Launching a Release Train

a SAFe Early Adopter Report

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C4SKA 2019
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Rialto 2017-2020

1. Rialto 2017-2018 - federal grant by DIIS:
   "Finalising the SDP Design and Preparing for SKA Construction"
   launched ART in Nov 2018
2. Rialto 2 2019-2020: SKA ad hoc grant

Rialto as in Ponte di Rialto in Venice:

- bridges extended precon with next SKA phases,
- integrates DALiuGE with ASKAPsoft and
- spans data flow design to SKA Regional Centres

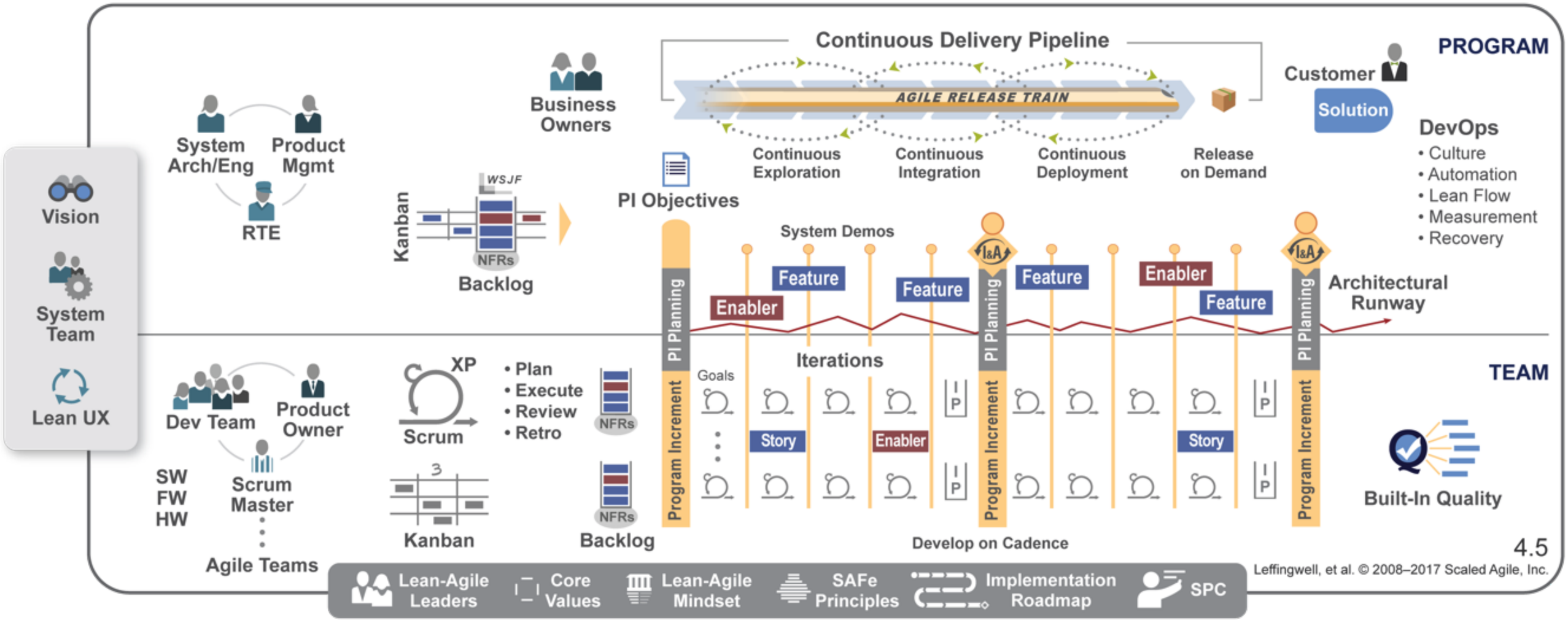
Training - Certification

Roles of (former SDP) Team Members

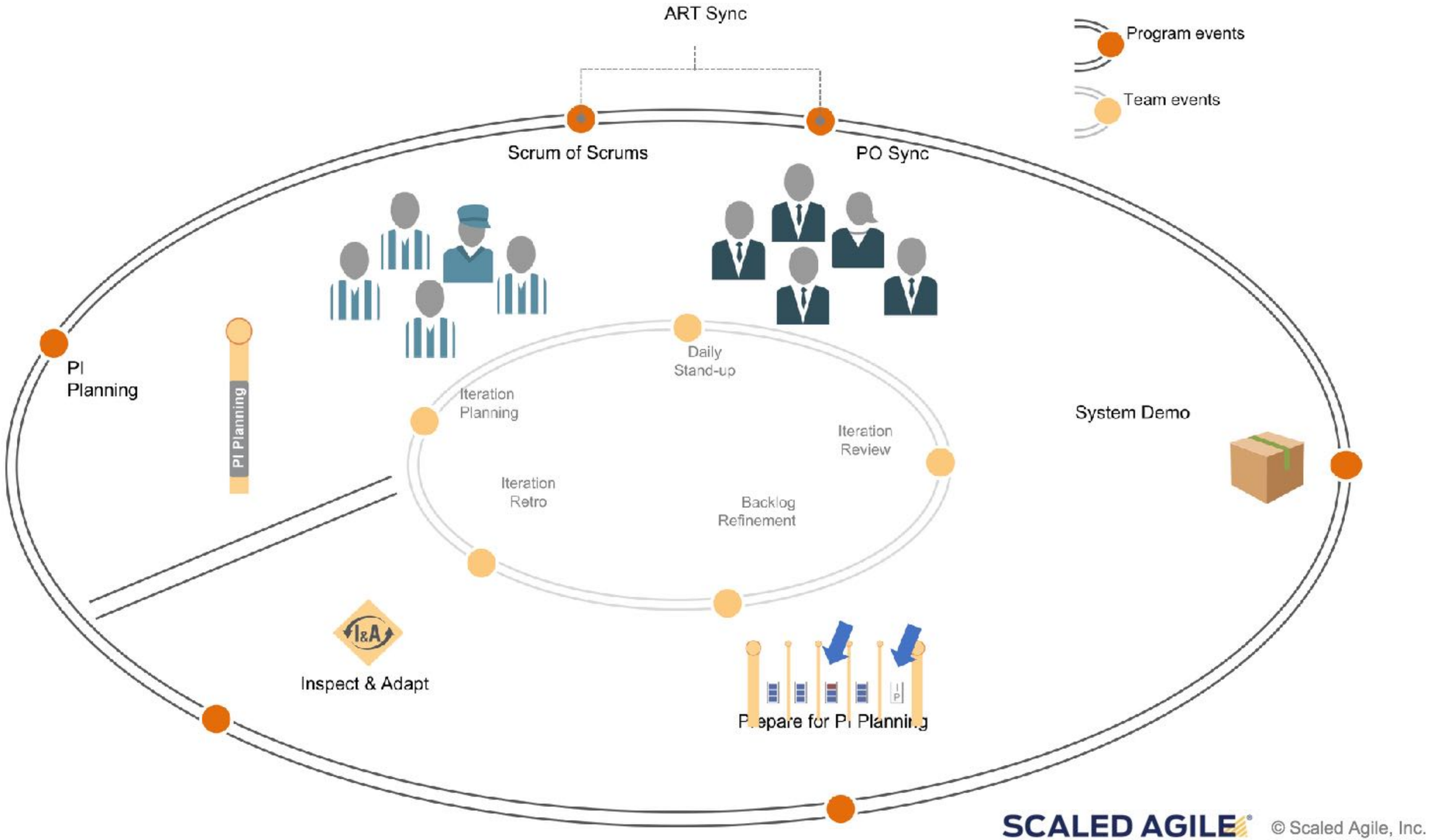
Name	Responsibility/Specialisation	Primary SAFe Role	
A. Wicenec	Head of Data Intensive Astronomy (Chief Investigator)	Business Owner	ICRAR
M. Dolensky	Technical Project Management, Computer Scientist	Product Management	
R. Dodson	Radio Interferometric Methods and Calibration	Subject Matter Expert	
C. Wu	Execution framework, Data Management and Analysis	Product Owner	
K. Vinsen	Machine learning and Data Intensive Research	Developer	
M. Boulton	Systems Engineering and IT Management	Shared Services	
D. Pallot	Software Engineering and System Administration	Developer	
R. Tobar	Software Engineering	System Team	
L. Quartermaine	Project Management	Release Train Engineer	
V. Ogarko	ASTRO3D Data Scientist	Developer	
JC Guzman	ATNF Software and Computing Group Leader. Project Management, Software Architecture and Engineering	System Architect	CSIRO
D. Mitchell	Radio Interferometry Calibration and Imaging	Product Owner	
S. Ord	Radio Interferometry Calibration and Imaging	Scrum Master	
M. Voronkov	Radio Interferometry Calibration and Imaging	Subject Matter Expert	
N. N.	Computing Scientist	Developer	

Individuals serve in secondary roles: pick up tasks during iteration planning, perform tests, improve DevOps etc.

SAFe *Essentials Flavour*



Meeting Schedule



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System Team Agenda

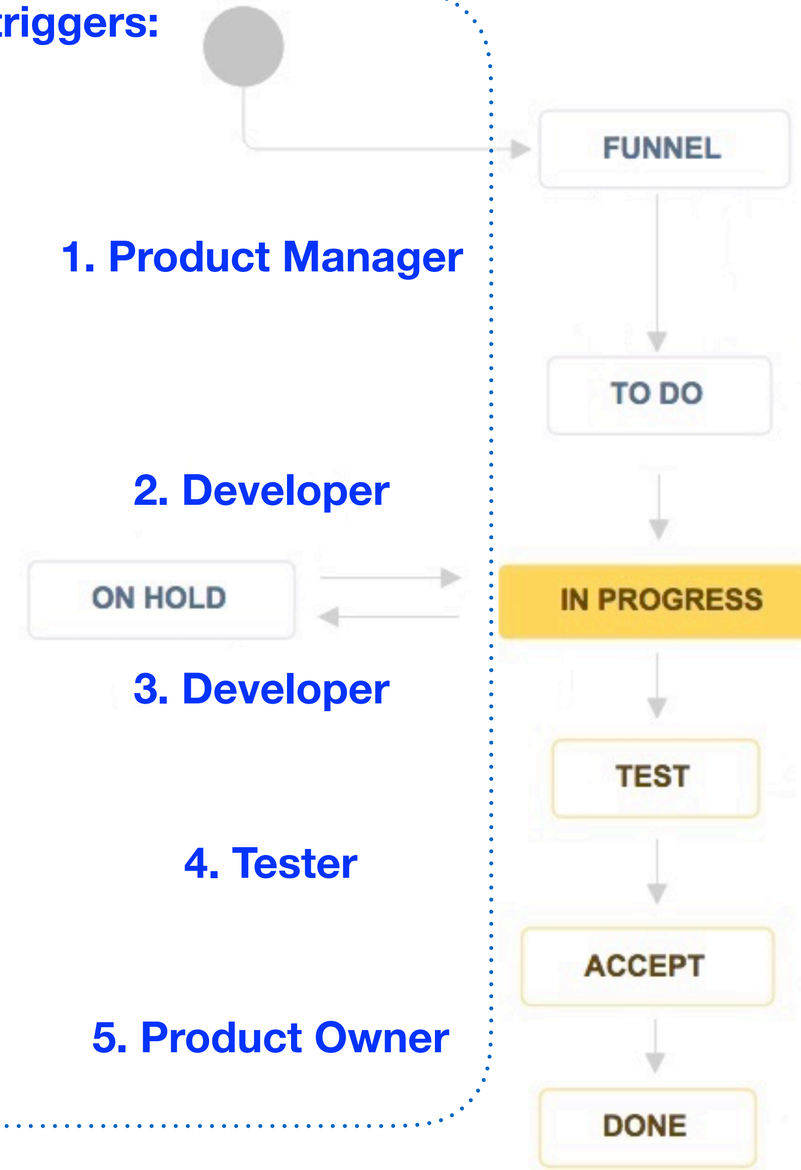
- roles: Solution Architect and System Engineers
- facilitate system demo
- support achieving DoD
- provide tooling for continuous delivery pipeline, deployment and release on demand
- optimal velocity means striking balance between team test effort and system level integration effort

Tools

- Jira ticketing; Portfolio for Jira
- Confluence for sharing notes
- Github
- Travis CI
- ReadTheDocs
- VM instance for system demo
- …

Jira Workflow (of a *Story*)

Who triggers:



1. Product Manager
2. Developer
3. Developer
4. Tester
5. Product Owner

Status vs Meeting:

PI Meeting

Iteration Planning

Daily Stand-Up

Daily Stand-Up

System Demo

Backlog Management

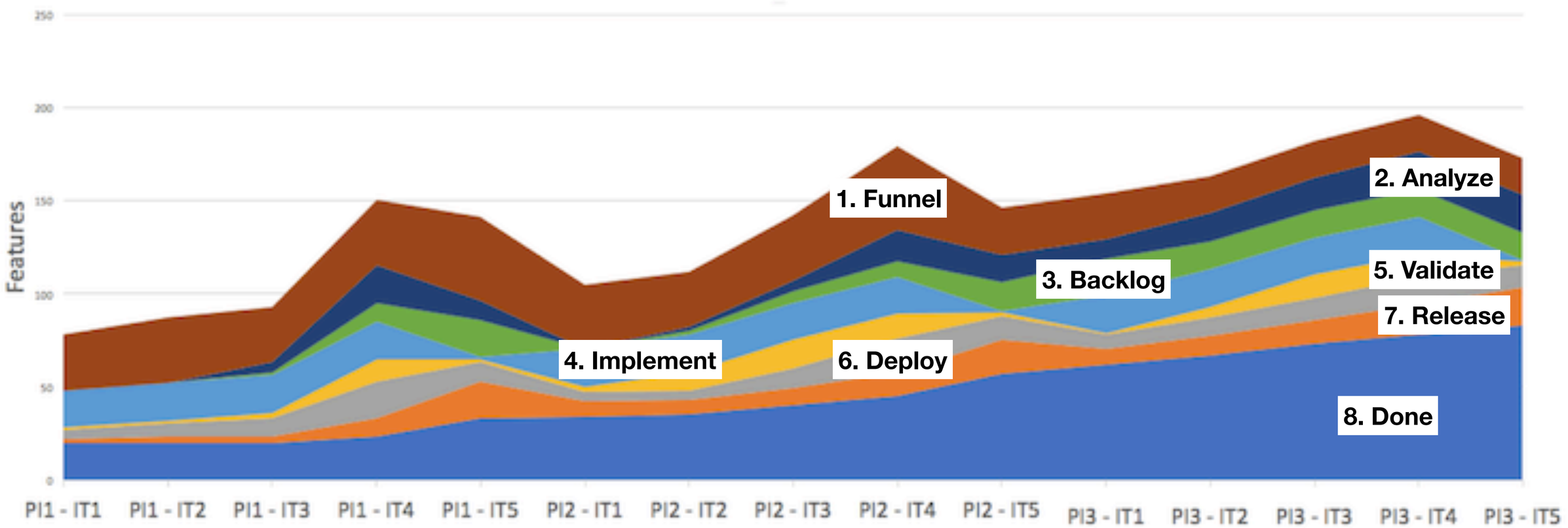
- Bootstrapping: Value Stream Workshop prior to 1st PI Planning Meeting
- Product Management has content authority at Program level (Funnel)
- Product Owners have content authority at Team level
- continuous reevaluation: backlog refinement, PO-Sync meetings
- Weighted Shortest Job First (WSJF) method for prioritisation
  - method ignores sunken cost
  - business value requires workaround in non-commercial context

Definition of Done (DoD at Story level)

- Story (Jira) satisfy acceptance criteria, NFRs
- Artefacts are under version control
- No must-fix defects
- Unit tests coded, automated where practical and passed
- Story demoed | Spike presented to the team

  - => Goal: Acceptance by Product Owner

Metrics: e.g. Cumulative Flow Diagram



Team velocity charts etc are useful to track performance and improve; avoid blame game.

Observations, Limitations, Remarks I

- lean principle:
  - minimal viable product increments
  - start lightweight process and if - and only if - needed to improve the product then augment
  - limiting W.I.P. can be tricky
- team:
  - meetings: got more interactive, shorter, and better balanced across participants; improved coherence
  - team members are more willing to step in and take responsibility

Observations, Limitations, Remarks II

- geographic dispersion: unavoidable; reduces efficiency when planning and executing
- performance metrics:
  - automated charting assumes accurate, up-to-date inputs
  - charts don't replace daily stand-up attendance
  - avoid overinterpreting charts with huge systematic deficiencies; focus on incresasing predictability and DevOps

Observations, Limitations, Remarks III

- methodology makes assumptions: about having a monopoly on processes and people allocation
- system team: incrementally build runway; automate and improve product quality
- multiple terminologies: SAFe, SEI, NEC4
- backlog:
  - WSJF backlog prioritization lacks commercial context
  - detailed backlog is paramount for meaningful PI meeting
  - clear product vision (SOW) is very important to establish culture including good definition for DoD

Implementation Roadmap