## Direct Marketing - How Big Can It Get?

This document will review the performance of digital marketing through July, share some of the learnings the team has generated and set the stage to go big in 2017.

A Note on Attribution 2016 Performance Our Strategic Priorities for 2017 2017 Marketing Plan Our Recommendation: \$23.6M Going Big: \$37.8M, but not until 2018 Core Marketing Programs **Paid Social** Paid Search Areas We're Exploring **Portal Deals** Direct Mail **Display Ads Lower Priority Programs** We're Deprioritizing App Marketing Radio, Print, and Out of Home Affiliate Things we Need Increased Mobile Conversion [Search Apps] We Always Need to Learn More [Analytics] Google Tag Manager on Apps [User Experience, Analytics, Landing Pages]

## A Note on Attribution

We attribute revenue and profit to marketing campaigns based on the 30-day contact rate from the date a user clicks on an ad. 30-day contact rate has proven to be a reliable predictor of how many contacts we'll get within 360 days of clicking, and will close within 360-days of contact. Even though we allow up to two full years for user to contact and close, the average direct marketing user contacts an agent within 64 days and closes within 122 days of contact, for a total of 186 days from click.

Better User Insights & Targeting [User Experience, Analytics, Landing Pages]

Aside from this paragraph, we have not included any conversation or assumptions about our attribution model in this document. We'll have a first draft of a more sophisticated attribution model by the end of September and expect that it will take a few months to review and finalize the model. While unlikely, if the model does show a big shift in how we assign revenue, we'll revise the strategy outlined here.

### 2016 Performance

Through July 2016 we have spent \$4.5M on digital media, up 134% YoY and +24% compared to our original 2016 budget. We project the cohort from January through July will drive \$17.1M in revenue, up +162% YoY over the same period last year. We also expect a 5.2% contribution margin. By comparison, our contribution margin was break-even in 2015.

By the end of the year we'll spend a total of \$9.7M in digital channels, including an additional \$2M we recently approved to accelerate growth in Q3 and Q4, based on our success advertising Redfin listings on Facebook. Including direct mail and radio we'll spend \$10.4MM in 2016. Overall, we'll drive \$32.6M in revenue, up 181% YoY, at almost 6% contribution margin.

2016 Performance Excluding Direct Mail and Radio, in \$ millions unless noted	<b>2015</b> (Jan - Jul)	<b>2016</b> (Jan - Jul)	2015 (FY)	2016 (FY)	2016 Vs. PY (Jan - Jul)	2016 Vs. PY (FY)
Spend	\$1.9	\$4.5	\$3.3	<b>\$9.</b> 7	133.9 %	193.9 %
Projected 360-day Contacts	12,359	28,167	19,926	52,160	127.9%	161.8%
Projected 360-day Deals	1,100	2,459	1,789	4,683	123.5%	161.8%
Projected 360-day Revenue	\$6.5M	\$17.1	\$11.6	\$32.6	161.9%	181.0%
Projected 360-day Gross Profit	\$1.9	\$5.4	\$3.6	\$11.5	187.4%	219.4%
Projected 360-day Contribution Margin	(0.5%)	5.2%	2.6%	5.5%	5.7 pts	2.9 pts
Projected In-year Revenue	\$4.9	\$12.5	\$5.3	\$15.2	155.1%	186.8%
Projected In-year Contribution Profit	(\$0.51	(\$0.5 8)	(\$1.8 4)	(\$3.1)	(14.6%	(58.9 %)

<sup>\*</sup> We're targeting 5% contribution margin.Contribution profit as gross profit minus media costs.

The majority of our growth has come from Facebook advertising and scaling up our paid search advertising, primarily in Google, but also in Bing. Beyond that, we've started pulling data automatically from our advertising partners, allowing the team to spend more time marketing

and less time pulling data. We've eliminated 18 hours per week of manual data manipulation and now have more detailed performance data. It takes us less than an hour to update our performance metrics each week.

We've also developed standardized templates for every campaign we run. This has allowed us to automate how we publish our Redfin listings on Google and Facebook and how we launch campaigns in new markets. This cut another six hours per week of manual time and let us update our listing advertisements daily instead of weekly. We could even update them every hour in busy listing seasons! Investing in automation is critical so we can invest more in media and less in headcount as we grow.

## **Our Strategic Priorities for 2017**

Reach in-market home-buyers and sellers for the least money: We're dependent on Google and Facebook for our overall performance. 67.4% of 2016 paid contacts come from those sites. By the end of 2017, we'll add additional ad networks like Criteo or Yahoo and at least 50% of contacts will come from other sites. This goal is dependent on scaling search on Bing and proving out display ads.

<u>Drive Sell-side Contacts</u>: In 2016, 15.5% of contacts driven by digital channels have been sell side. By the end of 2017 25.5% will be sell side contacts compared to the company average of 20%. We'll develop new campaigns and landing pages featuring pending and sold Redfin listings, the Redfin Estimate and Home Report, and neighborhood sales trends to attract and convert sell side folks.

<u>Expand Advertising on Mobile:</u> Mobile traffic represents 61% of total site traffic. However, none of our Redfin listing campaigns on Facebook and only 14% of paid search ads outside of Seattle are on mobile. By the end of 2017, we'll have launched all campaigns in all markets on mobile devices. To get there, we'll need support from search, apps, and customer growth to improve conversion on our mobile web and apps in 2017 so we can bid more aggressively on mobile. We may never get mobile conversion to the same level as desktop, but every bit helps.

## 2017 Marketing Plan

We've broken our marketing channels into high priority areas where we have significant room to grow with at least a 5% contribution margin; areas where we believe there is a big opportunity, but we don't have enough history to predict whether they'll be profitable; and lower priority areas we would pass on if forced to make cuts to the 2017 budget.

For 2017, we built our plan based on the five-year plan. We carved out \$12.0M for TV and \$1.2M for link-building, leaving \$11.8M for direct marketing. We'll talk about the details later in the document, but in order to stay within the five-year plan, we're dropping app marketing in favor of testing in display.

### Our Recommendation: \$23.6M

Our recommended budget for digital marketing in 2017 is \$23.6M, \$11.8M more than the five-year plan. We could potentially shift \$1M-\$2M from TV to digital marketing, but it would still be a significant expansion of the budget. We'd expect to drive \$68.8M in revenue and \$3.2M in contribution profit over the full attribution window, however we'd only close \$39.0M in revenue in 2017 and lose \$4.6M in contributing profits compared to a predicted in-year loss of \$3.1M in 2016.

## Going Big: \$37.8M, but not until 2018

We think we could spend all the way up to \$37.8M on direct marketing, but we're not confident we could hit this number and maintain a 5% contribution margin. We'd have to prove three assumptions:

- Close rates for Redfin listing ads need to be inline with other paid social and search ads.
   Based on the time it takes customers to close, we'll have a better estimate of close rates in
   March 2017.
- 2. We'll need our non-app mobile ads to perform. We've had initial success in DC, but haven't proven that we can replicate our experiment in Seattle.
- 3. Find a way to profitably invest in display advertising. We've only spent about \$200K on display ads, so it's early days, but the CPAs have not been promising, so far. We'll invest in learning in 2017.

Direct Marketing (in \$ millions)	2016	<b>201</b> 7 5-year Plan	<b>2017</b> Recommendatio n	High End
High Priority, High Certainty	\$7.6	\$8.3	\$18.3	\$26.0
Paid Social Media	\$3.4	\$2.7	\$10.3	\$18.0
Redfin Listing Promotion (Desktop)	\$2.8	\$2.2	\$7.5	\$7.6
Redfin Listing Promotion (Mobile)	\$0.3	-	\$1.0	\$8.6
Other Facebook Campaigns	\$0.3	\$0.5	\$1.8	\$1.8
Paid Search (SEM)	\$4.2	\$5.6	\$8.0	\$8.0

High Priority, Low Certainty	\$0.4	\$3.1	\$3.0	\$8.o
Portal Deals	\$0.0	\$0.4	\$1.0	\$1.0
Direct Mail	\$0.3	\$1.0	\$1.0	\$1.0
Web Display	\$0.1	\$1.7	\$1.0	\$6.0
Lower Priority Channels	\$2.1	-	\$1.9	\$3.4
App Marketing	\$1.7	-	\$1.9	\$1.9
Radio, Print, and Out of Home	\$0.3	-	-	\$0.5
Partner & Affiliate	\$0.1	-	-	\$1.0
Brand Search	\$0.3	\$0.4	\$0.4	\$0.4
Total Direct Marketing Spend	<u>\$10.4</u>	<u>\$11.8</u>	<u>\$23.6</u>	<u>\$37.8</u>
Performance				
Projected 360-day Contacts	53,020	60,809	104,478	
Projected Revenue	\$33.8	\$38.6	\$71.8	
Projected Contribution Profit	\$1.9	\$1.7	\$2.9	
Projected Contribution Margin	5.7%	4.3%	4.0%	
Projected in-year Revenue	\$16.0	\$25.0	\$39.0	
Projected in-year Contribution Profit	(\$3.4)	(\$3.1)	(\$4.6)	

## **Core Marketing Programs**

## **Paid Social**

For 2017, we're breaking out Paid Social as its own marketing channel from web display. It is our biggest growth opportunity and our proposed plan calls for nearly a 3x increase. We'll track and measure the impact of our spend independently from the rest of display advertising in weekly and quarterly reviews.

We're aggressive because of the program growth we've seen since September 7th when we increased our average daily budget from \$6.2K to \$15.5K, with our biggest day at \$21.7K. Early projections show contacts should follow in line with the increase in spend, but we'll have better data by September 30th.

Assuming contacts meet our expectations, we'll track close rates through March. If those hold up we have a clear path to spend between \$5.6 and \$8.0MM, at 5% contribution margin, on Redfin listing ads in 2017. The rest of our spend will be spent on exploring Redfin listing ads on mobile and other similar Facebook campaigns.

Paid Social (in \$ millions)	2016	<b>2017</b> 5-year Plan	<b>2017</b> Recommendatio n	High End
Spend	\$3.4	\$2.7	\$10.3	\$18.0
Projected 360-day Contacts	9,471	11,235	34,322	53,764
Projected Revenue	\$7.4	\$8.8	\$33.6	\$42.1
Projected Contribution Profit	\$0.3	\$0.4	\$1.6	\$1.0
Projected Contribution Margin	4.3%	5.0%	5.0%	2.38%
Projected in-year Revenue	\$3.3	\$5.8	\$18.1	\$25.2
Projected in-year Contribution Profit	(\$1.93)	(\$0.6)	(\$1.7)	(\$2.6)

#### Things that shape our thinking for 2017:

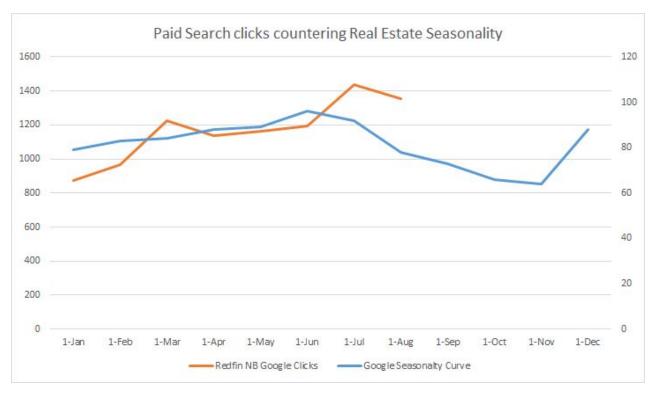
- 1. <u>Targeting Redfin Listing ads based on the number of bedrooms we expected a user to be looking for, instead of targeting all listings to all users, delivered efficiency.</u> Segmenting audience by bedroom count increased the click through rate by 28% from 2.06% to 2.63%.
- 2. We can double the size of our Redfin Listing campaigns by advertising on mobile. Between July 24th and August 14th we advertised on mobile devices in DC. We drove 55 contacts at a projected 3% contribution margin and did not see any drop off in our desktop campaigns. We still have some work to do to repeat this test in Seattle. If we succeed in Seattle and we're able to see that close rates are on par with paid social and search by March 1st, 2017, we can double the size of our Redfin Listing program and spend up to \$18MM in 2017.
- 3. Implementing Evocalize, an ad and bid management software similar to Marin, drove gains in click through rate and cost per click savings. We launched a bid management platform, Evocalize, in Q2-16 and saw an improvement of 19% in click through rate, 23% in cost per click, and 38% increase in volume. Coupled with the scale we're able to drive in SEM using

Marin, bid management software is a best practice for digital marketing. All CPAs include the cost of the bid management software.

#### **Paid Search**

Paid Search (in \$ millions)	2016	<b>201</b> 7 5-year Plan	<b>2017</b> Recommendatio n	High End
Spend	\$4.2	\$5.6	\$6.4	\$8.0
Projected 360-day Contacts	24,965	32,170	35,977	43,550
Projected Revenue	\$16.8	\$19.2	\$21.7	\$29.3
Projected Contribution Profit	\$1.4	\$1.0	\$1.1	\$2.2
Projected Contribution Margin	8.2%	5.0%	5.0%	7.5%
Projected in-year Revenue	\$7.3	\$12.7	\$14.2	\$17.4
Projected in-year Contribution Profit	(\$1.8)	(\$1.3)	(\$1.5)	(\$1.8)

We drove growth during 2016 by expanding into more markets, re-building our bidding process, standardizing how we set up our campaigns across markets, and expanding mobile coverage. Much of this growth has started to take hold in Q3 and we're growing impression and click volume despite seasonal declines in search volume.



- 1. Setup of our ad and bid management software is critical. In Q2 we completely re-built our integration with Marin and are now matching nearly 95% of contacts to a user click, up from 60%. As a result, previously undervalued keywords were able to drive more traffic and contacts. For example, in our Boston campaigns average weekly clicks increased by 30% and contacts 35% from June 2016 to July 2016.
- 2. <u>Being aggressive with our ad copy and format drives results.</u> We launched a new Google ad format in Q3 which drove a click through rate increase in buyer campaigns from 3.3% in May 2016 to 5% in August 2016. In 2017 we'll test winning ad copy across display and paid social.
- 3. <u>Mobile-specific targeting, bidding, and landing pages are keys to success.</u> In Q2, we tried to consolidate our existing desktop and mobile search campaigns in Boston to work better with Google's platform. The test didn't go well and contacts dropped by 10-15%. Google released mobile-bidding improvements in mid-august and we have a new test running with results expected in October.
- 4. <u>Tailor campaigns for Bing.</u> In the past, we copied Google campaigns to Bing. Campaigns were profitable, but we could not drive more traffic, particularly outside Seattle and DC. We are working on a new approach with our Bing reps and had an on-site working session with the Bing product team on September 16th. The goal is to have the new campaigns completed prior to the end of Q4.

## Areas We're Exploring

#### **Portal Deals**

Zillow is the largest real estate portal in the US. Starting in Q3 they are moving from a subscription model to an auction model in the Pacific Northwest and Florida. This means the price for ads will be set by the market. Zillow estimates a 5% close rate for inquiries from their site, so we could pay around \$100 per inquiry and break-even. We learned from speaking with Victor Lund that inquiries on Zillow go for around \$35 an inquiry in California.

We'd need to build an API to push inquiries from Zillow into the Support Queue, but we believe we are best positioned to succeed in this channel compared to other brokers because of our rapid response. Assuming we can prioritize the Support Queue integration in Q4 teams and projects, we'll spend \$50K to \$100K to run a 60-day test. If the test goes well, we'll plan to spend up to \$1.0M, and potentially more, in 2017 to explore this opportunity.

#### **Direct Mail**

We will spend \$1M in 2017 and deliver mail to 500,000 homes with a Redfin Estimate of more than \$500K. We'll expand from seven markets in 2016 to all core & mid markets in 2017, as well as five emerging/expansion markets, for a total of 25 business markets. Based on current performance, we expect to close 200 incremental deals and generate \$2.4 million in revenue. We're projecting we'll be break-even over the full attribution window, but we'll lose \$500k in contribution profit in 2017. At scale, we think there might be around two million homes that we could target at breakeven or better.

#### **Display Ads**

We don't have a lot of Redfin history with display advertising. In 2015 and 2016 combined, we spent less than \$200k on display. For 2017, we'll spend up to \$1MM before the end of Q1 2017; but only if we're seeing success. If we're not able to drive contacts at our target CPA's, we'd re-allocate the remainder to paid social. We'll track cost per acquisition, the way our contacts pull through, and product/partner splits to judge success. In order to allow for some room to experiment and learn about the channel we'd set our bids and CPA targets to break even on this investment. Like with paid social, we would include our technology/partner costs in our targets. We'll check back with the group in March 2017 to review performance and budget for the rest of 2017. If we're seeing positive results we could spend a total of \$6M during 2017. We'll succeed in display using one, or a combination, of the following three tactics:

- 1. We're planning to expand that capability in Redfin Listing ads beyond Facebook. We've had success on Facebook by targeting users that look like users who have closed a deal with Redfin using 3rd party software like <u>Atlas</u>, <u>Double Click</u>, or <u>Conversant</u>.
- 2. We'll buy ads directly from sites with real estate sections such as AOL, Yahoo, MSN.
- 3. We'll target relevant articles and pages for our ads. For example, we'd place an ad next to a real estate article on Bloomberg Finance.

## **Lower Priority Programs**

We're Deprioritizing App Marketing

App Marketing (in \$ millions)	2016	<b>2017</b> 5-year Plan	<b>2017</b> Recommendatio n	High End
Spend	\$1.9	\$1.7	\$1.5	\$1.9
Projected 360-day Contacts	17,724	9,911	8,961	17,724
Projected Revenue	\$8.4	\$7.4	\$4.8	\$8.4
Projected Contribution Profit	\$0.2	\$0.18	\$0.2	\$0.2
Projected Contribution Margin	2.9%	2.9%	5.0%	2.9%
Projected in-year Revenue	\$4.6	\$3.6	\$3.2	\$4.6
Projected in-year Contribution Profit	(\$0.6)	(\$0.5)	(\$0.3)	(\$0.6)

We'll keep our current app download program if we expand our 2017 recommended plan to \$23.8M, but would re-allocate resources to other channels if we stick to 5-year plan. We're getting fewer dollars back from our investment in app marketing, due to low contact to close rate and revenue per deal.

2015 Performance by Channel	Contact to Close Rate	Revenue per Contact	Gross Profit per Contact
Paid Social	13%	\$1,082	\$395
SEM	10%	\$708	\$200
App Download	6%	\$338	\$86

## Radio, Print, and Out of Home

After finalizing our 2017 TV media plan, if we have money left over in our broadcast budget of \$12M, we would explore radio in two markets. Our 2016 tests showed that radio generated some contact lift, but CPAs were unprofitable, so we'll need to learn how to better buy the media before we can expand.

We may also lease 60 branded cars in Seattle as part of our 2017 budget at a cost of \$150K above our current reimbursement for those cars. We're surveying the Seattle agents to see if they'd drive the cars with a \$150 monthly employee contribution.

#### **Affiliate**

Partner and affiliate marketing taps site owners and community managers that send traffic directly from their sites to Redfin. We'd pay between \$25 - \$50 per contact and on average would be profitable at close rates as low as 2.5%. The benefit of this approach is that it is lower risk, since we only pay if a user contacts us. The drawback is that it is time consuming to set up, police, and source new partner sites. We're currently exploring two potential pilot partners, BoostUp and SmarAssett, and several others have contacted us with interest (Niche.com, Patch.com, etc.) If these tests work, we'll likely come back to the group with a recommendation.

## Things we Need

## Increased Mobile Conversion [Search Apps]

Mobile web conversion rates lag desktop conversion rates and impact our ability to advertise on mobile. Of logged in users who have only used mWeb 6.1% will contact an agent vs. 7.9% on desktop. Our app install rate per web session has fallen from 19.0 in 1H-2015 to 14.6 in 1H-2016.

## We Always Need to Learn More [Analytics]

- 1. Our current CPAs are based on a trailing 12 month average for revenue per deal, close rate, product split, and partner split. In Q4-16 we'll use partner thresholds to forecast partner splits and adjust bids ahead of time, instead of waiting to see our partner splits change after the fact.
- 2. We do not understand the impact of one channel on another. For example, what happens in paid search if we increase paid social or TV. As we spend more, we'll need to develop a model that helps us understand these relationships.
- 3. We tend to lose money on sell side transactions and the team is counter-incentivised to drive sell side because doing so hurts our contribution margin. We'll need to spend time working with the Analytics team to understand what a home report sign-up and a sell-side contact is really worth.

# Google Tag Manager on Apps [User Experience, Analytics, Landing Pages]

We are able to fire events like contacts, saved searches, on desktop via Google Tag Manager which has allowed us to improve our targeting with Facebook and Google. We have asked to add information like property attributes and customer data so we can target users based on the number of bedrooms they're searching and match users across ad networks but these requests

have been de-prioritized for current Teams and Projects reviews. We need Tag Manager on apps to match desktop so that we can app events interactions to partners as well.

# Better User Insights & Targeting [User Experience, Analytics, Landing Pages]

We have been successful retargeting sell side users once they have visited the site but have been able to acquire sell side users at our target CPA's before they have visited the site. In order to develop acquisition campaigns we'll need to do some more research on understanding what sell side customers are looking for, develop marketing copy and creative assets, and develop landing pages that convert sell side users.