RISE Workshop

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Background: Capability Maturity Model

1 Definition

"A process improvement approach that provides organizations with the essential elements of effective processes, which will improve their performance"

2 History

Developed by Carnegie Mellon Software Engineering Institute to describe organizational capability to develop software reliably (i.e., predictably on time, within budget and with required functionality)

Some more background

- Represents our understanding of policy landscape, relevant standards and norms

- Designed to be easily applied in workshops based on DCC experience 2010-15, lessons learned from earlier model (CARDIO)

- 12 UK institutions involved in community review workshop 2016

Three models compared (a biased viewpoint)

CMM for RDM	Kouper et al	RISE
Very detailed level descriptions 'Common features' add clarity and potential to build in measurement	Simple level descriptions Reflects US library context	Detailed Assess ability to add value rather than 'maturity' per se User guide based on application in context
Metrics not well defined Uptake?	Content useful? Uptake?	More sensitive to change in policy and practice Relatively wide takeup

DCC
Digital Curation Centre

Where has RISE been used?

DCC facilitated

Cranfield

Stirling

Singapore

Northumbria

Independently

Cambridge

Sussex

4TU.Centre Research Data (blog here)

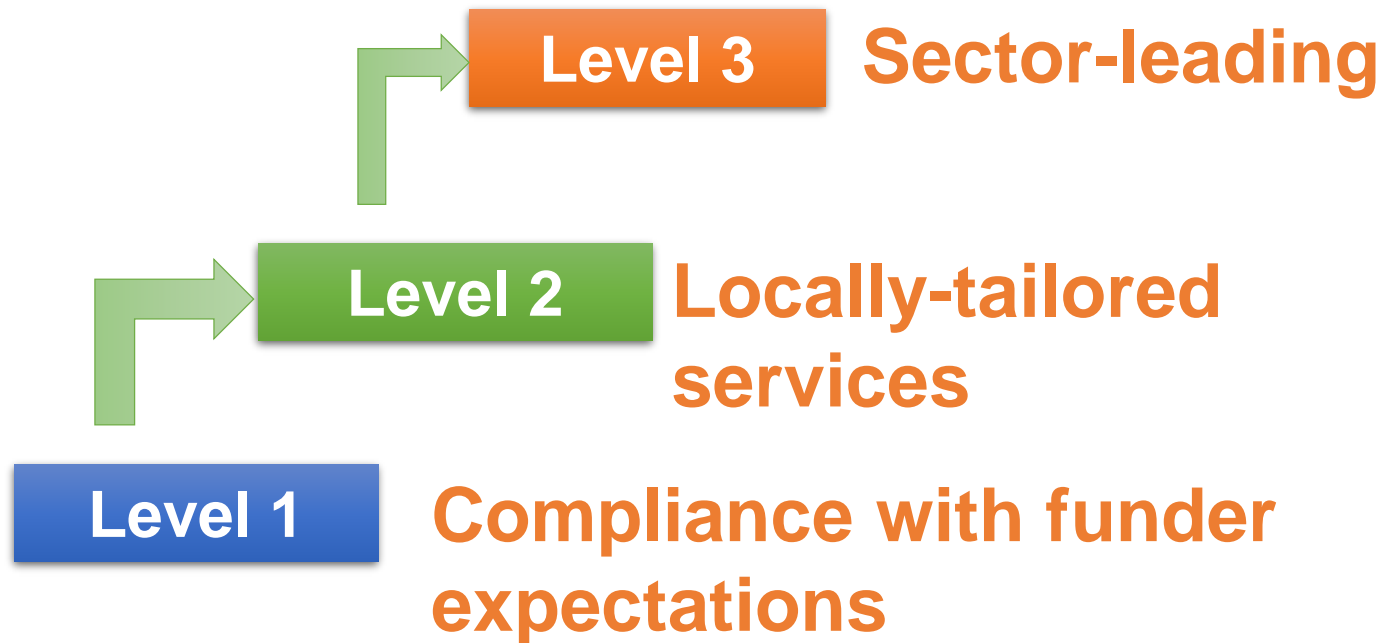Melbourne

Pottsdam

Leibniz Hannover

RISE model

21 capabilities across 10 service areas

1. RDM Policy and Strategy
2. Business plans and sustainability
3. Training
4. Advisory services
5. Data Management Planning
6. Active data management
7. Appraisal and risk assessment
8. Preservation
9. Access and publishing
10. Discovery

RISE levels of capability

Level 3 — **Sector-leading**

Level 2 — **Locally-tailored services**

Level 1 — **Compliance with funder expectations**

21 capabilities across 10 service areas

Security management

Level One	Level Two	Level Three
The service provides authenticated access to storage that is protected from unauthorised data access, and researchers are made aware of procedures for data protection and de-identification.	The service provides tools/environments that enable researchers to de-identify, encrypt or control access to data as required.	The service provides researchers from across the institution with access to ISO 27001/2 or equivalently accredited facilities for analysis of shared sensitive data.

Using RISE to take stock and plan

1. Set the scope and identify context

2. Classify current provision for relevant capabilities

3. Identify any feasible changes to aim for

NB. 'Right' level is what makes sense in your institutional context, higher is not necessarily better

How to Use RISE : http://www.dcc.ac.uk/resources/how-guides/RISE

References and Acknowledgements

CMM for RDM (Slides 23-28) Thanks to Kevin Crowston and Jian Qin

Qin, J, Crowston,K and Kirkland, A. (2017). "Pursuing Best Performance in Research Data Management by Using the Capability Maturity Model and Rubrics." *Journal of eScience Librarianship* 6(2): e1113. https://doi.org/10.7191/jeslib.2017.1113

Wiki: http://rdm.ischool.syr.edu/xwiki/bin/view/CMM+for+RDM/WebHome

Data Management Framework CMM – Australian National Data Service

https://www.ands.org.au/guides/creating-a-data-management-framework

RISE - Thanks to Kevin Ashley and Jonathan Rans

Rans, J and Whyte, A. (2017). '*Using RISE, the Research Infrastructure Self-Evaluation Framework*' v.1.1 Edinburgh: Digital Curation Centre. Available online: www.dcc.ac.uk/resources/how-guides

Other recommended reading:

CESSDA Capability Development Model https://www.cessda.eu/Projects/All-projects/CESSDA-SaW/WP3/CESSDA-CDM

Cox, A. M., Kennan, M. A., Lyon, L. and Pinfield, S. (2017), Developments in research data management in academic libraries: Towards an understanding of research data service maturity. *Journal of the Association for Information Science and Technology*, 68: 2182-2200. doi:10.1002/asi.23781

Wang, D. et al (2015) Collaboration to Clarify the Cost of Curation *D4.5- From Costs to Business Models* http://www.4cproject.eu/d4-5-from-costs-to-business-models/

Proença, D. and Borbinha, J. Maturity Models for Information Systems - A State of the Art, *Procedia Computer Science,* Volume 100, 2016, Pages 1042-1049, https://doi.org/10.1016/j.procs.2016.09.279

Thank you!

With thanks to Angus Whyte

In collaboration with:

Group Exercise

Now that you have seen how RISE is designed to be implemented, we will now try it out using an online tool developed with SPARC Europe and which can be found here:

https://sparceurope.org/evaluate-your-rdm-offering/

Please implement the tool in groups and answer all questions to the best of your ability. Three graphs will be produced per group which we will then compare and contrast between groups.