

Our technical implementation of Scrum and Kanban

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Disclaimer & Software note

- All presenters are employees of Novo Nordisk A/S.
- Views and opinions expressed are those of the presenters and not necessarily Novo Nordisk A/S.
- Neither Novo Nordisk A/S nor the presenters have any financial interests in any of the software mentioned during the presentation.

Why Scrum and Kanban?



Improved
overview of
tasks



Improve our
communication



Improve our
ability track
progress



Improve the
information
availability



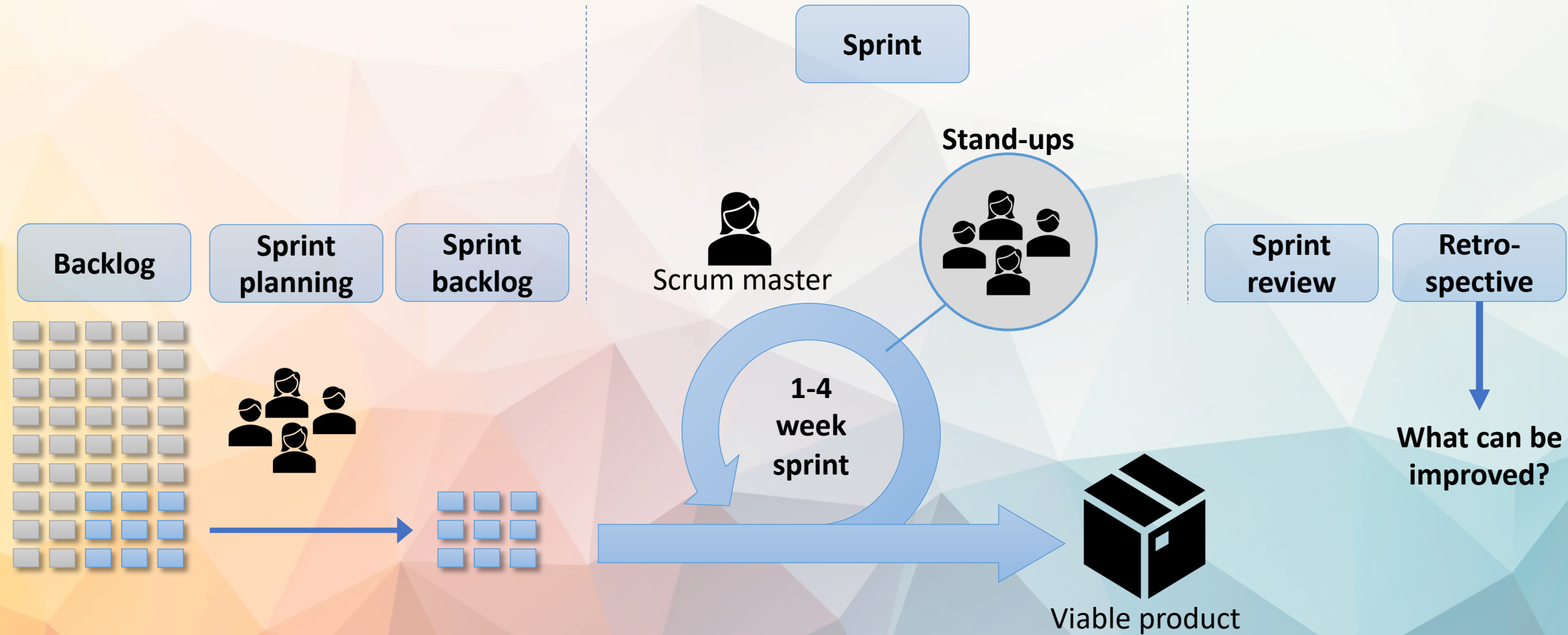
Do this while
working in a
global team



Ultimately work
smarter and
more efficient

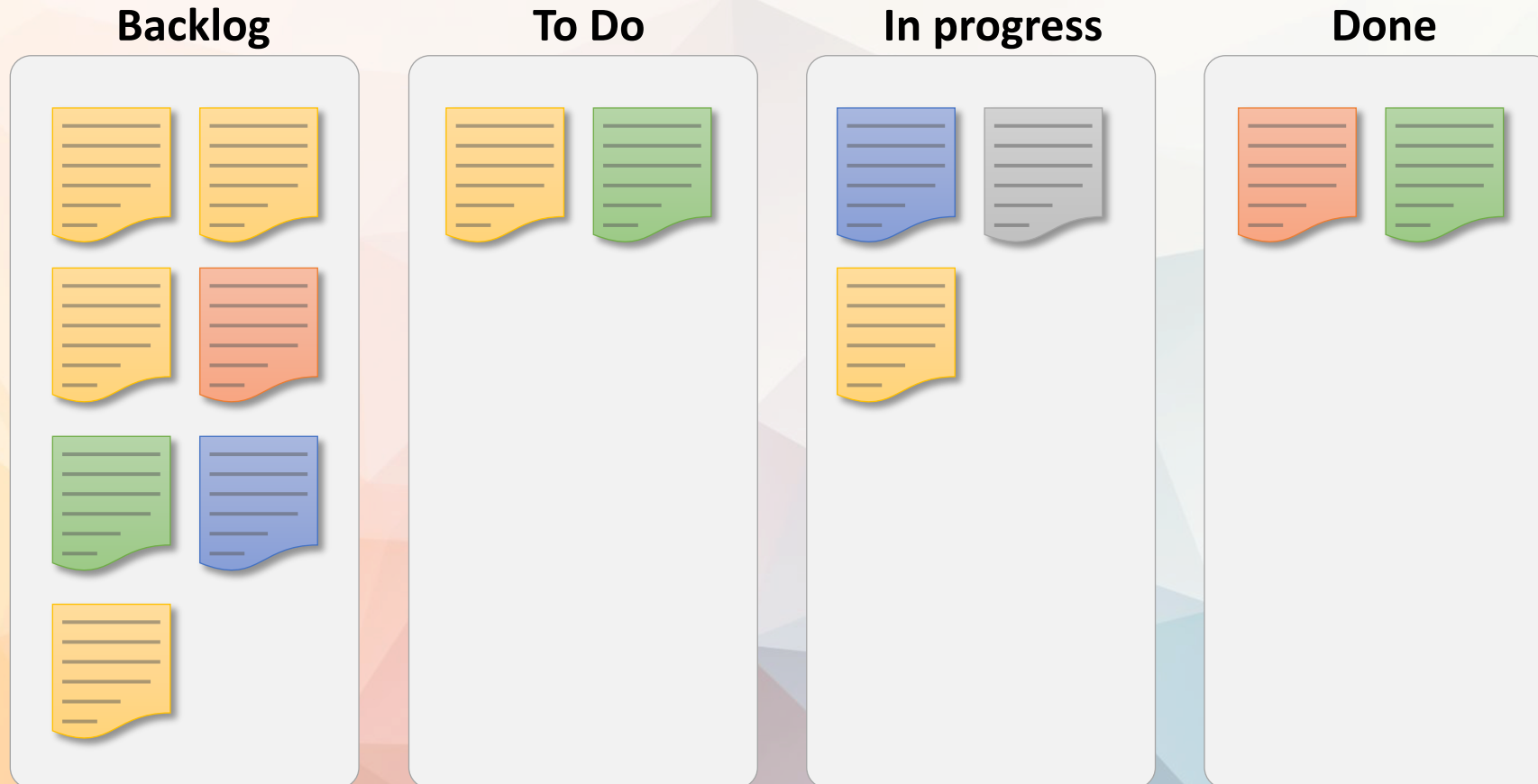
Scrum – in brief

Adopting some – but not all – elements of Scrum/Kanban



Kanban – in brief

Adopting some – but not all – elements of Scrum/Kanban



A visual system for tracking progress of work
Time-frame is less strict compared to Scrum

Scrumban

Combining features from both agile methodologies

Backlog



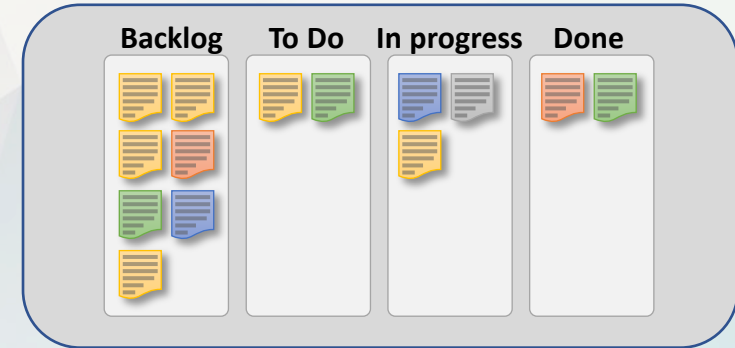
Stand-ups



Retrospective



Kanban board



Traditionally – Excel for project management



Good for the initial setup and for listing required programs



Easy to compare entries across programs



Everyone are familiar with Excel



Poor for communication



Although issues can be stored its not easy to track their progress



Limited visual overview of individual programs?

TFL (Tables, figures and listings)

Name	Title	Footnote	Program	Author
tsfreason	Reason for screening failure - summary - screening failures	#PERCENT_01 #N_01	tsfreason.R	ZSUK
tsldemocatsas	Demography and baseline characteristics - categorical - summary - safety analysis set	#PERCENT_01 #N_01	tsldcatdemo.R	MFDE
tsldemocontsas	Demography and baseline characteristics - continuous - summary - safety analysis set	#N_01 #SD_01 #BMI	tsldcontdemo.R	MFDE
tsldiabsas	Baseline diabetes characteristics - summary - safety analysis set	#FPG_01 #HBA1C_01	tsldiab.R	MFDE
tcmbasediabregsas	Diabetes regimen at screening - summary - safety analysis set	#PERCENT_01 #N_01	tcmbasediabreg.R	MFDE
tcmbasediabtrtsas	Diabetes treatment at screening - summary - safety analysis set	#PERCENT_01 #N_01	tcmbasediabtrt.R	MFDE
tcmbasediabdoseas	Daily dose of diabetes treatment at screening - summary - safety analysis set	#N_01 #SD_01 #OAD	tcmbasediabdose.R	ZSUK
tecplanbasaldosesas	Planned basal insulin dose - summary - safety analysis set	#N_01 #SD_01	tecplan.R	ZSUK
tmhmedhistsas	Medical history at screening - summary - safety analysis set	#PERCENT_01 #N_01	tmh.R	MFDE
tmhconcomillsas	Concomitant illness at screening - summary - safety analysis set	#PERCENT_01 #N_01	tmh.R	MFDE
tcmothrbasesas	Concomitant medication at screening - summary - safety analysis set	#PERCENT_01 #N_01	tcn.R	KTQN
tcmothrafrsas	Concomitant medication initiated after screening - summary - safety analysis set	#PERCENT_01 #N_01	tcn.R	KTQN
thungindvviewfnc	Overview of hypoglycaemia events - summary - full analysis set	Number of subjects	thungindv.R	GPB

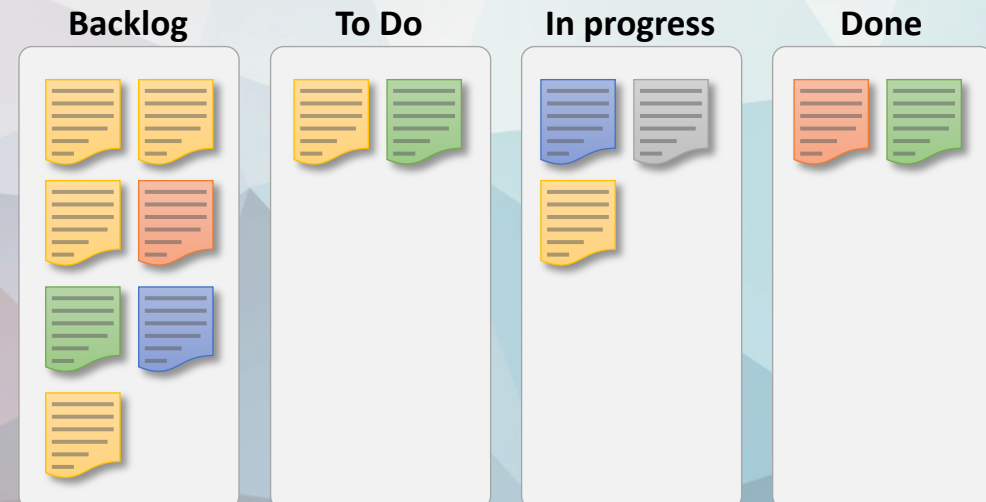
Non-TFL programs (ADaM, Metadata, Macros)

Update	Directory	Program	Review level	Author	Reviewer	Review date
	program/adamprog	mk010adtrtev.sas	Parallel-reviewed	KTQN	UAK	2021-12-1
	program/adamprog	mk020adtrvis.sas	Parallel-reviewed	KTQN	UAK	2021-10-1
	program/adamprog	mk030adsl.sas	Parallel-reviewed	YNKS	UAK	2021-11-2
	program/adamprog	mk040adlb.sas	Peer-reviewed	KTQN	VRQY	2022-01-2
	program/adamprog	mk050adv.sas	Peer-reviewed	KTQN	UAK	2021-10-2
	program/adamprog	mk060adae.sas	Parallel-reviewed	KTQN	VRQY	2022-01-2
	program/adamprog	mk070adhypo.sas	Parallel-reviewed	KTQN	UAK	2021-06-1
	program/adamprog	mk090adec.sas	Peer-reviewed	KTQN	YNKS	2021-12-0
	program/adamprog	mk100admh.sas	Peer-reviewed	KTQN	UAK	2021-11-0
	program/adamprog	mk110adcm.sas	Peer-reviewed	KTQN	UAK	2021-10-1
	program/adamprog	mk120adeg.sas	Peer-reviewed	KTQN	UAK	2021-10-2
	program/adamprog	mk130adeg.sas	Peer-reviewed	YNKS	UAK	2021-10-2

The hybrid version

- Excel is good for creating the backlog (and controlling metadata)
- Kanban is good for creating a visual overview of the items.

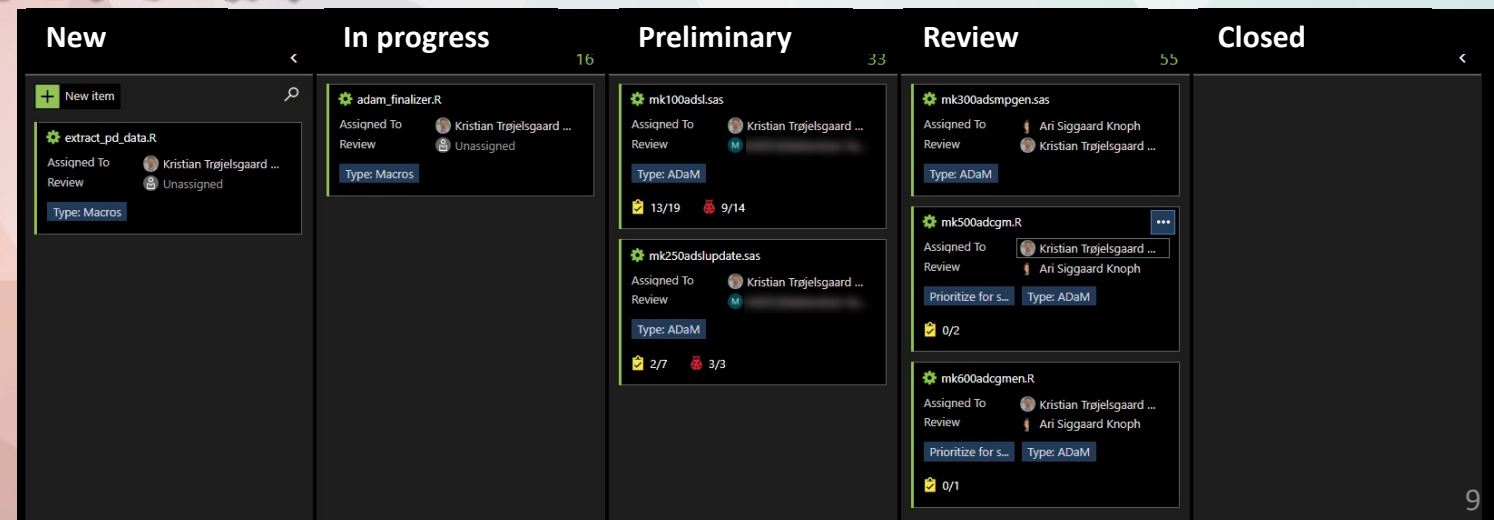
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	program/adamprog	mk030adsl.sas	Parallel-reviewed	YNKS	UAK	2021-11-2
	program/adamprog	mk040adlb.sas	Peer-reviewed	KTQN	VRQY	2022-01-2
	program/adamprog	mk050adv.sas	Peer-reviewed	KTQN	UAK	2021-10-26
	program/adamprog	mk060adae.sas	Parallel-reviewed	KTQN	VRQY	2022-01-20
	program/adamprog	mk070adhypo.sas	Parallel-reviewed	KTQN	UAK	2021-06-1
	program/adamprog	mk090adec.sas	Peer-reviewed	KTQN	YNKS	2021-12-0
	program/adamprog	mk100admh.sas	Peer-reviewed	KTQN	UAK	2021-11-0
	program/adamprog	mk110adcm.sas	Peer-reviewed	KTQN	UAK	2021-10-1
	program/adamprog	mk120adeg.sas	Peer-reviewed	KTQN	UAK	2021-10-2



The hybrid version

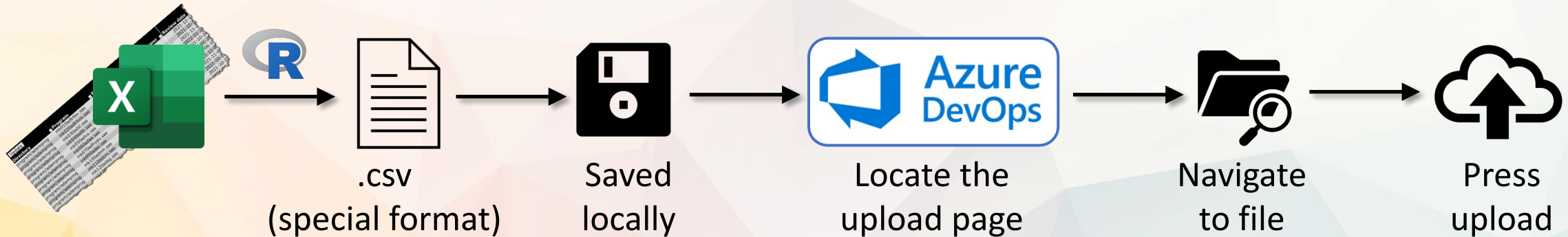
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	program/adamprog	mk110adcm.sas	Peer-reviewed	KTQN	UAK	2021-10-1
	program/adamprog	mk120adeg.sas	Peer-reviewed	KTQN	UAK	2021-10-2



R-script for uploading

1. Version – Manual upload process



Preview

ResultsBoardExport

 Save items

 Import from CSV

 Export to CSV





ID

Work Item Type

Title

Path

Review Level

Deliverable

 Trial ID: XXXX



non TFL

 dve_framework

program/DDMprog

non TFL

 dve_lab_rang_import.sas

program/DDMprog

TFL

 f_ae_most_freq.sas

program/statprog

Peer-reviewed

Output

 f_ae_most_freq5_2_1_sas

Output

 f_ae_most_freq5_2_2_sas

Output

 f_ae_most_freq5_2_3_sas

Output

 f_ae_most_freq5_2_4_sas

Output

 f_ae_most_freq5_2_5_sas

Output

 f_ae_most_freq5_2_6_sas

Output

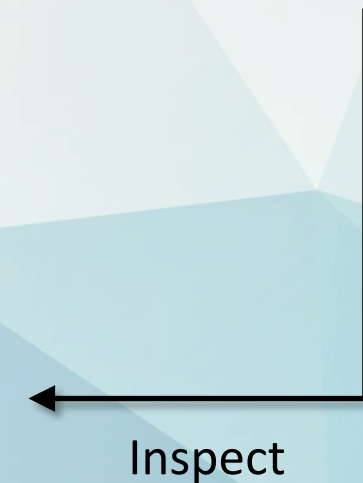
 f_ae_most_freq5_2_7_sas

Output

 f_ae_most_freq5_2_8_sas

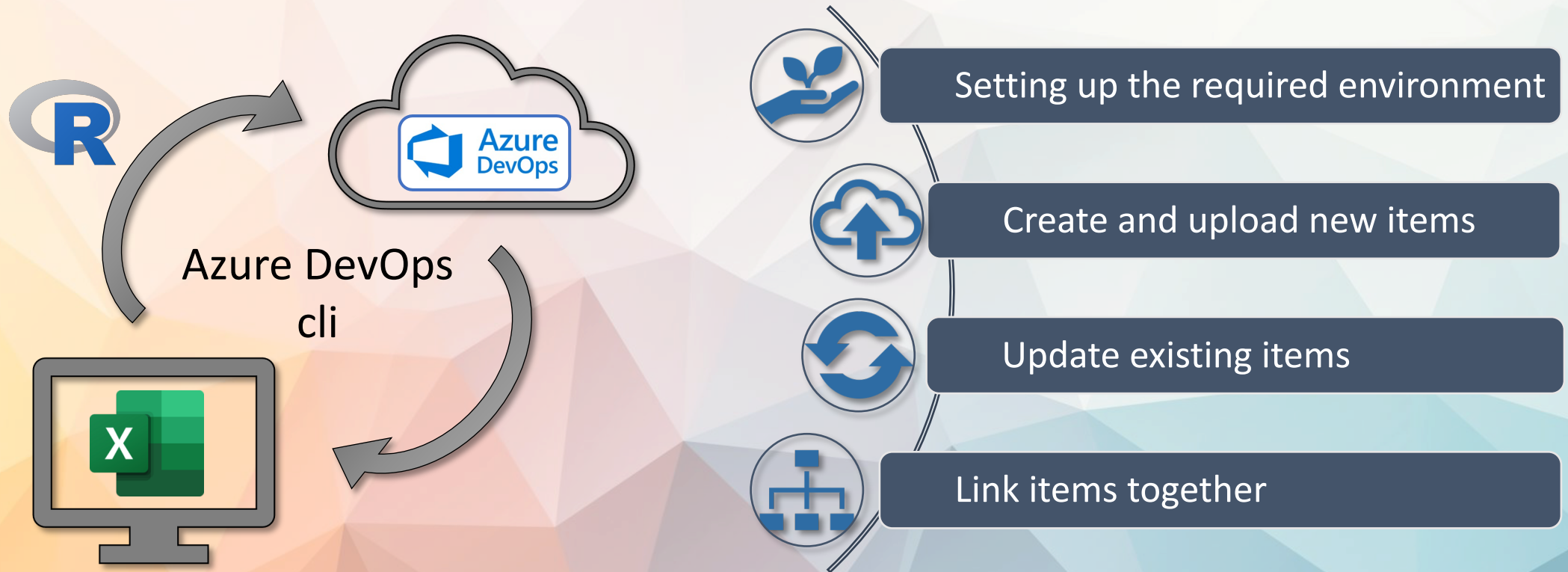
Output

 f_ae_most_freq5_2_9_sas

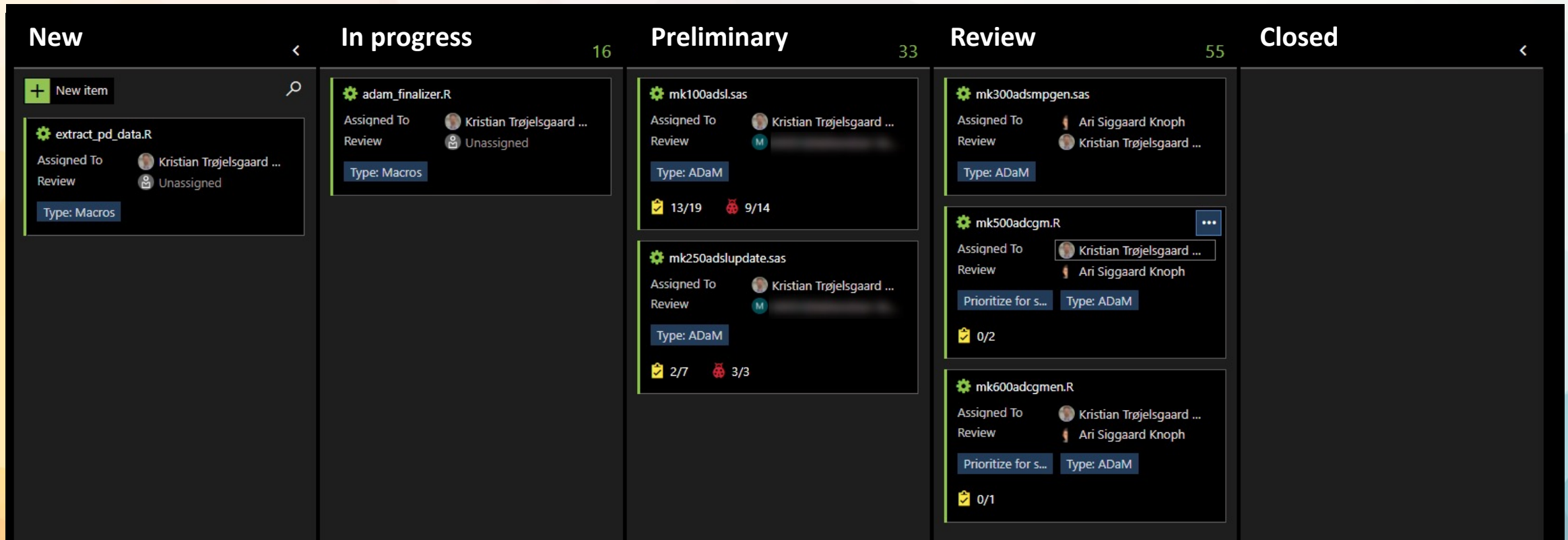


R-script for uploading

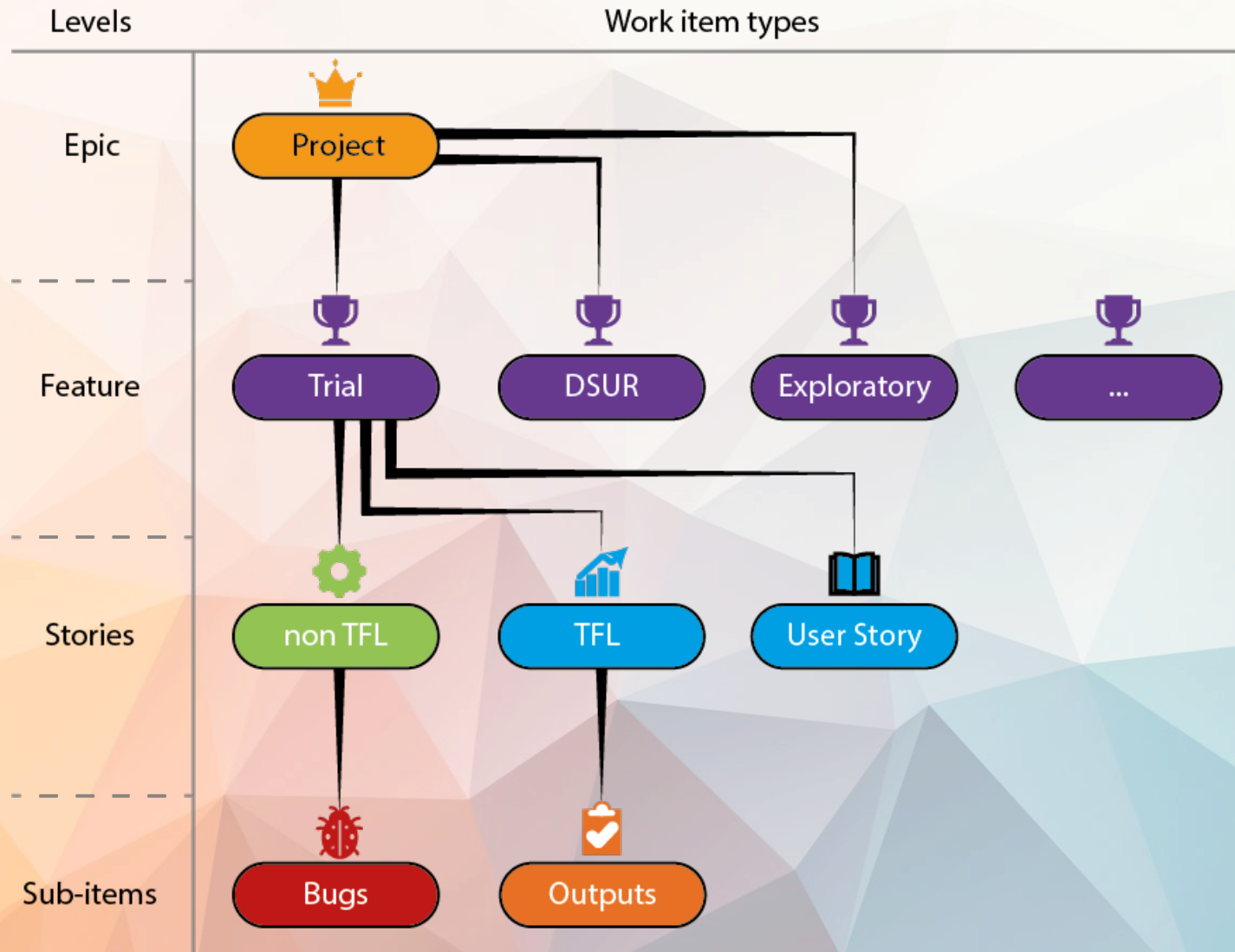
2. Version – Utilize R to communicate directly with Azure DevOps



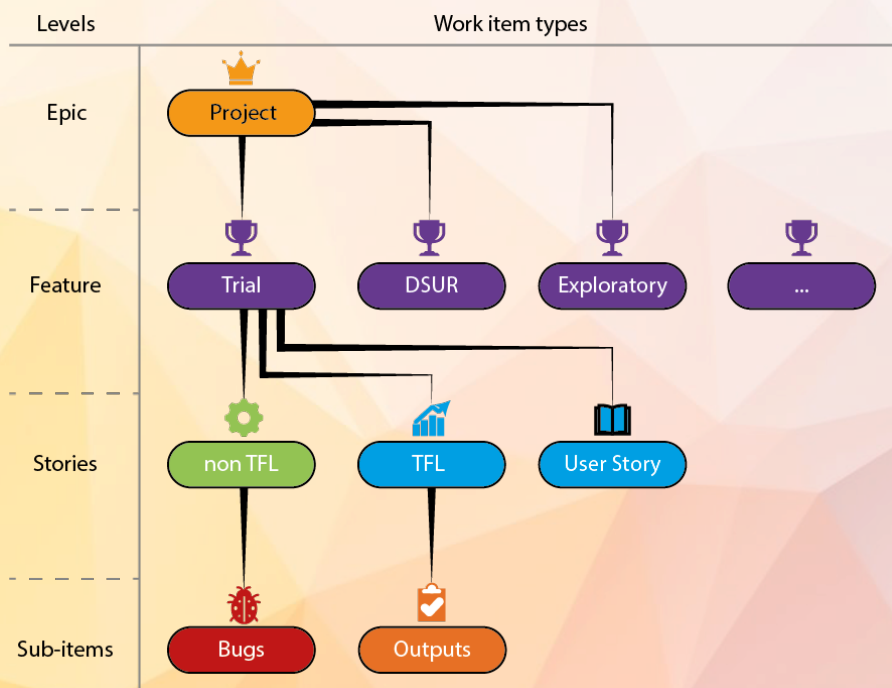
Example of a Kanban board



Organization of work items



Organization of work items



TFL

 **461122** tsumnum.R

Assigned ...  JL Jonas Larsen

Review  SP Suohang Poo...

Review L... Peer-reviewed

Finish Date 15-Mar-22

 0/5  1/1

 Add Bug

☒  Need to use AVISIT1 instead of AVISIT

☐  tlbbiosas

☐  tlblipasas

☐  tvssas

Feature

 **224415** Trial XXXX

Deadline

Statistician  KT Karen Marg...

Program...  Unassigned

 3/4  26/47

 9/46

 Add User Story

☐  MMA trial design needs update

☒  PLACE setup

☒  Specification ADRG

☒  CDISC utilities setup for specification define.xml

☐  mk110adcm.sas

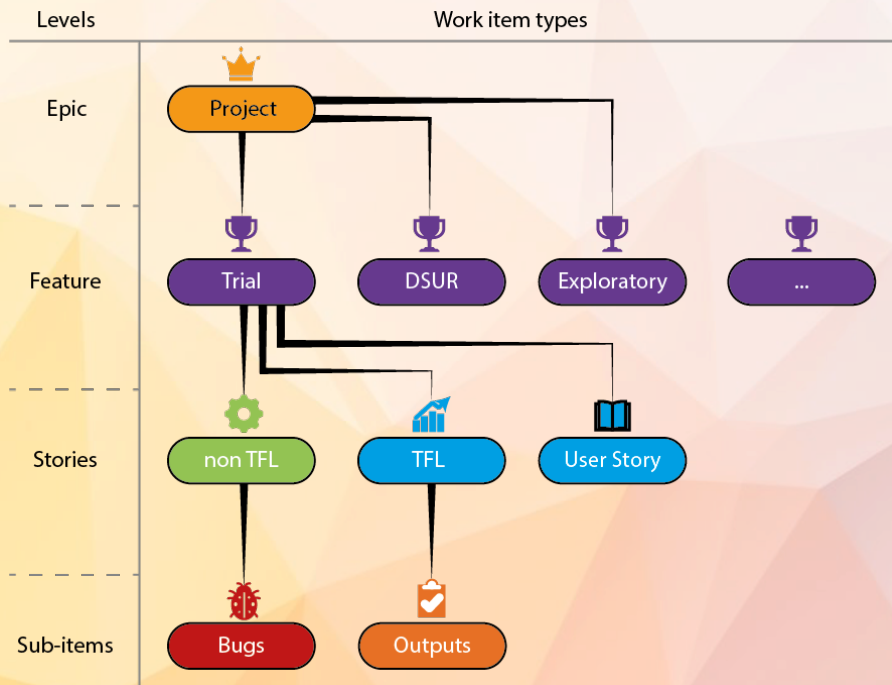
☐  mk400adpdc.sas

☐  mk070adhypo.sas

☐  mk771axe.sas

☐  mk410adpdp.sas

Overview at project level



Title	Progress by Stories	Progress by Output	Progress by Bug
> Trial 1	23%	62%	52%
> Trial 2	5%	14%	69%
> Trial 3	97%	86%	90%
> Trial 4	66%		
> Trial 5	47%		
> Trial 6	66%		
> Trial 7	50%		
> Trial 8	75%		
> Expl. 1	66%		
> Expl. 2	39%	17%	76%
> Expl. 3	87%	33%	93%

A closer look

- Elements inside

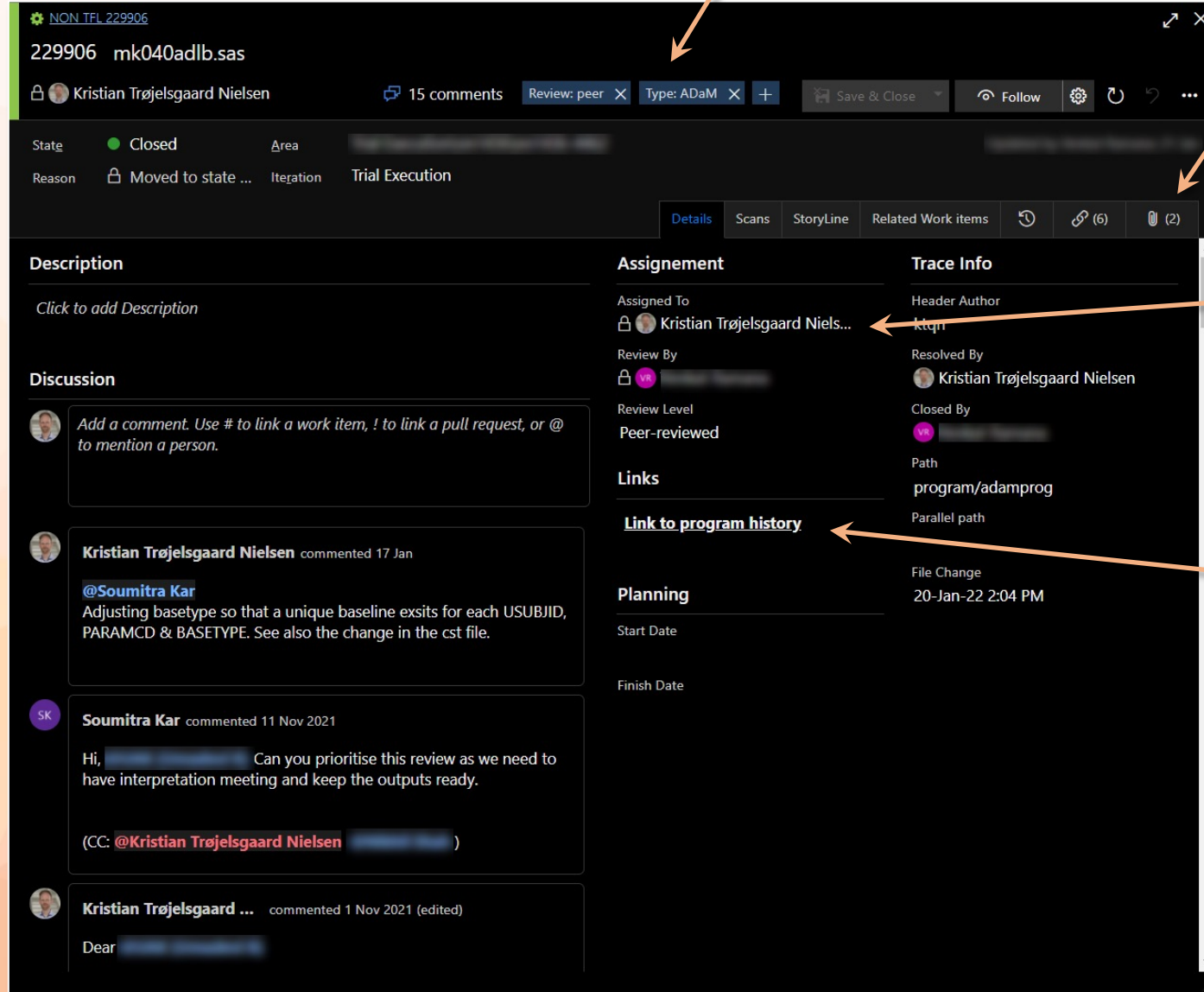
Tags
Good for filtering

Adding attachments

People assigned

Discussion

Link to git

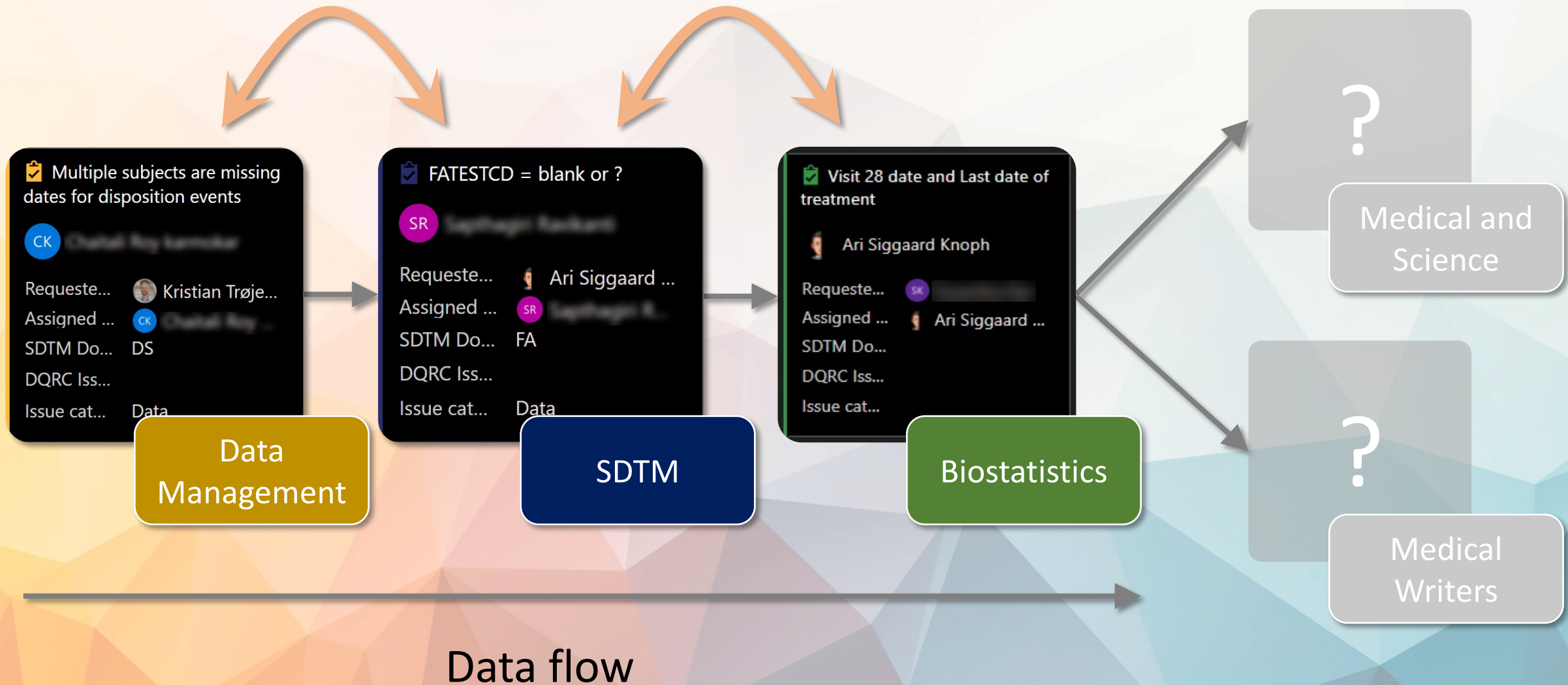


The screenshot displays a work item interface for item 229906, titled 'mk040adllb.sas'. The interface is divided into several sections:

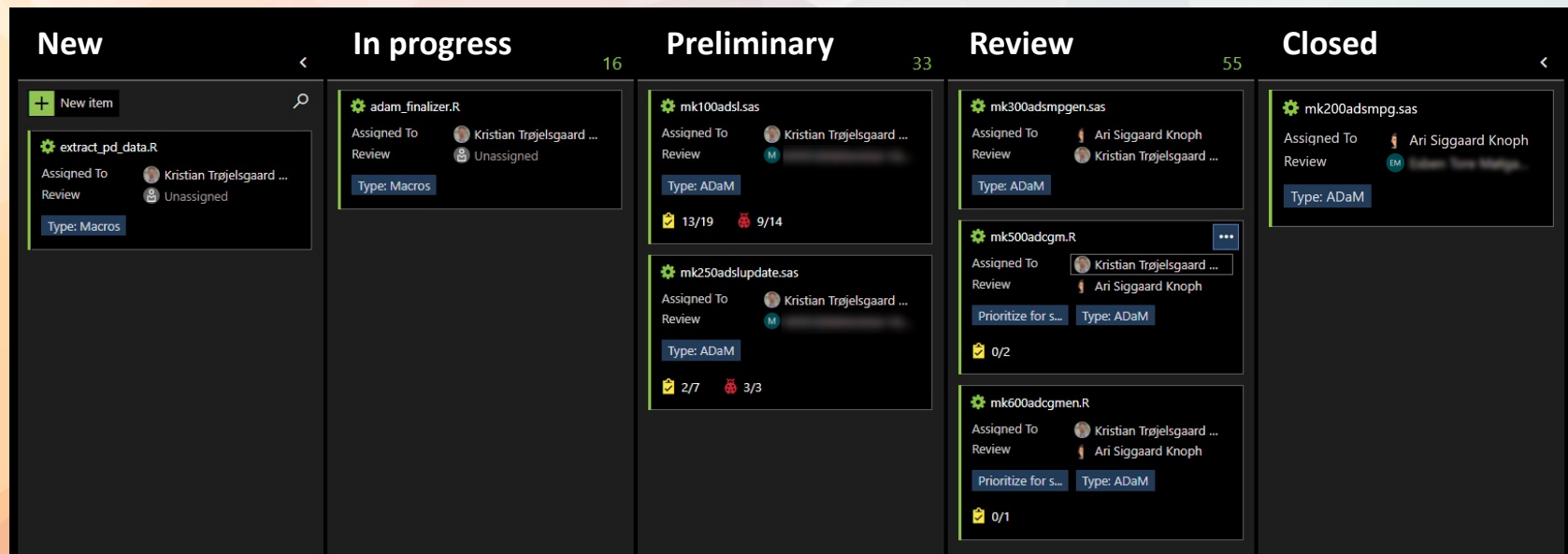
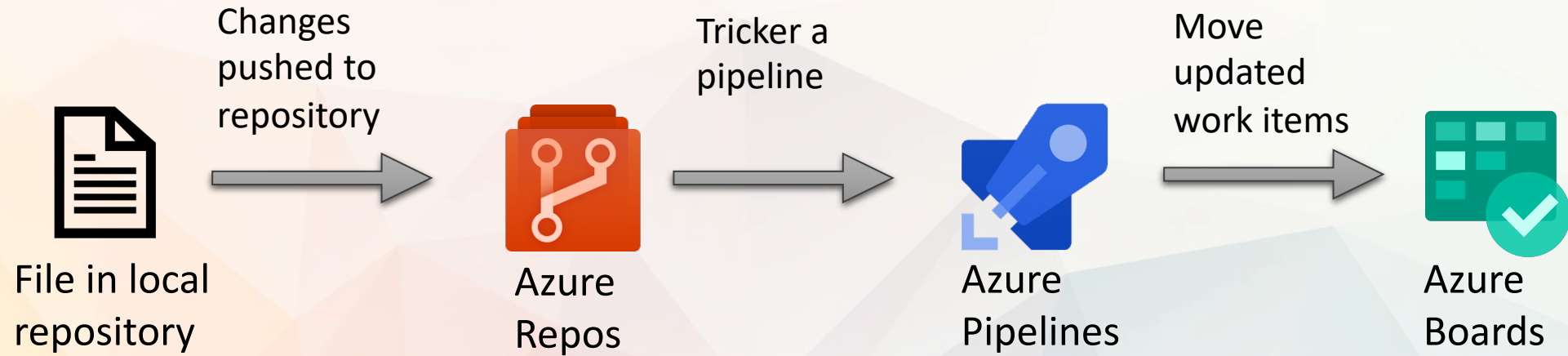
- Header:** Shows the item ID, title, owner (Kristian Trøjelsgaard Nielsen), and a status of 'Closed'. It also includes a 'Reason' field with the value 'Moved to state ... Iteration Trial Execution'.
- Tags:** Located at the top right, it shows 'Review: peer' and 'Type: ADaM'.
- Description:** A section on the left with a 'Click to add Description' prompt.
- Discussion:** A section on the left containing three comments. The first comment is from Kristian Trøjelsgaard Nielsen, dated 17 Jan. The second is from Soumitra Kar, dated 11 Nov 2021, mentioning a review and a meeting. The third is from Kristian Trøjelsgaard Nielsen, dated 1 Nov 2021, starting with 'Dear ...'.
- Assignment:** A section on the right showing 'Assigned To' as Kristian Trøjelsgaard Nielsen, 'Review By' as a user with a purple icon, and 'Review Level' as 'Peer-reviewed'.
- Trace Info:** A section on the right showing 'Header Author' as Kristian Trøjelsgaard Nielsen, 'Resolved By' as Kristian Trøjelsgaard Nielsen, 'Closed By' as a user with a purple icon, 'Path' as 'program/adamprog', and 'Parallel path' as 'Link to program history'.
- Planning:** A section on the right showing 'Start Date' and 'Finish Date'.

Kanban version 2.0

Kanban Version 2.0 – Shared issue log

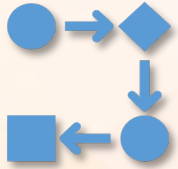


Kanban Version 2.0 – Integration with git



Conclusion –

Are we working smarter and more efficient?



Kanban part

Excel for creating the backlog
R for **automated upload** to an online Kanban board:

- ✓ Increased overview of ongoing tasks
- ✓ Fewer emails (Communication inside work items)
- ✓ Information transparency
- ✓ Easier for people to step in on ongoing tasks



Scrum part

- ✓ **Stand-ups** to remove impediments (use Kanban to get overview)
- ✓ **Retrospective** – have led to several changes in our ways of working



Additional

- ✓ Several everyday tasks collected in one tool
- ✓ Work items and repository is linked (automatic change of status)
- ✓ Shared issue log with stakeholders
→ Fewer emails
→ Higher transparency



Agile Methods



Technology

Thanks for listening

Acknowledgement

Steffen Falgreen Larsen

Tobias Krøgholt

Bo Sølgaard Andersen

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