



Migrating a Successful Waterfall Program to Agile: GPS IIF Integrated Mission Operations Service Center Journey

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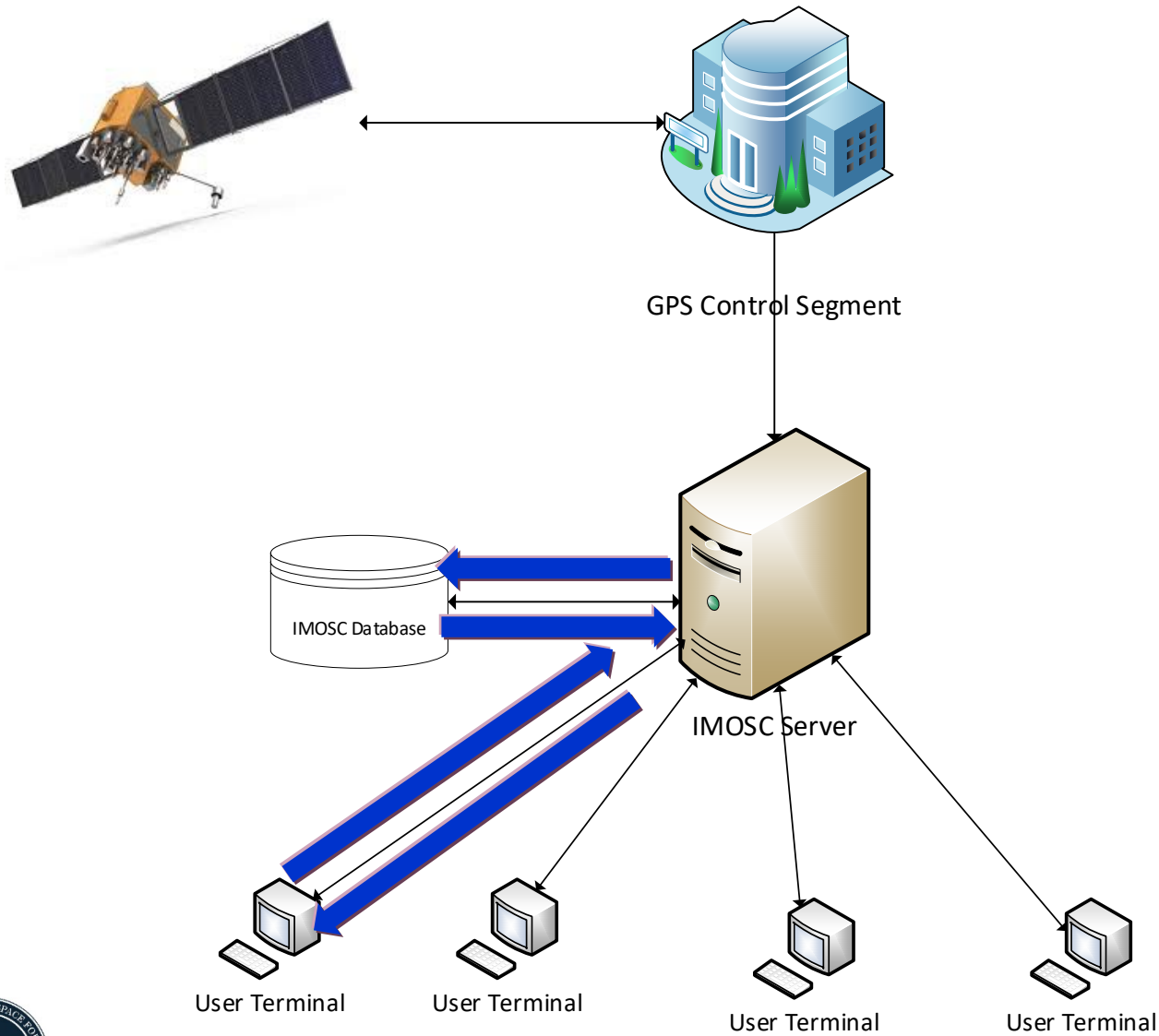
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- **Background**
- **Overview of Issue**
- **SAFe Approach**
- **Model-Based Engineering**
- **Tools**
- **Challenges to Date**
- **Summary**



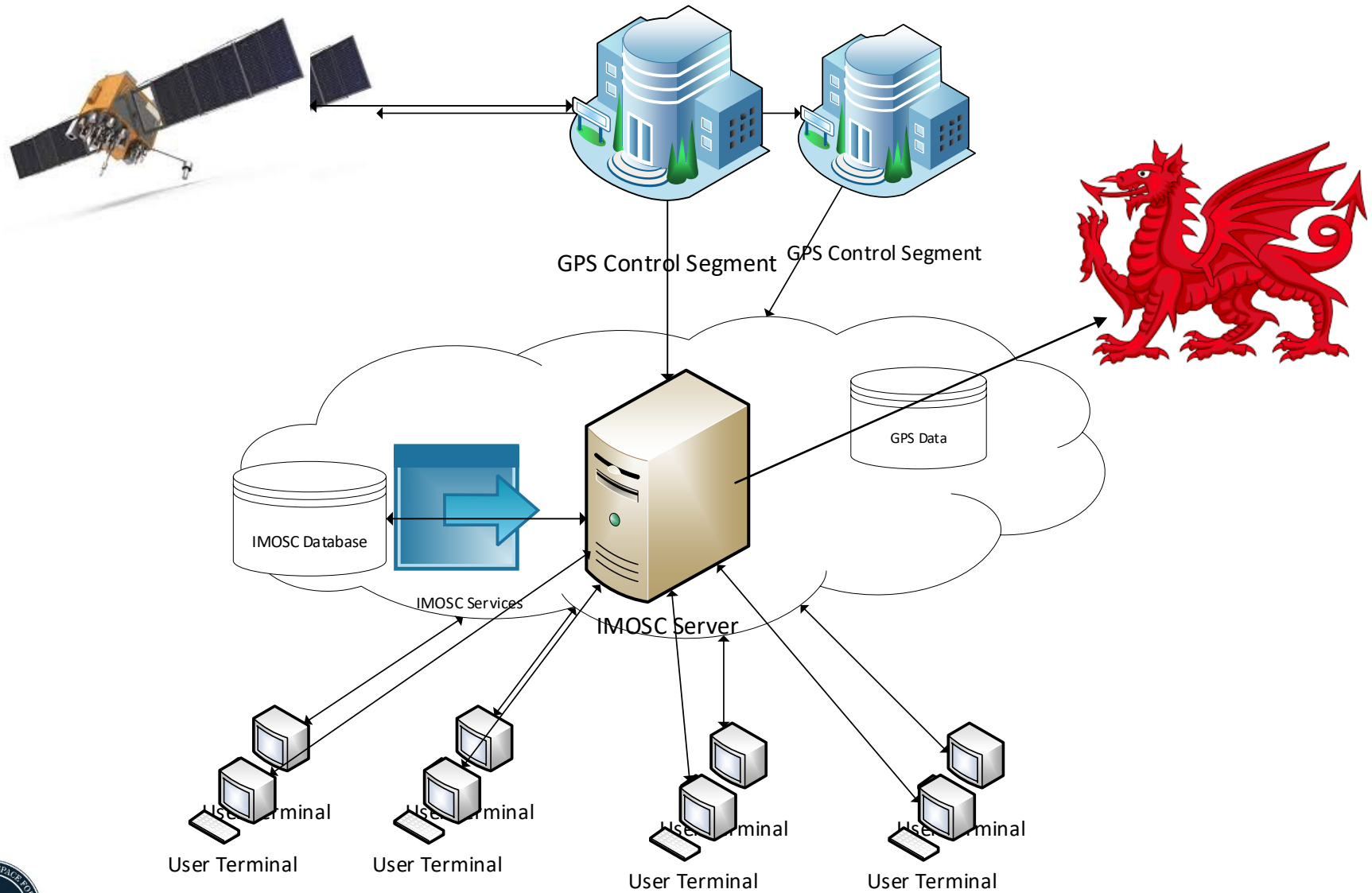


- Build smaller satellites
- Get the acquisition strategy correct
- **Enable teamwork**
- Award contracts with realistic cost and schedule targets
- **Maintain stability in programs**
- Avoid over-classifying
- Deliver ground before launch
- **Hold industry accountable for results**
- **Execute and deliver capabilities that work**

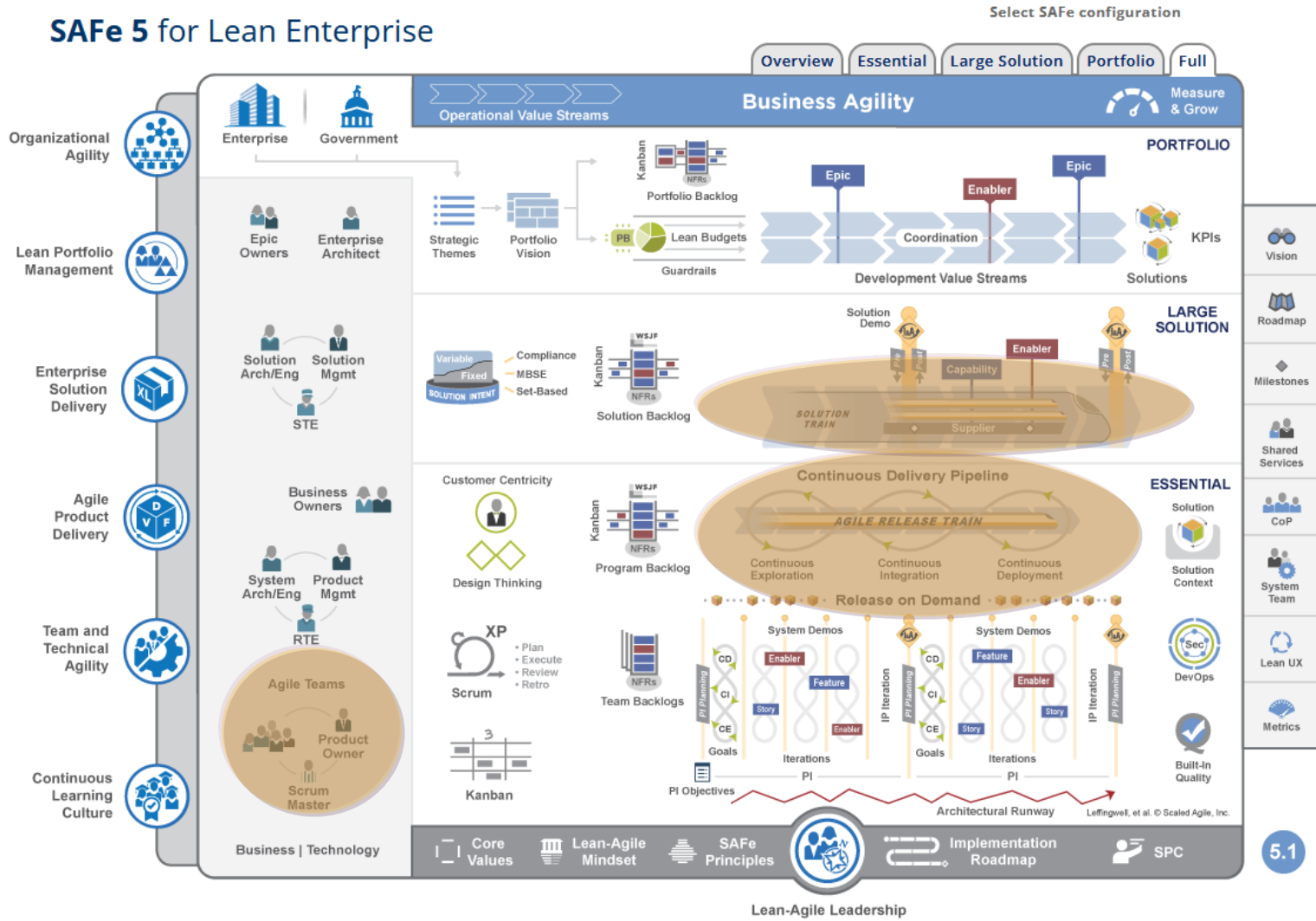
Boeing's approach to the IMOSC specifically addresses four of the nine tenets

S. Erwin, "SpaceNews," 1 November 2022. [Online]. Available: <https://spacenews.com/new-guidance-from-space-force-acquisition-boss-the-traditional-ways-must-be-reformed/>. [Accessed 5 November 2022].





SAFe 5 for Lean Enterprise



<https://www.scaledagileframework.com/#>



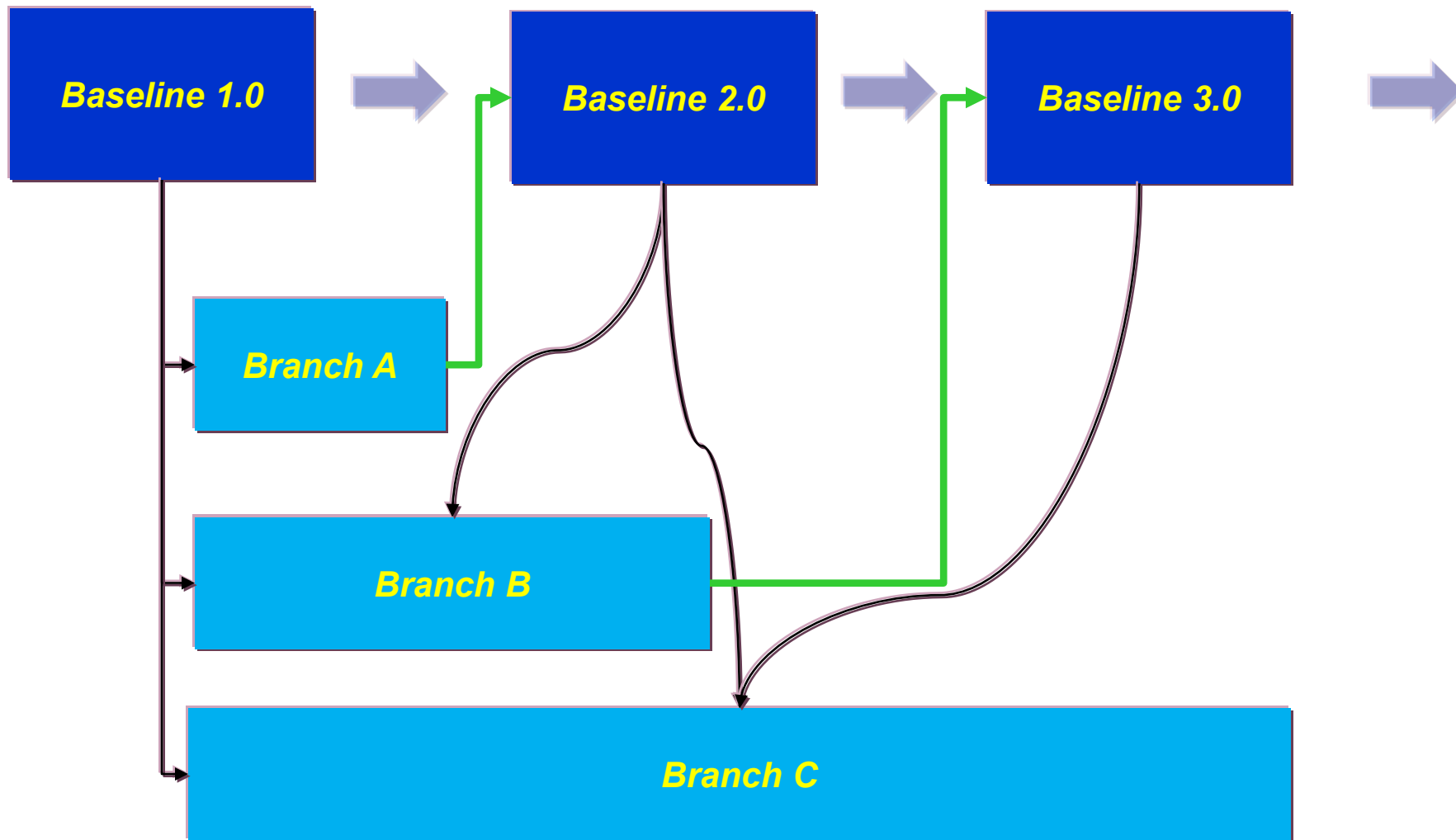
- **Single Team Serving multiple Products**
 - Designated Special Project Lead overseeing all products (Scrum Master/Product Owner)
 - All IMOSC Team Members included in the team, regardless of involvement on specific products
- **Utilize 12-week Program Increment (PI)**
 - Six two-week iterations
 - The last iteration (#6 of 6) is the Innovation and Planning Iteration
- **Modified PI Planning Event**



● PI Planning Event

- Adjusted for single team and multiple CGG customers (Business Owners)
- Attendees
 - IMOSC Team
 - CGG representatives for all activities for the next 12 weeks
 - OPS representative
- Duration: 2-3 hours instead of 2 days
- All IMOSC activities have to be addressed
 - Tool Maintenance: updating/developing current tools
 - System Maintenance: audits, user account servicing, etc.
 - Operations: Support of OPS activities
 - Task Orders: Existing and expected during the PI
- Capacity determined using SAFe approaches
- Work in Process (WIP) limited by capacity
- If required, CGG representatives will provide final decision on which priorities to focus on each increment





- **No Magic Systems of Systems Architect**
 - Impact analysis of architectural changes
 - Interface/data exchange identification
 - HTML model exports for review by customer
- **GITLAB Migration**
 - Planning tracking currently using Microsoft Access
 - Starting to use GitLab
 - Utilize Kanban
 - Automated testing for software



- **Contractual requirements create redundant activities**
- **Timing of new task orders**
- **Aligning both team and customer to unified Agile focus instead of current wildfire**
- **Merging sustainment activities and improvement efforts into the same planning, acting, and tracking mindset.**



- **IMOSC**

- Successfully serving the warfighter
- Needs to transition from Waterfall to Agile development

- **Transition Accomplished through**

- Modified SAFe Approach
- Model Based Engineering
- Addressing specific tenets of Mr. Frank Cavelli's acquisition process



THANK YOU



- **Slide 3:**

- W. Brooks, K. Foster, and W. Gaditano, "Learning from Legacy Systems: Identifying the Monolith Services to Redesign for Microservices" in GSAW 2022, Los Angeles, 2022.

- **Slide 4:**

- S. Erwin, "SpaceNews," 1 November 2022. [Online]. Available: <https://spacenews.com/new-guidance-from-space-force-acquisition-boss-the-traditional-ways-must-be-reformed/>. [Accessed 5 November 2022].

- **Slide 6:**

- <https://www.scaledagileframework.com/#>

