Optimising Software Delivery with Value Streams
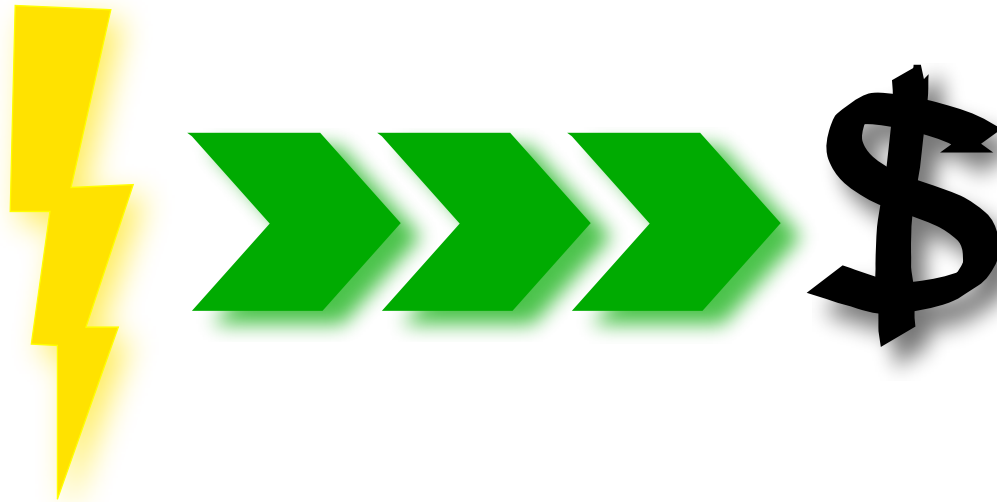
Joe Schmetzer • @tumbarumba

Introduction
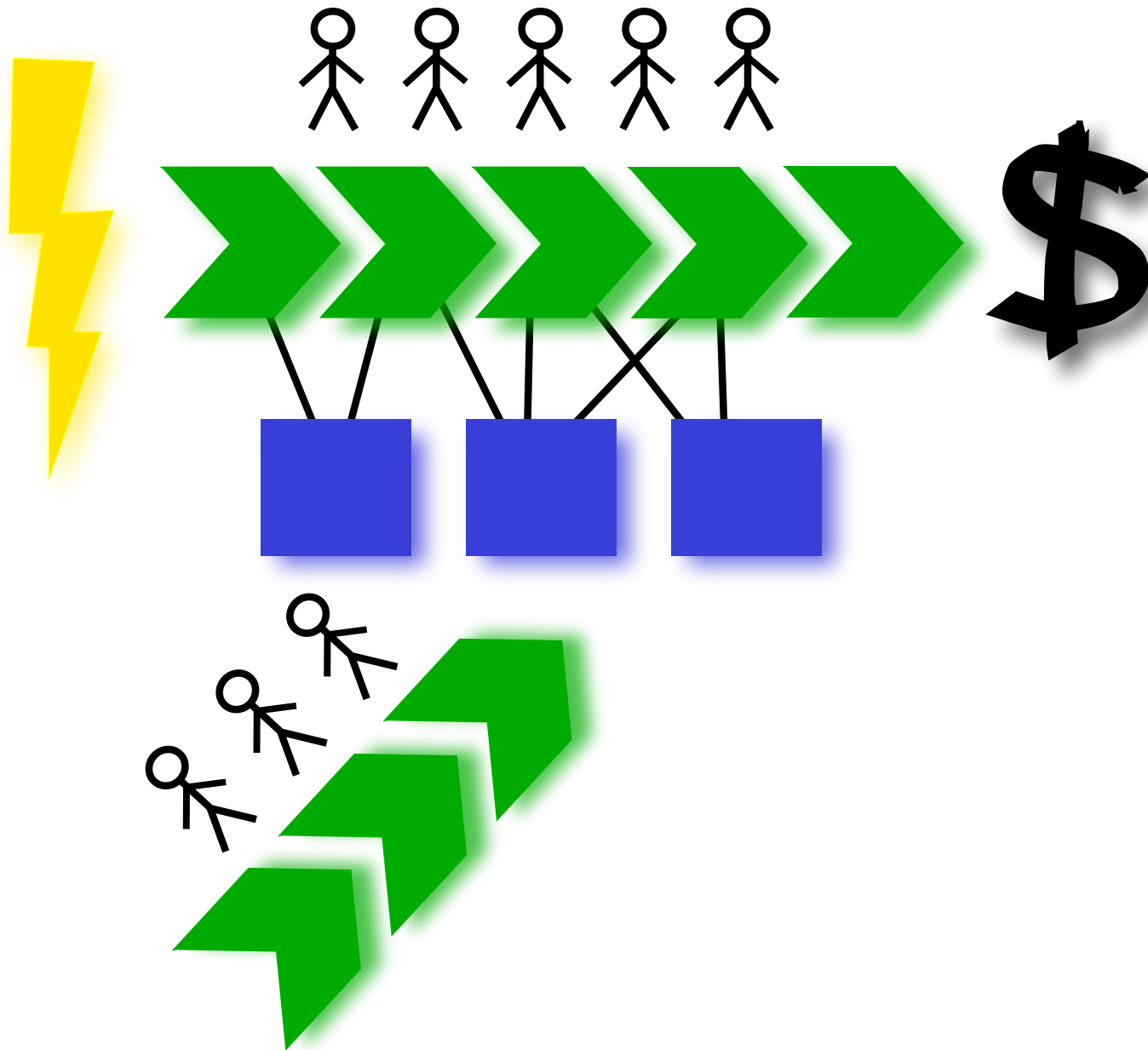
Question One

What is it we do that's valuable?
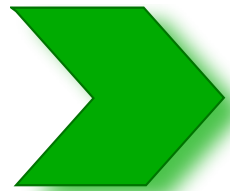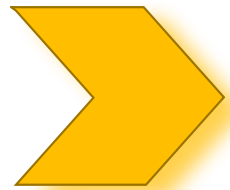
A Value Stream
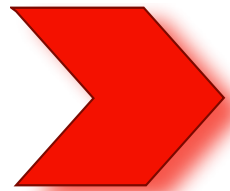
Types of Value Streams

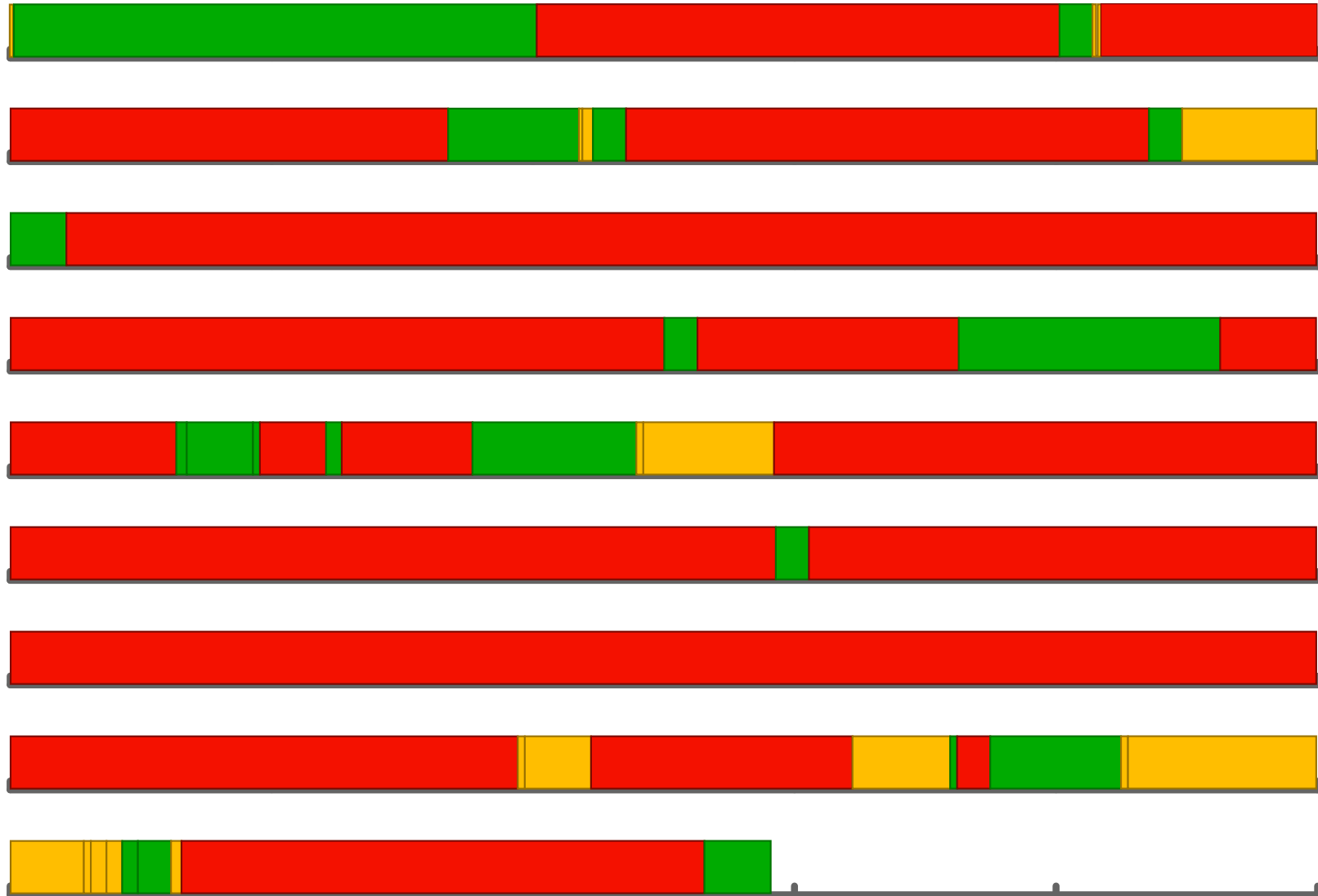# Value Stream Tasks

 Value add

 Overhead

 Queuing

A Value Stream in Detail

Value Stream Statistics

- 35 different activities
- 43 days lead time
- 7 days touch time

Question Two

Why does it take so long?

Single Task Analysis - Data

% Busy	Wait Time
0%	0
50%	1
75%	3
90%	9
95%	19
99%	99

Single Task Analysis - Graph

Little's Law

$$L = \lambda W$$

$$W = L/\lambda$$

Linked Queues
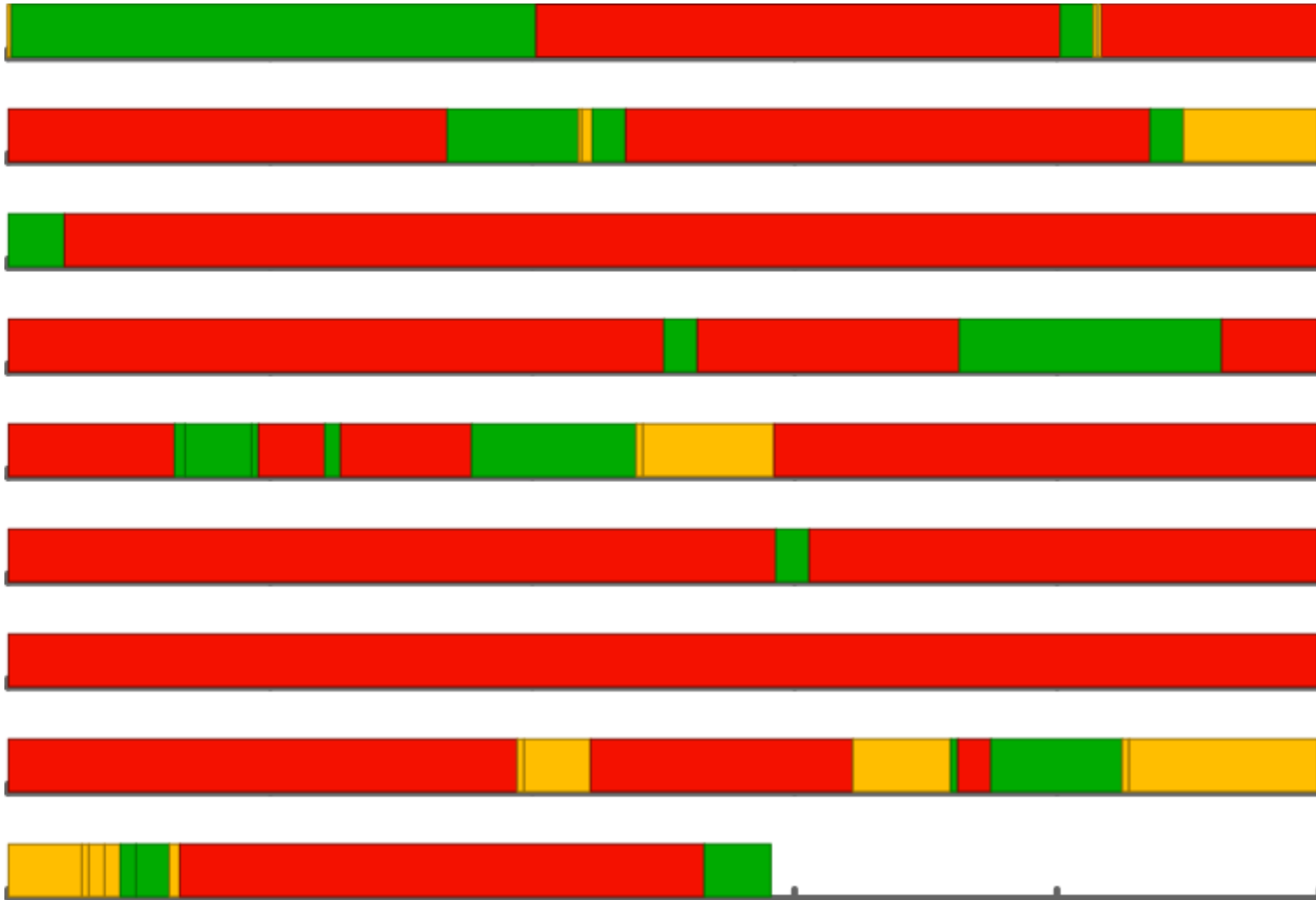
Question Three

What alternatives are there?

An Alternative Value Stream

Value Stream Statistics

- 13 different activities
- 5 days lead time
- 4 days touch time

Comparison of Value Streams
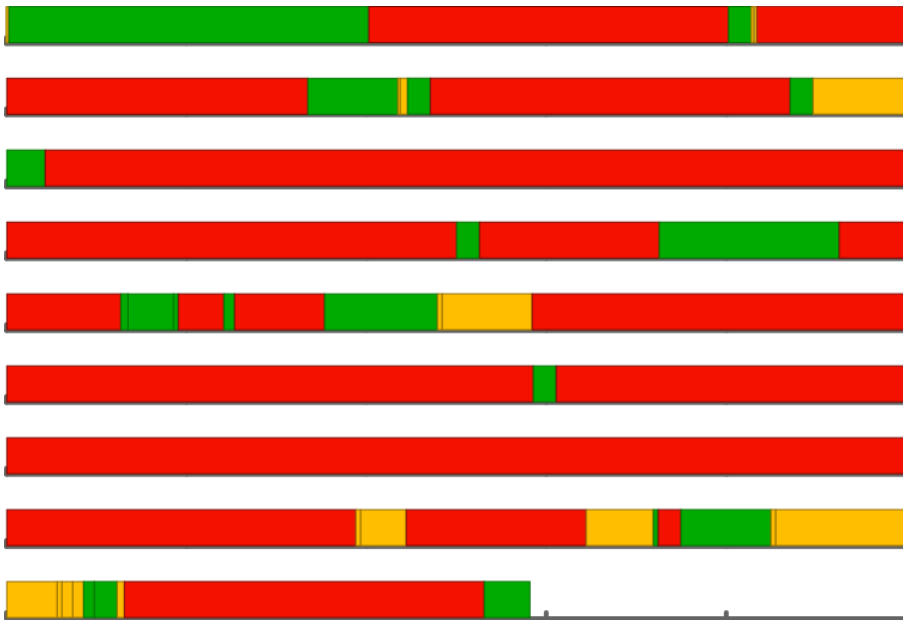
Resource Optimisation vs Flow Optimisation

- 43 days lead time
- 7 days touch time

- 5 days lead time
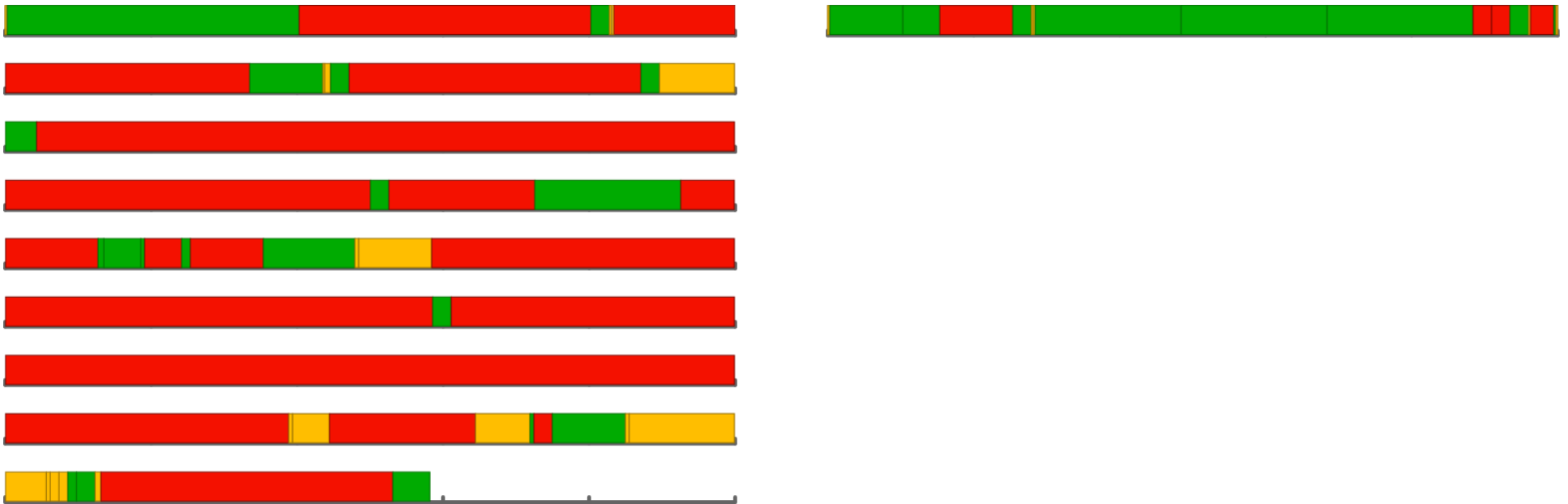- 4 days touch time

Product Economic Framework

Standard economic measure:

Life-Cycle Profits

Cost of Delay

What happens to life-cycle profits if release is delayed 7 weeks?
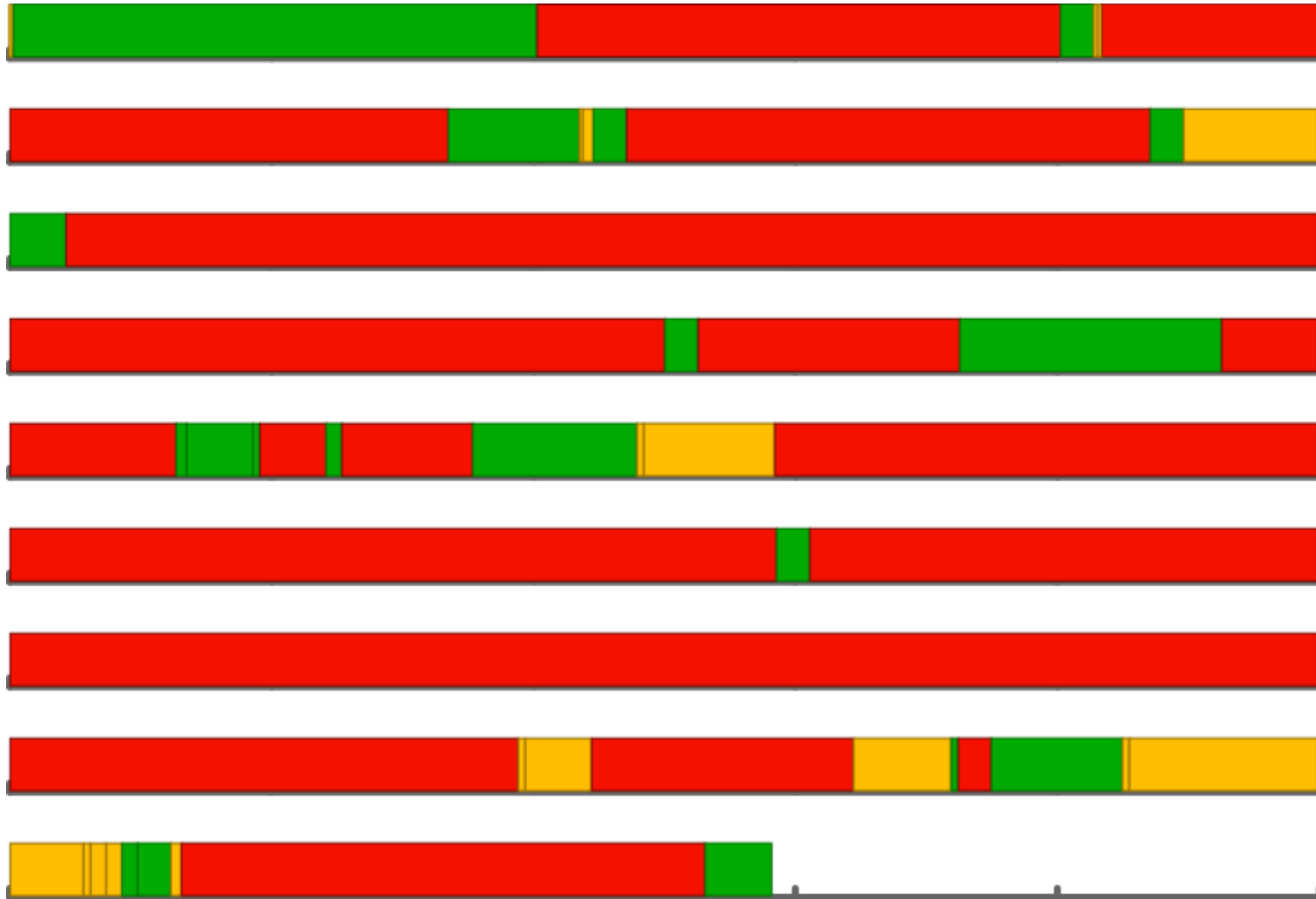
Question Four

How do we change?

Culture

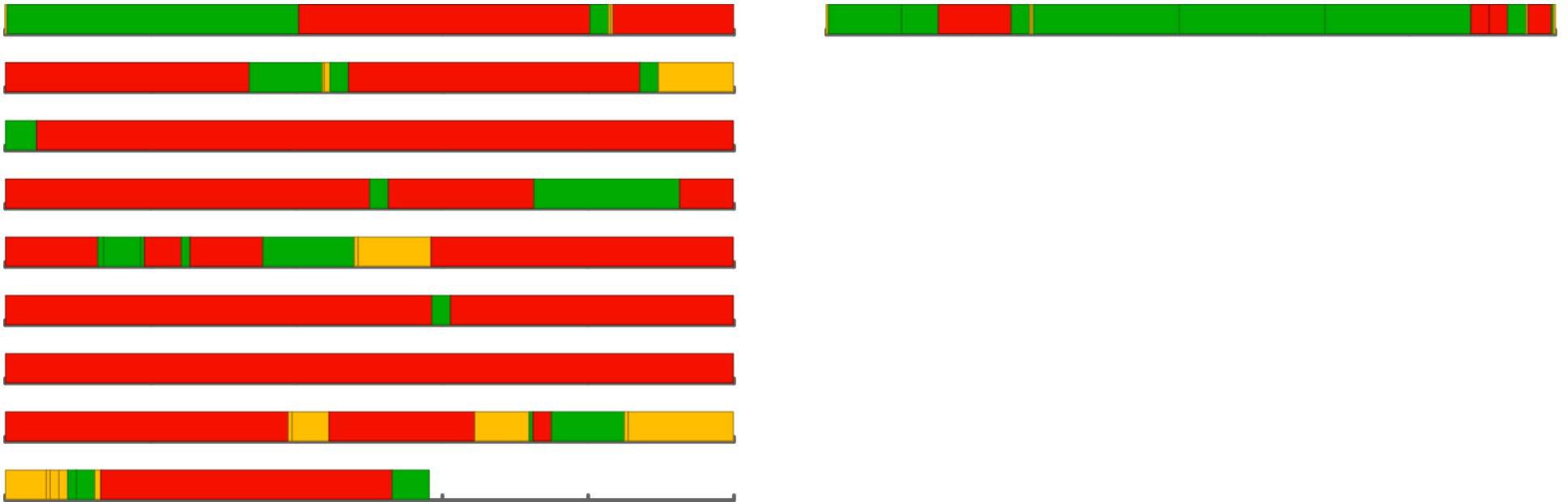Don't ask for permission to do the right thing

Step 1: Measure

- Life-cycle profits delivered
- Lead time
- Size of backlog
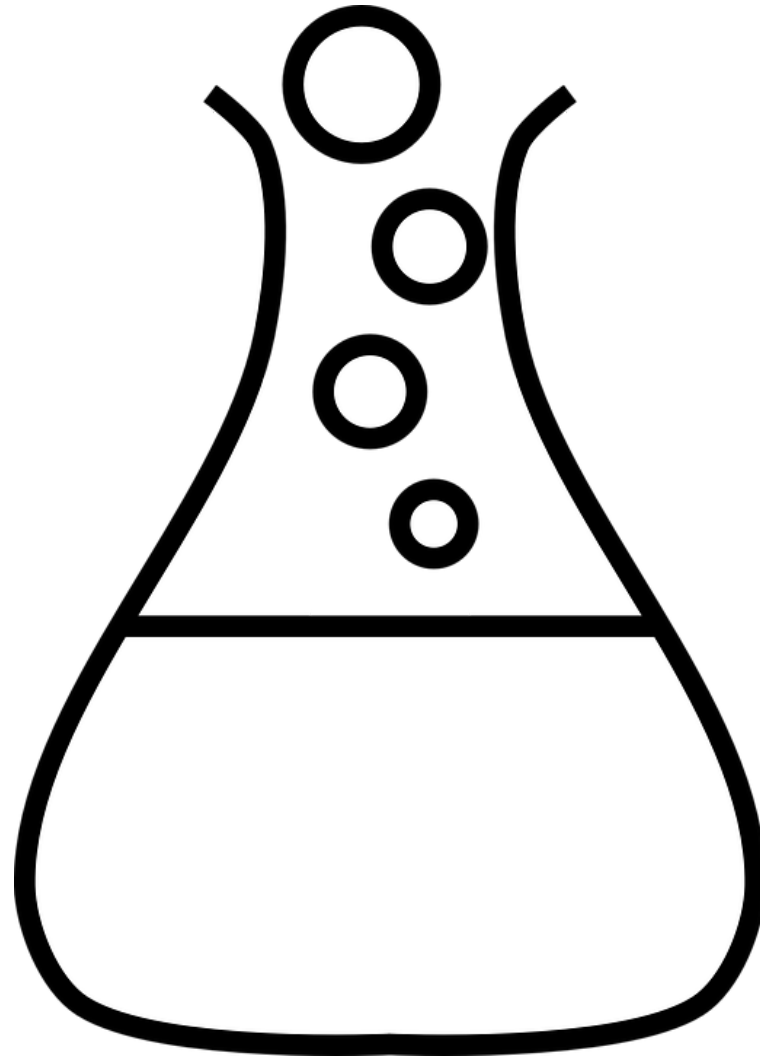- Work in progress
- Velocity
- … whatever is relevant to you
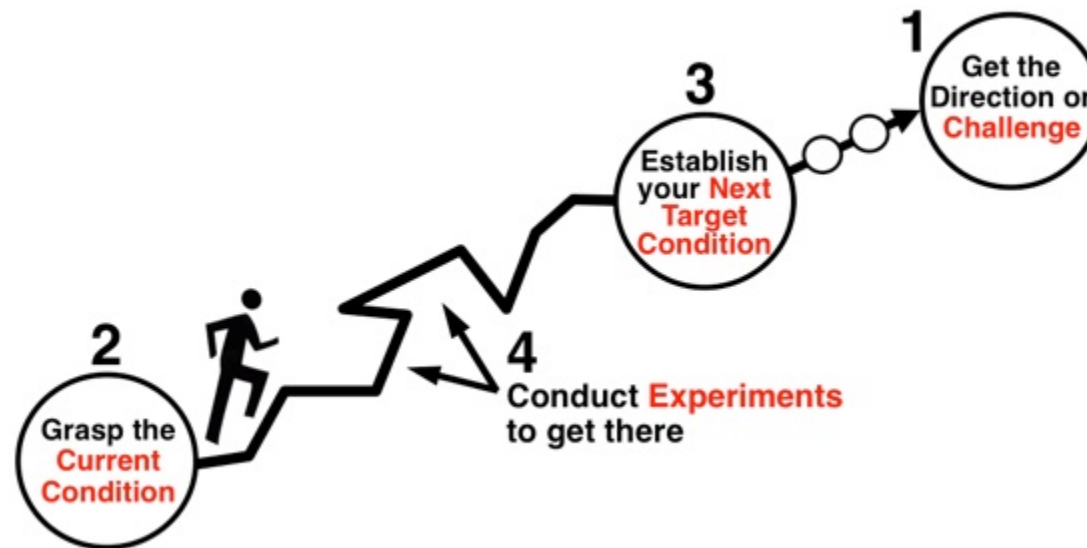
Step 2: Visualise the current value stream

Step 3: Plan an updated value stream
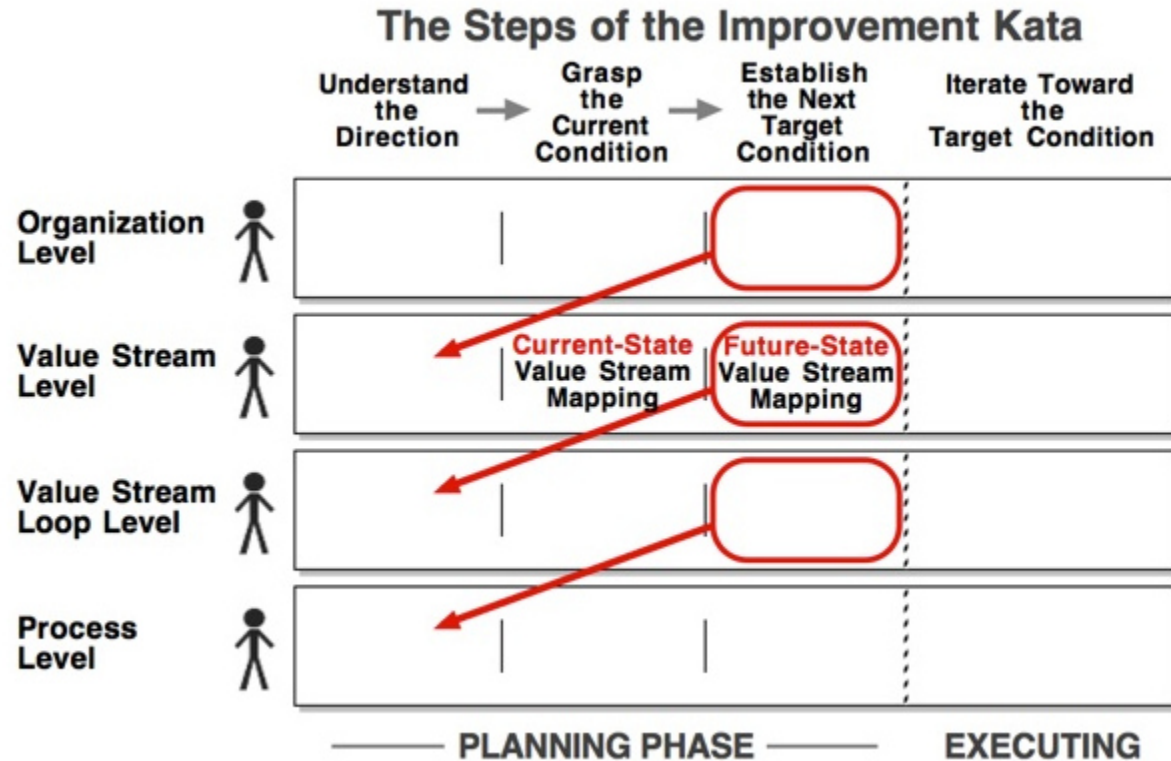
Step 4: Small, incremental experiments

Toyota Improvement Kata

*Image from The Improvement Kata, by Mike Rother

Improvement Kata with Value Streams

*Image from Value Stream Mapping, by Mike Rother

References

- Lean Lego - The Red Brick Cancer, by Håkan Forss
- Principles of Product Development Flow, by Donald G. Reinersten
- The Phoenix Project, by Gene Kim, Kevin Behr and George Spafford
- Slack: Getting Past Burnout, Busywork, and the Myth of Total Efficiency, by Tom DeMarco
- The Toyota Way, by Jeffrey K. Liker
- Value Stream Mapping, by Mike Rother
- Specification by Example, by Gojko Adzic

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Next Steps

Let's create our own value stream...