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Agile Framework as a key to Software Development and Delivery

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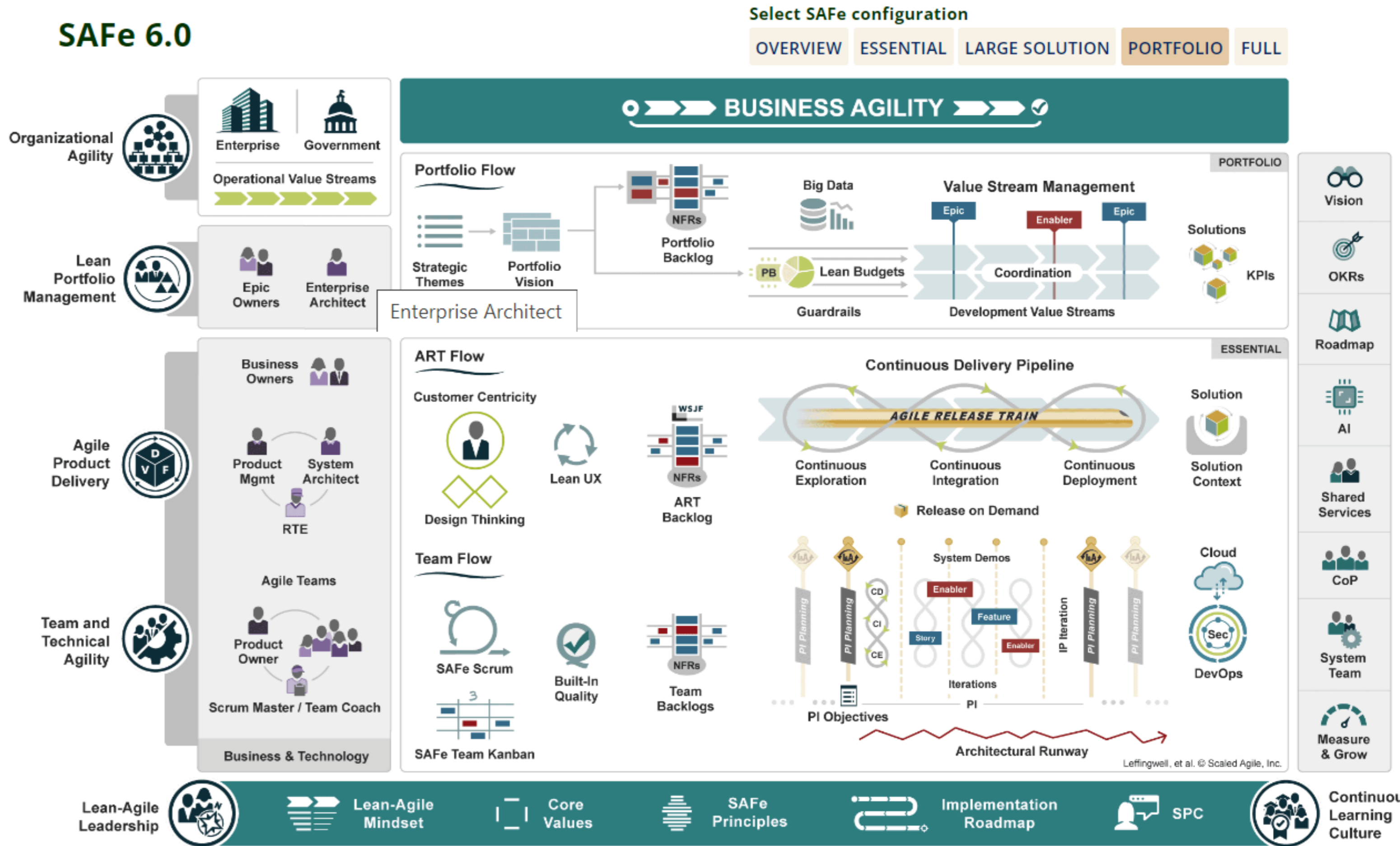


Introduction and Major Challenges

Scaled Agile Frameworks (SAFe)

SAFe for Lean Enterprises is the world's leading framework for business agility.

- ✓ SAFe Scrum
- ✓ SAFe Kanban
- ✓ Built-in Quality
- ✓ DevOps → Cloud
- ✓ Team backlogs
- ✓ Solution Context



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Aim and Research Tasks

The research aim is to implement an Agile framework and ways of working to software development and delivery

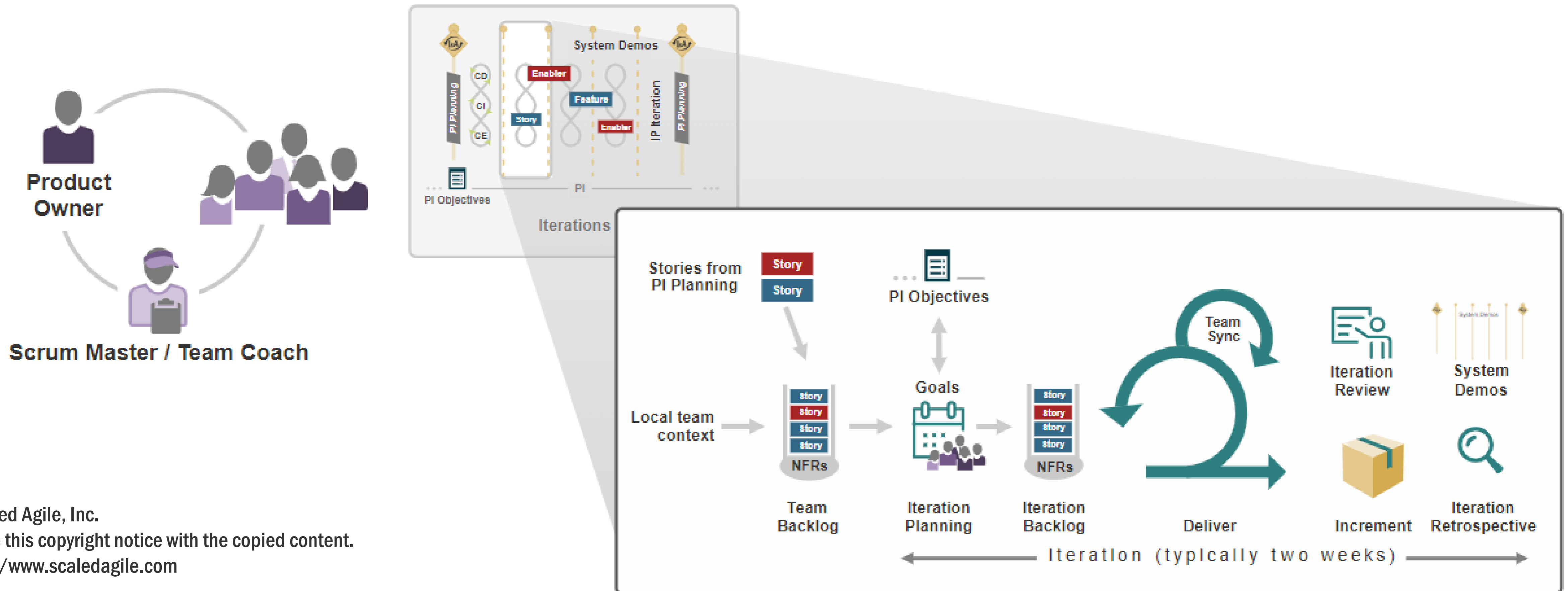
Research tasks:

- to ensure that the enterprise implement an Agile ways of working
- to improve the Agile's team effectiveness through the metrics: cumulative flow diagrams and control charts
- establish a risk management process in Agile ways of working

Research Methodology

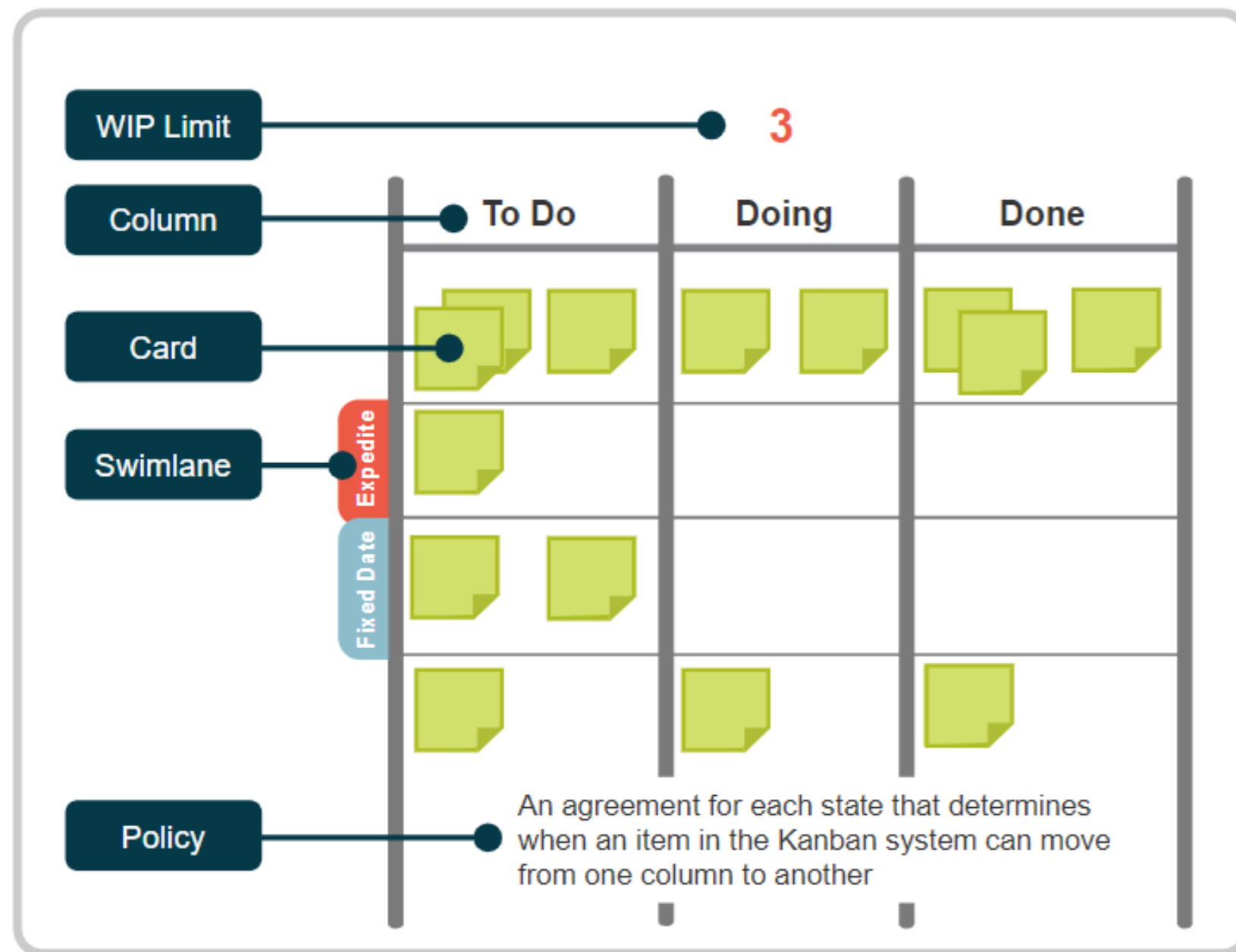
Scrum ways of working

SAFe Scrum is an Agile method used by teams within an ART to **deliver** customer **value** in a **short** time box.

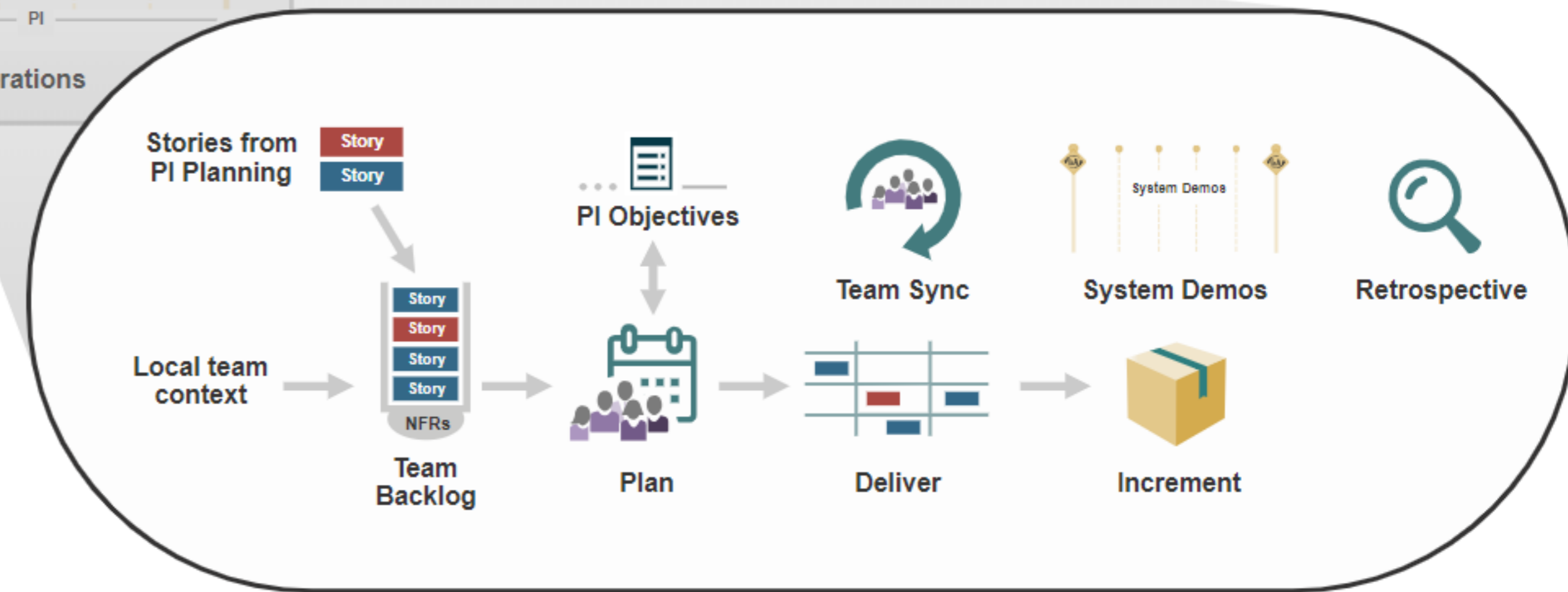
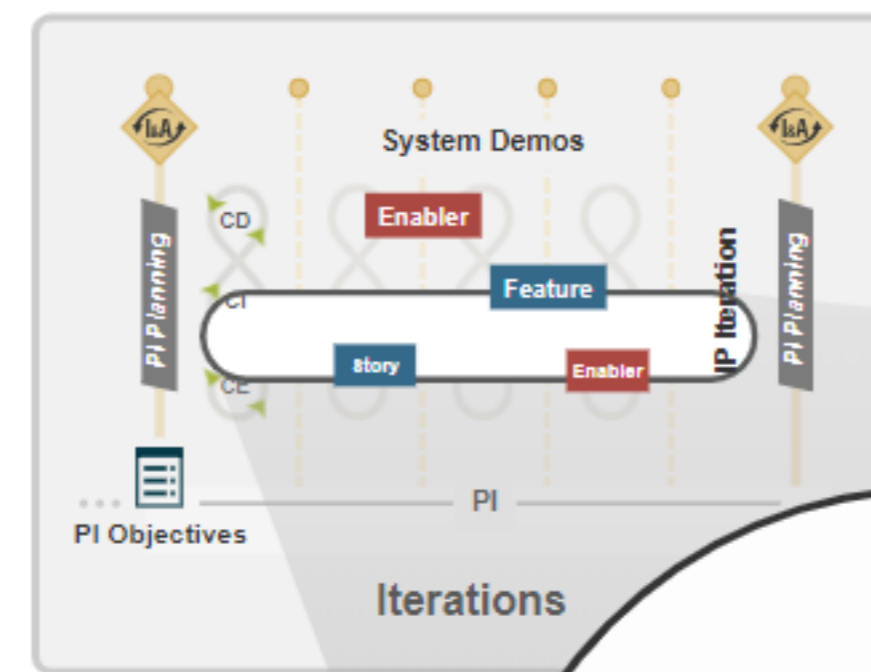


Kanban ways of working

SAFe Team Kanban is an Agile method used by teams within an ART to continuously deliver value with a flow-based process to their daily work and operate within the ART iteration cadence.



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Managing the scope of work: backlog and user stories





User Stories are short descriptions of a small piece of desired **functionality**, written in the user's language.

Classes of Service are typically visualized using color

Selection	Color	Class of service and its policies
1 st		Expedite – white; critical; top priority; no waiting; pre-empts other work; can exceed other kanban limit (bumps other work); limit 1
2 nd		Fixed date – orange; critical cost of delay after externally controlled deadline; give priority where necessary
3 rd		Standard - yellow; typically flowed on a FIFO basis based on start date
4 th		Intangible – blue; not urgent, may be critical over long term; protect capacity; risk hedge against Expedite; select & flow only when no Expedite or Fixed Date items are present

A typical Class of Services and how they correlate to flow efficiency

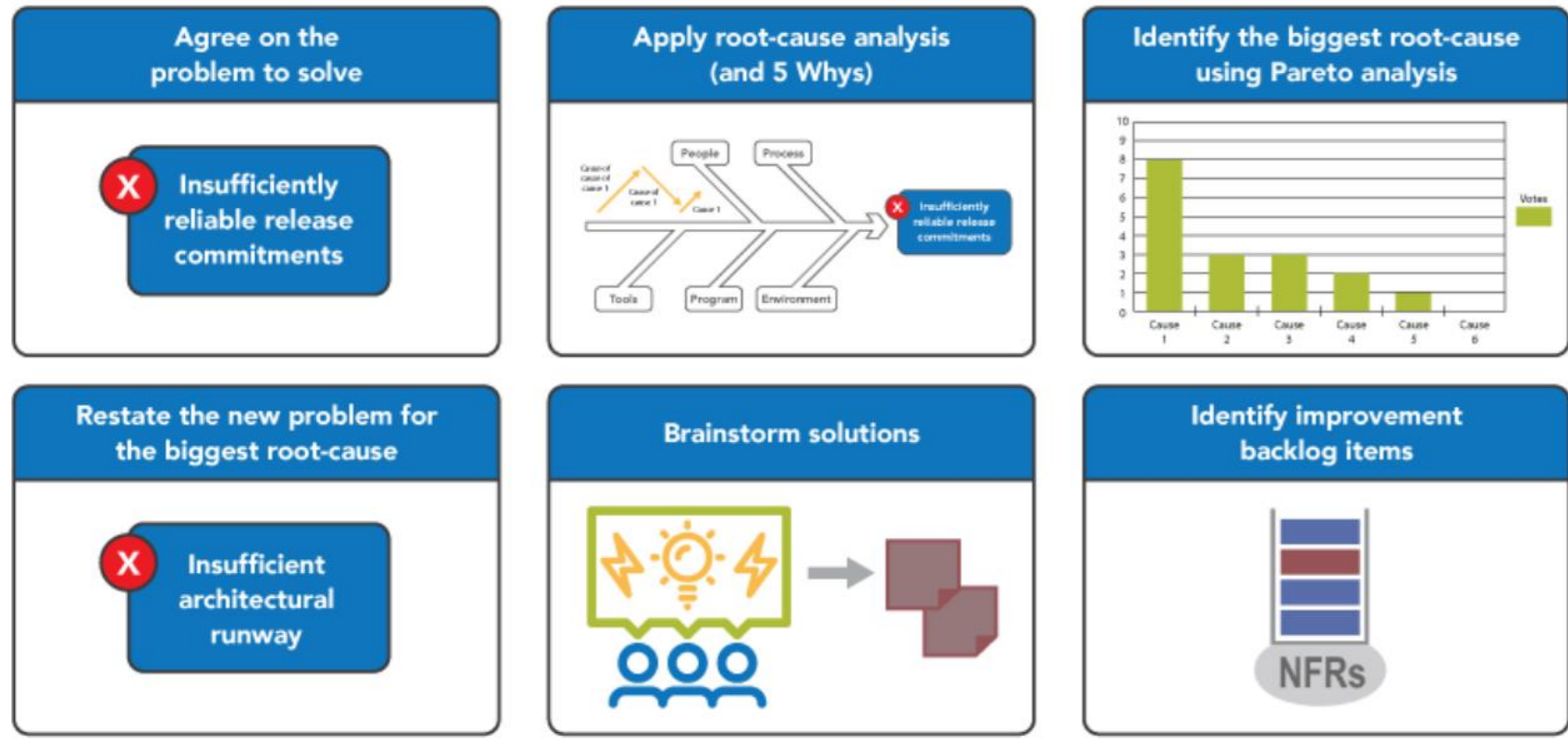
Classes of Service correlates to flow efficiency

Selection	Color	Class of service and its policies
1 st		Expedite – High flow efficiency. Often close to 100%. Preempts other work – almost no waiting time. Gaussian lead time distribution
2 nd		Fixed date – Higher flow efficiency. Some waiting. Tend to defer commitment until “just-in-time” & give flow priority
3 rd		Standard – Low flow efficiency in conditions of high worker utilization or heterogeneous skills requirements. Non-deterministic wait times
4 th		Intangible – Very low flow efficiency. Defers to Expedite or Fixed Date items. Often preempted. Long, non deterministic wait times

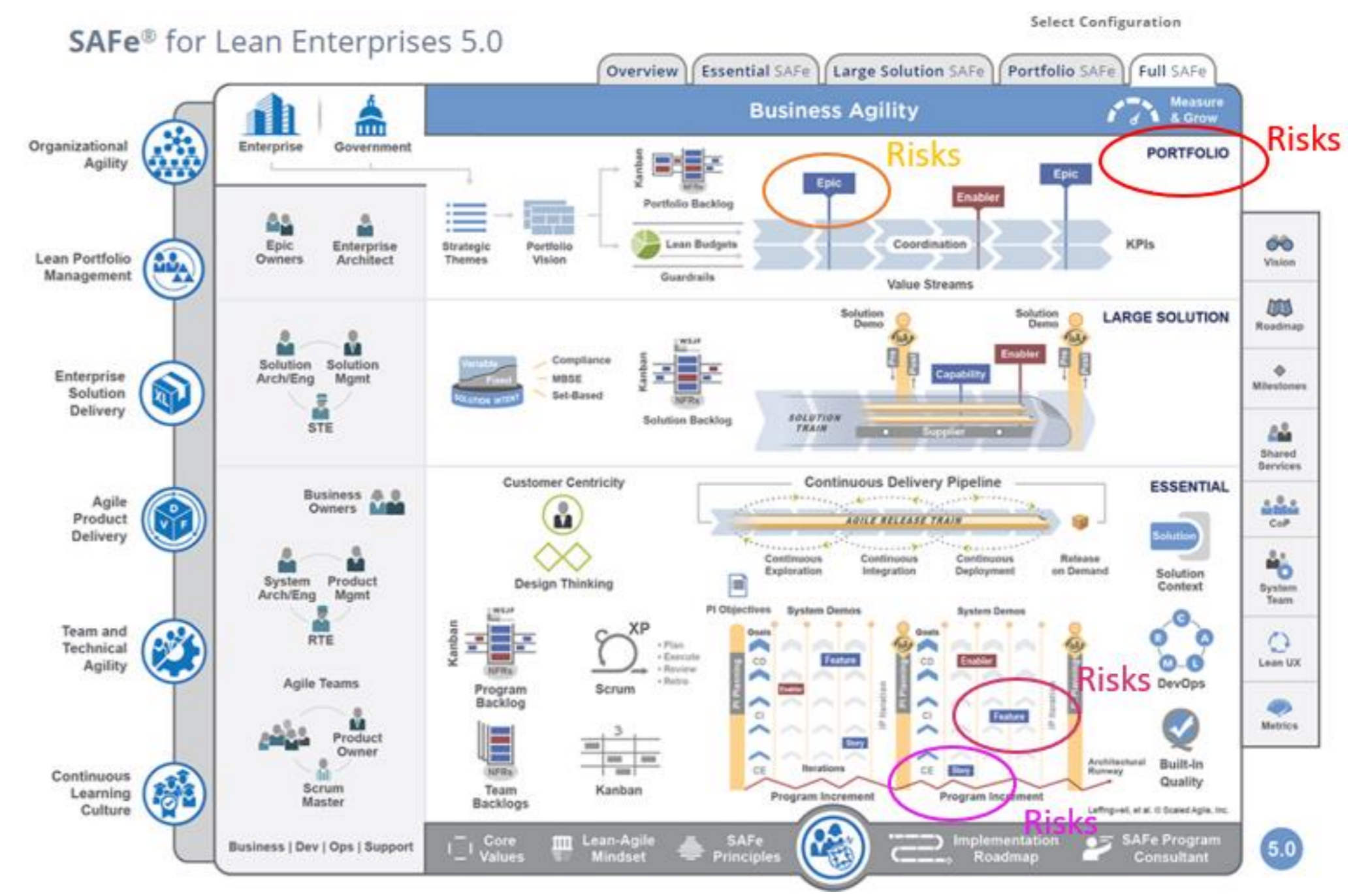
Agile Teams implement small, vertical slices of system functionality and are sized so they can be completed in a single Iteration.

Managing risks in Agile: Risk vs Issue

Problem solving workshop



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Results

Program Increment (PI) Planning: risks ROAMing



- ✓ **Resolved** – The teams agree that the risk is no longer a concern.
- ✓ **Owned** – Someone on the train takes ownership of the risk since it cannot be resolved during PI planning.
- ✓ **Accepted** – Some risks are just facts or potential problems that must be understood and accepted.
- ✓ **Mitigated** – Teams identify a plan to reduce the impact of the risk.

A Kanban board: Risks, Issues, Impediments

OPEN 10

▼ Risks (high impact): 3 issues

- DATA-8985 MB**: No RT sensor data can be visualize in Sitecom if there is no connection between ABB server and Sitecom Converter. POC PI tags extension. Maya Blaauw, Mourad Boukili, None.
- DATA-6951 FR**: Lack of inventory of existing EurekaX developed solutions induces rework. Johan Larsson, Frédéric Ramon, None.
- DATA-8349 MB**: ABB OPC-UA Hub infrastructure not ready for assets other than ABB server which will require a manual mapping into Sitecom. POC PI tags extension. Maya Blaauw, Mourad Boukili, None.

▼ Impediment (high priority): 2 issues

- DATA-10430 RA**: Mac users do not have access to the test environment due to not being able to install the Cisco Anyconnect VPN client. Ramon Arellano, 12/Sep/22.
- DATA-9407**: Usage of AkerBP VPN from Accenture/Avanade laptops is not according to policy, but required given the hub-and-spoke model. Kjetil Øgreid, Knut Halvor Larsen, None.

▼ Overdue risks: 1 issue

- DATA-9409 SD**: Limited sync with business Users - completions & interventions engineer - due to time clashes with their work schedule. Data management: BMS and data Alignment. Maya Blaauw, Sushmita Dutta, None.

▼ Everything else: 15 issues

- Unexpected new permission requested to DevOps security principals
- Low availability of data SMEs may cause delay in solutioning

ACCEPTED/MITIGATED/RESOLVED 0

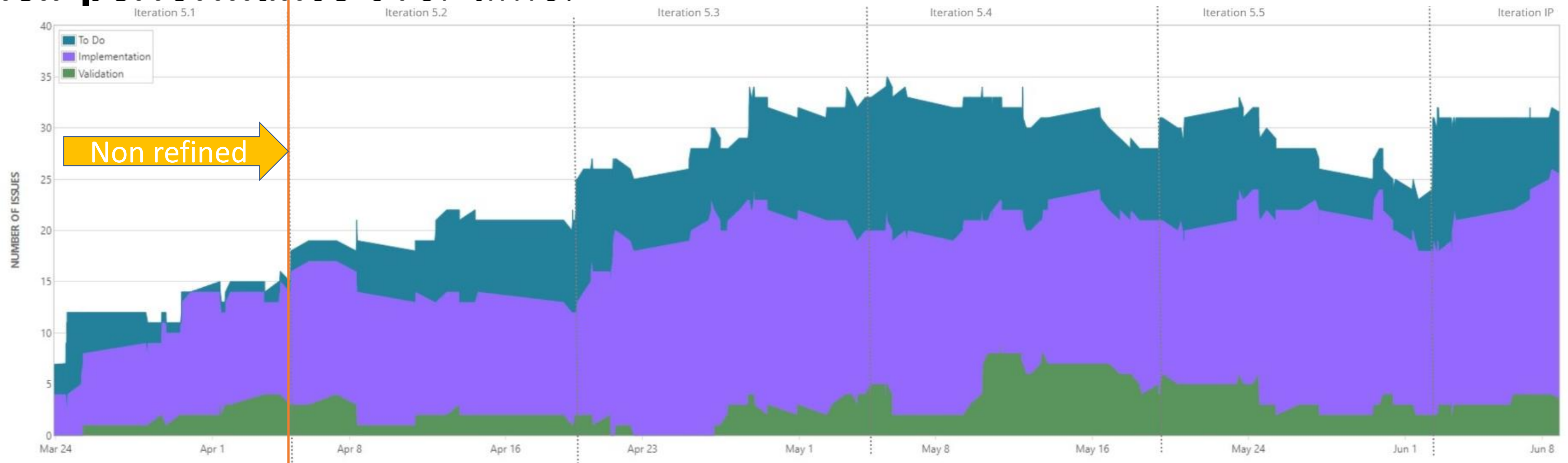
We're only showing recently modified issues. [Looking for an older issue?](#)

Details

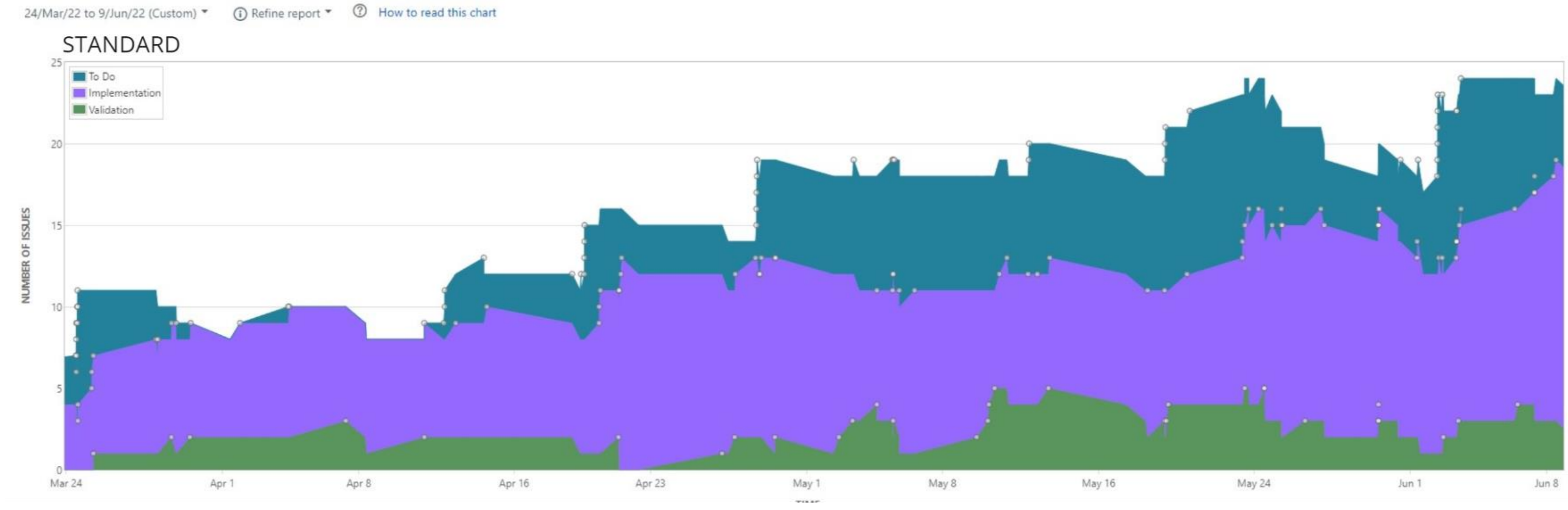
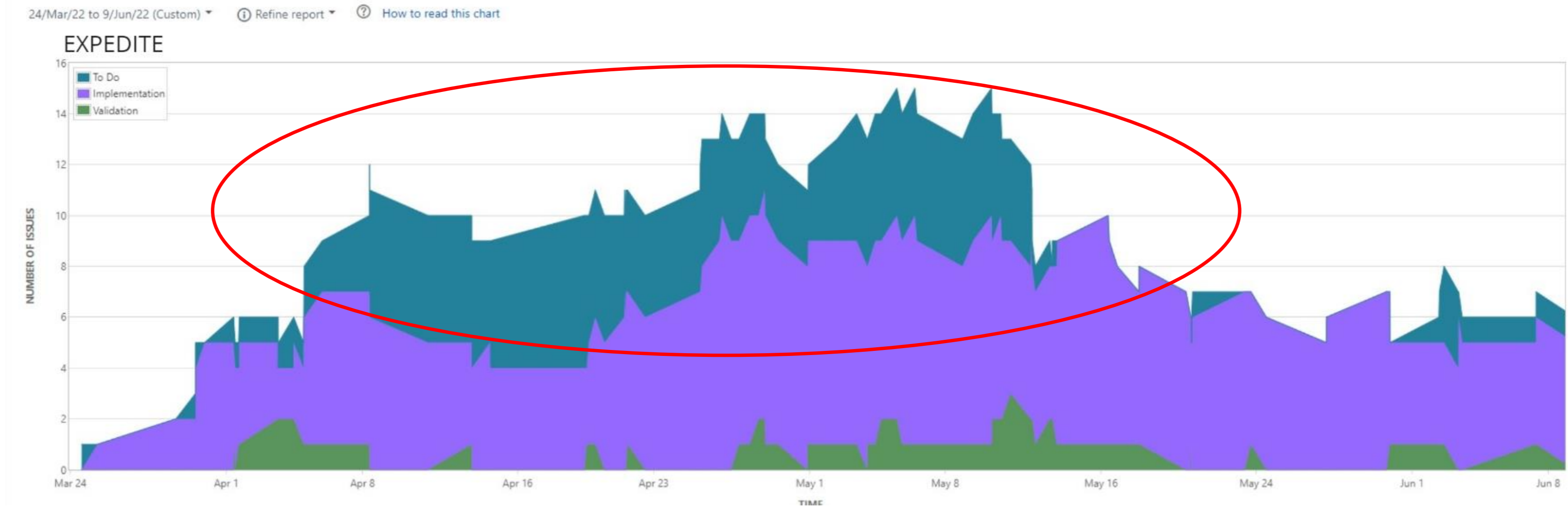
- Reporter: [Avatar]
- Target end: None
- 1 Category of risk or impediment: Technical
- 2 Risk likelihood: Likely
- 3 Risk likelihood score: 4
- 4 Risk severity: Moderate
- 5 Risk severity score: 3
- 6 Risk impact score: 12
- Team: [Avatar]
- Escalation level: No escalation required
- Labels: security
- Automation: Rule executions
- Clockify: Start / Stop
- OKRs: Open OKRs

Throughput: an evidence based

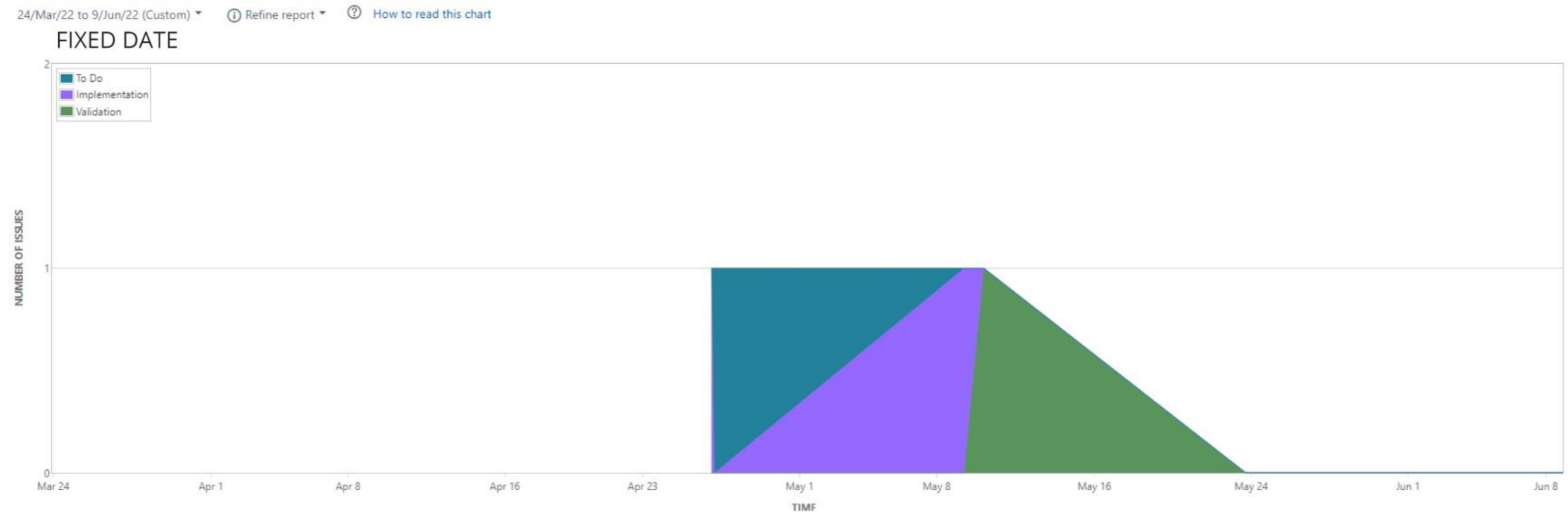
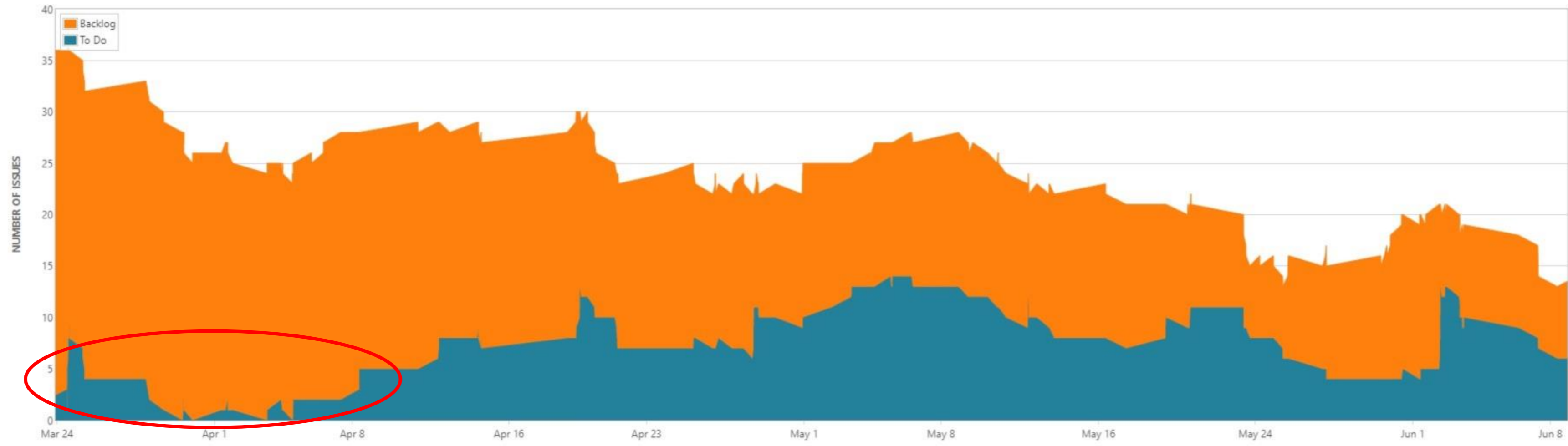
- ✓ Throughput is based on actual data to represent **the number of cards delivered in a given period of time** on a specific Kanban board.
- ✓ This metric will provide the team represented on a Kanban board a **way to track their performance over time**.



Expedite: an evidence based



Refined backlog: an evidence based



Cycle time: an evidence based

How to read this chart

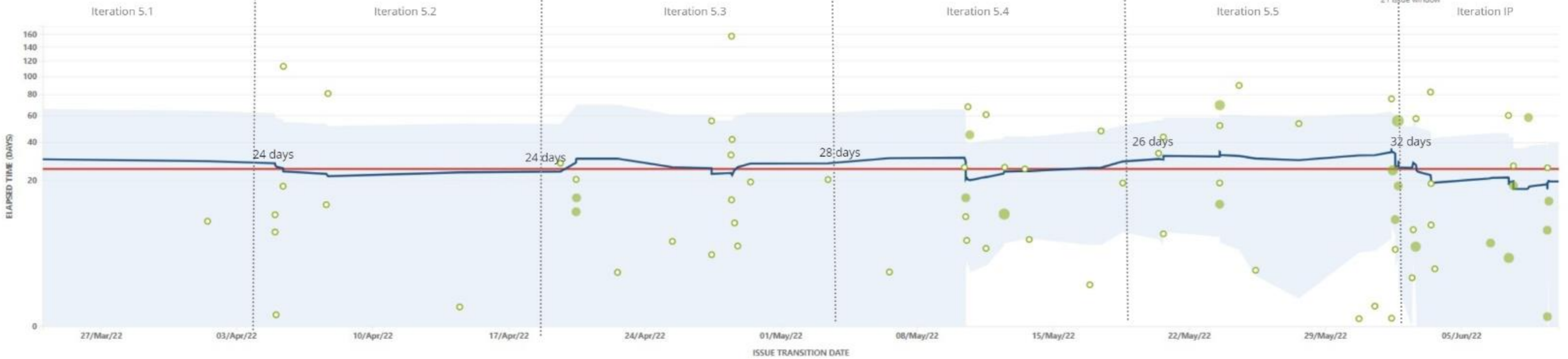
Shows the cycle time for your product, version or sprint. This helps you identify whether data from the current prc

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CYCLE TIME

24/Mar/22 to 09/Jun/22 (Custom)

3w 4d 3h average 1w 6d 11h median 4m min time 22w 3d 1h max time 106 issues



Visibility
See outliers and investigate their cause to reduce them in the future.

Efficiency
Decreasing rolling average indicates process improvements and increased throughput.

Predictability
Narrow standard deviation through process improvements to improve predictability of cycle time.

Conclusions

1. Implementing metrics for Agile ways of working helps to implement evidence-based approach to improve team's efficiency and:
 - a) **Convergence** approach to implement risk management tool and techniques
 - b) **Evidence** based risk management
2. Continuously working on **risk taxonomy** for different levels:
Program/Epic/Feature/User story
3. Establish risk management process based on the industry assumptions, limitations, principles and process implementation.

Thank you very much for your attention!

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