

# Activation Metric

July 2, 2015



# Problem Statement

- ▶ Identify factors that influence the conversion of a potential customer into a full-time customer.
- ▶ Quantify the factors into actionable Metrics.
- ▶ Take steps to drive a potential customer into a full-time customer.



# Approach

- ▶ Build an estimation model to predict conversion; significant variables are factors that influence conversion.
- ▶ Historical data starting from 1 January 2013 - 12 May 2015.
- ▶ Study behavior of factors during trialling period. Conversion determined at 2<sup>nd</sup> - billing cycle.
- ▶ Factors considered:
  - Number of admins.
  - Time to trial.
  - Total users.
  - Daily active users.
  - Time spent on App. by admin
  - Converted / Not converted.
  - Daily messages.
  - Daily comments.
  - Daily conversations.
  - Daily emails.



# Results

## ► Metric Constituents

	Coefficients	Estimate	Odds	p-value
1	Daily weighted growth in daily active users	0.113	1.120	1.26E-11
2	Average total admin.	0.059	1.061	2E-16
3	Average number of sessions per day	0.023	1.024	1.21E-05
4	Average daily comments per session	0.012	1.012	0.029
5	Average duration per session per day	0.011	1.011	0.007

Daily weighted growth in daily active users	Growth in daily users, taking the day into account.
Average total admin.	Average number of total admins per day.
Average number of sessions per day	Average number of sessions per day
Average daily comments per session	Number of Comments per session.
Average duration per session per day	Average duration of session per day (hour).

- Daily Admin. not used due to loss in **almost 50%** of data (earliest available data is from **19 May 2014**)
- Negative-Beta estimation model; Logistic regression had overdispersion.



# Metrics explained

- ▶ Daily weighted growth in daily active users:
  - percent growth in daily users divided by the day of growth.
  - assigns more weight to earlier add-ons.
- ▶ Average total admin:
  - accounts for when were the admins. added.
  - admins. added later on would yield lower value.
- ▶ Average number of sessions per day:
  - does not account for distinct admins.
- ▶ Average daily comments per session:
  - daily comments divided by number of session, averaged over trial.
- ▶ Average duration per session per day:
  - Time spent by admins.



# Useful insights

**Metric of the Average Customer**

1	Daily weighted growth in daily active users	2.21	[% per day]	50%
2	Average total admin.	2.00		54
3	Average number of sessions per day	1.60		50
4	Average daily comments per session	0.13		50
5	Average duration per session per day	457	[~ 8 min. per day]	50
<b>Metric</b>		<b>0.68</b>		

- ▶ Trialling customers with Metric **above 0.65** convert to **full-time customers**.
- ▶ From trialling customers that **converted**:
  - 82% generated a metric of above 0.65.
- ▶ From trialling customers that **did not convert**:
  - 35% generated a metric of above 0.65.



# Useful insights

## Metric of the Average Trialling Customer

1	Daily weighted growth in daily active users	2.40	[% per day]	50%
2	Average total admin.	1.93		51
3	Average number of sessions per day	2.17		50
4	Average daily comments per session	0.18		50
5	Average duration per session per day	474	[~ 8 min. per day]	50
<b>Metric</b>		<b>0.69</b>		

## Metric of the No Convert Subset Trialling Customer

1	Daily weighted growth in daily active users	-20.30	[% per day]	50%
2	Average total admin.	1.00	[ or less]	83
3	Average number of sessions per day	1.14	[ or less]	47
4	Average daily comments per session	0.09	[ or less]	51
5	Average duration per session per day	60	[~ 1 min. per day]	51
<b>Metric</b>		<b>0.58</b>		



# Useful insights

- ▶ From current trialling customers 72% are expected to convert to full-time customers.
- ▶ Measures to convert this subset of users:
  - Drive active daily users to increase daily weighted growth to -10%.
  - Get customer to add 1 more admin.
  - Get the admin. to increase the number of sessions to 2 sessions per day.
  - Get the users. to increase the number of comments by 10%.
  - Get the admin. to spend 2 minutes on the app per day.
- ▶ This measure would convert 82% of non-converting customers to full-time customers.

