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**Recommendations**

**Overall order: Organic > Email > Google > Bing > Paid Social**

The channel rank by ROI as Organic, Email, Bing, Google and Paid social based on ROI. But if we just look at ROI, our recommendation is not really trustworthy. That’s why we also calculated conversion rate. Research conducted by Larry Kim provides conversion rate benchmarks for business businesses who advertise on Google AdWords. Average Google AdWords account: 2.45 percent conversion rat, and Top 25th percentile is 5.31 percent conversion rate.

**Invest less money on paid social, but select and focus on one or two vendors​**

ROIs of Paid Social are low both in first touch attribution and last touch attribution​, the reason is because there are too many categories from lead vendors, in the total of 76 vendors from raw data. So, it’s very hard to make a return from such large pool, our recommendation is to focus on one or two vendors, like Facebook and Instagram.

**Spend more time managing social media channels​**

Both ROIs are very high from organic, it’s probability because people search and get to know Zillow by three major ways. First is from SEO; second is from Facebook, Twitter and other social media, third is from mouth to mouth. Social media channels are all free advertisement with a solid amount of member of followers or subscribers. Instagram and Twitter have over 300k subscribers, but YouTube has 60k. The recommendation is to spend more time managing social media channels.

**Continue to invest in Email​**

Although Email has a good ROI, but our model suggests that the probability of get acquire from email is low and the conversion rate of first touch is also low, both are saying that email may not be worth to invest more. The reason we have a high ROI, is because the cost of email is very low.

**If investing in Search Engines, Google > Bing**

Bing’s ROI is higher than Google’s from both attributions, the reason is because the cost of Google is $20 higher than Bing. Since the result of ROI is not robust for both Bing and Google, we generate the conclusion that Google has better return on acquire rate than Bing does.

**Assumption**

**Data filtering:**

* Valid phone records are more than 0.5 min and empty records are removed
* The revenue is only counted within the period of 2016-10-01 and 2017-06-30

**Data regrouping:**

**LeadType**

* Organic and social organic are categorized in same group

**LeadVendor**

* Regrouped leadvendor (Originally 76 factors) into five categories based on our assumption on each category

**Adding a new column ‘Channel’, based on…**

* We check the leadtype first, and then look at leadvendor.

For example, when leadtype is ‘email’, we categorize the associate channel as ‘email’, no matter what leadvendor is. When leadtype is ‘Paid’, categorize as ‘paid search – google’ if leadvendor associates with google (including "google", "gdn" and " AndroidSearchCards"), categorize as ‘paid search – bing‘ if leadvendor associates with bing ( "bing", "msn"), and categorize as ‘paid social’ if leadvendor associates other social websites or even if it’s ‘email’.

**Joining tables:**

**Join all raw tables by only REAgentID**

* To keep number of Agent ID consistent and not being excluded by join table. This will cause many duplicates, but we can remove these duplicate later after join

Reference:

Larry Kim, Google AdWords.

<https://trackmaven.com/blog/what-is-good-roi-for-marketing-campaigns/>