2 — Process

From Code to Product
gidgreen.com/course
Lecture 2

괴 Product development for startups

괴 Or... Customer development

괴 Or... How to avoid making an ice cream glove

괴 Or... How to discover the ice cream glove is actually a great idea
Lecture 2

- Companies vs startups
- Product—Market fit
- The idea
- The first version
- Collecting data
- Iteration and pivots
- Are we there yet?
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“Normal” companies

- Existing product
- Known market
- Established path to market
- Brand recognition
- Paying customers
- Revenue > Costs (usually)
- Incremental development
Startup companies

- **Existing product** No product
- **Known market** Uncertain market
- **Established path to market**
- **Brand recognition** Totally unknown
- **Paying customers** No customers
- **Revenue > Costs** Zero revenue
- **Incremental development** Clean slate
A company’s priorities

• Increase profit
• More customers
• More $ per customer
• Improve product
• New products
• New business area
• Acquire others
A startup’s priorities

• **Increase profit**  Don’t die
• **More customers**  Find some users
• **More $ per customer**  Get $ from users
• **Improve product**  Create a product
• **New products**
• **New business area**  Find business area
• **Acquire others**  Get acquired
Development by Waterfall

- Requirements
- Design
- Implementation
- Verification
- Maintenance

1 to 5 years...
Development for startups

1 month or less...

Ideas → Implementation → Collect Data

1 month or less...

Requirements → Design → Implementation

Verification
Why do companies fail?

- myspace
  - Surpassed
- Sun
  - Undercut
- Kodak
  - Superseded
- Yahoo!
  - Attrition
Why do startups fail?

• Running out of...
  – Money
  – Ideas
  – Energy
  – Faith

• Before reaching...
  – Break even
  – A (lucky) exit
A startup is...

“...a human institution designed to deliver a new product or service under conditions of extreme uncertainty.” — Eric Ries

“...an organization formed to search for a repeatable and scalable business model” — Steve Blank
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Product—Market Fit

That incredible moment when you realize that many people truly need (or want) your product and you can make real money from it.
Startup stages

Idea → Version 1 → Product → Efficiency

Time

Product Market Fit
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Sources of inspiration

- Blogger
  Own needs

- Copyscape
  Business experience

- Ushahidi
  Current events

- Yammer
  Others’ success

Wouldn’t it be cool?

Everyone’s doing it!
Immediate questions

• Is it feasible?
• Why now?
• Why you?
• Who would want it?
• How will it grow?
• Could it make money?
• Is it defensible?
• Define success or failure
No good answers?
Why now?

- **waze**
  - Critical mass

- **zynga**
  - New platform

- **reddit**
  - Troubled incumbent

- **Steam**
  - Bandwidth

- **Alibaba.com**
  - Macro shifts

- **twitter**
  - No one thought of it!
Some trends

**Technology**
- Cloud computing
- Big data
- Personal genetics
- Self-driving cars
- Cryptocurrencies
- 3D printing

**Society**
- Ageing in West
- Consultants
- Financial crises
- BRIC countries
- Mobiles in Africa
- Outsourcing

Be a trend spotter, not a trend setter
Can it be done?

• Break into layers
• Find the hardest part
  – Algorithm
  – Performance
  – Compatibility
  – Scaling
• Find equivalents
• Do you know how?
Who would want it?

• Talk to your ideal customer
  – Use connections
  – Cold calls / emails
  – (Surveys)
• Search for competition
• Check search volumes
• Vaporware/prototypes
• Ask friends and family
How will it grow?

Pure virality

Self promoting

Word of mouth

Search engines

Paid advertising

Direct sales
But... Google’s early growth

 Queries per day

 Monthly growth

 Dec 98 | May 99 | Oct 99 | Mar 00 | Aug 00 | Jan 01

0% | 25% | 50% | 75% | 100%
Could it make money?

• What’s the model?
  – Is there enough pain?
• Is the market...
  – Large enough?
  – Long term?
  – Growing?
• Is there competition?
• Are there per-customer costs?
Is it defensible?

- Amazon
  - Economy of scale
- Google
  - Technology
- Tripadvisor
  - Accumulation
- Microsoft
  - Lock-in
Is it defensible?

- Network effects
- Brand awareness

- First mover advantage
- Outspending on advertising
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The first version

• “Minimum viable product”
• Identify early adopters
• Build quickly
• Design for learning
• No barriers to use
• Aim to fail fast
What’s in?

• Simple interface
• Some explanation
• Metrics
• Feedback form
• Final product name
• Rapid deployment
What’s out?

- Beautiful interface
- Peripheral features
- Lots of options
- Scalable infrastructure
- Business model
- Bugs and glitches
Early Google

Search the web using Google!

Index contains ~25 million pages (soon to be much bigger)

About Google!

Stanford Search Linux Search

Get Google! updates monthly!

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Google now
Early Amazon

Welcome to Amazon.com Books!

One million titles, consistently low prices.

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SPOTLIGHT! -- AUGUST 16TH

These are the books we love, offered at Amazon.com low prices. The spotlight moves EVERY day so please come often.

ONE MILLION TITLES

Search Amazon.com's million title catalog by author, subject, title, keyword, and more... Or take a look at the books we recommend in over 20 categories... Check out our customer reviews and the award winners from the Hugo and Nebula to the Pulitzer and Nobel... and bestsellers are 30% off the publishers list...
Amazon now
Early Facebook

Welcome to Thefacebook!

Thefacebook is an online directory that connects people through social networks at colleges. We have opened up Thefacebook for popular consumption at Harvard, Columbia, Stanford, Yale, Cornell, Dartmouth, UPenn, MIT, and now BU and NYU.

Your facebook is limited to your own college or university.

You can use Thefacebook to:
- Search for people at your school
- Find out who is in your classes
- Look up your friends' friends
- See a visualization of your social network

To get started, click below to register. If you have already registered, you can log in.
Facebook now

Connect with friends and the world around you on Facebook.

See photos and updates from friends in News Feed.

Share what’s new in your life on your Timeline.

Find more of what you’re looking for with Graph Search.

Sign Up

It’s free and always will be.

First Name

Last Name

Your Email

Re-enter Email

New Password

Birthday

Month

Day

Year

Why do I need to provide my birthday?

Female

Male

By clicking Sign Up, you agree to our Terms and that you have read our Data Use Policy, including our Cookie Use.

Sign Up

Create a Page for a celebrity, band or business.
Version 1.0

“If you’re not embarrassed when you ship your first version you waited too long... You can never fully anticipate how an audience is going to react to something you’ve created until it’s out there.”

— Matt Mullenweg, WordPress
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Collecting data

• Change hats
• Observation
  – Direct
  – Remote
• Feedback emails
• Metrics
• Brand monitoring
Direct observation

- Find subjects
  - Advertise
  - Public places
  - Acquaintances
- Start from blank
- Don’t interfere
  - Questions allowed
- Discuss at end
Power of the few

![Graph showing the relationship between observations required and problem likelihood with 90% certainty.](gidgreen.com/course)
Remote observation
Feedback emails

• Read by product team
• Answer them
• Feedback = pre-sales
• Keep a tally
• Metadata
• Watch for jewels
Feedback tools

- get satisfaction
- Kampyle
- user voice
Real metrics

- Unique visits per ...
- Registrations per ...
- Downloads per ...
- Searches for product name per ...
- Engagement per user
- Retention per user
- Revenue per ...
Vanity metrics

- Total ...
- “Hits”
- Traffic from:
  - Bots
  - Script kiddies
- Publicity
- Purchased users
- One-time revenue
Brand monitoring

Google Alerts

Hootsuite

social mention

*
The building

“In a startup no facts exist inside the building, only opinions... Get the hell outside the building.”

— Steve Blank
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Iterate to increase...

• For customer
  – Features
  – Usability
  – Marketing

• For you
  – Engagement
  – Growth rate
  – Revenue
Iteration priorities

• Bugs first!
• Show stoppers
• Popular requests
  – But maintain your vision
• Easy improvements
• Jewels = market openers
• Avoid specials
Serve, don’t obey

“If I had asked people what they wanted, they would have said faster horses.”

– attributed to Henry Ford

“A lot of times people don't know what they want until you show it to them.”

– Steve Jobs
Don’t be scared!

From 1,000 to 1,000,000 users at 10% per month
Persevere or Pivot?

• Metrics improving?
• Still learning?
• Stuck serving the few?
• Frustrated?
• Is failure defined?
• Be brave, be swift
Product Pivots

• Zoom in
• Zoom out
• Platform ↔ Application
• Technology
• Application of technology
• Reuse accumulated data
Other Pivots

- Business model
- Target customers
- High margin ↔ High volume
- Sales channel
- Clean slate
Famous Pivots

- Adobe
- flickr
- Groupon
- Wikipedia
- Yelp
- YouTube
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Are we there yet?

“Startups occasionally ask me... whether they have achieved product/market fit... if you are asking, you’re not there yet.”

— Eric Ries

“In a great market — a market with lots of real potential customers — the market pulls product out of the startup.”

— Marc Andreesen
“You can always feel when product/market fit isn't happening. The customers aren't quite getting value out of the product, word of mouth isn't spreading, usage isn't growing that fast, press reviews are kind of "blah", the sales cycle takes too long, and lots of deals never close. And you can always feel product/market fit when it's happening. The customers are buying the product just as fast as you can make it... Money from customers is piling up in your company checking account. You're hiring sales and customer support staff as fast as you can. Reporters are calling because they've heard about your hot new...”

— Marc Andreessen
A rule of thumb

“In my experience, achieving product/market fit requires at least 40% of users saying they would be ‘very disappointed’ without your product.”

— Sean Ellis
Books

- The Lean Startup by Eric Ries
- Getting Real: The smarter, faster, easier way to build a successful web application by 37Signals

gettingreal.37signals.com
A story...

Sig Software → CopySentry

Goolgler → Copyscape

Siteliner → CopyScape