How to Optimize Your Product and Business Using Analytics

Dan Olsen  BASIS  August 2017
My Background

Education
- Engineering background
- Stanford MBA
- UX design and coding

Experience
- Managed nuclear submarine design
- Product Management leader at Intuit
- CEO & Cofounder, TechCrunch award winner YourVersion
- PM consultant: Box, Facebook, Microsoft, Medallia
- Founder: Lean Product Silicon Valley

Twitter: @danolsen
My slides: http://dan-olsen.com
Spiderman’s motto: “With great power comes great responsibility”

Product Manager’s motto: “With great responsibility comes **NO** power”
What is Product-Market Fit?
That’s Why I Wrote

- Book giveaway on Twitter
- Tweet: include @danolsen
- Hashtags
  - #leanstartup
  - #prodmgmt
  - #growth
- http://tiny.cc/LPP
Lean Product Analytics Process

1. Identify What Your Metrics Are
2. Measure Metrics Baseline Values
3. Evaluate Metrics Upside Potential
4. Select Top Metric
5. Brainstorm Ideas to Improve Metric
6. Identify highest ROI idea
7. Learn & Iterate
8. Design and Implement
9. Analyze How the Metric Changes

Global Level

Metric Level

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Valuable to Have a Holistic Analytics Framework: Dave McClure’s AARRR!

1. ACQUISITION
   Prospects visit from various channels
Valuable to Have a Holistic Analytics Framework: Dave McClure’s AARRR!
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Focus on right metric at right time

Identify your “Metric that Matters Most” (MTMM)

What’s the right order to optimize?

acquisition
conversion
retention
If you could only track 1 metric to measure your Product-Market Fit, which metric would it be?
Retention Rate

- Retention rate tracks what % of your customers are still active over time.

~80% never use app again

Curve either goes to zero or flattens out
Cohort Analysis

Percentage of Users Returning

Weeks Since User Signed Up

Cohort A

Cohort B

Cohort C

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Improving Retention Rate Over Time = Increasing Product-Market Fit
Improving Retention Rate Over Time = Increasing Product-Market Fit

The graph shows the percentage of users returning over time, with two lines representing users who signed up 18 months and 24 months ago. Both lines indicate a decrease in the percentage of users returning as time passes, suggesting an increasing fit of the product with the market.
Improving Retention Rate Over Time = Increasing Product-Market Fit
Define the Equation of your Business “Peeling the Onion”

Advertising Business Model:

Profit = Revenue - Cost

Unique Visitors \times Ad\ Revenue\ per\ Visitor

Impressions/Visitor \times Effective\ CPM\ /\ 1000

Visits/Visitor \times Pageviews/Visit \times Impressions/PV

New\ Visitors + Returning\ Visitors

Invited\ Visitors + Uninvited\ Visitors

#\ of\ Users\ Sending\ Invites \times Invites\ Sent/User \times Invite\ Conversion\ Rate
Registration Page Conversion Rate

Daily Signup Page Yield vs. Time
New Registered Users divided by Unique Visitors to Signup Page

Registration Page Conversion Rate vs. Time
New Registered Users divided by Unique Visitors to Signup Page

- Changed messaging
- Added questions to signup page
- Started requiring registration
View Each Metric as a Gauge

- Current Value
- Minimum Possible Value
- Maximum Possible Value
Identifying the “Critical Few” Metrics

- What is the upside potential of each metric?
- How much do we think we can “move the needle”?
- What would the revenue impact be?
- How many resources will it take to “move the needle”?
  - Developer-days, time, money
- Which metrics offer best Return on Investment (ROI)?
Prioritizing Product Ideas by ROI

![Graph showing the prioritization of product ideas based on return on investment (ROI) compared to investment in developer-weeks. The graph compares ideas A, B, C, D, and F, with idea C being the most promising due to its high return for a reasonable investment.]
Types of Metric ROI Situations

Metric A
Good ROI

Metric B
Bad ROI

Metric C
Great ROI

Investment

Return

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Case Study
Case Study: Optimizing Friendster’s Viral Loop

- % of users sending invites = 15%
- Invites per sender = 2.3
- Invite click-through rate
- % of users who are active
- Succeed
- Conversion rate = 85%

- Multiplied together, these metrics determine your viral ratio
- Which metric has highest ROI opportunity?

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The Upside Potential of a Metric

Max possible improvement

- Registration Process Yield
  - 100% / 85% = 18%

- % of users sending invitations
  - 100% / 15% = 570%

- Avg # of invites sent per sender
  - ? / 2.3 = ?%

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Is anyone feeling a sense of déjà vu right now?
The Upside Potential of a Metric

**Metric B**
Bad ROI

**Metric A**
Good ROI

**Metric C**
Great ROI

Max possible improvement

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric B</td>
<td>Bad ROI</td>
<td>0.15 / 0.85 = 18%</td>
</tr>
<tr>
<td>Metric A</td>
<td>% of users sending invitations</td>
<td>0.85 / 0.15 = 570%</td>
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<td>Metric C</td>
<td>Avg # of invites sent per sender</td>
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</tbody>
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Okay, so how can we improve the metric?

- How do we increase the average number of invites being sent out per sender?

- For each idea:
  - What’s the expected benefit? (how much will it improve the metric?)
  - What’s the expected cost? (how many engineer-days will it take?)

- You want to identify highest ROI idea
After Launching Address Book Importer...
After Launching Address Book Importer...
After Launching Address Book Importer...
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Questions?

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http://dan-olsen.com

Will notify book winners on Twitter

Happy to connect on LinkedIn