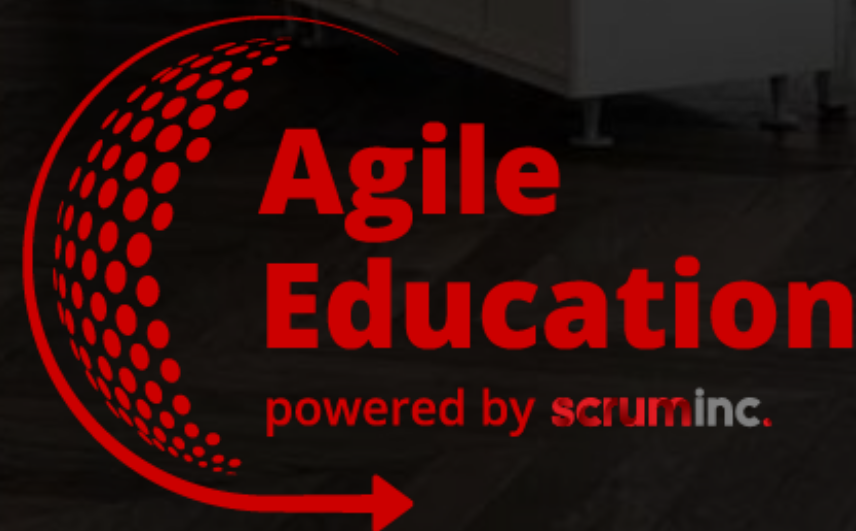


A Data-Led Approach to Scaling Scrum Globally

How Sanofi Transformed Global Vaccine Development
with Data-Driven Agility

A Case Study by **Robert Schrader**



Sanofi's mRNA Center of Excellence

We are building an Agile ecosystem leveraging Scrum and Scrum@Scale frameworks to globally coordinate the Development of a sustainable mRNA Vaccine Platform as well as generate viable New Vaccine (NV) candidates. Our aim is to compliment Sanofi Vaccine's already existing traditional vaccine and therapeutic portfolio which generates an annual revenue of >€7 billion annually.

21
mRNA IND¹ /
Clinical Trials
since 2021

Translate Bio
Acquisition
Sept 14, 2021

Creation of
mRNA Center of
Excellence
June 29, 2021

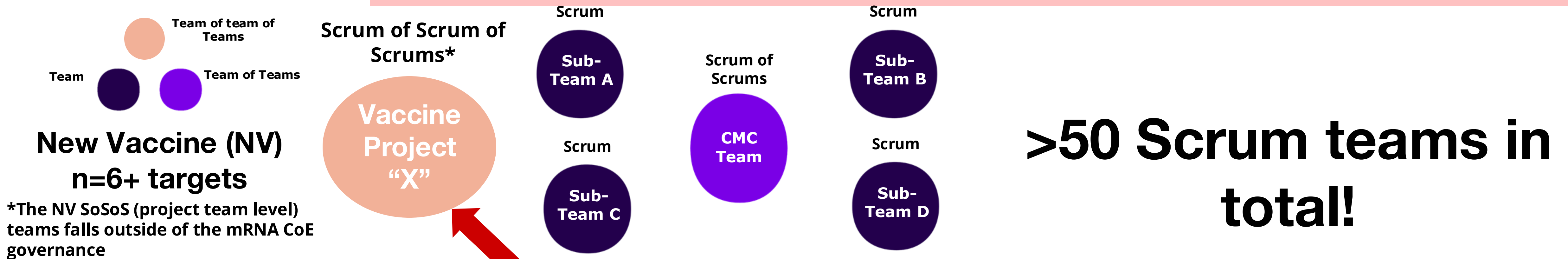


*CoE: Center of excellence

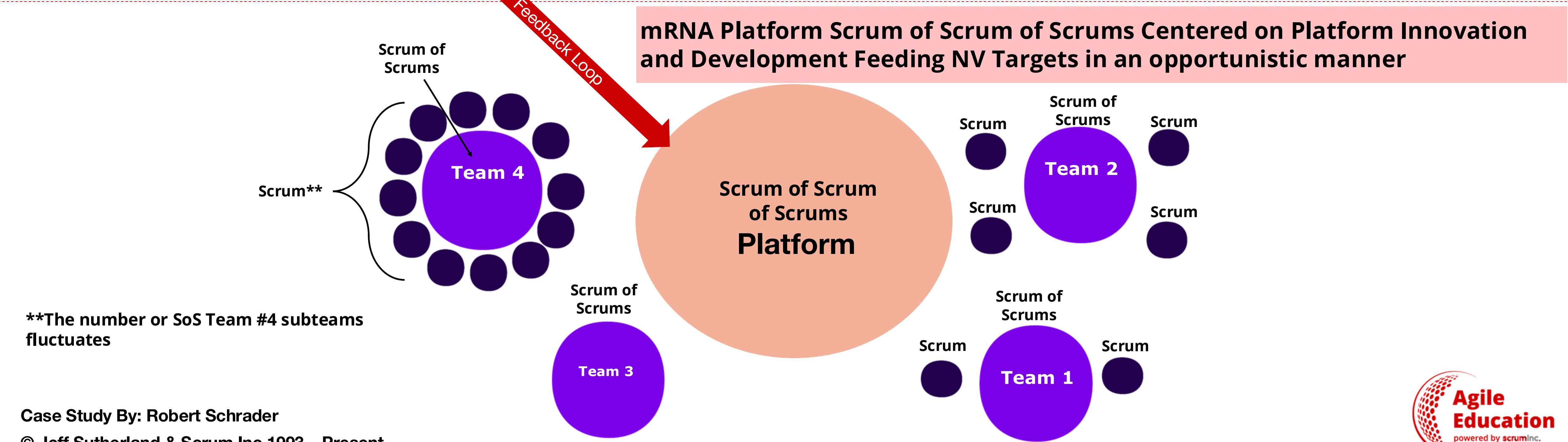


Teams Focused on Vaccine Targets and/or mRNA Platform Optimization

New Vaccine (NV) CMC Scrum of Scrums Centered on Vaccine Target



mRNA Platform Scrum of Scrum of Scrums Centered on Platform Innovation and Development Feeding NV Targets in an opportunistic manner



**The number or SoS Team #4 subteams fluctuates



Evaluate Teams Against the 3:5:3 Scrum Framework

At first, a simple Excel spreadsheet was leveraged to capture team Scrum maturity in application of the events, roles, and artifacts

Teams rated on each criterion

- **Roles Criteria**
 - Enter Score for Scrum Master
 - Enter Score for Product Owner
 - Enter Score for Team Member
- **Events Criteria**
 - Enter Score for Retrospective
 - Enter Score for Planning
 - Enter Score for Daily
 - Enter Score for Review
 - Enter Score for Refinement
- **Artifacts Criteria**
 - Enter Score for Product Backlog
 - Enter Score for Sprint Backlog
 - Enter Score for Parking Lot
 - Enter Score for Artifacts
- **Metrics Criteria**
 - Enter Score for Velocity
 - Enter Score for Happiness Assessment Performed
 - Enter Score for Value
 - Enter Score for General Team Mood*

Teams rated on each criterion on the following scale:

- 1 = Missing or unused
- 2 = Early Adoption requiring intensive coaching oversight
- 3 = Practice requiring moderate coaching oversight to sustain practice
- 4 = Practice requiring minimal coaching oversight to sustain practice
- 5 = Role model practice

But...

The amount of data to manage became a very challenging and time-consuming ordeal.

We needed a more streamlined mechanism to support a more empirical approach to our Scrum@Scale rollout!

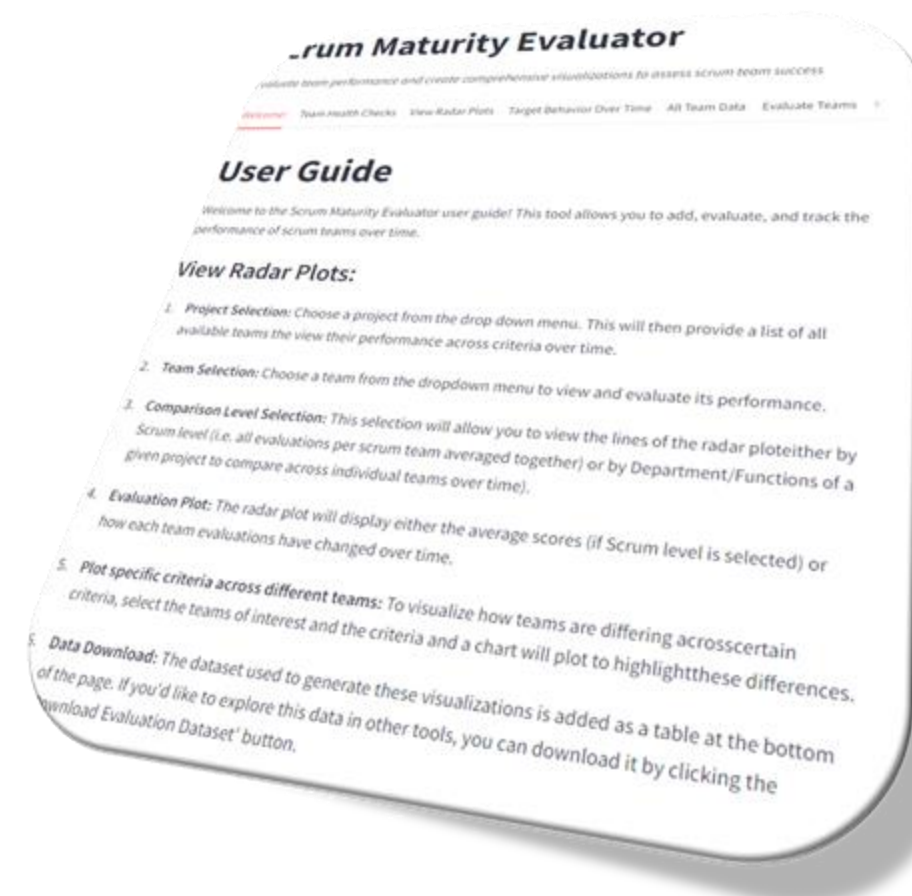
Streamlining our Global Assets to Assist Scrum@Scale Adoption

Using Data and empiricism to focus our Scrum Roll-out

Context	Core Question	Next Steps
1. A centralized database and visualization tool is proposed to facilitate consistent tracking of progress across multiple Scrum teams globally.	1. How might continuous monitoring and assessment of Scrum transformation across teams provide valuable insights to guide successful Agile adoption on a global scale?	1. By developing a centralized data application, the team can streamline reporting and provide consistent metrics across regions.
2. The goal is to develop a solution to connect teams and provide transversal insights into what's working well and areas for improvement across the mRNA CoE ecosystem.	2. Could a single-source database and visualization application streamline reporting and metrics to efficiently measure progress?	2. Taking a global, transversal approach to the application will enhance agility not just within the mRNA CoE but potentially across all of VRD and New Vaccine development.
3. How Agile practices throughout Sanofi can be collaboratively assessed and advanced in a nimble manner by the tool.	3. Will consistent data help identify opportunities that further spread impactful Agile practices?	3. With consistent language metrics connecting teams and identifying strengths and opportunities, their Agile transformations have the potential to be accelerated.

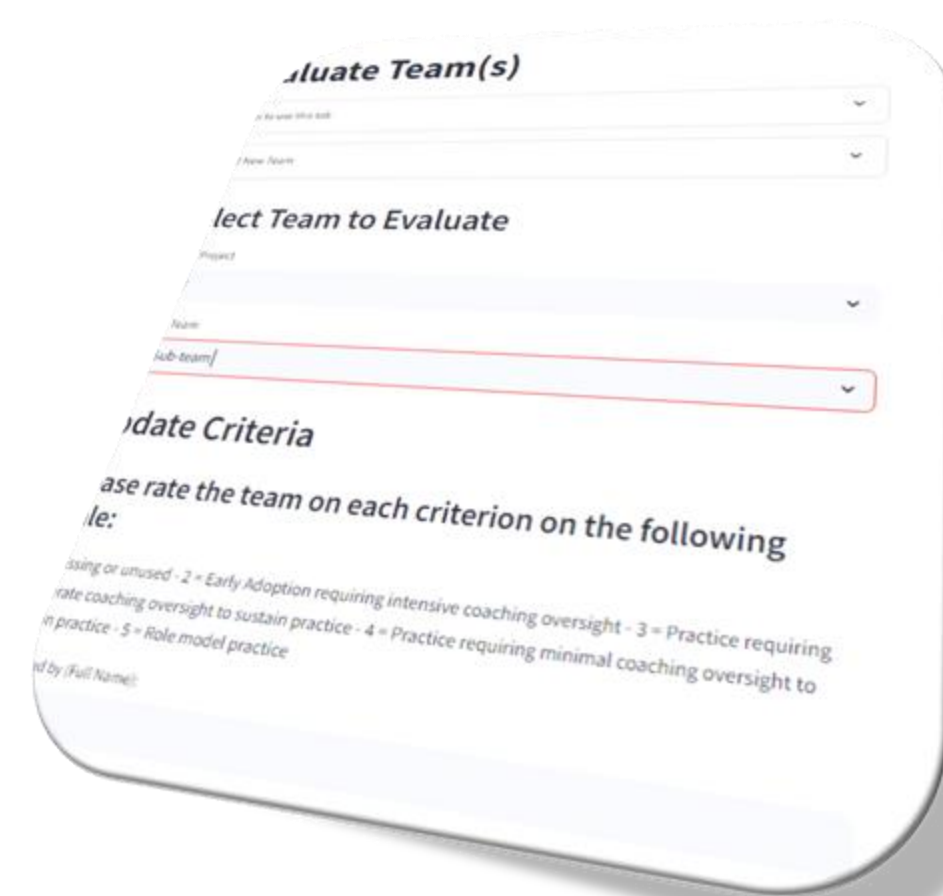
Scrum Maturity Evaluator Application

Users guide



Orients the user as to the sections and purpose for fuller understanding & Defines each element and criterion for better user experience and normalization of data

Evaluate Scrum Teams



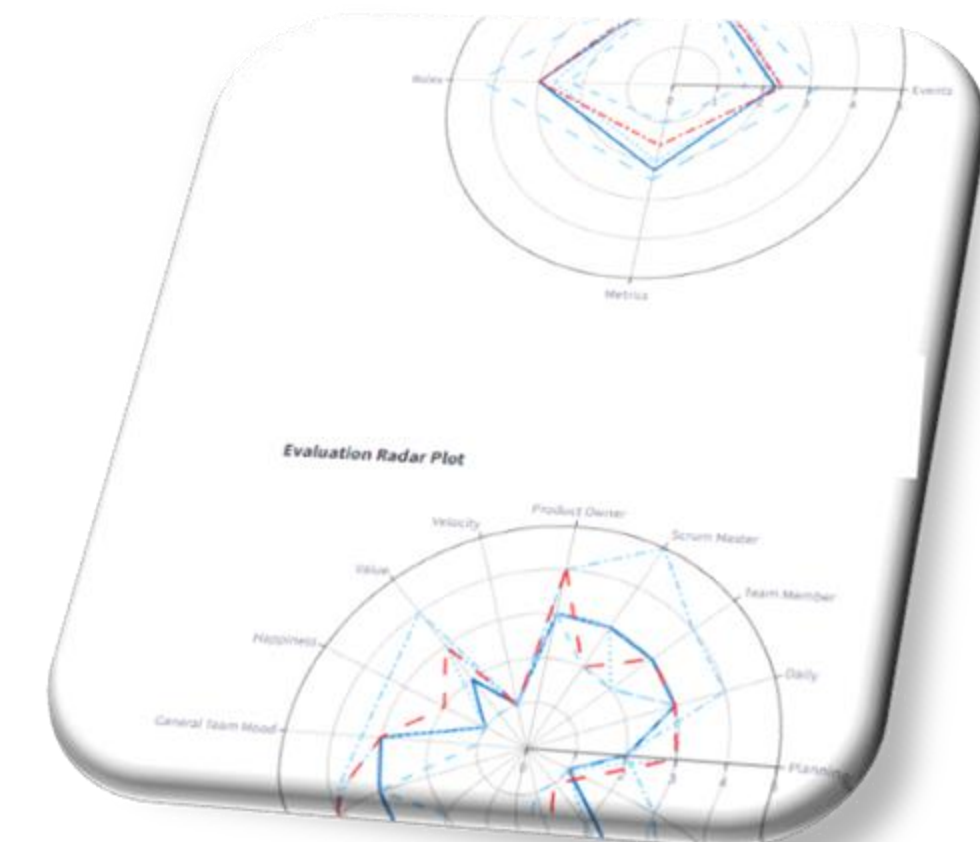
Score Teams (1 low to 5 high) against the 3:5:3 Scrum Framework

Team (Scrum Adoption) Health Checks Visualization



Provides access to teams that have not been evaluated to enable Agile coaches to know which teams need attention.

View Radar Plots



Scrum element (3:5:3) Utilization & Level of Maturity

Target Behavior Over Time



Average score over increments of time to visualize maturity progress

All Team Data



View allows you to create dashboards based on specific projects and view team behavior over time

Case Study By: Robert Schrader

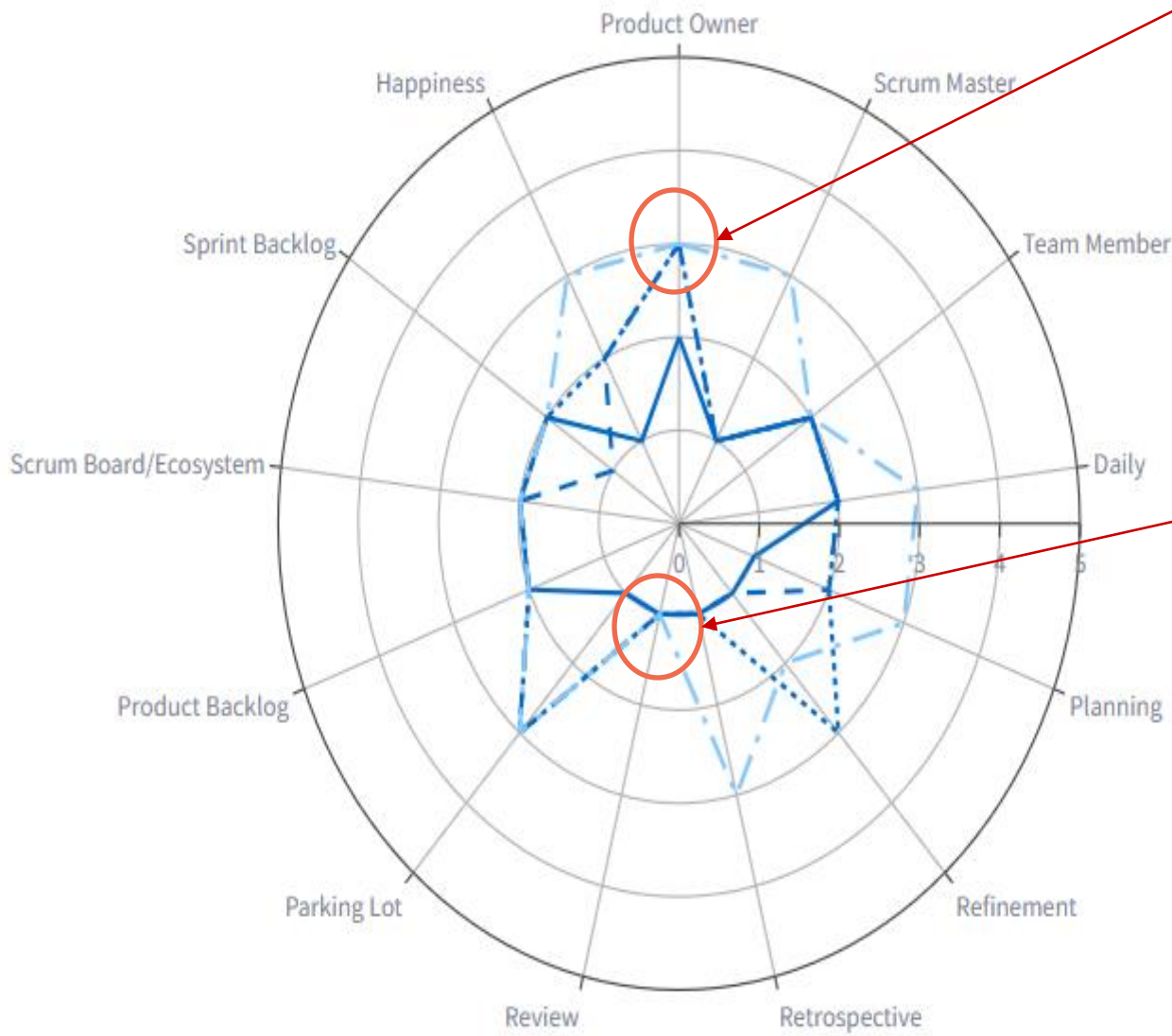
© Jeff Sutherland & Scrum Inc 1993 – Present

Utilizing this Information to Support our Next Steps

Micro View

Are there areas of common success within a Project ecosystem?

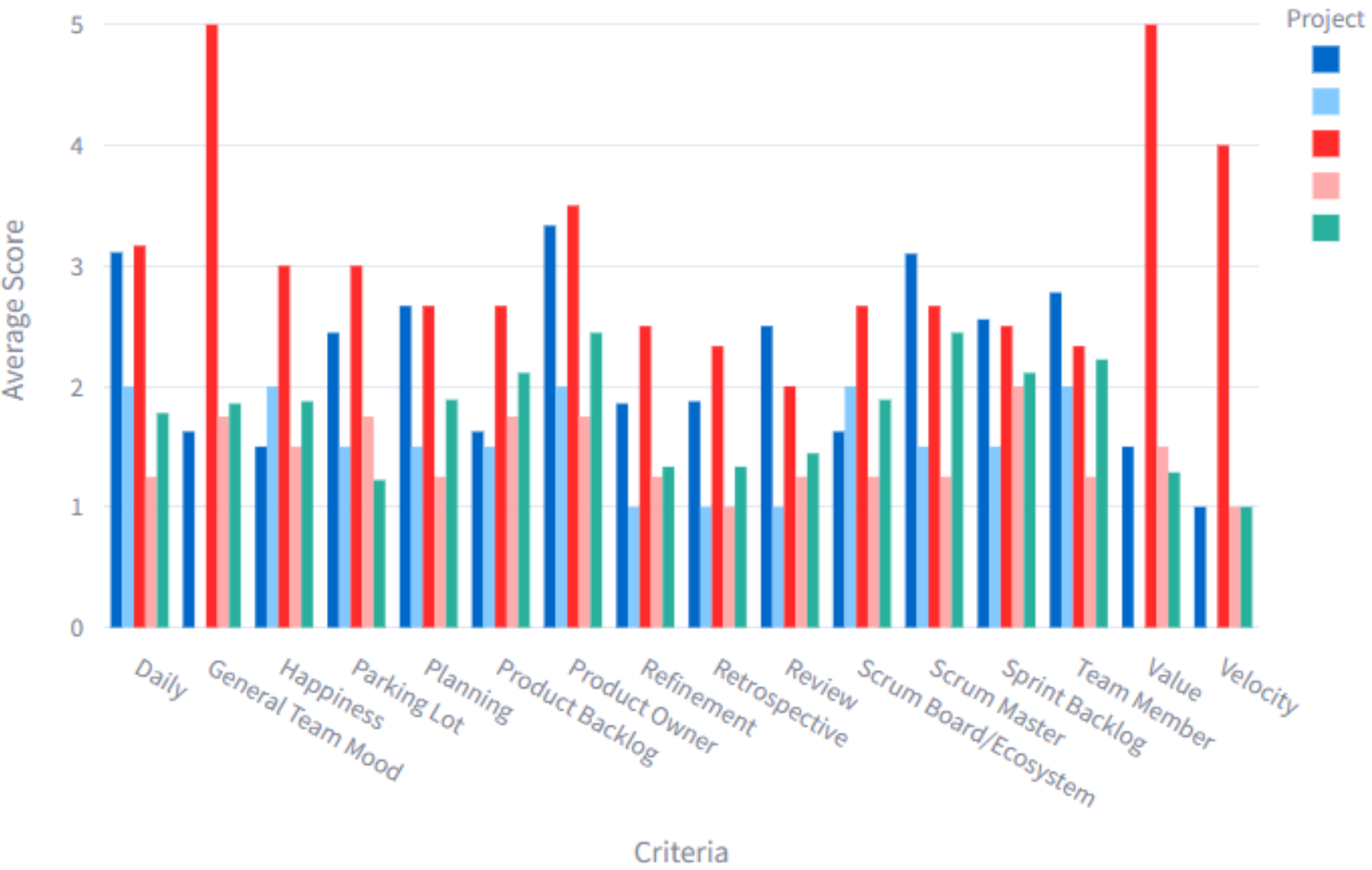
Are there areas of common failures/poor performance within a Project ecosystem?



Are there areas of common success or failures/poor performance across the portfolio of projects?

Macro View

Global Averages Comparison Across Projects



Measured Progress to Date

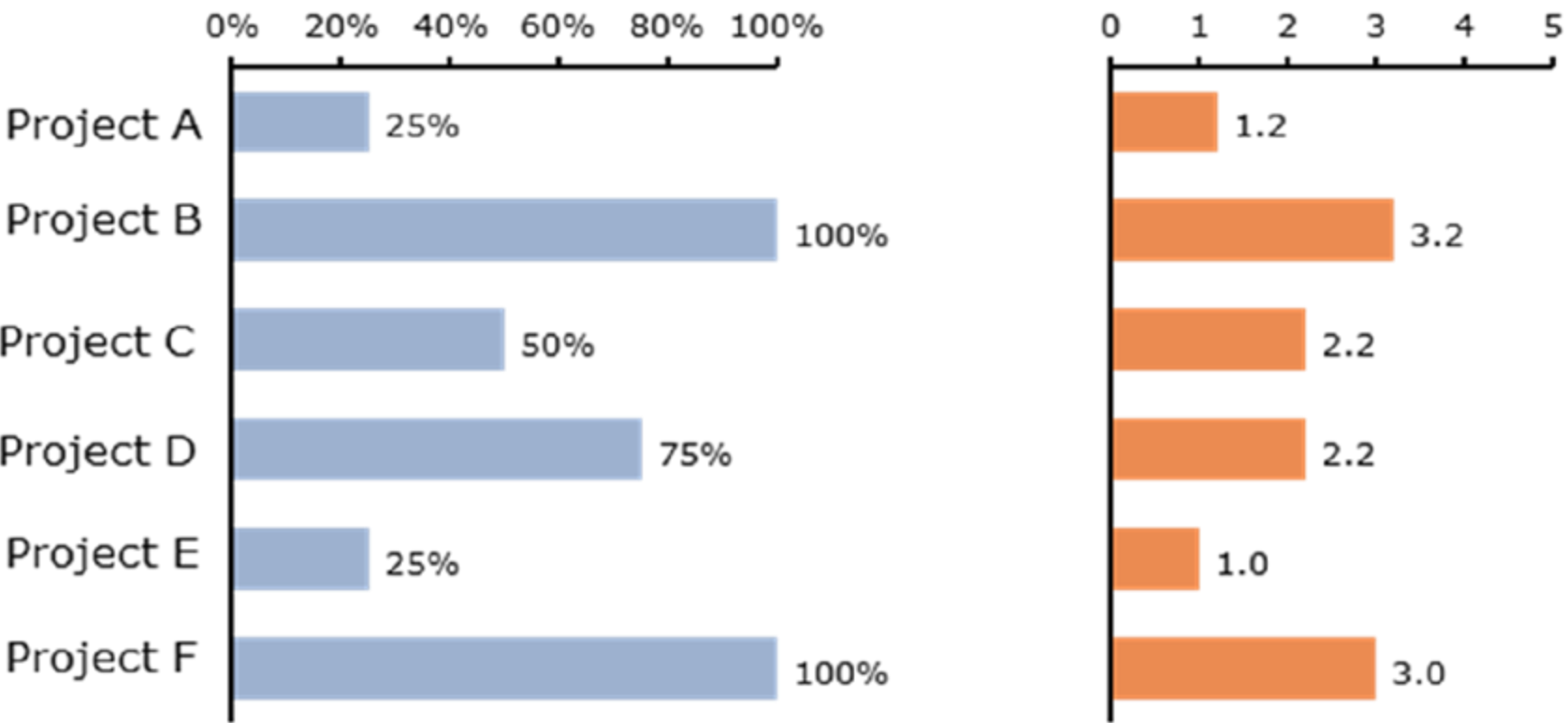
Timepoint 0 (Baseline)

% deployment

Maturity (1-5)

New Vaccine (NV)

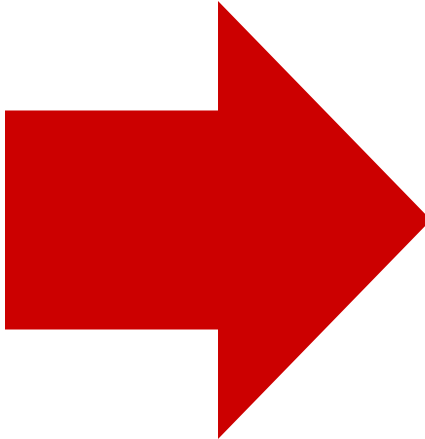
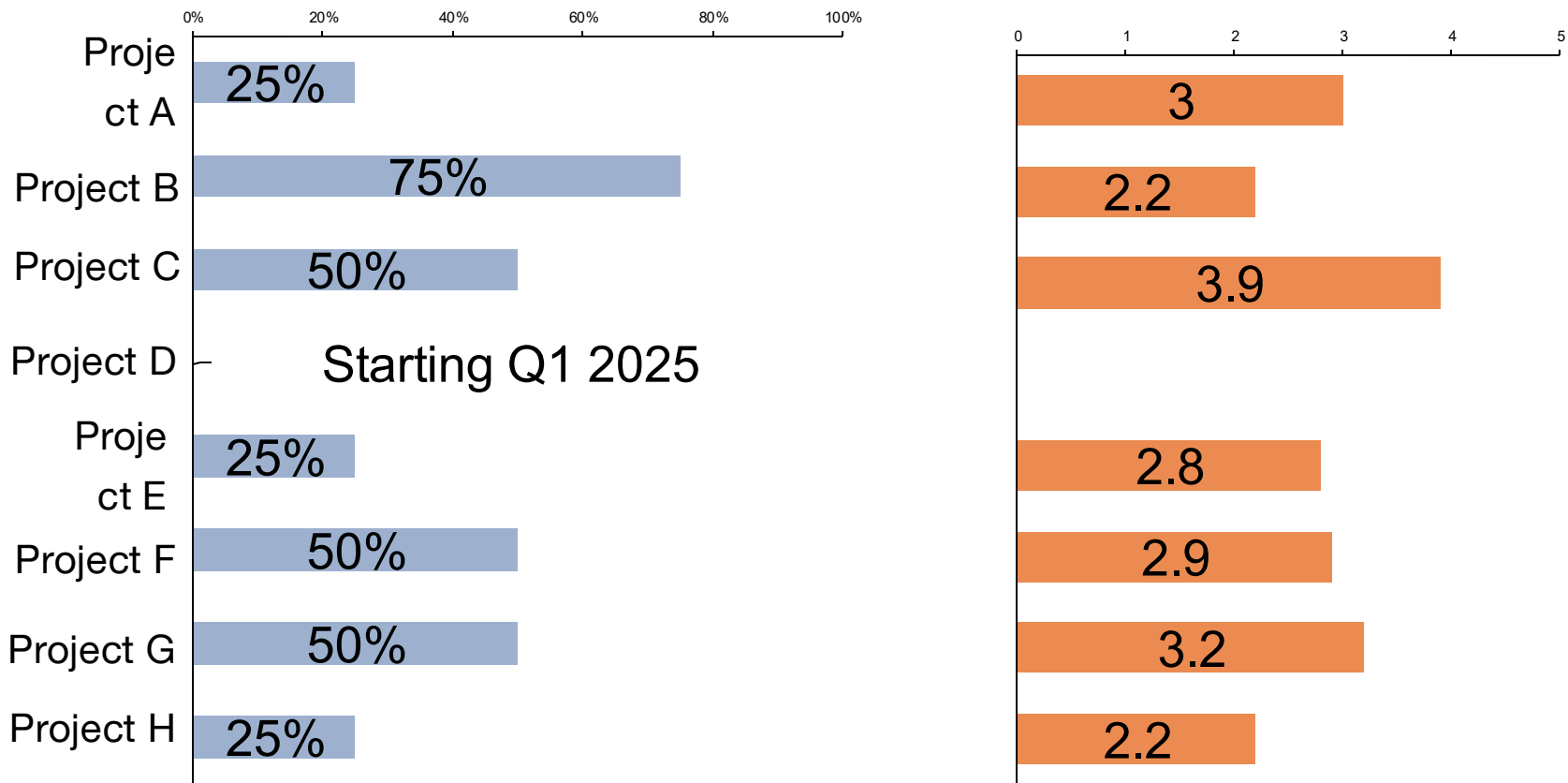
More than 50% of Scrum methodology deployed with a maturity of



Timepoint 1 (6 months Later)

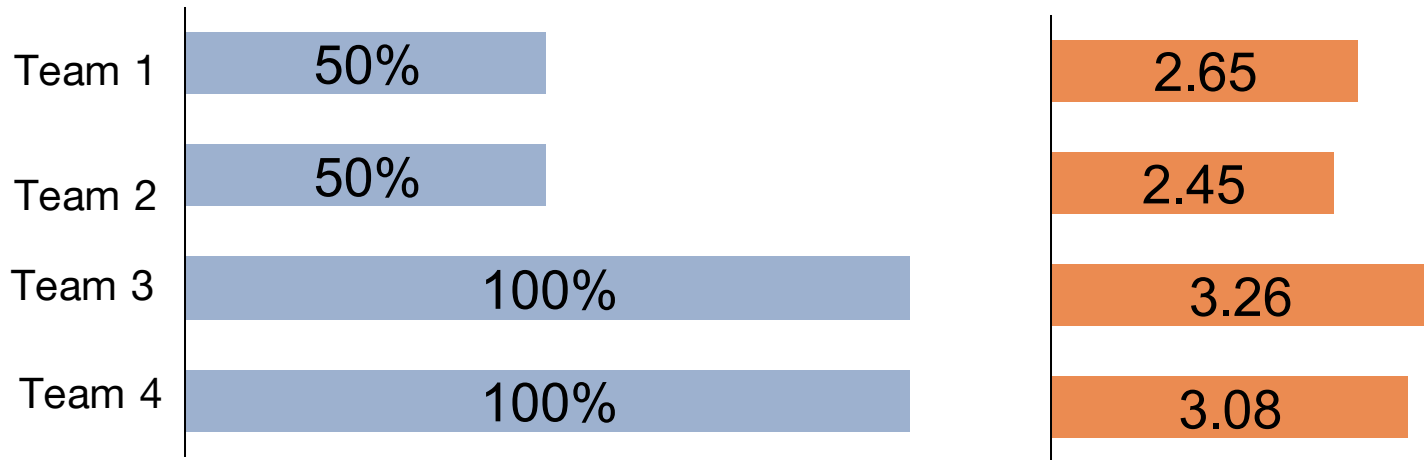
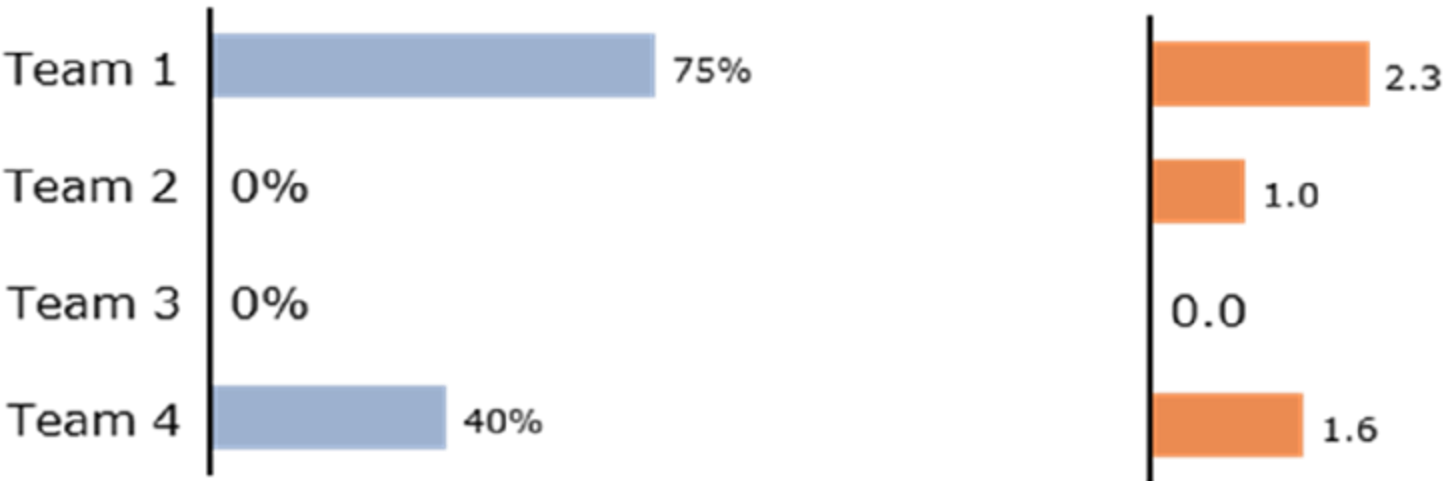
% deployment

Maturity (1-5)



Platform

More than 75% of Scrum methodology deployed with a maturity of



? April 2024, 50% of the Scrum methodology has been deployed in ~18 months reaching 1.8 maturity level (scale 1-5)

? Nov 2024, +60% of the Scrum methodology has been deployed in ~24 months reaching 2.8 maturity level Including some project with Scrum@Scale

*Scale Scrum maturity : 1 to 5
1 = Missing or unused,
2 = Early Adoption requiring intensive coaching oversight
3 = Practice requiring moderate coaching oversight to sustain practice
4 = Practice requiring minimal coaching oversight to sustain practice
5 = Role model practice



What have we learned?

- Gathering this data in a more organized, rationalize manner allows for useful insight and direction
- Less waste and more efficient utilization of resources
- Using a common set of questions and criteria can better normalize the data across teams and departments
- Coaches time for data curation and visualization will be dramatically reduced freeing up time to COACH!
- Visualizing the data is powerful to gain better understanding and sharing data more effectively
- We are speaking with data, objectively and making better decisions
- **But... more objectivity needs to be built into the assessment to increase consistency across coaches, highlight more specific areas of improvement, and allow for the extraction of next Steps on the continuous improvement journey for Scrum Teams, Product Owners, and Scrum Masters ☐ Scrum Maturity Evaluator Version 2 needed!**

Next Steps □ *Version 2 Under Development for 2025*

- Inclusion of specific attributes/behaviors for Scrum Events, Roles, and Artifacts
- Each attribute is weighted based on relative impact
- Resulting scores display performance strengths and weaknesses accommodating the guidance for a Development Pathway
- End of Q1 2025 targeted for V2 launch

The screenshot displays a 'Scrum Evaluation' form. It is divided into three main sections: 'Evaluation for Scrum Master', 'Evaluation for Product Owner', and 'Evaluation for Team Members'. Each section contains several criteria with corresponding dropdown menus for rating. The 'Scrum Master' section includes 'Facilitate Scrum Events' (Ensure the team follows the time-boxes and adheres to Scrum practices) and 'Manage Product Backlog' (Prioritize items and ensure the backlog is visible and understood by all). The 'Product Owner' section includes 'Stakeholder Engagement' (Collaborate with stakeholders to align on product expectations and releases), 'Define Product Vision and Goals' (Communicate the vision and set realistic goals), and 'Acceptance Criteria' (Clearly define requirements and acceptance standards). The 'Team Members' section includes 'Deliver Increment' (Ensure the delivery of potentially releasable product increments), 'Self-Organize' (Decide who will do what and how during the sprint), 'Cross-Functional Collaboration' (Work together to use collective skills for development), and 'Quality and Standards' (Maintain high levels of quality in the work delivered). Each dropdown menu currently shows 'N/A'.

**+ 3:5:3 plus
S@S criteria**