

Figures from Lean Enterprise

The images in the initial print runs of this book did not reproduce well in black and white because of an error in production.

In this free PDF, we've included full-color reproductions of all of the images from the book that aren't under licensing restrictions. We've also noted that some images are under a Creative Commons license: CC-BY.

PART I

ORIENT

CHAPTER 1

Introduction

Manage the Dynamics of the Enterprise Portfolio

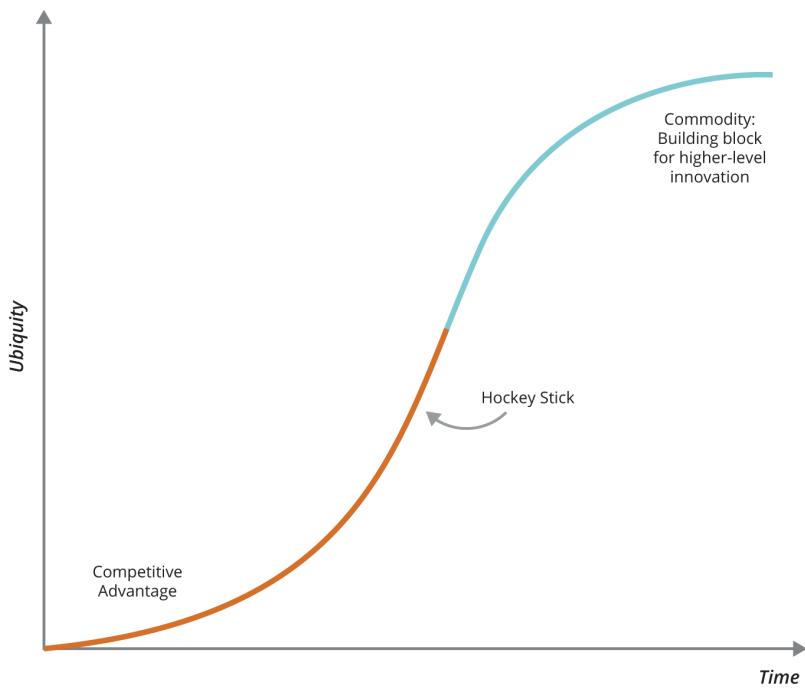
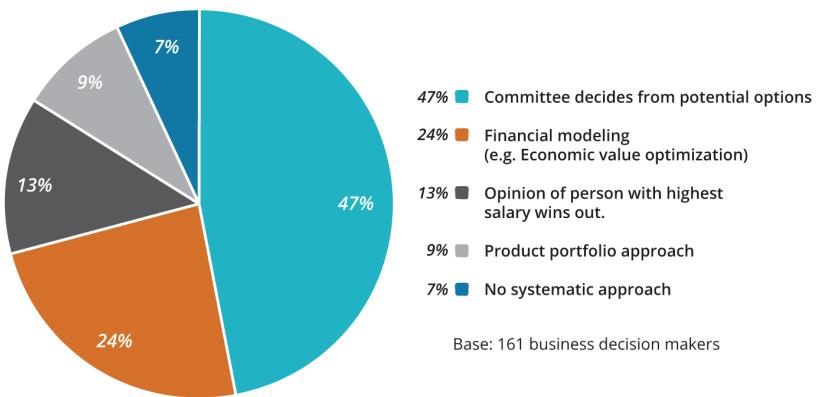


Figure 2-1. The S-curve which shows the lifecycle of innovations (available under Creative Commons license CC-BY)

Decision by committee is how most firms develop software services

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



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

Figure 2-6. How do enterprises make investment decisions?

PART II

EXPLORE

Model and Measure Investment Risk

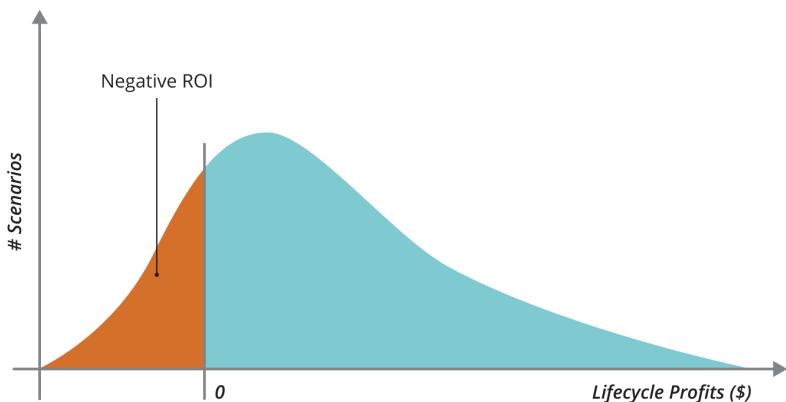


Figure 3-1. Output of a Monte Carlo simulation (available under Creative Commons license CC-BY)

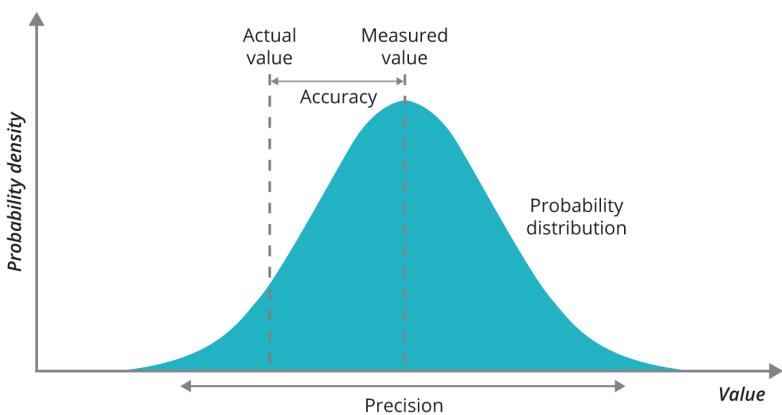


Figure 3-2. Accuracy and precision (available under Creative Commons license CC-BY)

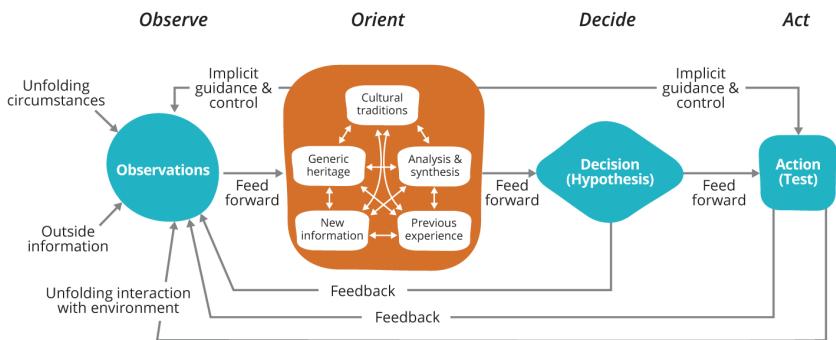


Figure 3-3. The OODA loop (Adapted from “Boyd’s OODA Loop (It’s Not What you Think)” by Chet Richards)

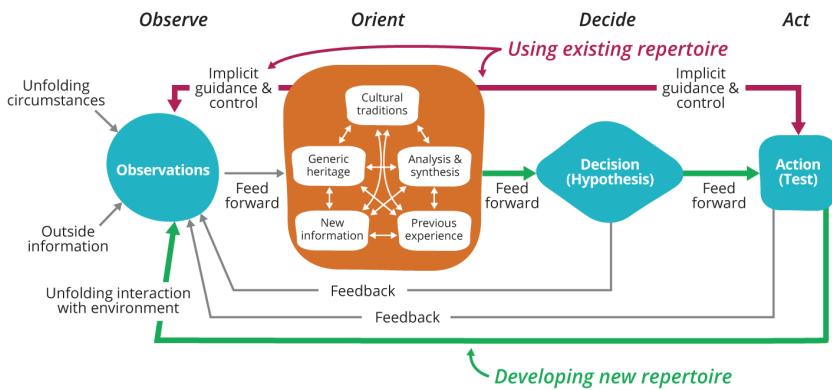


Figure 3-4. Creating new repertoire (Adapted from "Boyd's OODA Loop (It's Not What you Think)" by Chet Richards)

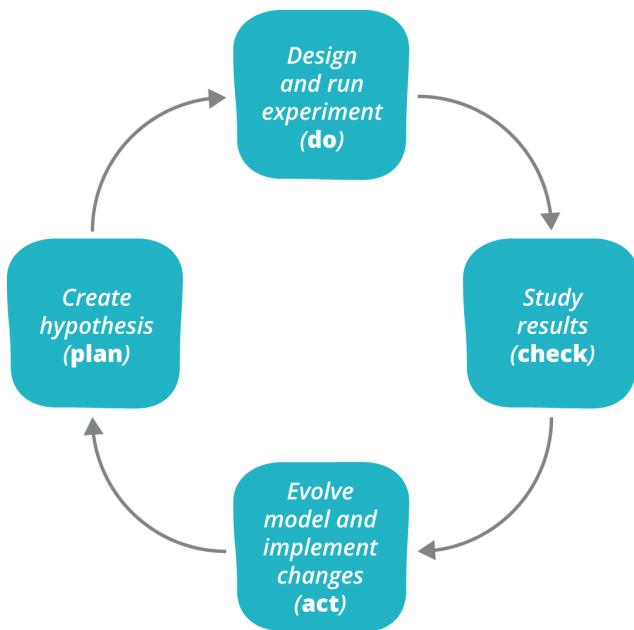


Figure 3-5. The Deming cycle (available under Creative Commons license CC-BY)

Explore Uncertainty to Detect Opportunities

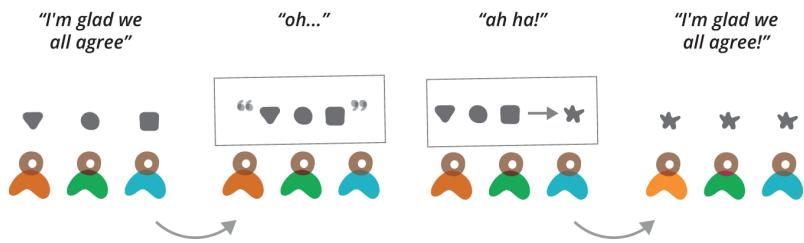


Figure 4-1. Building a shared understanding as a team (available under Creative Commons license CC-BY)

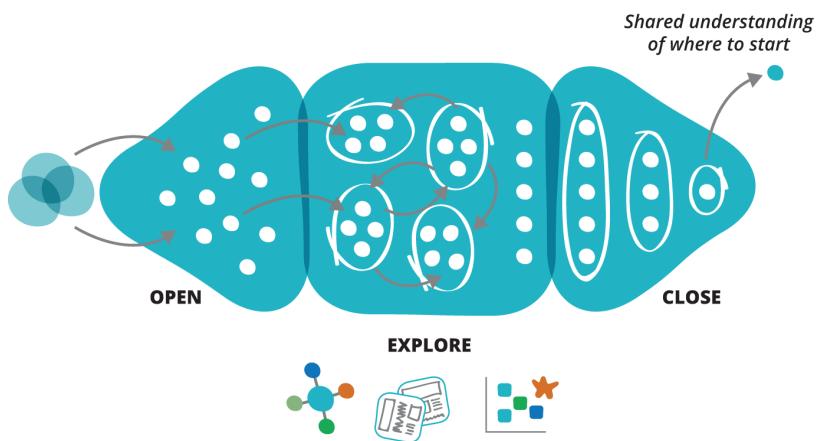


Figure 4-2. Structured exploration with divergent and convergent thinking (available under Creative Commons license CC-BY)

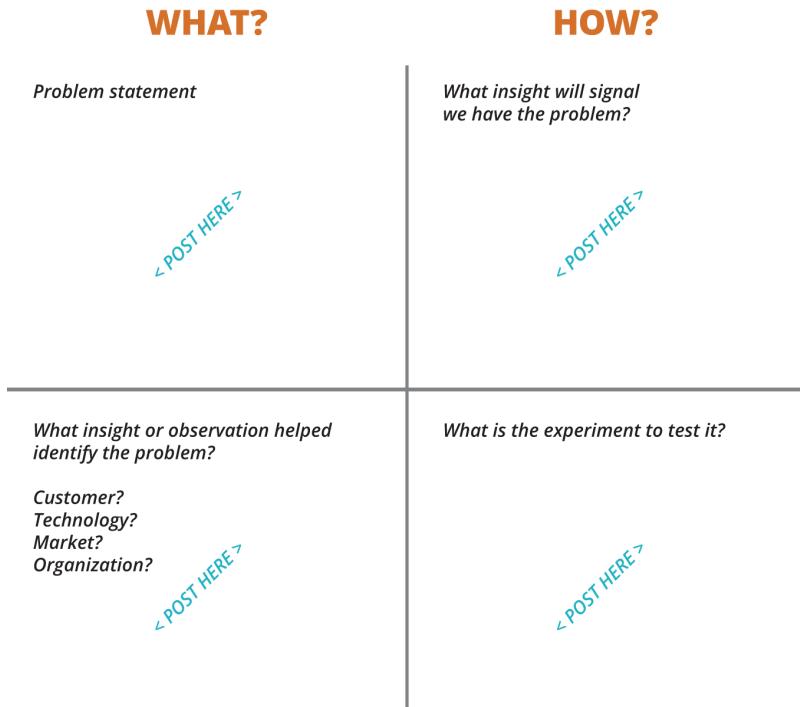


Figure 4-4. The Problem Statement Canvas (available under Creative Commons license CC-BY)

MINIMUM VIABLE PRODUCT

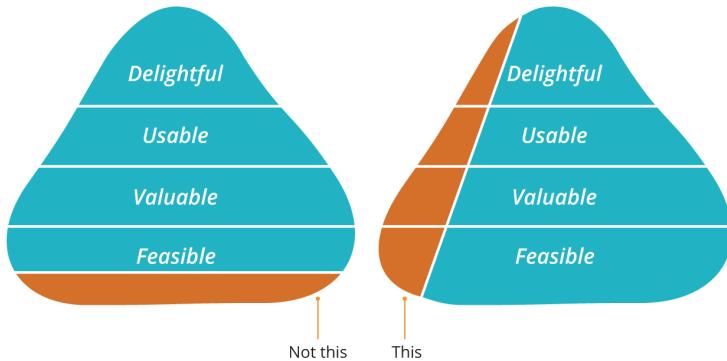


Figure 4-5. Minimum Viable Product: build a slice across instead of one layer at a time¹

¹ Diagram inspired by Jussi Pasanen, with acknowledgments to Aarron Walter, Ben Tollady, Ben Rowe, Lexi Thorn, and Senthil Kugalur.

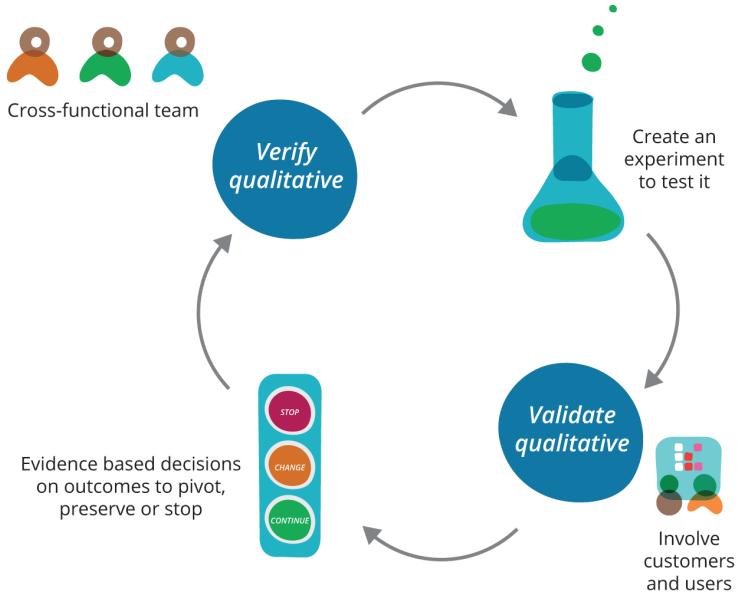


Figure 4-6. The MVP mindset and experiment evaluation loop (available under Creative Commons license CC-BY)

Evaluate the Product/Market Fit

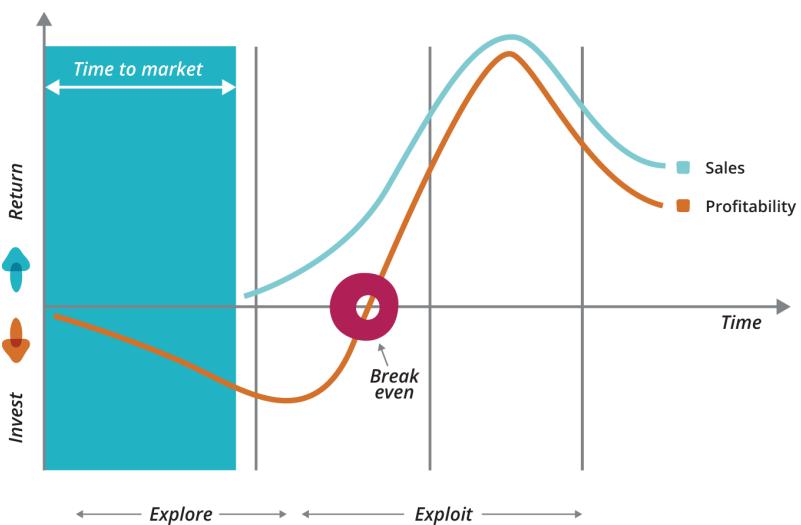


Figure 5-1. Profitability-to-sales ratios for early-stage innovations (available under Creative Commons license CC-BY)

Stakeholder	Measure	Current	Target	Trend
Customer	% users that complete sales flow	30%	45%	
	% retention	20%	25%	
	Net Promoter Score	44	60	
Business	% visits to sign up for service	20%	25%	
	% conversion to paying customers	15%	20%	
	Customer acquisition costs	\$0.25	\$0.05	
	Life time customer vale	\$0.30	\$0.80	
	% attrition	30%	15%	

Figure 5-2. Example innovation scorecard (available under Creative Commons license CC-BY)

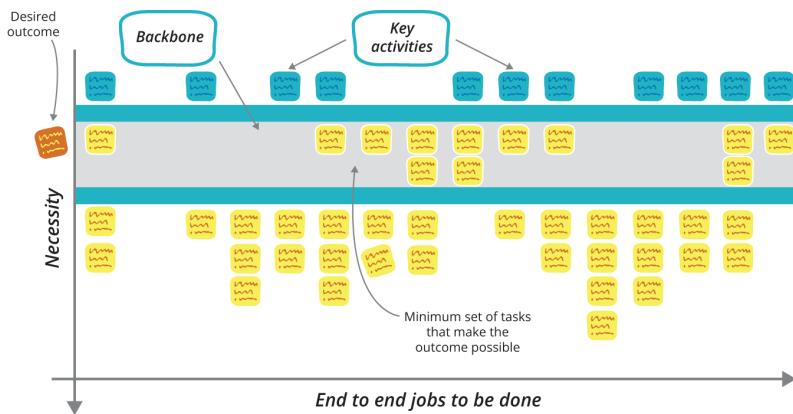


Figure 5-3. A user story map (available under Creative Commons license CC-BY)

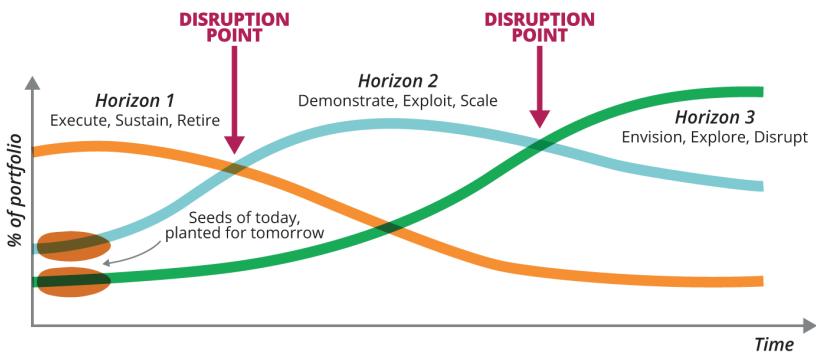


Figure 5-4. Percentage of product portfolio for the three innovation horizons over time (available under Creative Commons license CC-BY)

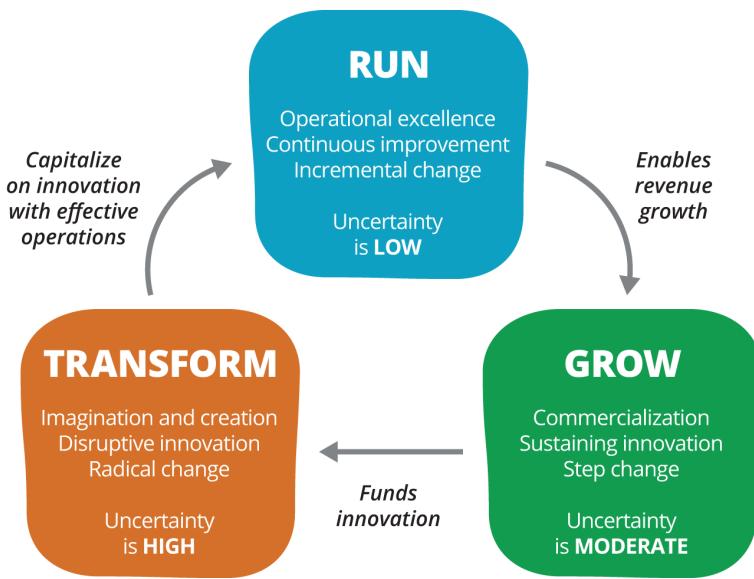


Figure 5-5. The virtuous cycle of innovation, by Steve Bell

PART III

EXPLOIT

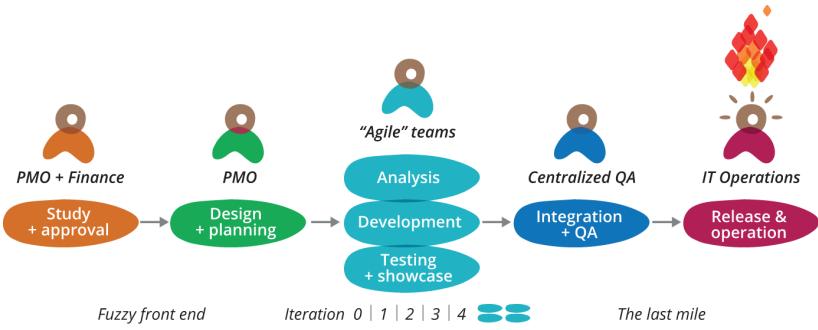
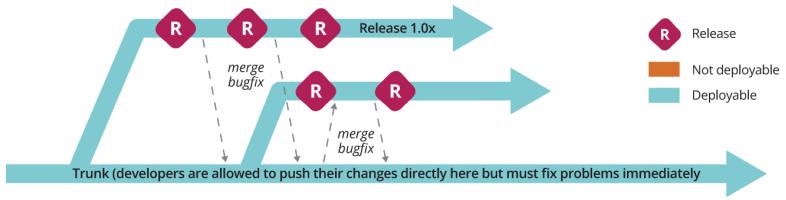


Figure III-1. Water-scrum-fall (available under Creative Commons license CC-BY)

Deploy Continuous Improvement



In trunk-based development (above), developers make their changes directly to trunk.

In a typical non-trunk-based development style (below), developers typically make changes to long-lived branches which are then stabilized before being released.

Product line A

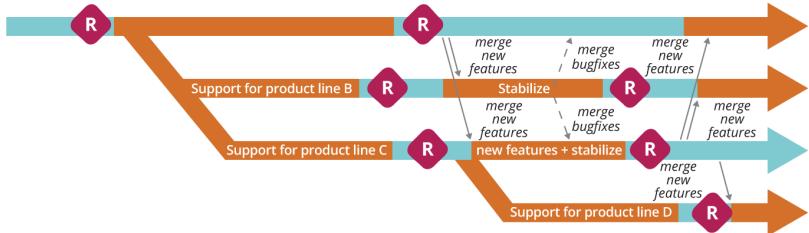


Figure 6-1. Branching versus trunk-based development (available under Creative Commons license CC-BY)

THE FOUR STEPS OF THE IMPROVEMENT KATA MODEL

A systematic, scientific pattern of working

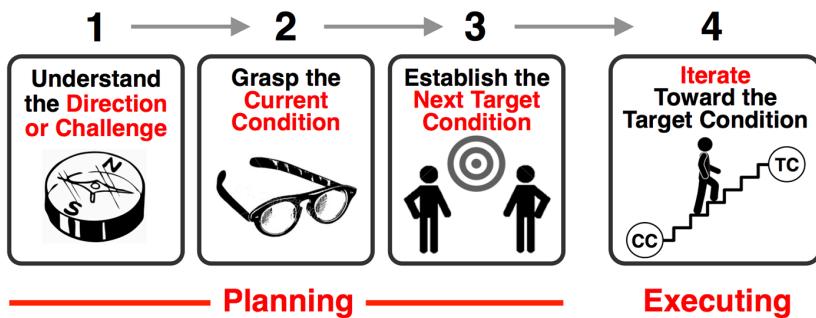


Figure 6-2. The Improvement Kata, courtesy of Mike Rother

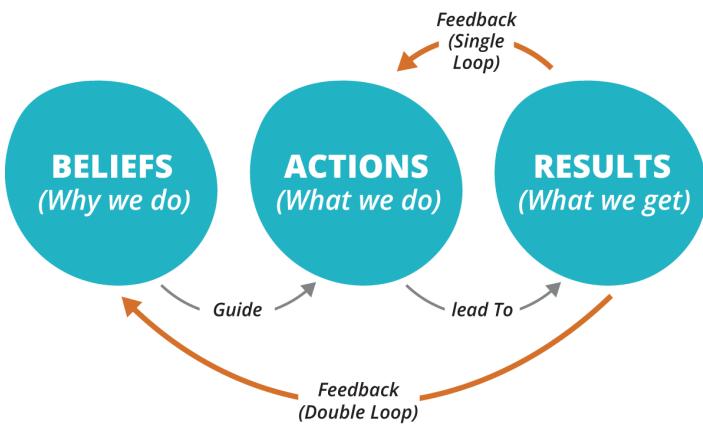


Figure 6-3. Single-loop and double-loop learning (available under Creative Commons license CC-BY)

Identify Value and Increase Flow

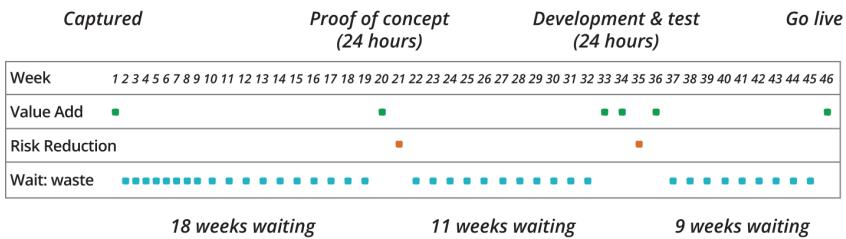


Figure 7-1. Value stream map of a single feature delivered through a core system at Maersk (courtesy of Joshua J. Arnold and Özlem Yüce)

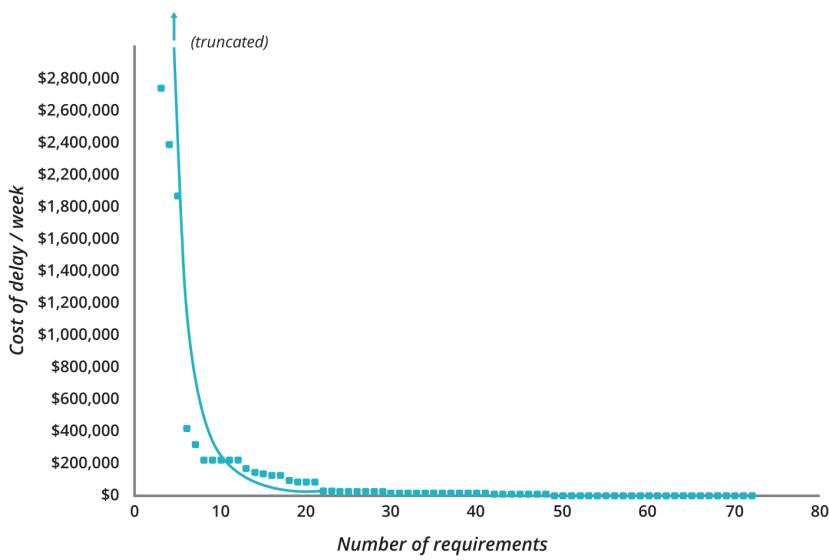


Figure 7-2. CD3 per feature (courtesy of Joshua J. Arnold and Özlem Yüce)

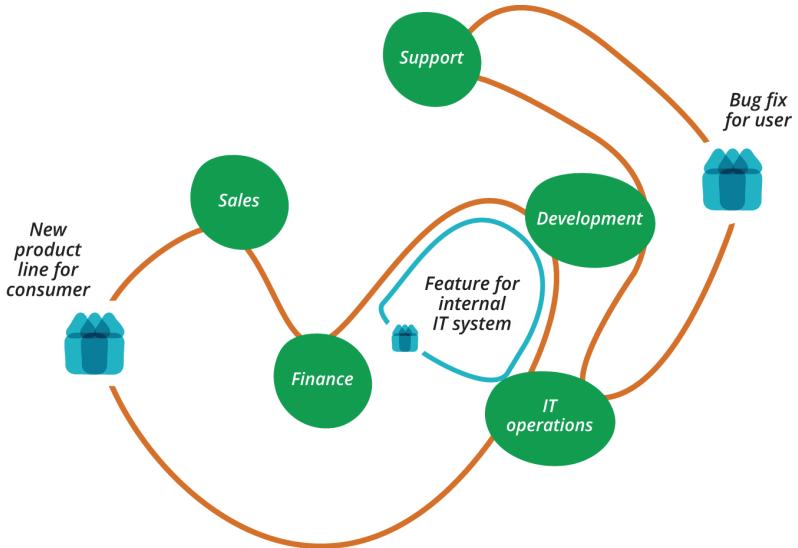


Figure 7-3. Value streams passing through departments (available under Creative Commons license CC-BY)

THE 4 STEPS OF THE IMPROVEMENT KATA

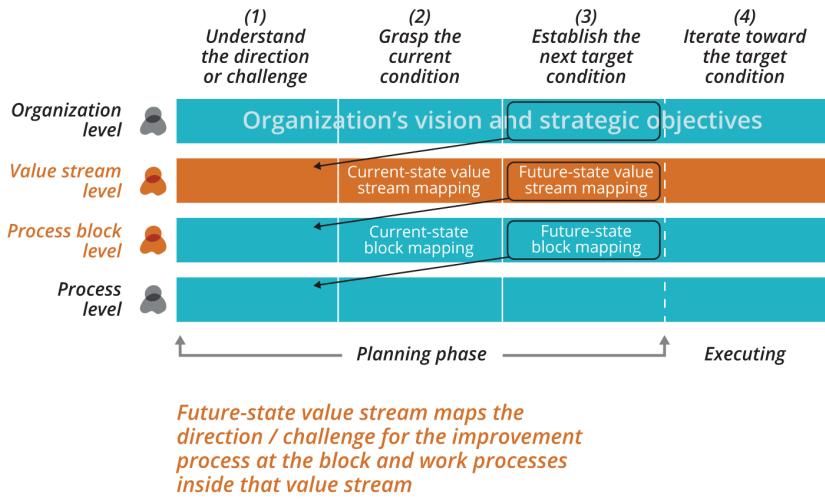


Figure 7-4. Value stream mapping in the context of the Improvement Kata (courtesy of Mike Rother)

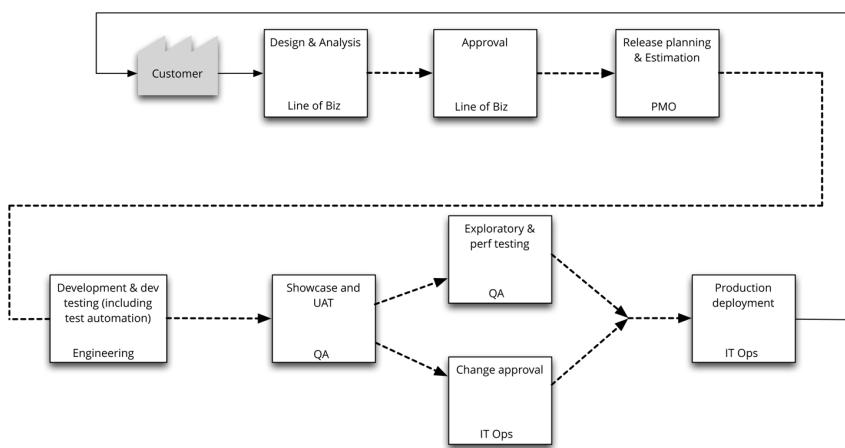


Figure 7-5. Outline of a value stream map showing process blocks (available under Creative Commons license CC-BY)

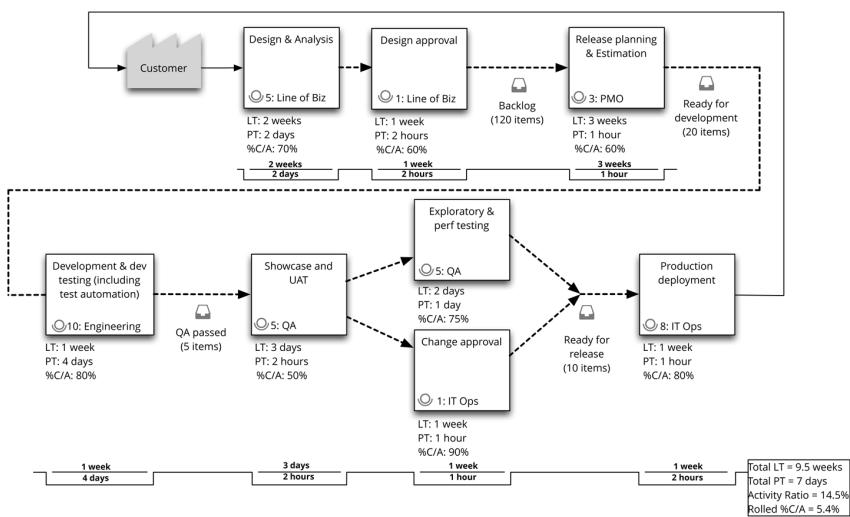


Figure 7-6. Example value stream map of a feature (available under Creative Commons license CC-BY)

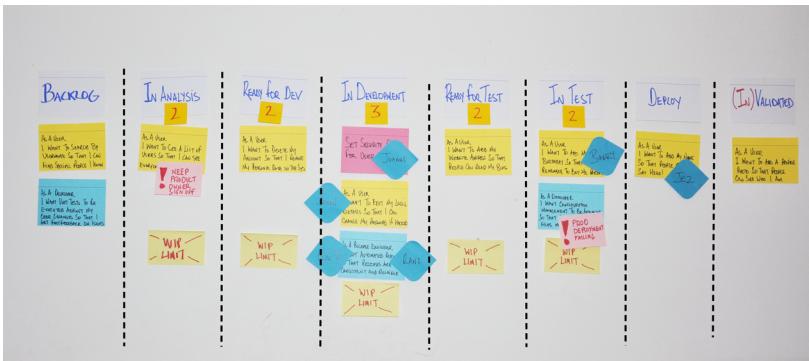


Figure 7-7. An example of a Kanban board (available under Creative Commons license CC-BY)

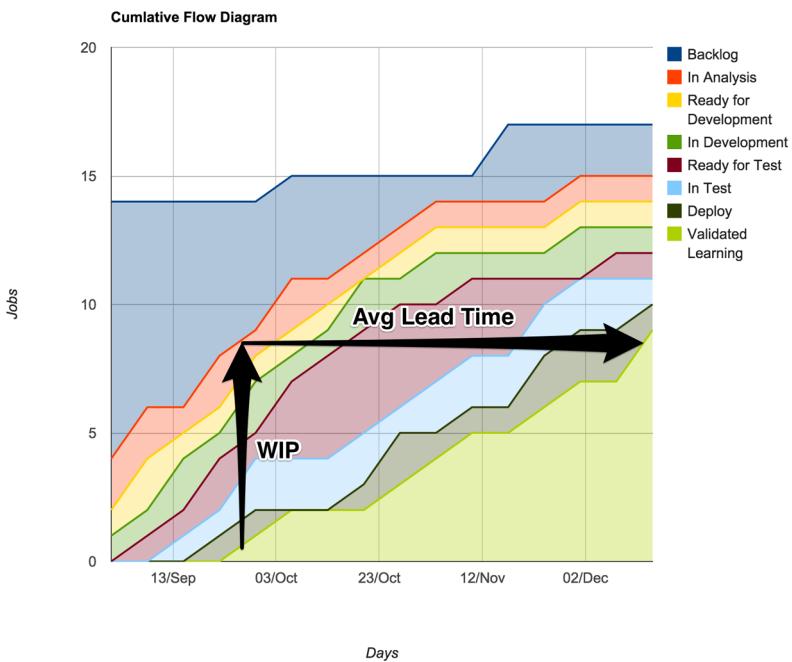


Figure 7-8. A cumulative flow diagram (available under Creative Commons license CC-BY)

Task A: 2 weeks, CoD \$250k / week
Task B: 1 weeks, CoD \$100k / week

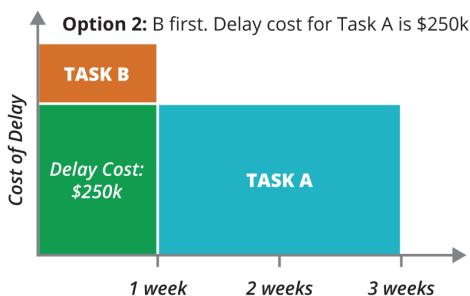


Figure 7-9. How do we prioritize Tasks A and B with Cost of Delay? (available under Creative Commons license CC-BY)

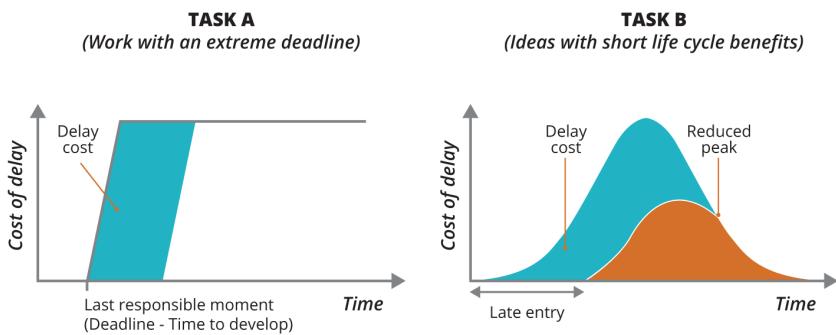


Figure 7-10. Urgency profiles for Task A and Task B (available under Creative Commons license CC-BY)

Adopt Lean Engineering Practices

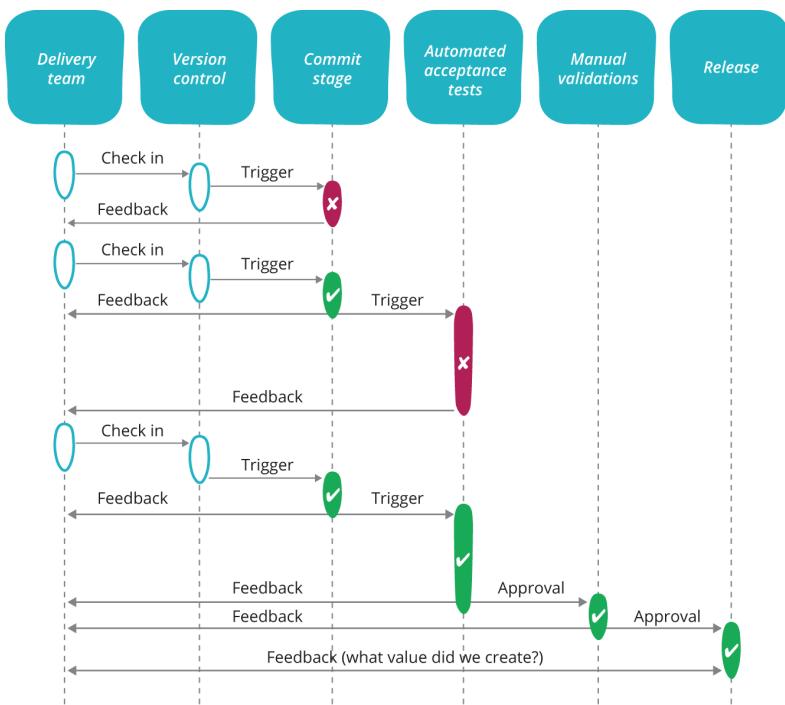


Figure 8-1. Changes moving through a simple deployment pipeline (available under Creative Commons license CC-BY)

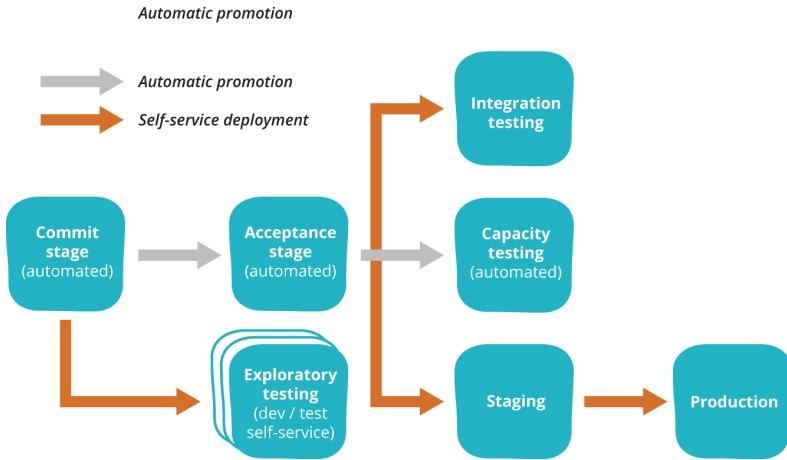


Figure 8-2. A more complex deployment pipeline (available under Creative Commons license CC-BY)

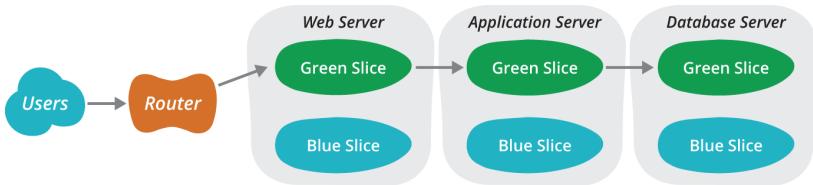


Figure 8-3. Blue-green deployments

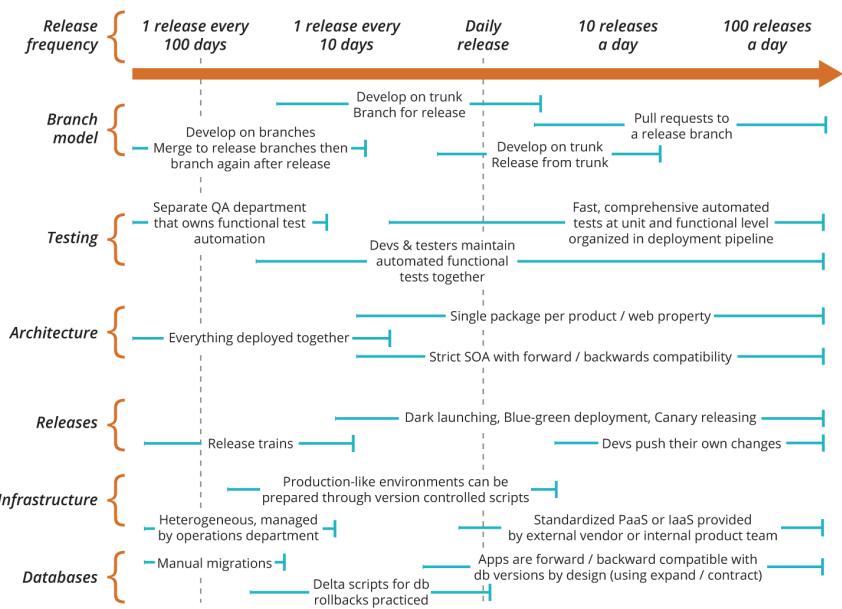


Figure 8-4. Deployment g-forces, courtesy of Paul Hammant (available under Creative Commons license CC-BY)

Take an Experimental Approach to Product Development

USER RESEARCH

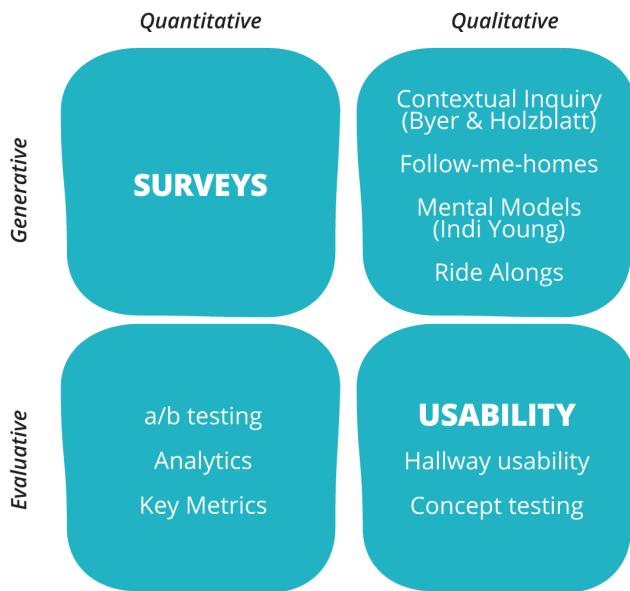


Figure 9-3. Different types of user research, courtesy of Janice Fraser

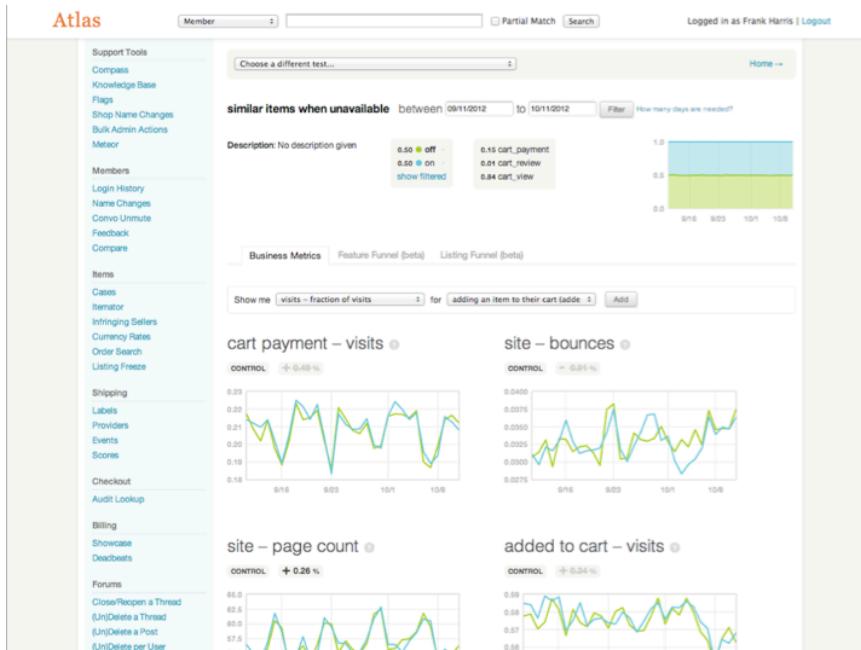


Figure 9-4. Measuring changes in user behavior using A/B testing (courtesy of Etsy)

Etsy Launch Calendar			
Home By Team Add an item Last Updated More			
Have an upcoming launch? Add an item			
Date	Name	Team	Notes
Nov 7	Gift Ideas browse pages 🎁	Buyer Experience	This is a gift guide browse destination. Subsections will focus on recipient (for him, for her, for kids, etc.) and price (under \$25, under \$100, etc.). It will work just like all other browse pages. There will be NO HAND ...
Nov 7	Etsy for iPhone (v2.1.1)	Mobile	Example — We submitted the app on Friday. We will be pushing it out when it's approved by Apple; our hope is that it's approved by Wednesday. There will be no coordination with PR or blog post. We may send ...
Nov 2	Winter Holidays browse pages 🎅	Buyer Experience	Example — These are browse pages for the Winter Holidays and will feature subsections for holiday decor, cards, etc. They'll be similar to our holiday merch hub from last year, but much deeper in terms of browsing opportunities. Those in UK ...
Nov 1	Updated treatment of homepage browse links 🎁	Buyer Experience	Example — Over a two week period we observed 4%-5% increases in browse landing page and subsection page views. There were also slight increases in add to cart and listings viewed events. Visits with a search and search events were down ...
Oct 24	Next day availability of DC funds 💰	Payments	We plan to allow established sellers to be able to deposit their funds prior the next day after a sale. Non established sellers will still need to ship items to have available funds.
Oct 23	Reduce one-time hold from 10 days to 5 days	Payments	Whenever a new seller signs up for direct checkout, a 10 day hold is placed on deposits. This also occurs anytime a bank account is updated. We have decided to reduce this standard hold period to 5 days. The main ...
Oct 23	Etsy for iPhone (v2.1) ❤️	Mobile	Example — Update: We have been approved by Apple and will be launching Tuesday, 10/23 at 8am ET. Our target submit date to Apple is Wednesday 10/10. Depending on Apple's turnaround time, we expect the app to be ...
Oct 22	Recipient Query Rewriting	Search & Destroy	Example — This didn't move metrics positively or negatively. However we decided to keep it because this is the first step towards using recipient in search, and encouraging users to properly associate their listing w/ a recipient. We will reevaluate how ...
Oct 19	Parcel Insurance for Shipping Labels 💰	Seller Team	Example 1 , Example 2 — Rampup started 10/9. Scheduled to finish 10/19.
Oct 18	Search Ads respecting filters	Search & Destroy	This experiment didn't hurt inventory: https://splunk.etsycorp.com/en-US/app/search/flastimeline?sid=1350940765.163366&vs=h8m3sk4b Also it looks like CTR might have improved.

Figure 9-5. Experiments currently running at Etsy (courtesy of Etsy)

Implement Mission Command

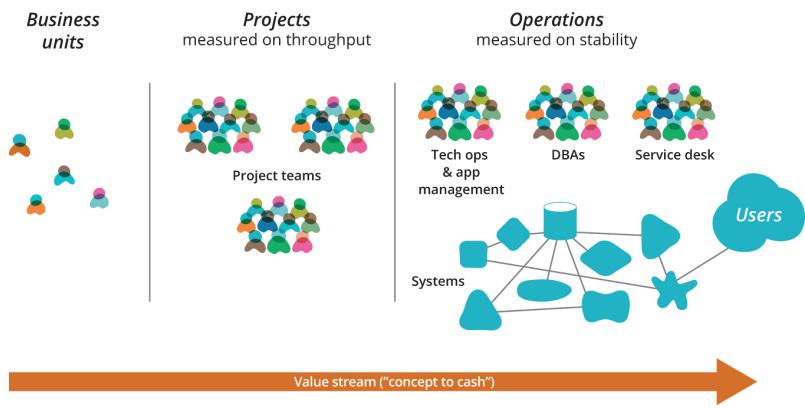


Figure 10-1. An example of a traditional enterprise organization (available under Creative Commons license CC-BY)

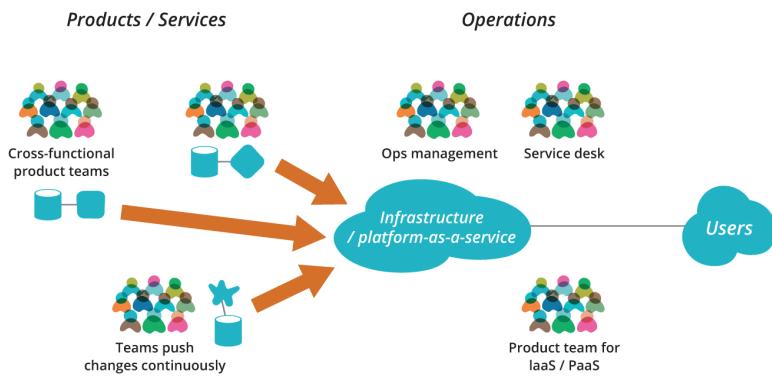


Figure 10-2. Product teams working together, with a service layer for performing deployments (available under Creative Commons license CC-BY)

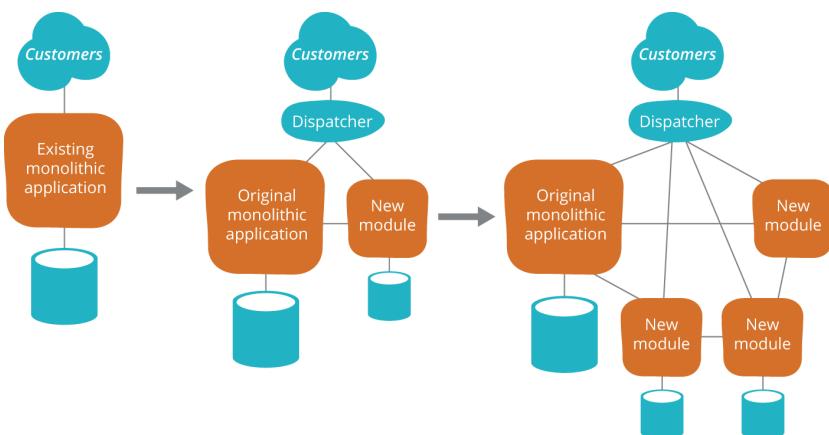


Figure 10-3. The evolution of stranglers (available under Creative Commons license CC-BY)

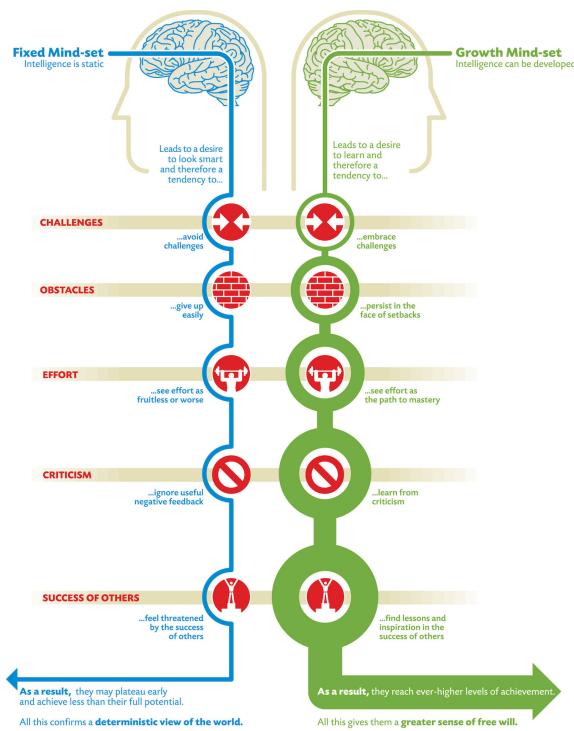
PART IV

TRANSFORM

Grow an Innovation Culture



Figure 11-1. Layers of organizational culture



GRAPHIC BY NIGEL HOLMES

Figure 11-3. Dweck's two mindsets, courtesy of Nigel Holmes

Embrace Lean Thinking for Governance, Risk, and Compliance

Evolve Financial Management to Drive Product Innovation

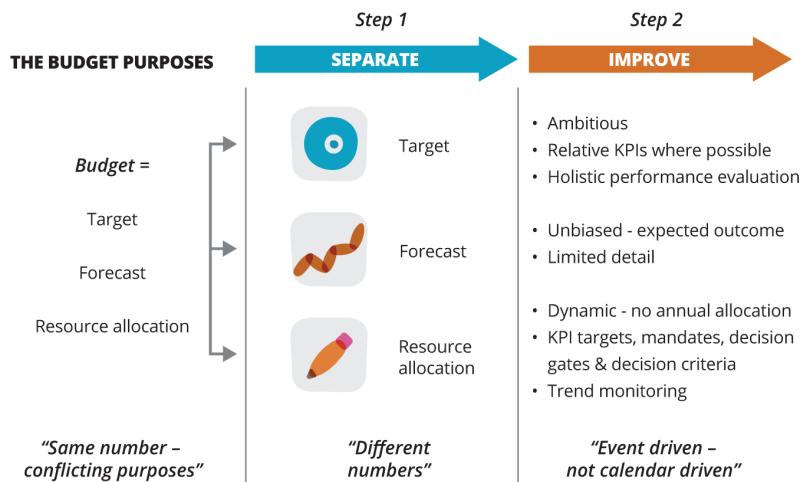


Figure 13-1. Approaches to achieving the goals of budgeting, courtesy of Bjarte Bogsnes, author of *Implementing Beyond Budgeting: Unlocking the Performance Potential*

DYNAMIC RESOURCE ALLOCATION

A different mindset - cost conscious from the first penny

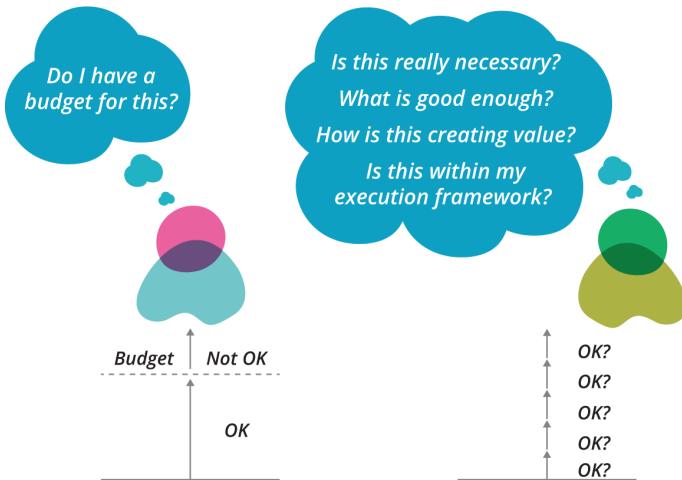


Figure 13-2. Dynamic resource allocation, courtesy of Bjarte Bogsnes, author of *Implementing Beyond Budgeting: Unlocking the Performance Potential*

Turn IT into a Competitive Advantage

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

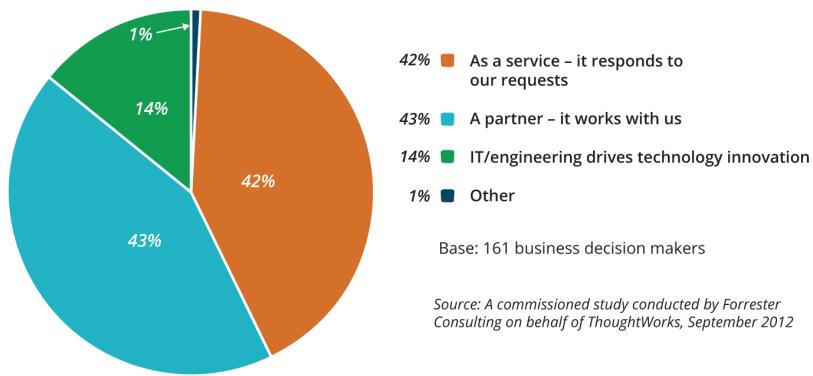
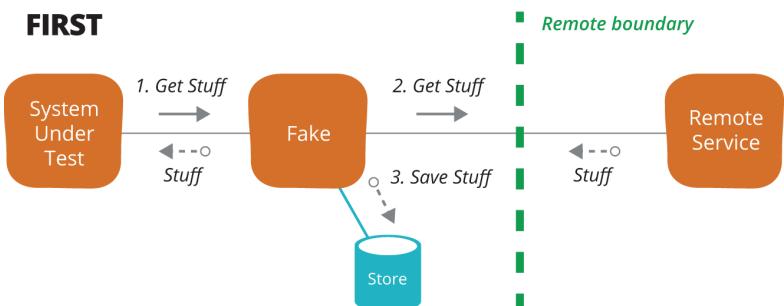


Figure 14-1. What business leaders think about the business-IT relationship

FIRST



LATER

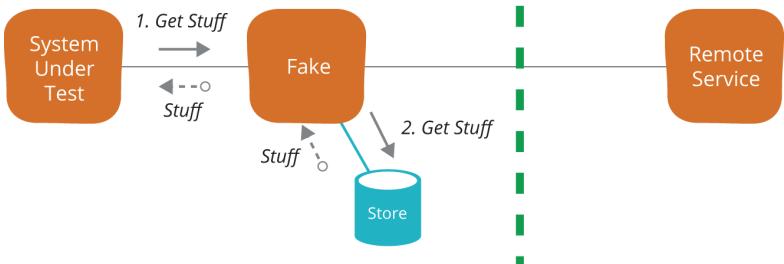


Figure 14-2. Simulating remote systems for test purposes (courtesy of Martin Fowler)

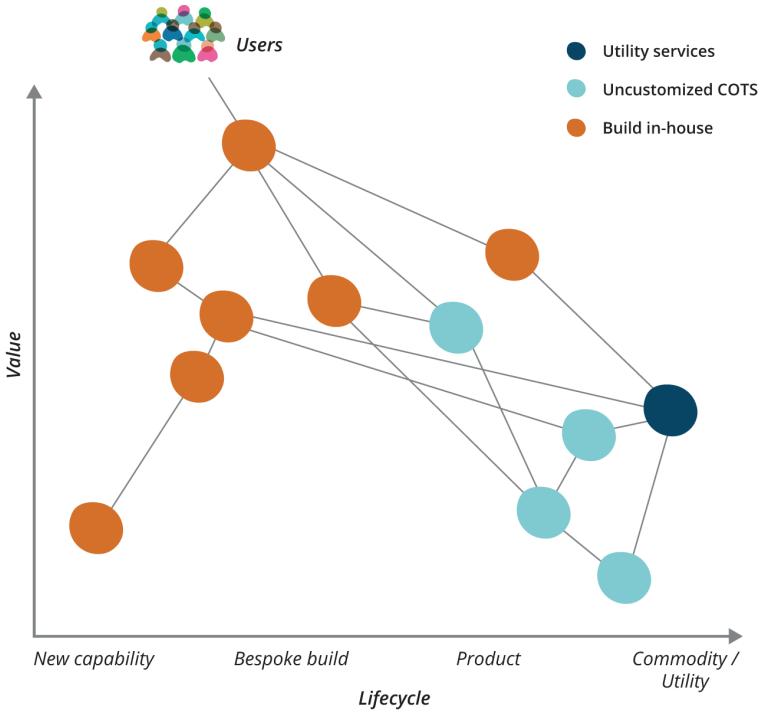


Figure 14-3. Value chain map, courtesy of Simon Wardley

Start Where You Are

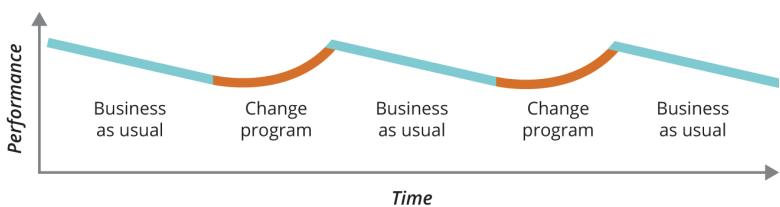


Figure 15-1. The reality of “event-based” change programs (available under Creative Commons license CC-BY)

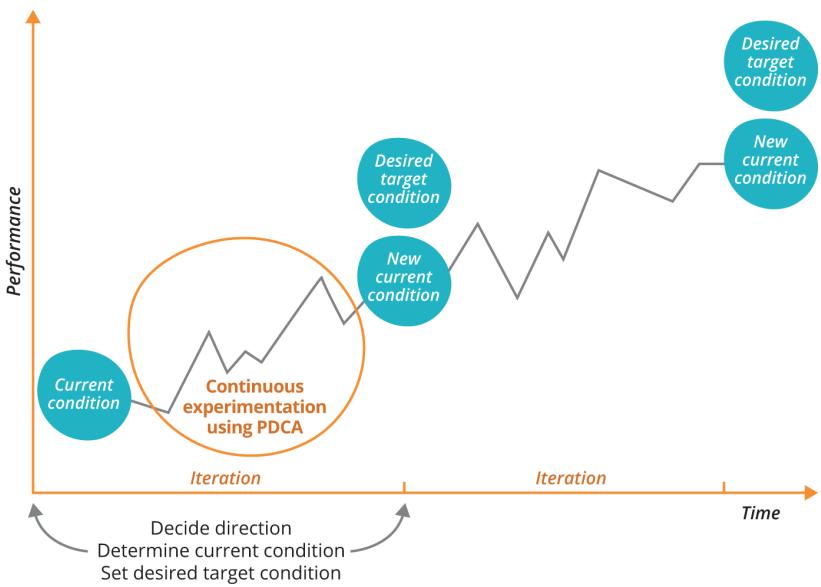
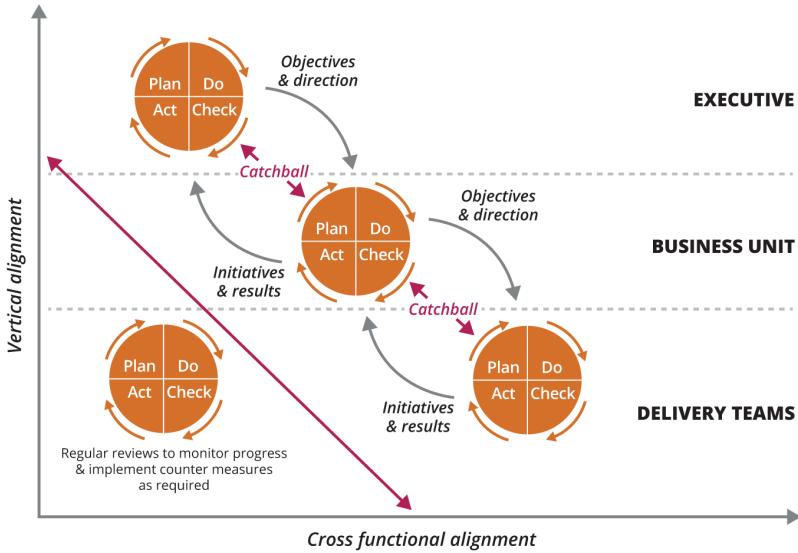


Figure 15-2. Continuous evolution and adaption to change (available under Creative Commons license CC-BY)

HOSHIN PLANNING PROCESS USING PDCA



 is Deming learning loop. Plan, Do, Check, Act.

Figure 15-3. Using catchball to drive strategic alignment of objectives and initiatives (available under Creative Commons license CC-BY)

Your Draft Transformation Plan

Business Objective

Change Management Plan

Iteration 1 Objectives (target date: 2-6 weeks from now)

Rank	Theme	Target Condition

Figure 15-4. Draft transformation plan (courtesy of Gary Gruver)