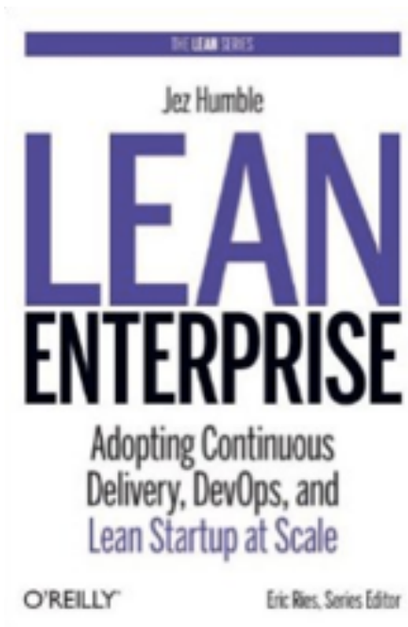
CHEF™
GETCHEF.COM

the lean enterprise



@jezhumble

7 november 2014

#gotoberlin

lean

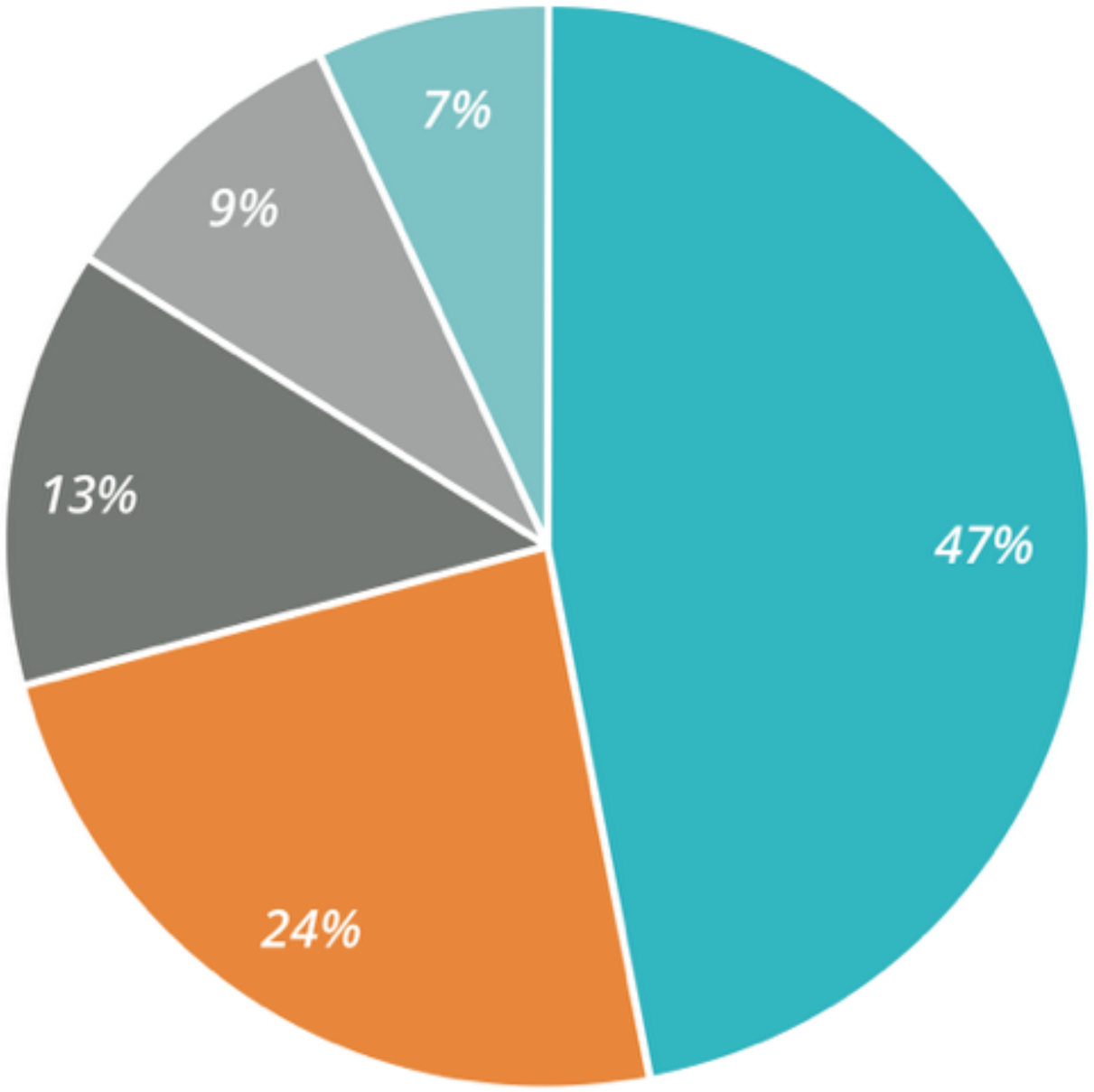
"precisely specify *value* by specific product, identify the *value stream* for each product, make value *flow* without interruptions, let the customer *pull* value from the producer, and pursue *perfection*"

Womack and Jones, *Lean Thinking*

enterprise

a complex, adaptive system

"Please select the statement that most closely aligns with how your company decides which products are built."



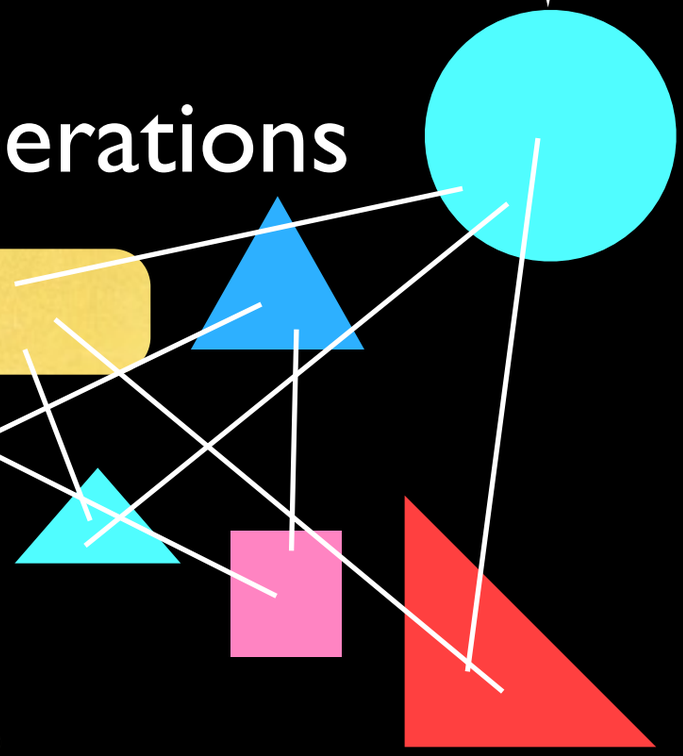
- Committee decides from potential options
- Financial modeling (e.g. Economic value optimization)
- Opinion of person with highest salery wins out.
- Product portfolio approach
- No systematic approach

Base: 161 business decision makers

Source: A commissioned study conducted by Forrester Consulting on behalf of ThoughtWorks, September 2012

“the enterprise”

Ping!



Business

Engineering

Operations

Project C

Project A

DBAs

Infrastructure team

Service desk

Project B

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

Oh shit!

We're going agile!

Oh shit!

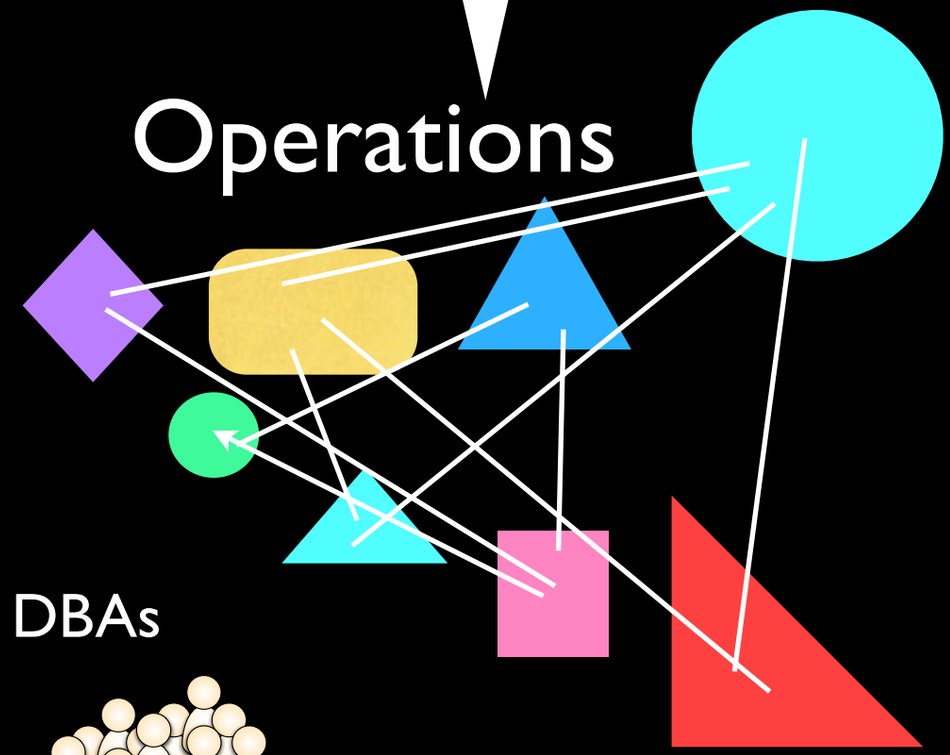
Business

Engineering

Operations

Project D

Project A



DBAs

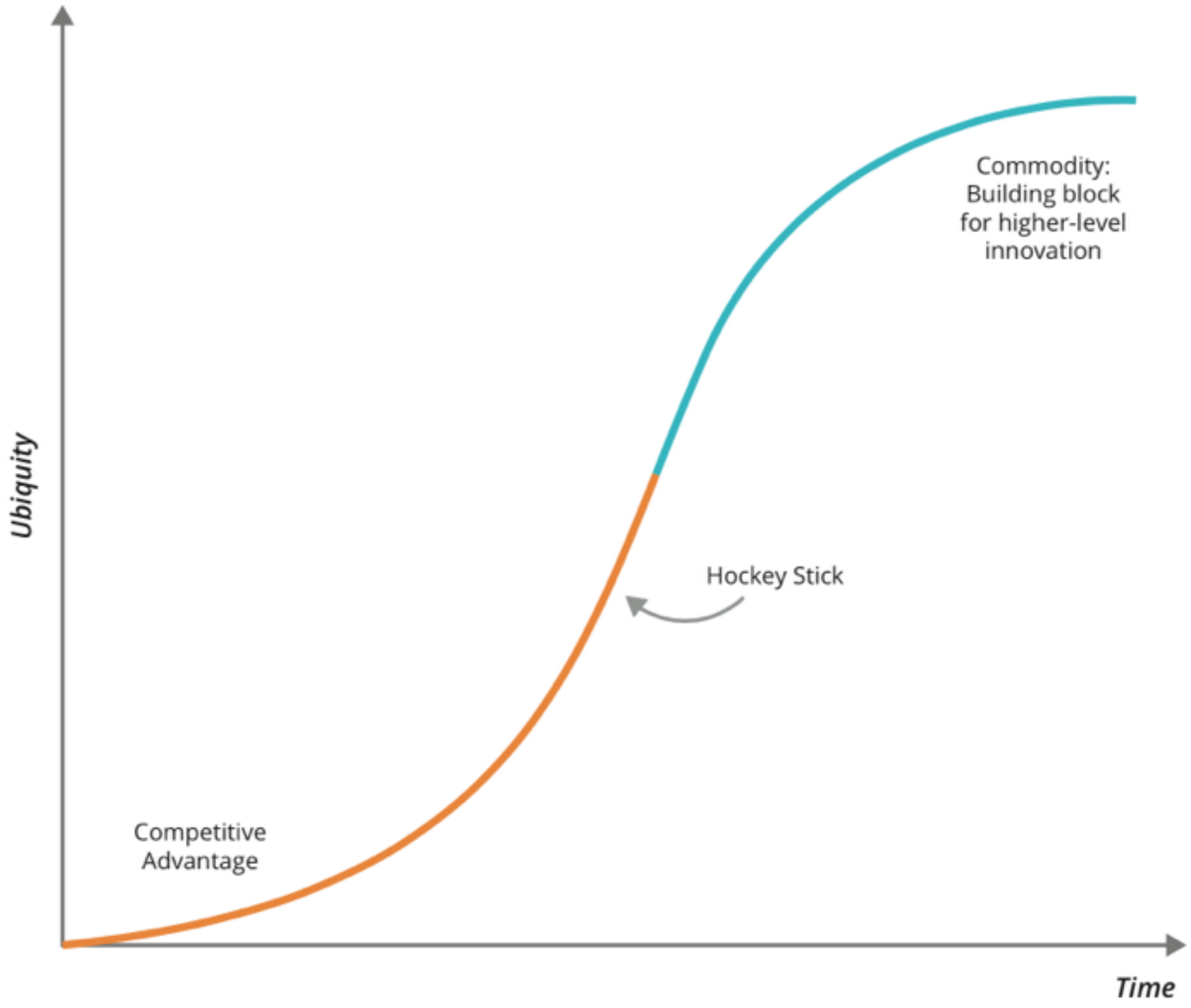
Project B

Service desk

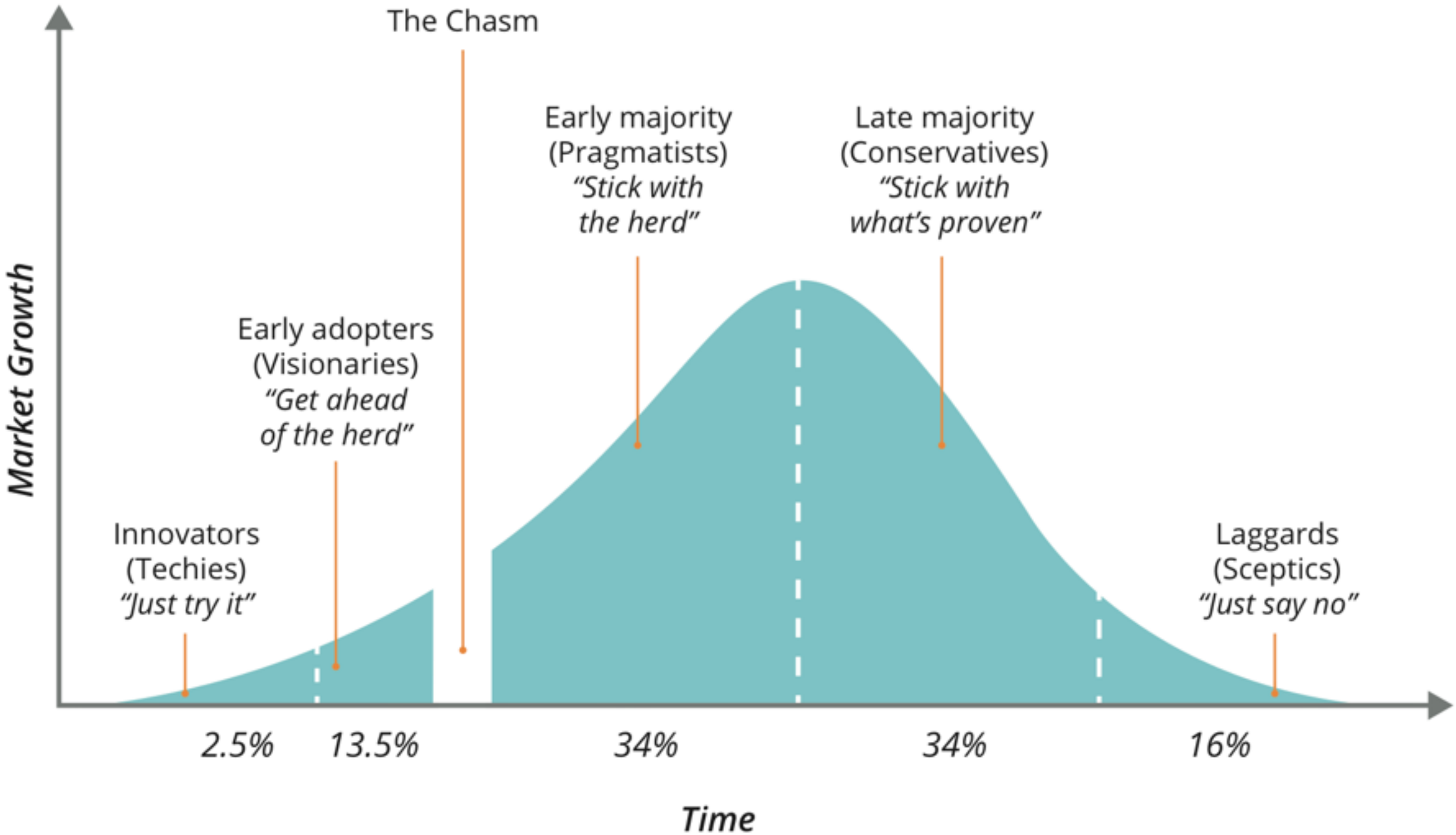
Infrastructure team

Value stream

lifecycle of innovations

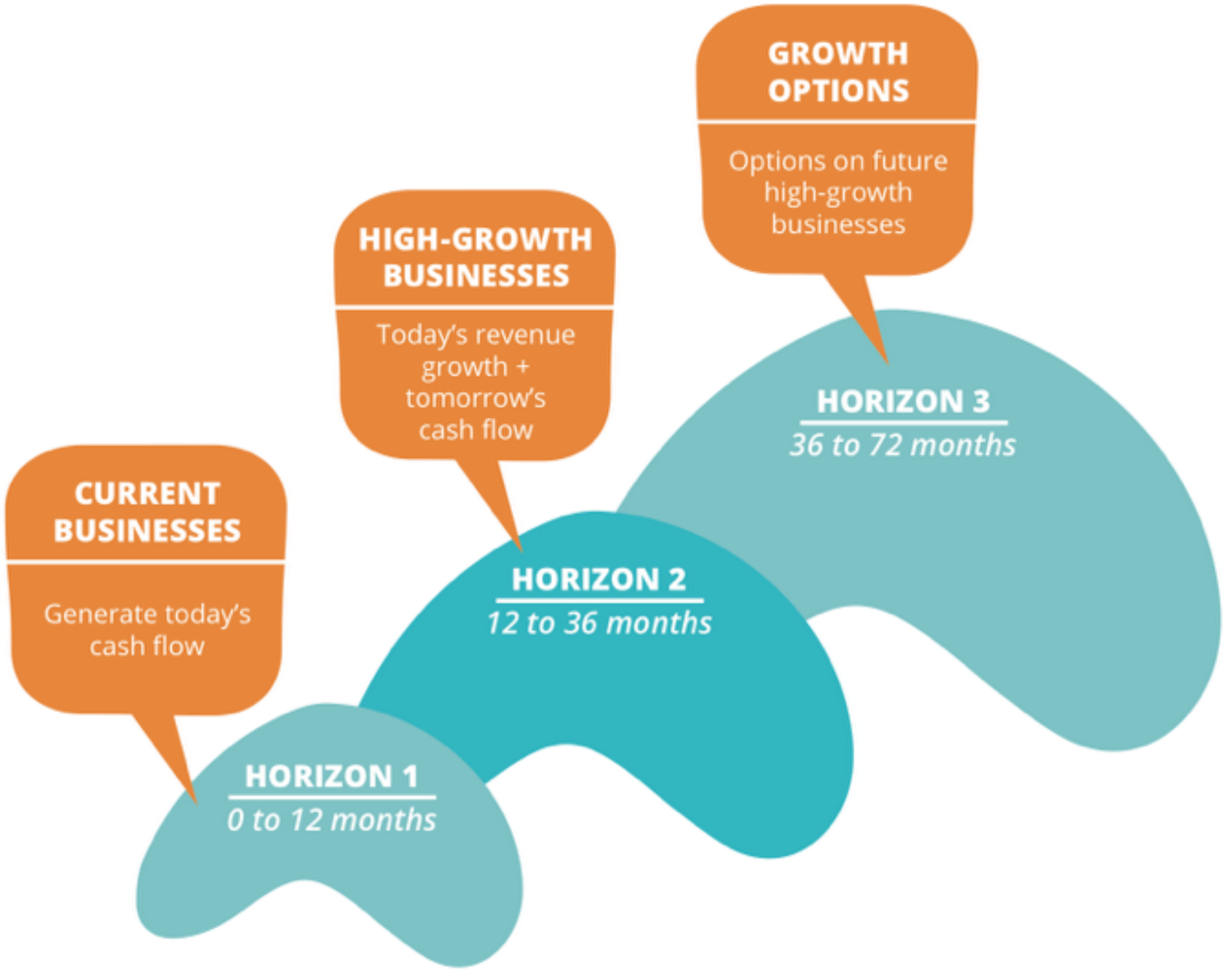


technology adoption lifecycle



Geoffrey Moore, *Crossing the Chasm*

three horizons



Baghai, M., Coley, S. and White, D., *The Alchemy of Growth*

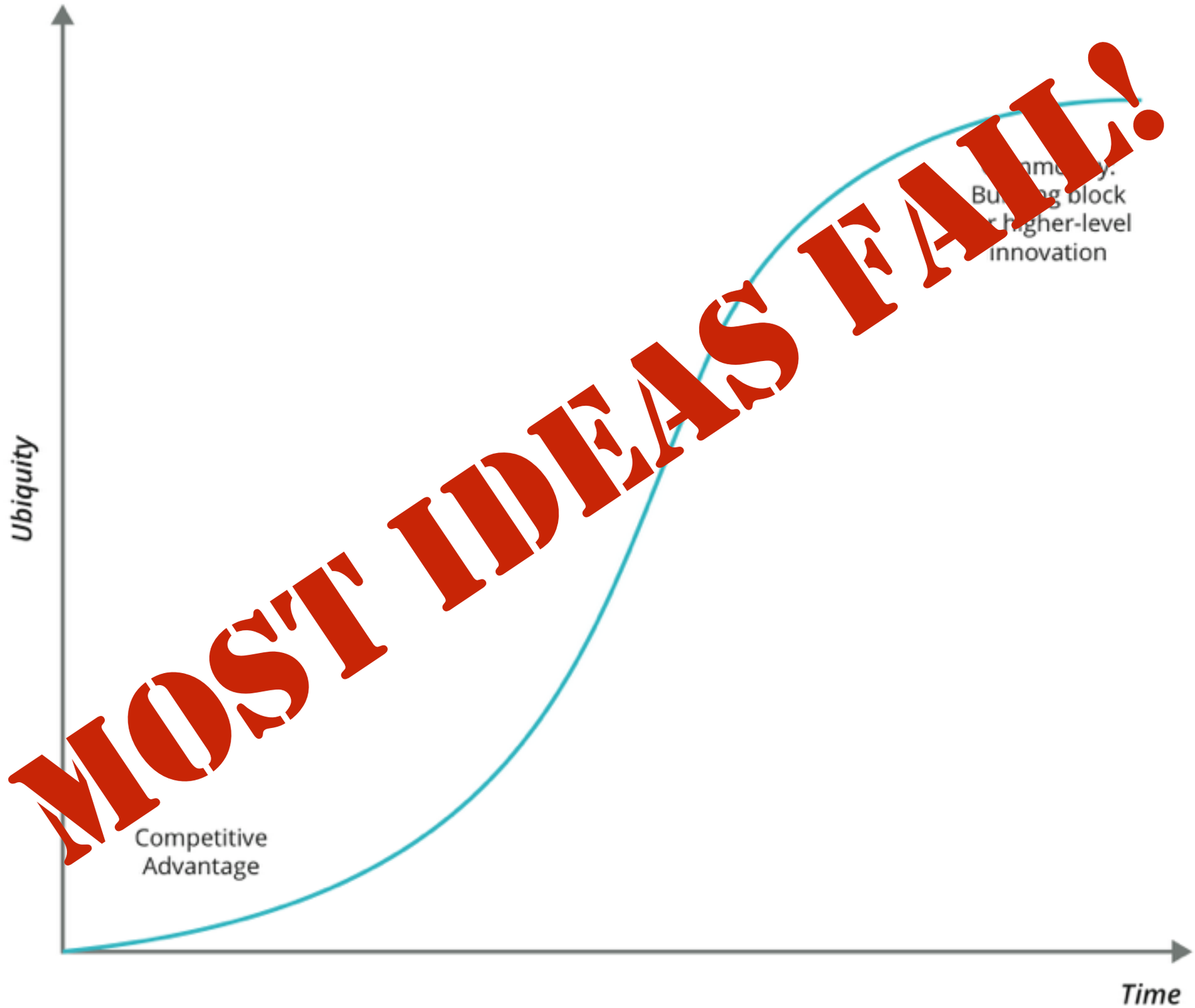
Intuit horizons and metrics

	Existing businesses	Adolescent businesses	Ideas
Investment	60%	30%	10% of operating expenses, funded quarterly based on validated learning
Metrics	Growing category, Share, Net promoter, Revenue	Growth, Increasing efficiency (will lead to profitability)	Love Metrics based on delivering customer benefit, active product usage, proactive word of mouth
Example products	TurboTax, Mint	QuickBooks Online Accounting	SnapTax

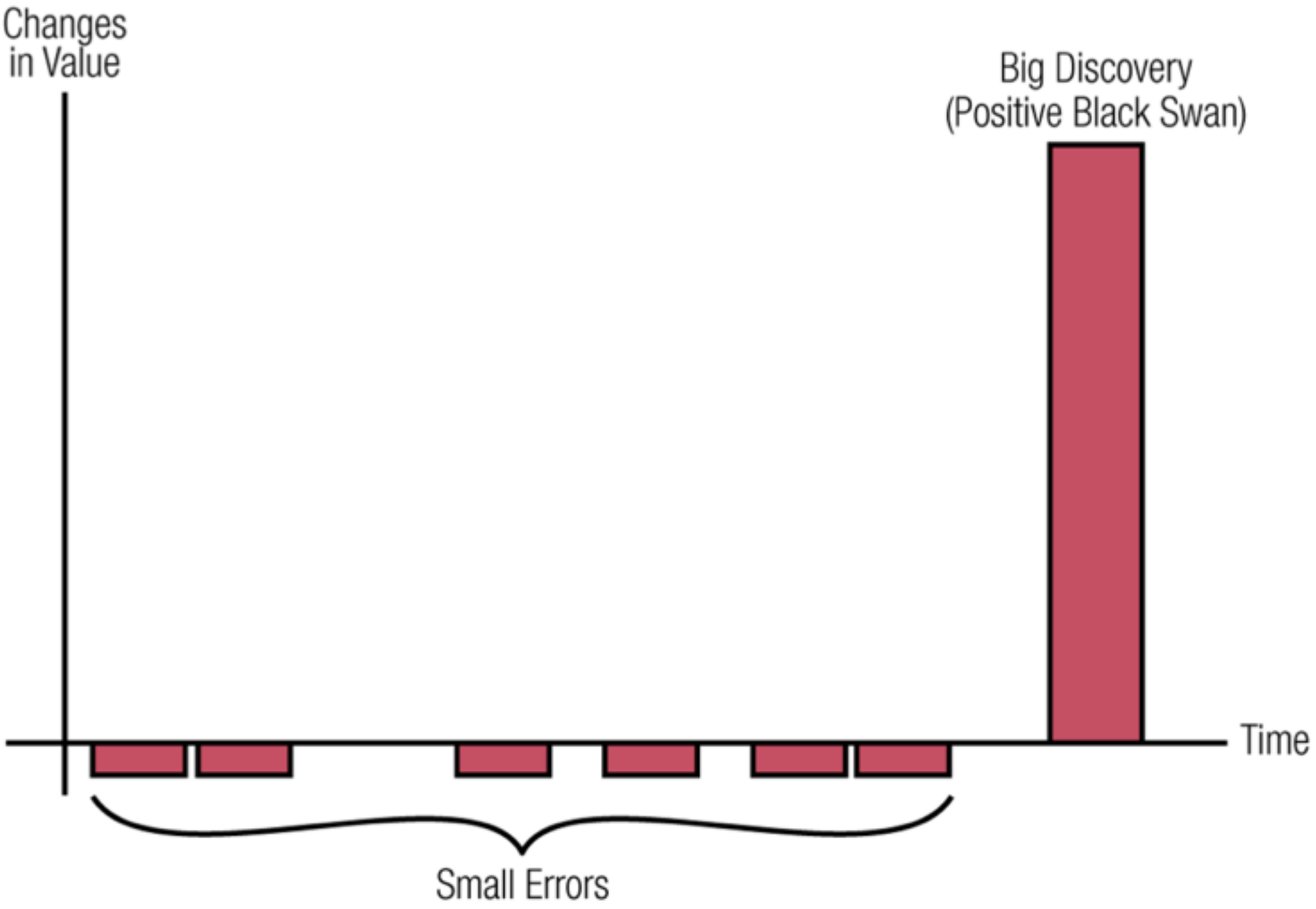
explore vs exploit

	Explore	Exploit
Strategy	Radical or disruptive innovation, new business model innovation	Incremental innovation, existing business model optimization
Structure	Small cross-functional multi-skilled team	Multiple teams aligned using Principle of Mission
Culture	High tolerance for experimentation, risk taking, acceptance of failure, focus on learning	Incrementally improve and optimize, values quality and customer satisfaction
Risk management	Biggest risk is failure to achieve product/market fit	A more complex set of trade-offs specific to each product/service
Goals	Create new markets, discover new opportunities within existing markets	Maximize yield from captured market, outperform competitors
Measure of progress	Achieving product/market fit	Outperform forecasts, achievement of planned milestones and targets

product/market fit

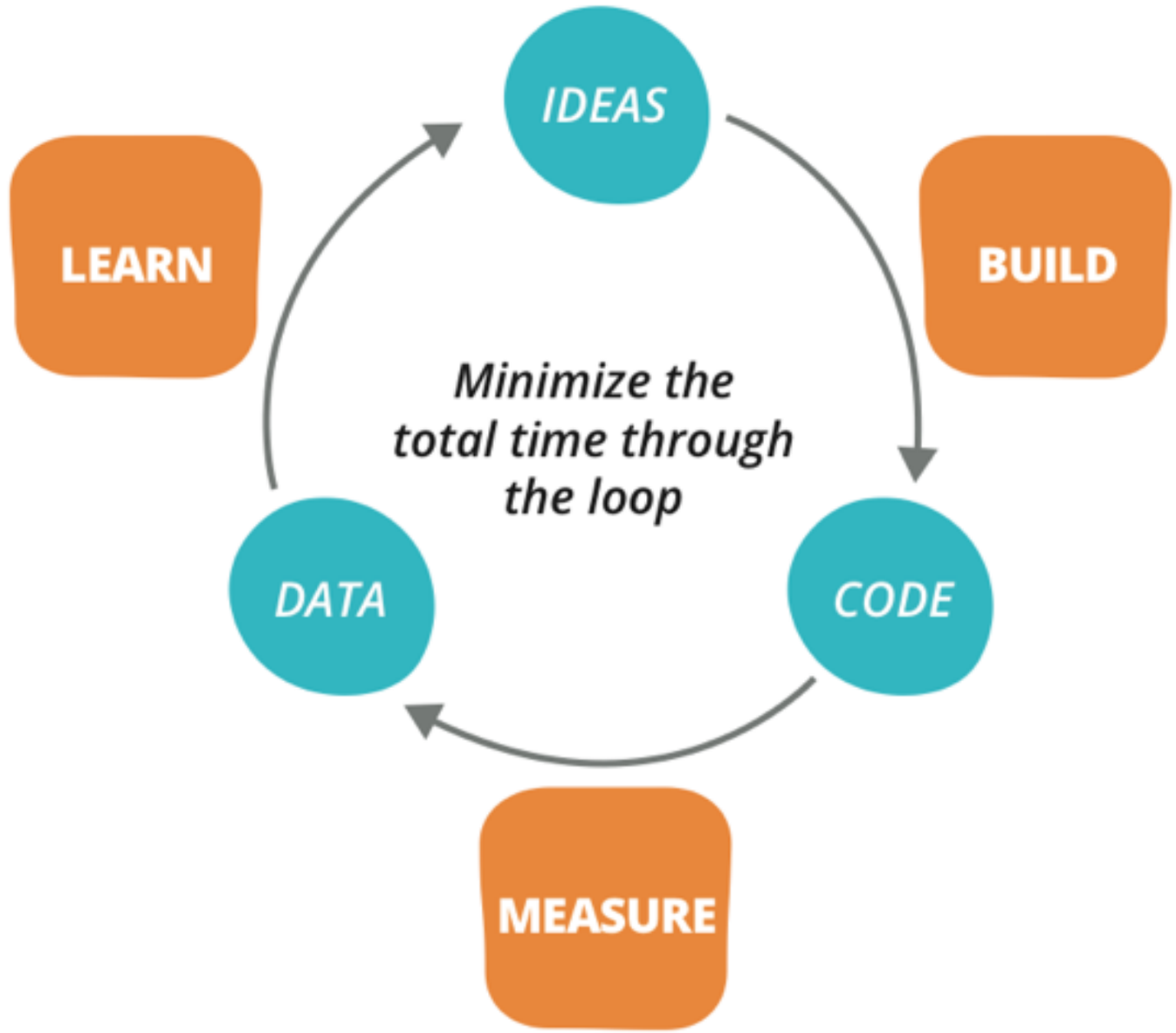


optionality



Nassim Taleb, *Antifrafile*

build-measure-learn

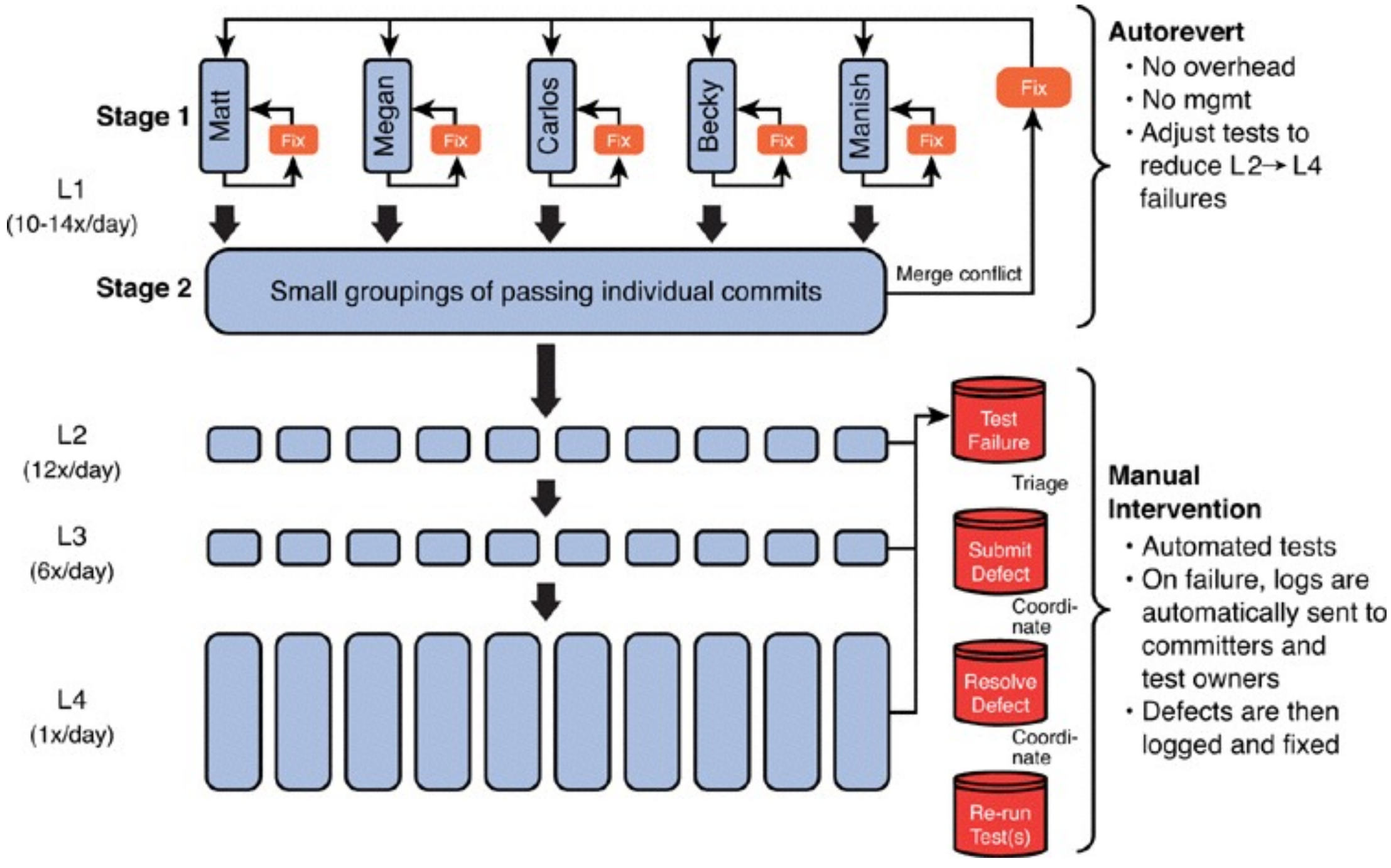


hp laserjet firmware team

2008

- 10% - code integration
- 20% - detailed planning
- 25% - porting code
- 25% - current product support
- 15% - manual testing
- **~5% - innovation**

deployment pipeline



hp laserjet firmware team

2008	2011
10% - code integration	2% - continuous integration
20% - detailed planning	5% - agile planning
25% - porting code	15% - one main branch
25% - current product support	10% - one branch cpe
15% - manual testing	5% - most testing automated
~5% - innovation	**~40% - innovation**

The remaining 23% on RHS is spent on managing automated tests.

the economics

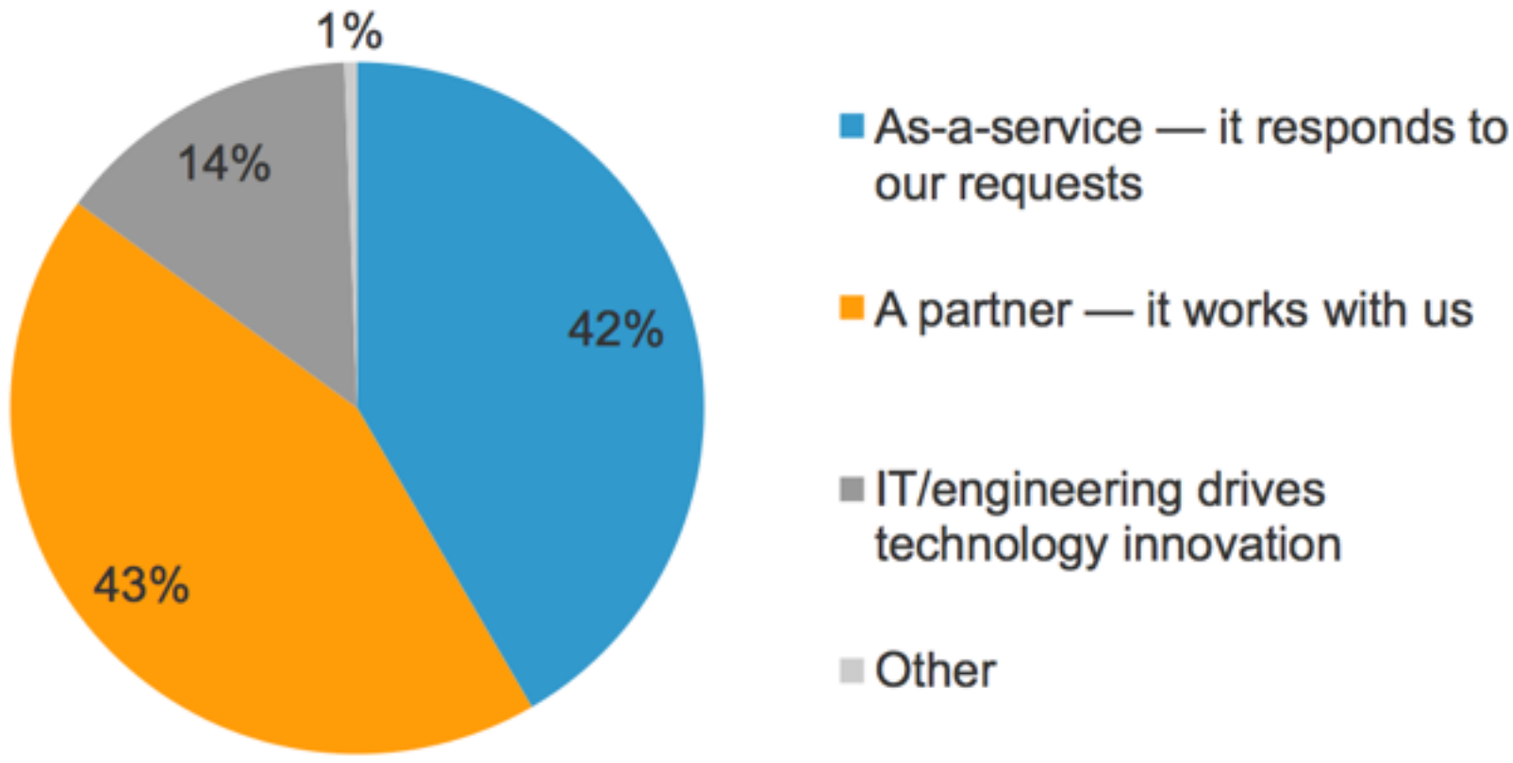
2008 to 2011

- overall development costs reduced by ~40%
- programs under development increased by ~140%
- development costs per program down 78%
- resources now driving innovation increased by 8X

A Practical Approach to Large-Scale Agile Development - Gruver, Young, Fulghum

What Business Leaders Think About The Business-IT Relationship

"What level of influence does your software development provider have when it comes to deciding which business services or products you deliver?"



Base: 161 business decision-makers

Source: A commissioned study conducted by Forrester Consulting on behalf of Thoughtworks, September 2012

IT as a competitive advantage

"Firms with high-performing IT organizations were twice as likely to exceed their profitability, market share and productivity goals."

http://bit.ly/2014-devops-report

“it performance”?

lead time for changes

release frequency

time to restore service

change fail rate

highest correlation with it performance

- “Our code, app configurations and system configurations are in a version control system”
- “We get failure alerts from logging and monitoring systems”
- “Developers merge their code into trunk daily”
- “When development and operations teams interact, the outcome is generally win/win.”
- “Developers break up large features into small, incremental changes.”

top predictors of it performance

peer-reviewed change approval process

version control everything

proactive monitoring

high trust organizational culture

win-win relationship between dev and ops

high trust culture

Pathological (*power oriented*)	Bureaucratic (*rule oriented*)	Generative (*performance oriented*)
Low cooperation	Modest cooperation	High cooperation
Messengers shot	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure leads to scapegoating	Failure leads to justice	Failure leads to enquiry
Novelty crushed	Novelty leads to problems	Novelty implemented

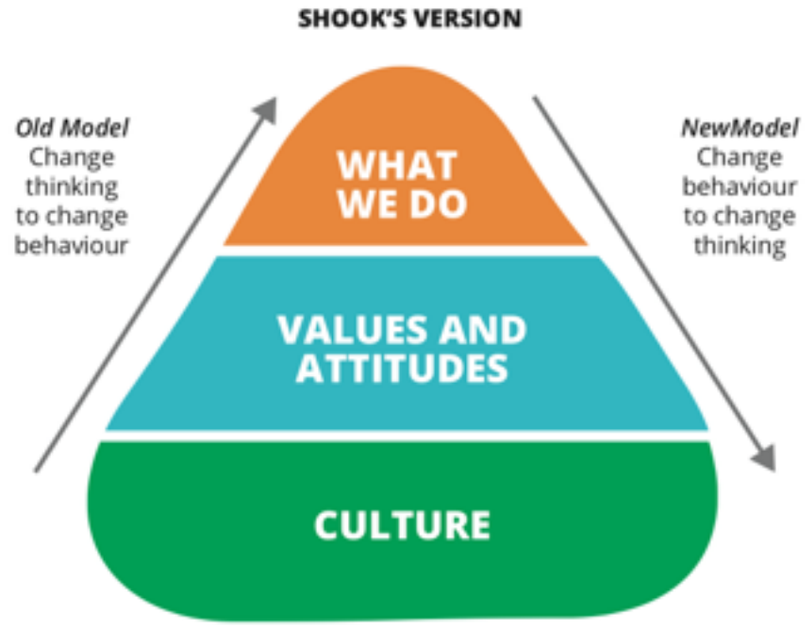
Westrum, “A Typology of Organizational Cultures”, Qual Saf Health Care 2004; 13 (Suppl II):ii22-ii27

changing culture

NUMMI
New United Motor Manufacturing, Inc.

TOYOTA

GM

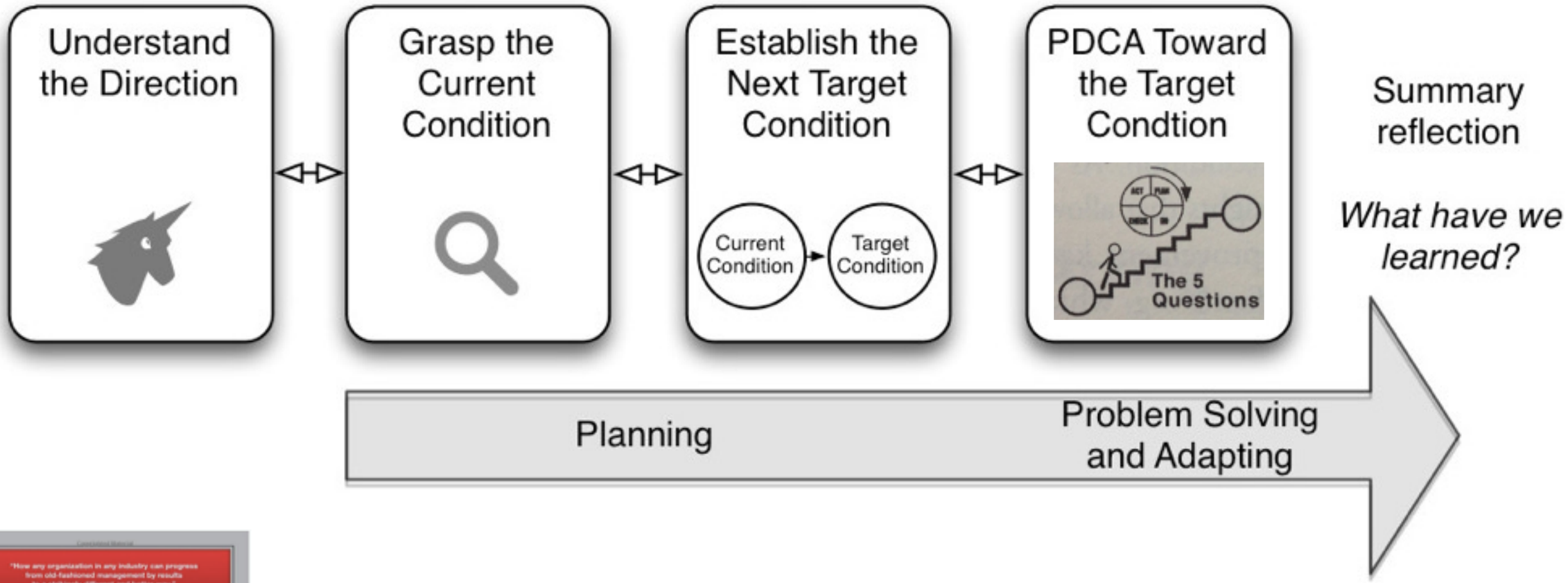


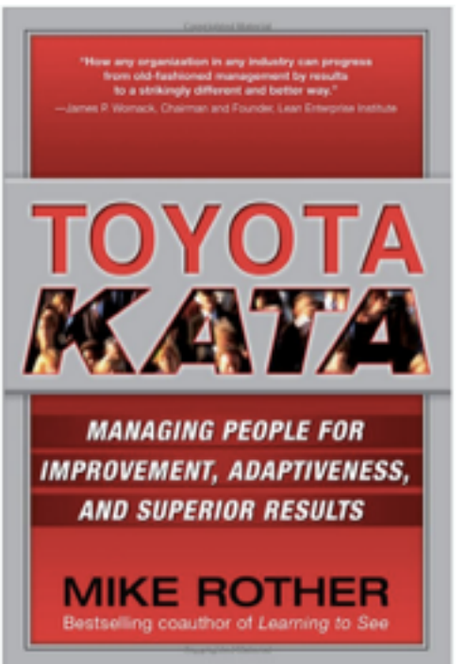
http://www.thisamericanlife.org/radio-archives/episode/403/nummi

http://sloanreview.mit.edu/article/how-to-change-a-culture-lessons-from-nummi/

Schein, *The Corporate Culture Survival Guide*

improvement kata





improvement kata

What is the target condition? (*The challenge*)

What is the actual condition now?

What obstacles are preventing you from reaching it?
which one are you addressing now?

What is your next step? (*Start of PDCA cycle*)

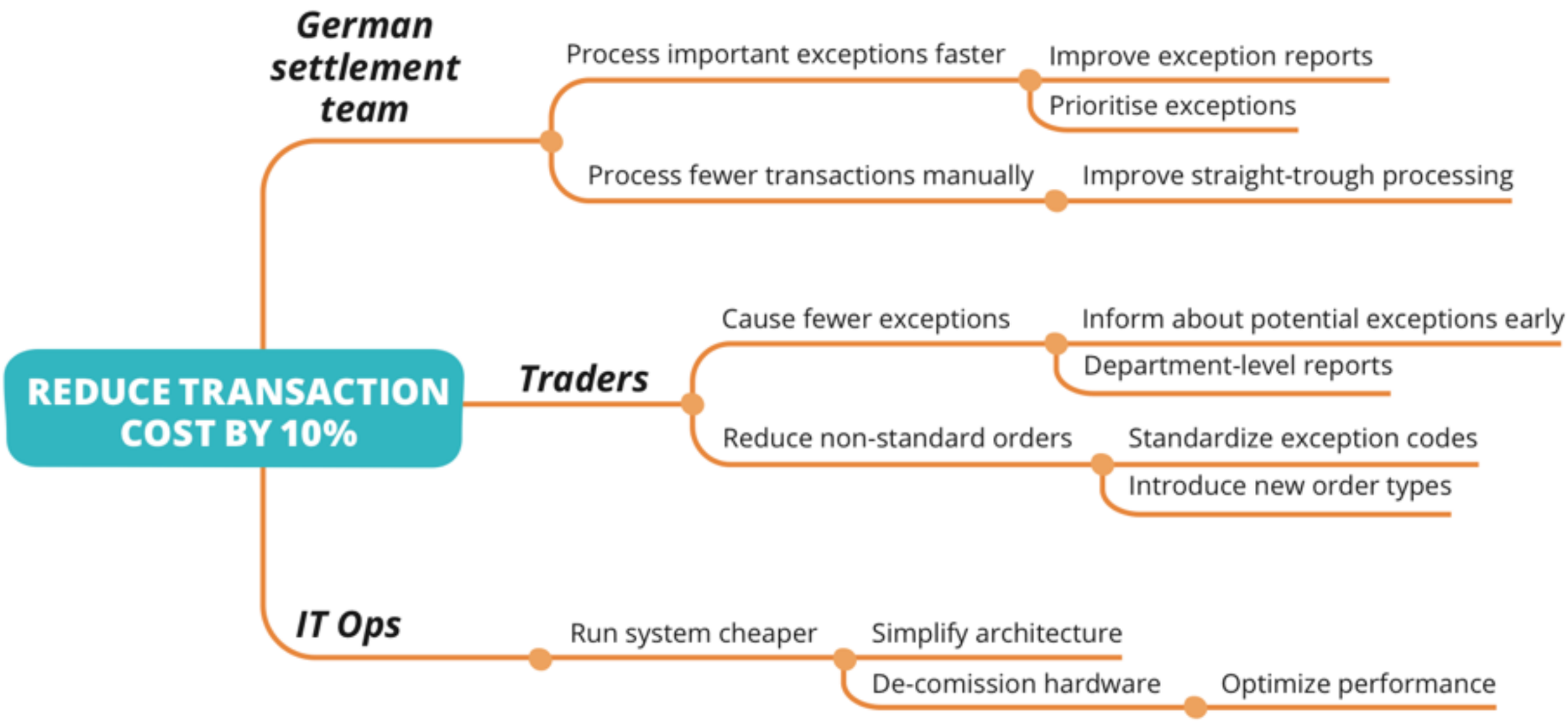
When can we go and see what we learned from taking that step?

improvement kata

Table 5.1. Sample Mini-Milestone Objectives (MM30 Objectives)

Rank	Theme	Exit Criteria: Objective Met/*Objective not met*
0	Quality threshold	P1 issues open < 1week L2 test failure 24-hour response
1	Quarterly bit release	*A) Final P1 change requests fixed* B) Reliability error rate at release criteria
2	New platform stability and test coverage	A) Customer Acceptance Test 100% passing B) All L2 test pillars 98% passing C) L4 test pillars in place D) L4 test coverage for all Product Turn On requirements E) 100% execution of L4 tests on new products
3	Product Turn On dependencies and key features	A) Print for an hour at speed to finisher with stapling B) Copy for an hour *at speed* C) *Enable powersave mode* D) Manufacturing nightly test suite execution E) Common Test Library support for four-line control panel display
4	Build for next-gen products	*A) End-to-end system build on new processor* *B) High-level performance analysis on new processor*
5	Fleet integration plan	Align on content and schedule for "slivers" of end-to-end agile test with system test lab

impact mapping



Gojko Adzic, *Impact Mapping*

hypothesis-driven delivery

We believe that

[building this feature]

[for these people]

will achieve [this outcome].

We will know we are successful when we see [this signal from the market].

Jeff Gothelf “Better product definition with Lean UX and Design” http://bit.ly/TylT6A

do less

"Evaluating well-designed and executed experiments that were designed to improve a key metric, **only about 1/3** were successful at improving the key metric!"

"Online Experimentation at Microsoft", Kohavi *et al* http://stanford.io/130uW6X

Amazon May Deployment Stats

(production hosts & environments only)

11.6 seconds

Mean time between deployments (weekday)

1,079

Max # of deployments in a single hour

10,000

Mean # of hosts simultaneously receiving a deployment

30,000

Max # of hosts simultaneously receiving a deployment

“I think building this culture is the key to innovation. Creativity must flow from everywhere. Whether you are a summer intern or the CTO, any good idea must be able to seek an objective test, preferably a test that exposes the idea to real customers. Everyone must be able to experiment, learn, and iterate.”

http://glinden.blogspot.com/2006/04/early-amazon-shopping-cart.html

questions

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http://continuousdelivery.com/

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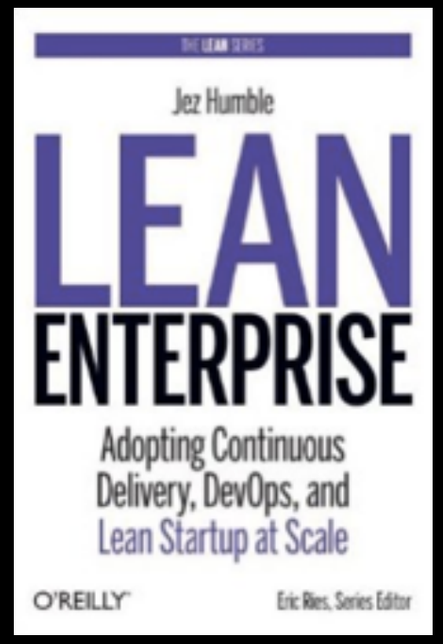

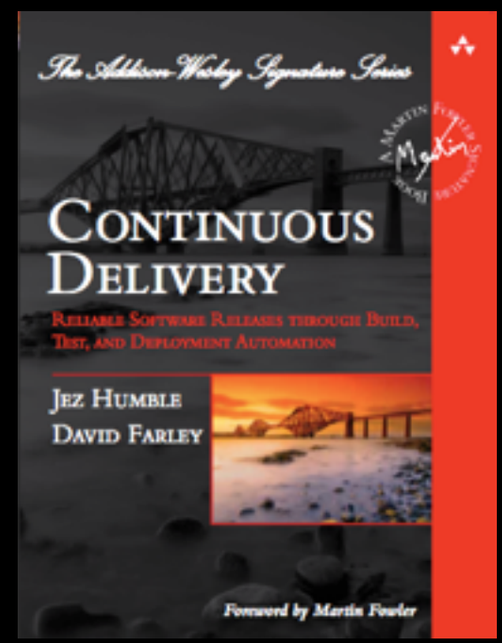

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