

# SVPG Product Masterclass

## *Working in the Product Operating Model*

Lea Hickman, Silicon Valley Product Group

svpg

# about this workshop

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# tools & interaction

Breaks and Breakouts

No question left behind

- Post session: office hours, or email
- Post workshop: [lea@svpg.com](mailto:lea@svpg.com)

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# agenda

- **day 1:** moving to the product operating model
- **day 2:** product leadership: principles & techniques
- **day 3:** product teams: principles & techniques

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# workshop goals

- gain a deep understanding of working in the product operating model
- learn how to move from projects to products, a.k.a. output to outcomes
- understand the principles and techniques of strong product leadership
- understand the principles and techniques of strong product teams
- build a shared foundation for transformation

**svpg** was formed to share the techniques and practices of the world's top tech-powered companies



Rational® software



**svpg** silicon valley product group

The Silicon Valley Product Group was created to share *senior level experience and best practices* with tech-powered companies

# moving to the product model

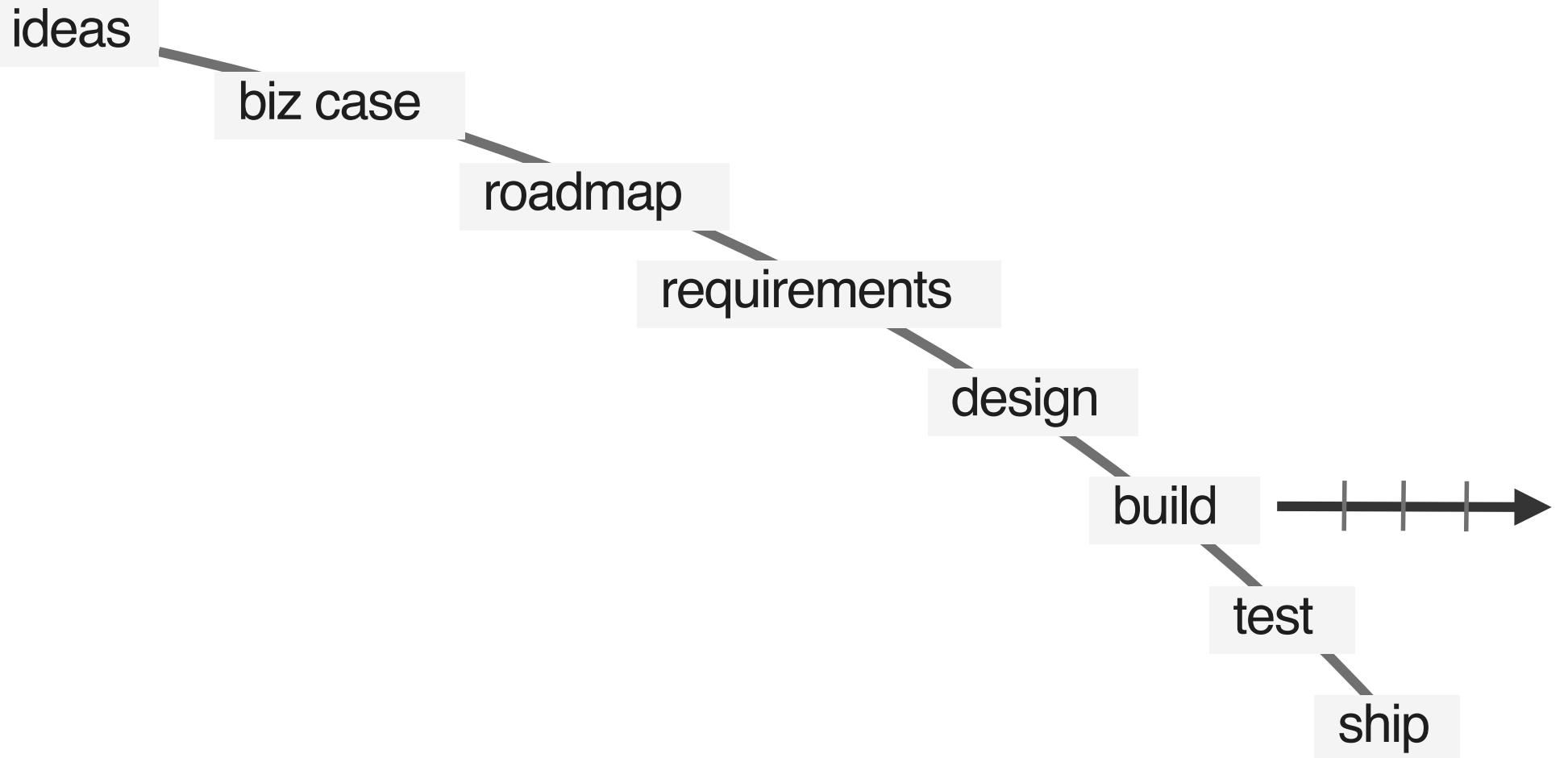
day 1

the project model  
product model definition  
product model dimensions  
product model concepts  
product model competencies

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# the *project* model

(the root causes of failing to deliver outcomes)



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**ideas**

biz case

roadmap

requirements

design

build

test

ship

1) The source of ideas



ideas

**biz case**

roadmap

requirements

design

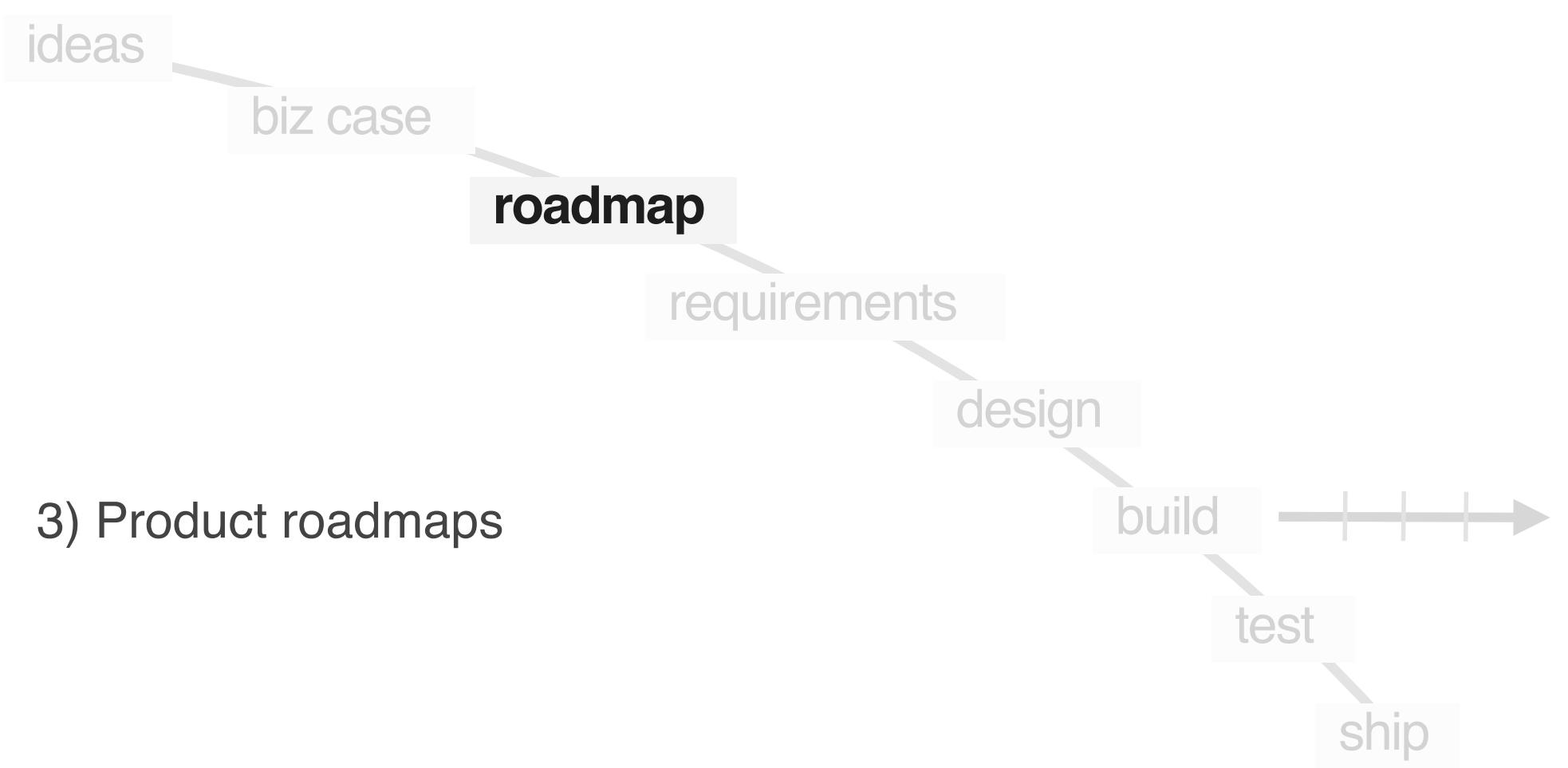
2) business case fallacy

build

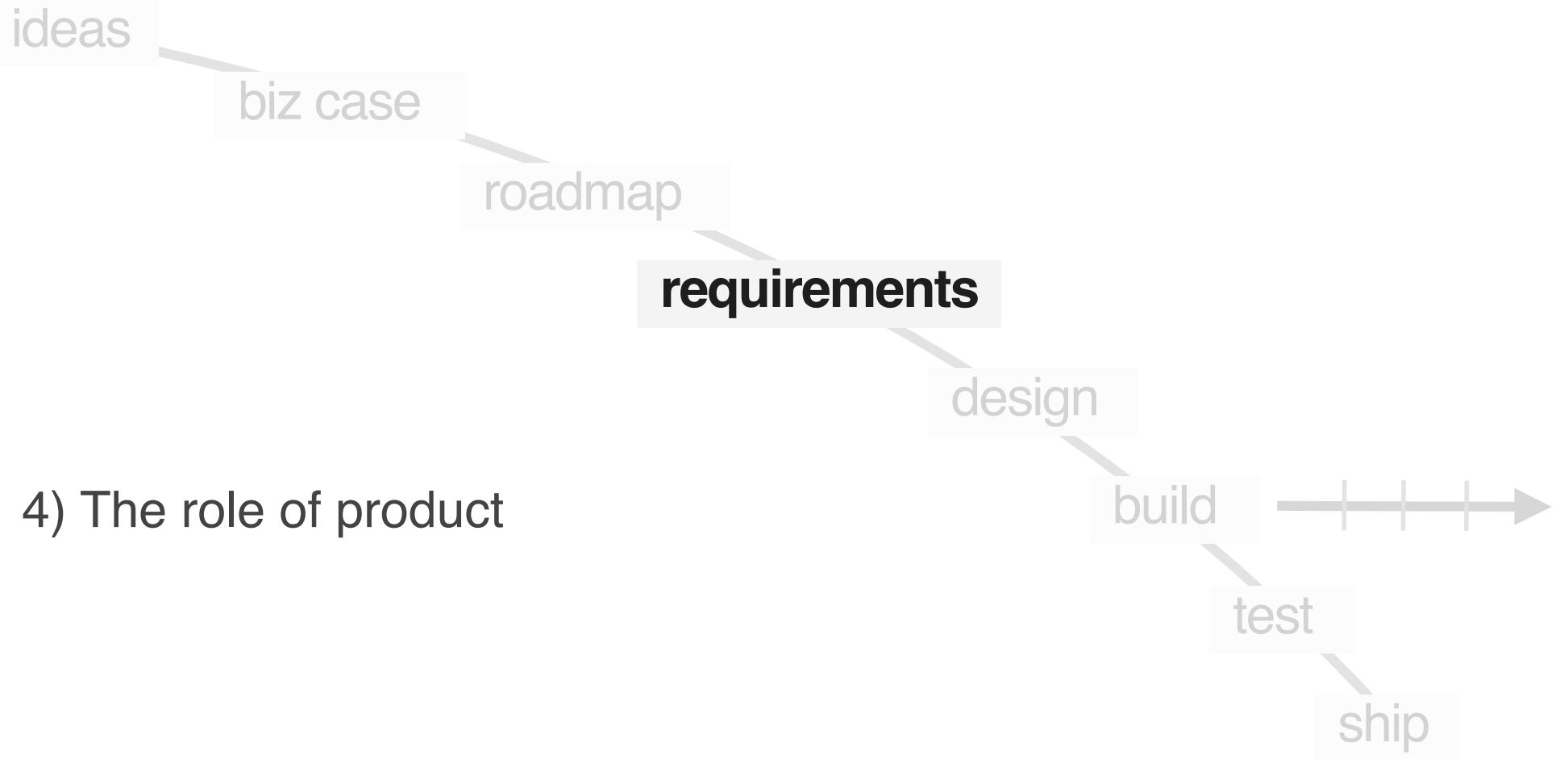
test

ship

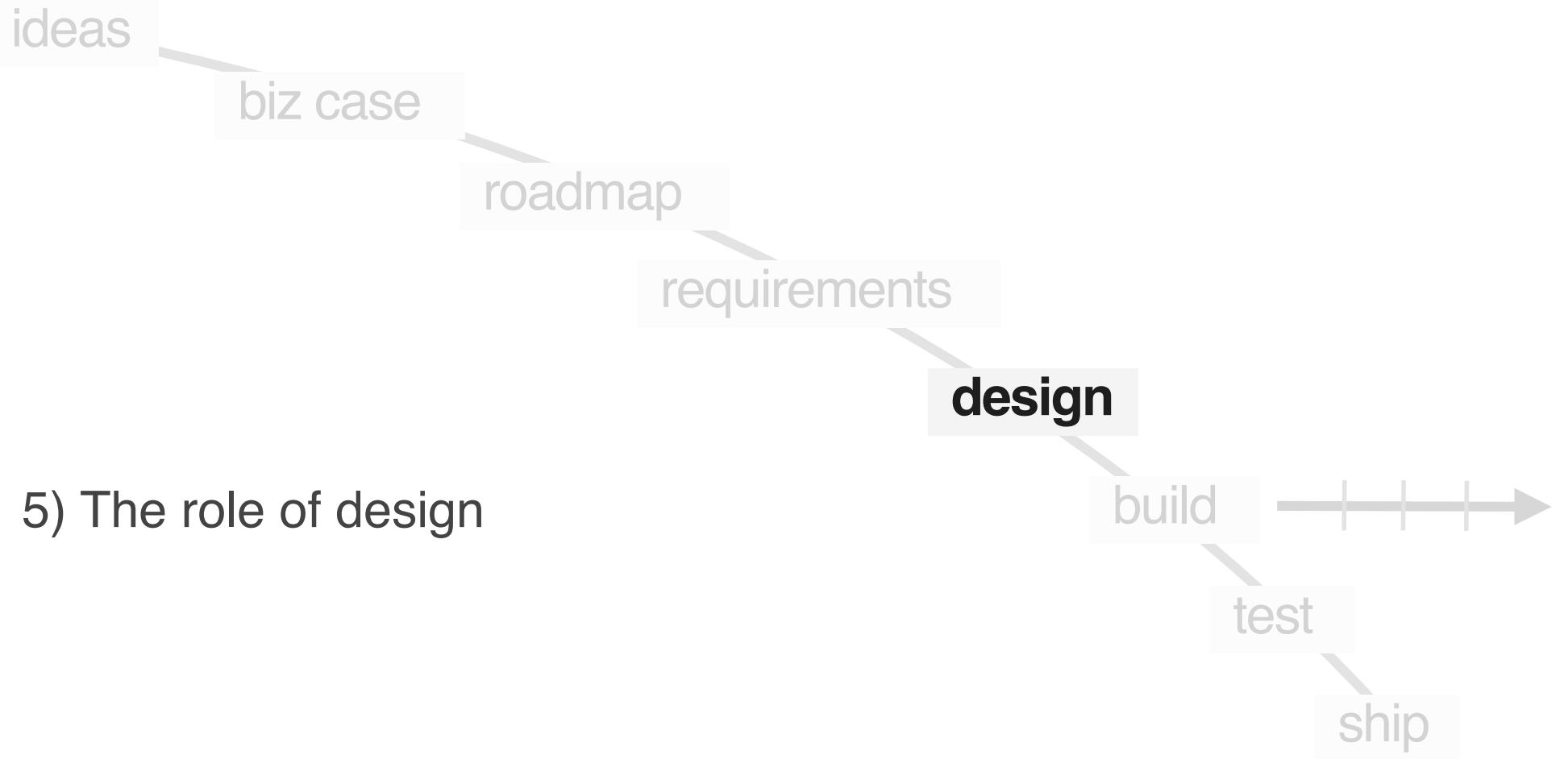




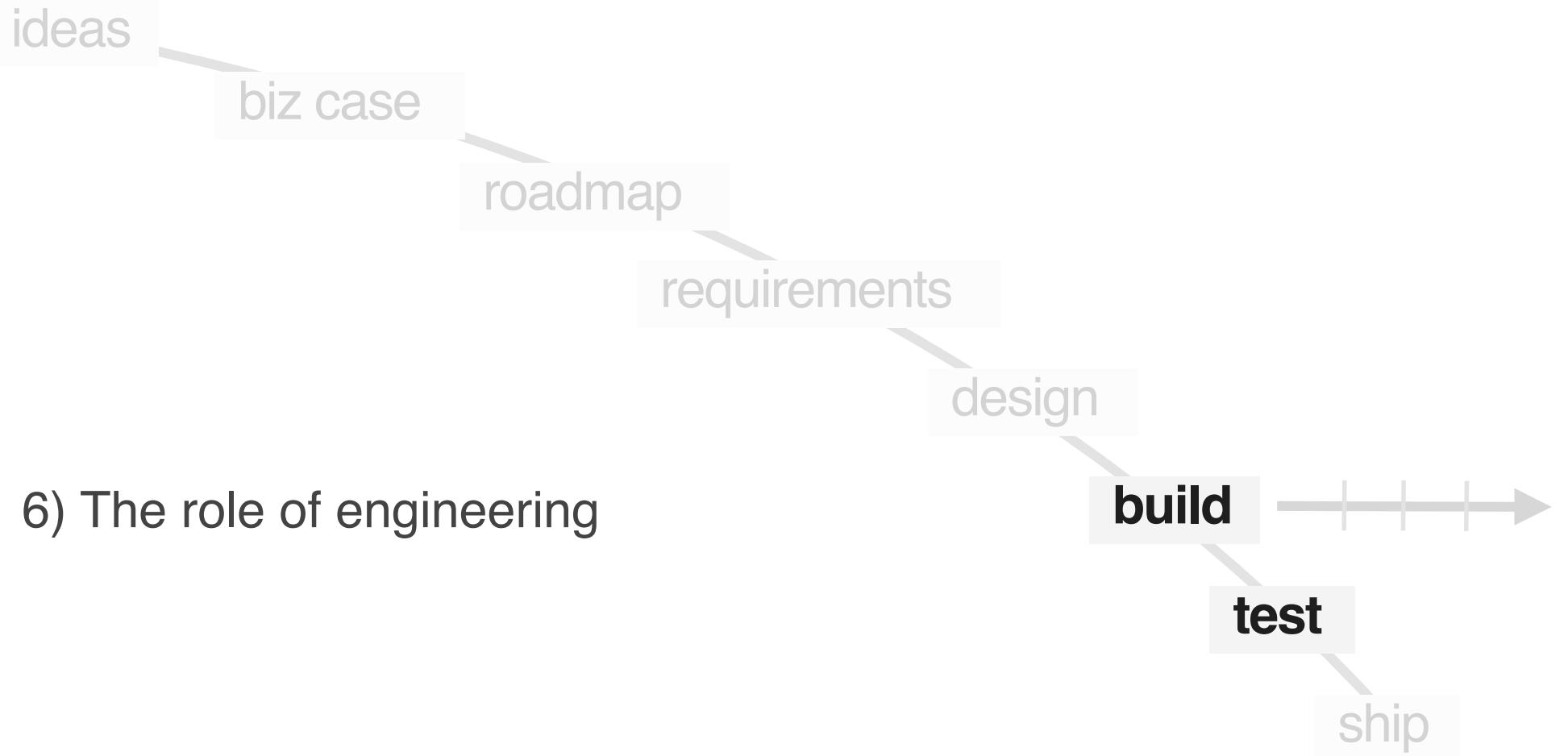
### 3) Product roadmaps



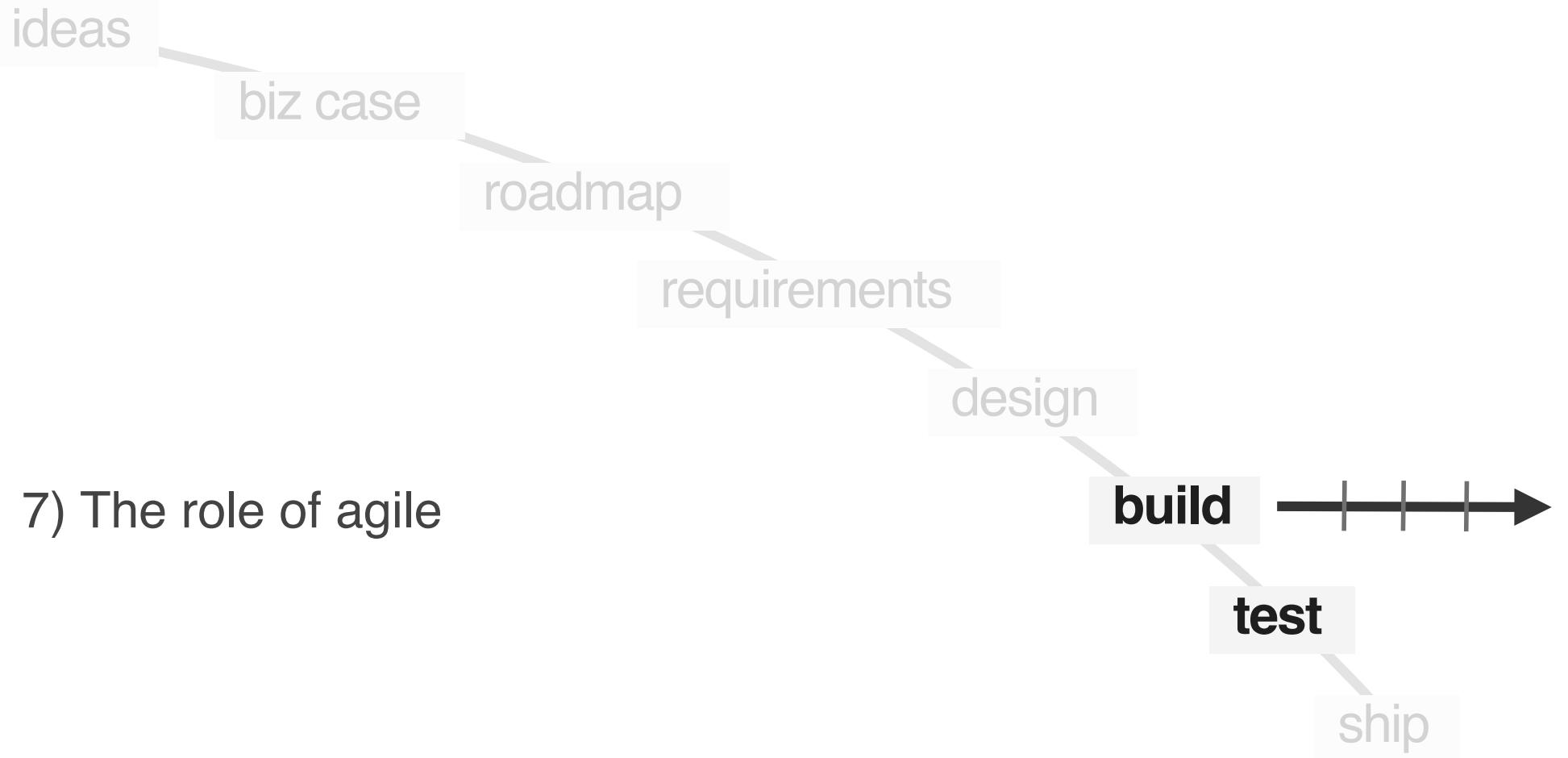
#### 4) The role of product



## 5) The role of design



## 6) The role of engineering



ideas

biz case

roadmap

requirements

design

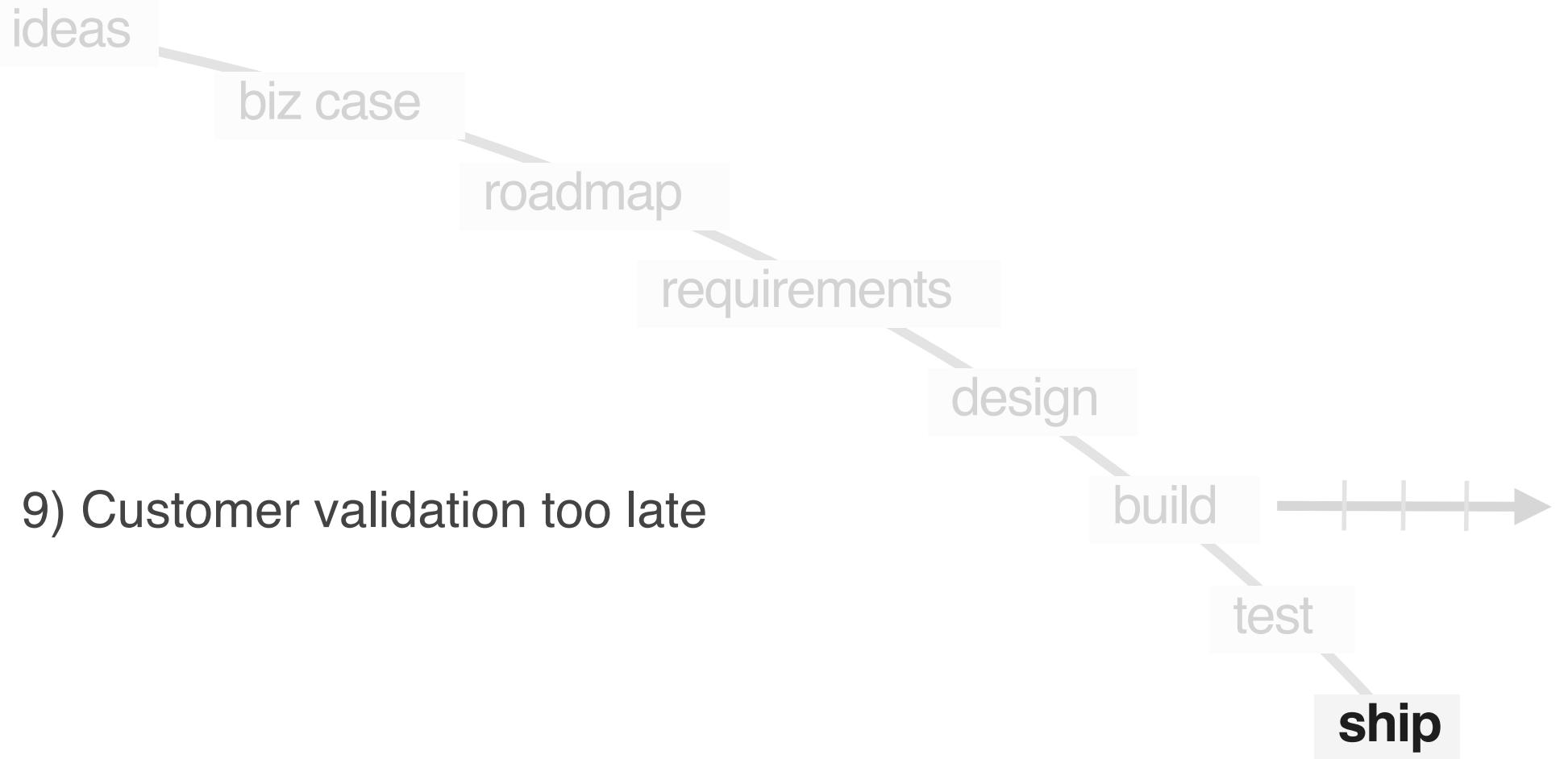
build

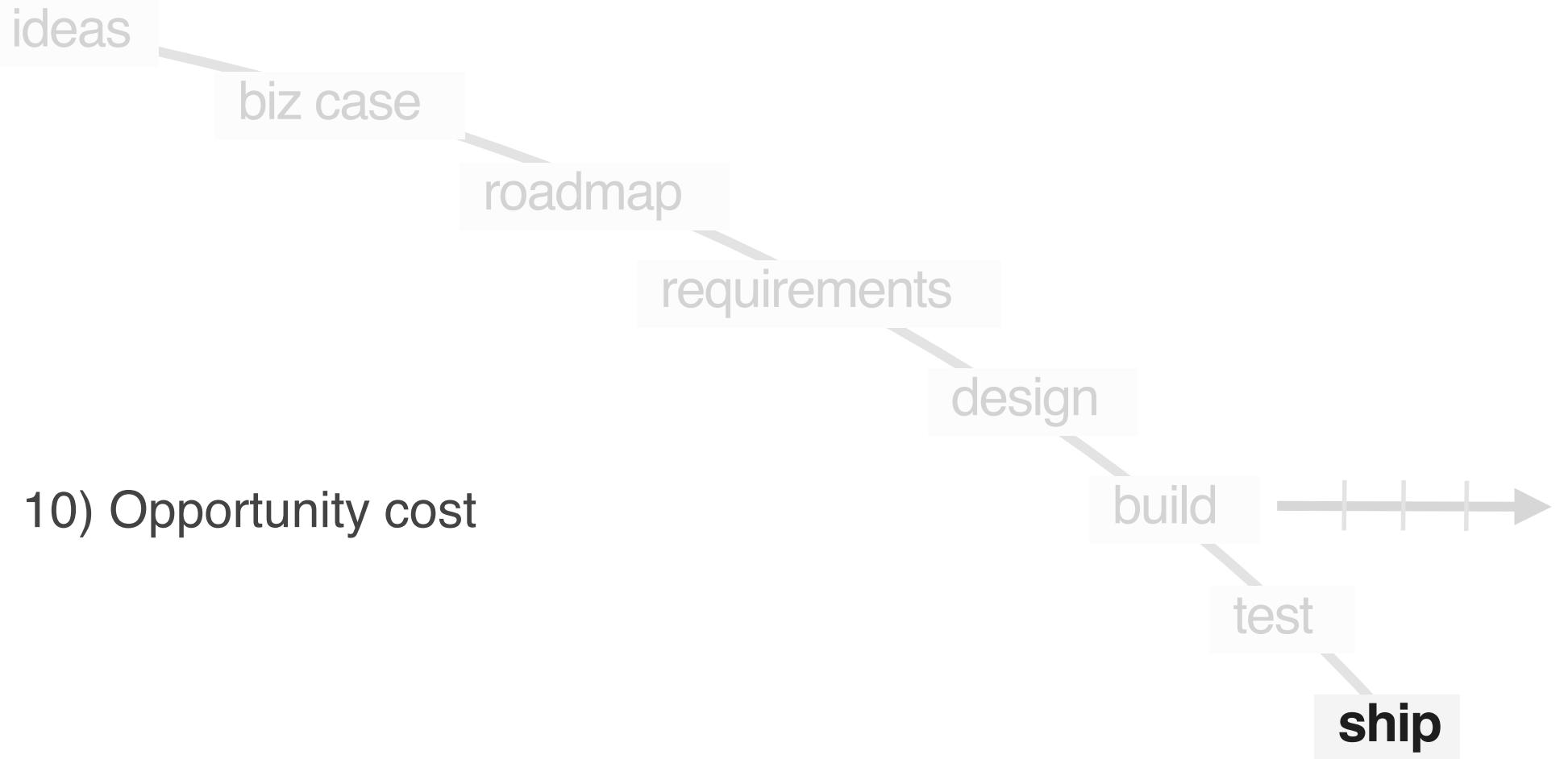
test

**ship**

8) Output, not outcome







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# common indicators of waterfall

- Underutilized **engineering contribution**
- Non-validated **roadmaps**
- Delivery-oriented **PM role**
- Downstream **design role**
- Focus on **dates/features** over results
- Aversion to **risk**
- Bloated or stale “**MVP**”
- Low level of **data insight**
- Not enough **customer interaction**
- Lack of cross-functional **collaboration**
- Lack of **focus**
- Long feedback loops, **opportunity cost**

# breakout

## PRODUCT DEVELOPMENT CHALLENGES

- Discuss the biggest challenges in how your organization does product development

the product model defined

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# the product operating model...

- ...is organized around *outcomes* rather than *output*
- ...is a *conceptual* model, not a process or methodology
- ...is comprised of principles, reflecting the beliefs of the best companies
- ...does not mean that there is a single right way to create products
- ...involves the *whole company*, not just product management
- ...can be shortened to the *product model*

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# from output to outcomes

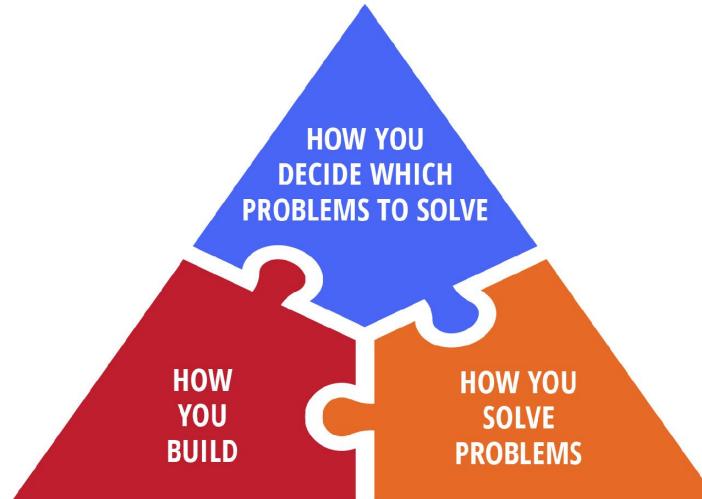
- from the rest to the best
- from projects to products
- from time-to-market to time-to-value
- from feature teams to empowered product teams

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# what is a product?

- Something we create that brings value to a market of customers or users
- Simultaneously works with and brings value to our business
- Leverages technology to create new value or experiences
- May be customer facing, customer enabling, or a platform

## DIMENSIONS



## CONCEPTS



## COMPETENCIES



# other important terms

## **product organization:**

Product management,  
product design,  
engineering as well as  
those people that  
directly support these  
functions

## **product leaders:**

The managers and  
leaders of product  
management, product  
design, and engineering

## **stakeholder:**

A senior person typically inside your company who is not typically part of the product organization, yet represents a key constituency, area of the business, or special expertise. Importantly, a *stakeholder is not the customer*

## **customer:**

The parties *outside of* your company to whom our product is typically delivering its primary value.

## **user:**

The internal or external parties who are *directly interacting* with your product experience. For some products, there may be many different types of users

## **go-to-market:**

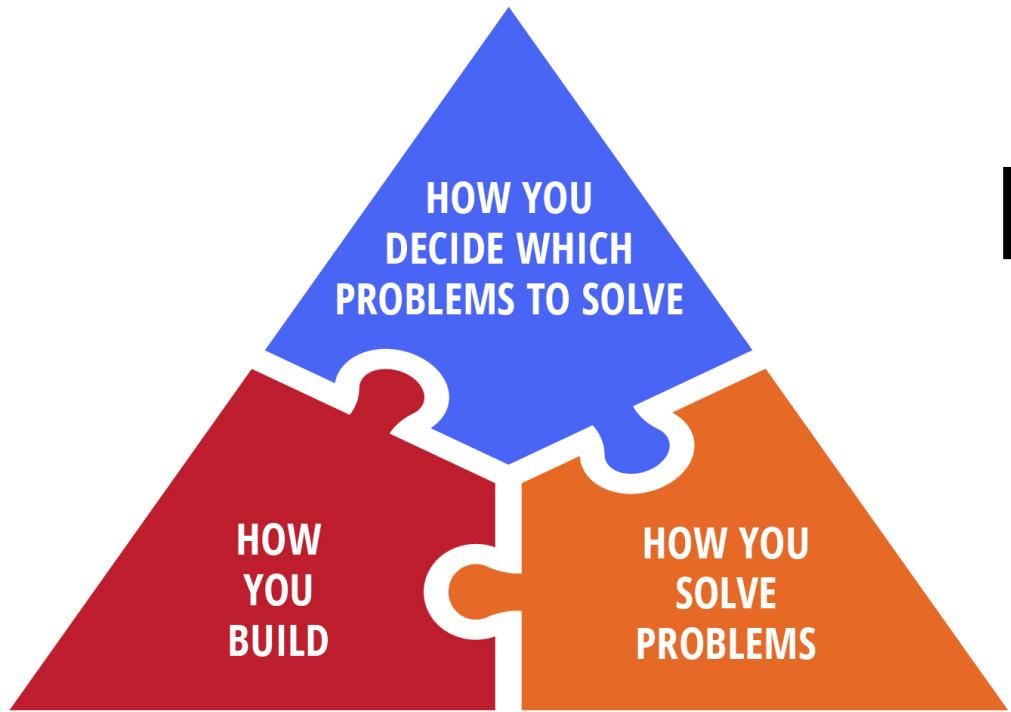
A particular route to get a product into the hands of customers or users

## **mvp test:**

The smallest **experiment** we can devise to prove an idea or address a risk in product discovery; not an actual product

## **product/market fit**

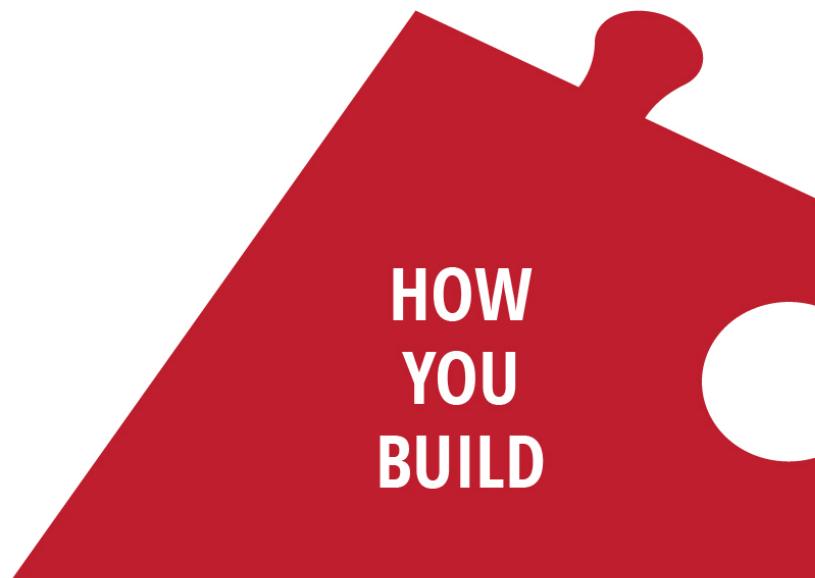
The smallest **delivered product** that meets the needs of a specific target market and works for our business



# product model dimensions

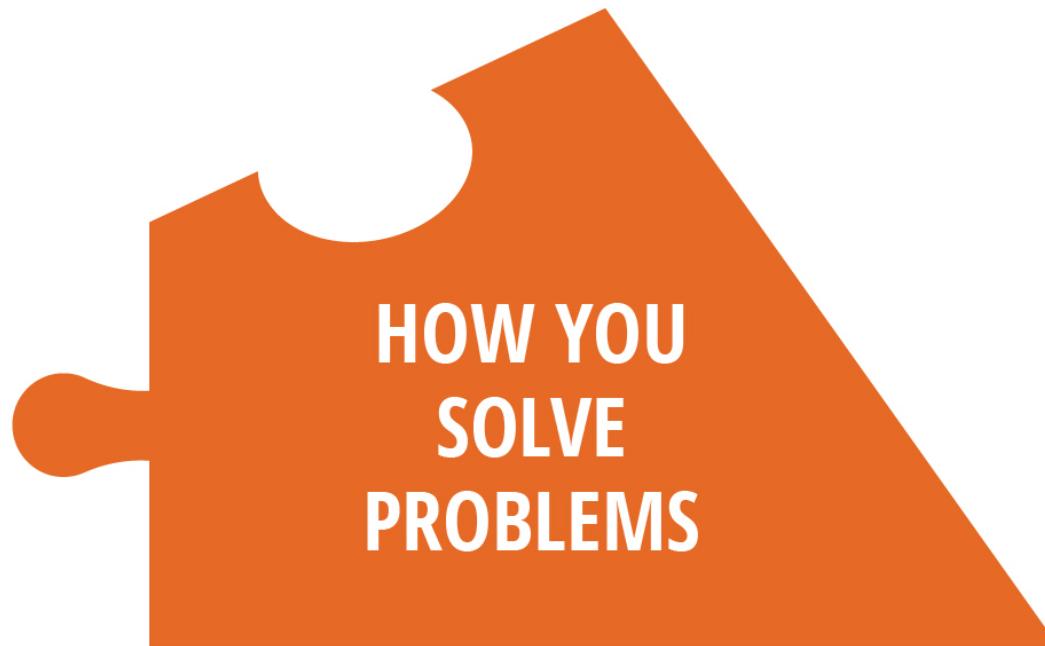
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# product model dimensions



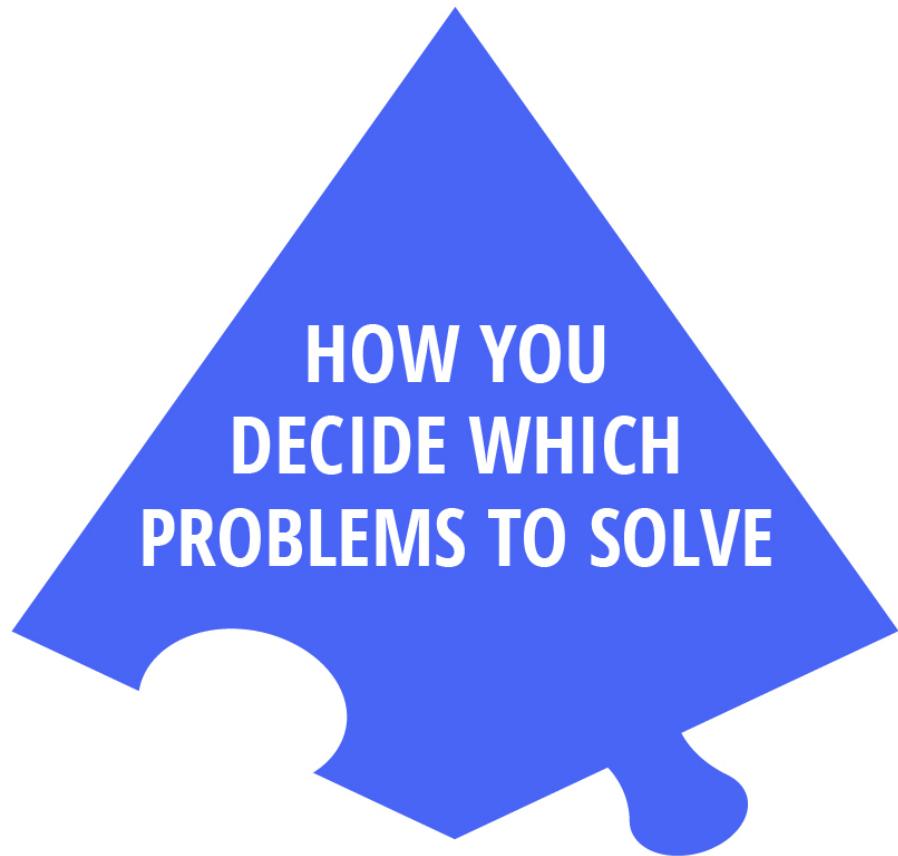
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# product model dimensions



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# product model dimensions





# the product model in action

## business challenge



new competition from Apple, Amazon, and Google:

- music streaming now table stakes
- company needed real differentiation for continued growth

## invested early in product culture



- empowered, cross-functional product teams
- continuous innovation
- infrastructure for experimentation and deployment
- focus on business outcomes

# product strategy



two types of users:

- lean-forward (spotify's strength)
- lean-back (underserved opportunity)

product leadership made the decision to focus innovation on the *lean-back* use case



# product teams



product team working on lean-back listeners:

- could they get lean-back users to discover new music?
- two machine learning engineers believed they could
- earlier experiment had providing promising clues
- brought the idea to product manager and product designer

# product discovery



discovering a solution:

- *valuable* - would users engage and stay engaged?
- *usable* - could users understand this new type of capability?
- *feasible* - could the company build and run this service at scale?
- *viable* - would it be acceptable to generate playlists *for* users?



# viability risk

*“This idea could backfire”*  
- Daniel Ek, co-founder



**Songs of Innocence**

U2



If you would like U2's *Songs of Innocence* removed from your iTunes music library and iTunes purchases, you can choose to have it removed. Once the album has been removed from your account, it will no longer be available for you to redownload as a previous purchase. If you later decide you want the album, you will need to get it again. The album is free to everyone until October 13, 2014 (PDT) and will be available for purchase after that date.

Do you want to remove *Songs of Innocence* from your account?

**Remove Album**

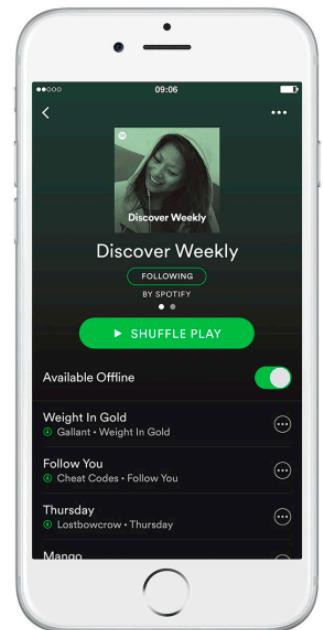


# product discovery



experimentation culture (live-data prototype):

- employee-only test
- all employee rollout (“dogfooding”)
- test to 1.5% of customers (1M users)



# product delivery



- built new, scalable playlist system  
(capable of simultaneous updates to playlists for 75M users)
- progressive deployment to full customer base
- instrumentation to track outcomes

## business results



- in first 10 weeks, over 1 *billion* tracks streamed
- 60% of users that tried discover weekly stream at least 5 tracks
- established clear market leadership in lean-back use case

**PRODUCT  
CULTURE**



**STRATEGIC  
CONTEXT**



**PRODUCT  
TEAMS**



**PRODUCT  
DISCOVERY**



**PRODUCT  
DELIVERY**



# product model concepts

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# product model concepts



## **product culture:**

the highest order principles of how a company utilizes its talent to produce products

this includes how it identifies and prioritizes opportunities, makes decisions, and delivers on its promises to customers and each other

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on innovation

**“100% predictability = 0%  
innovation.”**

- Henrik Kniberg





IT'S THAT PEOPLE  
GET CONFUSED.

# product culture principles

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Principles  
over Process



Trust over  
Control



Innovation over  
Predictability



Learning  
over Failure

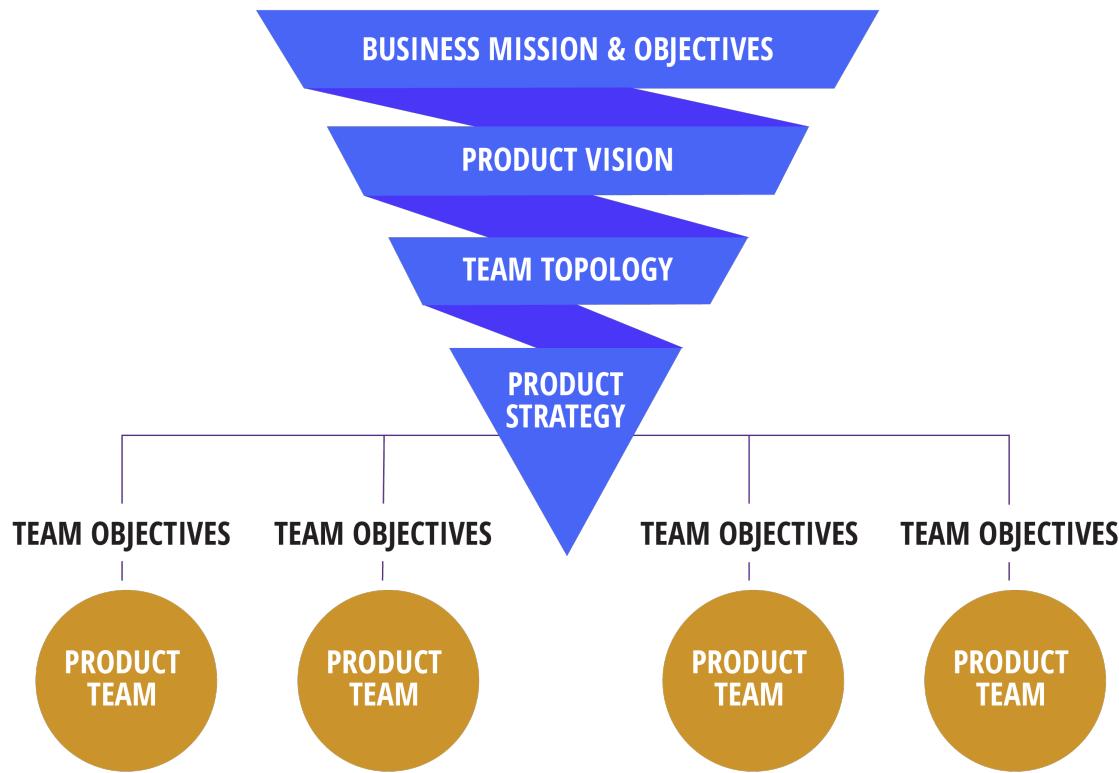
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# product model concepts



# strategic context



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## Strategic context

“The core of strategy work is always the same: discovering the critical factors in a situation and designing a way of coordinating and focusing actions to deal with those factors..”

Richard Rumelt





**Jony Ive on Steve Jobs  
Life Lessons**

## strategic context principles

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Focus



Powered by  
Insights



Transparency



Placing Bets

Images © Paweł Huryn

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# product model concepts



## **product team:**

A cross-functional, durable group of individuals who together are empowered to solve problems they're given in ways that customers love, but also work for the business

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product teams

“A leader should articulate what needs to be done and why, and then let the team decide how best to do it”

Avid Larizadeh Duggen



# product teams

Product Manager



Product Designer



Engineers



Other Roles



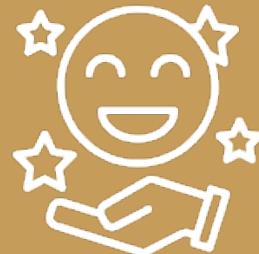
- cross-functional with *key competencies*
- *durable*
- informed with *strategic context*
- empowered with *problems to solve*
- accountable to *results*

# product teams principles

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Empowered with  
Problems to Solve



Outcomes  
over Output



Sense of  
Ownership



Collaboration

Images © Paweł Huryn

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# product model concepts



## **product discovery:**

rapidly identifying a solution worth building

gathering evidence that the solution is  
valuable, usable, feasible, and viable, and  
will achieve the necessary outcome

BREAKING  
NEWS

## JEFF BEZOS GIVES KEYNOTE AT AIR FORCE CONFERENCE

CNBC



## Continually assess product risks

*value* risk - will they use or buy it?

*usability* risk - can they use it?

*feasibility* risk - can we build it?

*viability* risk - does it work for the business?

# product discovery principles

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Minimize Waste



Assess  
Product Risks



Embrace Rapid  
Experimentation



Test Ideas  
Responsibly

Images © Paweł Huryn

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# product model concepts



## **product delivery:**

Building, testing and deploying a product-quality solution

Ensuring the solution is reliable, accurate, performant, scalable, secure, and delivers the necessary outcome

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on release frequency

**“If it hurts, do it more often.”**

- Jez Humble, *Accelerate*



# product delivery principles

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Small, Frequent,  
Uncoupled Releases



Instrumentation



Monitoring



Deployment  
Infrastructure

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# breakout discussion

## PRODUCT MODEL CONCEPTS

- How do these 5 concepts as we've discussed them compare to how they are practiced at your organization?
- Where are your largest gaps?



PRODUCT  
MANAGER



PRODUCT  
DESIGNER



TECH  
LEAD



PRODUCT  
LEADERS

# product model competencies

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# product model competencies



**PRODUCT  
MANAGER**

# product manager



PRODUCT  
MANAGER



PRODUCT  
DESIGNER



TECH  
LEAD

the *product manager* is responsible for the **value** and **viability** of what the product team builds, and is ultimately accountable for the **results** of the product team

(includes product owner responsibilities)

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# product manager knowledge

- **Customer** - acknowledged expert on users and customers
- **Data** - acknowledged expert on product data
- **Business** - understand full range of stakeholder constraints and needs, including go-to-market, financial, legal and compliance
- **Industry** - expert on competitors, domain trends, technology trends
- **Product** - acknowledged expert on your product

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# direct access (together with the team)

- ...to **engineers**
- ...to **customers**
- ...to **data**
- ...to **stakeholders**

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# product model competencies



**PRODUCT  
DESIGNER**

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## product designers

“Design is not just what it looks like  
and feels like; design is *how the*  
*product works.*”

- Steve Jobs



# product designer



the *product designer* is responsible for ensuring the **usability** of what is built, and overall, how users and customers **experience the product's value**

- ideation and prototyping
- usability & value testing
- design assets for delivery

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# product model competencies



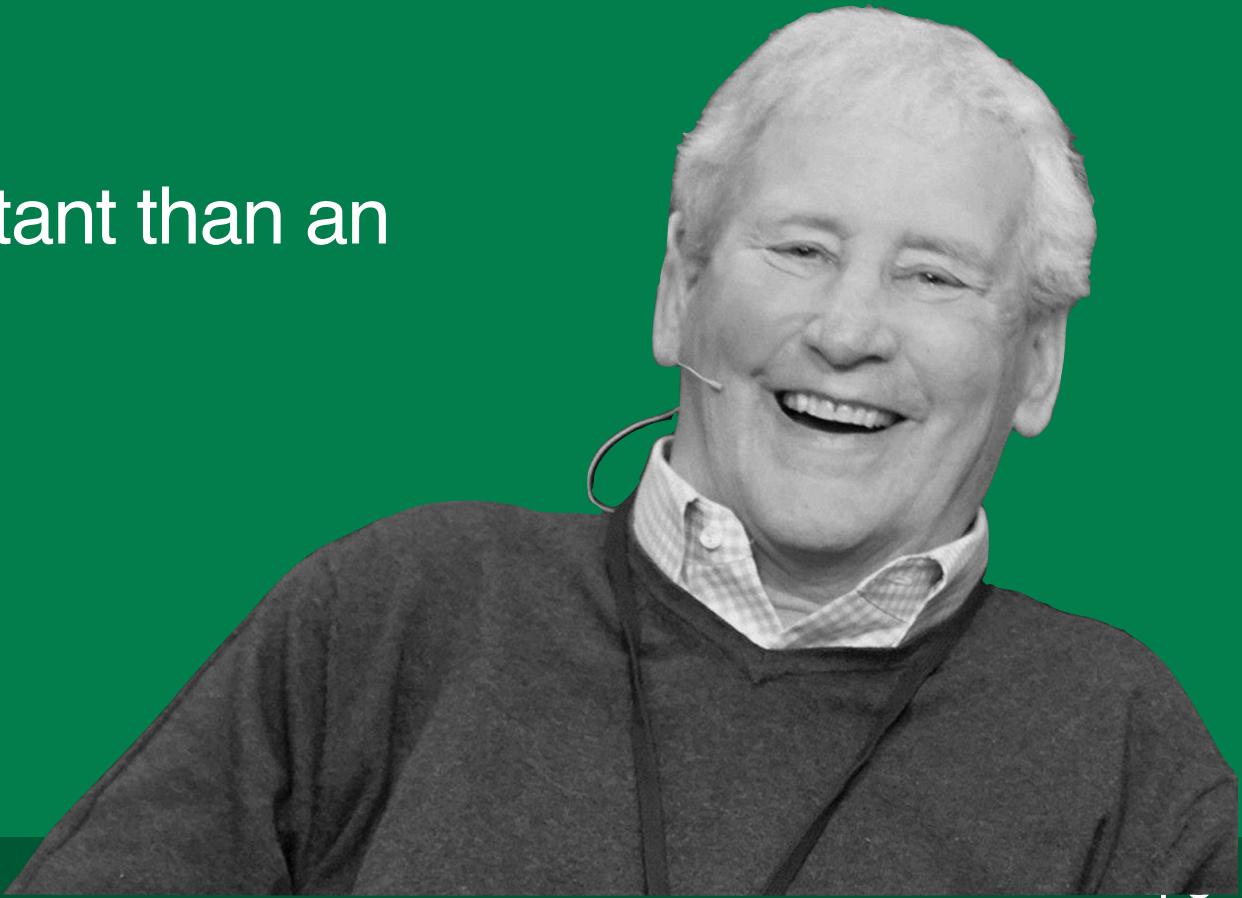
**TECH  
LEAD**

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## empowered engineers

*“Nothing is more important than an empowered engineer”*

- Bill Campbell



# tech lead



the *tech lead* is responsible for ensuring the **feasibility** of what the team builds, and more generally, has overall responsibility for **delivery**

- active contributor to product discovery
- guides engineers on the team
- responsible for holistic view of tech

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# product model competencies



**PRODUCT  
LEADERS**

# product leaders

product leaders are the managers and leaders of product management, product design, and engineering. they enable and empower product teams:

- coaching & staffing
- setting & communicating strategic context
- champions of the product model



PRODUCT  
LEADERS

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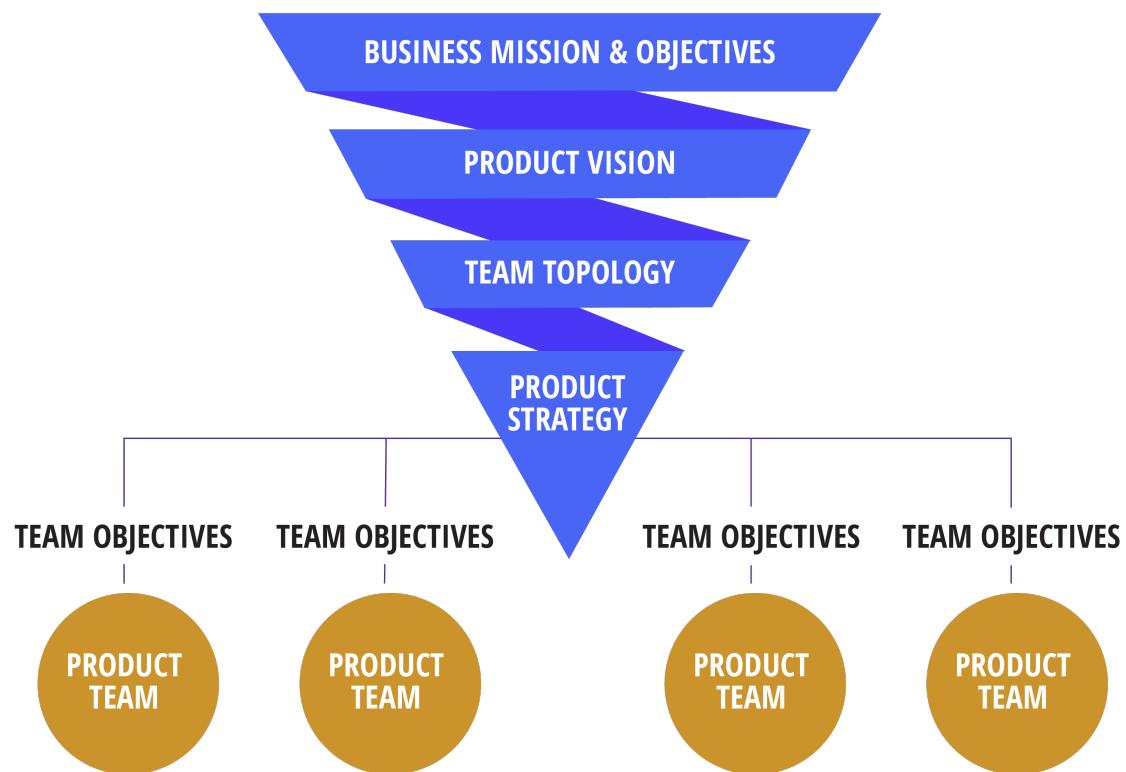
on context

“Lead with context, not control.”

Lisa Kilgore



# defining and communicating strategic context



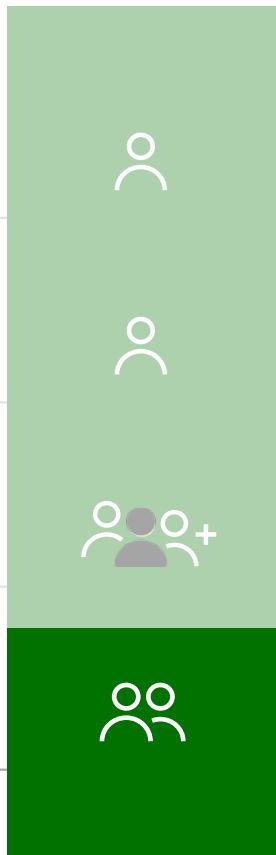
# key supporting roles

Product Manager

Product Designer

Engineers

Other Roles



- delivery manager
- product marketing manager
- user researchers
- data analysts
- data scientists
- domain experts

# breakout discussion

## PRODUCT MODEL COMPETENCIES

- How do these 4 competencies as we've discussed them compare to how they are practiced at your organization?
- Where are your largest gaps?



the product model in action



*largest seller of used cars in the US*

## business challenge



urgent need for *omni-channel alternative* to buy and sell cars:

- restrictions on physical stores
- billions of dollars worth of inventory sitting on car lots
- revenue immediately dropped 75%

# product culture



product model transformation:

- began on customer-facing side, then store-facing
- introduced true, cross-functional, empowered product teams
- provided dedicated discovery coaching to teams
- created specially designed collaborative space for product teams

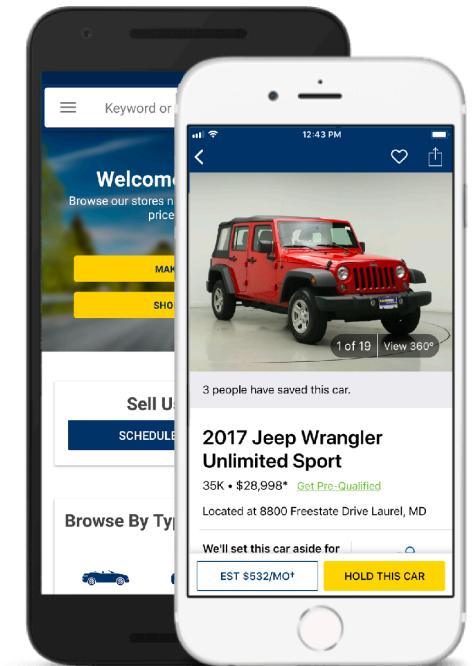


# product strategy



needed to solve multiple difficult problems:

- move to virtual customer service
- real-time, accurate trade-in values
- finance and pay for cars
- arrange curbside pickup or delivery



## product teams



company introduced product model competencies:

- product managers
- product design
- product engineering

teams supported by strong user research and discovery coaching

# product discovery



built a culture of rapid experimentation:

- heavy use of prototypes
- collaboration with key stakeholders
- engaged directly with consumers and store sales
- collected evidence to prove results, often before building

# product delivery



- first tested with small groups of users
- then tested regionally
- then deployed nationally
- rollout completed within 6 months

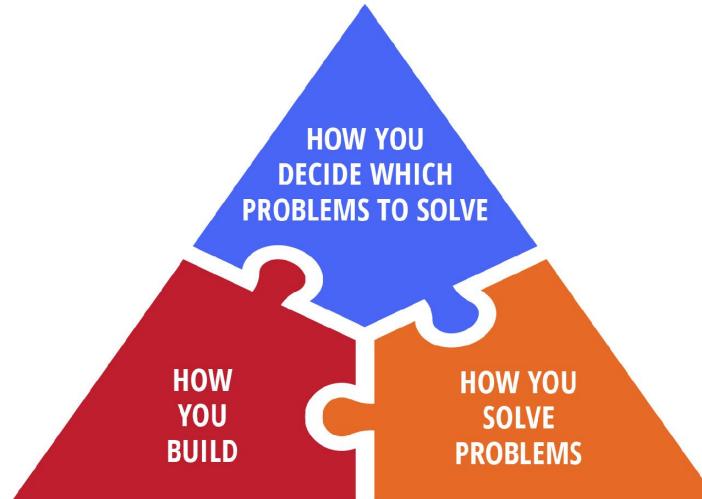
## results



- quickly recovered then exceeded lost revenue
- became one of very few pandemic success stories in automotive
- demonstrated to market and colleagues power of product model
- built reputation as one of best places to work in region

# closing thoughts

## DIMENSIONS



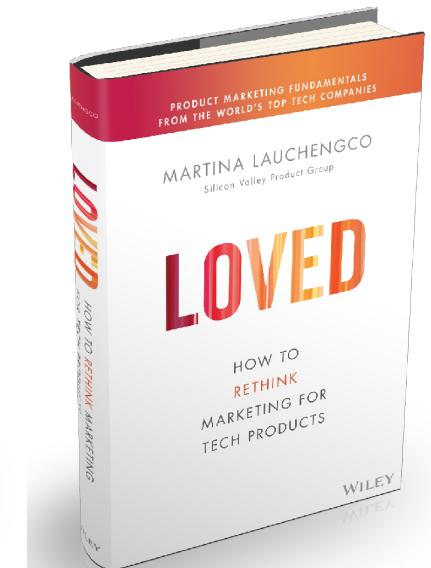
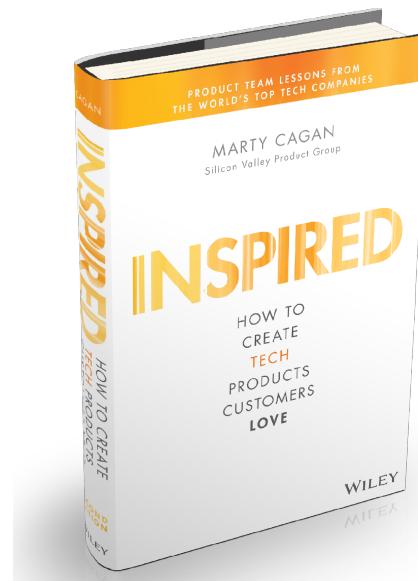
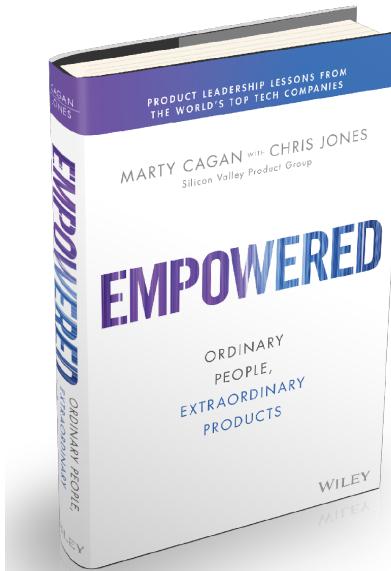
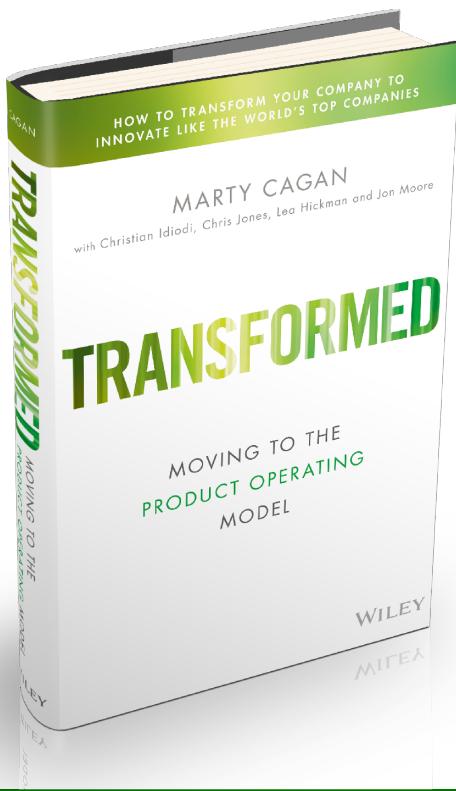
## CONCEPTS



## COMPETENCIES



# learning more



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# thank you

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- [lea@svpg.com](mailto:lea@svpg.com)



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# Office hours

day 2

# product leadership

product leaders  
coaching  
product vision  
team topology  
product strategy  
team objectives  
product teams  
additional roles

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## PRODUCT LEADERS

failures of  
product leadership

leadership fail

1. building teams via staffing rather than *recruiting*

leadership fail

2. trying to scale with process rather than *coaching*

leadership fail

### 3. micro-managing rather than *empowering*

leadership fail

4. underestimating importance of *inspiration, context, and clarity*

leadership fail

## 5. lack of insights-driven *product strategy*

leadership fail

## 6. lack of *collaboration* between product, design and engineering leadership

leadership fail

## 7. lack of *trust* with stakeholders

leadership fail

## 8. not understanding impact of *team topology*

leadership fail

## 9. not understanding need for *outcomes*

leadership fail

10. *have never seen good*

# breakout discussion

## PRODUCT LEADERSHIP

- What are the biggest challenges with your product leaders?



**PRODUCT  
LEADERS**

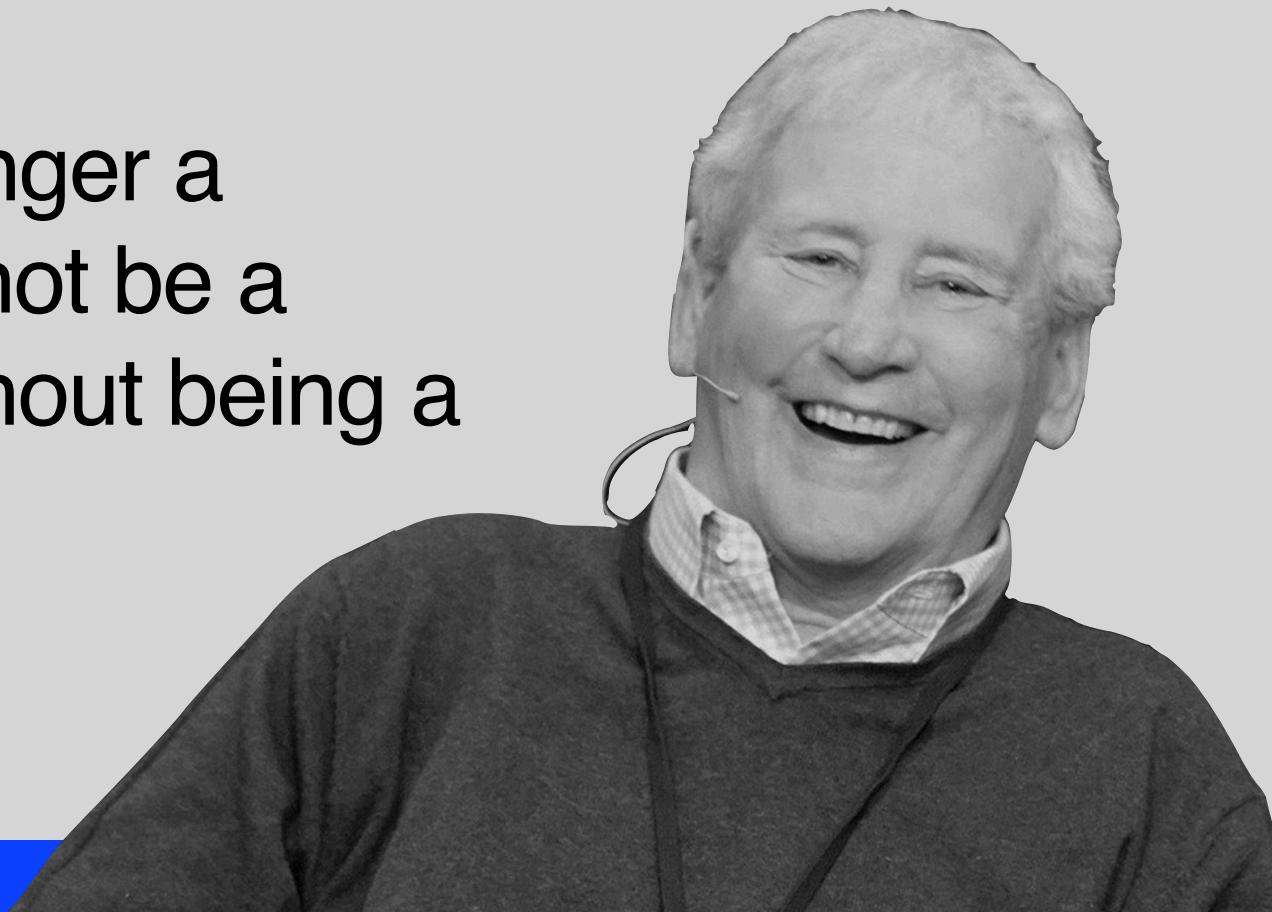
coaching

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on coaching

“Coaching is no longer a specialty; you cannot be a good manager without being a good coach.”

Bill Campbell



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on coaching

“Leaders develop leaders  
and take seriously their  
role in coaching others”

- Andy Jassy, *Amazon Leadership Principles*





# assessment

- helping an employee become great
- NOT a performance evaluation
- Combine with self-assessment, 360

**svpg silicon valley product group**

INSPIRED EMPOWERED insights blog workshops coaching our team contact us

## Coaching Tools – The Assessment

Marty Cagan  
Apr 8, 2019

NOTE: This article and the coaching tool it describes is an update to the older gap analysis tool described in [Developing Strong Product Managers](#).

In my last several articles, I have been focusing on coaching tools for helping managers of product managers to raise the level of performance of the product managers that report to them.

I want every manager of product managers to feel considerable urgency and importance around this need. Your cross-functional product teams depend on competent product managers, and if you don't develop your people and provide growth opportunities, there are usually other companies that will. I have always been a big believer in the old adage that "people join a company, but leave their manager."

This article discusses the technique that I use and advocate for assessing a product manager. It is the foundation for then coaching the person to success.

This skills assessment is structured in the form of a gap analysis. The purpose is to assess the product manager's current level of competence along each of several necessary dimensions, and then compare that with the level of competence that's required for this particular team and company.

This format acknowledges that not all skills are equally important, not all gaps are equally significant, and expectations change with the level of responsibility. This tool is intended to help focus the attention where it is most needed.

*People, Process and Product*

As many of you know, the taxonomy I like to use when talking about product management is the three pillars; people, process and product.

For purposes of the assessment tool, I like to cover "product" first because product knowledge is the foundation for everything else. Without competence in product knowledge, the rest doesn't *really matter*.

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Product Fail  
Product Success  
Good Product Team/Bad Product Team  
Vision vs. Strategy  
The Inconvenient Truth About Product  
The Alternative To Roadmaps  
Developing Strong Product Managers



# coaching plan

- Starts with a gap analysis
- Develop the weaknesses
- Leverage the strengths
- Consider their goals

	Importance for Role	Current Level	Target Level
Customer Knowledge	High	3	5
Stakeholder Management	Moderate	2	4
Data IQ	High	2	5
Presentation Skills	Low	1	3

# coaching case study

move from engineering to PM - coaching plan

- 30 customer visits (15 US/15 EU)
- sales & marketing education
- tutoring from a friend in finance
- coaching on product analytics



# weekly one-on-one

- not for status or tasks
- asking critical questions
- coaching gaps
- developing strengths
- removing impediments

# coaching case study

first time manager - advice through 1-1

- ensure new hire becomes acknowledged expert
- engineer a public win for new hire



## 6-page written narrative

- Tool for framing decisions
- Coaching tool to force deep thinking
- Create actual prose vs. powerpoint bullet points
- Includes conclusion, analysis, alternatives, objections

# coaching case study

PM that has lost the confidence of the CEO

- o Written narrative to form strategic PoV
- o Iterated
- o Developed confidence



# coaching decisions

- Understanding a decision
- Right-sizing
- Collaboration
- Disagreements

# coaching time management

- Time required for **product discovery**
- Leverage **delivery manager**
- Leverage **manager**



# magic pie

How have you *actually* spent time over an average week?

- Customer interviews, user test
- Stakeholder interaction
- Meetings, coordination
- Documentation
- Etc.



# coaching case study

Coaching an always time-strapped employee

- Reviewed calendar, questioned each meeting
- Sorted to critical, delegate, punt
- Enabled focusing on how to do discovery



# breakout exercise

## COACHING CHALLENGES

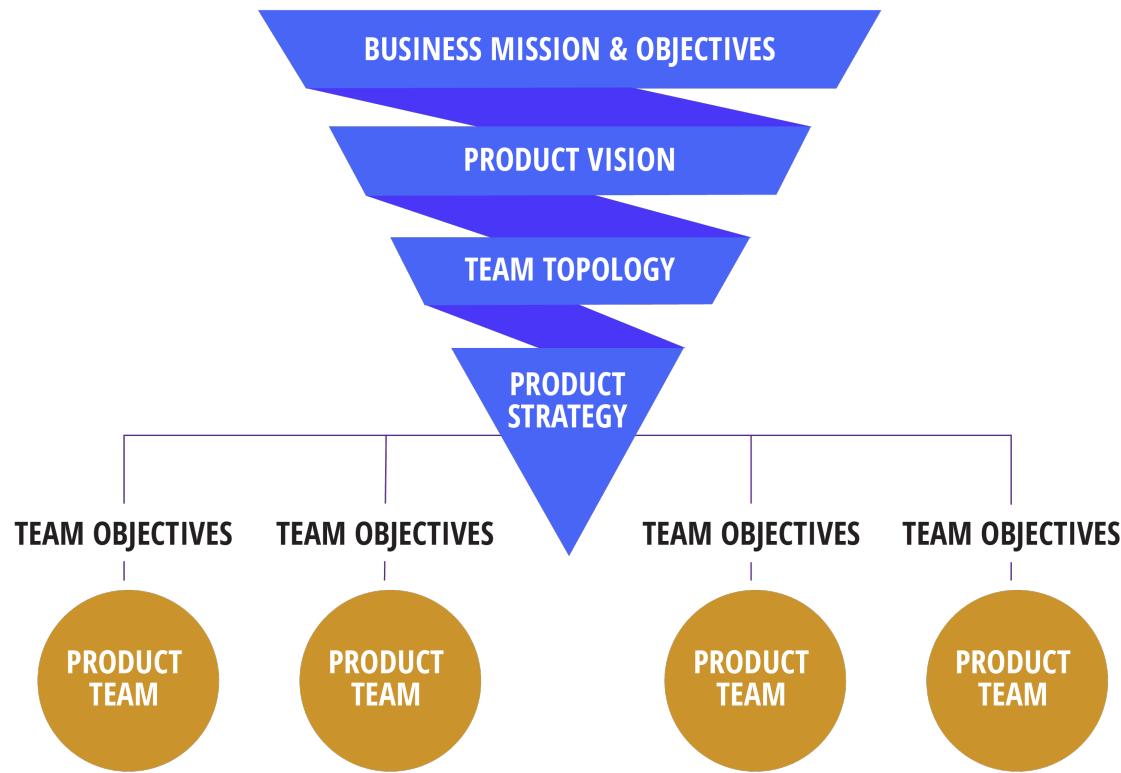
- Have each person discuss a difficult past or present coaching challenges
- Discuss as a team any strategies for handling the situation



## PRODUCT LEADERS

strategic context

# strategic context



# strategic context: **product vision**

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on vision



“If you want to build a ship, don’t herd people together to collect wood and don’t assign them tasks and work, rather teach them to long for the endless immensity of the sea”

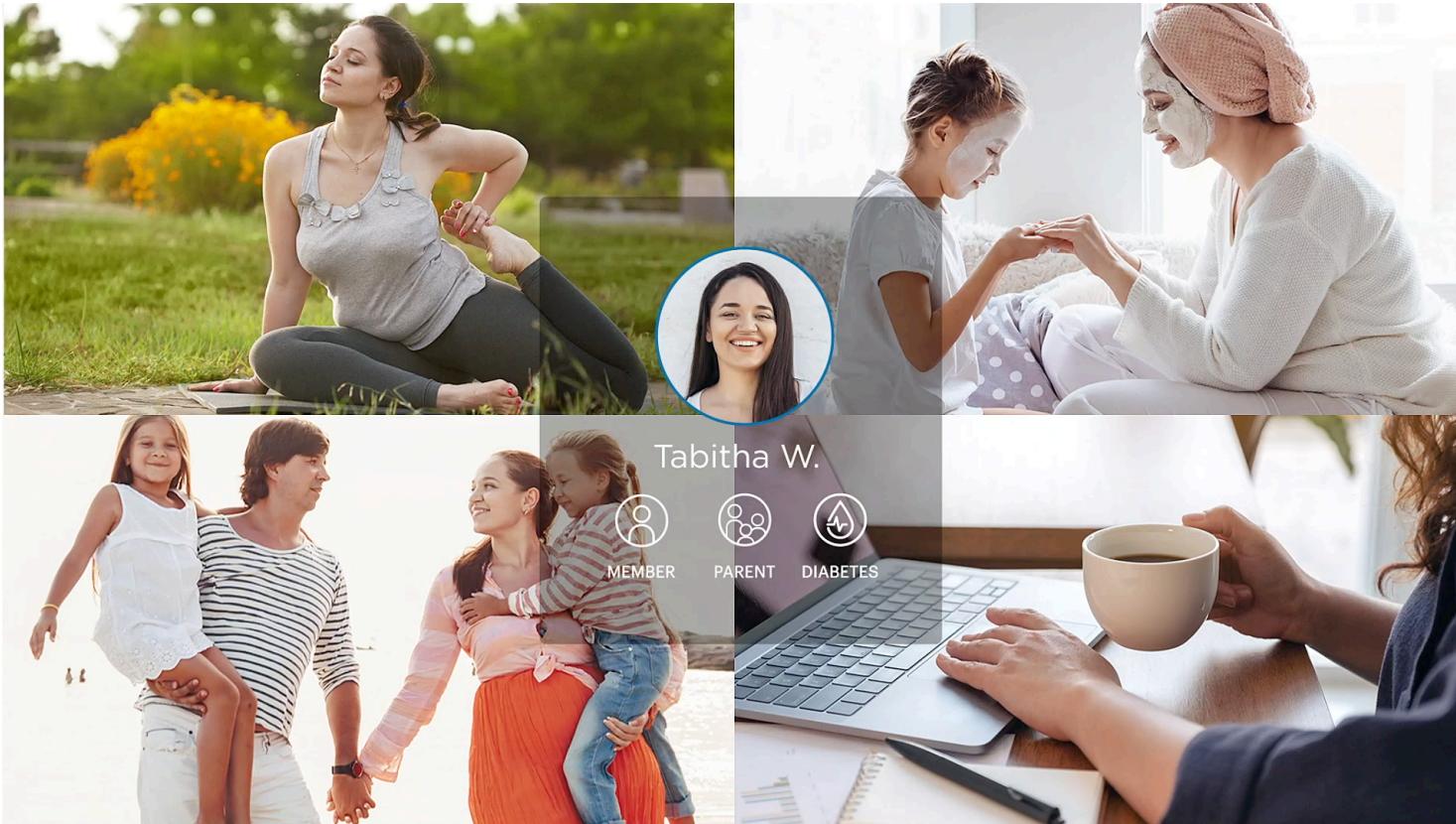
Antoine de Saint-Exupery

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## **product vision:**

The future you are trying to create.  
From the perspective of your users and  
customers, how will the world improve?

# vision case study



# product vision

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- Customer centric
- North Star
- Inspires meaningful work
- Leverages industry trends
- Informs architecture
- Informs team topology
- Reflects values and principles
- Best recruiting tool

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on vision

“Be stubborn on vision, but  
flexible on details.”

Jeff Bezos



---

# communicating the vision

- White paper / deck
- Storyboard
- Video
- Press release
- VisionType

# vision case study



trainline

*Say hello to the Bernard family*

# vision case study



# breakout discussion

## PRODUCT VISION

- Does your organization have this sort of emotional, customer-focused vision?
- How might you tell the story for your company?

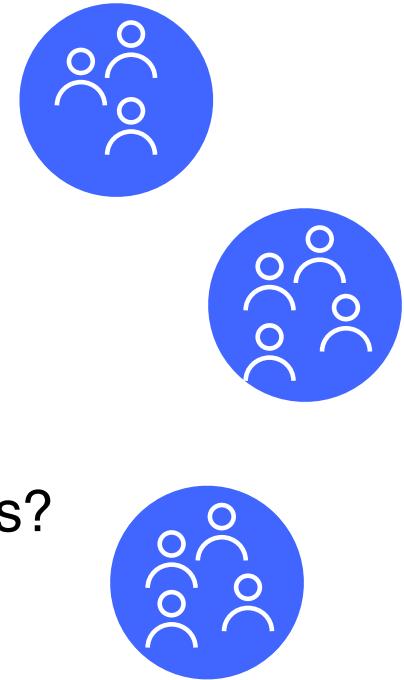
# strategic context: **team topology**

## **team topology:**

The structure of a product organization's product teams, especially their respective areas of ownership.

# determining team topology

- How many teams?
- What is the charter or scope of each team?
- What are the dependencies between teams?
- How do the teams relate to the technology?
- How do the teams relate to other aspects of the business?
- What expertise is required for each team?
- What personalities are required for each team?



# setting team topology

optimize for *empowerment*

- Ownership
- Autonomy
- Alignment

---

# types of teams

- **Customer-facing:** the product has a user-facing customer experience
- **Customer-enabling:** the product enables the customer experience
- **Platform:** the product enables one or more other product teams

# platform pattern

Experience Teams  
(customer facing or customer enabling)



Platform Teams

---

## platform teams - leverage & complexity

- Typically internal, but may be customer facing
- Common foundation of infrastructure and services
- Enables broader scope of ownership for experience teams
- Enables developer speed



---

# experience teams - alignment

- By solution area (e.g. onboarding, profile, personalization)
- By investment (e.g. core offering, expansion market)
- By user type or persona (e.g. employee, seller, buyer)
- By market segment (e.g. food, retail, financial services)
- By sales channel (e.g. self-service, direct sales, channel partner)
- By business KPI (e.g. new user growth, conversion)
- By geography (e.g. US, AsiaPac, EMEA)

# case study - team topology

## Employer Teams

- Employer Home
- Enterprise Tools
- Recruiter Tools
- Employer Comms
- Premium Services

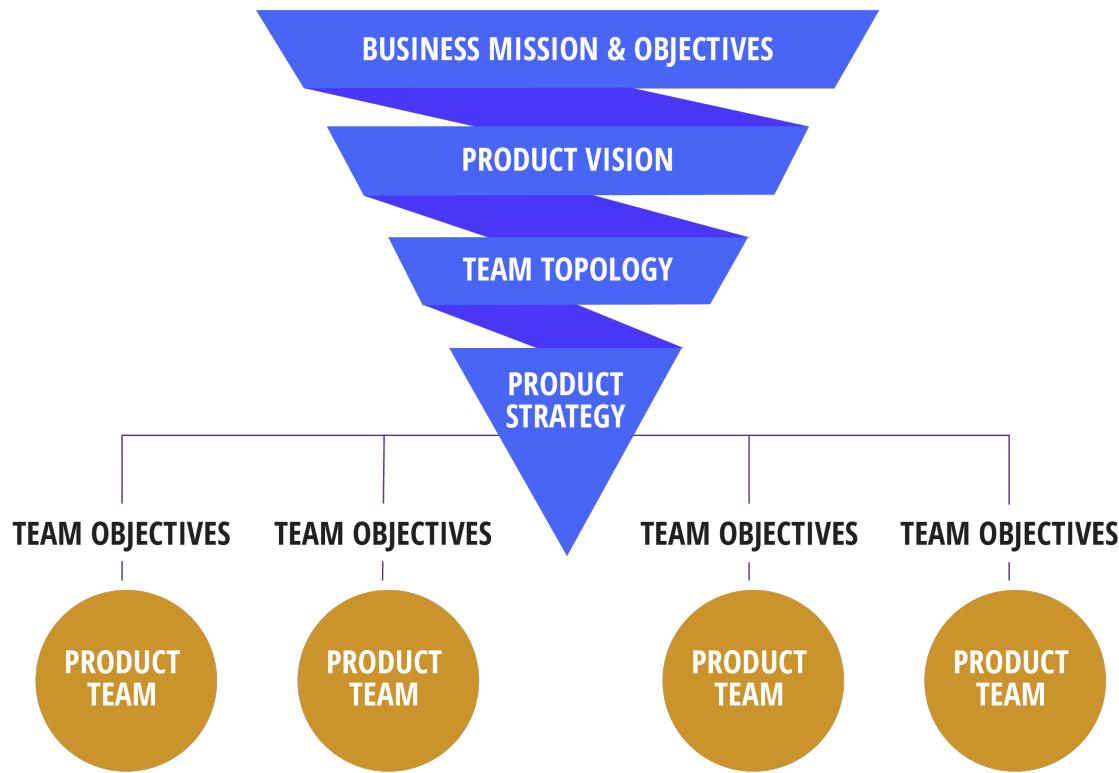
## Job Seeker Teams

- Seeker Home
- Job Applications
- Job Search
- Mobile Apps
- Job Recos

## Platform Teams

- Shared Services
- Payment & Billing
- Data & Reporting
- Infrastructure
- Developer Tools

# strategic context



# strategic context: **product strategy**

## **product strategy:**

the plan to achieve the product vision while meeting the overall business objectives along the way.

identifies the critical problems to be solved each quarter

# product strategy principles

---



Focus



Powered by  
Insights



Transparency



Placing Bets

---

product strategy: focus

“People think focus means saying ‘yes’ to the thing you’ve got to focus on. But that’s not what it means at all. It means saying ‘no’ to the hundreds of other good ideas.”

Steve Jobs



---

## product strategy: insights

“Good strategy does not pop out of some ‘strategic management’ tool, matrix, chart, triangle, or fill-in-the-blanks scheme. Instead, a talented leader identifies the one or two critical issues in the situation—the pivot points that can multiply the effectiveness of effort—and then focuses and concentrates action and resources on them.”

Richard Rumelt



# strategy case study



- Focus - Conversion to paid
- Insights - RUMS



---

## product strategy: transparency

“The greatest dividend of transparency is trust.”

- Sarah Bryers

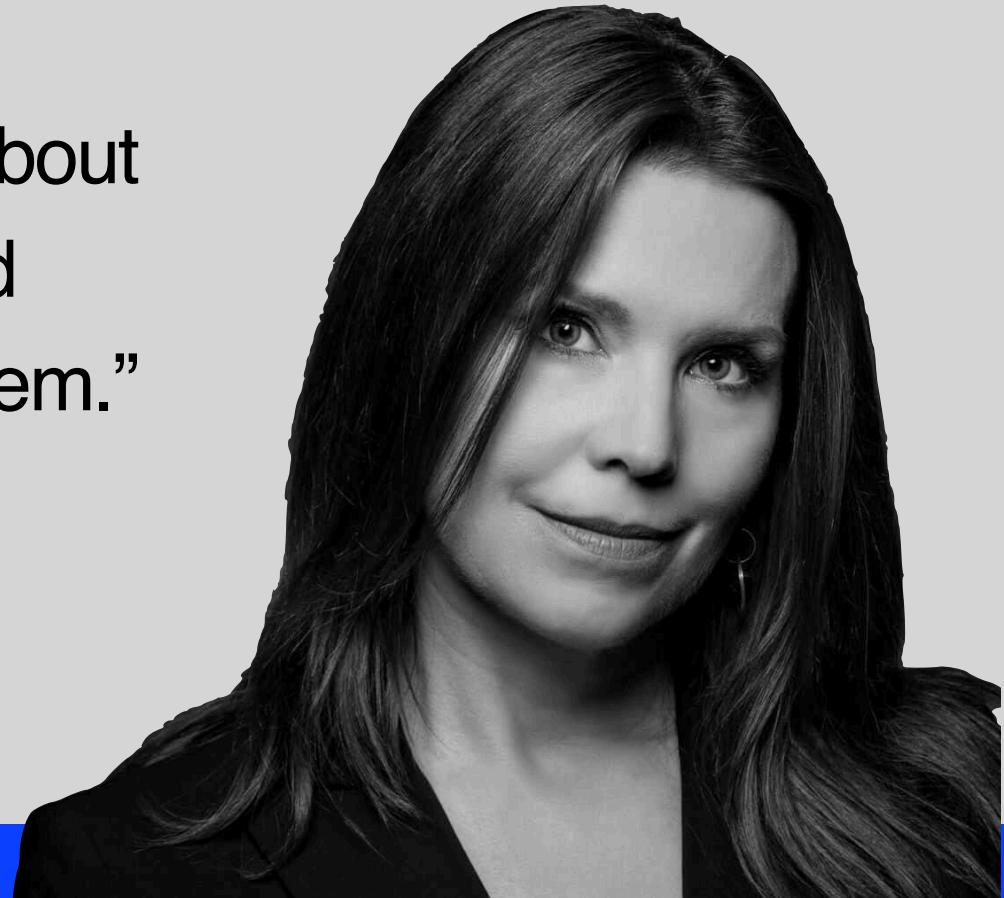


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*placing bets*

“Improving decision quality is about increasing our chances of good outcomes, not guaranteeing them.”

- Annie Duke, *Thinking in Bets*



# strategy case study



## Drive Enterprise Deployments

- 2000 messages

A screenshot of a Slack workspace titled "Acme Sites". The left sidebar shows a list of channels: STARRED, #api, #bugs, #cats, #features, #general (which is selected and highlighted in green), #marketing, #mobile, and #ui. Below that is a list of CHANNELS: #billing, #engineering (which has a red notification badge with the number 1), #ops, #sales, #support, and #web. The main area shows a conversation in the "#general" channel. The messages are as follows:

- Carl Benting 2:45 PM: no it's becky
- Suzie McGeuze 2:50 PM: hey everyone, our all-hands will be starting in 10 minutes amy has some exciting updates about our engineering team hiring and JR will be covering last quarter's sales report
- Amy Grint 2:52 PM: great
- Suzie McGeuze 3:10 PM: thank's everyone, that was a great meeting
- Carl Benting 3:13 PM: record speed too
- Amy Grint 3:15 PM: If anyone has any questions about the new additions to engineering, give m
- Carl Benting 3:23 PM: Question 1: Can they juggle work? I mean literally. Like paper and staplers.

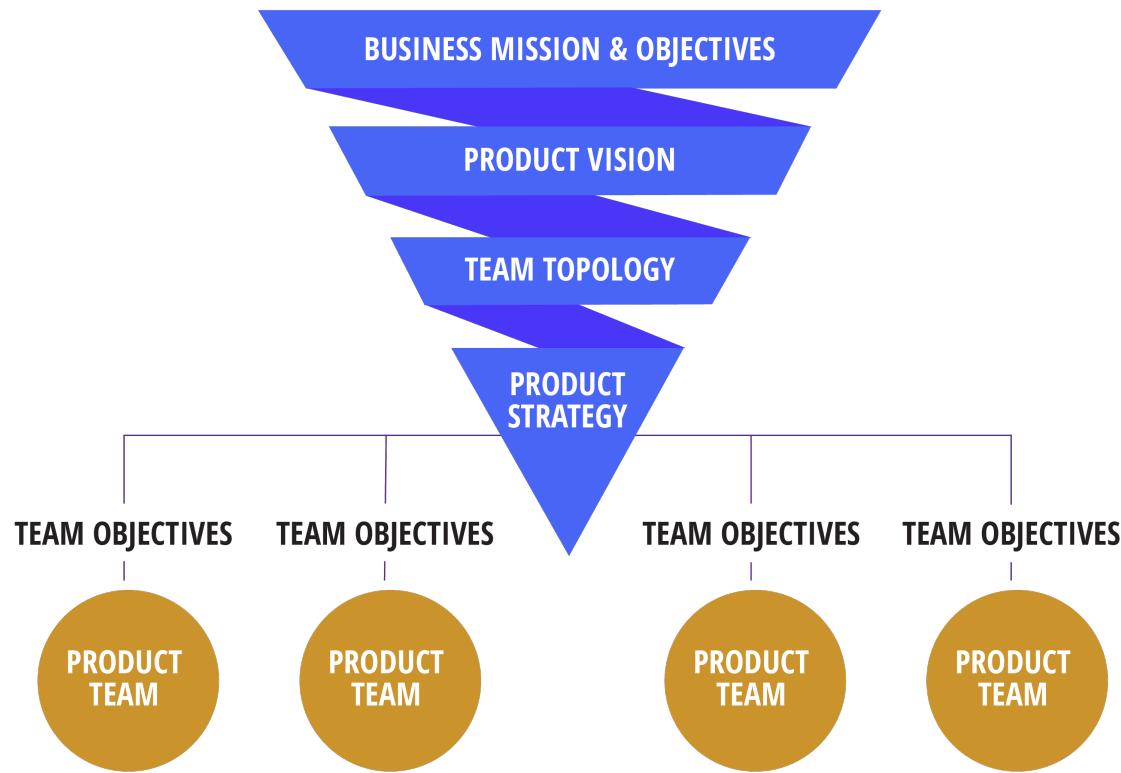
# breakout discussion

## PRODUCT STRATEGY

- How effective is your organization at generating and leveraging actionable insights?
- How might you do a better job of this?

# strategic context: **team objectives**

# strategic context



## **team objectives:**

How leaders assign problems to empowered product teams. Comprised of a problem to solve (the objective) and measure of success (key results).

# team objectives - empowerment

Assign teams problems to solve

Rather than features to build

# good team objectives

Bad Objective (output)	Good Objective (outcome)
Internationalize the product for the Japanese market	Fully adopt 6 new Japanese market customers
Create a new intake UI for enrollment	Reduce the amount of time and effort it takes to successfully enroll a new student to less than 5 minutes
Create an administrative portal for enterprise customers	Successful onboard 5 new enterprise customers willing to be a reference for us
Add tracking of 3 new KPIs to the analytics platform	Ensure 5 internal teams are using the analytics platform to meet 100% of their data needs

# good team objectives

Objective	Key Result
Achieve Product Market Fit (PMF)	>12 new customers on new product 8 reference customers (>4 new)
Dramatically improve end user engagement	>80% of licenses sold active after 30 days Avg. 3+ logins per user, per week
Increase revenue	20% top line revenue growth YoY Monthly / Annual ratio > 4/1
Dramatically improve performance	PoC deployed in < 5 minutes Reduce latency by 50%

# team objectives - action

**Objectives:** from leadership

**Key Results:** from the product team



# team objectives - ambition

Set the level of ambition a team should pursue

10% or 10x?

“Roofshot” or “Moonshot”

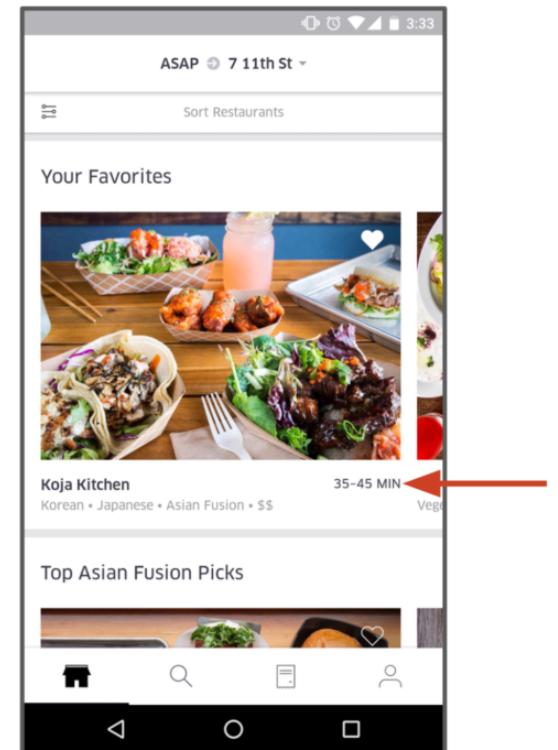
80% confidence or 20% confidence

# team objective



## Internal Platform Team - ML as a Service

- **Objective:** Enable Product Teams
- **KR:** Increase adoption - models deployed
- **KR:** Increase impact - per model business value
- **KR:** Improve developer velocity - time to deploy



# team objectives - commitments

**High-Integrity Commitments:** major promises

**Keep-the-Lights-On Work:** normal agreements, assumptions

# team objectives - cross-team collaboration

**Shared Objectives:** multiple teams working together

**Common Objectives:** multiple teams working independently

# team objectives - management

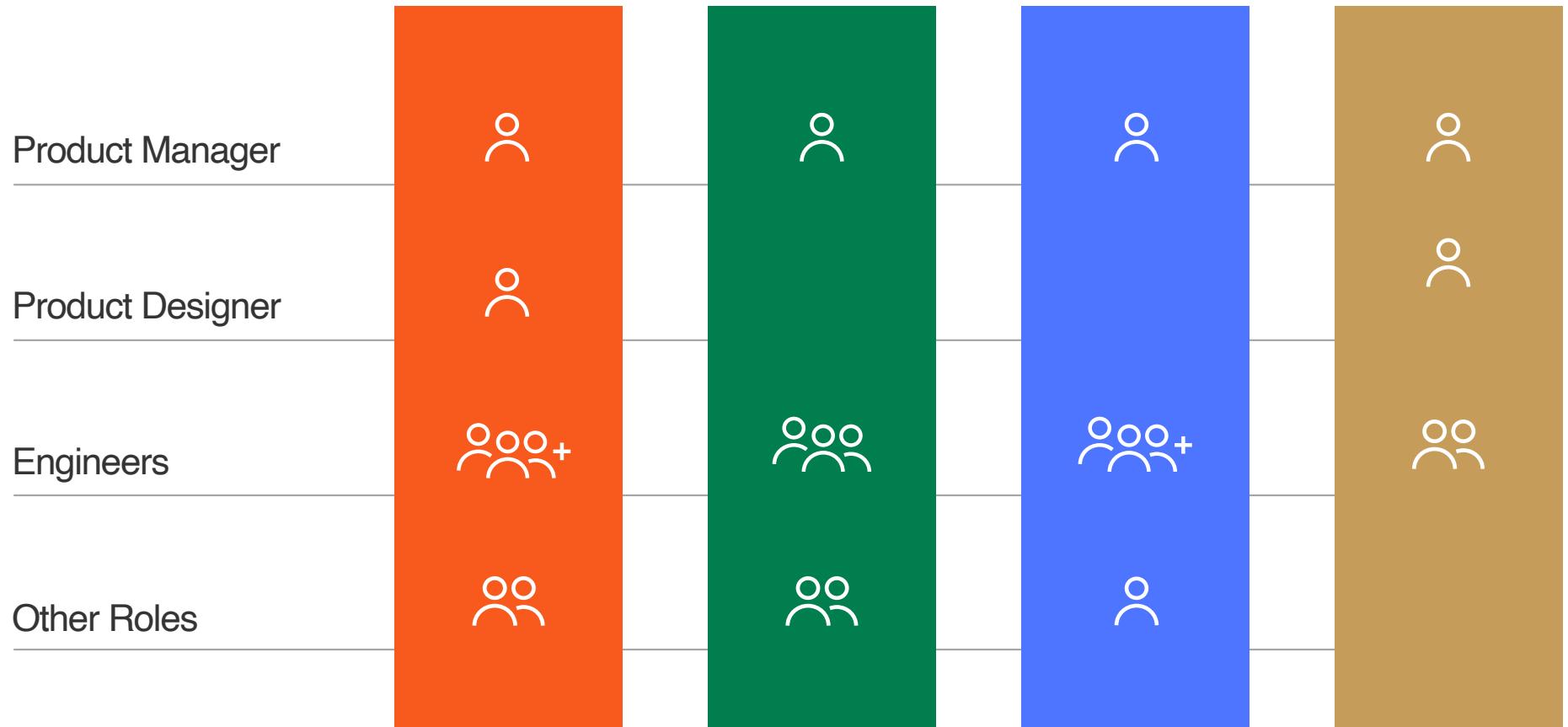
- **cadence:** quarterly planning
- **progress:** weekly tracking
- **escalation:** early
- **accountability:** particularly for commitments

# making the vision a reality

- **Product Vision** describes the future we are trying to create
- **Team Topology** structures our teams into areas of ownership
- **Product Strategy** helps us decide which problems to solve
- **Team Objectives** assigns those problems to product teams
- **Product Discovery** helps teams find a solution worth building
- **Product Delivery** builds that solution and brings it to market



principles



# product teams

Product Manager



Product Designer



Engineers



Other Roles



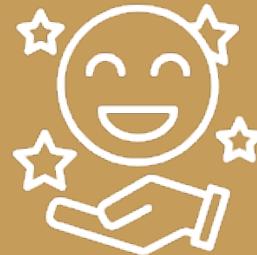
- *durable*
- cross-functional with *key competencies*
- clear area of *ownership*
- empowered with *problems to solve*
- accountable to *results*

## product teams principles

---



Empowered with  
Problems to Solve



Outcomes  
over Output



Sense of  
Ownership



Collaboration

---

on outcomes

accountability - empowerment = blame

empowerment - accountability = low-performance

empowerment + accountability = high-performance

- Darrielle Ehrheart



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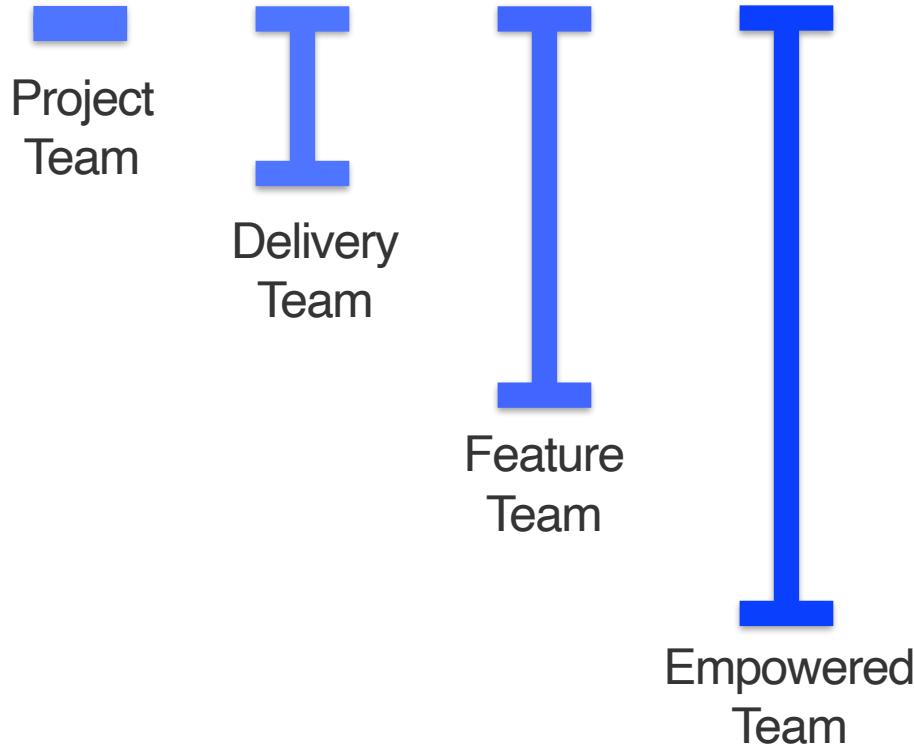
on ownership

“A sense of ownership is the most powerful weapon a team can have.”

- Pat Summit



# types of product teams



- Small
- Durable
- Cross-Functional
- Clear Area of Ownership
- Empowered to Determine Solutions
- Accountable for Outcomes



**additional  
roles**

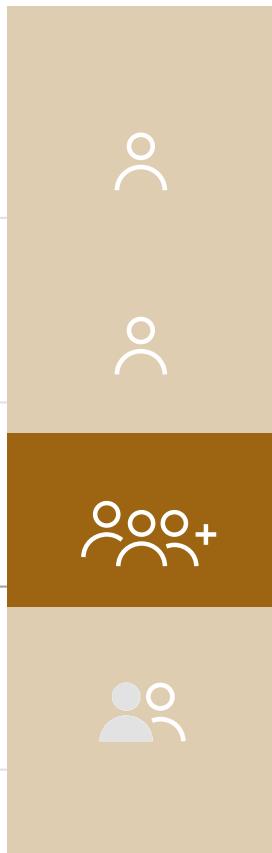
# additional engineers

Product Manager

Product Designer

Engineers

Other Roles



many types of engineers:

- software engineers (many types)
- data engineers
- hardware engineers (devices)
- test automation engineers / qa
- release engineers / devops

---

# user researcher

uses qualitative techniques to enable product teams to make better and faster decisions:

- generative vs evaluative research
- support qualitative discovery: interviews & qualitative user testing
- skill building and subject recruiting (enablement charter)

---

# data analyst

uses data and quantitative techniques to enable product teams to make better and faster decisions:

- measure progress against KPIs
- understand behavior
- Support quantitative discovery: a/b testing
- create self service reporting tools (enablement charter)

(skills: SQL, R, Excel, data visualization)

---

# data scientist

uses high volumes of data, advanced mathematics, and programming to create applied mathematical models that enable:

- data products (customer facing value)
- advanced data analytics

(skills: advanced math and statistics, machine learning, programming)

---

# delivery manager

(project management for empowered teams)

- Delivery coach vs agile coach (outcomes vs process)
- Impediment Removal
- Dependency Management
- Communication and Coordination
- (Typically serves as ScrumMaster)

---

# product marketing manager

Connects the market to the product

- **Ambassador:** Connects market insights to teams
- **Strategist:** Directs a product's GTM strategy
- **Storyteller:** Shapes how the world thinks about a product
- **Evangelist:** Enables sales, marketing, and other evangelists

---

# domain or subject matter expert

Support teams when **deep expertise** is required

- Typically a resource to all product teams
- Expertise on product domain, or some other complex aspect of the business
- Understands the difference between constraints and requirements

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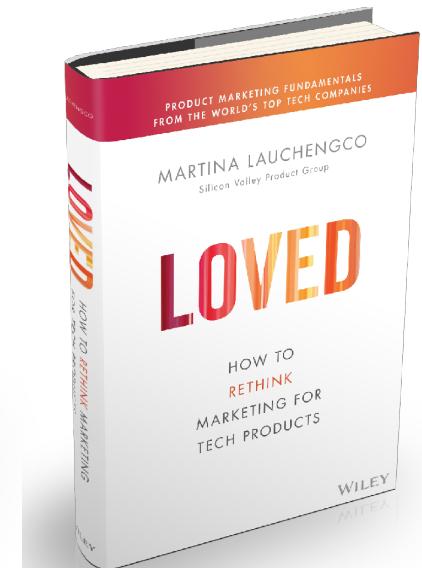
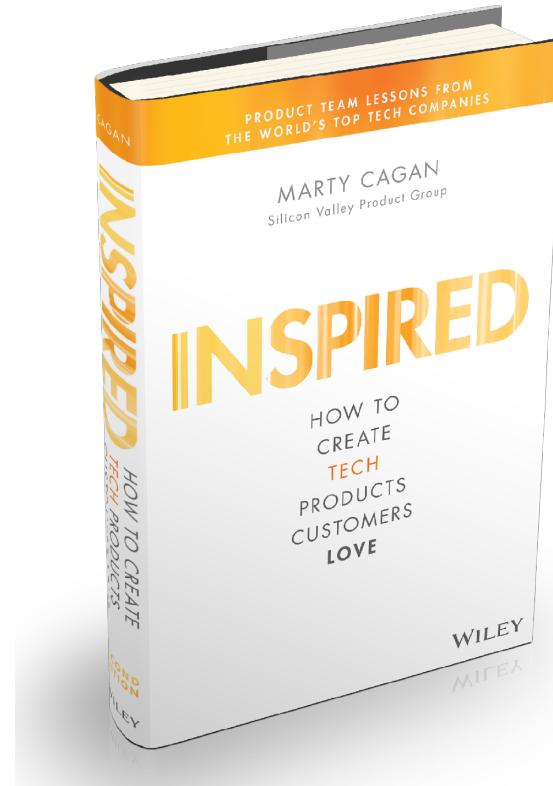
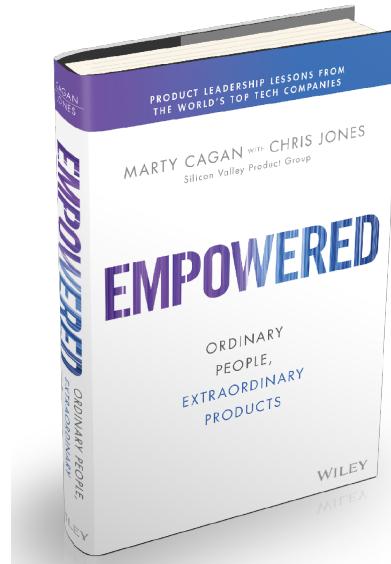
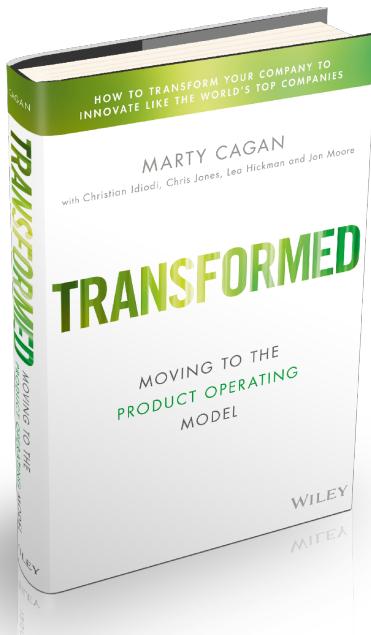
# what's missing?

there are several legacy roles that are explicitly  
*not* part of the product model:

- business analysts (BA's)
- product owners (PO's)
- product manager “assistant roles”

# closing thoughts

# learning more



# thank you

- [www.svpg.com/articles](http://www.svpg.com/articles)
- [www.svpg.com](http://www.svpg.com) newsletter
- <https://www.youtube.com/@officialsvpg>
- [lea@svpg.com](mailto:lea@svpg.com)



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# Office hours

# product teams

day 3

product development goals  
product delivery  
product discovery principles  
discovery planning techniques  
customer discovery  
product data  
ideation techniques  
prototyping techniques  
testing techniques  
adoption techniques

Svpg

# product development overview

---

# two goals: move fast but *don't* break things

Build the **right product** - release quickly and often

- More Iterations → Learning → Innovation
- Product brand, revenue, customers, employees

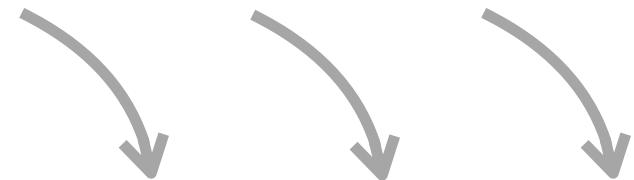
Build the **product right** - release with confidence

- Accuracy, reliability, performance, scale, privacy, security

---

problem  
to solve

**discovery**



**delivery**



principles

## **product delivery:**

Building, testing and deploying a product-quality solution

Ensuring the solution is reliable, accurate, performant, scalable, secure, and delivers the necessary outcome

---

# product delivery risks

- *Reliability*
- *Accuracy*
- *Performance*
- *Scale*
- *Maintainability*
- *Privacy*
- *Security*

# product delivery principles

---



Small, Frequent,  
Uncoupled Releases



Instrumentation



Monitoring



Deployment  
Infrastructure

---

outcomes

If the product model is all about achieving business outcomes, we depend on the ability to understand and measure the impact of our products and *demonstrate those outcomes*

# **technical debt**

Accrued work that is “owed” to an IT system, and is a normal and unavoidable side effect of software engineering. Teams “borrow” against quality by making sacrifices, taking short cuts, or using workarounds to meet delivery deadlines

- Gartner



# technical debt maintenance

Zero tech debt is never the goal

Agree on a definition of technical debt

Maintain a technical debt backlog

Manage as you go - 20% allocation



# principles

# **product discovery:**

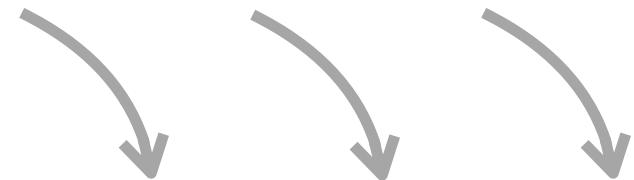
rapidly identifying a solution worth building

gathering evidence that the solution is  
valuable, usable, feasible, and viable, and  
will achieve the necessary outcome

---

problem  
to solve

**discovery**



**delivery**

---

# product discovery risks

*value* risk - will they use or buy it?

*usability* risk - can they use it?

*feasibility* risk - can we build it?

*viability* risk - does it work for the business?

# product discovery principles

---



Minimize Waste



Assess  
Product Risks



Embrace Rapid  
Experimentation



Test Ideas  
Responsibly

---

*embrace rapid experimentation*

“The most important thing to know is what you can’t know.”

- Marc Andreessen



product discovery

# discovery mindset - lessons learned



“No customer ever asked Amazon to create the Prime Membership program”

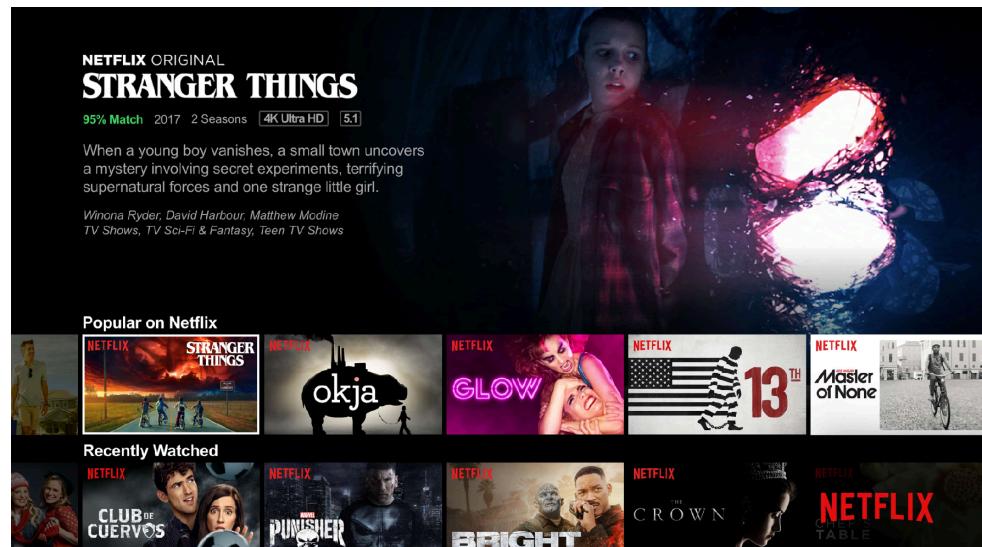


DISCOVERY LESSON

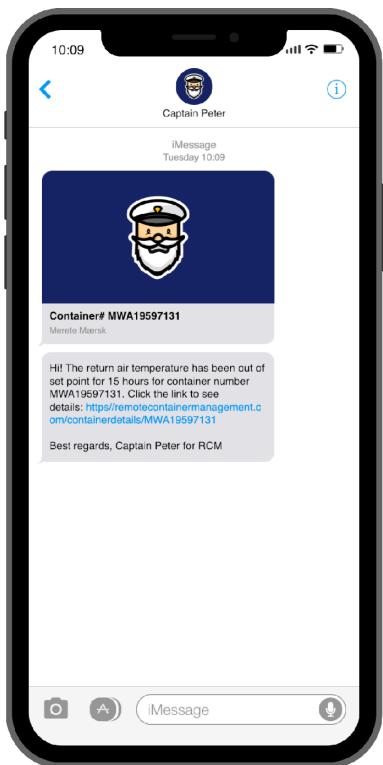
We can't count on our customers to tell us what to build



## DISCOVERY LESSON



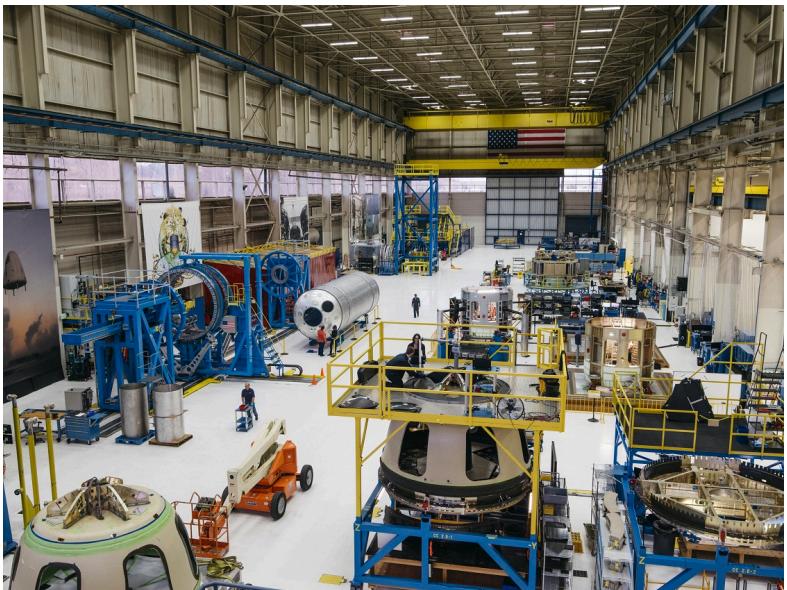
The most important thing is to establish value



Engineering is hard, but the product experience is often more difficult and more important to success



Technical feasibility must be validated before deciding to build



## DISCOVERY LESSON

We also need to validate business viability before deciding to build



Go-to-market assumptions  
are critically important, yet  
most often overlooked



```
sentiment.ts write_sql.go parse_expenses.py addresses.rb

1 import datetime
2
3 def parse_expenses(expenses_string):
4     """Parse the list of expenses and return the list of triples (date, value, currency).
5     Ignore lines starting with #.
6     Parse the date using datetime.
7     Example expenses_string:
8         2016-01-02 -34.01 USD
9         2016-01-03 2.59 DKK
10        2016-01-03 -2.72 EUR
11    """
12    expenses = []
13    for line in expenses_string.splitlines():
14        if line.startswith("#"):
15            continue
16        date, value, currency = line.split(" ")
17        expenses.append((datetime.datetime.strptime(date, "%Y-%m-%d"),
18                        float(value),
19                        currency))
20    return expenses

Copilot
```



Functionality, design and technology are inherently intertwined



“It is humbling to see how bad experts are at estimating the value of features (us included).

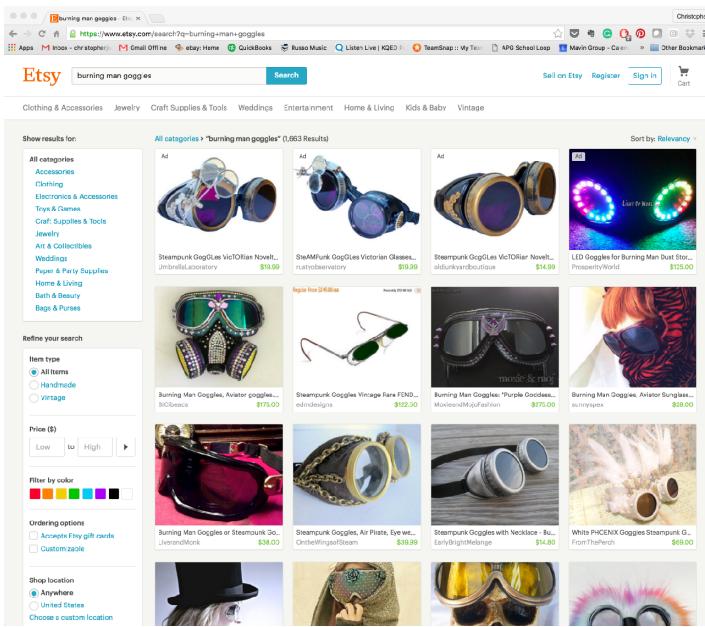
Every feature built by a software team is built because someone believes it will have value, yet many of the benefits fail to materialize.”



## DISCOVERY LESSON

Most of our ideas won't work,  
and those that do will require  
multiple iterations

## DISCOVERY LESSON



We need to use both  
quantitative and qualitative  
techniques for product  
discovery



## DISCOVERY LESSON

Validate ideas as quickly and  
cheaply as possible





---

# discovery is not a process...

...It's a set of tools to inform your judgement

- Rightsize based on the risks
- Rightsize based on the necessary level of confidence
- Rightsize based on the type of product work
- Rightsize based on the necessary level of description





# framing techniques



# team objective

Each team must understand the objective(s) its being asked to focus on

- What problem are we solving? (objective)
- Who are we solving it for? (target market)
- How do we know we have succeeded? (key results)



# PR/FAQ

A fake press release that allows us to work backwards from the customer outcome we want, and forces us to think in terms of benefits over features

The screenshot shows the Amazon.com homepage with a sidebar titled "Amazon Press Info". The sidebar includes links for Home, Press Releases, Images & Videos, Press Rooms (which is currently selected), Amazon Web Services, Kindle, and About Amazon.com. Below these are links for Overview, Company Facts, and History & Timeline. At the bottom of the sidebar is a link for "Amazon and Our Planet". To the right of the sidebar, the main content area is titled "Press Releases" in orange. Underneath this title is a news item about "Amazon Web Services Announces New". The news item text is partially visible, mentioning the launch of Amazon Relational Database Service (Amazon RDS) and its support for Microsoft SQL Server and ASP.NET.



# product canvas

For all-new product efforts or true startups, this is a technique for mapping the hypotheses and assumptions across all aspects of your product

Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments
Top 3 problems	Top 3 features	Single, clear, compelling message that states why you are different and worth buying	Can't be easily copied or bought	Target customers
Key Metrics		Channels		
Key activities you measure		Path to customers		
Cost Structure		Revenue Streams		
Customer Acquisition Costs Distribution Costs Hosting People, etc.		Revenue Model Life Time Value Revenue Gross Margin		

Lean Canvas is adapted from The Business Model Canvas (<http://www.businessmodelgeneration.com>) and is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported License.

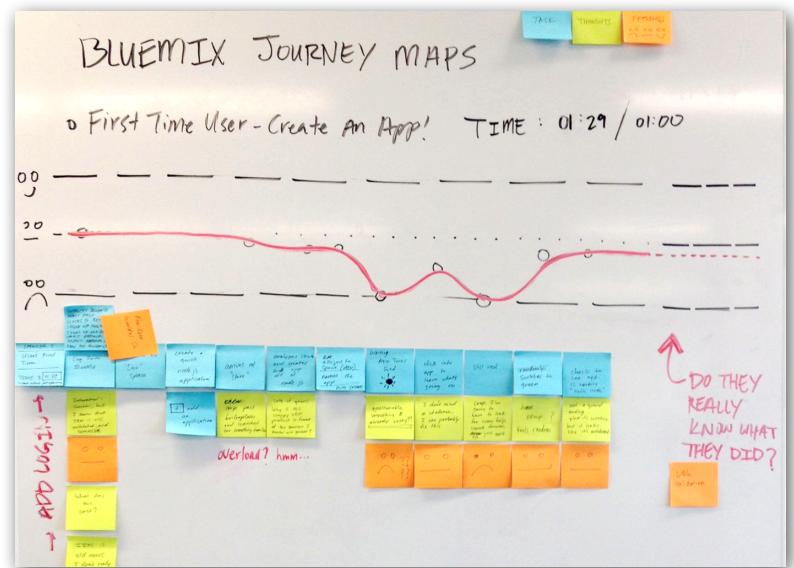


planning  
techniques

# planning techniques: **journey maps**

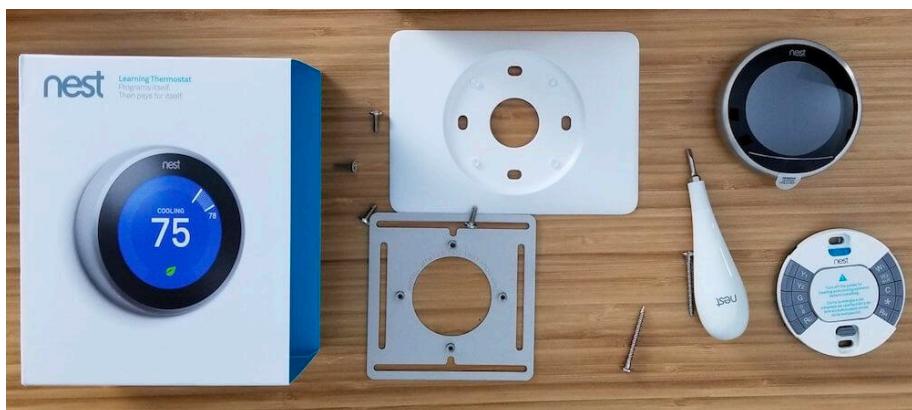
# journey map

Customer/user-centric map of an entire end-to-end experience. It can help identify pain and opportunity points as well as reveal gaps between teams





# discovery case study



## Nest learning thermostat

- Small amount of the product experience was about the device itself
- Retail innovations - Connected Home aisle
- Installation innovations - Screwdriver

# planning techniques: **opportunity solution trees**

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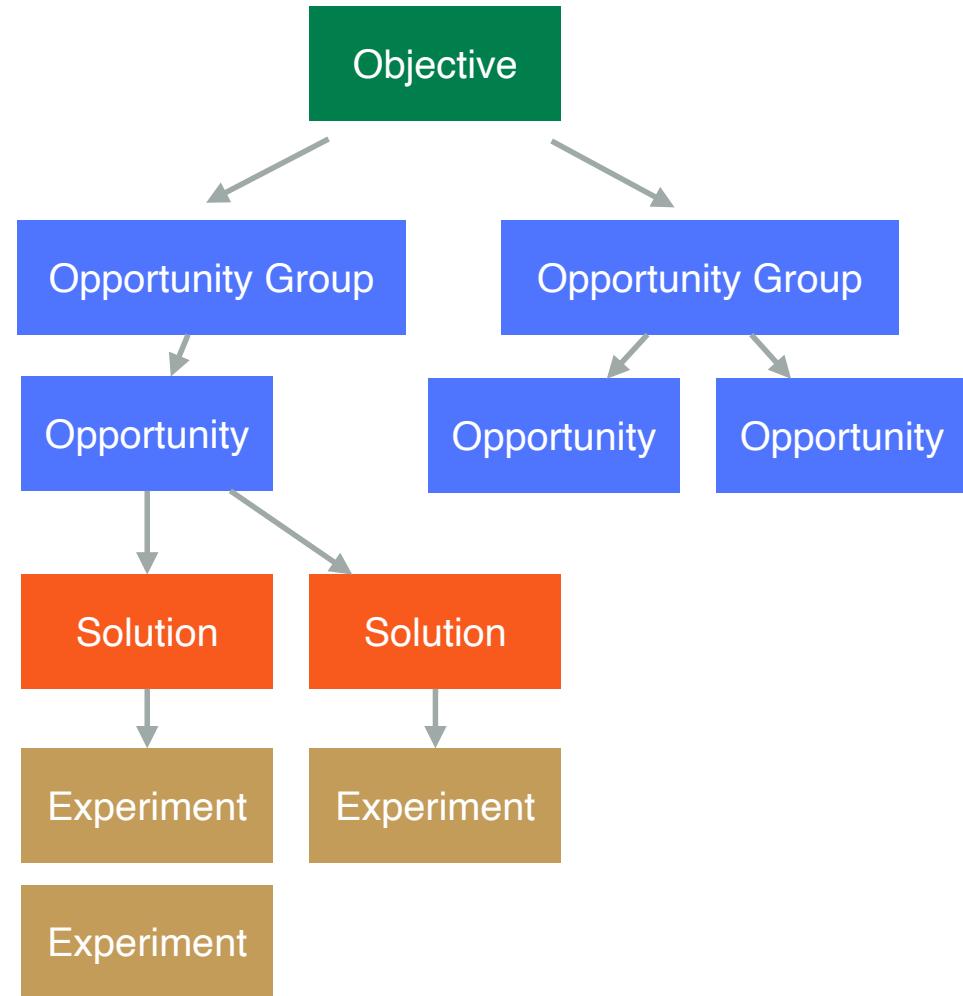
“Product teams rarely consider enough opportunities before jumping into solutions”

Teresa Torres



# opportunity solution tree

Before jumping into solutions and prototypes, take a breath and consider the various ways you might be able to attack this problem

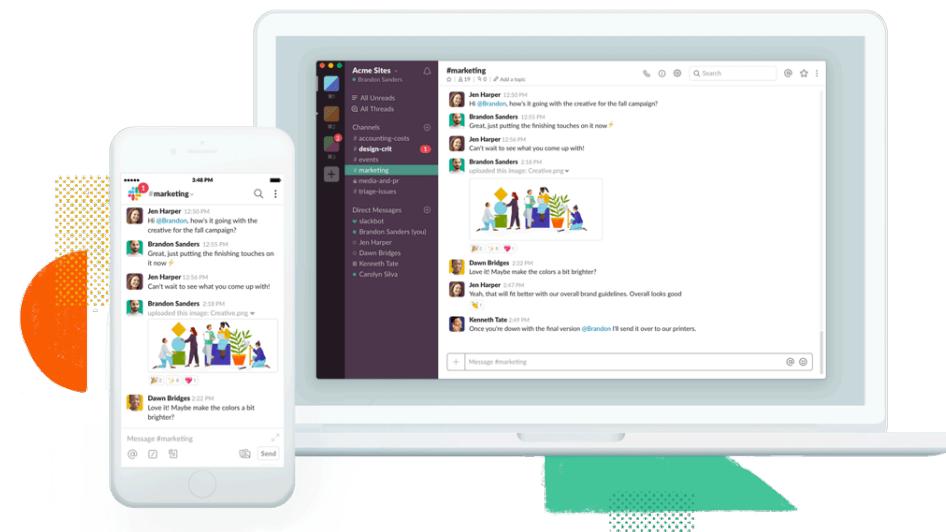




# discovery case study

## Team collaboration service

- **Problem:** showing value to the early market
- **OGs:** Onboarding Experience vs. Education
- **Candidate Solutions:** bots vs tour
- **Risks:** feasibility, usability



# planning techniques: **customer discovery**

## customer discovery:

Discovering and developing a set of  
**reference customers** *in parallel with*  
*discovering and delivering the product*

---

on customer development

**“No facts exist inside the building, only opinions.”**

Steve Blank



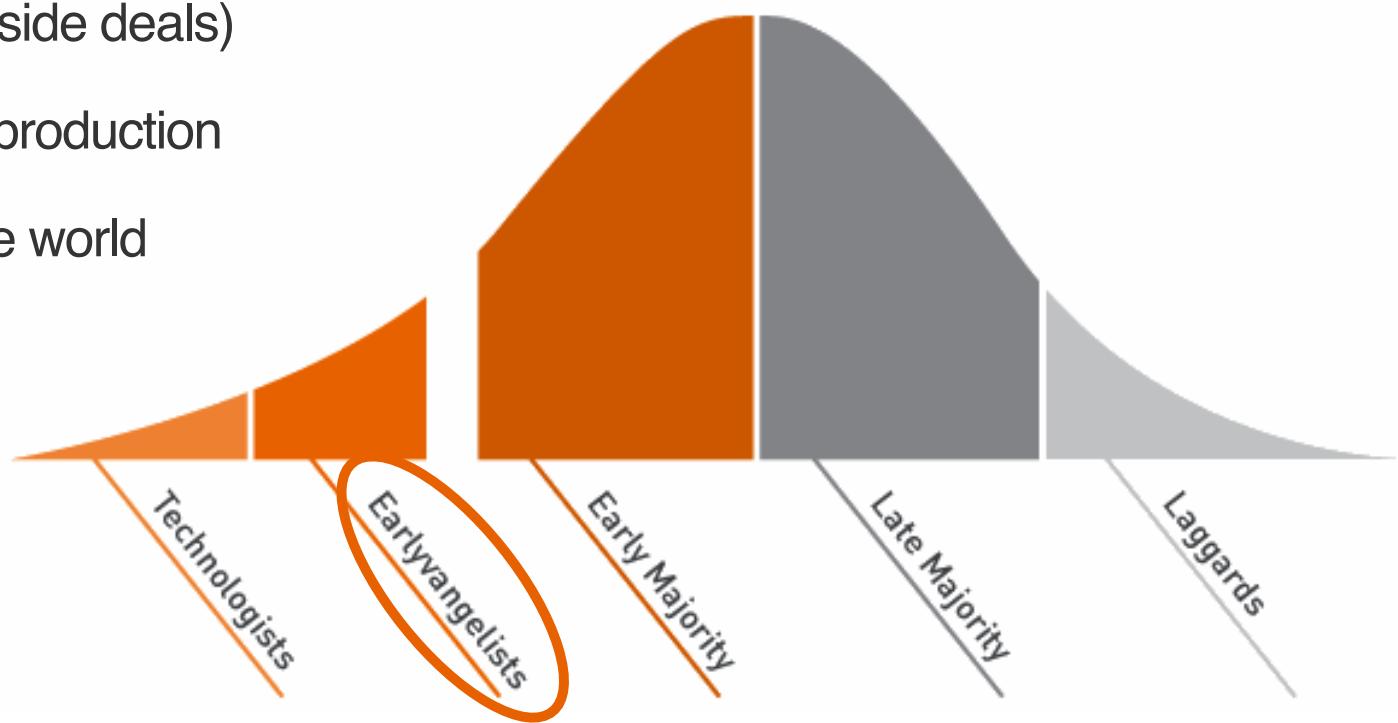


# customer discovery

- Recruit 6-8 “earlyvangelist” customers who are willing to engage deeply
- Your goal is to come up with *a single solution* that all 6 customers love
- We define Product/Market Fit as the *smallest possible product* that meets the needs of these initial customers

# reference customers

- Bought the product (no side deals)
- Running the product in production
- Love it enough to tell the world



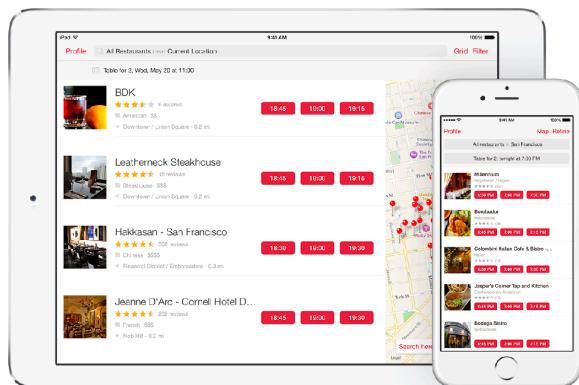
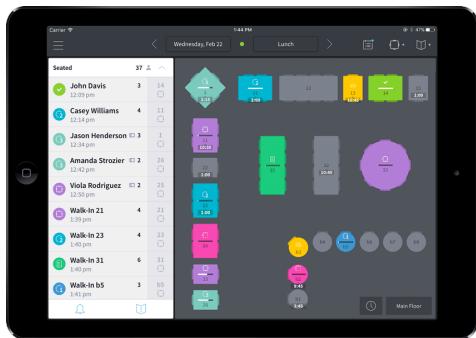
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# customer discovery considerations

- All partners from a *single target segment*
- *One solution* that fits all customer discovery partners
- Securing references vs pre-pay
- Recruiting itself is a demand signal
- Customer discovery vs beta vs early release
- Partnering with product marketing, sales, business development



# discovery case study



## Dining reservation system

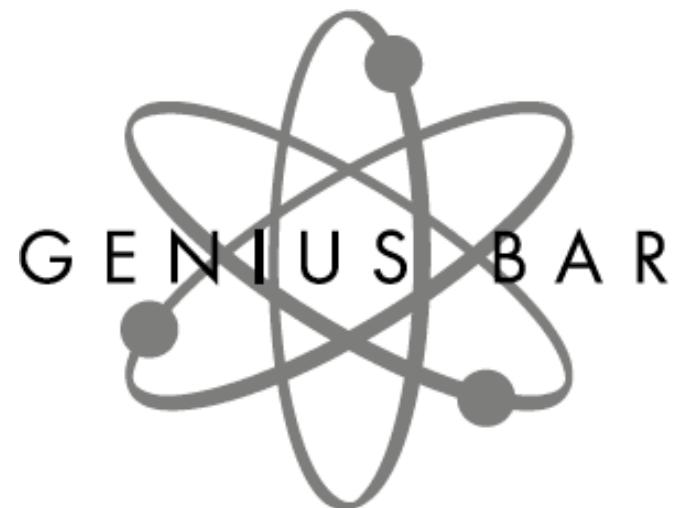
- Two-sided market
- Target segment:  
US, fine-dining, single-site, struggling
- References
- PMF



# discovery case study

## Customer Enabling Tools

- Internal Tools (supporting retail sales)
- Target segment: retail stores
- Partners became internal evangelists



# breakout exercise

## CUSTOMER DISCOVERY TECHNIQUE

Discuss how you might apply this technique to an upcoming effort.

How would you select the customers?

How would you define the program?

Can you anticipate any objections or problems?

# product data

## **data analytics:**

Using data to track and analyze KPIs, support quantitative discovery, and **inform product decisions**

## **data products:**

Using data science to build or improve products by **enabling customer value** in the form of new capabilities, experiences, or performance

---

# metrics concepts

Vanity    vs    Impact

Leading    vs    Lagging

Correlated    vs    Causal

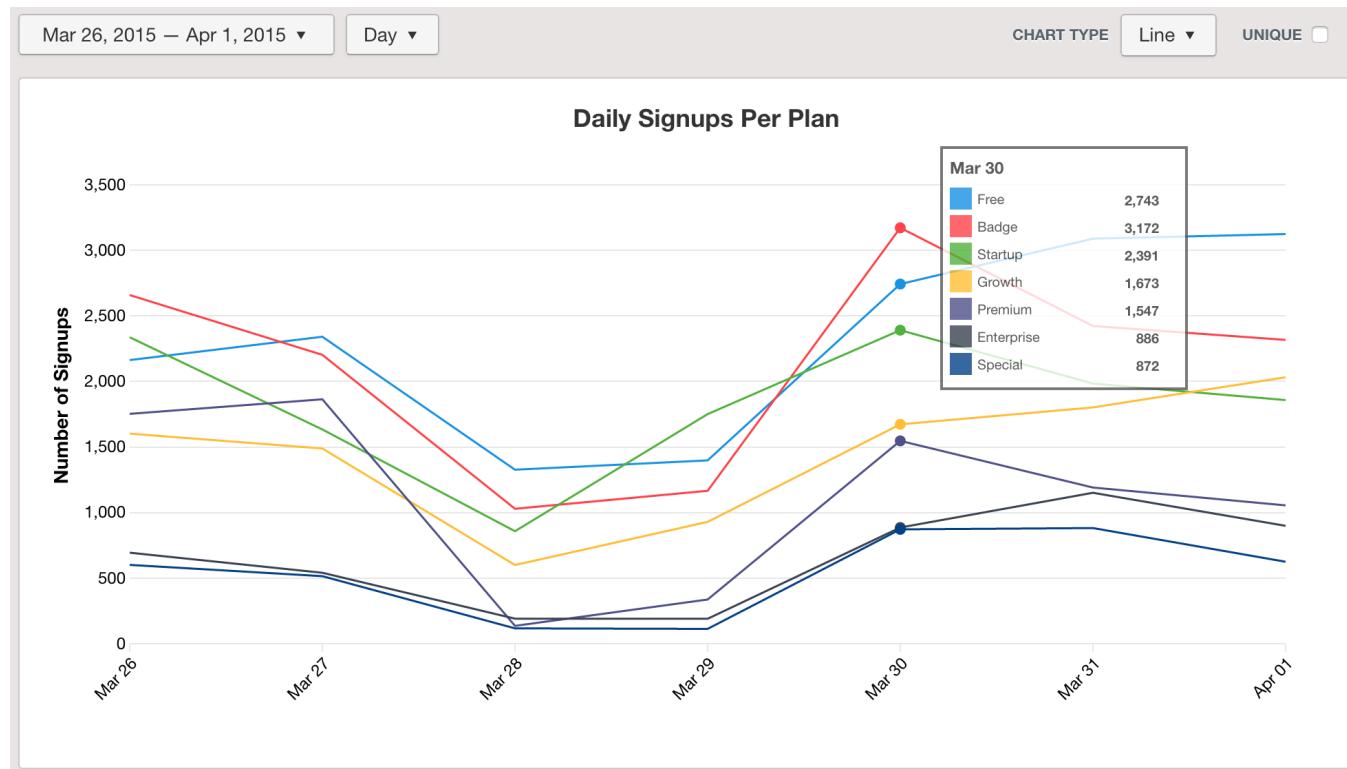


# HEART metrics

Taxonomy of KPIs for measuring the quality of a product experience

<b>H</b> appiness	Actual NPS, % satisfied users
<b>E</b> ngagement	% active users of X / time frame Avg. num key action per user Avg. time between key actions
<b>A</b> doption	Adoption rate Time to first action
<b>R</b> etention	Retention rate Mean time to churn
<b>T</b> ask Success	Completion time Error rate,

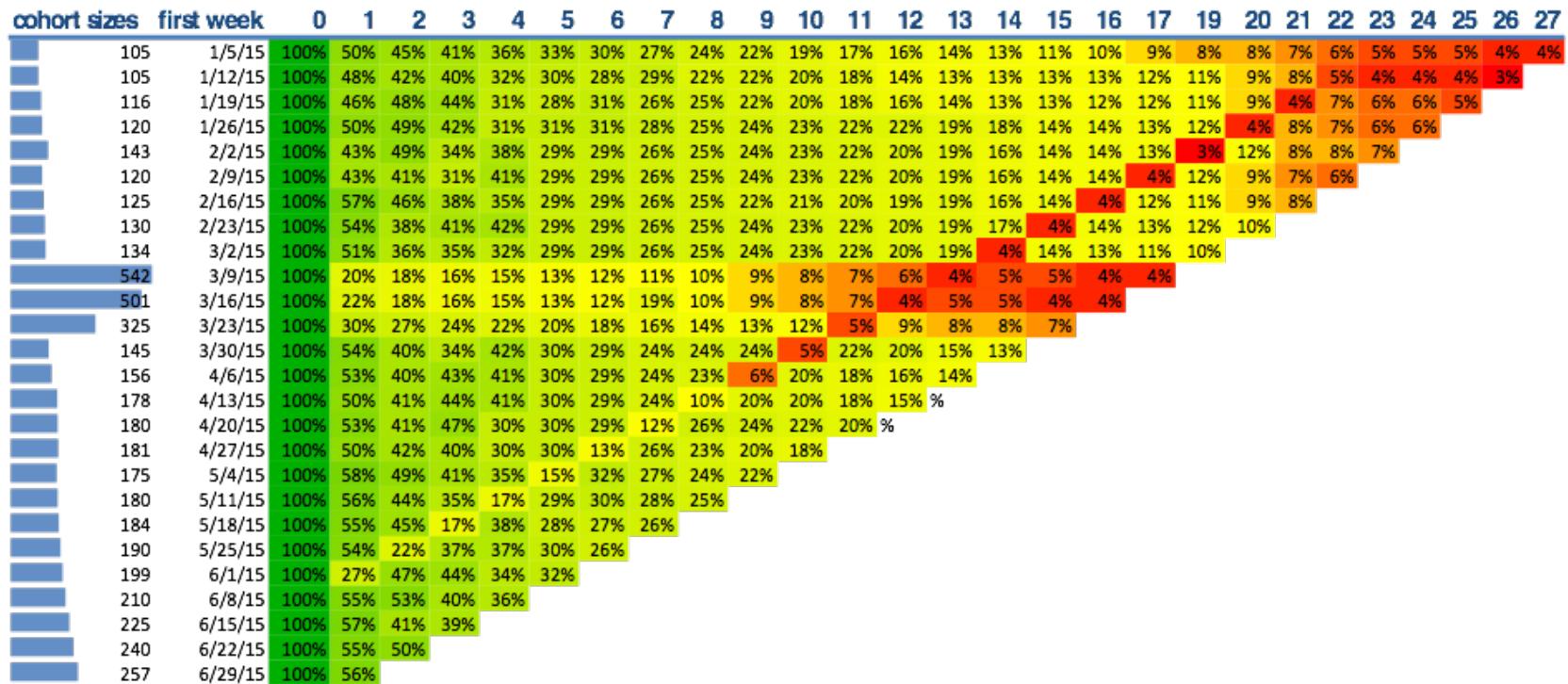
# segmentation analysis



# time-based cohort analysis

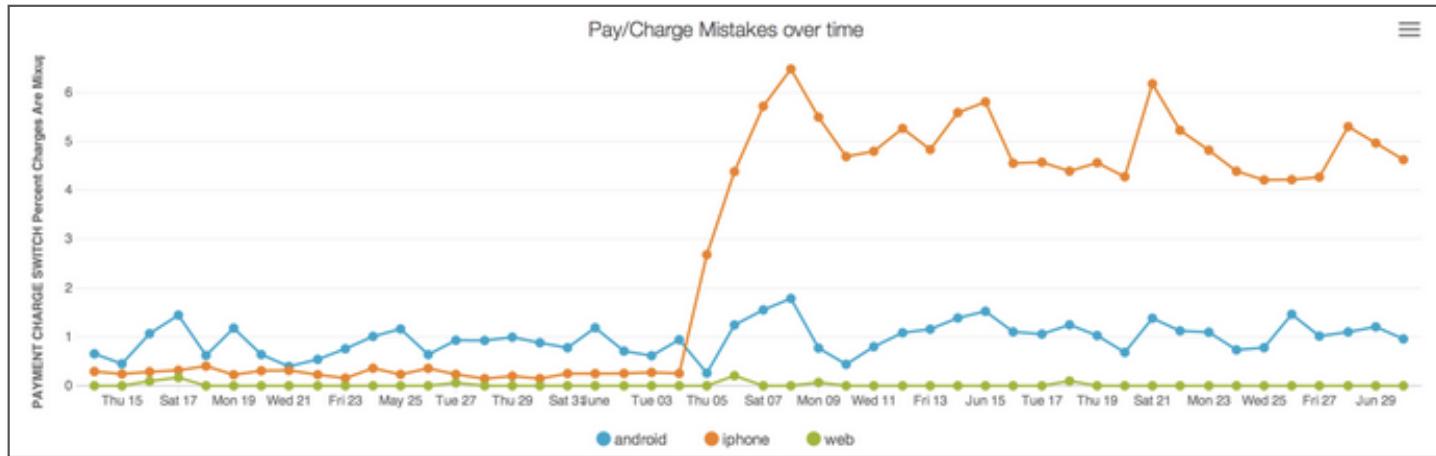
Week	Size	Weeks Later							
		1	2	3	4	5	6	7	8
1/5/23	105	50%	45%	41%	36%	33%	30%	27%	24%
1/12/23	105	48%	42%	40%	32%	30%	28%	29%	
1/19/23	116	46%	48%	44%	31%	28%	31%		
1/26/23	120	50%	49%	42%	31%	31%			
2/2/23	143	43%	49%	34%	38%				
2/9/23	120	43%	41%	31%					
2/16/23	125	57%	46%						
2/23/23	130	54%							

# data visualization



# Example | Data Analysis

venmo



svpg

---

# stages of data enablement

- Instrumentation
- Warehousing
- Reporting & Access
- Embedded Analysts
- Decision Science

# Breakout exercise

METRICS

Which metrics are most important to measure the health of your product?



**PRODUCT  
DISCOVERY**

**ideation  
techniques**



# customer interviews

You can never do too many of these!

Pro Tip: the magic happens when you bring an engineer along

- Are your customers who you think they are?
- Do they really have the problems you thought?
- How does your customer solve their problem now?
- What would it take for them to switch?



# concierge testing

Doing your customer's job on their behalf in order to spot opportunities to better solve their problems

- Often no technology involved
- More generative than evaluative
- Good when there is not a clear idea for the solution

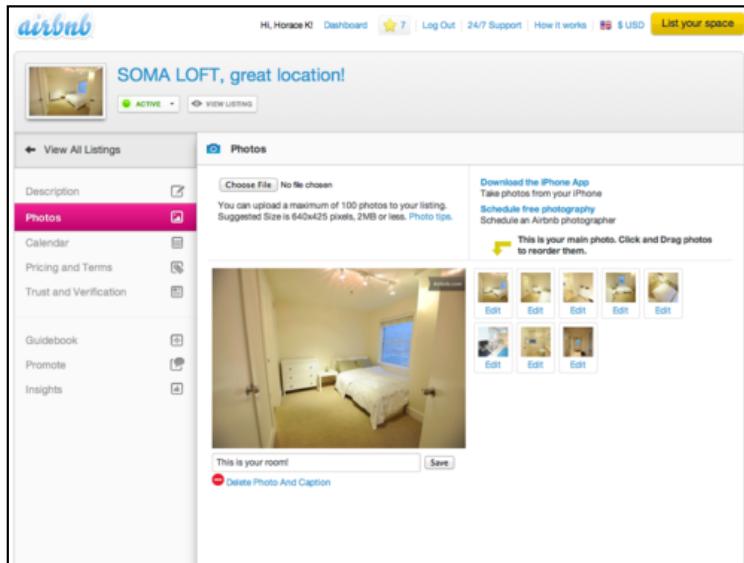
# discovery case study



## In-store and warehouse tooling

- Customer enabling team
- Product teams doing the job of in-store associates
- Led to insights on leverage smartphones

# discovery case study



## Home sharing and rental

- Risks: value, usability
- Founders stayed with hosts
- Tested role of high-quality photos





# private hackathon

Dedicated period where  
normal product work stops,  
and people and teams  
pursue their own ideas

- Directed vs Undirected
- Data spelunking

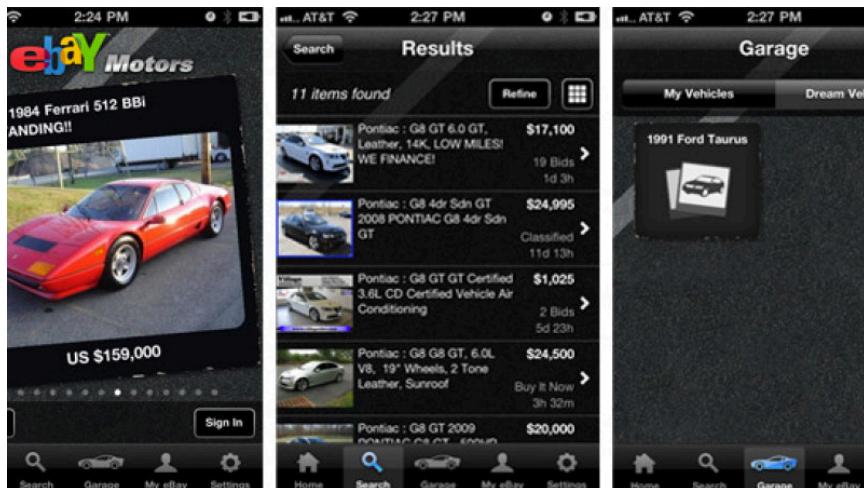


# customer misbehavior

Many exceptional product ideas come from intentionally enabling your product to be used in unintended ways

- Public APIs / Public Hackathons
- “Other” Category
- “Notes” Field

# discovery case study



## Auctions for automobiles

- Intentionally created “Everything Else” category
- Observed activity by users
- Led to dramatic new business opportunities



prototyping  
techniques

# prototyping techniques: **user prototypes**



# user prototype

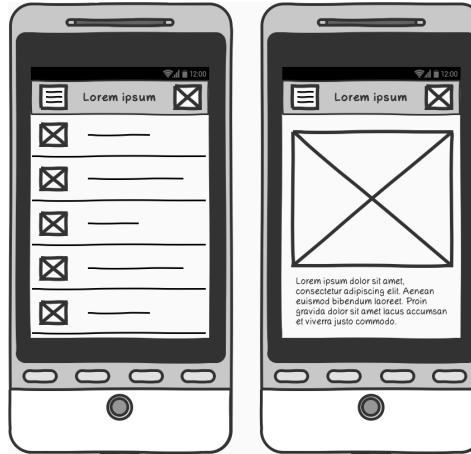
A *simulation* of all or part of a user experience that requires no coding by engineers (normally created by the designers).

Used for rapid internal iteration, as well as viability testing with stakeholders and value/usability testing with users



# fidelity & tools

- Visual fidelity
- Behavioral fidelity
- Content fidelity
- Context fidelity



balsamiq

proto.io

axureRP



Marvel

Xd

Figma

# prototyping techniques: **feasibility prototypes**

# feasibility prototype

```
db =  
MySQLDb.connect("localhost", "username",  
"password", "dbname")  
cursor = db.cursor()  
sql = "select Col1,Col2 from Table1"  
cursor.execute(sql)  
results = cursor.fetchall()  
  
for row in results:  
    print row[0]+row[1]  
  
db.close()
```

These are creating *by and for the engineers* to help tackle technical risks.

These rarely resemble the final product. As with all discovery, speed should be optimized over reuse.

CLOSED for ALTERATIONS ~ OPENING SOON ~  
THE FIRST ONE IN AMERICA !!!!

# 'DRIVE-IN HAMBURGER BAR'

CREATED and OPERATED by McDONALD BROS

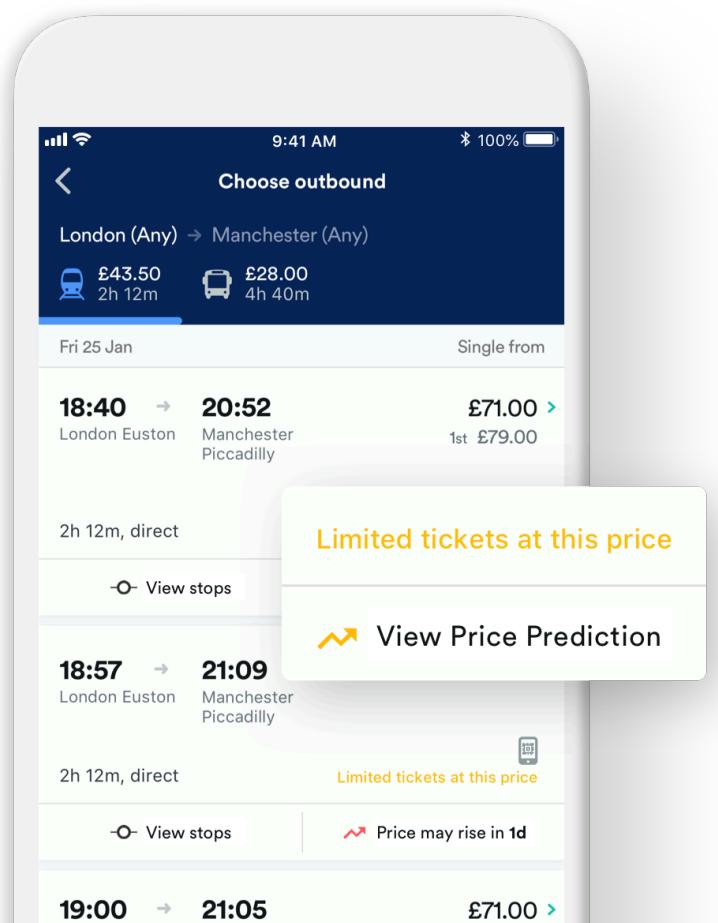


# prototyping techniques: **live-data prototypes**



# live-data prototype

When we have the need for collecting live usage data quickly, a live-data prototype includes some level of working functionality, but is not close to “productized”



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# production software vs live data prototype

- All required use cases
- Instrumentation / analytics
- Test automation
- Scale and performance
- SEO work
- Maintainability
- Internationalization / localization

# prototyping techniques: **hybrid prototypes**



# hybrid prototype

Any of the prototyping techniques may be blended based on the particular set of risks and the experiment you are trying to run.





**PRODUCT  
DISCOVERY**

testing  
techniques

# testing techniques: **testing usability**



# usability testing

Observing how users perform on specific tasks within an experience.

May be in person or virtual, may be supervised or unsupervised, may use a prototype or actual product.



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# recruiting for usability or user testing

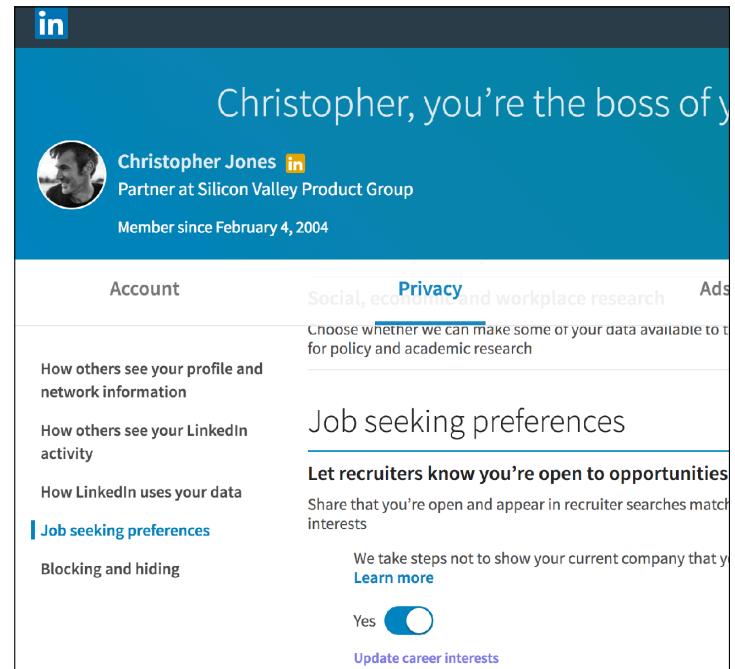
- Customer Discovery Program
- In product
- Intercept Testing (adwords, social media, classifieds)
- Agencies, [usertesting.com](http://usertesting.com)
- Customer service or success teams

testing techniques:  
**testing value: market demand**



# fake door test

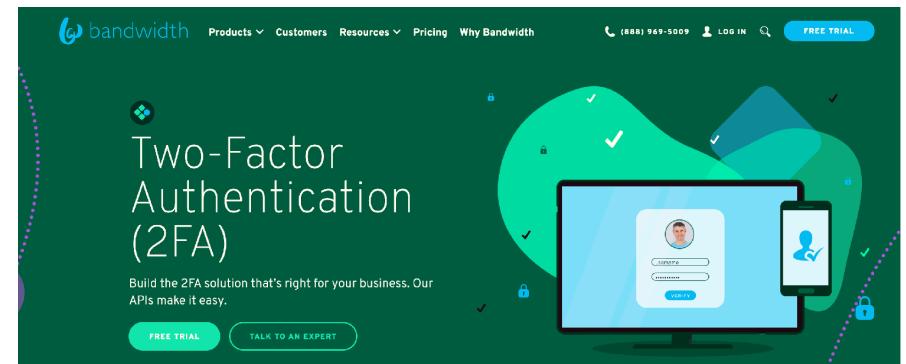
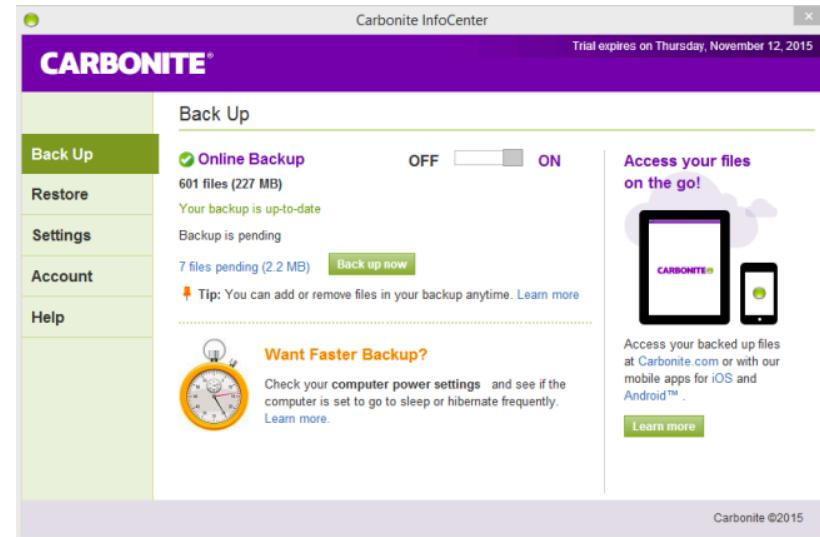
Measuring interaction with a feature control for new functionality that hasn't yet been built.





# landing page test

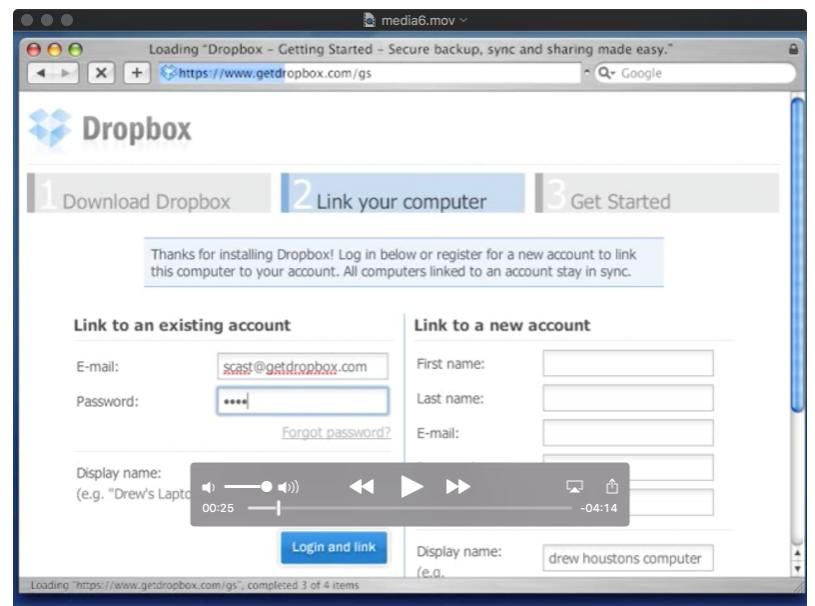
Bringing traffic to a pitch page for a product that doesn't actually exist, then measuring conversion on some call-to-action for that product.





# explainer video

Creating a video of a prototype and measuring conversion on some call-to-action.



testing techniques:  
**testing value: qualitative**



# qualitative user testing

An expansion of usability testing where the tester engages more deeply with test subjects on the topic of **value**.

Often reveals unexpected insights.



# user testing flow

Frame	<p>“how do you currently solve this?” “what do you expect to see?”</p>
Introduce	<p>“would you look at a prototype?” “please think aloud”</p>
Tasks	<p>“please try this task: ....” look for the magic moments</p>
Debrief	<p>“how does this compare with now?” “how would you improve it?”</p>
Value	<p>“are you ready to sign up?” “would you recommend to a friend/co-worker?” “if not, what will it take?”</p>

# assessing value

Time: follow up, non-trivial trial

Reputation: NPS, intro to peers/boss

Cash: pre-order, LOI

Behavior: active switch from  
incumbent

*“Prototype as if you  
know you’re right,  
but test as if you  
know you’re wrong”*

d. 

---

on...

“You don’t get the answer from any one user test, but every test provides another piece of the puzzle.”

Google



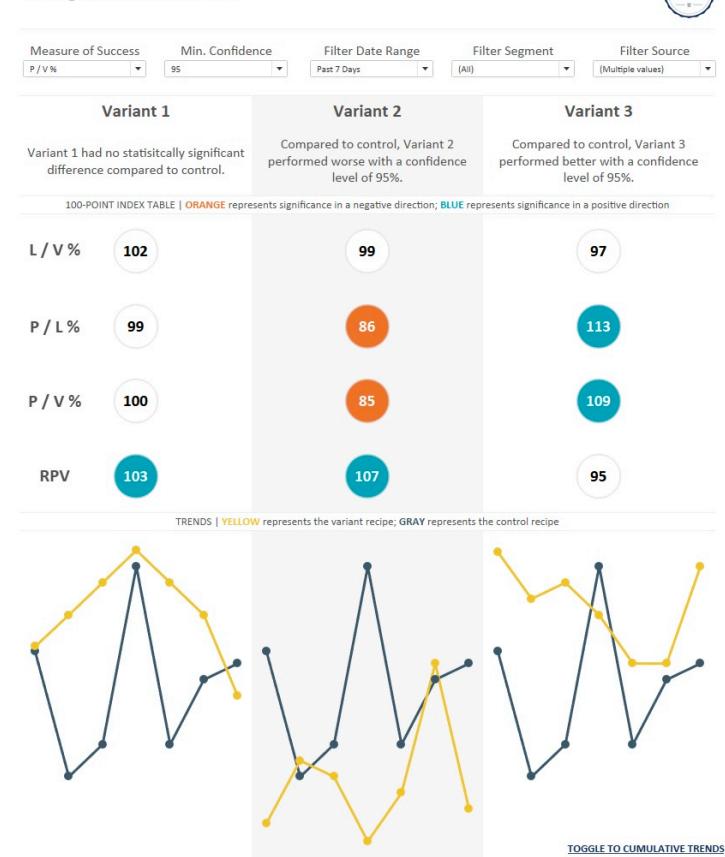
testing techniques:  
**testing value: quantitative**



# A/B testing

Using live traffic from real users to compare quantitative outcomes for a new product innovation or optimization with a base line.

Testing Dashboard: Test #206



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# requirements for a/b testing

- Live-data prototype or product
- Testing framework (cohorts, toggles, dashboards)
- Traffic
- Hypothesis and target KPIs

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# variations and alternatives for a/b testing

- Invite-only testing
- Opt-in testing
- “Labs” testing

# testing techniques: **testing feasibility**

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# feasibility concerns

- Do we know how to build this?
- Do we have the right skills on the team?
- Do we have enough time?
- Do we have the right architecture and components?
- What are the supply chain and manufacturing implications?
- Do we understand the dependencies?
- Can we scale it?
- Is it secure?
- Do we have an infrastructure to test and operate it?

# tools for testing feasibility

- Continuous collaboration with engineering - user prototypes
- Feasibility prototypes (speed of learning over reuse)

# testing techniques: **testing viability**

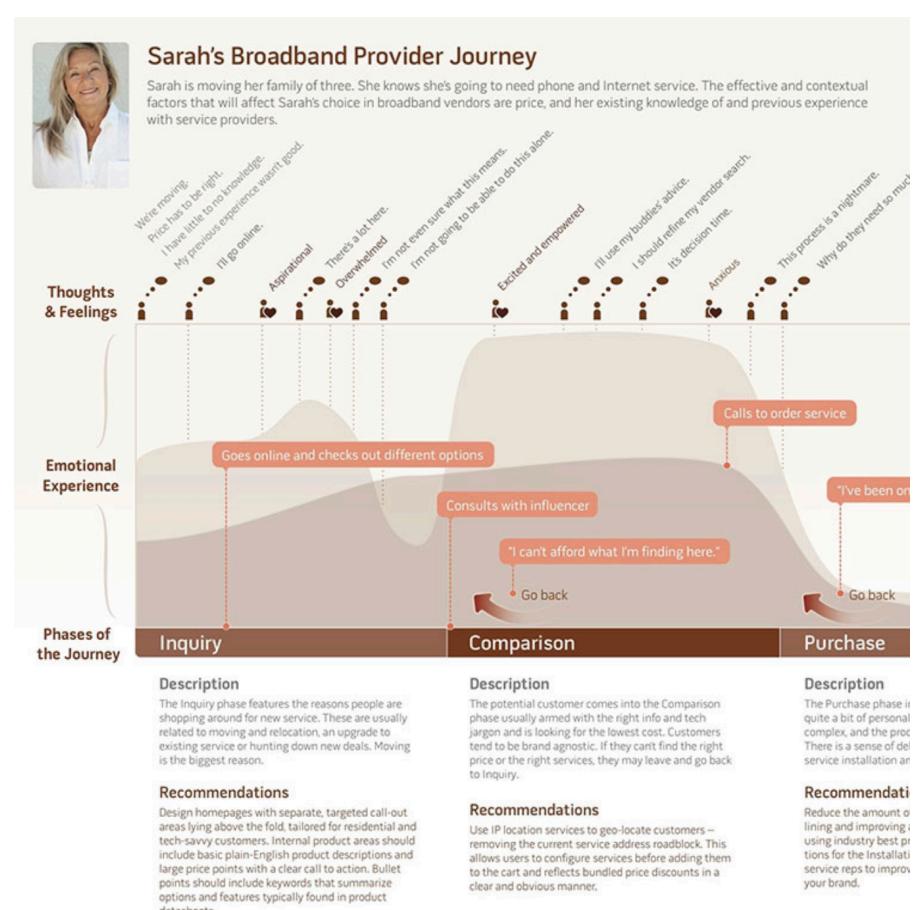
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# business viability concerns

- How will customers learn about and obtain our product?
- Is the product compliant with any relevant regulations or laws?
- Is the product consistent with our partnership obligations?
- Is the product compatible with our brand?
- Are there any ethical concerns?
- Are we prepared to deploy and support this product?
- Does the product have a path to profitability?

# customer journey testing

Undirected test of the decision ecosystem. Uncovers truths about channels, segmentation, positioning, evangelists, etc.





# stakeholder testing

Product walkthrough, usually with a user-prototype, with key stakeholders to uncover constraints

## Principles

- **Know the stop signs vs yield signs**
- **Everyone has a voice, but not a vote**
- **Evidence beats opinions**
- **Avoid group meetings**



# pre-mortem GTM assumptions testing

Giving the extended product team an opportunity to express all functional concerns over a specific product opportunity early on in the discovery process

Examples:

- Is it the right customer?
- Is our sales channel aligned?
- Are incentives aligned to make it successful?
- Do we have the right channel?
- Does it provide enough value to justify price?



adoption

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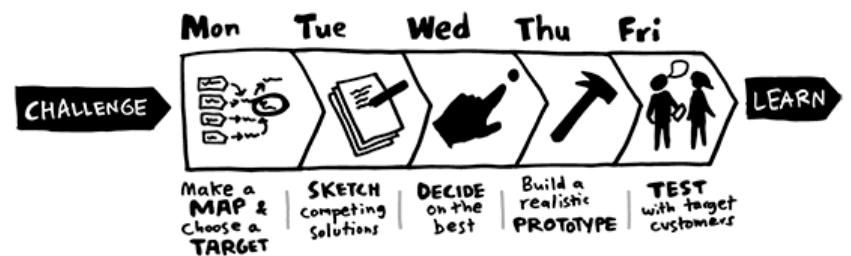
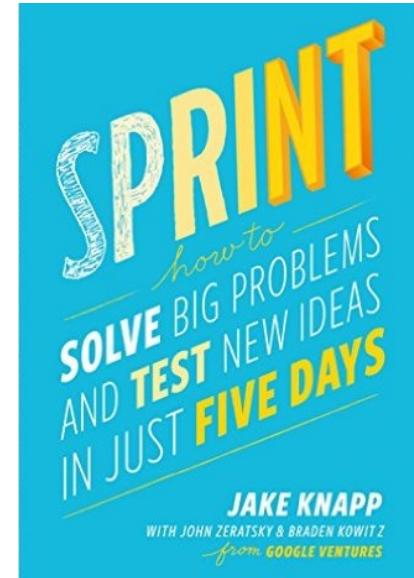
# discovery pitfalls

- Confirmation-biased discovery
- Over-built discovery
- Over-processified discovery
- Partial-team discovery
- One-tool discovery
- Big-bang discovery
- Outsourced discovery

# discovery sprints

Template for intensive, time-boxed discovery that moves from amorphous problem space to user testing a solution in one week

Good for teams that are new to discovery, working on something really big, or just stuck.





# pilot teams

Rolling out concepts with a focus on fully transforming a small number of teams rather than partially transforming a large number of teams.

- Allows for A/B testing
- Stack the deck with early adopters
- Learn
- Tell the stories to leverage success

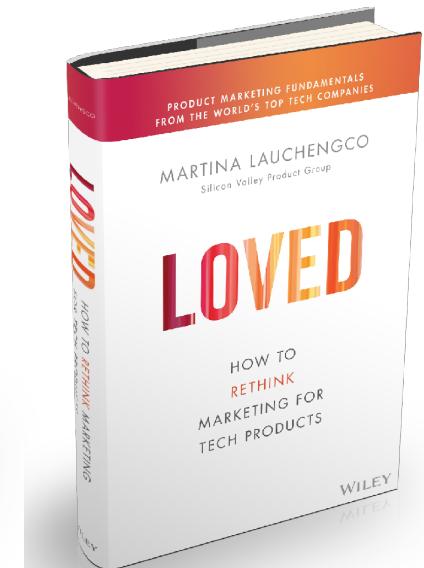
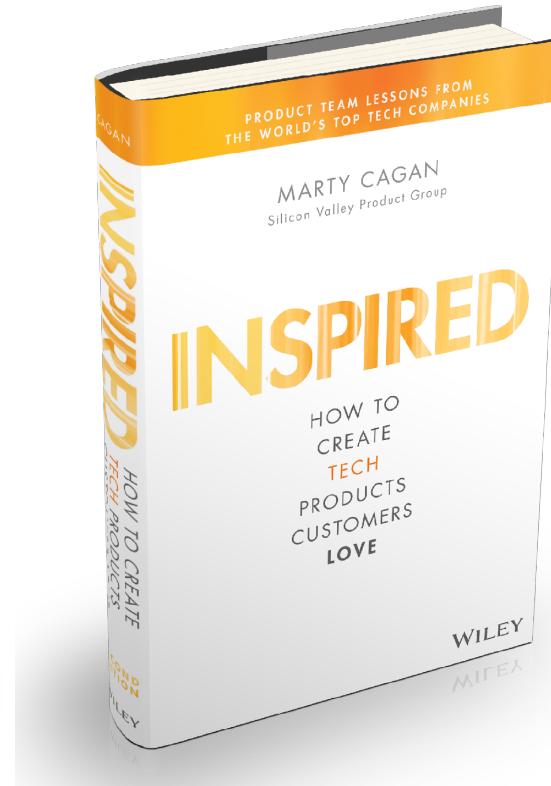
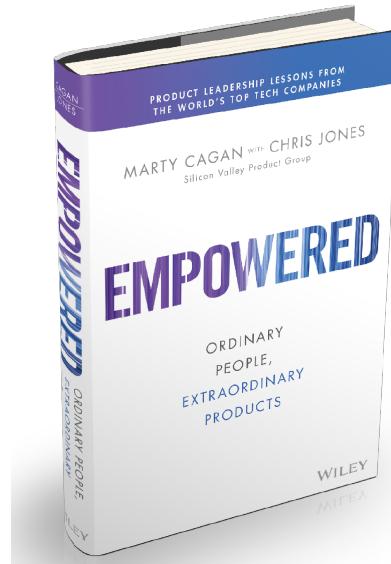
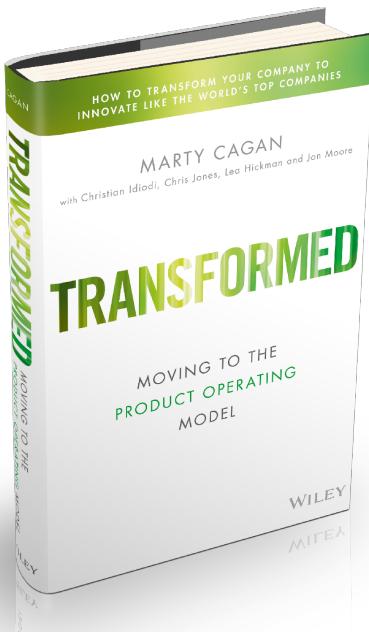


# outcome based roadmap

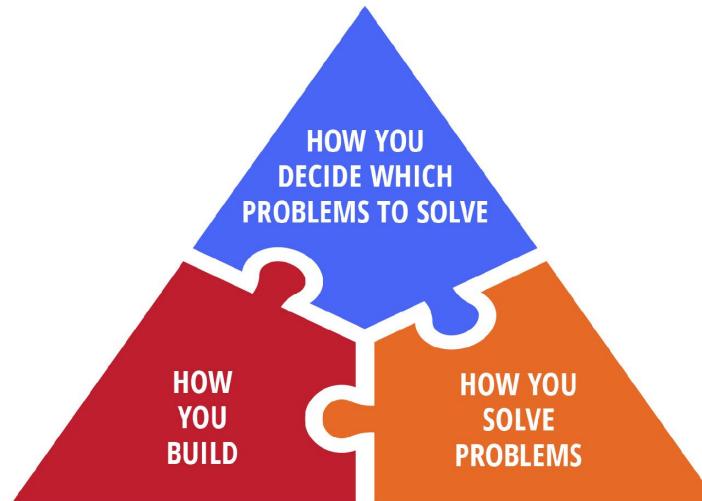
A transitional solution to begin to change the conversation. It consists of annotating roadmaps with desired business results, and measuring actual outcomes against those hoped for results.

# closing thoughts

# learning more



## DIMENSIONS



## CONCEPTS



## COMPETENCIES



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# thank you

- [www.svpg.com/articles](http://www.svpg.com/articles)
- [www.svpg.com](http://www.svpg.com) newsletter
- [lea@svpg.com](mailto:lea@svpg.com)



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# Office hours