BIG DATA & WHY MARKETING IS AN OPEN FIELD FOR ENGINEERS

AUTHOR
Ryan Kelly

associate editor
Ryan Cahill

People often ask me how in the world I went from being a design engineer at the world's most recognized jet engine manufacturer to running an online marketing company. At the ripe age of 22, I started my career in aerospace; by 27, I founded a web development company; and by 31, an Internet marketing company. How do these dots even connect? I'll tell you how.

With the advent of digital advertising, marketing in the last 10 years has progressed into a Big Data problem for some companies. For what you would once spend on a traditional media campaign on TV, or even radio, you can now launch an expansive, widespread and targeted campaign online, which gives you a lot more data from many more sources to analyze.

John Wanamaker, a pioneer in marketing, once said, "Half the money I spend on advertising is wasted; the trouble is, I don't know which half."

This is still true today because we have access to so much data that companies are not sure how to navigate through it all. We have web analytics, CRM data, sales data, marketing response data, and much more. How can we use all of this information in a beneficial way to improve our marketing efforts?

Many think of marketing as more of a "creative" industry, but that ignores the intense amount of data, analysis, and problem-solving that marketing requires. This is why I believe engineers have a special place in the marketing industry as data analysts; their analytical minds are a perfect match for data-driven marketing. It also explains why it was not unusual for me to go from aerospace engineering to marketing. There is a serious shortage of engineer-like minds in the marketing world, and it needs them.

For instance, one of the major problems in marketing that needs to be solved right now is attribution and how to apply credit to the right marketing channel for the conversion or sale. Now that most of us use multiple devices throughout the day, it is difficult to track visitors – particularly with existing privacy rules. In 2011, Google announced that it would be encrypting search by forcing users to use a secure search page and hiding valuable data for marketers from Google Analytics. Of course, this translated through to all analytics platforms, such as Omniture, Core Metrics, and others. Marketing analysts now need to analyze other data sources, like Google Webmaster Tools, keyword rankings, and page view data to make educated assumptions about which key phrases are driving quality leads.

And this is only the beginning of the fun. Marketing analysts also need to think like engineers as they conduct A/B testing experiments as a method to try to boost conversion rates on a webpage. Tools such as Optimizely have made it easier to conduct such experiments and enable companies to show cohorts of users different data on a webpage, such as who clicked on a certain call to action or design element or how many conversions occurred for design A versus design B. However, these tools require some advanced knowledge of statistics – otherwise results could be largely random.

Maybe a marketer wants to know why his visitors are not engaged, not buying, or not converting. The engineer-minded marketer has a wide variety of advanced analytical tools at his fingertips, such as CrazyEgg – an advanced heat mapping tool showing the marketer "hot" and "cold" areas of a webpage; Qualaroo – a page-level survey that allows marketers to ask pinpointed questions at the point-of-sale; or ClickTale – a tool that allows marketers to record visitor sessions, and see where users are stumbling through the business' website.

Let's not forget the marketing automation industry, which is red-hot right now. Companies like Pardot (acquired by SalesForce), Marketo, Eloqua, and many others try to use a combination of actual real-time data and learning algorithms to automate portions of consumer sales funnels. B2B marketers know that 72 percent of their leads are not ready to buy or talk to a salesperson yet. With marketing automation, we can nurture these folks and increase sales opportunities by 50 percent or more. The problem is that many companies are paying for traffic and awareness and then doing nothing to engage or nurture those visits into marketing qualified leads.

Companies that understand their customer lifecycles are spending big money right now in the areas of demand and lead generation, marketing automation, and data analysis so that every marketing dollar can be effectively used to add real sales to the bottom line. Companies are looking to service providers who can provide the most value along the customer decision journey, and not just a firm that can provide only SEO, or only conversion optimization. Essentially, if you offer SEO or PPC services, you're really only solving half of the problem. In my opinion, marketing companies that can provide expertise along the path of attracting, capturing, converting and nurturing are those who will see higher growth over the next three to five years in digital marketing. ◼