Successful Entrepreneurship for Microsystems

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April 30, 2014
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Course presented at UCSD CSE 190, Spring Quarter 2014
Towards “Plan A” – an iterative process
Lean Canvas Business Model – Pirate METRICS

Stage 1
- Understand Problem

Stage 2
- Define Solution
- Validate Qualitatively

Stage 3
- Verify Quantitatively

Problem/Solution Fit
- Focus: Validated Learning
- Experiments: Pivots

Product/Market Fit
- Focus: Growth
- Experiments: Optimizations

Scale

Ref: Ash Maurya, “Running Lean”
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Lean Canvas Business Model – Pirate METRICS
The “Productization / Commercialization” Lifecycle

...Idea to High Volume Production

**Biz Plan**

- IDEA
- Lab Demo
- Funding
- Market
- Customer
- Biz Plan

- Model
- Prototype
- "System"/Produce-able

- Production

Technology Release Levels, *Ref. nasa.gov*

1 2 4 5 7 9

**UNDERSTAND PROBLEM** ➔ **DEFINE SOLUTION** ➔ **VALIDATE QUALITATIVELY** ➔ **VERIFY QUANTITATIVELY**

Problem/Solution Fit  ➔  Product/Market Fit

**CANVAS**  ➔  **CUSTOMER INTERVIEWS**  ➔  **1st Demo/Sample**
Typical IC Product Roadmap

- **Initial Product**
- **Follow On Product**
- **Features, Performance**
- **Cost Reduction**
- **Follow On Product**

**Introduction**

**Years**

0 1 2 3
Product Positioning

“Movie” Candy

- A product of Switzer Clark
- Small ad budget
- Created a differentiating feature
  - Normal candy does not last long
  - Kids love it!
  - Lasts as long as the movie!

Candy

Ref: Al Ries, Jack Trout, “Positioning”
Lean Canvas – RISKS Assessment

PROBLEM

SOLUTION

UNIQUE VALUE PROPOSITION

UNFAIR ADVANTAGE

CUSTOMER SEGMENTS

Existing alternatives:

KEY METRICS

High-level concept:

CHANNELS

Early adopter:

P – Product Risks
M – Market Risks
C – Consumer Risks

Cost Structure

Revenue Streams

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Ref: Ash Maurya, “Running Lean”
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Key Metrics – Pirate METRICS (“AARRR”)

…Early feedback & Assessment

- **ACQUISITION**: How do users find you?
  - “Get in the door”

- **ACTIVATION**: Do users have a great first experience?
  - “Connect the promise to your UVP/Product”

- **RETENTION**: Do users come back?
  - “Return to your website or product”

- **REVENUE**: How do you make money?
  - “Customer PAYS”

- **REFERRAL**: Do users tell others?
  - “Word of mouth”

Ref: Ash Maurya, “Running Lean”, Dave McClure
Unfair Advantage

- Anything worth copying (technically and business-wise) WILL be copied!
- Anticipate that the competition will try to out-run you!
- “Unfair Advantage” are things that cannot be easily copied or bought
  - Insider Information
  - The right “Expert” Endorsements
  - A dream Team
  - Existing Customers
  - Personal authority
  - Community
  - SEO (Search Engine) ranking
  - .....

Ref: Ash Maurya, “Running Lean”
# CloudFire – PARENTS Lean Canvas

<table>
<thead>
<tr>
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<th>UNFAIR ADVANTAGE</th>
<th>CUSTOMER SEGMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing lots of photos/videos is time-consuming. Parents have no free time. There is lots of external demand on this content.</td>
<td>Instant, no-upload sharing iPhoto/folder integration Better notification tools</td>
<td>The Fastest Way to Share Your Photos and Videos</td>
<td>Community</td>
<td>Parents (creators) Family and friends (viewers)</td>
</tr>
</tbody>
</table>

**Existing alternatives:** Flickr Pro, SmugMug, Apple MobileMe, Facebook

**Key Metrics**
- A - Sign-up
- A - Created first gallery
- R - Shared an album and/or video
- R - Invited family and friends
- R - Paid after trial

**High-level concept:** Photo and video sharing without the uploading

**Channels**
- Friends
- Daycare
- Birthday parties
- AdWords
- Facebook
- Word of mouth

**Early adopter:** Parents with young kids

**Cost Structure**
- Hosting costs - Heroku (currently $0)
- People costs - 40 hrs * $65/hr = $10k/mo

**Revenue Streams**
- 30-day free trial then $49/yr

**Break-Even Point:** 2,000 customers
# CloudFire – PHOTOGRAPHERS Lean Canvas

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<tr>
<td>Sharing lots of photos/videos is time-consuming. Most proofing sites only support low-res thumbnails.</td>
<td>Instant, no-upload sharing Aperture/Lightroom/ folder integration Cloud storage of originals</td>
<td>The Fastest Way to Share Your Photos and Videos</td>
<td>Community</td>
<td>Photographers (creators) Clients (viewers)</td>
</tr>
<tr>
<td><strong>Existing alternatives:</strong> SmugMug Pro, Photo Shelter</td>
<td><strong>KEY METRICS</strong> Created first gallery Shared an album and/or video Invited clients</td>
<td><strong>HIGH-LEVEL CONCEPT:</strong> Photo and video sharing without the uploading</td>
<td><strong>CHANNELS</strong> First-degree network Cold calling Photography events</td>
<td><strong>EARLY ADOPTER:</strong> Wedding photographers, sports photographers, portrait photographers</td>
</tr>
</tbody>
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<th>COST STRUCTURE</th>
<th>REVENUE STREAMS</th>
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<td>Hosting costs - Heroku (currently $0) People costs - 40 hrs * $65/hr = $10k/mo</td>
<td>30-day free trial then $199/yr</td>
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**Break-Even Point:** 600 customers

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# CloudFire – VIDEOGRAPHERS Lean Canvas

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<tr>
<td>Sharing large video files is time-consuming and error prone. Most proofing sites only support low-res thumbnails.</td>
<td>Instant no-upload sharing Progressive streaming</td>
<td>The Fastest Way to Share Your Video Files</td>
<td>???</td>
<td>Videographers (creators) Clients (viewers)</td>
</tr>
</tbody>
</table>

**Existing alternatives:** FTP, CDN

**Key Metrics:**
- Create first project
- Shared video
- Invited clients

**High-level concept:** Video sharing without uploading

**Channels:**
- First-degree network
- Cold calling

**Early adopter:** Music, sports, video games

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**Break-Even Point:** 100 customers

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# CloudFire – CONSUMERS Lean Canvas

<table>
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<tr>
<th>Problem</th>
<th>Solution</th>
<th>Unique Value Proposition</th>
<th>Unfair Advantage</th>
<th>Customer Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal media files are spread across many devices. Sharing lots of photos and videos is difficult.</td>
<td>Auto-sync files across devices Instant, no-upload sharing Always-on network appliance device (optional)</td>
<td>Anywhere access to your media content</td>
<td>???</td>
<td>Consumers</td>
</tr>
</tbody>
</table>

**Existing alternatives:** Maintain multiple copies through manual syncing

**Key Metrics**
- Add first device
- Shared photos/videos
- Invited friends

**Channels**
- First-degree network
- Cable/DSL providers (white-labeled solution)
- Early adopter: Digital media enthusiasts, ???

**Cost Structure**
- Hosting costs - Heroku (currently $0)
- People costs - 40 hrs * $65/hr = $10k/mo

**Revenue Streams**
- Freemium model with $9/mo for premium storage option

**Break-Even Point:** 1,000 customers

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Ref: Ash Maurya, “Running Lean”
Get External Advice

- Avoid lengthy presentation
- Devote 20% of time to Present, 80% to Listen
- Ask specific questions
  - What they consider highest risk points
  - Have they encountered similar risks? How? What they did about them?
  - How would they go about testing the risks?
- Recruit Visionary Advisors
  - Get their advice, don’t follow it, APPLY it!

Ref: Ash Maurya, “Running Lean”
HW 6.2 – Lean Canvas

...Due Wednesday, May 7th

- Create a Lean Canvas for your Project
- Submit also a revised Homework 3 (optional)