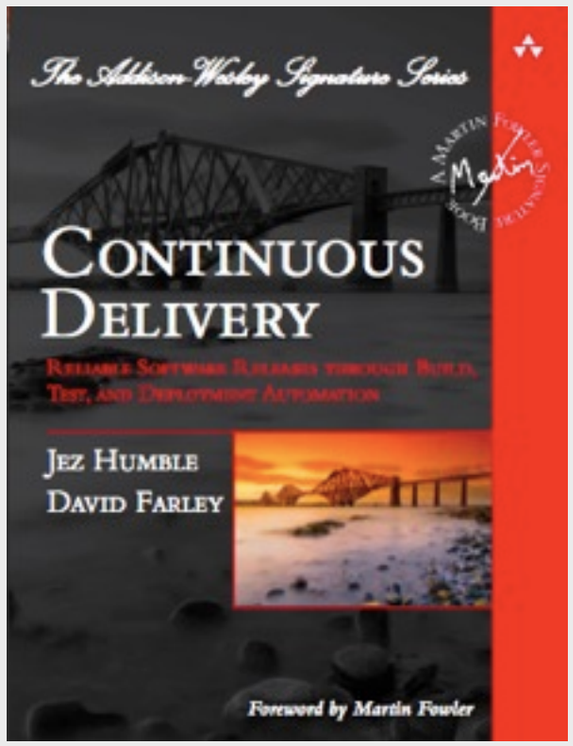
ThoughtWorks® STUDIOS

mingle® go™ twist®

Scaling Devops

Breaking Down the Barriers between Development and IT Operations



October 10, 2011, GOTO Århus

Jez Humble, ThoughtWorks Studios
@jezhumble #continuousdelivery
http://continuousdelivery.com/

http://thoughtworks-studios.com/

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"

“the enterprise”

Business

Engineering

Project C

Project A

Project B

Operations

DBAs

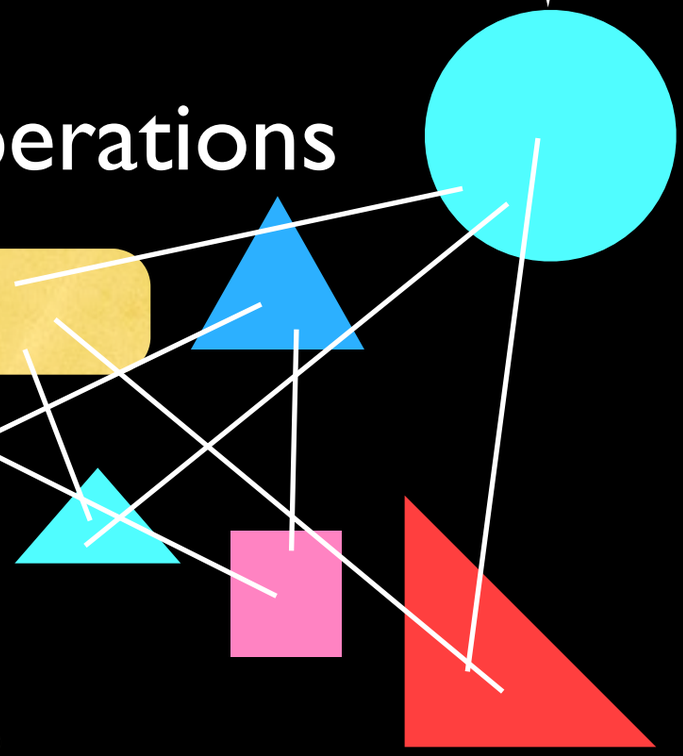
Service desk

Infrastructure team

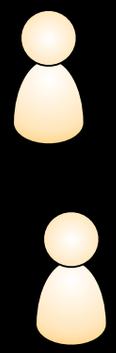
Value stream

“the enterprise”

Ping!

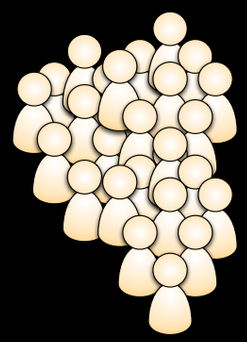


Business

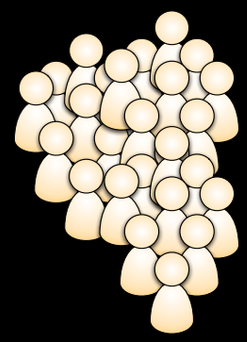


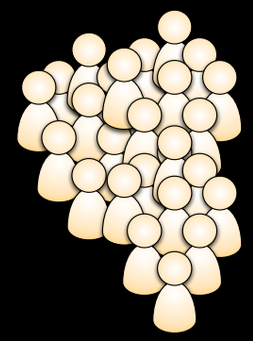
Engineering

Project C



Project A

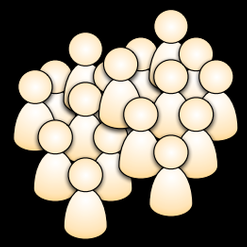




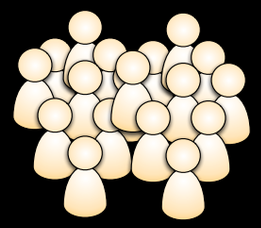
Project B

Operations

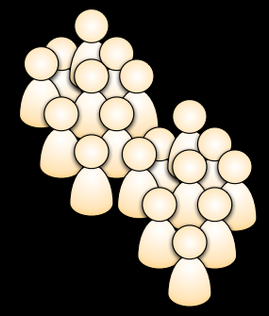
DBAs



Service desk



Infrastructure team



Value stream

enterprise projects

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Let's create a new product

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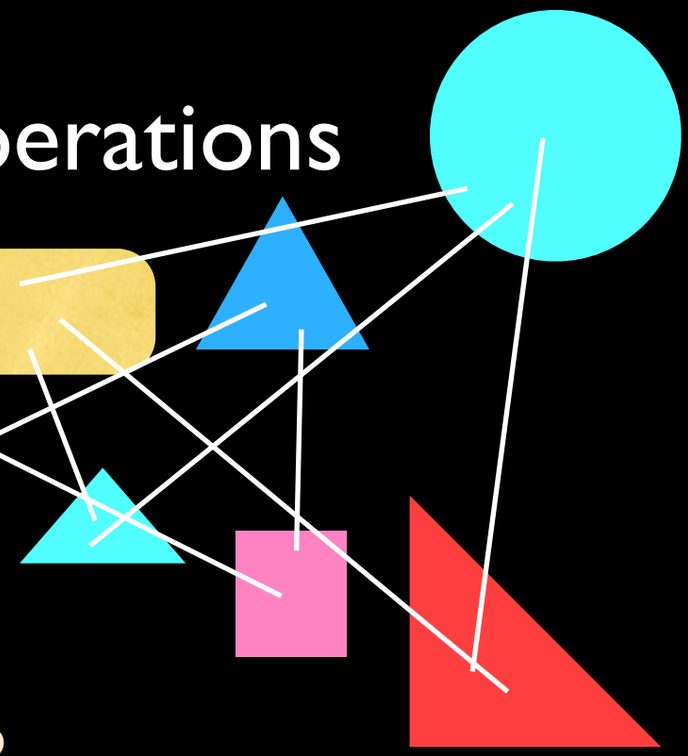

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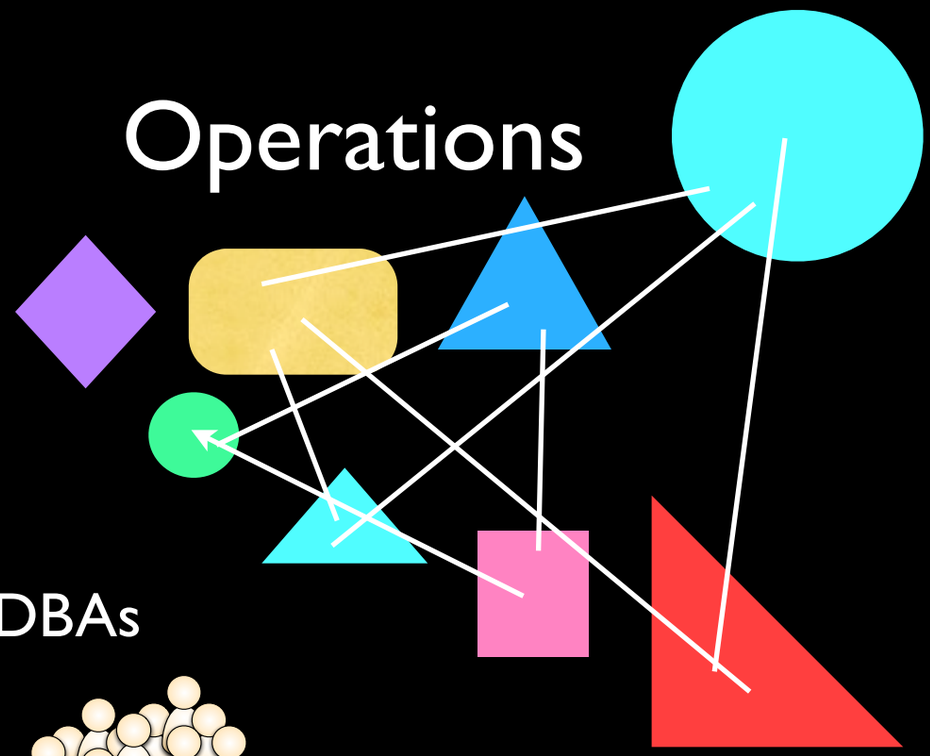

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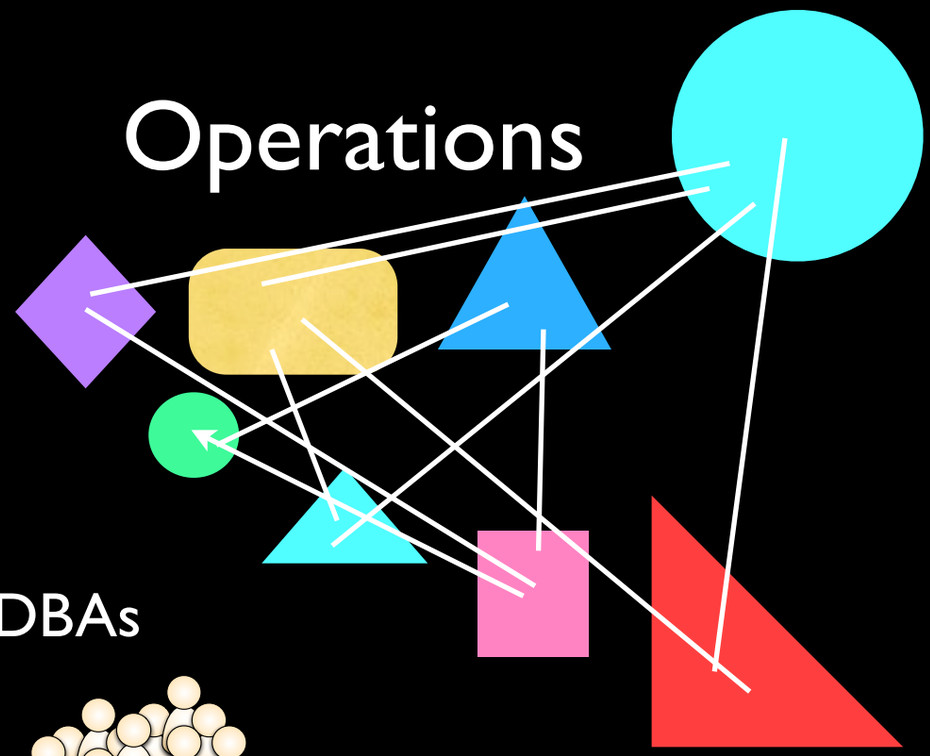

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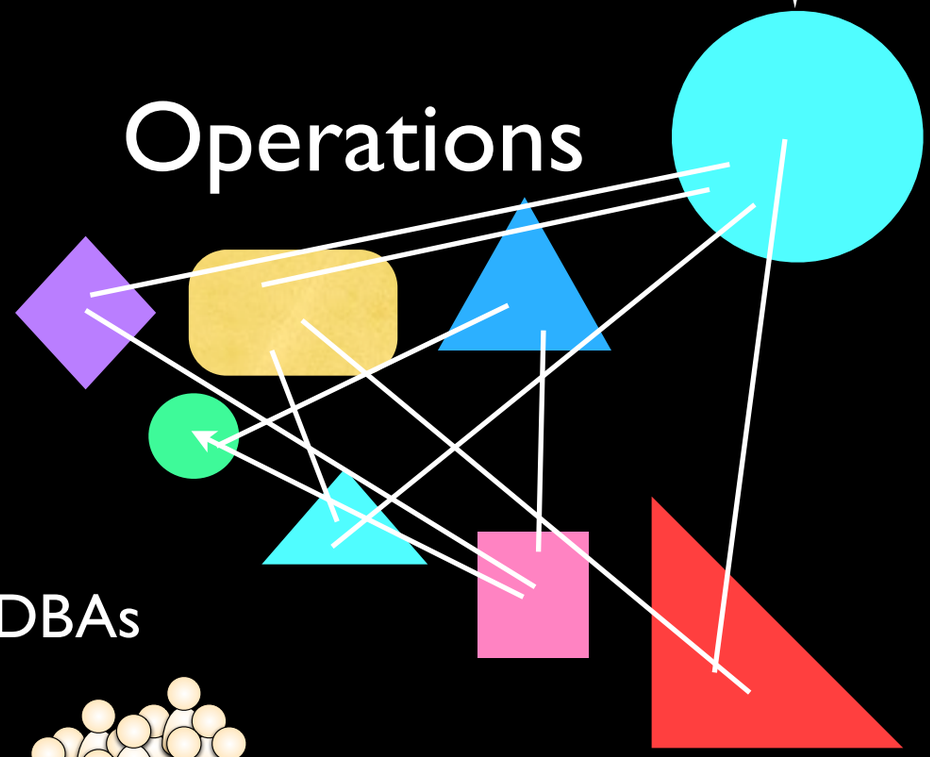

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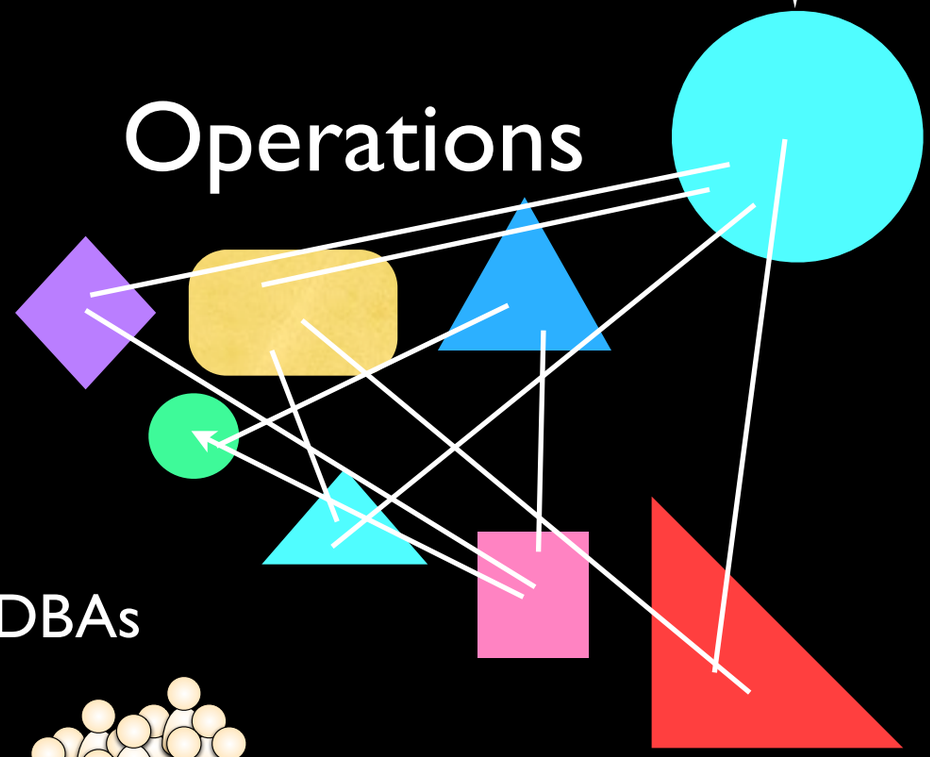

DBAs

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Ping!

Business

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Engineering

Project D

Project A

Project B

Operations

DBAs

Service desk

Infrastructure team

Value stream

We're going agile!

Business

Engineering

Operations

Project D

Project A

Project B

DBAs

Service desk

Infrastructure team

Value stream

Oh crap!

Business

We're going agile!

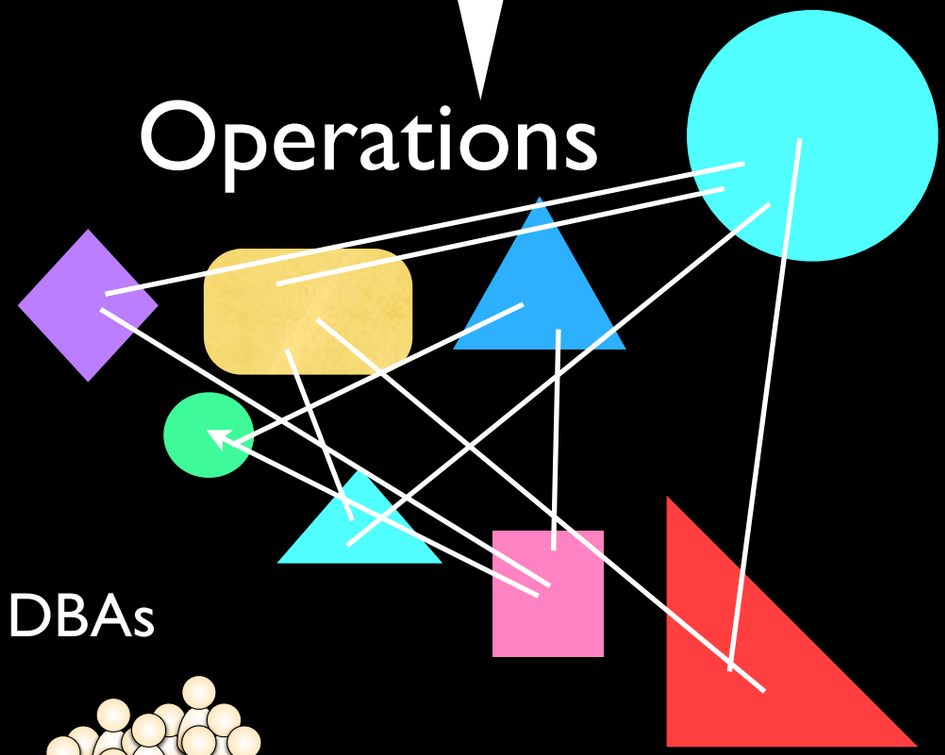
Engineering

Oh crap!

Operations

Project D

Project A



DBAs

Project B

Service desk

Infrastructure team

Value stream

Business

Engineering

Operations

Project D

Project A

DBAs

Infrastructure team

Service desk

Project B

Value stream

Business

Engineering

Project D

Project A

Project B

Operations

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Engineering

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Project D

Project A

DBAs

Infrastructure team

Service desk

Project B

Value stream

Business

Engineering

Operations

Project D

Project A

DBAs

Infrastructure team

Service desk

Project B

Value stream

Our test-driven code follows SOLID principles

Business

Engineering

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Project A

DBAs

Infrastructure team

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Project B

Value stream

Our test-driven code follows SOLID principles

Shame it doesn't work

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Value stream

Our test-driven code follows SOLID principles

Change management

Shame it doesn't work

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Project B

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Value stream

devops

culture
automation
measurement
sharing

culture

- ops involved in inceptions, showcases, retrospectives
- devs go to weekly ops stand-ups
- devs rotate through ops
- devs carry pagers
- organize your incentives (Hawthorne effect)

automation

- build, deploy, test release (deployment pipeline)
- provisioning & management of infrastructure and environments (infrastructure-as-code)
- database migrations and deployments

measurement

- business metrics - revenue, # orders, # users
- ops metrics - changes, incidents, TTD, TTRS, TBF
- technical metrics - TPS, response time, hits
- root cause analysis - which changes break stuff?

sharing

- celebrate success together (one team)
- knowledge
- tools and techniques (bdd, refactoring, continuous integration)

Business

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Project C

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Value stream

continuous delivery

developers write production-ready code

continuous delivery

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everyone collaborates throughout lifecycle

continuous delivery

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faster feedback loops

continuous delivery

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lower-risk, more reliable releases

continuous delivery

developers write production-ready code

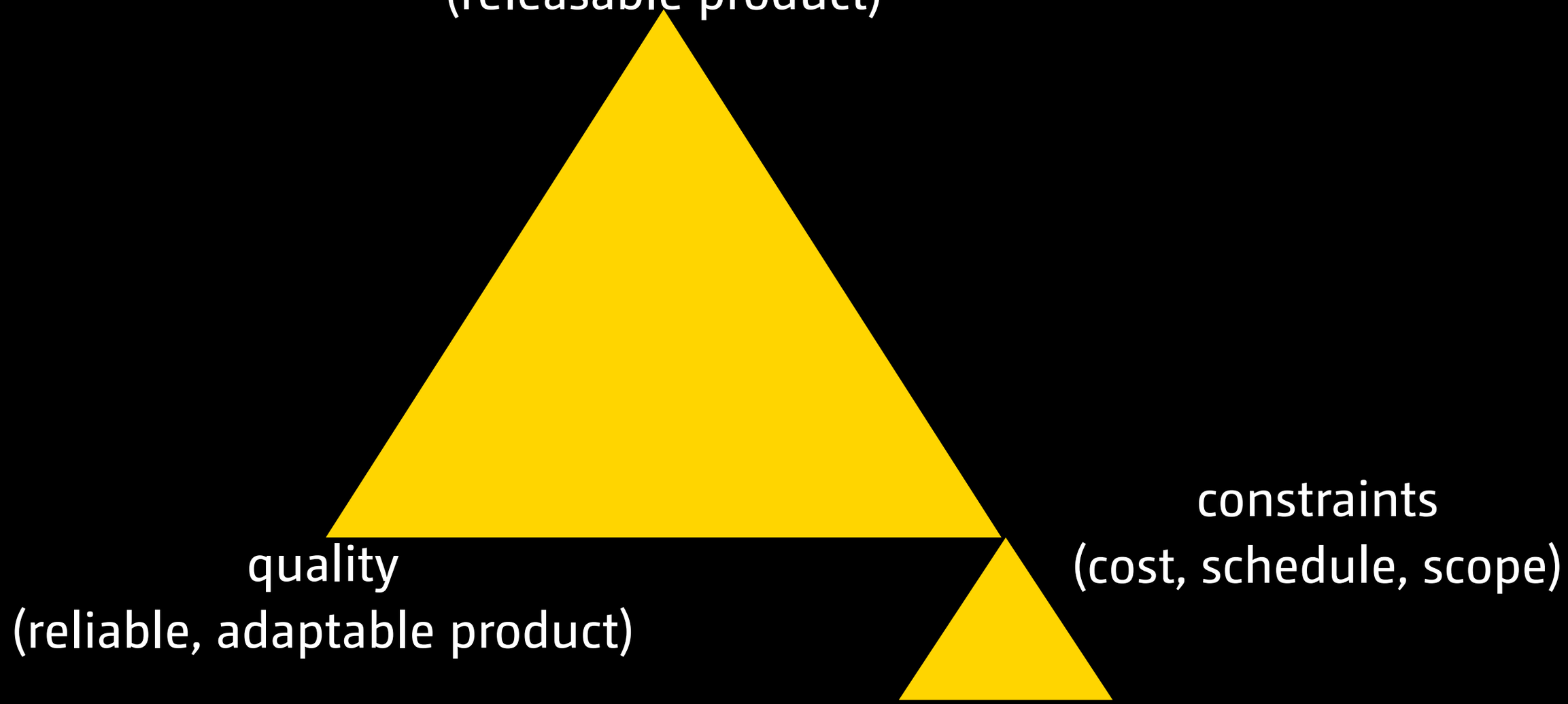
everyone collaborates throughout lifecycle

faster feedback loops

lower-risk, more reliable releases

done means released

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.

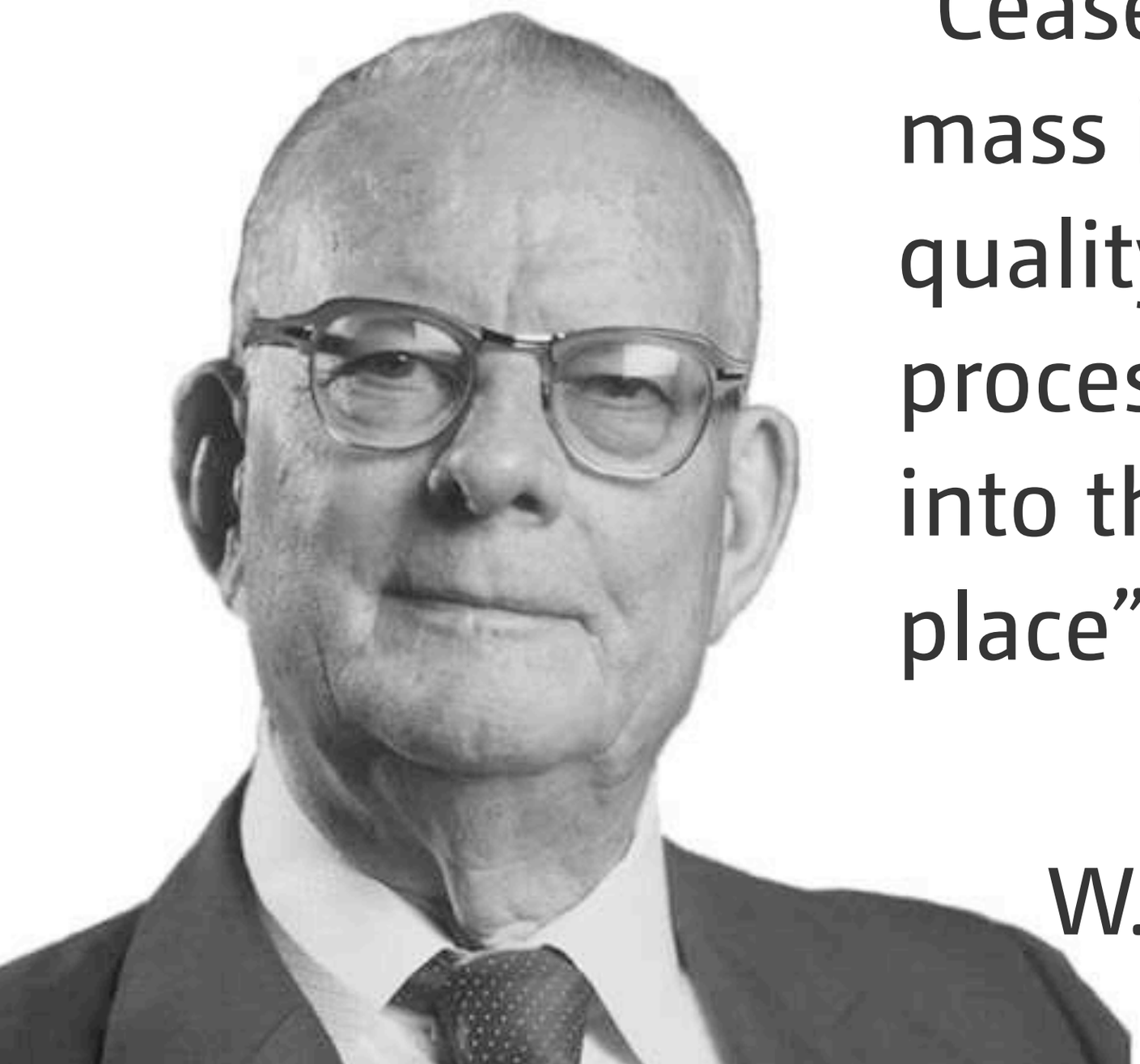
The Standish Group, reported in the IEEE conference 2002

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

but

ops still has all that legacy crap

but

ops still has all that legacy crap

no way to rationally decide what to retire

but

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deciding what to do is command-and-control

but

ops still has all that legacy crap

no way to rationally decide what to retire

deciding what to do is command-and-control

people who can make the changes aren’t the ones feeling the pain

werner vogels, cto, amazon

Treat these services as if they were products

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think product

Products / Services

Operations

IaaS

Ping!

Ops management

Service desk

Value stream

therefore...

teams can measure cost and value delivered per product

therefore...

teams can measure cost and value delivered per product

teams can rationally determine what to prioritize in their product backlog

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architecture group responsible for regulating and monitoring system-level attributes

therefore...

teams can measure cost and value delivered per product
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teams can self-manage using the lean startup methodology
architecture group responsible for regulating and monitoring system-level attributes
PMO regulates and measures to prevent “market failure” and manage externalities

organizational change

architecture group

organizational change

architecture group

PMO

organizational change

architecture group

PMO

operations

organizational change

architecture group

PMO

operations

business

enterprise governance

risk management

enterprise governance

risk management

SOX, ITIL, COBIT

enterprise governance

risk management

SOX, ITIL, COBIT

segregation of duties

enterprise governance

risk management

SOX, ITIL, COBIT

segregation of duties

change management

enterprise governance

risk management

SOX, ITIL, COBIT

segregation of duties

change management

auditing and compliance

questions

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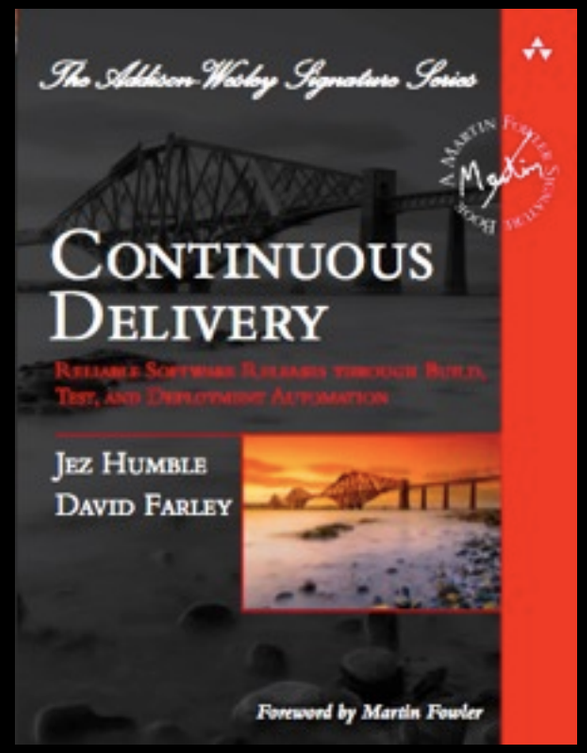
@jezhumble #continuousdelivery



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