FLOW SYSTEM

PARTICIPANT WORKBOOK

Complexity Thinking

Workbook: Scrum the Toyota Way

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Scrum the Toyota Way

Scrum is based upon original work from Prof. Takeuchi and Prof. Nonaka, Japanese professors who both taught at different universities, studied Toyota, and developed the new new product development game in a white paper in the Harvard Business Review in 1986.

When Jeff Sutherland and Ken Schwaber presented their paper at the OOPSLA '95 conference, this was the official launch of Scrum. However, Scrum has two key influences: Toyota and DuPont. Ken Schwaber, one of the co-creators of Scrum, provided Thurlow with this information directly. He said that Scrum is based upon the Toyota Production System and empirical process control inspired by Prof. Tunde at DuPont.

Key Elements of Scrum

In the following table identify the typology and explain the purpose of each of the key elements of Scrum. We highly recommend reading the Scrum Guide in conjunction with this workbook as some terms may require additional study. It can be found here https://scrumguides.org/.

Key Elements of Scrum		
Element	**Type?**	**Describe the purpose.**
Product Backlog		
Product Goal		
Backlog Refinement		
Acceptance Criteria		
READY		

Key Elements of Scrum (cont.)		
Sprint Planning		
Sprint Backlog		
Sprint Goal		
A Sprint		
Daily Scrum		
Definiton of Done		
Sprint Review		
Sprint Retrospective		
An Increment		
Product Owner		
Scrum Master		
Developers		

Identify where the key elements of Scrum would fit in a Plan-Do-Check-Act (PDCA) cycle from TPS.

PDCA and Scrum	
What Scrum elements fit the PLAN step in PDCA?	
What Scrum elements fit the DO step in PDCA?	
What Scrum elements fit the CHECK step in PDCA?	
What Scrum elements fit the ACT step in PDCA?	

Complete the following table to test your knowledge of goals used in Scrum The Toyota Way.

Goals	
What type of goal is the Product Goal?	
What type of Goal is the Sprint Goal?	
What might happen if a Sprint Goal becomes obselete during the Sprint?	
Which type of goal has a longer time horizon?	

The focus of Scrum The Toyota Way is on developing a deep understanding of lean thinking and combining this knowledge with a more holistic understanding of Scrum. It is through a combination of this understanding we seek to detect the patterns and techniques that are effective when combined in the triple helix of flow.

Thurlow, as of 2023, remains a Professional Scrum Trainer (PST) and continues to teach Scrum the Toyota Way as one possible approach to enable the emergence of agility through a deeper and more holistic understanding of TPS, The Toyota Way, and Scrum.

Build the thing right. Build the right thing.

Connect the Three Helixes:

Flow can only be achieved when the three helixes are interconnected. To identify how this could occur, the next exercise requires the reader to identify examples of different methods from each of the other two helixes (distributed leadership, team science) that might work well with, or support, weak signal detection. Knowledge of all three helixes will be required to make these connections.

Connect the Helixes	
Select a scenario or problem that would benefit from the Scrum The Toyota Way.	
Identify three methods from distributed leadership that could work with Scrum The Toyota Way and give a brief description about how they complement one another.	
DL Method 1:	
DL Method 2:	

Connect the Helixes	
DL Method 3:	
Identify three methods from the team science helix that could work with Scrum The Toyota Way and give a brief description about how they complement one another.	
TS Method 1:	
TS Method 2:	
TS Method 3:	
Provide a description explaining which methods from each of the three helixes (with Scrum The Toyota Way being the CT method) work best for the scenario/ problem identified earlier.	