Flow Metrics for Predictability and Forecasting

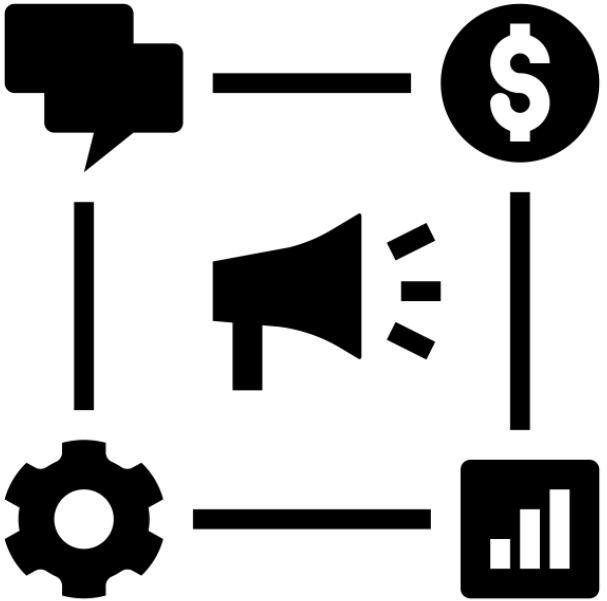
Kevin Sivic

Agenda

- Introduce Forecasting
  - Flow Metrics
  - Multiple Things - Monte Carlo
  - One Thing - SLE's
- Introduce the rest of the flow metrics
- How to improve predictability using flow metrics

When will it be done?

Created by Wilson Joseph
from Noun Project



Created by Nithinan Tatah
from Noun Project

How do we answer this question?

Created by Vectors Market
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Created by Larea
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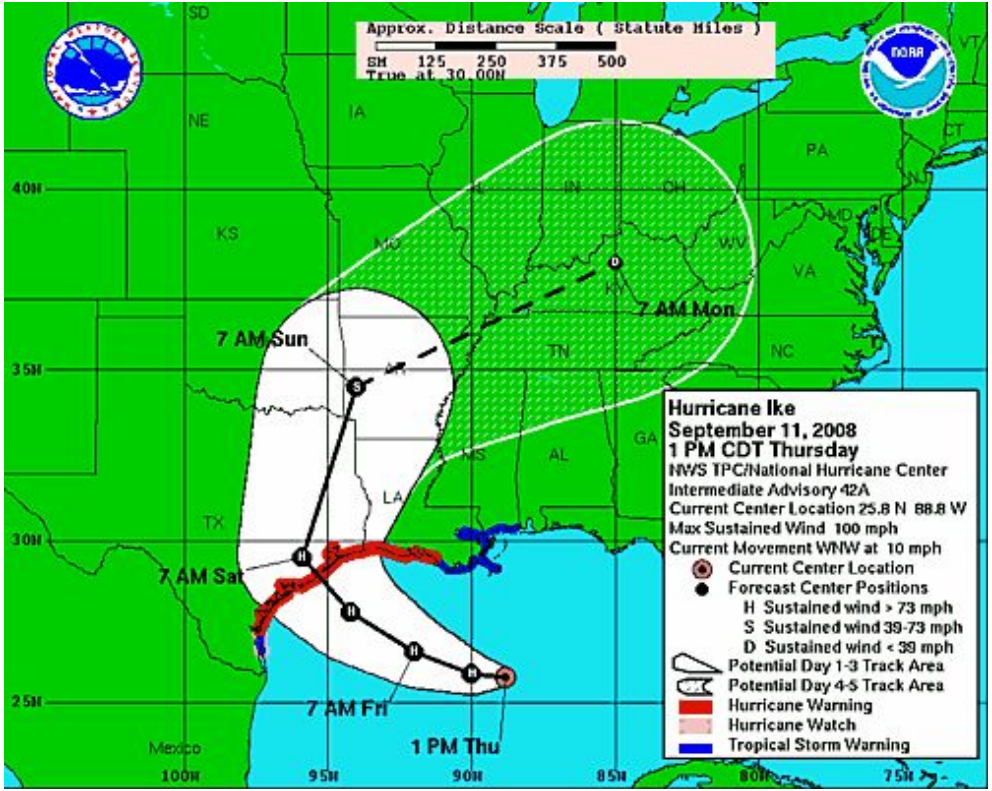
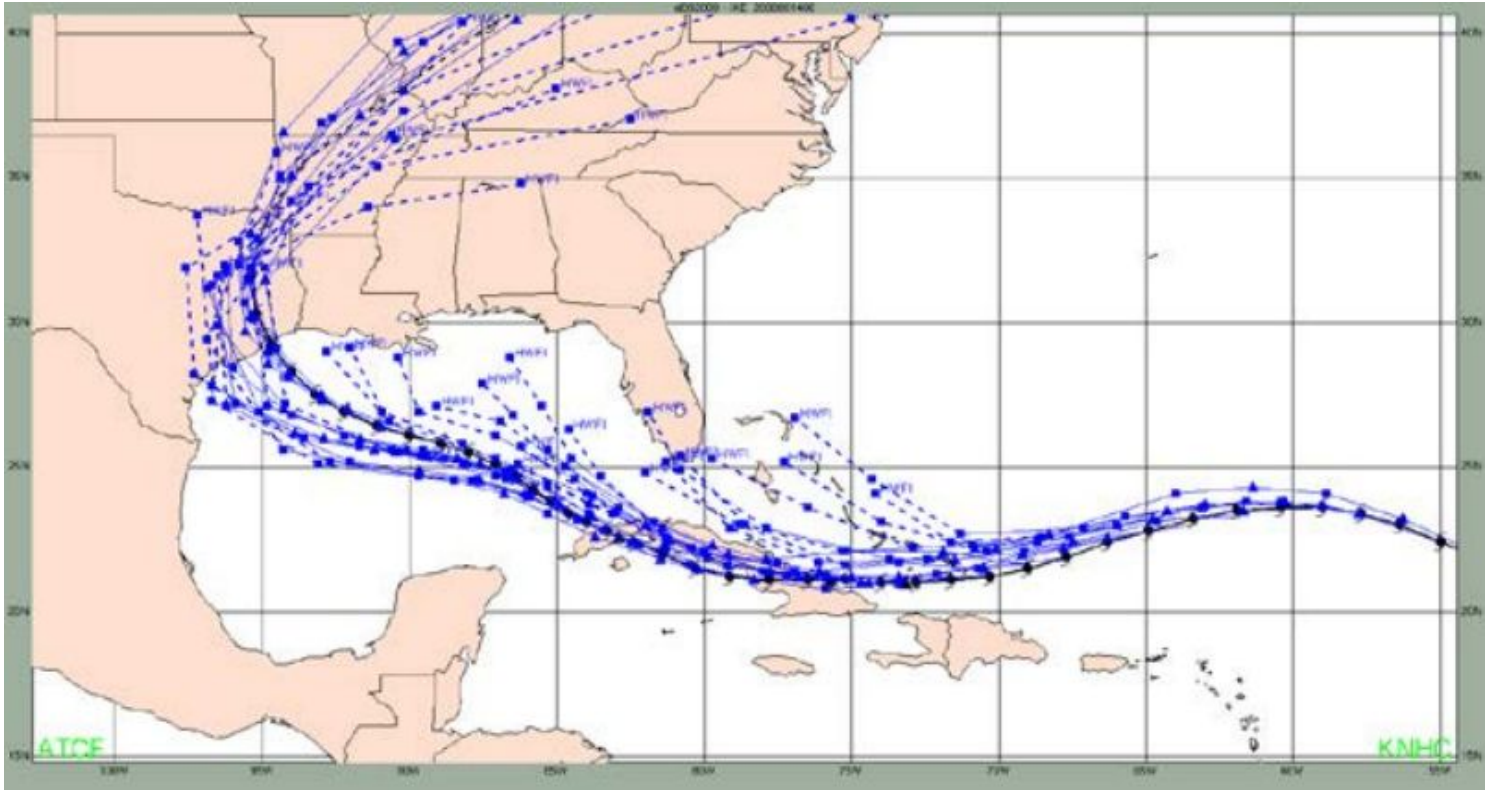
Forecasting



Forecasting - What's with the cone?

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Forecasting

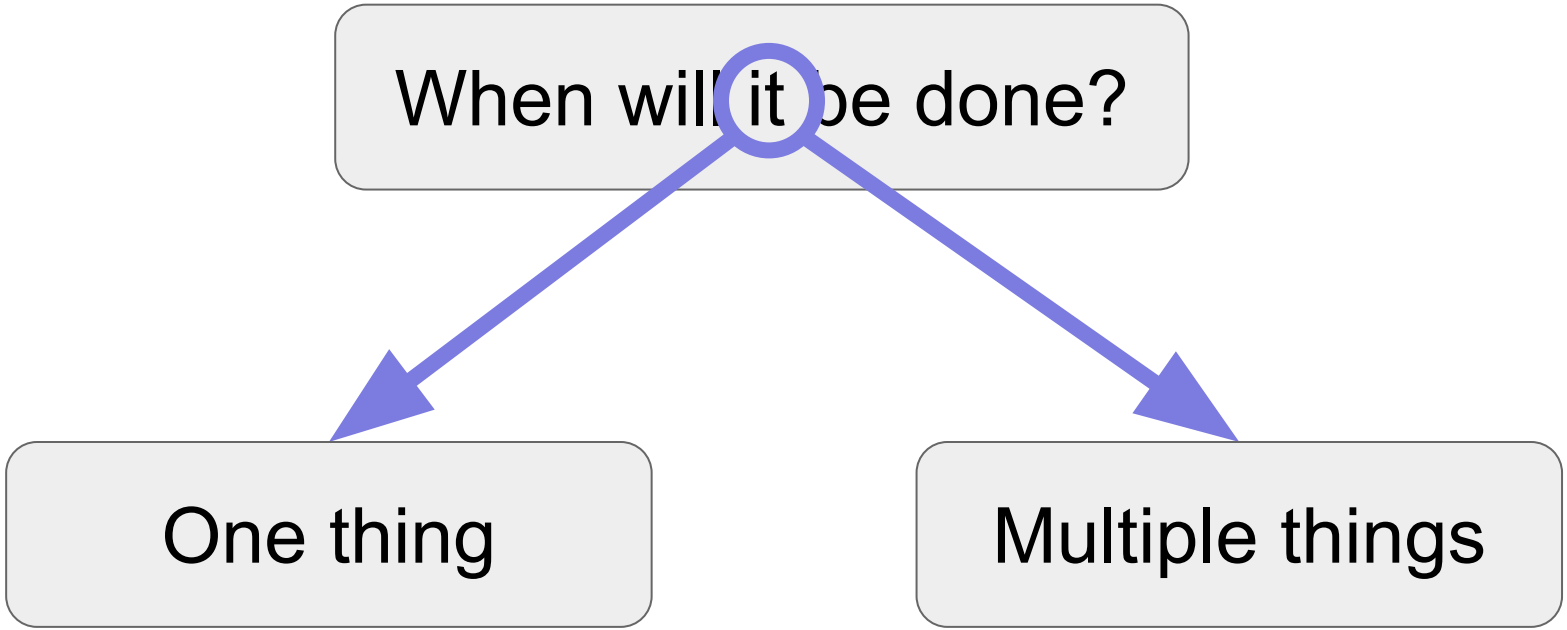


Forecasting - What else?

Forecasting (for knowledge work)

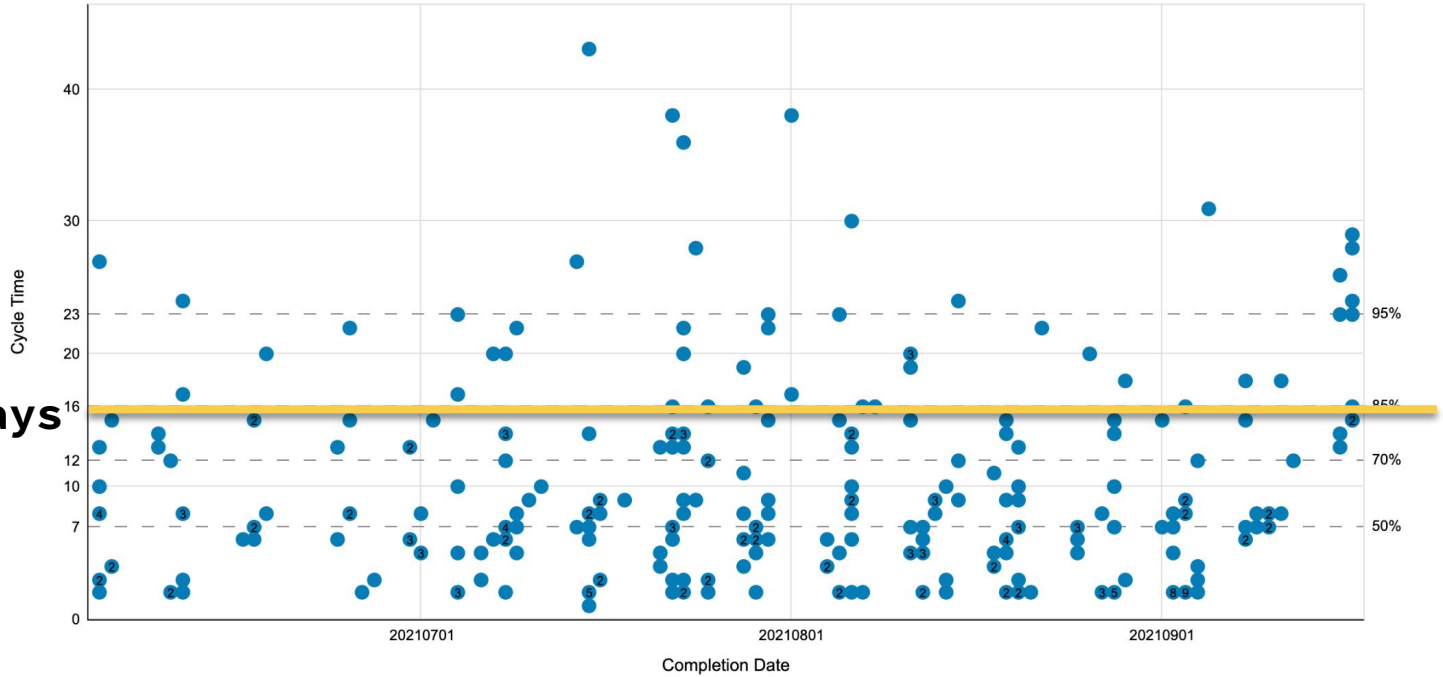
Created by Mark Jayvee Pabilonia
from Noun Project

Forecasting (for knowledge work)



Forecasting (for knowledge work)

One thing



16 days **85%**

Thanks to https://actionableagile.com

Forecasting (for knowledge work)

Multiple things

2. How many stories are remaining to be completed?

low guess	175	high guess	225

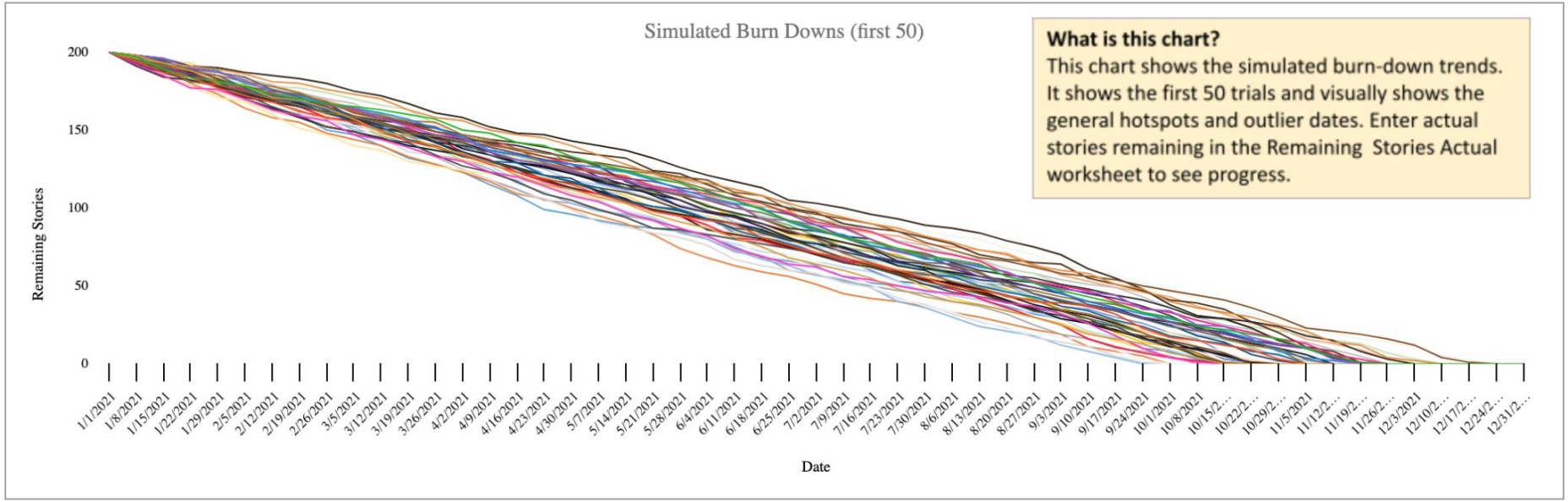
Throughput Samples

18
17
18
19
17
16

Thanks to Troy Magennis for his spreadsheets at https://www.focusedobjective.com/

Forecasting (for knowledge work)

Multiple things



Thanks to Troy Magennis for his spreadsheets at https://www.focusedobjective.com/

Flow Metrics

Throughput: the total number of work items completed per unit of time

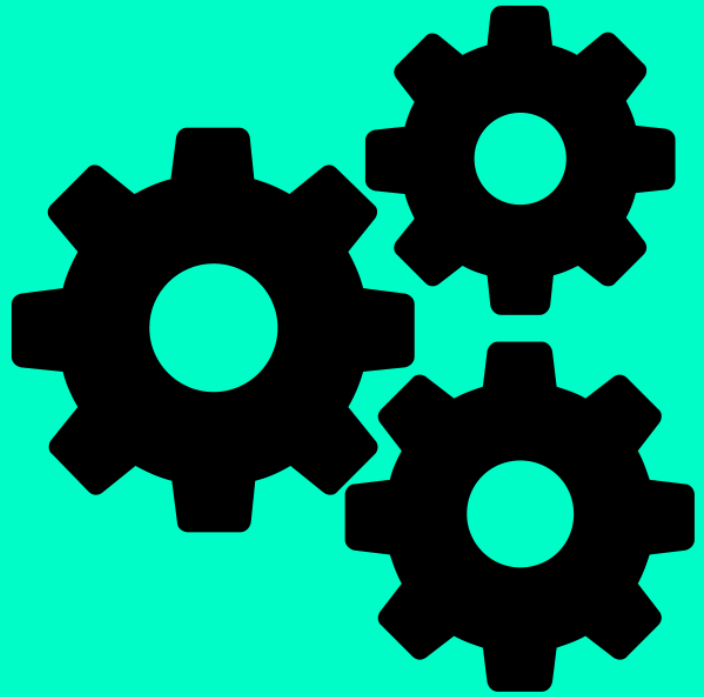
Cycle Time: the amount of elapsed time it takes for a given work item to complete

WIP: the total number of items started and not yet finished

Little's Law

$$\text{Avg Cycle Time} = \frac{\text{Avg WIP}}{\text{Avg Throughput}}$$

Predictability



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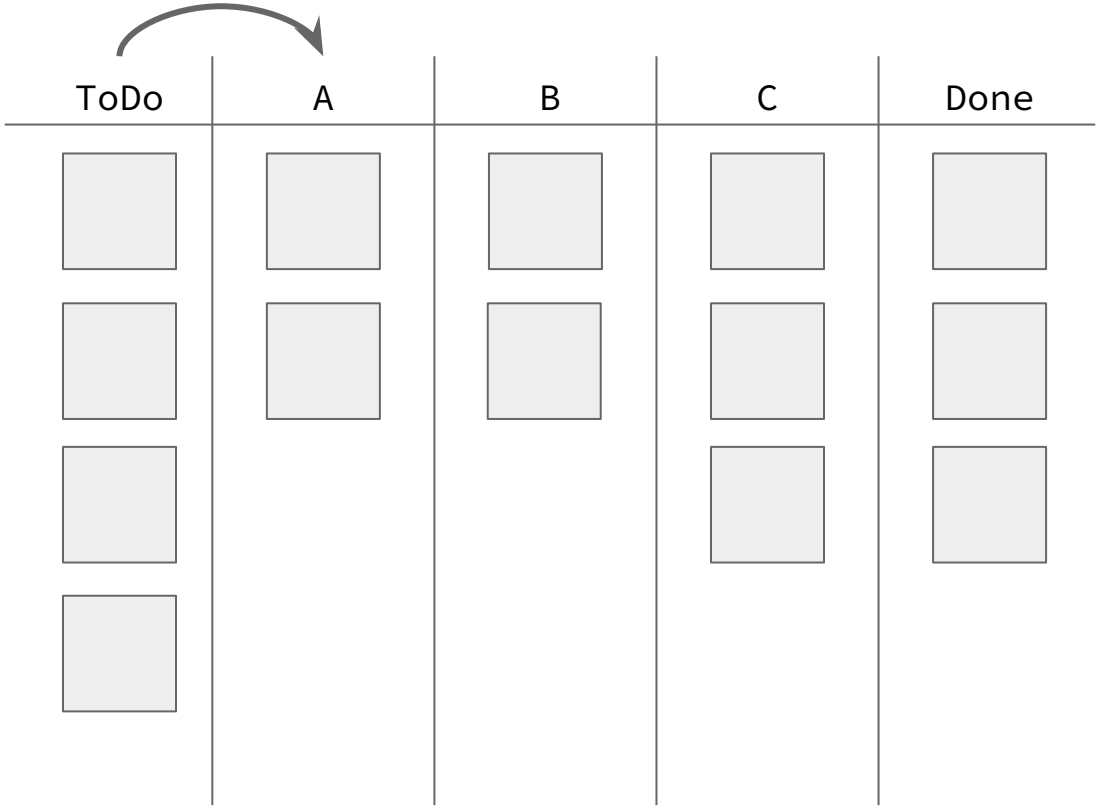
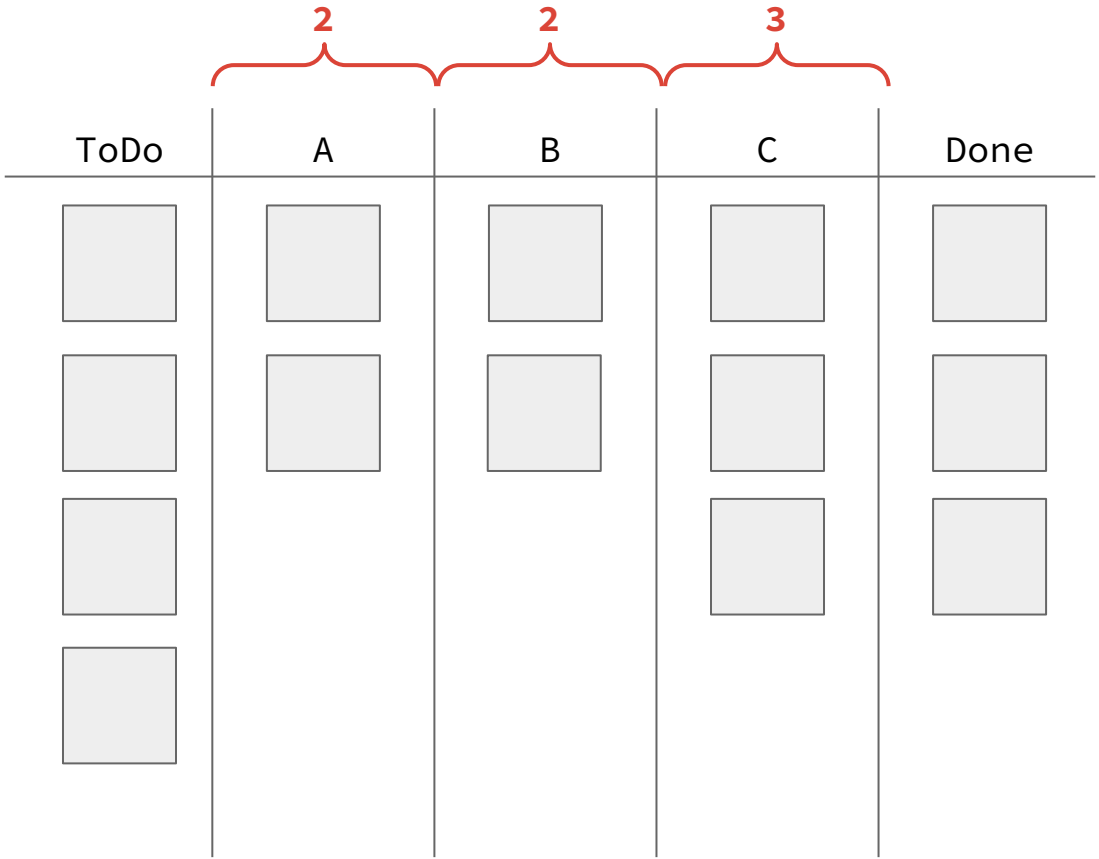
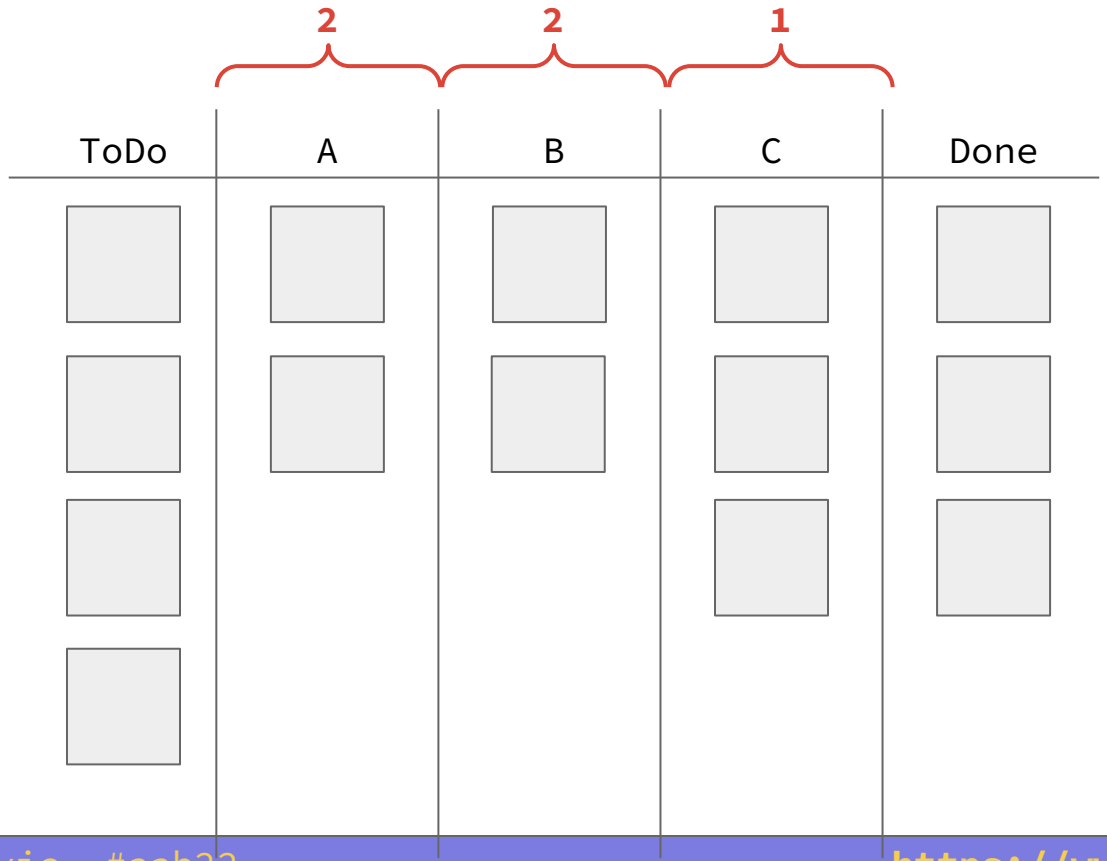
WIP



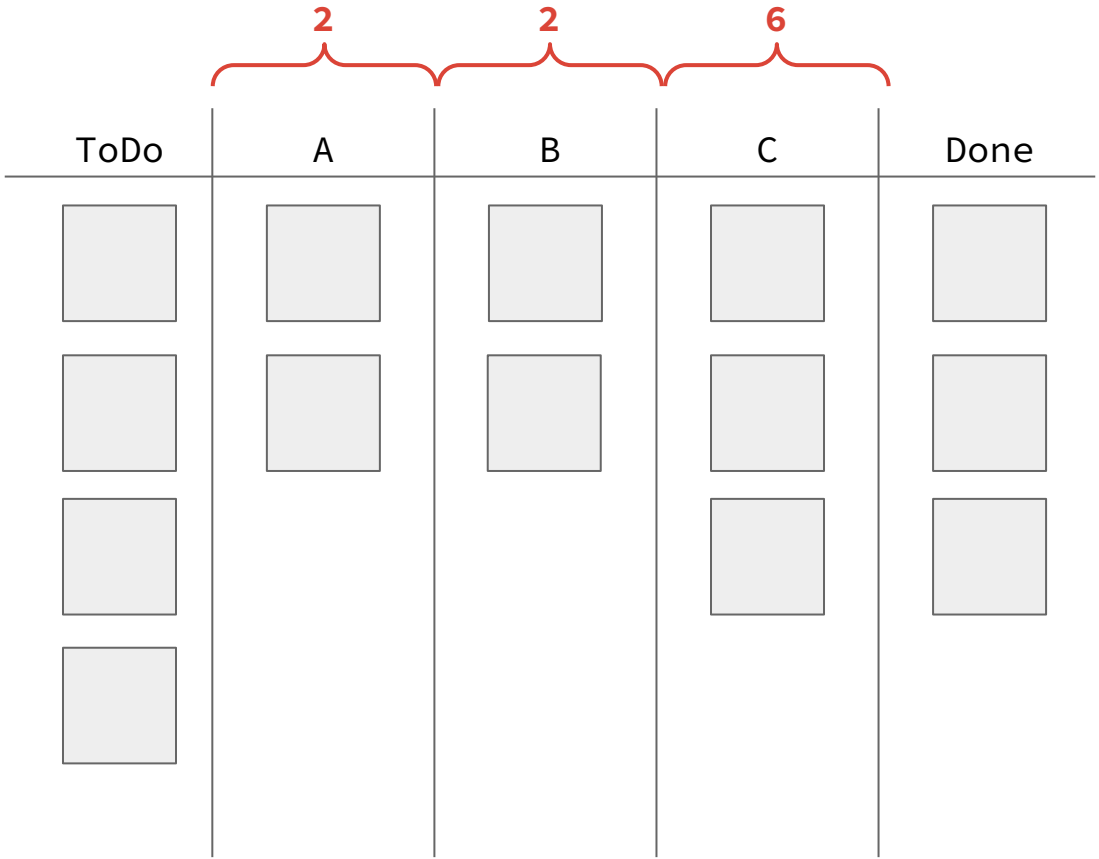
WIP



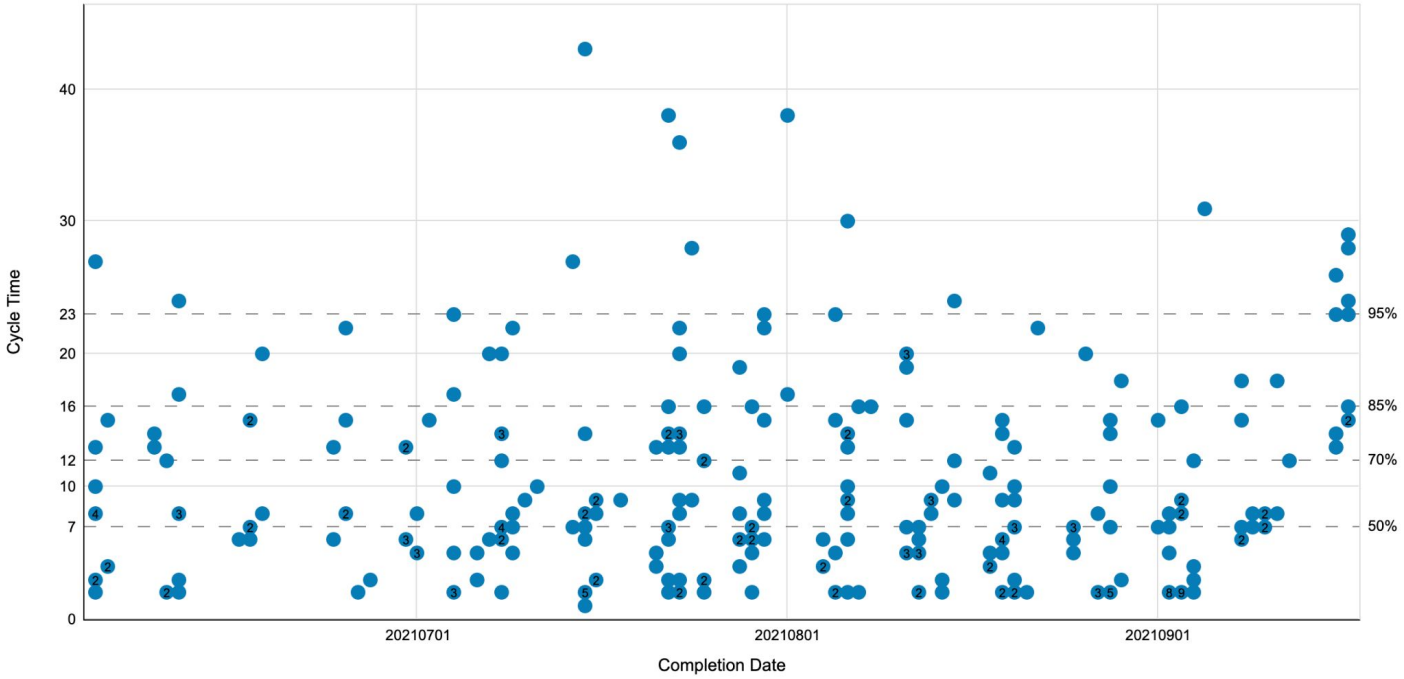
WIP



WIP

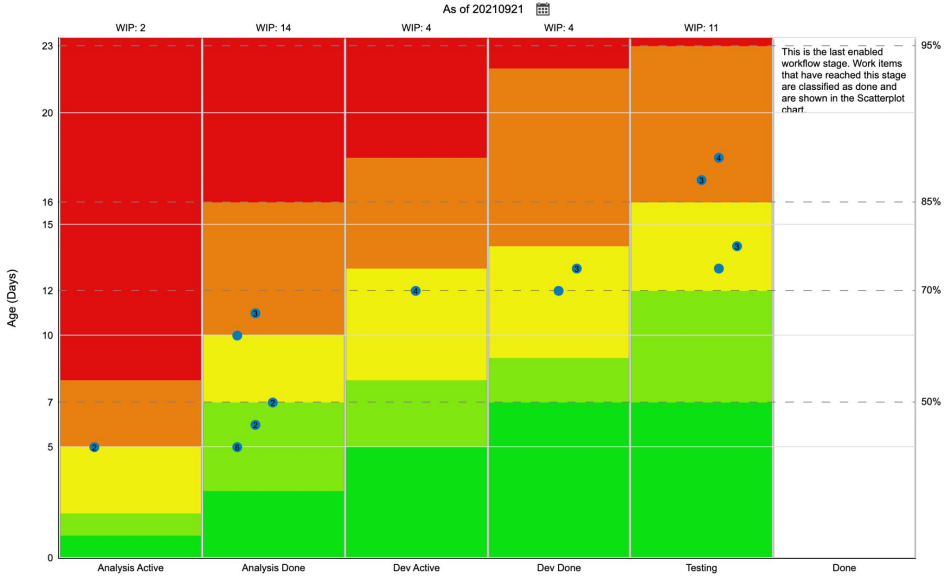


Cycle Time

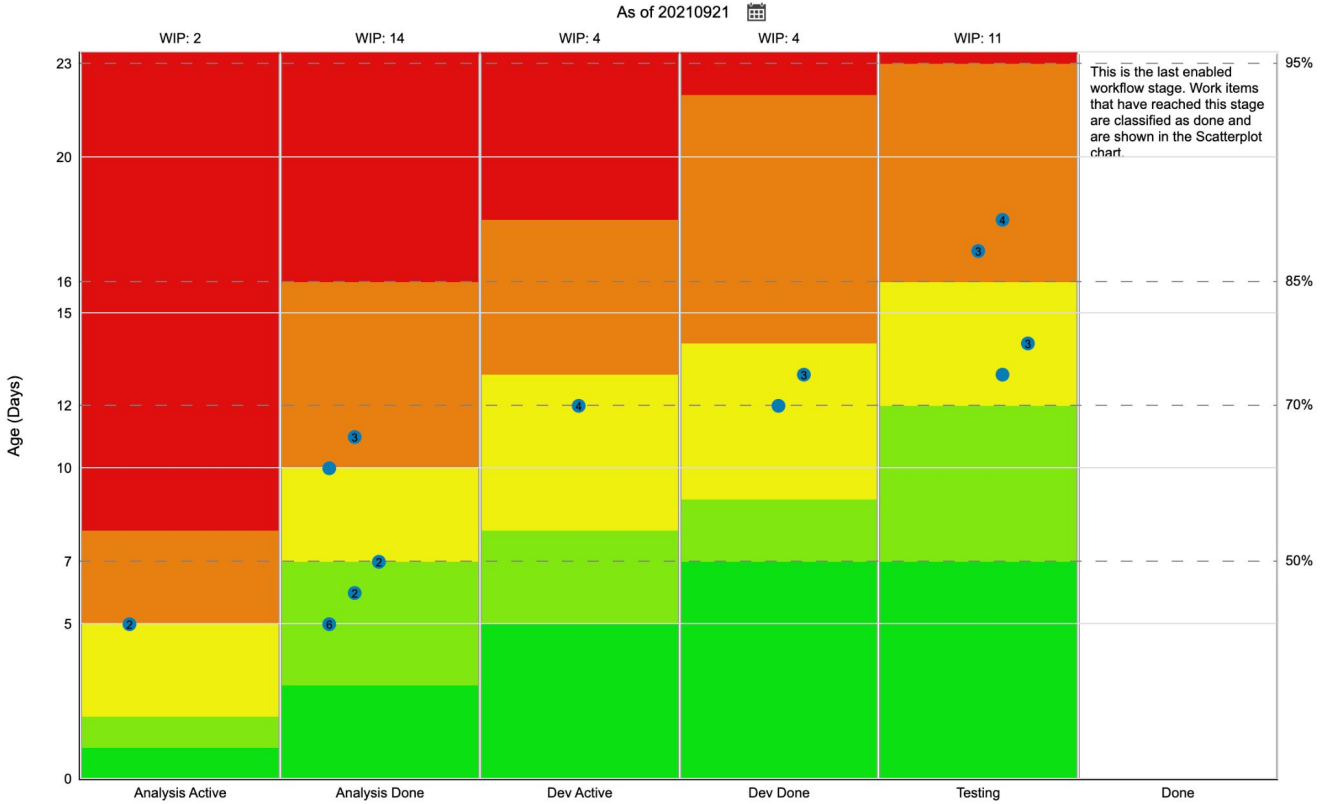

Cycle Time
40
30
23
20
16
12
10
7
0
95%
85%
70%
50%
20210701
20210801
20210901
Completion Date

~~Cycle Time~~ Work Item Age

Work Item Age: the elapsed time since a currently in progress work item was started



~~Cycle Time~~ Work Item Age



What about Throughput?

$$\text{Avg Cycle Time} = \frac{\text{Avg WIP}}{\text{Avg Throughput}}$$

One more thing

Created by b farias
from Noun Project

- Control WIP
- Manage Age of Work

Thank You!

Kevin Sivic
Agile & Technical Coach and Trainer

Industrial Logic

kevin@jemsoftware.co
kevin@industriallogic.com
Twitter: @kevinsivic

https://www.linkedin.com/in/ksivic/
https://jemsoftware.co
https://improvingflow.com

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