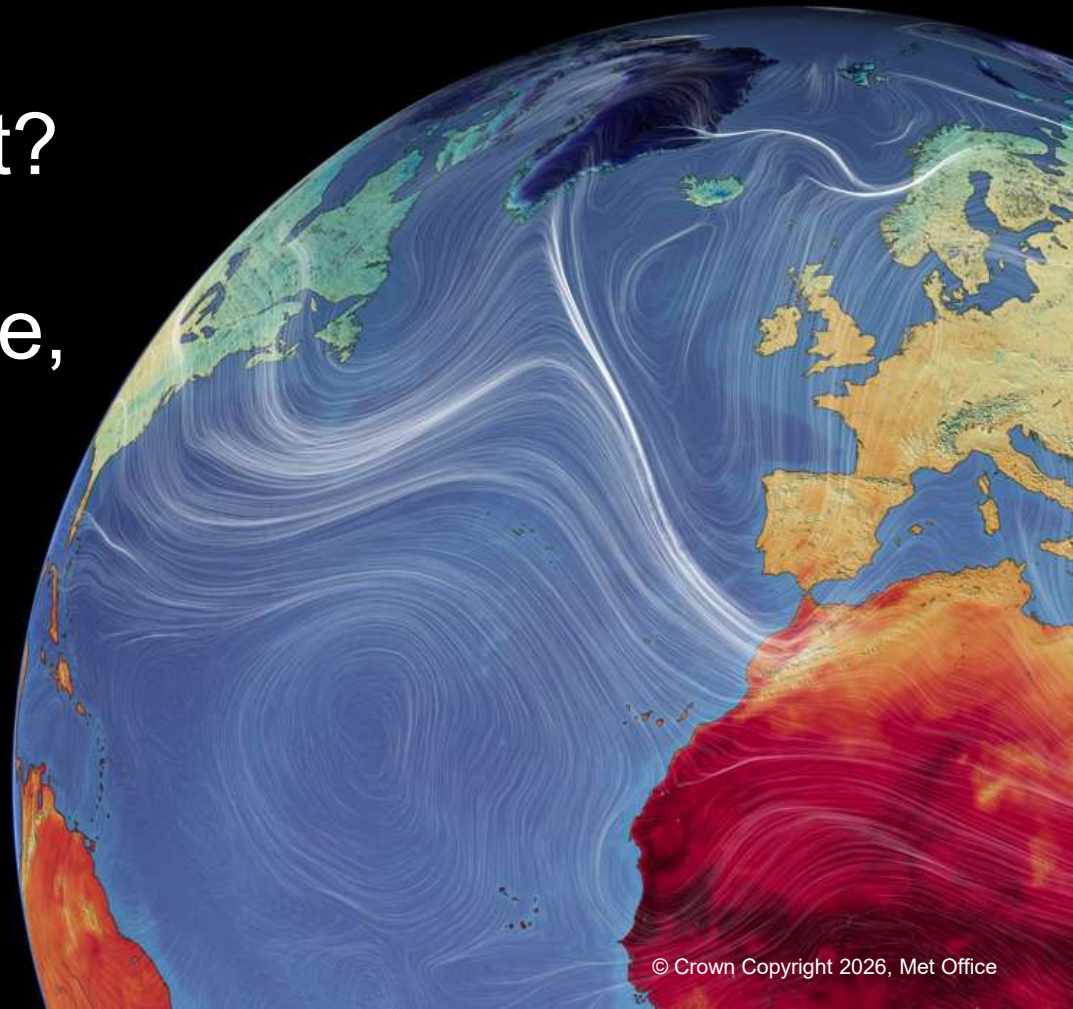


What happened next? Advancing learning resources for iterative, customer-focused development of research software

Emma Hogan

RSE SW, Friday, July 31, 2026



Delivering high-quality research software that lasts

Emma Hogan

RSE SW, Friday, February 20, 2026

10:05 - 10:25

Many thanks to Peter Hill (University of York)
and my team (the Model Inputs And Outputs /
MIAO 🍌 team) for their feedback on this talk 🙌

www.netoffice.gov.uk





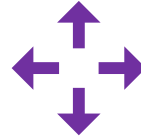
Characteristics of maintainable code



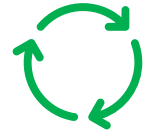
Documentation



Consistent



Extendable



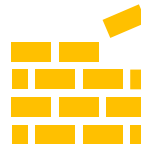
Reusable



Testable



Simple



Modular



Readable

Research Software Maintenance Fund

Software is pervasive in modern research, used in every discipline and underpins modelling and simulation; data management, analysis and visualisation; and experiment and laboratory control. Yet it can be difficult, even for widely used software, to find resources for maintenance, refactoring and community development, because the focus of much research funding is on novelty.



Project management identified as a skill gap

Project management was identified as a skill gap by several employers who noted that graduates often lacked experience with software lifecycle management processes such as Agile. One employer with insight into higher education pointed out that whilst Agile was taught on computer science degrees, it was rarely done effectively. Agile techniques like daily standups were developed for industry settings, requiring a level of immersion that, it was noted, was difficult to replicate in an academic environment when students only worked on a project once a week. It is 'very difficult to teach that stuff' in a way that mirrors real-world application (E2, work coach, MNC4). A recent PhD graduate described his struggle with the demands of his current job that required planning, prioritising tasks, and creating timelines, a skill set he admitted he had not really needed in his PhD and was still developing (G5).

Skills you would like to gain or improve



Agile Methods for RSEs

A formula for scrum-driven software development in research?

Ann Gledson, Adrian Harwood & Scott Archer-Nicholls
Research IT, IT Services, The University of Manchester

RSE Con 24 | Newcastle | September 2024

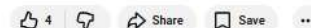


Agile Methods for RSEs: A formula for scrum-driven software development in research?



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YouTube: RSECon24: https://youtu.be/qKNhwTsozT4?si=7S_GB4c6zFRD1d8w

Customer engagement & high-quality software



Product Owner



Sprint Review / demo



Definition of Done

Maintainability

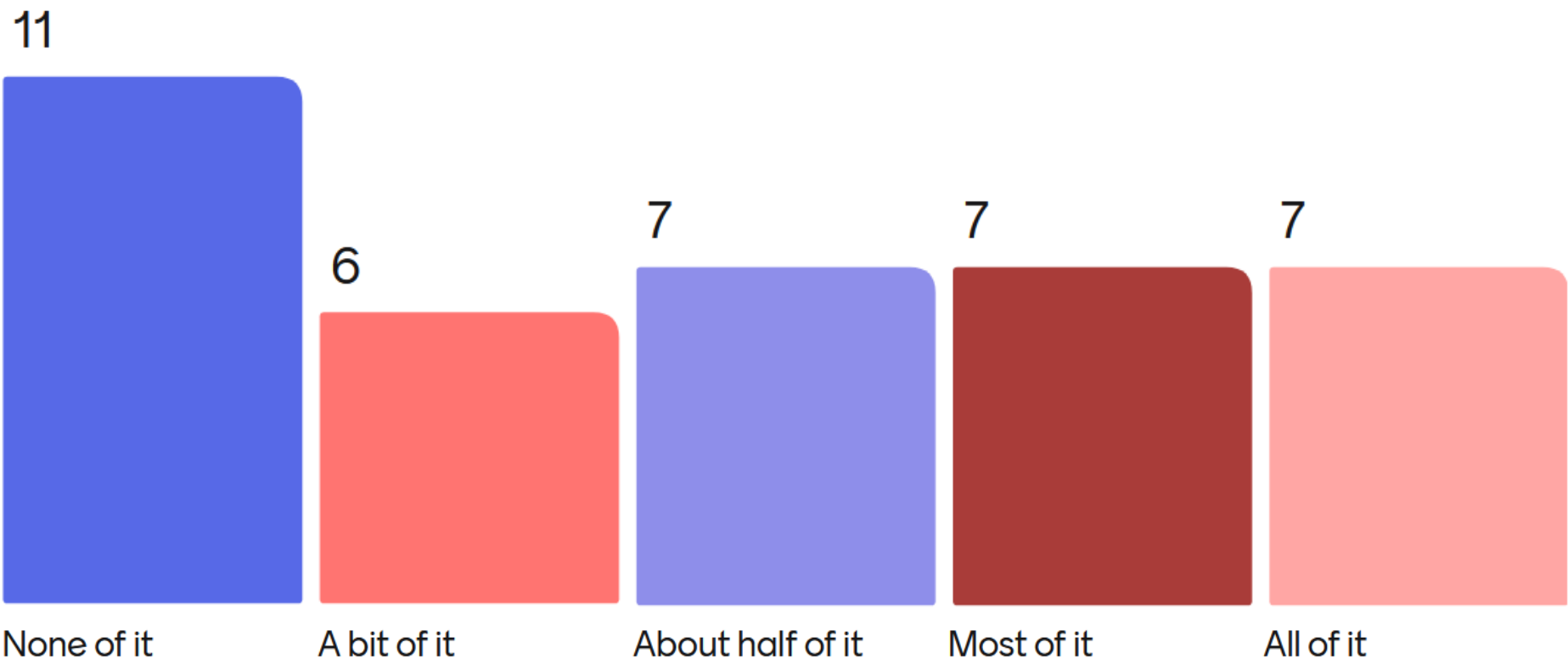


Two key messages

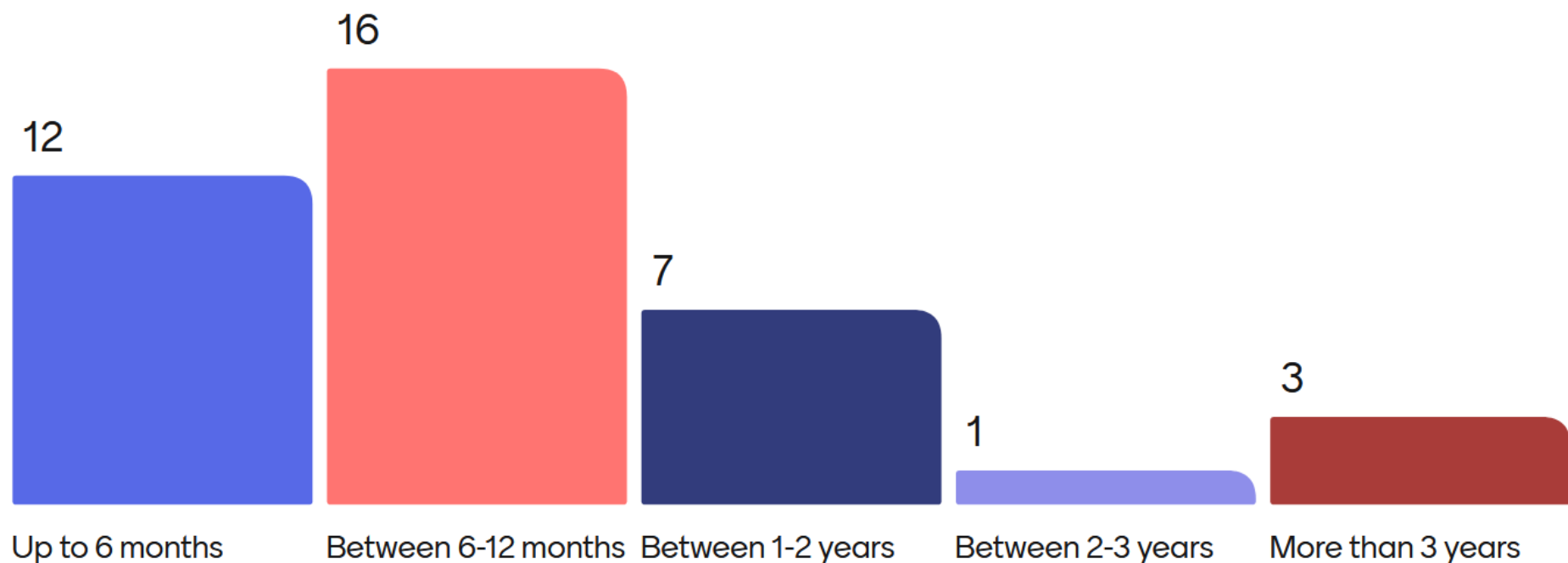
-  Maintainable code matters:
 -  our ability to continuously deliver value to our customers
 -  depends on how effectively and efficiently we can modify our code
-  Iterative, customer-focused development practices are valuable:
 -  engaging with customers throughout the development process
 -  leads to robust code that customers can maintain independently

 Ask the audience!

How much of the research software you develop do you deliver to a customer?



Thinking about your recent projects, how long do you typically develop research software before delivering it to the customer?



What learning resources (topics, delivery methods, etc.) would be most useful to you when developing research software?

Online resources we could use for in-house training.

...

sprint planning techniques

...

Examples of working with different sized teams, including single RSEs in a research group of non-RSEs

...

CW26
COLLABORATIONS
WORKSHOP
2026

CW26: <https://www.software.ac.uk/workshop/collaborations-workshop-2026-cw26>



CW26
COLLABORATIONS
WORKSHOP
2026

Strengthening the Research Software Community

CW26 Report: <https://www.software.ac.uk/blog/collaborations-workshop-2026-report>



The team!

From left to right

- Qianhui Lin
- Nicole Whippey
- Alexandra Simperler
- James Tyrrell
- Chris Wood
- Dan Brady
- Emma Hogan



What have we done so far?

- Introduced ourselves! 🎉
- Reviewed RSE SW presentation
- Discussed requirements
- Reviewed pre-existing immersive experience
- Defined personas
- Created a GitHub repository and project board
- Developed a Product Backlog (user stories)

Research Software Project Management

[Add status update](#)[Insights](#)[Workflows](#) 6[Backlog](#)[Scrum Board](#) ▾[+ New view](#)[View](#)

Product Backlog 23



This item hasn't been started

 research-software-project-management #8
Defining a Definition of Done

 research-software-project-management #4
Breaking down Product Backlog Items

 research-software-project-management #23
Running effective retrospectives

In Progress 0



This is actively being worked on

Done 1



This has been completed

 research-software-project-management #5
Create baseline personas

Tuesday, 16 June ▾

**Emma Hogan** 09:37

Hi everyone 🙌

My name is Emma Hogan, and I am a Senior Scientific Software Engineer at the Met Office and a Certified Scrum Master. I have recently been exploring how iterative, customer-focused practices can support research software development. I presented a keynote on this at the [RSE South West meeting at the University of Exeter](#) earlier this year. In addition, a small group of us discussed requirements for learning resources in this space during the hack day at [Collaborations Workshop 2026 \(CW26\)](#). We were looking for a space to continue these conversations and engage with others, so it was great to discover this channel already exists!

Following a brief chat with Sarah Jaffa (who created this channel), it appears there is strong interest in forming a SIG, but finding the time to make it happen has been a challenge.

I would be very happy to help get things moving again, if that would be useful? As a first step, perhaps we could collectively shape the Terms of Reference document, so we can define what we want from the SIG.

If you're interested in contributing, or have any initial thoughts, it would be great to hear from you! 😊

 7  2  1 

7 replies Last reply 1 month ago

The event has now passed

Registration

Only open to staff in dRTP roles within the UK higher education sector. Please see the main text for the registration links and details of the eligible dRTP roles.

Closing Date

10 Jun 2026

Registration is NOW CLOSED

Page Details

Author: Adina Rahim

Published: 8 May 2026, 10:54 a.m.

Agile Project Management Training for dRTPs

Learn practical Agile project management skills to improve how you plan, deliver, and manage research projects in digital research teams.

2 Jun 2026 09:30 — 16:30

19 Jun 2026 09:30 — 16:30

Hybrid

This is a free training programme delivered as part of a funded pilot programme evaluating Agile training for digital research technical professionals.

Supported by the DisCourSE Network, this initiative delivers hands-on Agile training for [digital research technical professionals](#) (dRTPs) across the UK higher education sector.

The programme combines research-focused workshops, Agile fundamentals, and practical GitHub tools to support Agile workflows, collaboration, and project tracking in real research environments.

<https://research-it.manchester.ac.uk/events/agile-project-management-training-for-drtps/>

Customer engagement & high-quality software



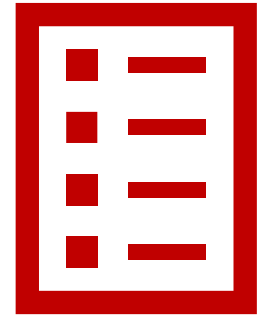
Customer engagement & high-quality software



Working agreements



Definition of Done



Sprint planning

Maintainability





Next steps



Identifying teams for
case studies



RSE Slack: join [#project-management-sig](#)



RSECon26: [Following Scrum with part-time teams](#)