

# The Audience Business at Newsday

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## Imagine you knew...

- The engagement **habits and dynamics** for each and every one of your subscribers for the various interactions they have with your brand
- The **probability of canceling** for each and every one of your subscribers
- The steps and stages of **why and when** your subscribers cancel
- The **content types and consumption patterns** that predict great retention and greater price elasticity
- The **audience revenue attributable** to each of your content segments
- Which subscribers **will and will not be influenced** by retention treatments
- The **optimal personalized retention treatment** for each subscriber

## Would you...

- Add **personalized dynamic touchpoints** and build upon opportunities to incorporate greater relevancy?
- Develop and offer **products targeted towards greater retention** and price elasticity?
- **Aggregate** all of your **disparate audience data** sources?
- Build out the practice of **customer experience management**?
- Significantly **reduce your attrition** rate?
- Significantly **exceed** your year/year **audience revenue growth budget**?

# Our Audience Data Journey

Q2 2014 – Market Based Pricing

Q1 2015 – Budgeting Tool

Q3 2015 – Data Project

- Churn Modeling
- Payment Path Analysis
- Entity Resolution
- Behavioral Profiling
- Digital Engagement into Print Pricing
- Ad Blocking Detection
- Retention Modeling
- Price Increase Negotiation Modeling
- Opt In Monetization Modeling
- Propensity to Subscribe Scoring
- Paywall Analysis
- Dynamic Meter Recommendations
- Content Matrix
- Digital Ad Rate Segmentation/Analysis

Q4 2015 – Talent Build

Q4 2015 – Customer Experience Management

Q1 2016 – Testing of Retention Marketing

Q2 2016 – Implementation of Retention Marketing

Q3 2016 – Net Lift/Persuasion Modeling



# Our Business

Present –

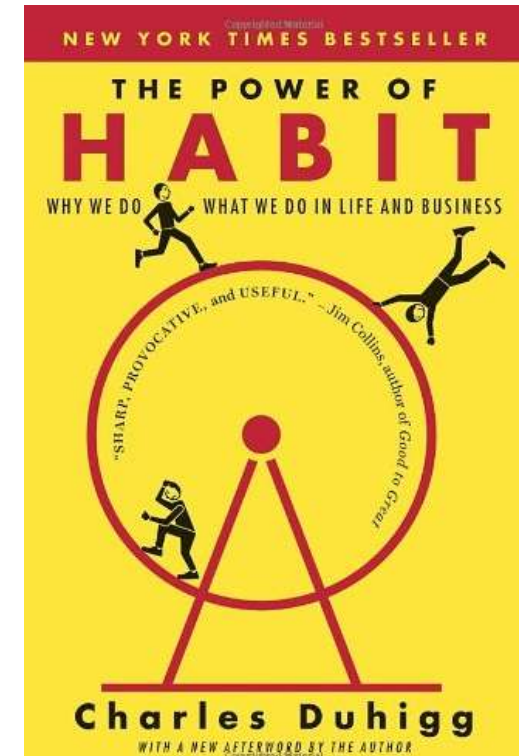
- **What is the Impact on Audience Satisfaction, Retention, and Price Elasticity** – [top of mind](#) in strategic decision making across the organization
- **Brand Engagement over Platform Engagement** – “print or digital” to “print and digital”... it’s all customer touchpoints; multichannel. [Stimulated further interest in audience data entity resolution](#)
- **One Size to Individualized** – customer experience (marketing and content delivery) to be focused on individual customer; [priority on reducing friction and increasing relevancy](#)
- **Customer First Focus over Product First Focus** – developing products for audience over finding audiences for products; maintaining [integrity in curation while leveraging automation](#)

# Talent

- Past – Circulation First Focus
  - **Acquisition** – qualitative and marketing focus
  - **Customer Service** – delivery resolutions to sales focus
- Present – Data First Focus
  - **Acquisition** – added [retention](#); incorporated [quantitative focus](#) [Erik Zenhausern]
  - **Customer Service** – migrating to an increasing [metrics driven revenue resolutions](#)
  - **Research** – added talent for [audience research](#) and [voice of customer feedback](#)
  - **Data Analytics** – formerly responsible for analytical development at Publishers Clearing House; focus on [audience data frame work and statistical modeling](#) [Ned Kaufman]
  - **Audience Analytics** – former Newsday senior financial analysts; focus on [audience strategy and analysis](#) [Jaime Bowman]

# Habits

- Dictionary.com – an acquired behavior pattern regularly followed until it has become almost involuntary
- Charles provides a framework for understanding **how habits work and a guide to experimenting with how they might change**
  - Craving: 4 days/100 hours to break
- Retention Marketing – **start with identifying each individual subscriber's habits (routine) of engagement with your touchpoints and experiment with stimulus when you detect a change in routine**



## Modeling & Applications

- Churn Modeling and Applications [\[updates\]](#)
  - Dynamic Messaging for Payment Deviations
  - Surprise and Delight Retention Marketing
  - Niche Product Opt Ins
  - Billing Period Optimization [\[new\]](#)
- Net Lift/Persuasion Modeling and Applications [\[new\]](#)
- Customer Experience Management
- Data and Revenue Optimization in the Contact Center

# Churn Modeling

## What is Churn Modeling?

- Predictive analytics identifying steps and stages of **why and when subscribers leave**
- Provides awareness, **anticipation**, and quantifiable metrics of **churn risk for each individual subscriber**

## Churn Modeling Enables

- Provision of insights to prevent churn behavior
- Identification of habits and dynamics that predict lower churn
- Significant insights for a customer first focus
- Targeted retention marketing
- Complements with CLV to optimize retention focus and spend

# Churn Modeling Insights

Variable	Lower Churn	Higher Churn	Coef.	Vs.
Start Source	No/Low Pressure	High Pressure	0.92	Voluntary
Form of Payment	Credit Card	Billed	-1.21	Billed
switch to Credit Card			0.24	
switch off Credit Card			2.74	
Billing Period	Shorter	Longer	0.31	8 week
Age	Older	Younger	-0.12	Younger
Income	Higher	Lower	-0.15	Poor
Frequency	Longer	Shorter	0.25	7 Days
Upgrade			-1.71	
Forced Conversion			1.80	
Downgrade			0.50	
Tenure	Longer	Shorter		
Payments	Early	Late	1.50	<30 days grace
1 STD			0.48	
2STD			0.68	
Complaints	More	Less	-0.15	No Complaints
quarterly rate up			-0.44	
quarterly rate down			1.81	
Digital Engagement	None/More	Less		
more			-0.25	routine
less			0.25	routine
Content Preference	Lifestyle	Opinion		
change			0.11	routine
Seasonality	Summer/Fall	Winter/Spring	-0.43	January

Positive coefficient denotes a predictor of churn



# Dynamic Messaging For Payment Deviations

# Dynamic Messaging for Payment Deviations

## Assumptions:

- **Change in habit**, particularly payment timing, is highly predictive of declining relevancy of product to consumer and subsequently consumer engagement

## Concept:

- Understanding each individual subscribers payment habits
- Market to individual subscriber when a deviation is detected

## Application:

- **Communication sequence** and messages during the renewal process are **triggered by deviations from prior payment behaviors** instead of a generic collections communication sequence applied to all subscribers.

# Dynamic Messaging for Payment Deviations

## Message 1 1STD



## Message 2 1STD + 2 wks



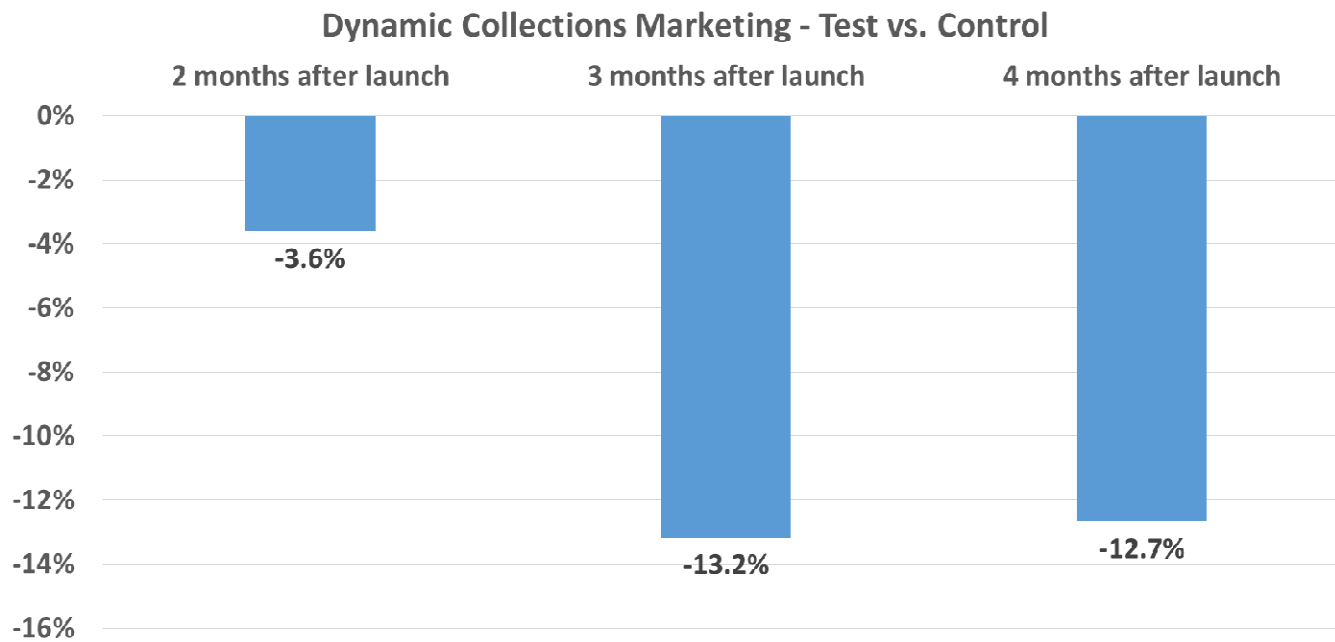
## Message 3 1STD + 4 wks



All messages are distributed via email, topper, and phone call

# Dynamic Messaging for Payment Deviations

Results: Reduction in formers is 13% at 3 to 4 months after launch



# Dynamic Messaging for Payment Deviations

## Learnings:

- First deviation is most significant
- Further actions have less impact
- Third message impact flat to negative vs. control in full role out

## Next Steps:

- Application of net lift modeling; particularly to third message
- Testing of different messaging/offerings at third message
- Incorporating (personalization) relevancy into marketing messages based on behavioral profiles
- Transition entire collections process from static to dynamic messaging

# Surprise & Delight Retention Marketing

# Surprise & Delight Retention Marketing

## Assumptions:

- Unanticipated gift or gratitude will decrease churn probability

## Concept:

- Targeted marketing to subscribers with high probability of churn

## Application:

- Send a gift or expression of gratitude to such subscribers

# Surprise & Delight Retention Marketing

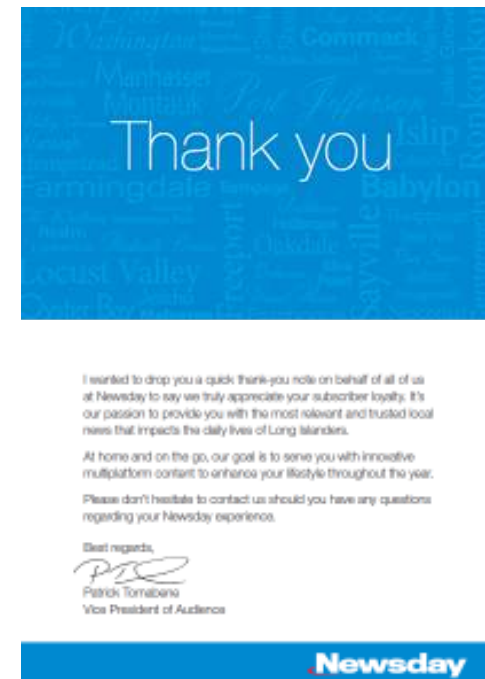
Portable Smart  
Device Charger



Gift Card



Greeting Card

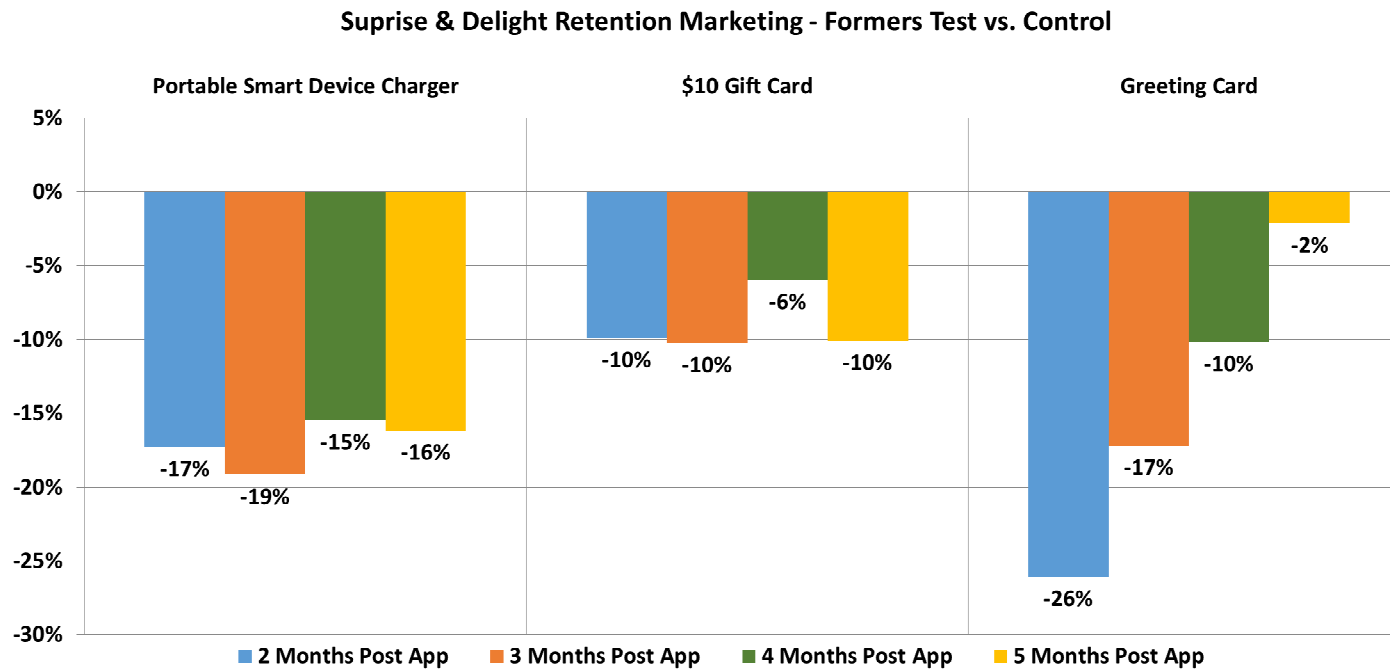




# Surprise & Delight Retention Marketing

Results: Pilot 1 – Applied to subs with **higher churn scores**

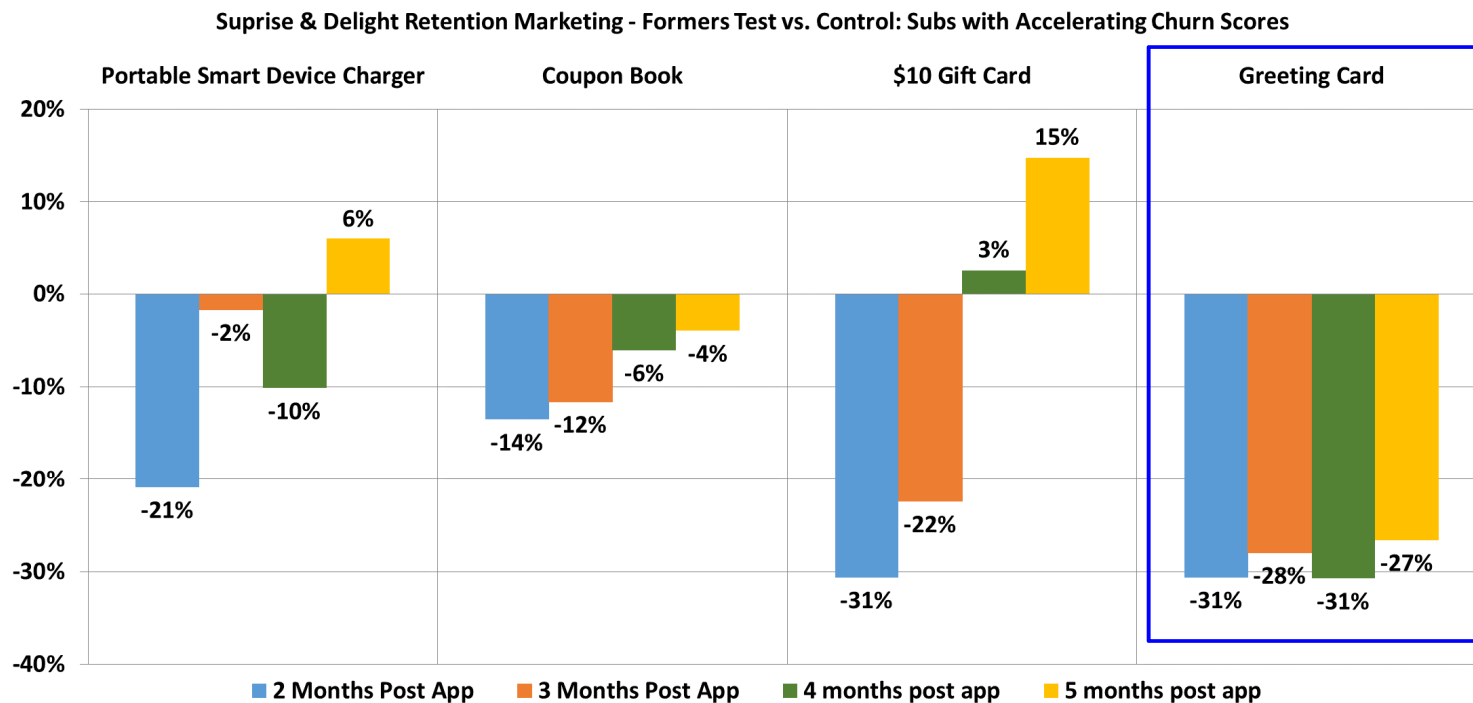
- Reduction in formers is approximately 15% at 3 months; 10% at 5 months



# Surprise & Delight Retention Marketing

Results: Pilot 2 – Applied to subs with **accelerating churn scores**

- Reduction in formers is significantly more than subs with high churn scores



# Surprise & Delight Retention Marketing

## Learnings:

- 50-cent greeting card had the same impact as \$15 charger at 3 months, however, the charger had more staying power after 3 months
- Dynamics (change) in churn score is a greater predictor of churn than actual churn score (i.e. subscriber with a churn score increasing from 50 to 70 is more likely to churn than a subscriber with a static churn score of 85.)
- Greeting card (expression of gratitude vs. gift) has a greater impact on subs with accelerating churn scores

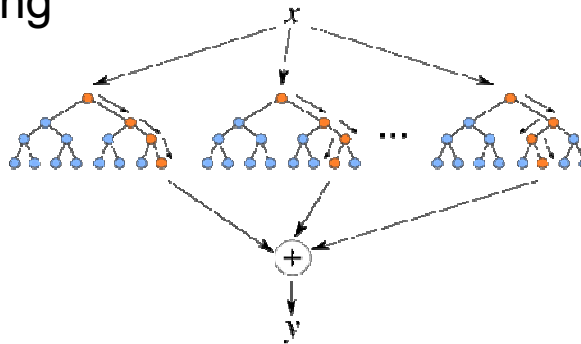
## Next Steps:

- Application of Net lift/Persuasion modeling to optimize efforts

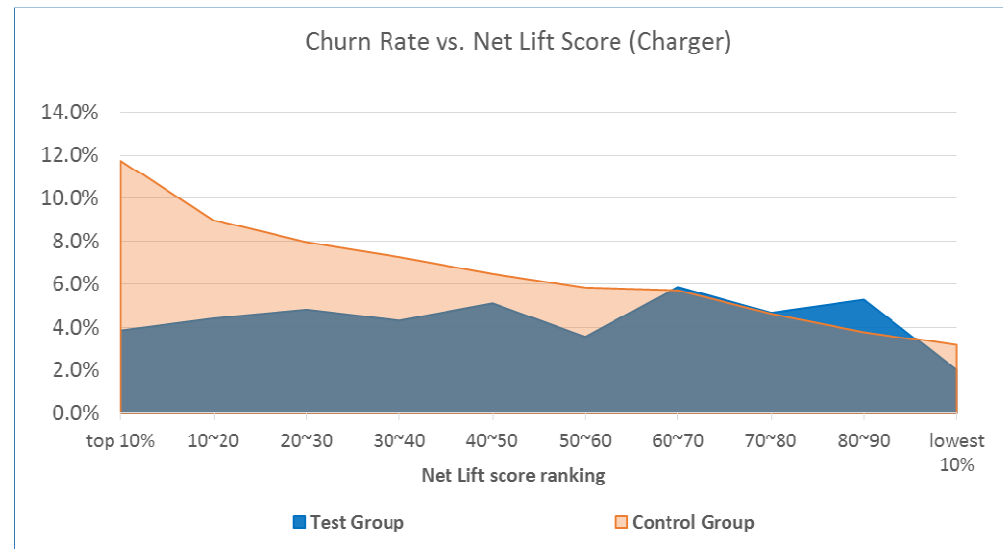
# Net Lift/Persuasion Modeling

# What is Net Lift/Persuasion Modeling?

- Identifies “swing/persuadable subscribers” through classifying them with combination of significant variables. Three groups of subscribers...
  - **Sure** – Will behave like you want them to, even if you don’t target them. They are already persuaded.
  - **Self Selectors** – Likely to do decision on their own. Retention efforts could even have an adverse effect.
  - **Swing/Persuadable** – Will have a positive response to retention marketing. Need some convincing and open to being convinced.
- Methodology: **Random Forest Learning** (prevailing Machine Learning Algorithm) builds a forest of 600 different trees for each subscriber with each tree using an independent random subset of data for training



# Net Lift/Persuasion Modeling Insights



- Training the persuasion model allows for both the **optimal personalized treatment** for each subscriber and the **estimated net lift in retention** for each subscriber as a result of such treatment.

# Net Lift/Persuasion Modeling Insights

## Typical Subscriber – Greeting Card Treatment

Account_num	23358916	43316337
Net Lift	7%	-5%
pf	0.73	0.04
income	Lowermid	Midscale
age	Younger	Older
period	8	8
tenure	0-1 years	0-1 years
source	DIRR	VOLN
EZpay	0	1
num_comps	0	9
Payment_days	-4	-11.8
Tenure days	177	16
freq	Thursday & Sunday	Thursday & Sunday
Weekly pay	2	2.5
Billing	NON	NON
pf_change	-0.005	-0.024

**Subscriber on the right is a typical self-selector**

- Started subscribership voluntarily
- 9 complaints in 16 days
- EZpay

# Net Lift/Persuasion Modeling Insights

## Typical Subscriber – Charger Treatment

Account_num	71710988	20296878
Net Lift	7%	-4%
pf	0.72	0.22
income	Lowermid	Midscale
age	Younger	Mature
period	8	8
tenure	0-1 years	5 + years
source	BILL	VOLN
EZpay	0	0
num_comps	0	0
Payment_days	57.33	-10.42
tendays	249	9581
freq	Other	Daily
Weekly pay	2	10.09
Billing	2nd renew	NON
pf_change	-0.005	0.0006

### Subscriber on the left needs stimulus

- Pays bill 57 days post expire on average
- Just received 2<sup>nd</sup> (reminder) bill
- Very likely to churn (high pf)

### Subscriber on the right doesn't want a charger

- Midscale and mature, might already have chargers
- Already well-engaged



# Net Lift/Persuasion Modeling Insights

- Implement Net Lift model to Score all 240,000 subs.
- Target **all swing clients** with Net Lift Score >2%, and find most suitable treatment for each of them (optimizing cost per save).

	Base case (based on churn level)				Net Lift Model				
	Accelerating	High	Low	Sum	Group 1	Group 2	Group 3	Group 4	Sum
Suitable treatment	Post Card	Charger	Post Card		Charger	Coupons	Gift Card	Post Card	
Population	4,395	11,165	44,907	60,467	9,579	4,702	3,835	113,091	131,207
% Formers 90 days post app									
Treatment	6.8%	4.8%	3.6%		2.9%	4.0%	3.1%	2.8%	
Control	9.7%	6.9%	4.1%		6.0%	7.6%	6.3%	6.1%	
Net lift	2.9%	2.1%	0.5%		3.1%	3.6%	3.2%	3.3%	
Expense									
Unit	\$0.55	\$16.02	\$0.55		\$16.02	\$7.14	\$8.50	\$0.55	
Total	\$8,096	\$178,853	\$82,723	<b>\$205,943</b>	\$153,447	\$33,566	\$32,598	\$62,139	<b>\$281,750</b>
Subs saved	127	234	235	<b>597</b>	296	172	123	3743	<b>4334</b>
Per Save	\$19	\$763	\$105	<b>\$345</b>	\$519	\$196	\$264	\$17	<b>\$65</b>

- Our net lift/persuasion modeling suggest that an additional \$80k in retention marketing will save 3700 more subscribers.

# Niche Product Opt Ins

## Niche Product Opt Ins

### Assumptions:

- Churn model identifies content areas that provide greater retention and price elasticity. Couple with research to aid in identifying product development opportunities
- Providing additional products/content on a **no charge opt in** basics will result in greater retention and price elasticity.
- Ask me to pay more for something that I want... not so fast. Give me more of what I want, then charge me more... not so fast to complain.

### Concept:

- Focus on what products/content drives retention and price elasticity; develop/market such products



## Niche Product Opt Ins

### Results:

- 28k subs opted in the first two weeks; halted promotion to measure impact
- 12% reduction in churn probability upon opting in
- 5% more price increase with nearly no stops at 10 weeks post price increase

	Non BB	BB	BB vs. Non BB
Stop	1.30%	0.15%	-1.15%
Revert	6.33%	10.41%	4.08%
COS	1.09%	1.52%	0.43%
Realization (net to gross)	88%	85%	-2.61%

## Niche Product Opt Ins

### Learnings:

- Relevant product development generates significant retention and price elasticity
- Product both identified subscribers that had greater retention and price elasticity as well as added to their retention and price elasticity

### Next Steps:

- Partnering and developing additional products in areas that will generate additional retention and price elasticity as identified by churn model and related audience data and analytics

# Billing Period Optimization

# Billing Period Optimization

## Assumptions:

- Churn model identified that our 8 week billing period yields the greatest retention
- Currently 20% of our subscribers are not on a 8 week billing period

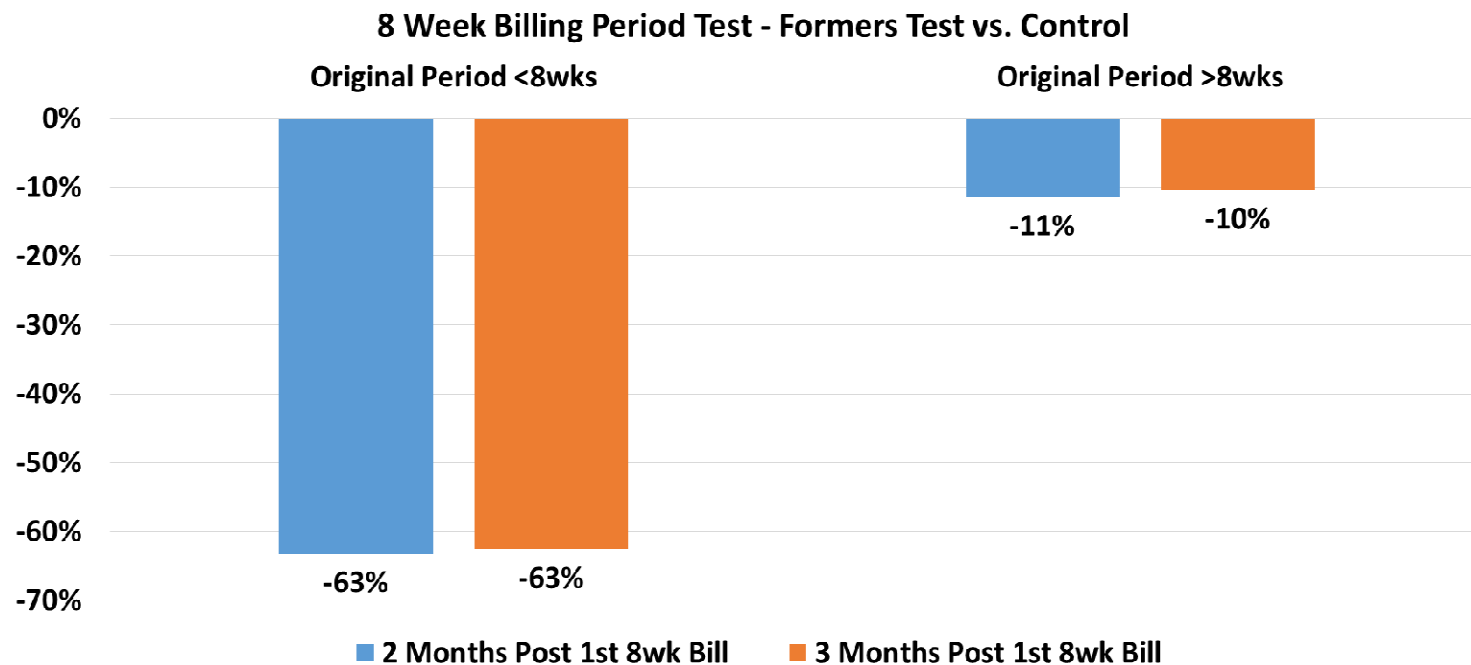
## Application:

- Test moving non 8 week billing period subs to 8 week billing periods



# Billing Period Optimization

Results: Significant reduction in formers. (Churn model showed -0.70 Coef.)



# Billing Period Optimization

## Learnings:

- 13% called about the change; 3% requested their current billing period
- Early indication suggest that the move to 8 week billing periods is a significant contributor to reducing churn. However, the impact on original period <8 is likely to decline due to assuming a portion of the improvement is due to receiving less bills.

## Next Steps:

- Migrate the balance of non 8 week billing period subs, less 4 and 5 week credit card billed subs

# Customer Experience Management

# Why Customer Experience Management?

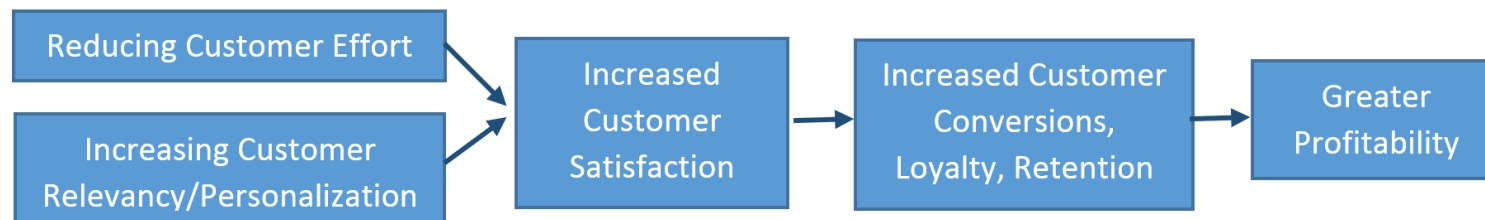
## Assumptions:

- Attitudinal data provides significant insights for reducing churn
  - It's what subscribers think and why they are doing it
- Brand engagement and customer first focus over platform engagement and product first focus strategy
  - Challenge is less on growing page views and unique visitors and more on getting continued customer engagement

# What is Customer Experience Management?

## Concept:

- Practice of **managing and improving customer touchpoints/interactions**
- Optimizing interactions/product from the customers perspective
- Provides measures to ascertain elements of satisfaction and respective impact on overall satisfaction



# Customer Experience Management

## Applications:

- Channels
  - Digital Products – Website, Mobile site
  - Contact Center
  - Distribution
- Data to be loaded into churn model and analytics database, via entity resolution, to aid in strategic decision making across the organization

# Data and Revenue Optimization in the Contact Center

# Contact Center – Cost Center to Revenue Generator

## Stop Save Optimization Modeling:

- Audience and customer experience management data coupled with contact center metrics to identify opportunities for optimization
- Multiple 7-figures – annualized audience cash flow saved by contact center reps
- 20%'s to 50% plus or \$250k – range of monthly stop save percentages by rep
- Included retention of stop saves; by rep
- Enables: Identification of best processes and practices for optimizing
- Results: 10% (\$750k annualized cash flow) improvement in stop saves vs. last year



# Contact Center – Cost Center to Revenue Generator

## Price Increase Negotiations Modeling:

- Revert rates are increasing, marginally, with continual price increases
- 7-figures – annualized audience revenue negotiated by contact center reps
- +67% to -38% or \$200k – range of increase revenue net/gross by rep
- Enables: Testing of different offerings and identification of best practices for negotiation; complimented with CLV, call monitoring, and speech analytics data
- Results: 27% vs 1% (\$350k annualized cash flow) improvement P8 vs. Q1

Price Increase Negotiations  
Net/Gross Revenue Realized (including stops)

Q1	Q2	P7	P8
1%	14%	18%	27%

# Contact Center – Cost Center to Revenue Generator

## Satisfaction Scoring:

- Survey served to subscriber via email after call to contact center
- Provides customer satisfaction insight after contact with rep
- Total Satisfaction and NPS (Net Promoter Score) benchmarked by rep
- Elements of satisfaction (resolution, response speed, knowledge,...) and their respective impact on total satisfaction
  - Identifies specific areas of strength/weakness by rep, policy, process
- Identify what practices on a call provide greatest retention/revenue realization
- Satisfaction data as input for retention modeling

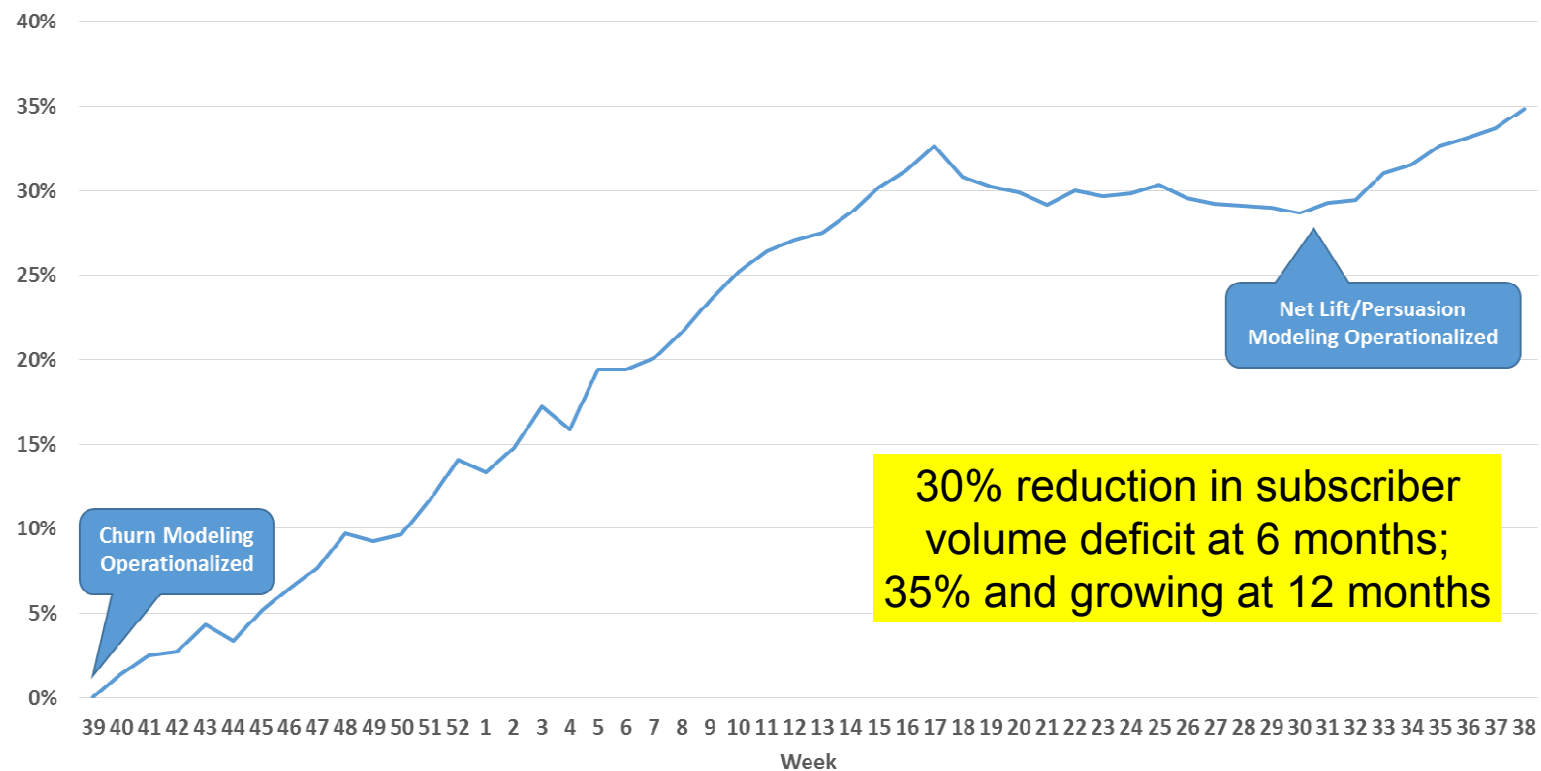
What's the Total Impact?

# Impact on Volume Trend – Historical Performance

AAM Reported Circulation Volumes  
 Daily Individually Paid: Q4 2015 vs. September 2010  
 Top 50 Q4 2015 match to Top 25 September 2010

Q4 '15 Total Daily Circ Ranking	Member Name	Q4 '15 Indv Paid Print	Sept '10 Indv Paid Print	2015 vs 2010	Rank
2	WALL STREET JOURNAL	1,105,185	1,416,974	-22.0%	1
3	NEW YORK TIMES	534,129	724,719	-26.3%	2
9	STAR TRIBUNE	181,304	250,325	-27.6%	3
16	TAMPA BAY TIMES	150,946	219,172	-31.1%	4
8	NEWSDAY	212,323	311,004	-31.7%	5
7	WASHINGTON POST	334,596	506,574	-33.9%	6
18	SAN FRANCISCO	119,731	185,505	-35.5%	7
11	DALLAS MORNING	143,230	224,820	-36.3%	8
14	PHILADELPHIA	137,416	224,329	-38.7%	9
4	LOS ANGELES TIMES	332,408	544,552	-39.0%	10
15	ARIZONA REPUBLIC	183,266	302,546	-39.4%	11
6	CHICAGO TRIBUNE	257,031	426,089	-39.7%	12
12	HOUSTON CHRONICLE	170,056	282,619	-39.8%	13
19	THE STAR-LEDGER	112,114	205,598	-45.5%	14
5	NEW YORK POST	242,577	459,521	-47.2%	15
26	CHICAGO SUN-TIMES	117,674	232,171	-49.3%	16
10	DAILY NEWS	219,054	482,158	-54.6%	17
1	USA TODAY	294,042	692,901	-57.6%	18

## Impact on Subscriber Volume Deficit – Trailing 12 Months Year/Year



30% reduction in subscriber  
volume deficit at 6 months;  
35% and growing at 12 months