

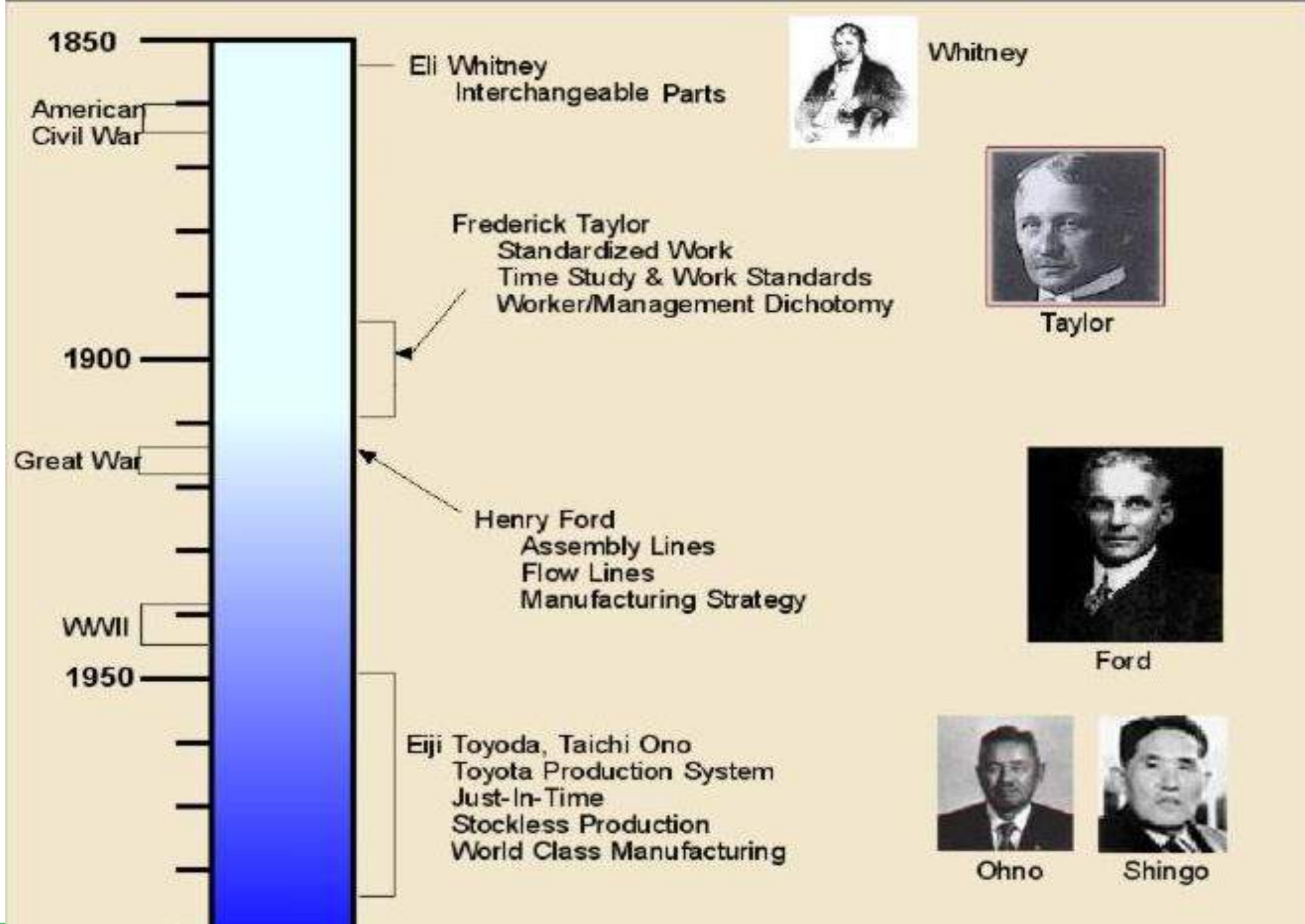


INFORMATION COMPETENCE AS BOOSTER
FOR PROSPECTIVE SCIENTISTS

SCRUM

Barcelona, 4th January 2020

History



First Article in English



International Journal of Production Research

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Toyota production system and Kanban system
Materialization of just-in-time and respect-for-human system

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Two basic concepts

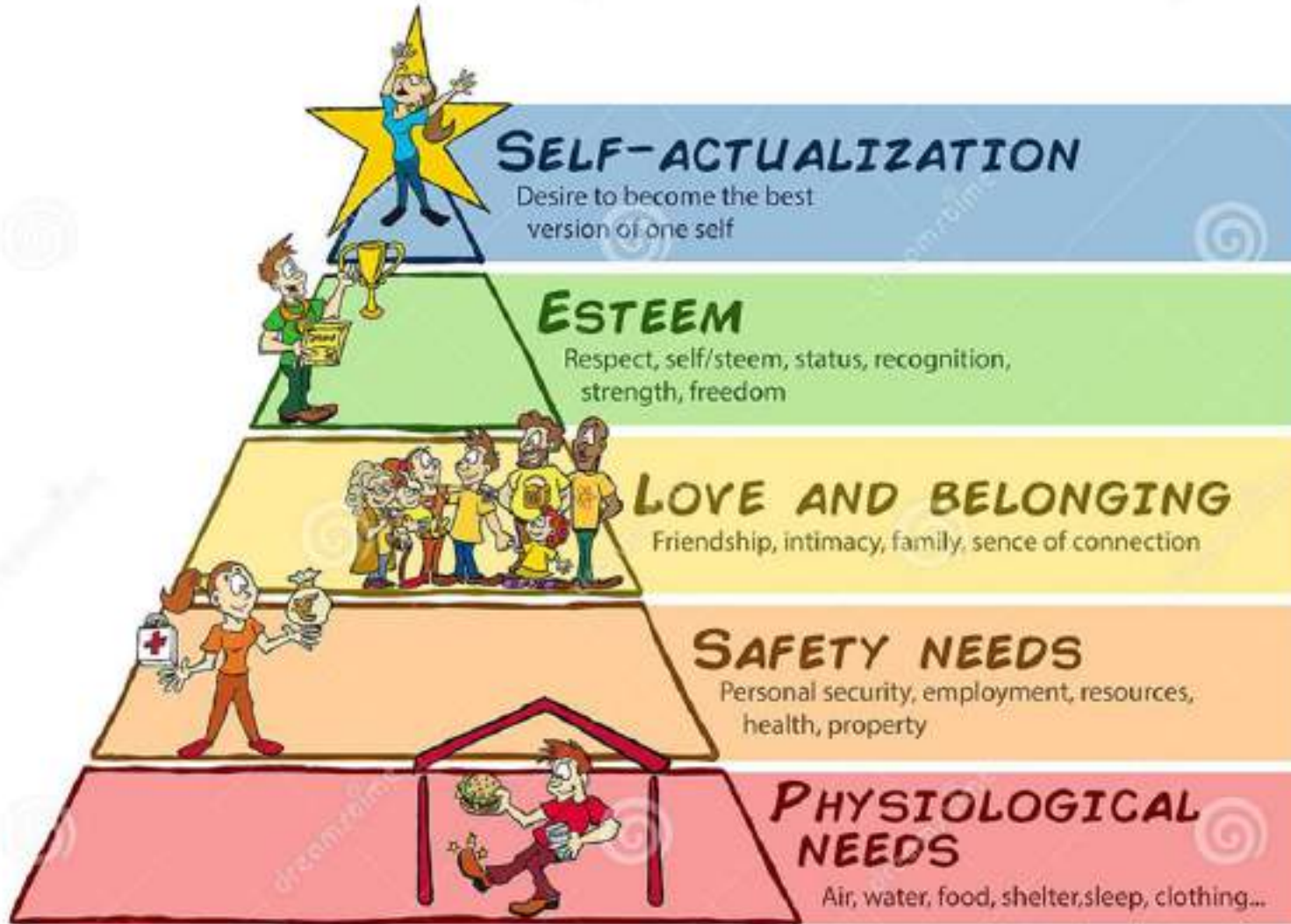
Toyota production system and its basic concept

Upon recognition of the matters related above, Toyota is planning and running its production system on the following two basic concepts.

First of all, the thing that corresponds to the first recognition of putting forth all efforts to attain low cost production is “**reduction of cost through elimination of waste**”. This involves making up a system that will thoroughly eliminate waste by assuming that anything other than the minimum amount of equipment, materials, parts, and workers (working time) which are absolutely essential to production are merely surplus that only raises the cost.

The thing that corresponds to the second recognition of Japanese diligence, high degree of ability, and favoured labour environment is “**to make full use of the workers' capabilities**”. In short, **treat the workers as human beings and with consideration.** Build up a system that will allow the workers to display their full capabilities by themselves.

Maslow's Pyramid



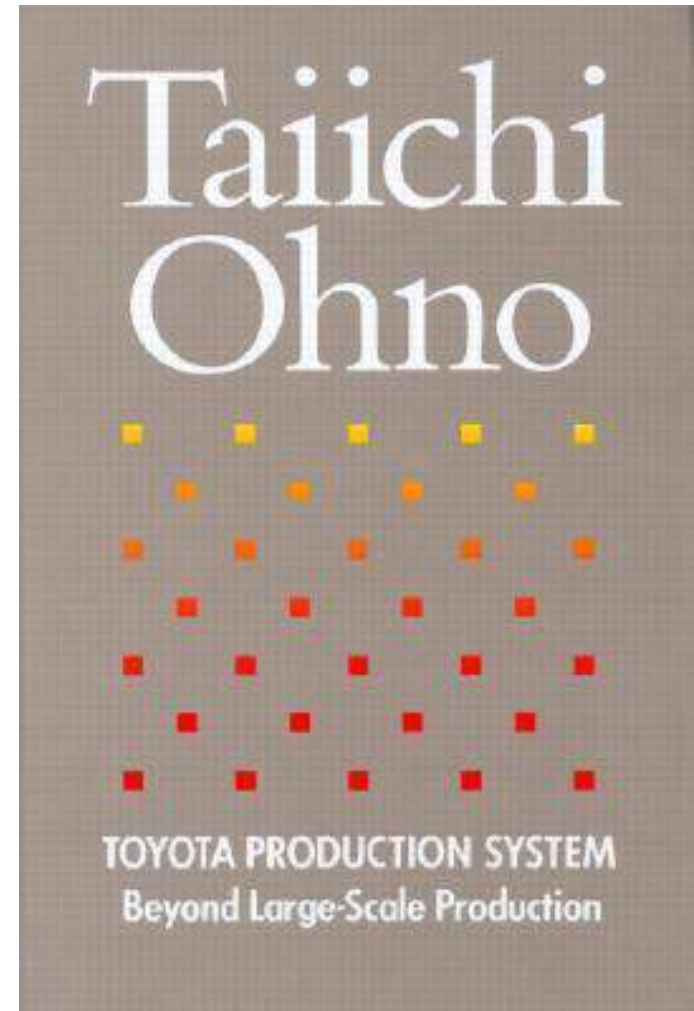
Respect people

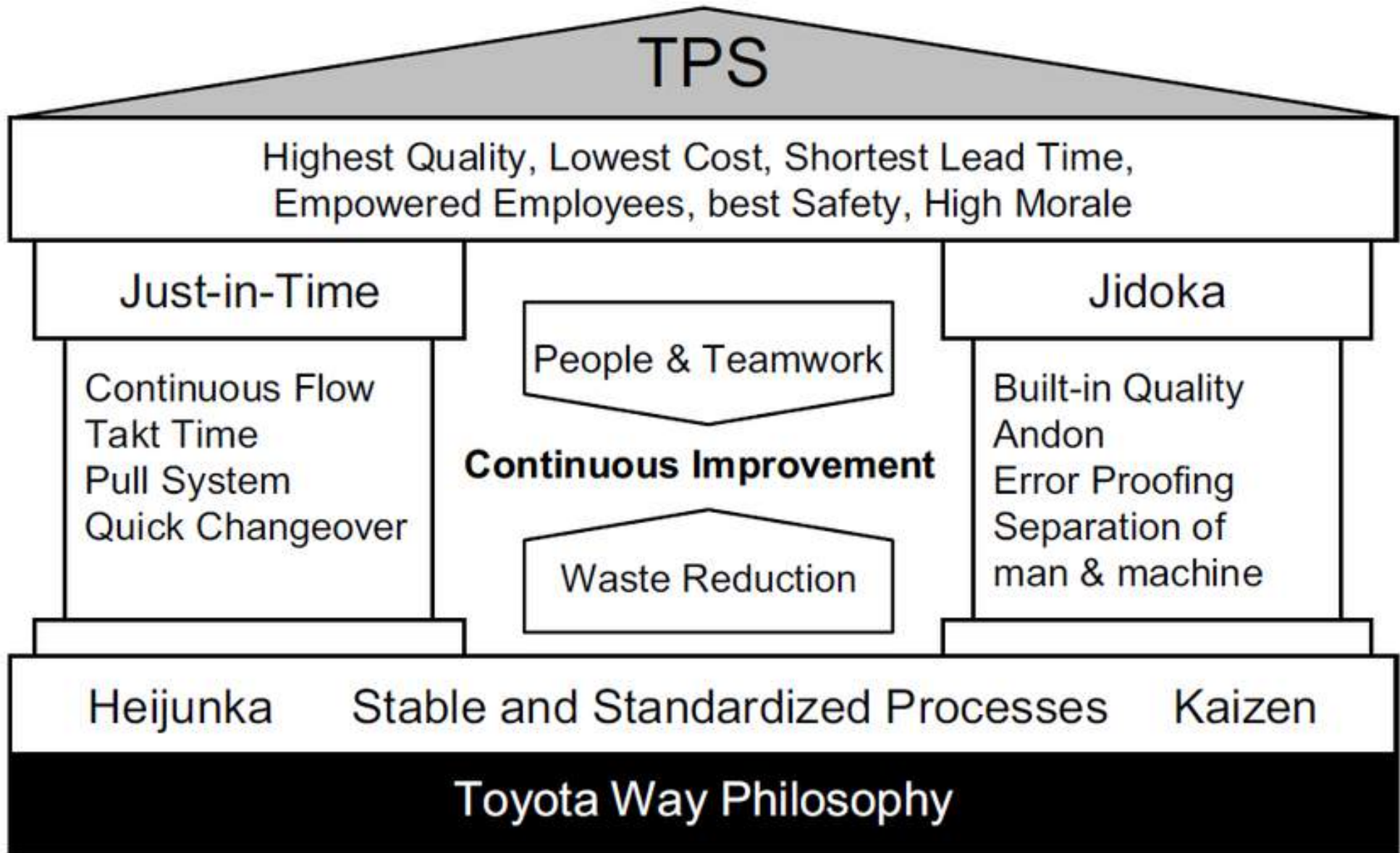


Taiichi Ohno



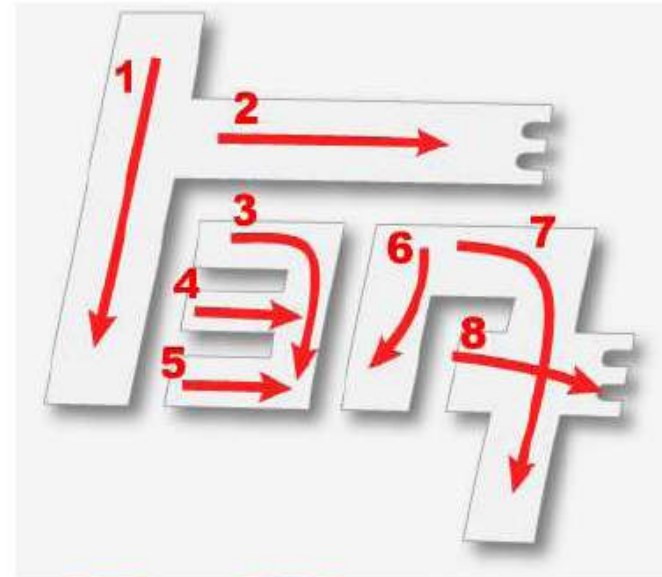
1977 in Japanese
1988 in English





3. Kaizen Mind

15) *“Being content with one’s current situation could be the first step towards corruption.”* (words of Mr. Eiji Toyota)



Why did they switch from **TOYO-DA** to **TOYO-TA**???

Shingo Model

1. **Respect Every Individual**
2. **Lead With Humility**
3. **Seek Perfection**
4. Embrace Scientific Thinking
5. Focus on Process
6. Assure Quality at the Source
7. **Improve Flow & Pull**
8. Think Systematically
9. Create Constancy of Purpose
10. **Create Value for the Customer**



First Shingo Prize - 1988

WITH A NEW INTRODUCTION ON USING THE PRINCIPLES OF *THE SERVANT* IN YOUR LIFE AND CAREER

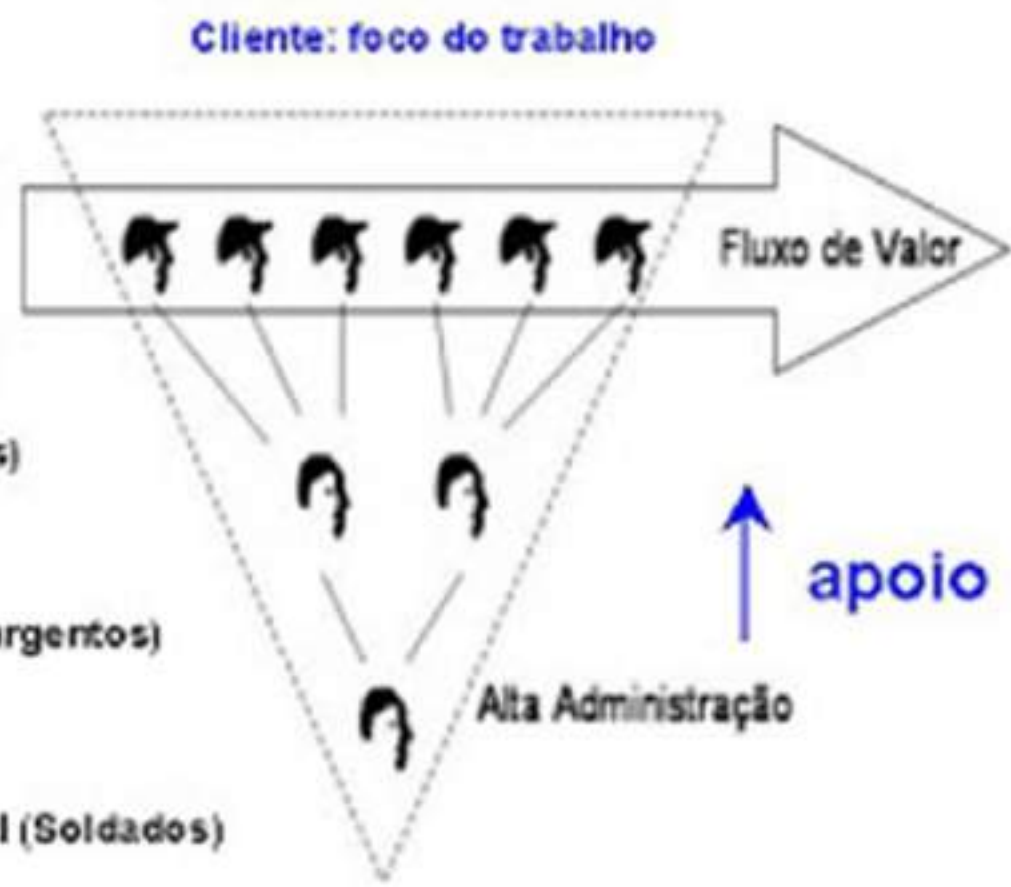
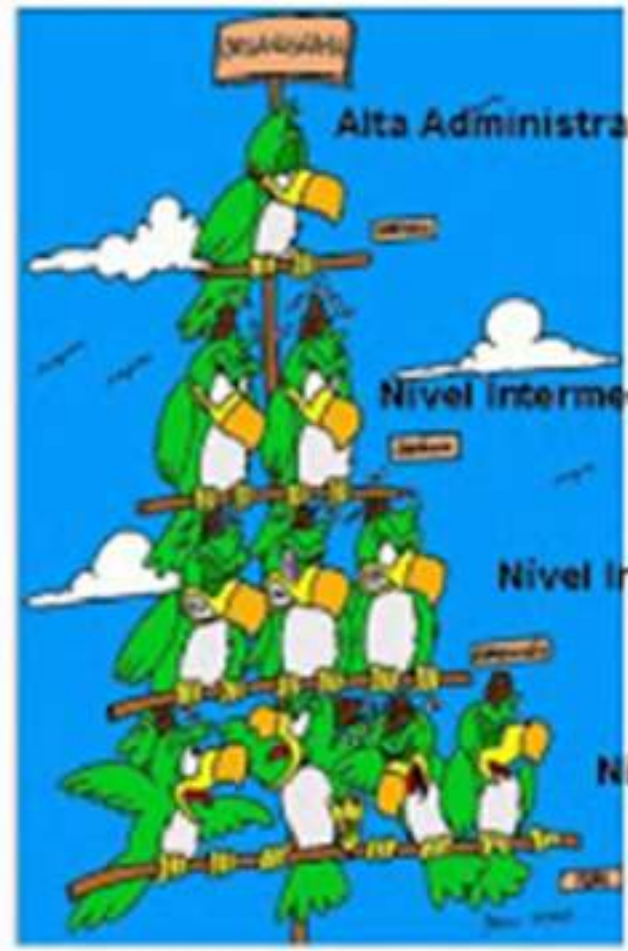
THE SERVANT

A SIMPLE STORY ABOUT THE TRUE ESSENCE OF LEADERSHIP

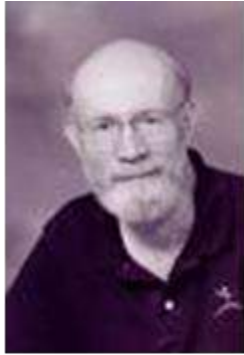


OVER 3 MILLION COPIES IN PRINT
JAMES C. HUNTER

Inverted Pyramid



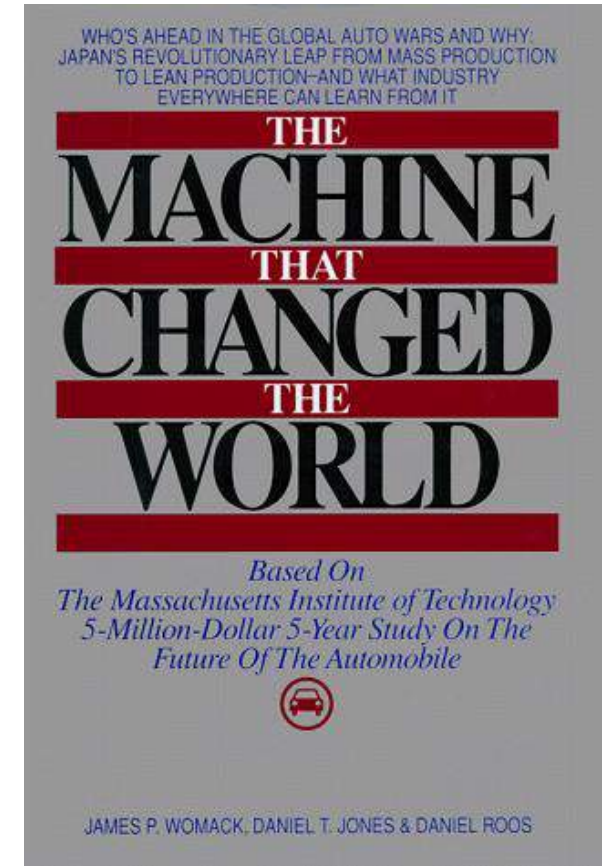
Lean word



- James P. Womack
- Daniel T. Jones
- Daniel Ross

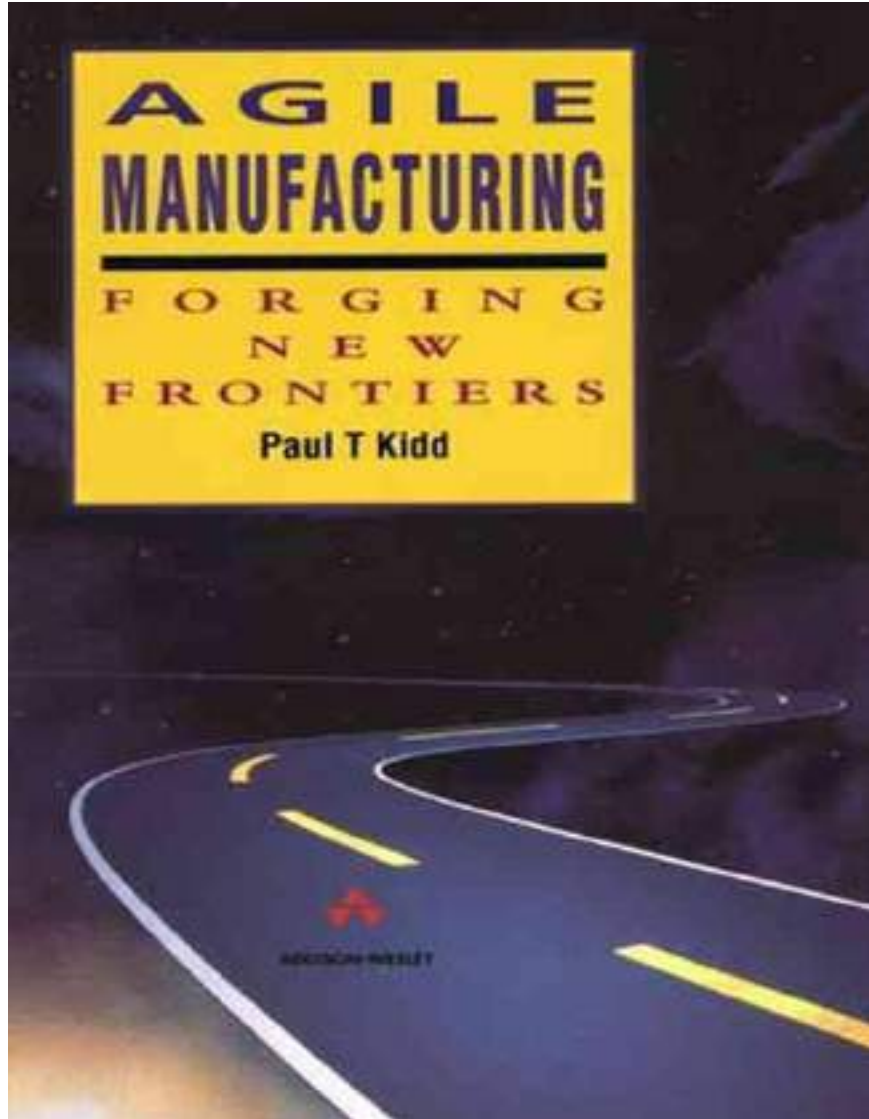


- MIT
- 5 Million USD
- 5 year of project (1985-1990)
- Around 200 Researchers
- **“Lean Production”** became famous



1990

Agile Manufacturing

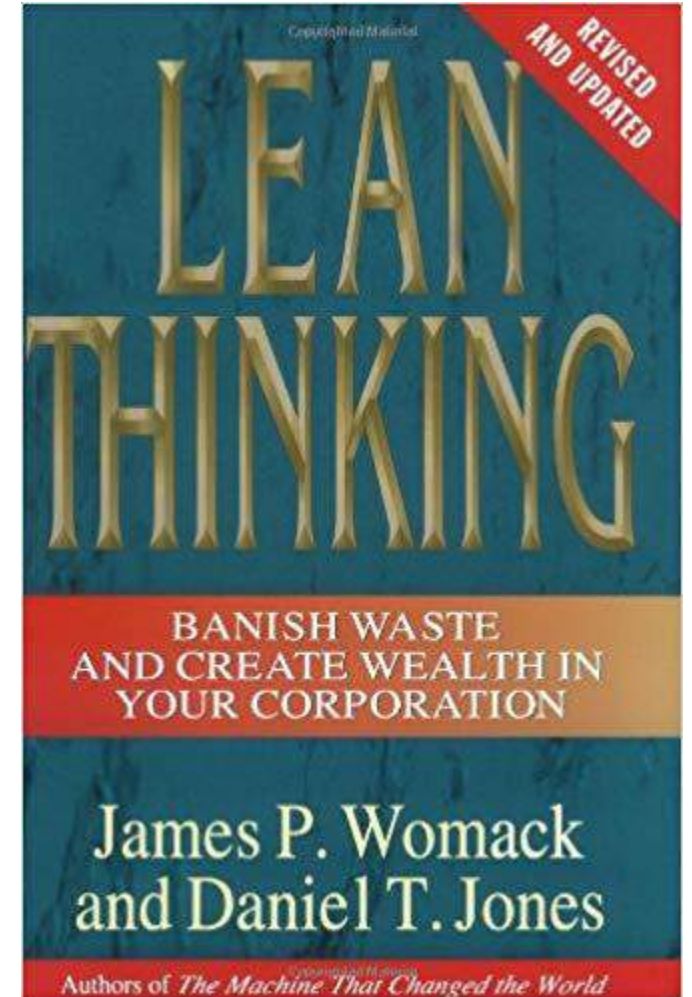


1994

Agile Manufacturing represents a quantum leap forward in manufacturing that could enable the West to gain a real competitive advantage over the Japanese.

Lean Thinking Principles

1996

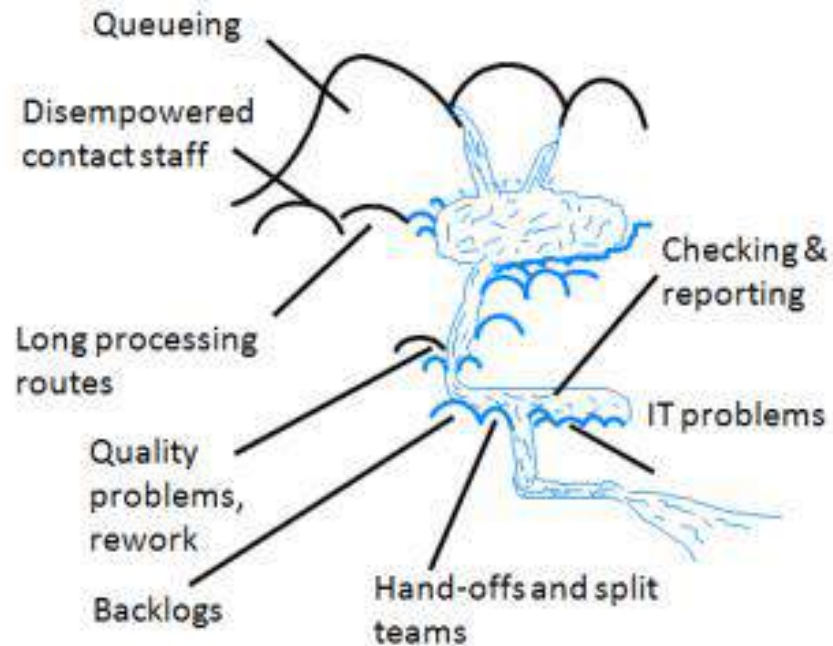




VALUE

Creating Flow

Flow is typically disrupted in many services:

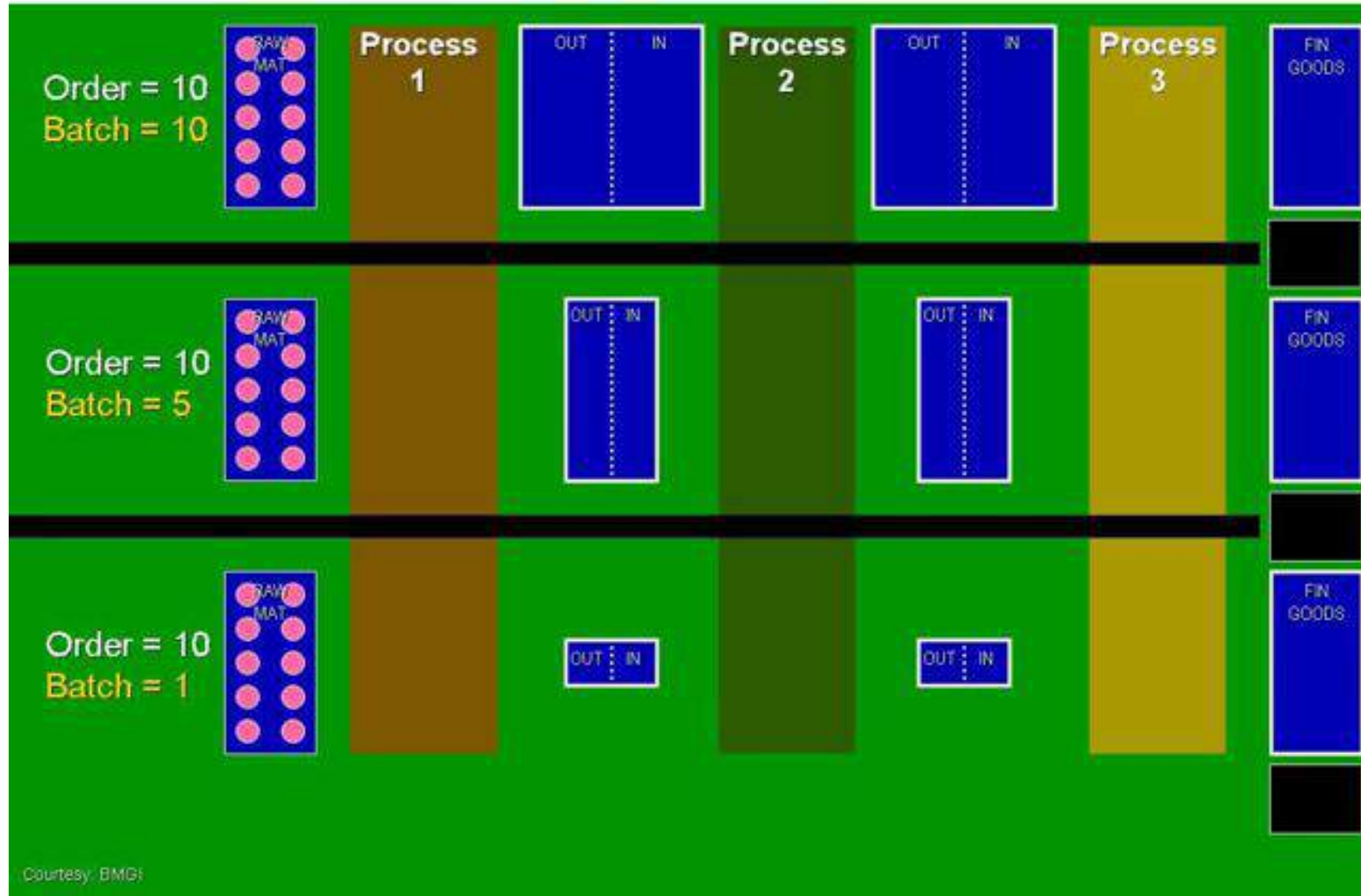


A developed flow is less disrupted:

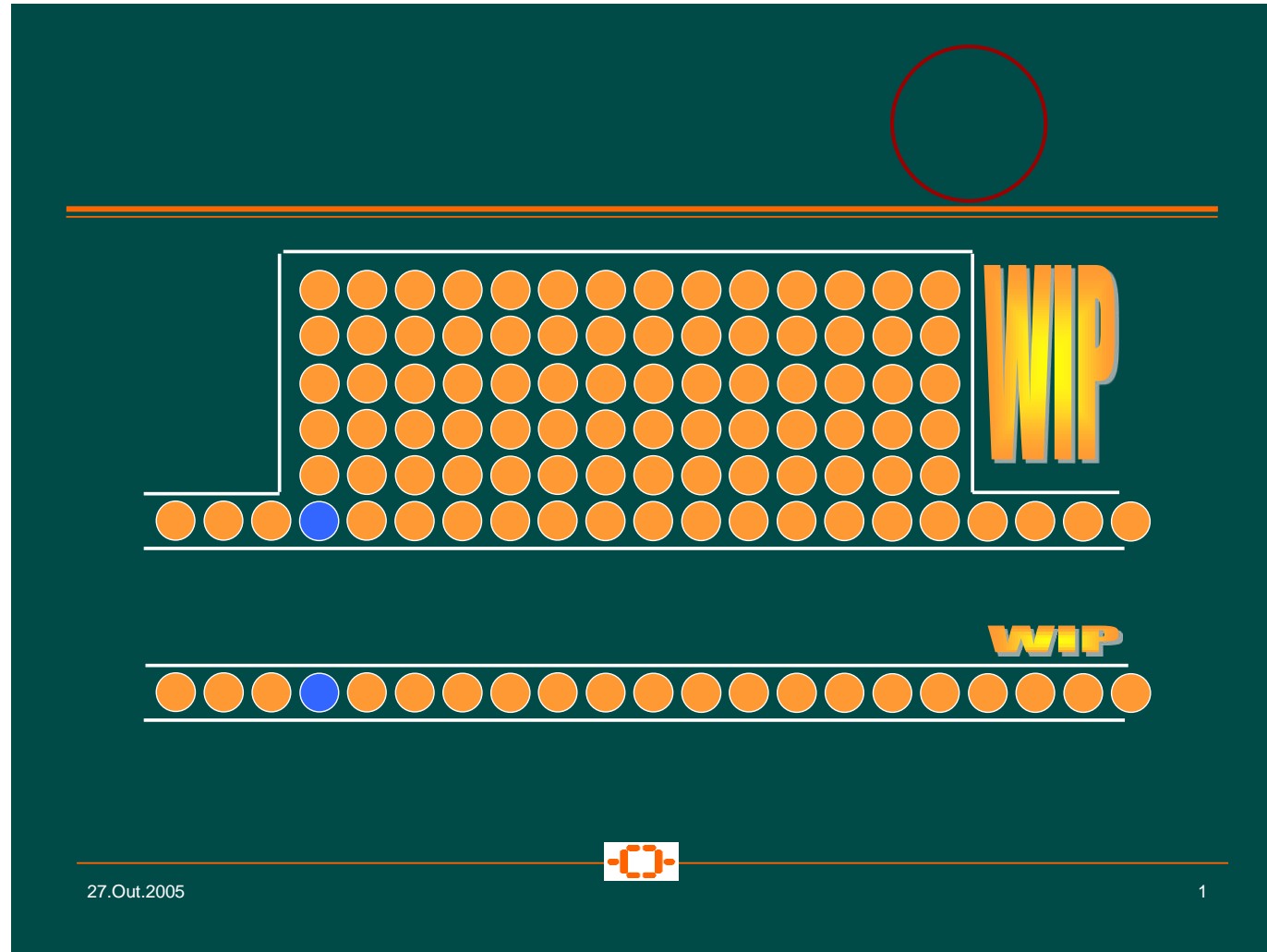


- Smooth
- Customer focused
- Meets organisational requirements
- Efficient
- Uninterrupted
- Shortest lead time
- Waste intolerant
- Right first time

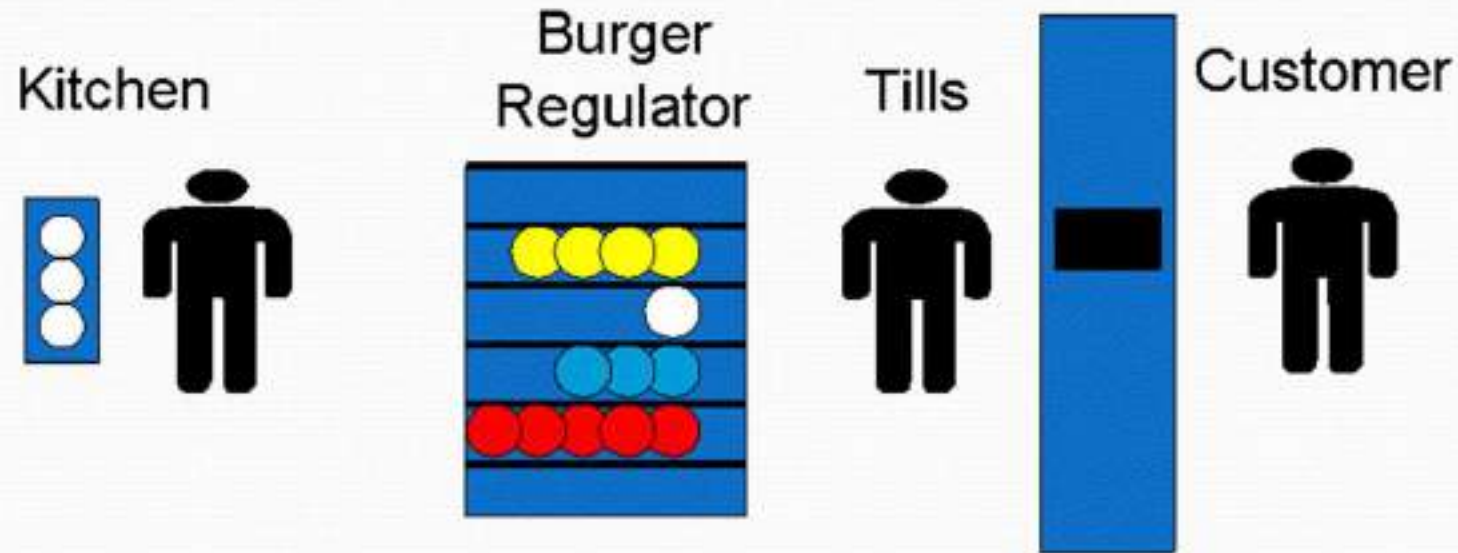
Flow – One piece flow versus Batch Production



Flow and Pull Flow



Kanban: A Simple Real Example



As each burger is consumed . . .
They are removed from the regulator . . .
And then replenished by the kitchen . . .
Not made to a forecast and pushed at the customer

One-Piece-Flow

<https://www.youtube.com/watch?v=Dr67i5SdXiM&t=29s>

Mass Production 00:02:27

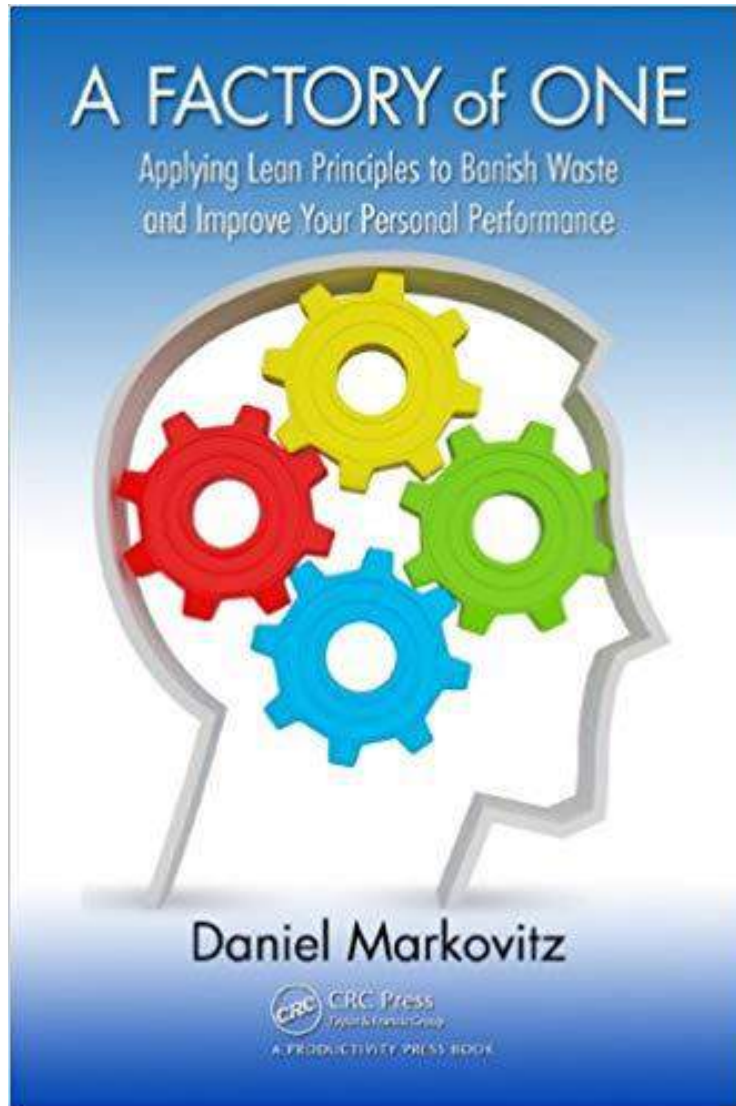
Gemba
ACADEMY
Improvement Learning, Improved.

GembaAcademy.com

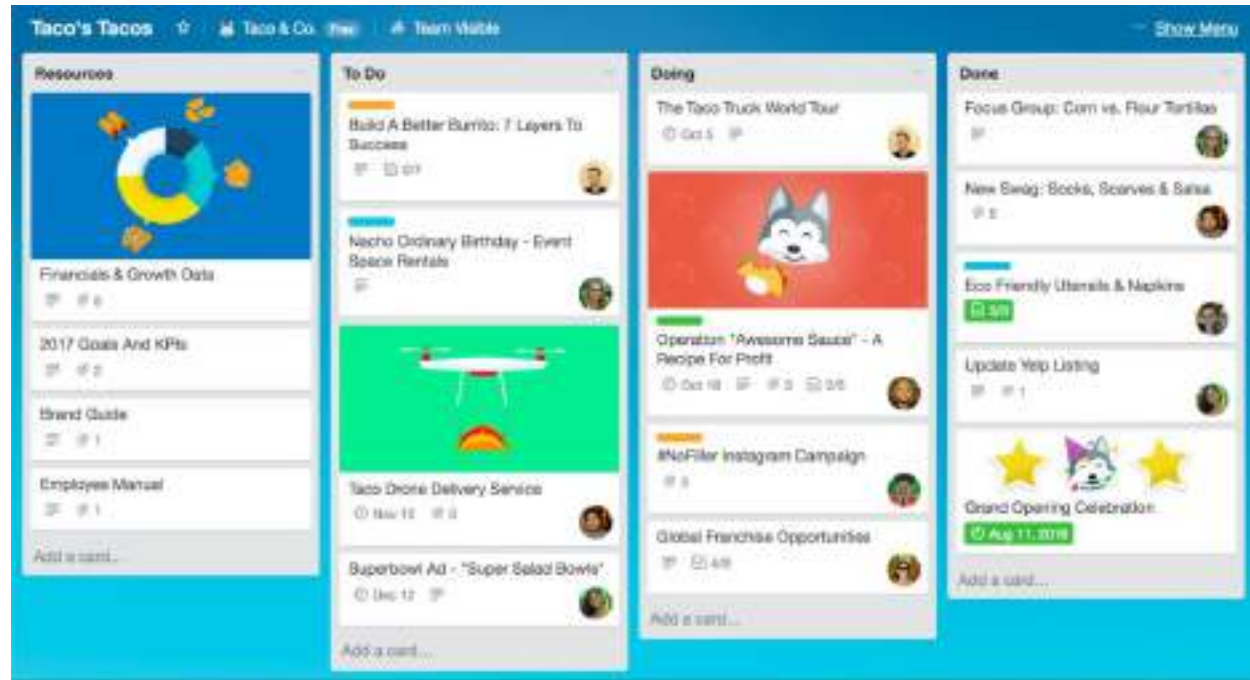
CLICK
HERE

The image shows a man in a red jacket standing at a table, demonstrating a process. On the table are a smartphone, a stack of papers, a small stack of yellow and green blocks, and a white mug with the Gemba Academy logo. In the background, a whiteboard displays the text 'Mass Production 00:02:27'. To the right of the man is the Gemba Academy logo, which consists of a green stylized building icon and the text 'Gemba ACADEMY' in green, with the tagline 'Improvement Learning, Improved.' below it. In the bottom right corner of the video frame, there is a small white box with a red play button icon and the text 'CLICK HERE'. The overall scene is set against a dark background.

Personal Kanban



Example of Team Kanban platform



In Brain@Work



<https://librarycloud.bo.cnr.it/>

Visual Management Impact



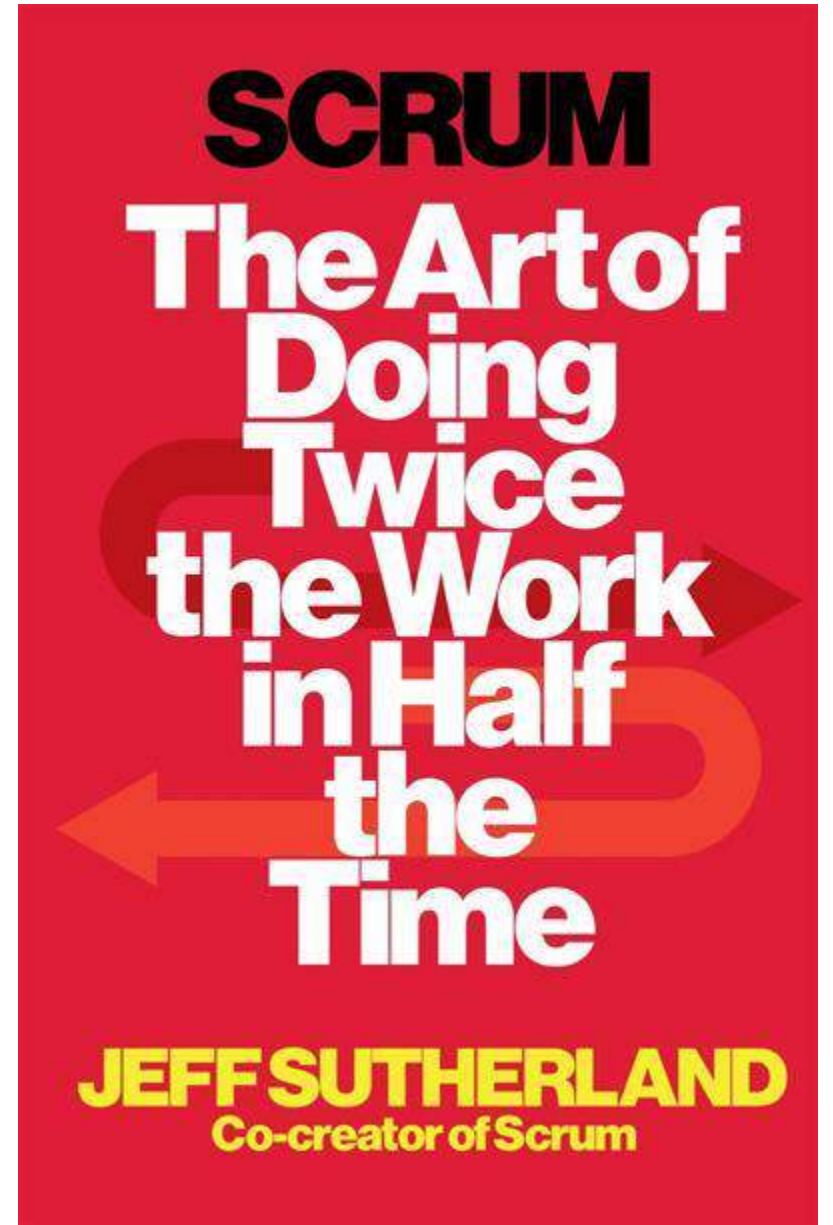
Scrum



Hiroataka Takeuchi and Ikujiro Nonaka introduced the term scrum in the context of product development in their 1986 Harvard Business Review article, "The New New Product Development Game"

In 1995, Sutherland and Schwaber jointly presented a paper describing the Scrum framework

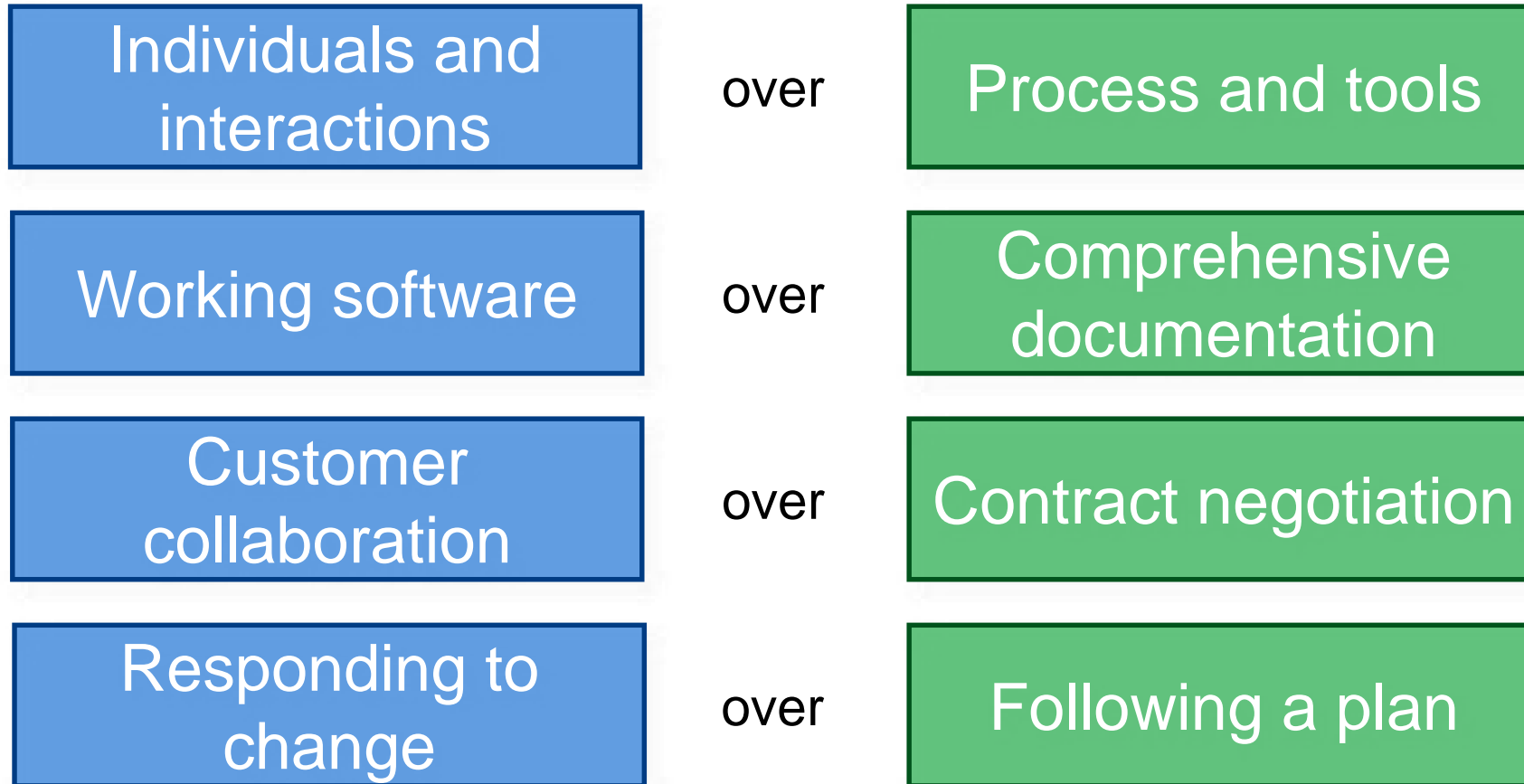
The Scrum Guide



Scrum has been used by:

- Microsoft
- Yahoo
- Google
- Electronic Arts
- IBM
- Lockheed Martin
- Philips
- Siemens
- Nokia
- Capital One
- BBC
- Intuit
- Apple
- Nielsen Media
- First American Corelogic
- Qualcomm
- Texas Instruments
- Salesforce.com
- John Deere
- Lexis Nexis
- Sabre
- Salesforce.com
- Time Warner
- Turner Broadcasting
- Océ





Function / Paradigm Paralysis

$$445 + 5 = 450$$

Include or remove one of the following segment:

/ | \ -

The Agile: Scrum Framework at a glance

Inputs from Executives,
Team, Stakeholders,
Customers, Users



Product Owner



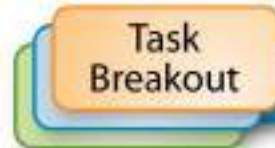
The Team



Product Backlog



Sprint Planning Meeting



Sprint Backlog



1-4 Week Sprint

Sprint end date and team deliverable do not change



Scrum Master



Burndown/up Charts

Every 24 Hours



Daily Scrum Meeting



Sprint Review

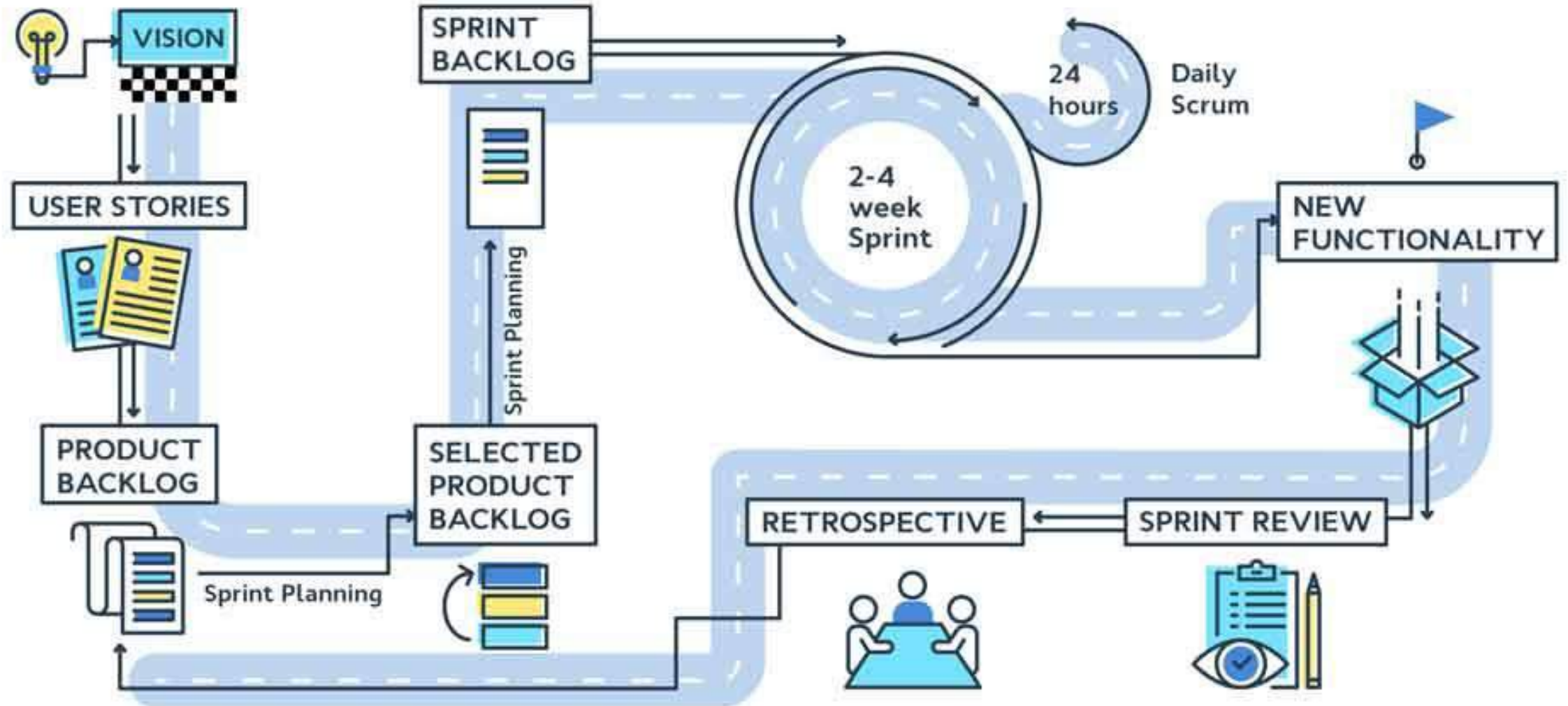


Finished Work



Sprint Retrospective

SCRUM PROCESS



Student's Team using Scrum



Roles

- Product owner
- Scrum Master
- Team

Ceremonies

- Sprint planning
- Sprint review
- Sprint retrospective
- Daily scrum meeting

Artifacts

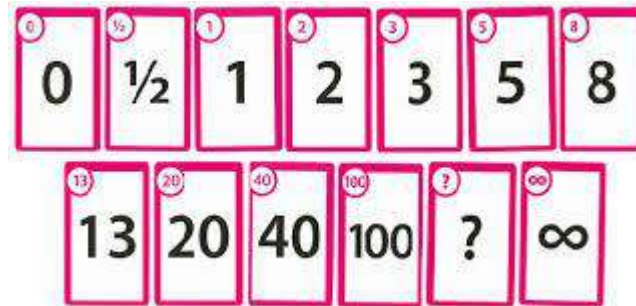
- Product backlog
- Sprint backlog
- Burndown charts

Artifacts

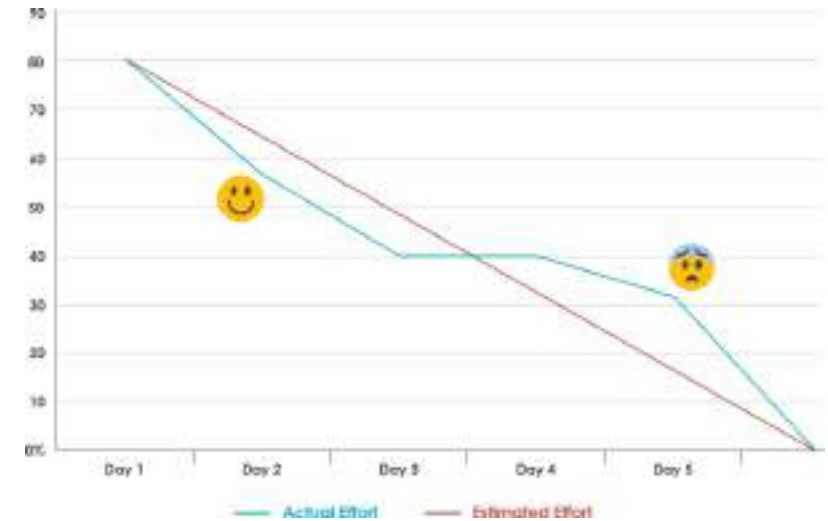
Kanban Board

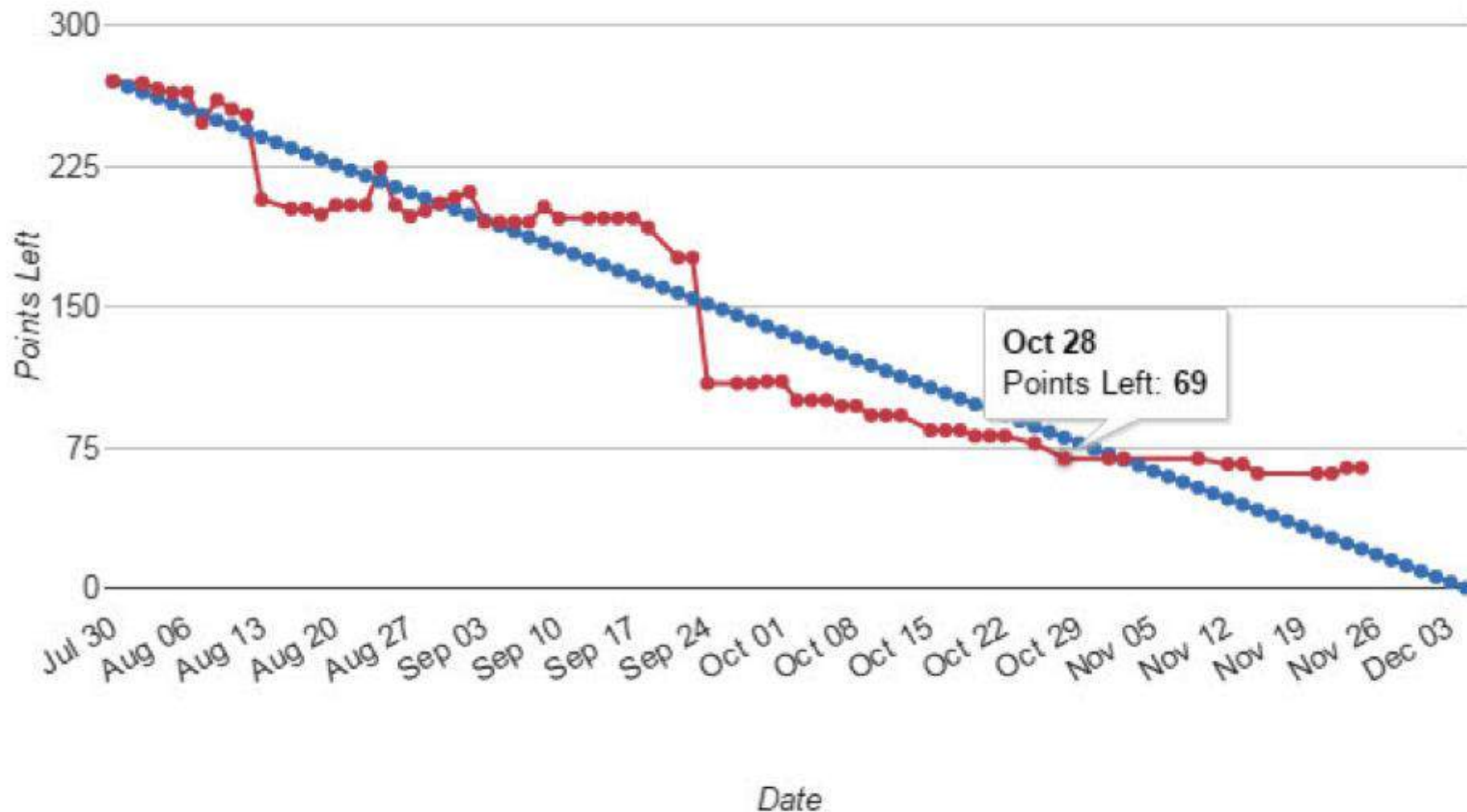


Fibonacci Poker Cards



Burndown Chart





Sprint Planning

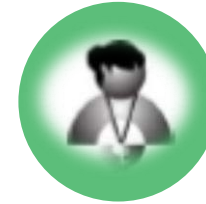


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Product Owner



Scrum Master



Scrum Master



Part 1

Part 2

Development Team



Development Team



T
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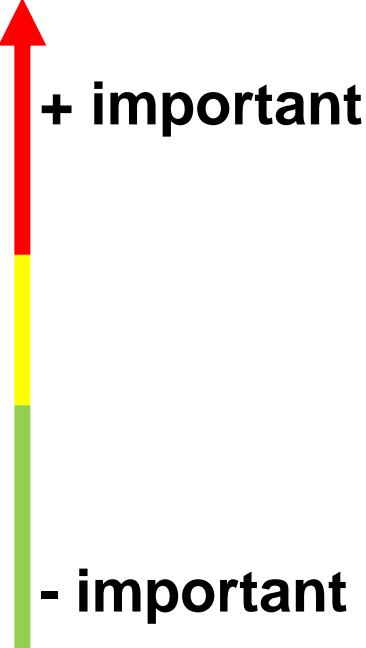
Part 1 - PO + SM + DT

Backlog / Initial Sprint Goal

STEPS:

- 1** Product Owner shows the backlog prioritized.
- 2** Product Owner shares with the team the Initial Sprint Goal.

Initial Sprint Goal

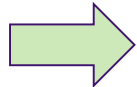


Part 2 - SM + DT

Each US... is broken into a set of tasks

STEPS:

- 2 The development team break every US into a set of tasks.



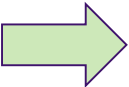
IDEAS	SPRINT			WIP	TEST	DONE
	EPIC	STORIES	TASKS			
		US1 As a I want In order to	T1 T2 T3			
		US2 As a I want In order to	T1 T2			
		US3 As a I want In order to	T1			

Part 2 - SM + DT

Each US... is broken into a set of tasks

STEPS:

- 2 The development team break every US into a set of tasks.



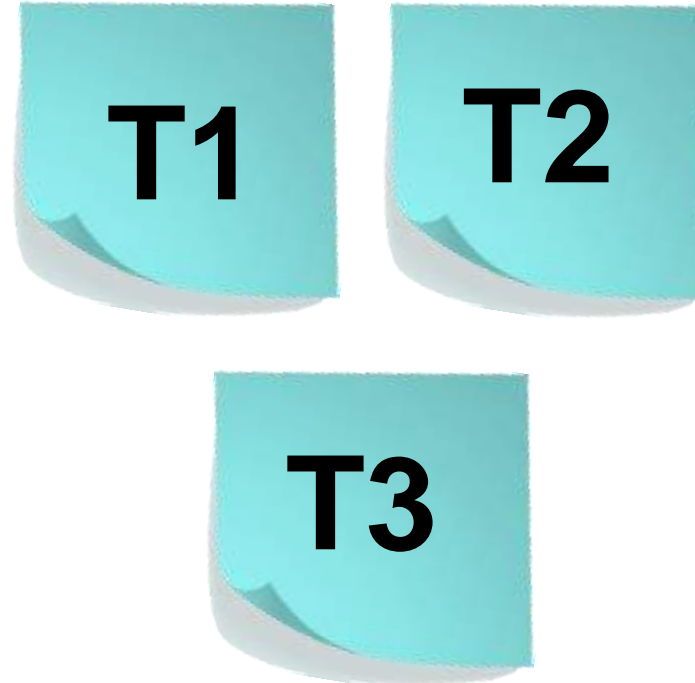
IDEAS	SPRINT			WIP	TEST	DONE
	EPIC	STORIES	TASKS			
		US1 As a I want In order to	T1 T2 T3			
		US2 As a I want In order to	T1 T2			
		US3 As a I want In order to	T1			

User Stories

As a...		Story Points
I want to...		
In order to...		
Acceptance Criteria		



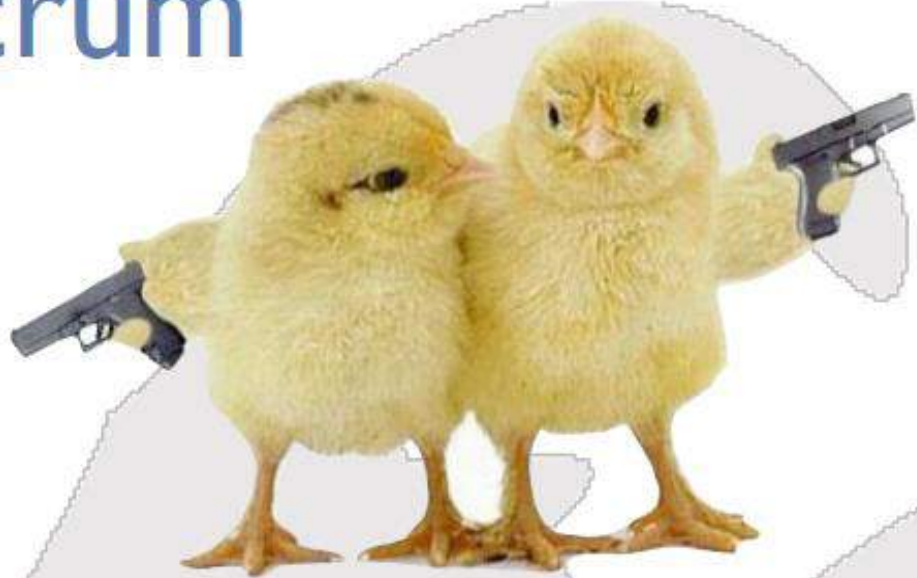
Tasks

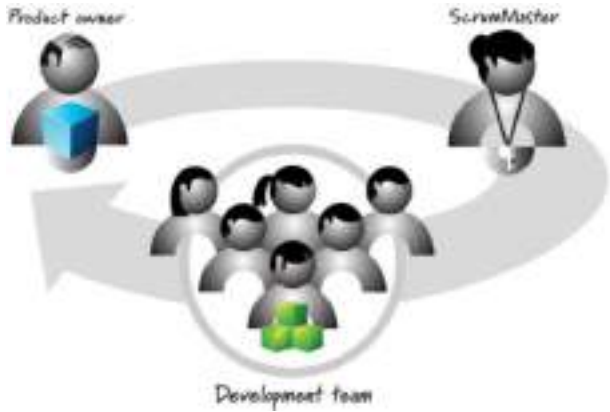


All tasks should not take more than **1 day** and less than **1h**.

The daily scrum

- Parameters
 - Daily
 - 15-minutes
 - Stand-up
- Not for problem solving
 - Whole world is invited
 - Only team members, ScrumMaster, product owner, can talk
- Helps avoid other unnecessary meetings





Daily Meeting

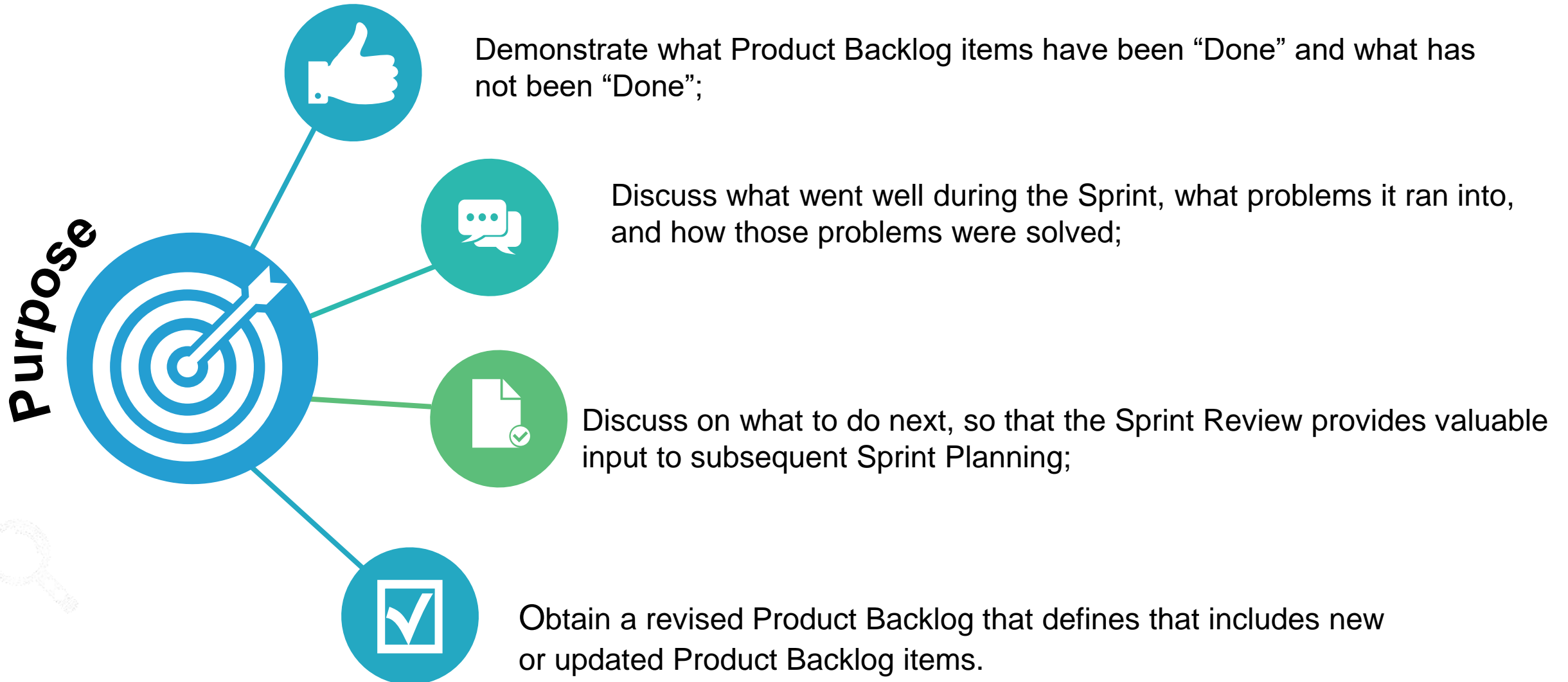
What have you done?

What are you doing?

Is there anything blocking you?

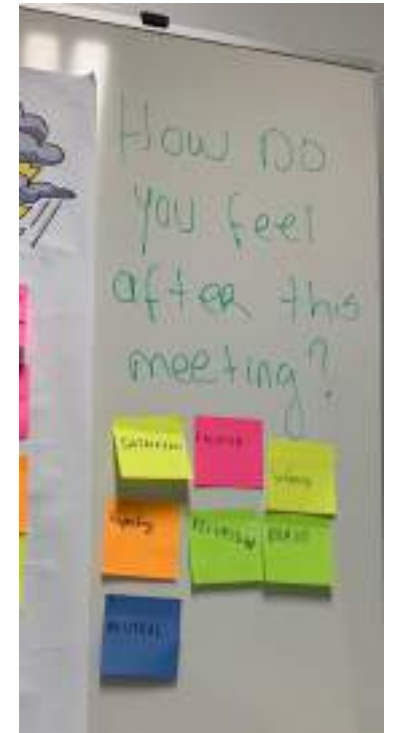
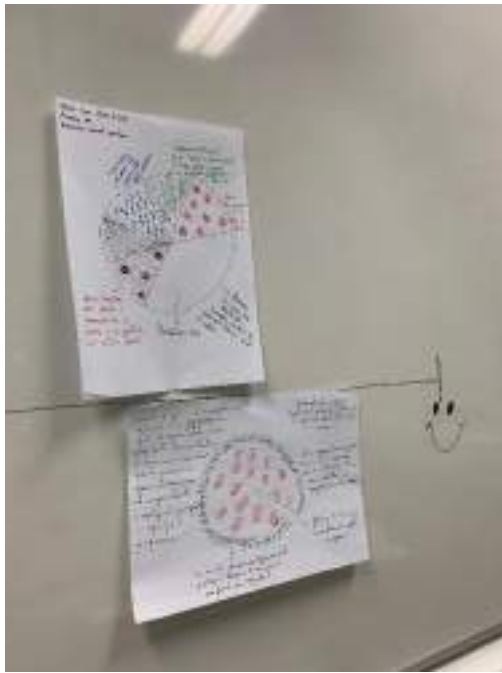


Sprint Review



Sprint Retrospective

Is the continuous improvement mechanism





THANK YOU!

ANY QUESTIONS?