



STEM-in-PM Framework

Tuesday, April 17th, 2018

What we're going to talk about

- 1. Speaker Introduction**
- 2. What is Genetic Engineering?**
- 3. Mendel, and his Peas**
- 4. STEM vs. PM**
- 5. Case Study: The PM Toolkit**
- 6. Q&A**



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Product Manager

reelyActive Smart Spaces Web App, Lightspeed Retail POS Inventory Tool, Mishipay Cisco Integration Partner iOS, Android, Web App, NRF 2018 Cisco CX, Leroy Merlin 'Scan, Pay, Leave' Pilot CX

Founder & Chief Executive Officer

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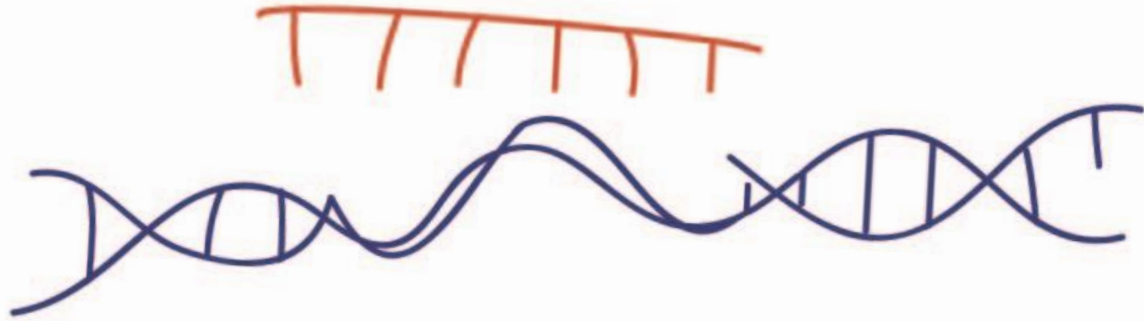
Genetic Engineer

Micropoint Biosciences, Inc, MIT iGEM Machine Team, Engineers Without Borders

Cupcake Enthusiast

Home, mostly.

Miss Chinese International 2014第二名
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What is Genetic Engineering?

Just like an engineer who builds bridges, or buildings, we 'engineer' DNA. But we also conduct many experiments to make sure that what we're building makes sense.



Mendel, and his Peas

Observation

- Peas, and their seeds, can be shapes and colors.

Characterization

- “I know that peas can be green one generation, and then yellow the next generation.”

Hypothesis

- Different traits can be expressed in different generations.

Formula

- Assumptions:**
- Traits must be able to have the ability to ‘hide’.
 - Traits must be in the genes of plants.
 - If I change the genes (=X), then it will change the way the traits of the plant (=Y).

Experimentation

Mixed pea plants of different colors and shapes, with a bunch of different combinations, and recorded the data.

STEM

versus

PM

1. *Qualitative data*
2. *Roommate Theory*
3. *Efficiency*

Case Study:
Bringing STEM into PM

The PM Toolkit

1

2

3

4

5

Observation

- What problems are emerging?
- Which should we focus on solving?
- Innovation, or Improvement

- Customer Feedback Loop

Characterization

- Do we have any other background information?
- What are we missing?

Hypothesis

- What is a possible solution for the problem?
- What is your explanation for this observation?

- 1:1 Interviewing
- Focus Groups

Formula

- What is your desired user behaviour?
- What product changes can you make, to solve this problem?

- Traffic Analysis, Surveys, Logs

Experimentation

- How will you present your solution?

- Usability Testing
- A/ B Testing

You are a PM
for a mobile
POS company,
that has just
launched their
“Scan, Pay,
Leave” iOS App
in a DIY
hardware store.



A passing thought.



Data
Data
Data

Hm, that's weird.

Only 20% of the customers who add items to basket, are checking out.

Sales · Support · Product

Passive Research

1. Observations

- 20% of people who add items to cart, checkout.
- 80% of our transactions are made by card.
- 4 out of 10 users say they would not use the app, again.

2. Characterization

20% of people who add items to cart, checkout.

- ➔ We know that users:
 - ➔ Prefer card transactions
 - ➔ can accidentally add items to cart,
 - ➔ can be confused about how to checkout,
- ➔ We know that the only items available to add to cart are power tools.

An *active* thought.

Why?

Active Research

20% of people who add items to cart, checkout.

3. Hypothesis

- We think that our users are not checking out, because they are worried that their credit card details will be stolen from 3rd party hackers.

4. Formula

Assumptions:

- ➔ Users do not want to have their details hacked by 3rd parties.
- ➔ Users would feel safer if they knew their details could not be stolen by 3rd party hackers.
- ➔ People who are adding items to cart, but not checking out, want to pay with card.
- ➔ A product change will fix this problem.

Active Research

20% of people who add items to cart, checkout.

4. Formulas (cont'd)

Variables:

- ➔ X (Product Change):
 - ➔ make card details page feel “more safe”
- ➔ Y (Desired customer behaviour):
 - ➔ user who want to pay by card add to cart, fill in card details, and then checkout.

5. Experimentation

- “This data is encrypted, and therefore will not be shared. It is safe”
- Putting a lock icon

The PM Toolkit

1

2

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Experimentation

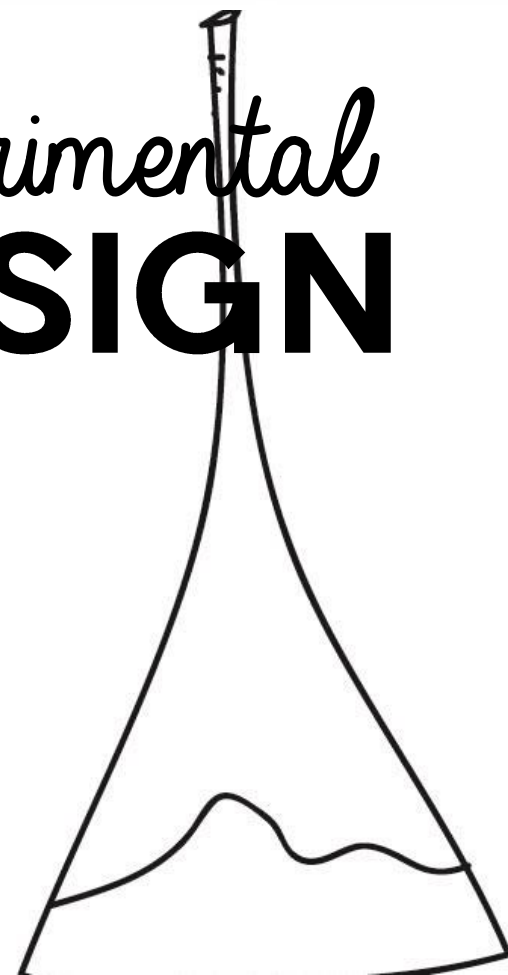
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Success Stories

- 10,000€ in 1st week launch of beta Mishipay iOS App, and launched in 4 countries
- 24 hours of uploading time to 3 hours of uploading time, eliminated support queries, and operational/infrastructure costs // Lightspeed POS Web App - Inventory Tool
- \$1M market niche discovered, through vigorous customer research, and use case analysis // reelyActive IoT Smart Spaces, Bubbles
- 40,000\$ sales revenue through re-iteration of product, marketing analysis // 意丽之梦.com, e-Commerce travel platform

Next time,

Experimental
DESIGN



and,

Measuring
**CUSTOMER
BEHAVIOUR**

Different types of testing

1. Independent Measures

- Group A, Solution A. measure A,
 - Group B, Solution B.
 - Group C = Group A + B, randomly.
- Take this group of 50, and randomly divide them into 2 groups (n=25).
 - Send Group A yellow email.
 - Send Group B, blue email.

2. Repeated Measures

- Group C, Solution A, Solution B.
- Let all of our customers be emailed with email A, and then email B, advertising with the yellow e-mail.

3. Matched Pairs

- Group A \approx Group B
 - Group A, Solution A
 - Group B, Solution B
- Both of these people are familiar with technology, and make purchases 2/month, and are loyalty members.
 - Make Group A, send yellow email.
 - Make Group B, send blue email.

The Customer Journey

If X, then Y.

**Would
spend
more
money**

Customer will
visit new spring
shoe collection
online

Will spend more
time on website
than most
people

Would sign up to
be a loyalty
member

Will shop more
frequently in-
store

**# of website visits
from source**

**Total time spent on
website (sec)**

**# of loyalty signups
who saw e-mail**

**# customers who
visited online**

**\$ on shoes,
spring collection**



Yellow E-mail

Blue E-mail

If X, then Y.



Solution A → Yellow E-mail
Solution B → Blue E-mail



Customer will
visit new spring
shoe collection
online

of website visits
from source

Will spend more
time on website
than most
people

Total time spent on
website (sec)

Would sign up to
be a loyalty
member

of loyalty signups
who saw e-mail

Will shop more
frequently in-
store

customers who
visited online

Would
spend
more
money

\$ spent on shoes in
spring (or overall) by
customer

Thanks for listening!

Q & A



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