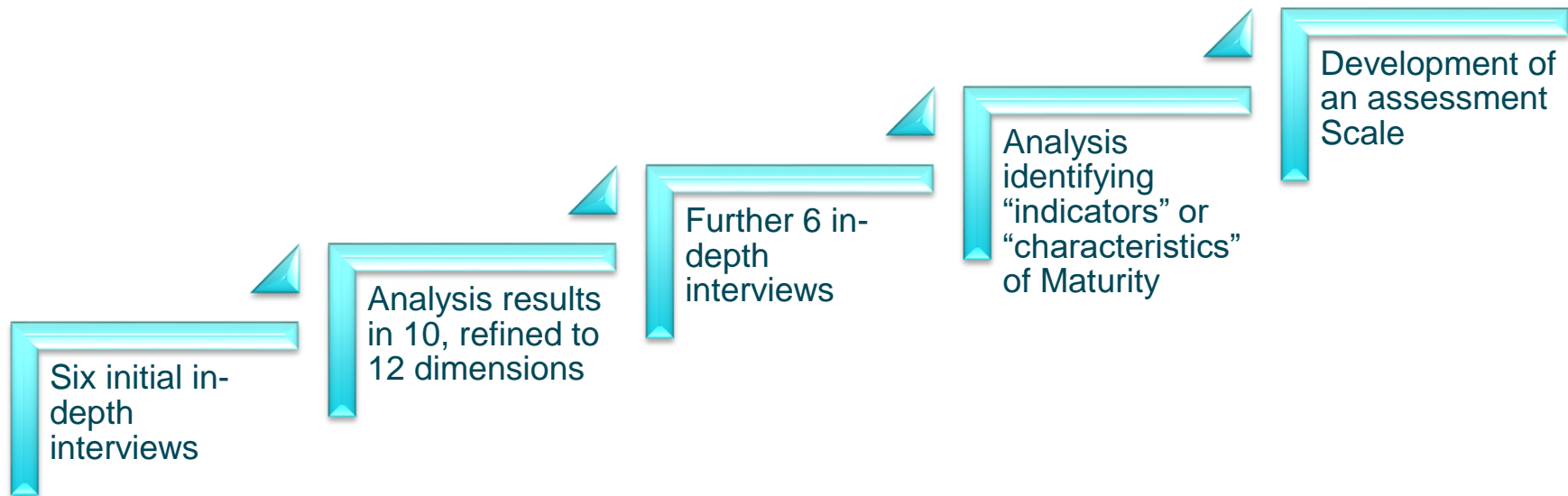
Regions Interviewed

- Attica
 - Basque
 - Catalonia
 - Galicia
 - Northern Ireland
 - Saxony
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- Medical Delta
 - Olomouc
 - Puglia
 - Scotland
 - Skåne
 - South Denmark

B3 Maturity Model

- ▶ Initially driven by Action Area 7 (ICT and Teleservices) of the B3 Action Group on Integrated Care.
- ▶ It became clear that the maturity of a Health System to accept new practices (whether ICT-based or not) extended to take into account all aspect of maturity.
- ▶ The John Crawford of IBM supported by other members of the B3 Action group decided to construct a maturity model based on the experience of those implementing Integrated Care

Building the B3 Maturity Model



Delphi Process: Face Validity

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

Scirocco Project Maturity Assessment

HOME ACCOUNT LOGIN LOGOUT **MATURITY MODEL QUESTIONNAIRE** MEMBERS PASSWORD RESET REGISTRATION

SAMPLE PAGE USER

Maturity Model Questionnaire

Open all the questions

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

2. Structure & Governance *

3. Information & eHealth Services *

- ☐ Information systems are not designed to support integrated care
- ☐ Integrated care services are being piloted
- ☐ Integrated care services are deployed but there is not yet region wide coverage
- ☒ Integrated care services are deployed but there is not yet region wide coverage
- ☐ Mandated or funded use of regional/national eHealth infrastructure across the healthcare system
- ☐ Mandated or funded use of regional/national eHealth infrastructure across the healthcare system



An Online Tool to Support the Maturity Model

- ▶ Started work mid-September
- ▶ Currently we have a working online interactive questionnaire.
- ▶ Working on:
 - Registration and personal profile.
 - Means to share spider graphs between users.
 - Localisation for specific languages.
 - Gathering justifications for scores via text comments.
- ▶ Deploy to support:
 - Scirocco assessment of good practices.
 - B3 Sprint groups using the B3 Maturity Model

Different Uses of the Tool

1. Rating a good practice on the basis of a description of the good practice (the good practice description is the basis).
2. Rating a regional/national health service (experience is the basis)
3. Rating a good practice on the basis of experience in order to enable transfer or to assist in writing a good practice description (experience is the basis)
4. Supporting twinning between two health systems
5. Supporting coaching around a particular practice

Different Uses – Different Process?

1. Using support from the best practice description – text analysis – experimenting with NVIVO.
2. What is the best process – multiple experts? Combining ratings from several good practices?
3. Similar to 2 – use multiple experts with different perspectives?
4. Capacity to compare and contrast the two systems – helping search for candidate good practices.
5. At the good practice level – supporting multiple negotiations of different experts.

Justification/Evidence



- How do we justify a particular score on a dimension?
 - Initially gathering texts justifying the score.
 - Exploring the use of the NVIVO tool to analyse good practice descriptions.
 - Exploring developing more support for evidence.

Supporting Negotiation



- ▶ Orange: adopting health system.
- ▶ Blue: good practice to transfer.
- ▶ Areas where the blue exceeds the orange are those in need of negotiation/discussion.

Supporting Negotiation

- ▶ How do we understand the scales on each dimension?
- ▶ Rating a good practice or system along a dimension may involve several experts all from the same region in order to construct the rating of a good practice.
- ▶ So we need to support negotiation to some extent:
 - In one language.
 - In multiple languages
 - Locally and Remotely

Language Independence

- ▶ The tool is constructed so that all the language used in the interface can be localised to the context of use (i.e. all the phrases used directly in the tool will be gathered together so it is possible easily to translate them into a new language.)
- ▶ Can we support multiple language in negotiation (and so the basis of coaching and twinning)?
 - Using Machine Translation – possibly?
 - Using crowdsourcing to contribute translations?
 - Constraining justification to some **ontology** of justification (captured from real use?).

Twinning and Coaching

- ▶ Filtering good practices – using B3-MM to assist to restrict to feasible good practices?
- ▶ Evidence can provide the basis for negotiating transfer of a good practice?
- ▶ Looking at how to “equate” evidence?
- ▶ Looking for similarities and differences and using this as the starting point for discussion.

Design Methodology

- Essential to consider different stakeholders in the design because of:
 - Different roles
 - Different values
 - Different languages
 - Different locations
- The reliability of the answers collected will depend on the ability of the instructions and design to speak the users' language and appeal to their values
- Considering: user centred design, value sensitive design

User Centred Design

- Focus on needs, wants and limitations of end users
- Based on an explicit understanding of users, tasks and environments
- Users are involved throughout design and development
- Iterative process, with cycles informed and improved through user-centred evaluation
- The design team creates the design and owns the product



<https://www.usability.gov/what-and-why/user-centered-design.html>

Value Sensitive Design*

- ▶ Theoretically grounded approach to design which focuses on **human values** (“what a person or group of people consider important in life”*)
- ▶ Consideration of all stakeholders, both direct and indirect
- ▶ Methodology consisting of 3 main steps:
 - **Conceptual investigations:** identification of stakeholders, how they are affected by design, their values, value trade-offs
 - **Empirical investigations with the stakeholders,** to enrich the conceptual investigations
 - **Technical investigations:** designing proactively to support identified values; evaluating how existing technology supports or hinders human values

*Friedman, Batya, et al. "Value sensitive design and information systems." *Early engagement and new technologies: Opening up the laboratory*. Springer Netherlands, 2013. 55-95.

Evidence-Based Methodology

- ▶ We will combine user-centred and value sensitive design approaches.
- ▶ We will gather detailed data on interaction with the online tool.
- ▶ We will use the tool to gather data on how best to justify a rating and on modes of negotiation.
- ▶ We will use questionnaires and interviews to help co-design the tool with users.
- ▶ Later iterations will include more explicit support for twinning and coaching.

Time Line to December

- ▶ Mid November: First iteration that includes the results of the Delphi and experience with the trial good practices.
- ▶ Mid December: Second iteration that includes feedback from the Scirocco project and B3 members using the model.
- ▶ First full version of the tool will be available by end December.