

## Kanban

A strategy for optimising the flow of stakeholder value through a process that uses a visual Work In Progress (WIP) pull system.

A focus on:

**Transparency | Visualisation | Flow**

## Workflow - Defined by Scrum team

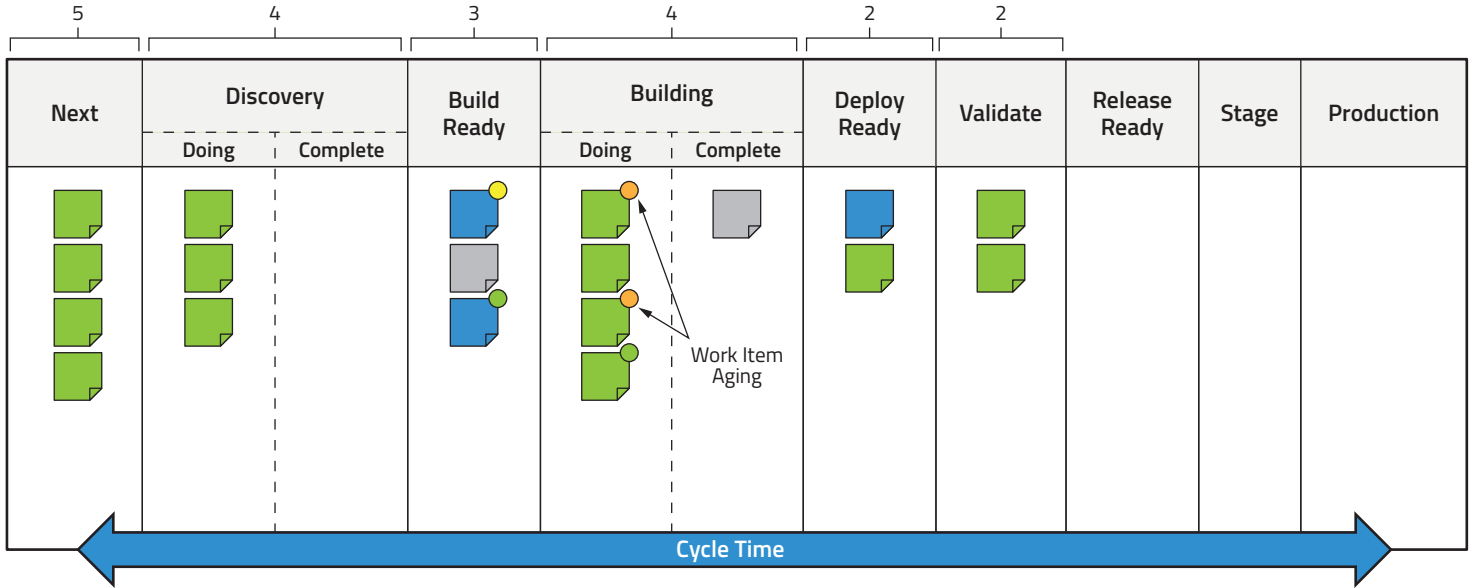
- Clear start and end points
- Units of customer value (PBI)
- One active state
- Explicit policies
- SLE (Service Level Expectation)

The workflow does not have to be sequential, or use all states

**Must Use WIP** -> Creates predictability -> typically change at retrospective  
-> when urgent vary and exceed limit – vary and discuss

## Service Level Expectation (SLE)

**Period and probability:** e.g. 8 days or less for 85% of items (*85% of items are finished inside 8 days*)  
(Each day that an item is not finished, the probability that it will not meet its SLE increases).



## Practices and Metrics

### Four Practices

- Visualization of the workflow
- Limiting WIP
- Active management of work items in progress
- Inspecting and adapting their definition of "Workflow"

### (Covered by Scrum)

- Improve collaboratively
- Implement feedback loops

### Metrics for Forecasting

**Item:** Cycle Time  
**Items:** Throughput  
**SLE:** Deterministic

### Four Metrics

**WIP:** The number of work items started but not finished (according to the Scrum Team's definition of "Workflow").

**Cycle Time:** The amount of elapsed time between when a work item "starts" and when a work item "finishes."

**Throughput:** The number of work items "finished" per unit of time.

**Work Item Age:** The amount of elapsed time between when a work item "started" and the current time.

### Actively Manage WIP

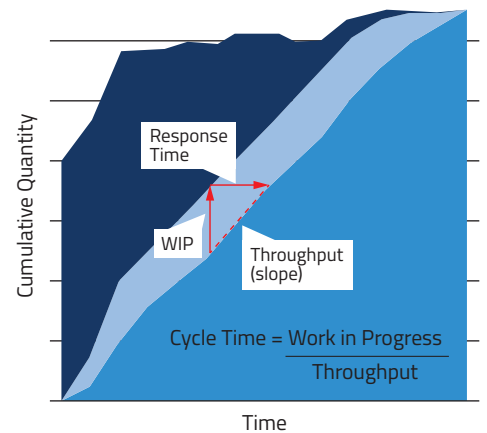
- Respond to blocked
- Pull at same rate as leaving
- Don't let work age
- Unclog piled up work

## Little's Law

**Applies when rate of work in = rate of work out**

(No cancelled work & no preferential treatment)

Cumulative Flow Diagram (CFD)



## Metrics to use at Events

	WIP	Cycle Time	Work Item Age	Throughput	SLE
Sprint Planning			*Leftover	✓	
Daily Scrum	✓		✓		✓
Sprint Review		✓	**	✓	✓
Sprint Retro	✓	✓	*Leftover	✓	✓