

1 Major Challenges Facing Marketers Today

Our mind is capable of passing beyond the dividing line we have drawn for it. Beyond the pairs of opposites of which the world consists, other, new insights begin.

– Hermann Hesse, Quotation.io

As much as we marvel at all the new and transformative electronic devices, social media platforms, apps, games, and digital avenues that make our lives better, more productive, more informed, and more fun today, certain basic truths about marketing and new product development persist.

Marketing is still about reaching consumers effectively, informing them, persuading them, motivating them, and ideally bringing them back for more.

New product introductions are still risky, essential, and potentially hugely rewarding.

And true innovation, in both fields, is still as alluring and elusive as ever.

Some of the major issues facing marketers today are the same as they have always been (such as deploying a marketing budget for best effect), while others are newer challenges (such as connecting effectively with consumers in an ever-fragmenting, fast-moving media environment).

Today, the emerging and critical issue for marketers is not *whether* to use AI to address these challenges and many others, but *which* AI technologies and methodologies to use. The imperative is clear: marketing professionals today *must* integrate AI into their marketing strategies if they expect to keep up with, much less beat, the competition.

This presents a tall order. Creating new and effective AI algorithms requires top trained talent. Currently, the demand far outweighs the supply of qualified professional mathematicians, data scientists, and software engineers. Compounding that issue, to be truly effective for marketing and product innovation purposes, those algorithms must be designed from the ground up for those specialized applications. Yet, more and more marketing activities are driven by ML algorithms.

And we are just in the early stages of this global transformation. The race is on – and the winners will not only need to be the fastest. They will also need to be the smartest, the most innovative in their own right, and they will need to own – or apply – the best proprietary AI and ML tools. Algorithms alone won't necessarily win the day – it will be suites of custom software, databases, and a reservoir of “secret sauces” that will prevail.

A quick illustration of what “fast” is in the Age of AI:

A self-learning ML algorithm from Google called AlphaZero mastered the game of chess in four hours, a feat that takes no less than two years for a human to accomplish, and more typically takes about 10 years.

Numbers have an important story to tell. They rely on you to give them a voice.

– Stephen Few, Information Technology innovator, teacher, and consultant, quoted in Brent Dykes, “Data Storytelling: The Essential Data Science Skill Everyone Needs,” *Forbes*, March 31, 2016

Living in the Age of the Algorithm

Algorithms have already penetrated far and wide and permanently in our daily lives. Rather than reciting a laundry list of those applications, one simple and central fact confirms not only their ubiquitous presence (seen and unseen), but also their inherent power and value in our lives.

Algorithms drive the globally burgeoning world of online dating. Without them, these sites would be little more than bulletin boards. With them, we enter into an exciting (and yes, occasionally disappointing) dynamic realm where the prospect of finding true, long-lasting love – or even just a hot date for Friday night – dangles temptingly right in front of us.

The fact is, we trust algorithms to deliver what most of us want foremost in life: a human partner, whether that's a friend or a lover. If algorithms can help guide us expertly through the romantic jungle, it's a safe bet that they can power our search for innovations in product development and marketing!

AI and ML algorithms are designed to execute four major tasks:

- 1. Predict outcomes**, for instance, by designing the algorithm to provide answers to questions such as:
 - If someone discovers your product or service today, how likely is that person to sign up or make a purchase?
 - Which visitors are most likely to buy your product or service?
 - How much will a customer spend during his/her lifetime on your product or service?
- 2. Reduce dimensionality** to understand the personalities and preferences of clients. This lets you know how your customers feel about your product, and clues you into their interests, habits, opinions, and attitudes. As the old Indian philosopher wondered, “What is that, on knowing which, everything else becomes known?” This enables you to know the major factors influencing

a purchase decision, or the principal components that blend together to influence behavior. More on this later.

- 3. Understand language** to extract intangibles such as sentiment, understand metaphors, and find key contexts.
- 4. Cluster and classify** data so the right segments of customers can be chosen and the right set of features and bundling options can be determined.

In order for the algorithms to successfully perform these tasks, here are four paths marketing professionals must pursue:

- 1. Ask the right questions.** Clarify which questions you are trying to ask: Which metrics you are trying to forecast? Which future behavior are you attempting to predict?
- 2. Gather the right data.** Figure out which types of data you need. Not ALL data is relevant to your purposes. On that note, it is also important to obtain a dataset that is “clean” and complete.
- 3. Target the right people.** Find out, through the application of AI methodologies, which people are more likely to make a purchase than others, then focus on that target group – build the right audience for either the product or the message.
- 4. Use the right technology.** It is critical for marketing professionals to choose the right AI and ML tools. As these twin disciplines continue to develop, partnering with the most adept and resourceful marketing technology company is essential to ensuring the most effective outcomes. The quality of thinking, the experience of the professional team, the sophistication of the algorithms, and the proprietary resources that a company brings to bear will dictate the success of the outcome.

Within a few years, it is predicted that most employers will require some degree of AI and ML proficiency. However, it is still a

rare skill at this time, and marketing professionals who gain a working grasp of AI and ML will have a strong competitive edge.

That said – given the complexity of the science behind AI and ML, the necessary level of specialization required to create AI and ML algorithms to perform at peak efficiency for marketing and product innovation purposes, and the constantly evolving nature of the field – retaining professional firms that are dedicated to this sector and have the requisite talent, experience, and resources stands as the smart direction to take. This is where sector experience becomes important. Artificial Intelligence is only as intelligent as the domain expertise contained in it. Glib “general problem solvers” that solve anything are as useful as a dictionary is in composing a poem or a story. If you are in marketing and you are choosing a firm specializing in applying AI or ML to marketing, it is useful to ask and find out how much “domain knowledge” is embedded in the system, and what the relevant background and experience is of the creator of the system.

80% of executives surveyed are “eyeing the peaks” and view AI as a strategic opportunity.

– Sam Ransbotham, David Kiron, Philipp Gerbert, and Martin Reeves, “Reshaping Business with Artificial Intelligence,” *MIT Sloan Management Review*, September 6, 2017

