Metrics-Driven Design

by Joshua Porter

Twitter: bokardo

bokardo
52weeksofUX
performable
microcopy
designing for the social web
make them care!
“Unfortunately for me, there was one small problem I didn’t see back then.”
Doug Bowman on Design at Google

"Yes, it’s true that a team at Google couldn’t decide between two blues, so they’re testing 41 shades between each blue to see which one performs better. I had a recent debate over whether a border should be 3, 4 or 5 pixels wide, and was asked to prove my case. I can’t operate in an environment like that."
41 Shades of Blue Test

41 Bucket Split Test: ~2.5% of users each got a shade for 2 weeks.
The Green & Blue Effects

Top CTR vs. Green Content

Search CTR vs. Blue Content

Abandonment Rate vs. Green Content

Time to Search Click vs. Blue Content
Google

Bing
"That blue was worth at least $80 million."

Paul Ray, UX Manager, Bing
When a company is filled with engineers, it turns to engineering to solve problems. Reduce each decision to a simple logic problem. Remove all subjectivity and just look at the data. Data in your favor? Ok, launch it. Data shows negative effects? Back to the drawing board. 

**And that data eventually becomes a crutch for every decision, paralyzing the company and preventing it from making any daring design decisions.**
Spectrum of Design

Intuition-Driven

Make best-guesses
Rely on previous experience
Study what others are doing
Use best practices, principles & patterns
Aesthetics are integral
Rely on our gut
Creative, visionary
Inherently risky

Doug’s words:

*instinctive, subjective, daring*

Data-Driven

Every design choice is tested
Takes others experience with a grain of salt
Design is a logic problem
Rely on data for decision-making
Aesthetics are secondary
Never trust your gut
Cold, calculating
Risk-averse

Assumed:

*deliberate, objective, safe*
Imagine that your design is a mountain...
Imagine that your design is a mountain...
Imagine that your design is a mountain...

The grass is always greener on other mountainsides.
Imagine that your design is a mountain...

Optimized (local maxima)

EXISTING DESIGN

The grass is always greener on other mountainsides.
Imagine that your design is a mountain...

Potential Improvement

Optimized (local maxima)

Now

The grass is always greener on other mountainsides.
Imagine that your design is a mountain...
Imagine that your design is a mountain...

- **Potential Improvement**
- **Goal**
- **Better Design**

EXISTING DESIGN

Saturday, March 12, 2011

The grass is always greener on other mountainsides.
Optimization asks:

What works best in the current model?

Design innovation asks:

What is the best possible model?
What are Metrics?
Metrics are simply numbers that measure the effectiveness of your business.
5 Reasons why Metrics are a Designer’s Best Friend
1. Metrics reduce arguments based on opinion.
2. Metrics give you answers about what really works.
3. Metrics show you where you’re strong as a designer.
4. Metrics allow you to test anything you want.
5. Clients love metrics.
Your metrics will be as unique as your business.
## Vanity Metrics

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The Usage Lifecycle
Interested  Trial/beta User  Customer  Passionate Customer
With metrics you are essentially just measuring how well you move people along the lifecycle!
Acquisition Metrics
CPA - Cost per Acquisition

If your CPA is higher than your LTV then you’re in trouble.
Acquisition vs. Referral: Dropbox

Ran Google Adwords campaigns to drive traffic to dropbox.com

The traffic that completed the lifecycle:

1) Searched on a keyword
2) Visited their site
3) Signed-up for service
4) Became a customer

cost them $233-$388 per person!
(for a $99 product)
30 days prior to April 2010, Dropbox users sent 2.8 million direct referral invites.

Dropbox’s referral program with 2-sided incentive increased sign-ups by 60% permanently.
Performable Acquisition Metrics

Comparative Metrics

Revenue by Channel

Revenue by Keyword
Conversion Metrics
Trials / Conversions = Conversion Rate
Conversion Funnel Analysis
Sign-up Conversion Funnel

Original Flow

1. Confirm personal info
2. Add your friends
3. Invite others
4. Getting started

Original Conversion Funnel

1. 100%
2. 63%
3. 26%
4. 14%

Of the 100% of people who started the sign-up process, only 14% made it to the getting started screen.
New Flow

add your friends → getting started

New Conversion Funnel

of the 100% of people who started the sign-up process, 86% made it to the getting started screen.

2 → 4

100% 86%
Engagement Matters: Twitter

Speed without context is wasted.

Engagement Metrics
- Hits
- Page views
- Visits
- Unique Visitors
- Returning Visitors
- Registered Users
- Customers
- Frequency
- Time on Site
- Daily Active Users
## Cohort Analysis

**Engagement over time**

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In this case engagement is improving nicely. Of the January cohort, only 20% were engaged in month 2. Of the October cohort, 53% were engaged in month 2.
Prevention: Facebook Deactivation

Design changes to the deactivation page accounted for 1 million members not leaving the service.

Julie Zhou, Facebook

Satisfaction Metrics
Referral: Net Promoter Score

How likely is it that you would recommend our company to a friend or colleague?

0 1 2 3 4 5 6 7 8 9 10

Saturday, March 12, 2011
Metrics-Driven Design

Do you know what your net promoter score is?

Net Promoter Score

How likely is it that you would recommend our company to a friend or colleague?

Detractors

Passives

Promoters

Score = % Promoters - % Detractors

Saturday, March 12, 2011
Mint.com & Net Promoter Score

“Maybe we didn’t have a high viral coefficient but we had a great net promoter score.”

Jason Putorti, Lead Designer, Mint.com
Emergent Metrics
Emergent Metrics: 5 Friends

The magic number is 5. Once a FriendFeed user found five friends, they became active users.

Bret Taylor, Friendfeed
Is there one metric that drives others?

"At Blogger, we determined that our most critical metric was number of posts. An increase in posts meant that people were not just creating blogs, but updating them, and more posts would drive more readership, which would drive more users, which would drive more posts."

Ev Williams
founder of Blogger & Twitter
Principles of Metrics-Driven Design

1. Optimize in small steps; innovate with daring leaps.
2. No design survives contact with the user.
3. Small improvements, taken together, yield amazing results.
4. Testing is empowering, reversion is cleansing.
5. Metrics are not creative: human beings are.
6. All team members are responsible for the user experience.
7. If metrics aren’t actionable, they aren’t useful.
8. Design is never done.
This Talk.

http://bokardo.com/talks/metrics-driven-design/
My Life.

http://performable.com

http://oneflightbooks.com