Startups and the Scientific Method
Scientific Method

1. Ask Question
2. Do Background Research
3. Construct Hypothesis
4. Test with an Experiment
5. Analyze Results
   - Draw Conclusion
6. Think! Try Again
   - Hypothesis is True
   - Hypothesis is False or Partially True
7. Report Results
Why are you here?
What is a Startup?
What is a Startup?

A temporary organization that’s designed to search for a repeatable and scalable business model

— Steve Blank
Corporations

Dec 31st, 1600
• Org Charter to manage

1856
• 300 years of business knowledge gathered
• Created an organization chart to manage the knowledge

1908
• Harvard MBA

Startup
• Traditional tools of an MBA are irrelevant.
Hi! I'm Alex Osterwalder

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In my writing, speaking, and the software company I co-founded, I obsess with making strategy, innovation and entrepreneurship simple, practical, and applicable.

I invented the Business Model Canvas, co-founded strategyzer.com and lead authored the two international bestsellers Business Model Generation selling over a million copies in 30 languages, as well as Value Proposition Design.
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The Business Model Canvas

- Organize our thinking
- List all our hypotheses
- Validate our hypotheses (scorecard)
- Search for our business model
Why Startups Fail?

- **Process**
- **Concept**
  - Create Materials/Positioning
- **Dev**
  - Early Buzz
  - Hire Sales VP/Staff
  - Hire first Bus Dev
  - Waterfall
  - Q/A
  - Tech Pubs
- **Testing**
  - Launch Event
  - Branding
  - Build Sales Organization
  - Do deals for EoS
Why Startups Fail?

What we will address

Startups fail from a lack of customers
Customer Discovery
Customer Discovery

- **Who do you want to talk to?**
  - Find 100 names (Social Media - LinkedIn, etc)
  - B2B or a B2C product?
  - Face to face! No surveys!
  - **Don’t** try to sell something
Customer Discovery

• Existing Market
  • Easy to interview

• New Market
  • Steve Jobs or Henry Ford problem
  • Understand your customer - A day in the life
  • Don’t validate your product, validate
Customer Discovery

- **Why 100 customers?**
  - Product Market Fit
    *get stories not speculations*
  - Unbiased customer need
  - Channels, Partners
  - Customer acquisition, activation & retention
  - Costs and metrics that matter?
Customer Discovery: Why?

• **Death by Demo**
  - Validate a problem
  - Validate how best to solve the problem not your product

• **Customers Lie**
  - Will they buy/invest in it?
  - Understanding your customers: the *User*, the *Buyer*, the *Saboteur*
Customer Discovery can surprise you

Clean Water $\rightarrow$ Potential?

NLP $\rightarrow$ Potential?
Business Model Canvas
Value Proposition
Value Proposition

• What **product** are you building? What **gain** are you creating? What **pain** are you solving?

• Does it solve a **problem** or a **need**. Find your product/market fit!

• MVP Reaction - Physical

• MVP Reaction - Virtual

• Validate qualitatively, verify quantitatively
Defining your VP

• Does your product **produce savings**?  
  eg. time, money, effort, etc

• Does your product make the customers **feel good**?  
  eg. entertainment, pain relief, etc

• Does it **have new features**?  
  eg. in comparison with existing products in market, etc

• Does it **end challenges**?  
  eg. easier to use, etc

• Does it add to **social gain**?  
  eg. trust, connectivity, social status, etc
Business Model Canvas
Customer Segments
Customer Segments

• Who are you customers?
  • Geographic, Social, Demographic, etc
  • A day in the life?
• Why will they buy your product?
• Account for Multi-sided Markets
Business Model Canvas
Channels
Channels

• How do you connect your Value Propositions with your identified Customer Segments?

• Type of Channel:
  • Physical Channel
  • Virtual Channel
Business Model Canvas
Customer Relationships
Customer Relationships

• How do I get customers?
• How do I keep customers?
• How do I grow customers?
Acquire

- Earned: Conferences
  - $1000 per conference x 5 = $5000 per yr
- Paid: Web Advertising
  - Google Adwords: 10,000 x 0.75 = $3750
- In Person Sales:
  - $1000 x 3 = $3000
- Social Media
  - $0

Activated Customers

- 10% of 10500 = 1050

Sales Cost

- $40 x 40hrs/week x 24 weeks x 10 people = $384k (per year)
- ~30% IBM Equity Share = $115k
- ~100k Bloomberg x 3 = $300k
- ~800k / 1050 customers = $760

Customer Acquisition Cost

- $14 - Marketing Cost
- $760 - Sales Cost
- $775 - Total Cost

Churn

- 1 / average # months of usage = 1 / 36
- 0.03
Business Model Canvas
Revenue Streams

• How does your startup make money from each customer segment?

• What is the value of your product?

• What is the strategy of your revenue model?

• What is the pricing or tactics you will use? eg. Free for a month? Paid later?
Business Model Canvas
Key Resources
Key Resources

• What are the assets you require to make your model work?
  
  • **Physical** Assets (office building? cars?)
  
  • **Financial** Assets (credit line? raising money?)
  
  • **Intellectual** Assets (customer lists? patents?)
  
  • **Human** Assets (developers? sales people?)
Business Model Canvas
Key Partners
Key Partners

• Who are the Key Partners or Key Suppliers you need for the Key Resources we just found?

• What Key Activities do they perform for you?

• What kind of alliance do you need to make with them?
  eg. Joint Ventures? Supplier-Buyer? Non-Competitor alliances?
Key Partners

- **Joint Business Development** - Intel
  *Joint promotion of complimentary products*

- **Strategic Alliance** - Starbucks & Pepsi, iPod (Music Labels)
  *Compliment your product to build a “whole” product*

- **Key Suppliers** - Apple & Foxconn
  *Outsource a part of your company to another company*

- **Coopetition** - Trade shows, standards groups

- **Traffic Partners** - Travel sites
Business Model Canvas
Key Activities
Key Activities

• What are the Key Activities do you need to perform for your startup to succeed?

• Types of Activities:
  • Production
  • Problem Solving
  • Platform & Networking
Business Model Canvas
Costs
Costs

• What are the costs to operate the business model we just generated?

• Find:

  • Most important costs
  • Most expensive resources
  • Most expensive key activities
Business Model Canvas
Market Analysis
Petal Diagram

Financial Information Market
(2011 Burton-Taylor Report)

Bloomberg (30.44%)
Thomson Reuters (30.05%)
SunGard MarketMap (15.18%)
FactSet (12.60%)
Morningstar (12.31%)
Moody's Analytics (11.70%)
McGraw-Hill Financial (10.25%)
Competitor Revenue Strategy

• Fee-for-Service Model / Usage Model
  • By Markets - Commodities, Derivatives, Equities, etc
  • By Solutions—Investment Banking, Hedge Funds, Private Equity, etc
  • By Tools—Charts, Collaboration, Desktop, etc
  • By Plugins—Microsoft Equivio, Mobile, etc
  • By Data Resources - Bloomberg Intelligence, Economics, News, etc

• Subscription Model
  • Yearly / Monthly

• Licensing Model
  • Organization Plan
  • Departmentalized Plans (restricted by number of users/IPs)
TAM:
Total addressable market. The whole market. The potential market.

SAM:
Serviceable addressable market. Reachable market.

SOM:
Share of market. Sales divided by SAM.
Total Available Market

- How do you find out?
  - Customer Discovery
  - Industry Analysts
  - Market Analysts
Served Available Market

• How many people am I reaching with my current channels?

• How many people use similar products right now?

• How many have the money to buy the same?

• If everyone in the SAM bought it, how large is your market?
In the end.....
Scientific Method

Do the hypotheses need to be MODIFIED?
Did the results match the hypothesis?

INSIGHT

HYPOTHESES

TEST

DESIGN EXPERIMENT

Customer Segments

"Customers will be MALE... 24-35... in URBAN AREAS... who like STARBUCKS..."

GET OUT OF THE BUILDING!

"Oops! We kept getting TEEN GIRLS in suburbia!"

Run Google Adwords campaign to acquire
Collect and ANALYZE the data

"How about a GOOGLE ADWORDS campaign to acquire?"