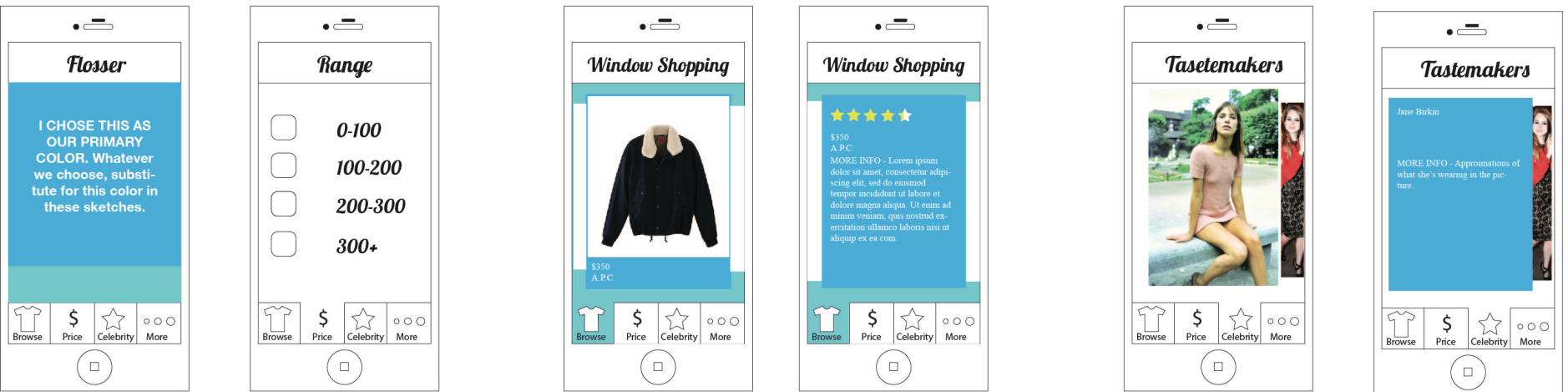


# Product Development

Myself and five engineers teamed up to develop a mobile shopping app for clothing. We applied design thinking, prototyping, and user research to create a working app by the end of the semester.

The following slides give a glimpse into our design process and contains work that I contributed to, either partially or fully.

# Concept Generation



*generated in Adobe Illustrator*

Concept Scoring: the team ideated several UI's and scored their features in order to choose the three best interfaces.

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Generation      Selection

Concept Scoring Matrix (Weighted and Scored 1-5)

	Weights (1-3)	Wish (benchmark)	Subscription Service	Instagram Style	Swipe	Pokemon Style	Model App	Facebook Style	Magazine Style	Ranking Model	Geotag Stores	Rental
Feasibility	3	9	6	12	15	9	9	12	15	12	6	3
Intuitive	3	9	9	12	15	3	6	9	12	15	9	6
Immediacy	2	8	2	10	10	6	4	8	8	8	10	4
Uniqueness	2	4	10	2	6	10	8	2	2	8	6	10
Scalability	2	10	4	10	8	2	4	8	8	8	6	4
Customer Base	3	15	3	15	15	6	3	12	12	9	12	3
User Interface - DOF	3	9	3	9	15	6	12	6	12	12	9	9
Addictability	1	3	2	3	4	5	2	2	4	3	2	2
Networking/ Social Platform	2	4	4	10	8	2	6	10	6	10	4	4
Expanding User Experience	2	4	4	4	8	8	6	6	4	4	6	4
Monetization	3	12	12	12	12	6	9	12	12	12	9	15
Entertaining	3	12	3	12	15	15	12	12	9	15	6	6
<b>Total:</b>	<b>29</b>	<b>3.41</b>	<b>2.14</b>	<b>3.83</b>	<b>4.52</b>	<b>2.69</b>	<b>2.79</b>	<b>3.41</b>	<b>3.59</b>	<b>4.00</b>	<b>2.93</b>	<b>2.41</b>

# UI Testing: We prototyped the three UI's and conducted user research to determine their usability

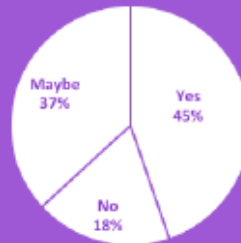
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## Functional Survey Results

We surveyed 45 people on Cal Day concerning functionality and features. Here are a few of our major insights:

WOULD YOU BE MORE LIKELY TO BUY A PRODUCT YOU KNEW WAS FAIR TRADE?



WHICH TYPE OF STORES WOULD YOU LIKE TO SEE CLOTHING FROM?



WOULD YOU USE SOFTWARE TO DETERMINE FIT USING HEIGHT AND WEIGHT INFORMATION?



WOULD YOU USE SOFTWARE TO DETERMINE FIT USING PHOTOS OF YOURSELF?



# Business Analysis: User Growth Projections

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## Bass Diffusion Model for User Growth

$$\text{Sales} = [p + qF(t)][1 - F(t)]N$$

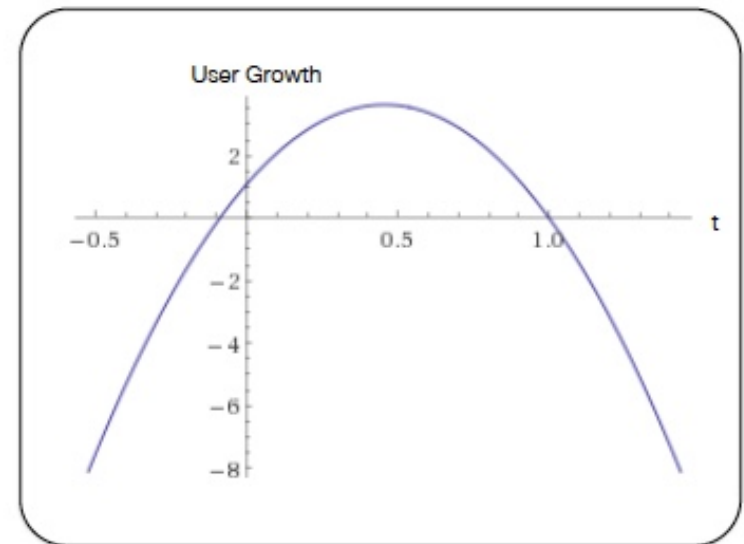
$p$  = coefficient of innovation = 0.04<sup>1</sup>

$q$  = coefficient of imitation = 0.45<sup>2</sup>

$F(t)$  = fraction of consumers who have bought the product by period  $t$

$N$  = size of the market =  $(63.2\text{m}^3)(.43^4) = 293.2\text{m}$

$$\text{Sales} = [0.04 + 0.45F(t)][1 - F(t)]27.17$$



Assumptions:

<sup>1</sup> Assuming an above average  $p$  ( $p_{avg} = 0.03$ )

<sup>2</sup> Assuming an above average  $q$  ( $q_{avg} = 0.38$ )

<sup>3</sup> Estimated U.S. iPhone users according to Statista

<sup>4</sup> 43% of iPhone users are between 18-34 (our target market) according to comScore.com

# Business Analysis: Revenue Projections

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## Revenue Projections

Y <sub>0</sub>	Transaction Fees	(1.08m users)(MAU rate: 34% <sup>1</sup> )(5.68% <sup>2</sup> )(8.5% Fee <sup>3</sup> )(AOV: \$75.71 <sup>4</sup> ) (12 mo/yr)	\$1,610,662	Total: \$1,610,662
	Promotion	(0 users)(\$100/mo)(12 mo/yr)	\$0	
Y <sub>1</sub>	Transaction Fees	(3.108m users)(MAU rate: 34%)(5.68%)(8.5% Fee)(AOV: \$75.71) (12 mo/yr)	\$4,635,127	Total: \$4,653,127
	Promotion	(15 users)(\$100/mo)(12 mo/yr)	\$18,000	
Y <sub>2</sub>	Transaction Fees	(3.6m users)(MAU rate: 34%)(5.68%)(8.5% Fee)(AOV: \$75.71) (12 mo/yr)	\$5,368,873	Total: \$5,404,873
	Promotion	(30 users)(\$100/mo)(12 mo/yr)	\$36,000	
Y <sub>3</sub>	Transaction Fees	(4.78m users)(MAU rate: 34%)(5.68%)(8.5% Fee)(AOV: \$75.71) (12 mo/yr)	\$7,128,670	Total: \$7,170,670
	Promotion	(35 users)(\$100/mo)(12 mo/yr)	\$42,000	
Y <sub>4</sub>	Transaction Fees	(7.34m users)(MAU rate: 34%)(5.68%)(8.5% Fee)(AOV: \$75.71) (12 mo/yr)	\$12,392,387	Total: \$12,440,387
	Promotion	(40 users)(\$100/mo)(12 mo/yr)	\$48,000	

### Abbreviations:

MAU: Monthly Active Users  
AOV: Avg. Order Value

### Assumptions:

<sup>1</sup> Based upon information provided by Localytics

<sup>2</sup> Weighted Average percent of active users who make in-app purchases; information provided by App Annie

<sup>3</sup> Based upon Amazon's affiliate program. Zip over to a breakdown of these percentages >

<sup>4</sup> Based upon information provided by Statista.com



# Business Analysis: Bottoms-Up & Top-Down Analysis

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## Bottoms-Up Analysis

Customers=Revenue/Average Selling Price

$$C=(250k^1/\text{month})/(75.71^2)$$

3302=Customers

$C/[(MAU)(\text{In-app purchases})]=\text{Users}$

$$3302/[(.34^3)(0.0568^4)]=170,981/\text{month}$$

$$(170,981\text{users/month})(12\text{mo/yr})=$$

2,051,772 users/year

According to our Bass diffusion model, by the end of our second year we should have over 2.051m users and \$250k/month in revenue.

## Top-Down Analysis

Total Addressable Market (TAM):

Clothing Industry Sales Worldwide = \$1,105bn<sup>5</sup>

Served Addressable Market (SAM): Mobile

Shopping Revenue in U.S.=(21%)(44.7bn)=\$9.3bn<sup>6</sup>

Share of Market (SOM): If we try to capture 1% of SAM, SOM=(.01)(9.3bn)=\$930m

Our projected revenue of \$12.4m in 4 years is only 0.13% of SAM. This is also assuming that e-retailing revenues and the percentage of e-retail revenues attributable to mobile shopping remain constant.

<sup>1</sup> With the goal of raising \$10m in VC funding

<sup>2</sup> AOV based upon information provided by Statista

<sup>3</sup> Information provided by Localytics

<sup>4</sup> Information provided by App Annie

<sup>5</sup> Information provided by Statista

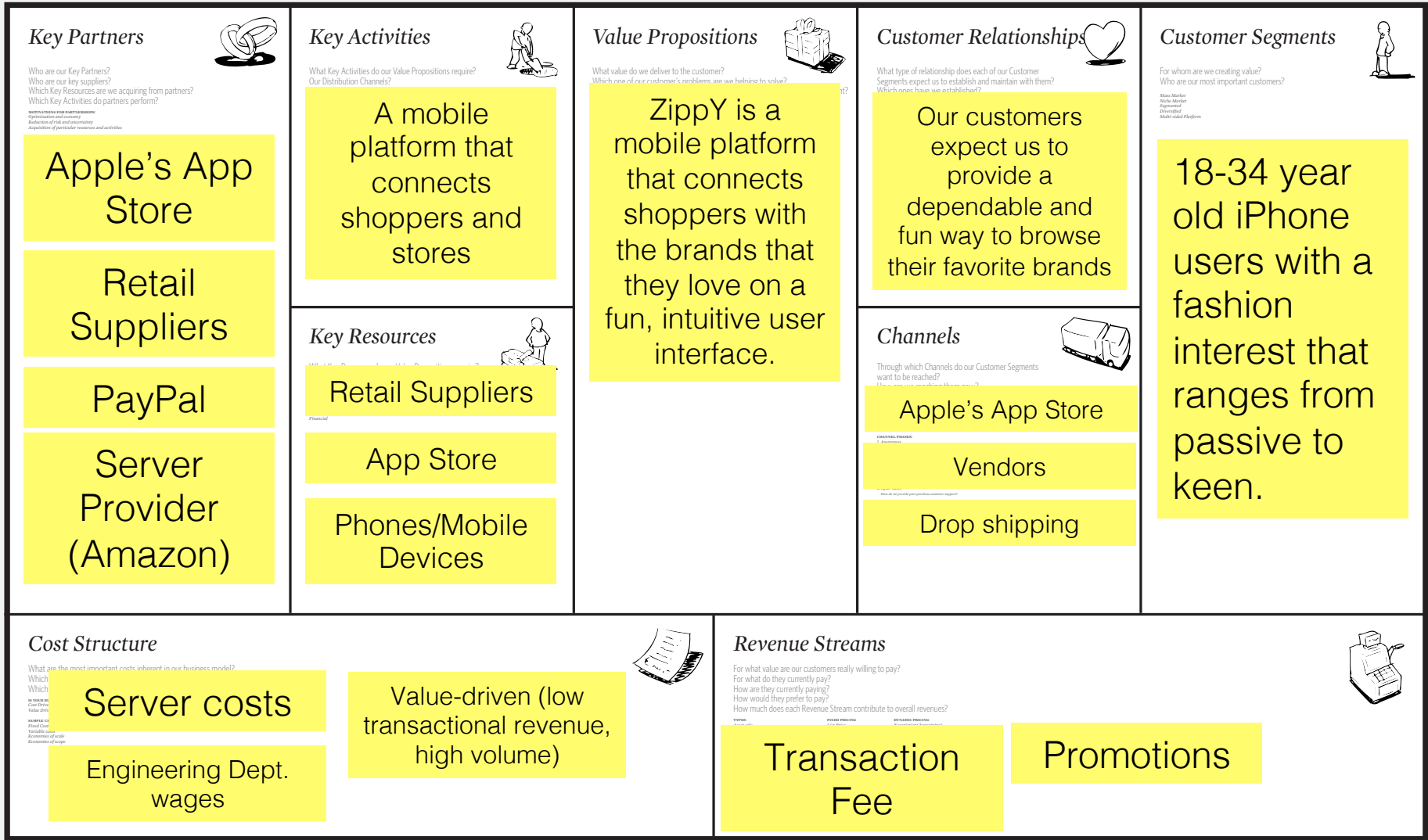
<sup>6</sup> Information provided by Statista and Marketing Land

# The Business Model Canvas

Designed for:

Designed by:

On: Day Month Year  
Iteration: No.





# The Triple Bottom Line

