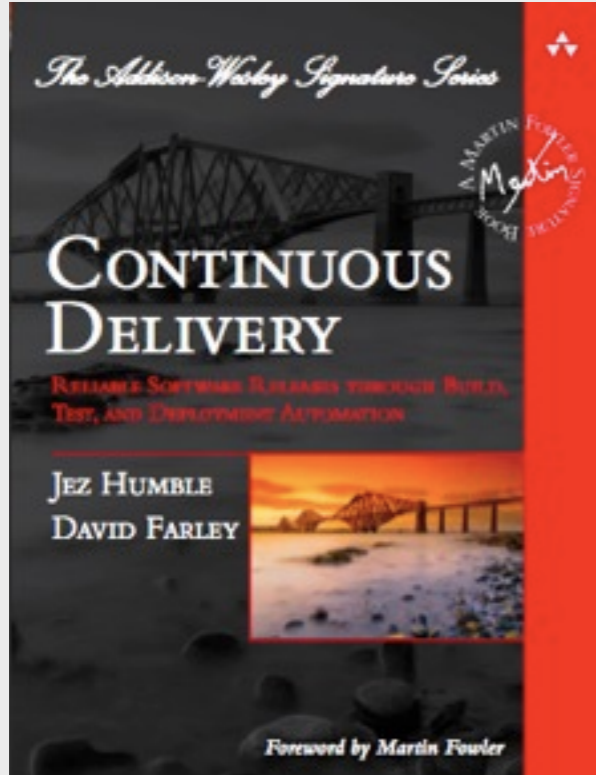


Innovation at Scale

Using Lean Thinking



November 16, 2011, QCon San Francisco

Jez Humble, ThoughtWorks Studios

@jezhumble #continuousdelivery

<http://continuousdelivery.com/>

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A startup is a human institution designed to create new products and services under conditions of extreme uncertainty



eric ries, *the lean startup*, ch. 1



innovation

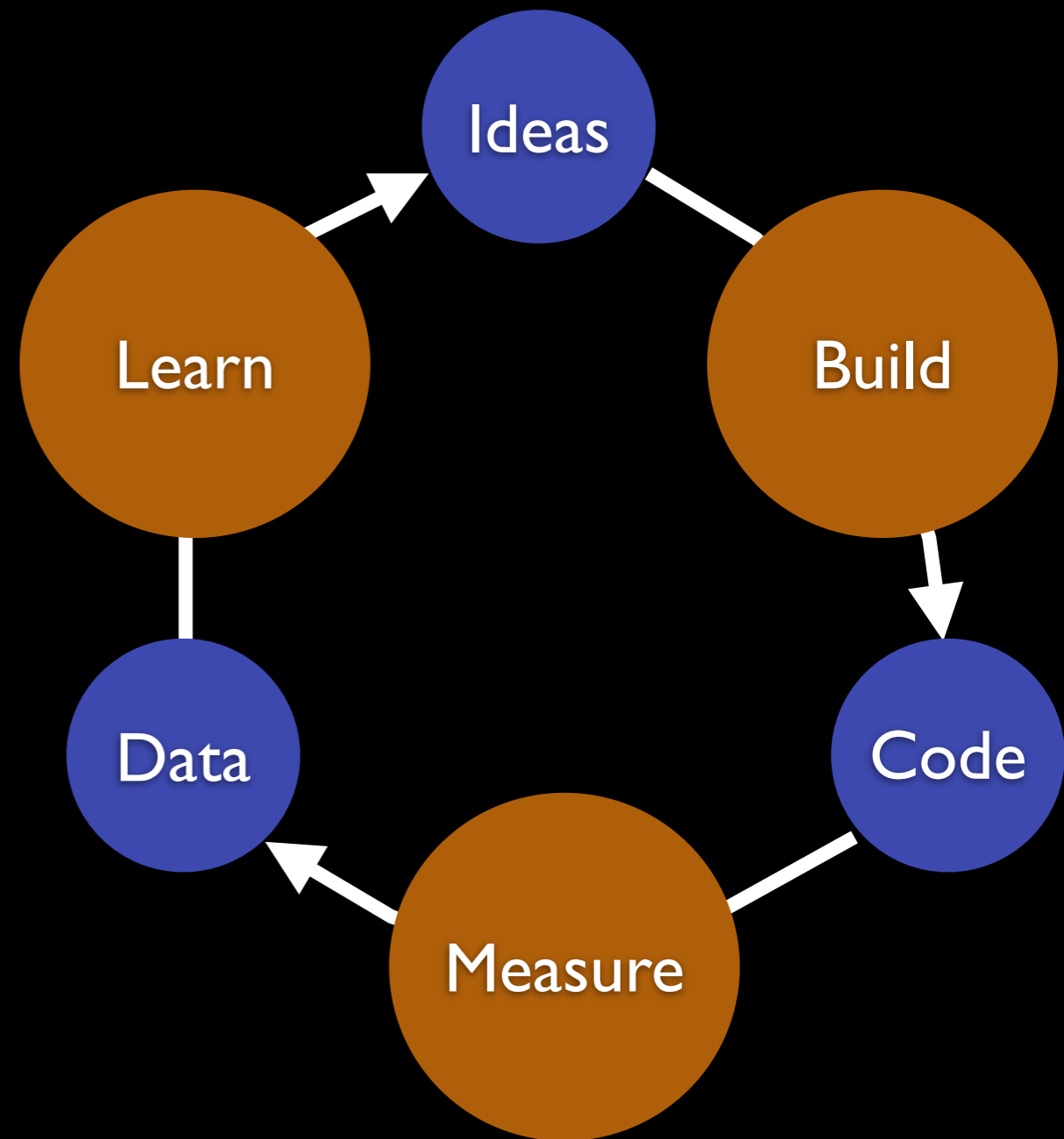
**You can't just
ask customers
what they want
and then try to
give that to
them.**

**By the time you
get it built,
they'll want
something new.**

steve jobs

the lean startup

Create hypothesis
Deliver **mimimum viable product**
Get feedback
(repeat, pivoting if necessary)



the lean startup, part II - steer

business agility

“The main obstacles to improved business responsiveness are slow decision-making, conflicting departmental goals and priorities, risk-averse cultures and silo-based information.”

Economist Intelligence Unit: “Organisational agility:
How business can survive and thrive in turbulent times”

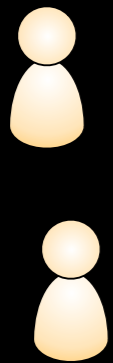
enterprise-class problems

- Political
- Organizational
- Project / program management
- Governance

“the enterprise”

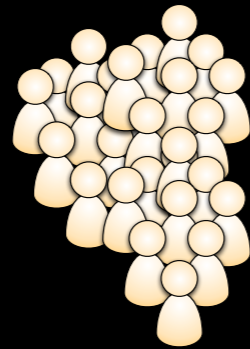
Ping!

Business

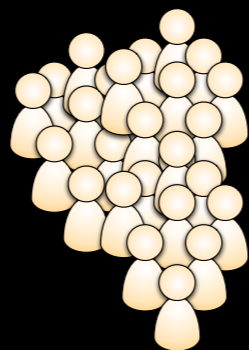
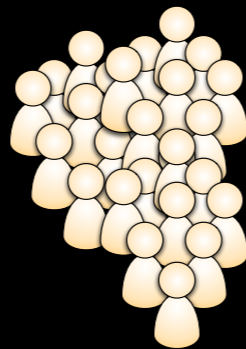


Engineering

Project C



Project A

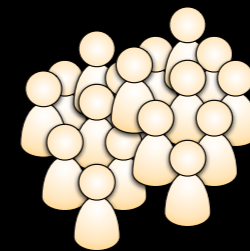


Project B

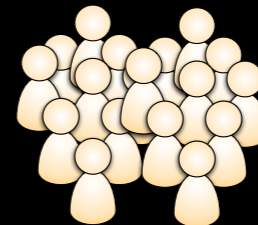
Operations



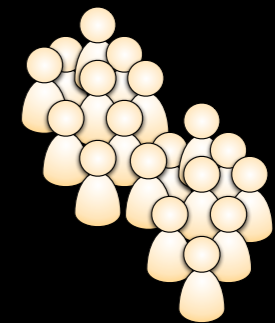
DBAs



Service desk



Infrastructure team



Value stream



enterprise politics

Business

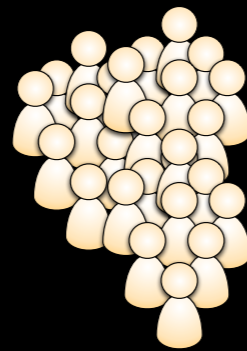
Let's create a new product



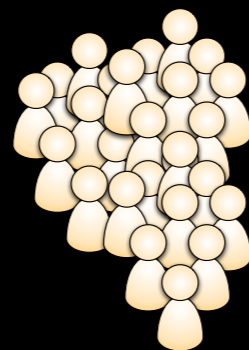
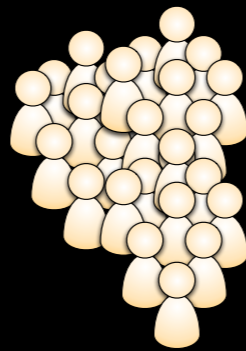
Get off my land!

Engineering

Project C

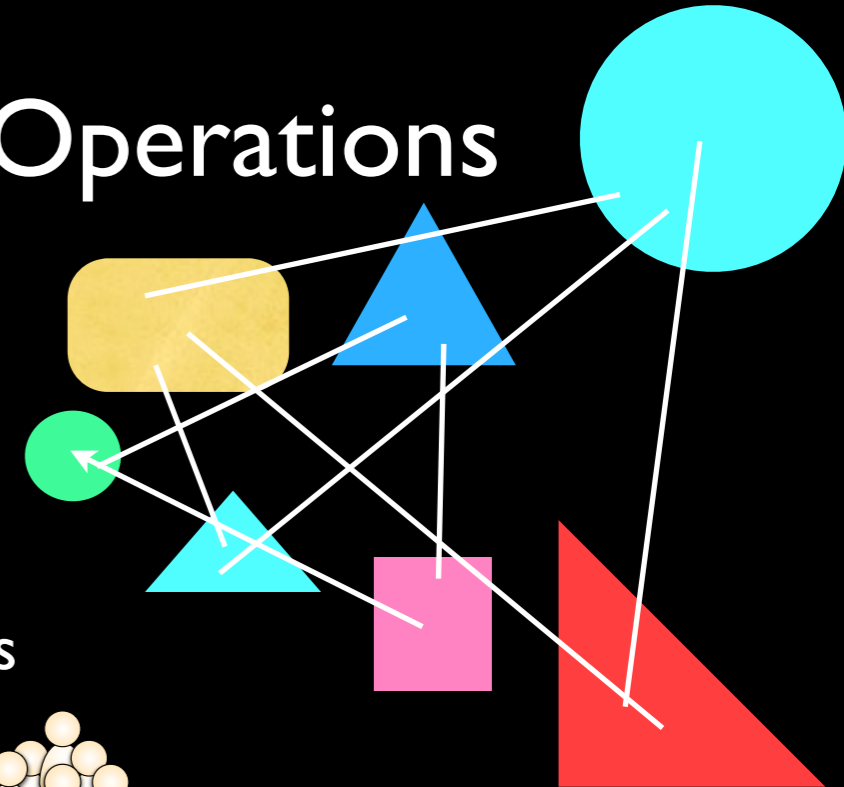


Project A

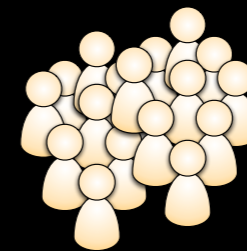


Project B

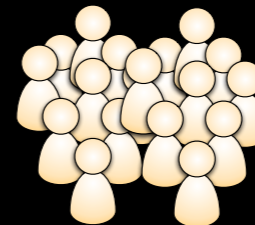
Operations



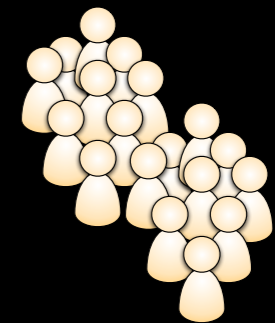
DBAs



Service desk



Infrastructure team



Value stream



enterprise projects

Ping!

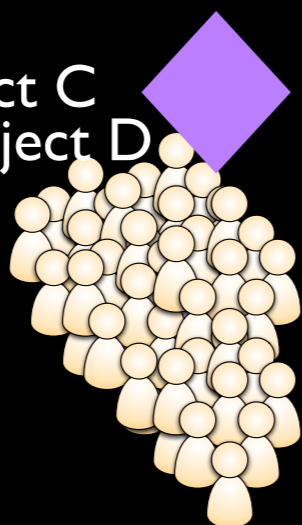
Business

Let's create a new product

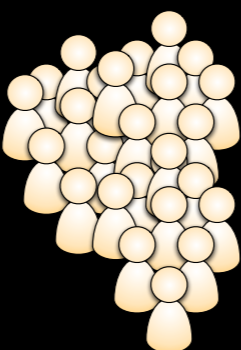
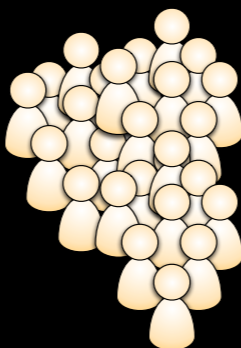


Engineering

Project C
Project D



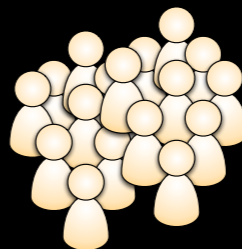
Project A



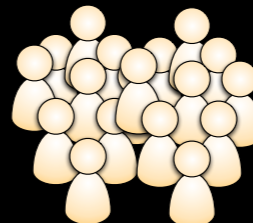
Project B

Operations

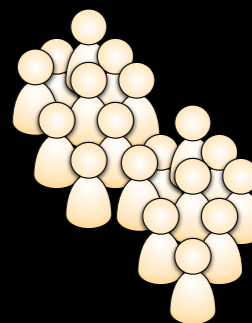
DBAs



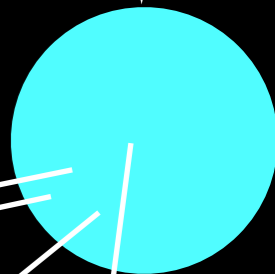
Service desk



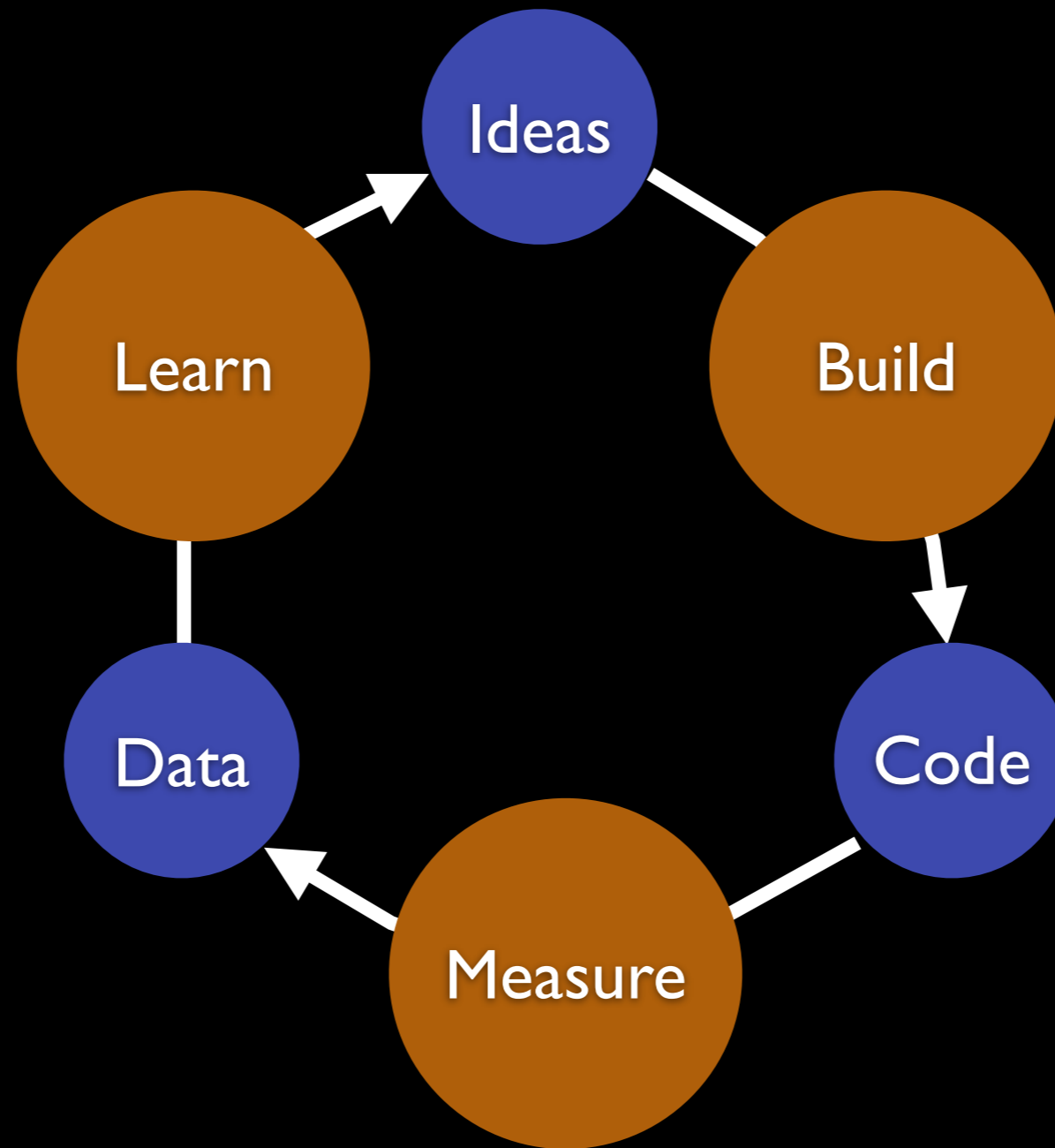
Infrastructure team



Value stream



Ideas -> Measurement



Oh shit!

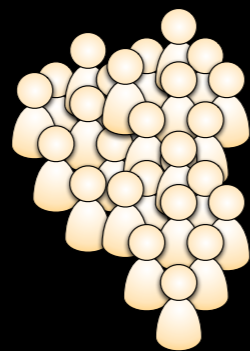
Business



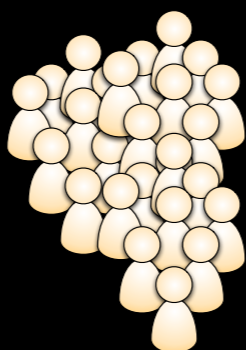
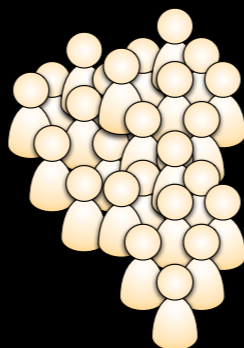
We're going agile!

Engineering

Project D



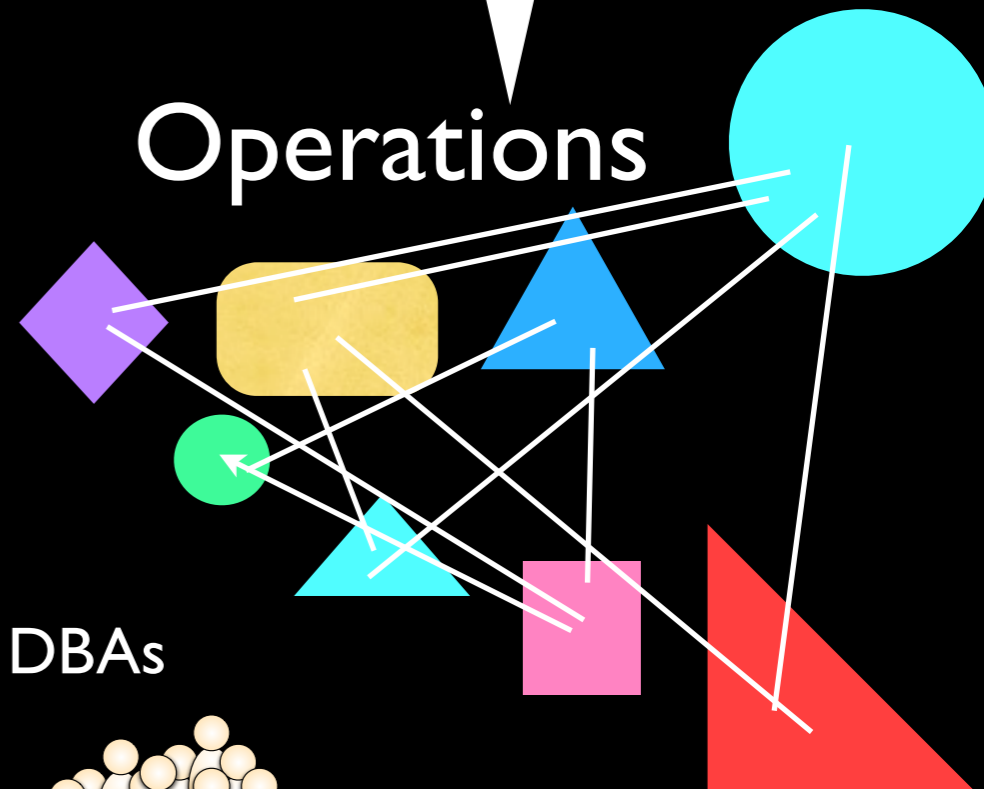
Project A



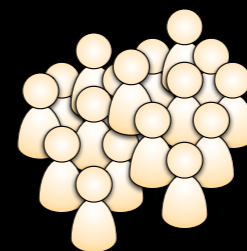
Project B

Oh shit!

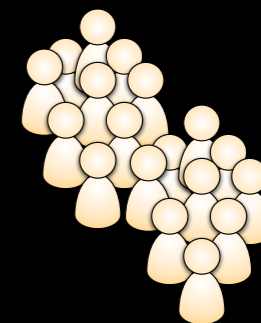
Operations



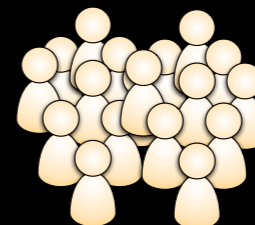
DBAs



Infrastructure team



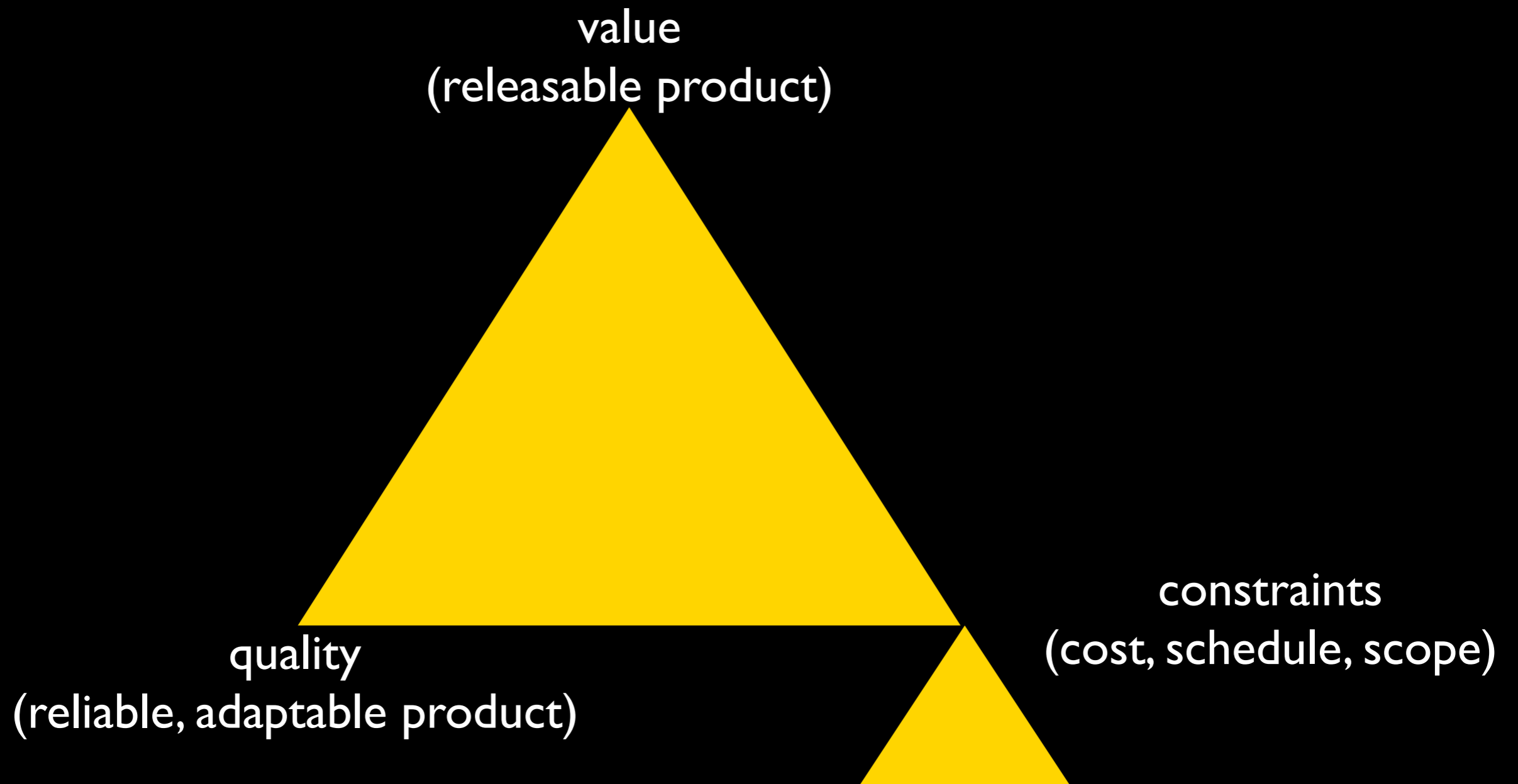
Service desk



Value stream



agile triangle



Jim Highsmith: *Agile Project Management*

do less

Far more than 50% of functionality in software is rarely or never used. These aren't just marginally valued features; many are no-value features.

The Standish Group, reported in the IEEE conference 2002

quality

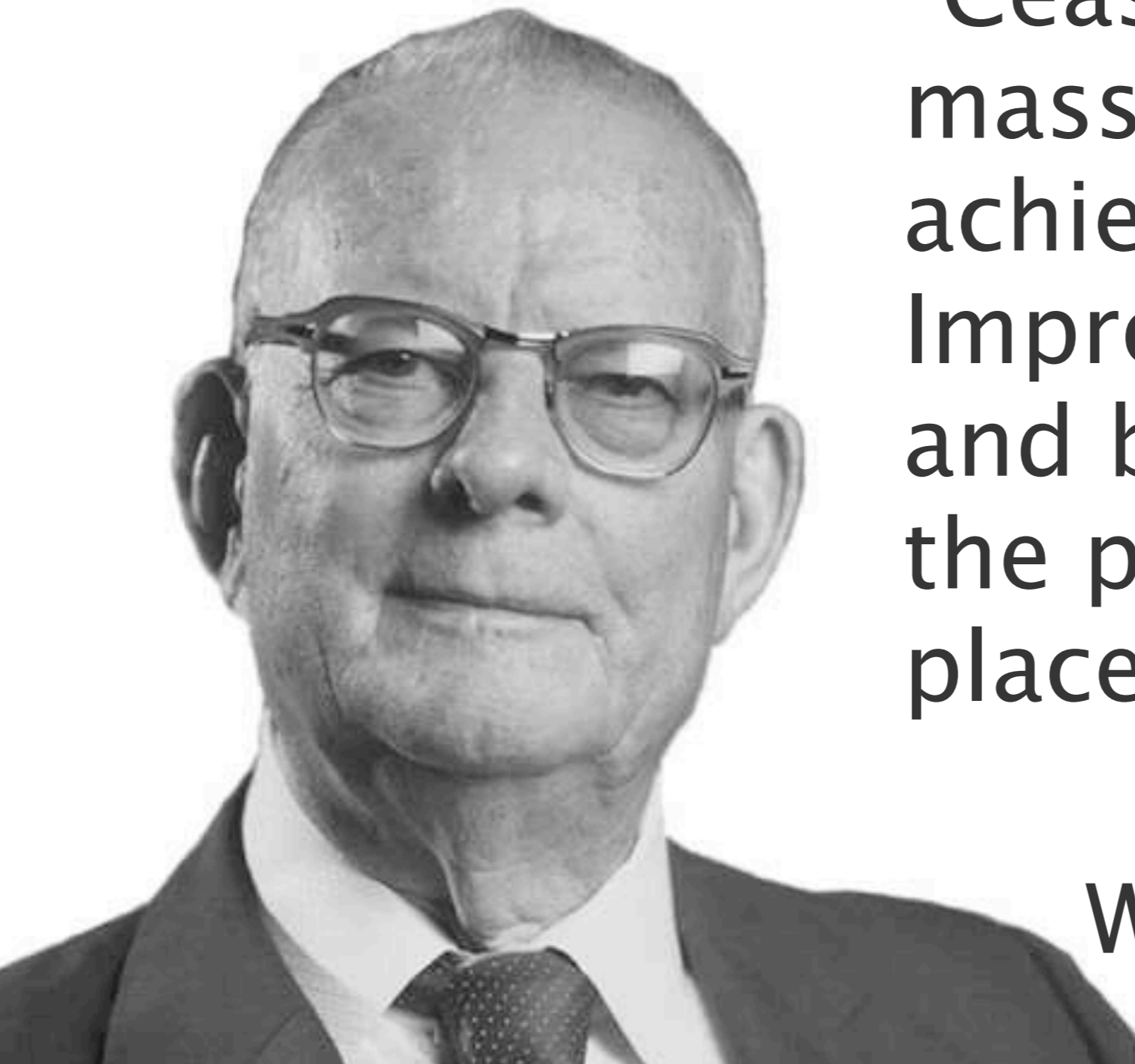
“if we do not know who the customer is, we do not know what quality is”

the lean startup, ch. 6 - test

build quality in

“Cease dependence on mass inspection to achieve quality. Improve the process and build quality into the product in the first place”

W. Edwards Deming



Our test-driven code follows SOLID principles

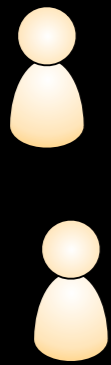
Change management

Shame it doesn't work

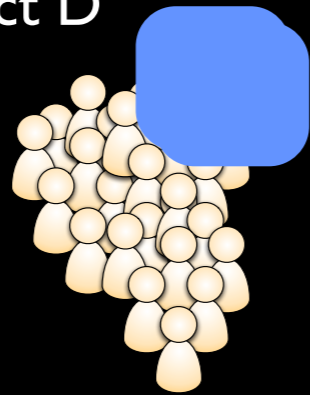
Business

Engineering

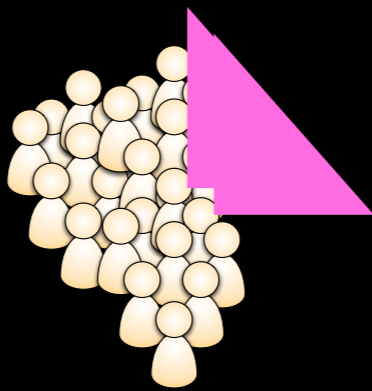
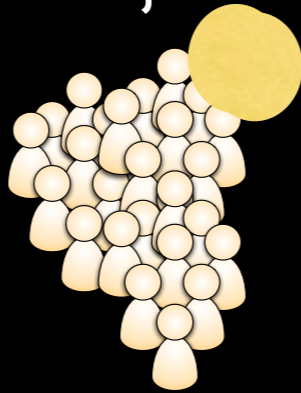
Operations



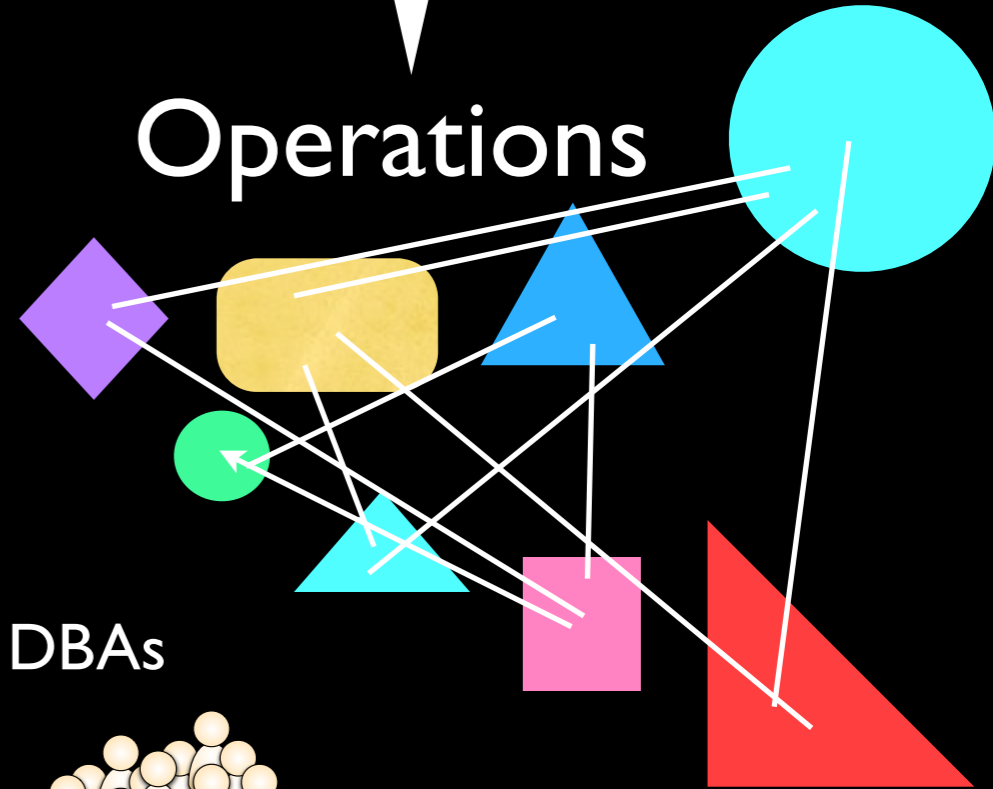
Project D



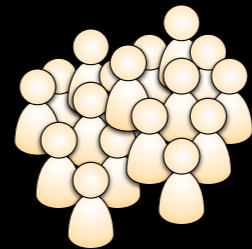
Project A



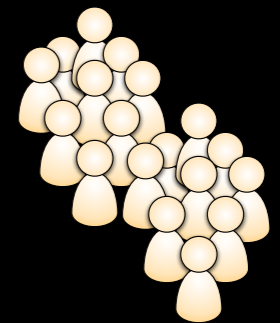
Project B



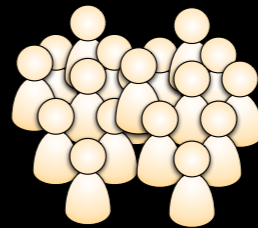
DBAs



Infrastructure team



Service desk



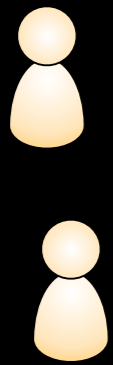
Value stream



devops

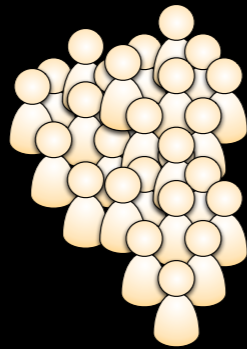
culture
automation
measurement
sharing

Business

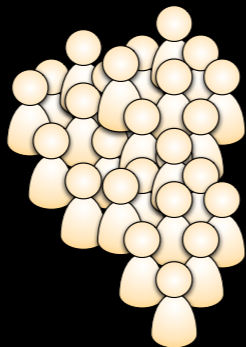
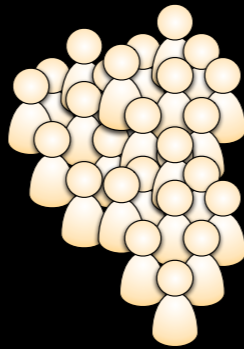


Engineering

Project C



Project A

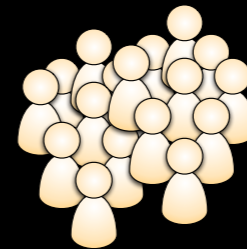


Project B

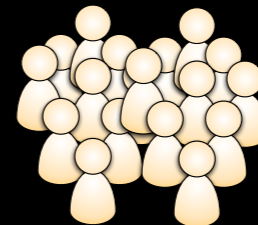
Operations



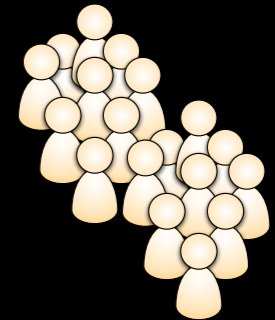
DBAs



Service desk



Infrastructure team



Value stream



continuous delivery

developers write production-ready code

everyone collaborates throughout lifecycle

faster feedback loops

lower-risk, more reliable releases

done means released


but

ops still has all that legacy crap

no way to rationally decide what to retire

deciding what to do is command-and-control

who is feeling the pain?



You build it,
You run it

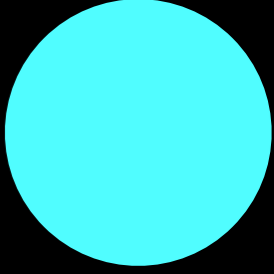
werner vogels, cto, amazon

Treat these services as if they were products

Business

Engineering

Operations



Project C

Project A

DBAs

Infrastructure team

Project B

Service desk

Value stream

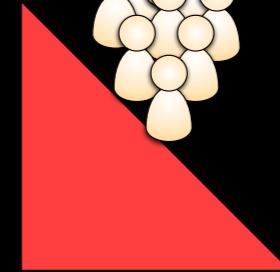
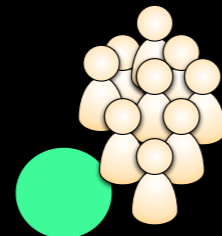
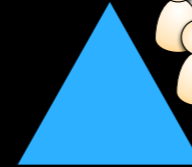
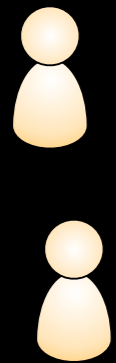


think product

Business

Engineering

Operations



Service desk

DBAs

Value stream



what about utilization?

$$\frac{\textit{Cycle time}}{\textit{Value added time}} = \frac{1}{1 - \rho}$$

Donald Reinertsen, *The Principles of Product Development Flow*, p60.

therefore...

measure cost and value delivered

rationally determine what to prioritize

self-manage using lean startup methodology

architecture group regulates at system level

PMO prevents “market failure”

what is “done”?

“user stories were not considered complete until they led to validated learning”

the lean startup, ch. 7 - measure

enterprise governance

risk management

SOX, ITIL, COBIT

segregation of duties

change management

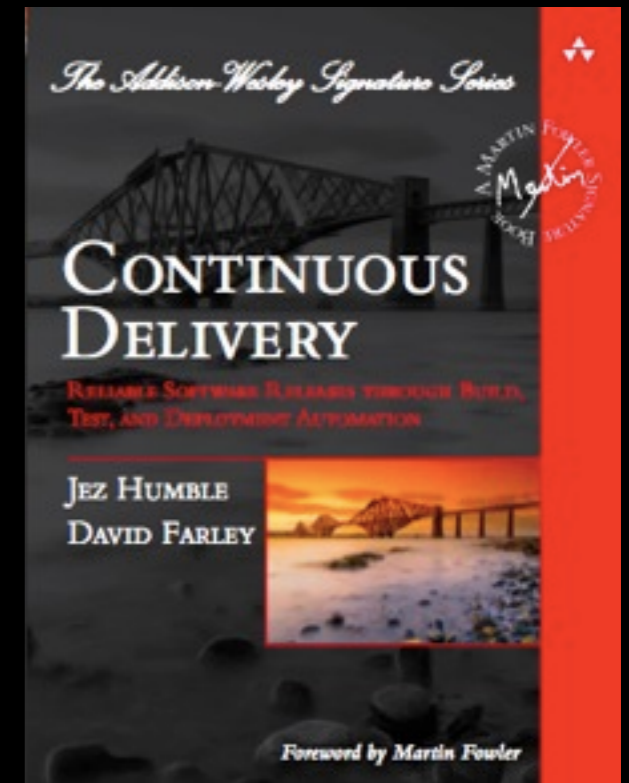
auditing and compliance

questions

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