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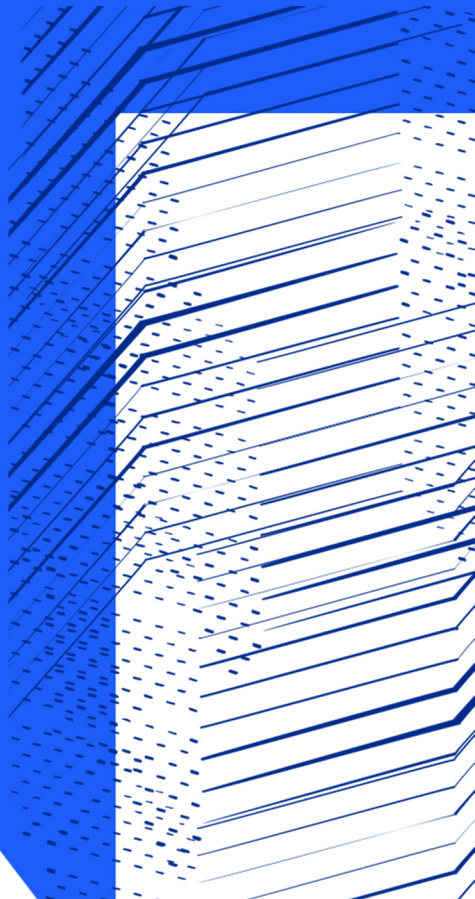
AGILITY IN MANAGING EXPERIMENT CONTROL SOFTWARE SYSTEMS



Agenda

1 What does Agile mean?

A brief description of Agile

2 Multifunctional Teams

What kind of functions are needed, and what kind of team works on the Experiment Control Software (IBEX) at ISIS

3 How the IBEX team works

The functions we perform, and how we enact frameworks that support Agile

4 What we are trying and might try next

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What does Agile Mean?

A methodology not a framework

The Agile Manifesto

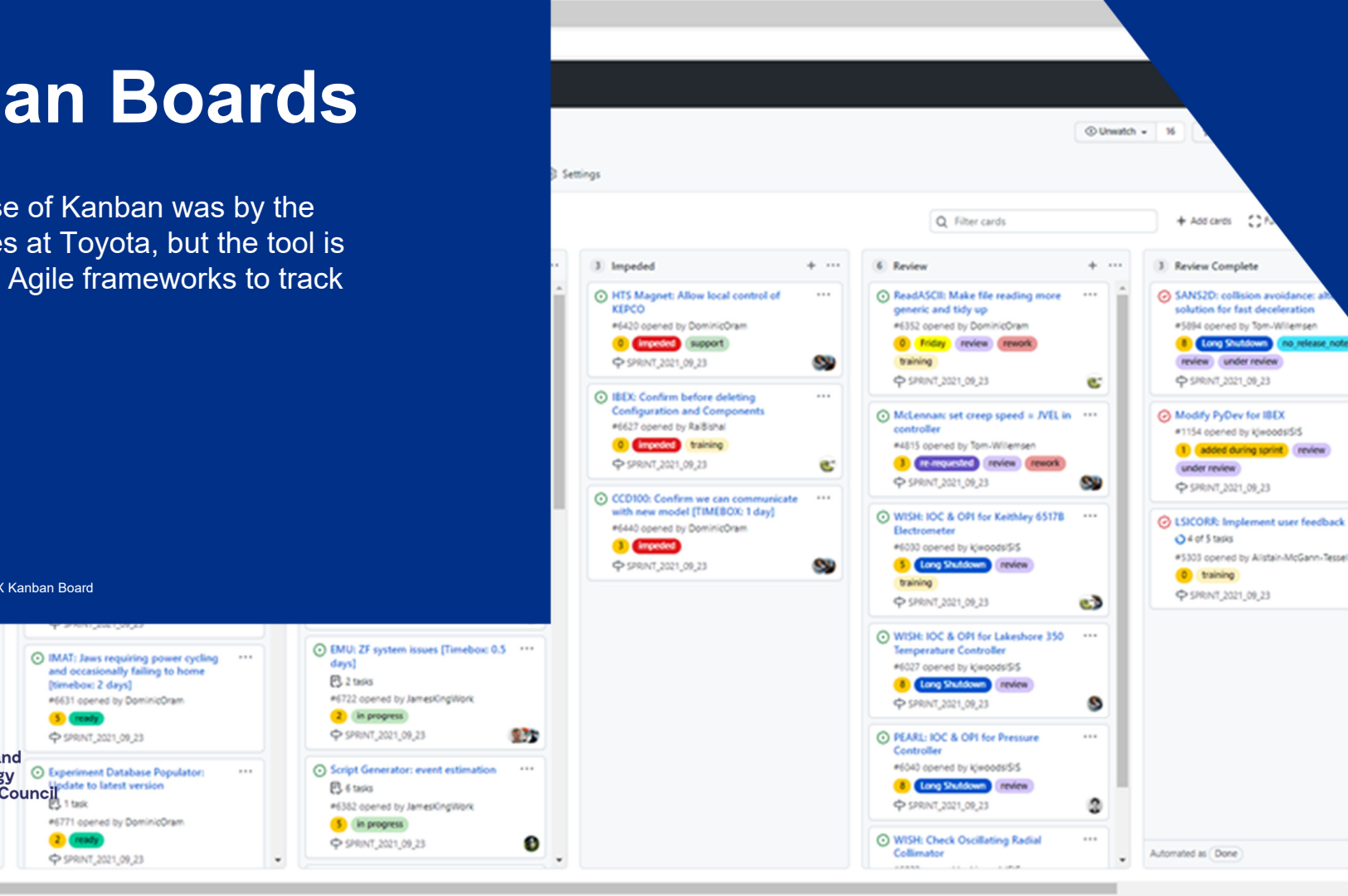
- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Link: https://agilemanifesto.org/

Kanban Boards

Initially the use of Kanban was by the assembly lines at Toyota, but the tool is used by most Agile frameworks to track progress.

Image: Screenshot of the BEX Kanban Board



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Multifunctional Teams

The families of tasks that people creating Experiment Control Software undertake

Types of Function

- Development (Dev)
  - Develop the Experiment Control Software
- Systems (Sys)
  - Keep the computers and hardware systems that the Experiment Control Software runs on running
- Operations (Ops)
  - Keep the software up to date, fix the bugs that are found
- Project Management, Admin

Challenges for Multi-functional Teams

- Context Switching
  - Between functions
  - Between tasks
  - Between projects
- Knowledge can be limited to an individual and/or shared thinly

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How the IBEX Team works

How we employ Agile frameworks

The IBEX Team - SysDevOps

We all have a hand in keeping the hardware systems connected physically to the computer, and the networks for the computers

We are all capable of development work and adding to the code base

When the ISIS Accelerator is running, and science is being done we all take on an Ops role

We get involved in all of it!

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How we are working in an Agile fashion

- Continuously meeting with the users of our systems in various ways
- Preparing a list of things to work on in a sprint (over the next n weeks)
- Meeting every day during the sprint to make sure everyone has all the support they need
- Sharing what we've done at the end of the sprint
- Considering what was good and bad and what we can do differently

How we are working with SCRUM - adaptations

- Ideal – able to release and deploy after every sprint ends
  - Reality – we can only deploy at certain times, we also demonstrate the system to the scientists who use it most at that point in time
- Ideal – representation of the scientists at every meeting
  - Reality – team members meet with them and variously highlight the work that needs doing
- Ideal – only the work agreed up front gets done in the sprint
  - Reality – Operations work can't be predicted, we accept this and add it in as required

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What we are trying and might try next

The only constant in life is change

- Heraclitus (attributed)

Things that are being tried

- Making sprints variable lengths
  - Less meeting pressure when Ops tasks can be a heavy workload
- Individuals focussing on an area of work (e.g. one science area) each sprint
  - Changes the context switching
  - Allows for more responsiveness when undertaking an area of work
  - May allow some lower priority items to be achieved for that area of work
- Different ways of providing a prioritised list of tasks that need doing
  - Looking to other Agile frameworks, especially the scaled ones

Conclusion

As a methodology Agile is valuable, whichever framework is being used (Agile or non-Agile).

Kanban boards are a good tool to track the status of a task when it has a progression to undertake.

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