



# THE NEXT FRONTIER IN PERSONALIZATION

By Adam Whybrew, Mark Abraham, Jane Danziger, and Julian King

**O**F THE THREE IMPERATIVES for marketers who want to personalize engagement with customers, (activate just-in-time personalization, build long-term digital relationships, and create strong emotional connections), just-in-time personalization may be the most difficult to master at scale. Adding to the challenge is COVID-19, which has scrambled daily life for just about everyone. Some people’s context has changed a lot, others a little; you don’t know what works for whom anymore. Marketers need a next-generation approach, which we call “self-learning personalization.”

## Average Isn’t Good Enough

Before the pandemic hit, personalized marketing had moved from a niche capability to a mainstream approach. Automation allows companies to develop many campaigns, delivering varied messages at low cost. But determining who should get what and when they should get it is difficult at the best of times. The “customers for

campaigns” approach that many companies use (in which marketers create campaigns and target them to a model-generated list of customers) has its shortcomings. For example, some companies execute campaigns that may reach many more customers than they should because product managers, in the search for extra sales, inevitably press marketers to go further down the customer list than the analytics suggested.

An even more common issue with this approach is that the same customers often appear at the top of all the lists, so companies must develop a system to deal with the overlaps or risk inundating them with messages. Companies tend to measure overall campaign effectiveness, which means they are always striving for things that work well on average. But they’re failing to identify the pockets of variety among their customers, and this is where the real value of personalization can be realized. A/B testing reveals what works best on average, but companies really need to know what works best for each individual.

Perhaps worst of all, companies are failing to complete the most important step in any campaign—discovering what works—because the people who need to do the analysis are the same people who are executing the new campaigns, and there aren't enough hours in the day to do both. They test and don't learn.

## What Self-Learning Personalization Does

BCG's self-learning personalization approach, Galileo, overcomes these limitations. While others have automated the A/B testing process, BCG and GAMMA, our data and analytics group, use artificial intelligence to go significantly further. Our system works on an individual customer level using insights from data on the collective actions of other customers.

The GAMMA system works by constantly assessing and quantifying the efficacy of each message for each customer. When it is able to decide what will work best, the system implements that approach. When it's not certain, it tests different messages and combinations of messages, learning as it goes. For a new message, it uses what it knows about that type of message from past experience and experiments to find out how this message differs from what it has seen before. Marketers can feed in new messages as fast as they can create them. The system learns what works best: the best time of day, best channel, best content, best incentive (if any). It also figures out—for each individual customer—when to keep quiet.

Consider the following. We worked recently with a multi-vertical retailer and managed marketing communications (email and website) to a select group of 5% of its customer base using GAMMA's self-learning approach. We compared the resulting sales among this group to those of a matched control group among the remaining 95% of the customers, who were being managed by a more traditional customers for campaigns approach. After just a few months the self-learning system was consistently outperforming the human marketers: sales

increased by as much as 10%, depending on the vertical. The system has now been rolled out to all customers, and the retailer no longer needs to devote resources to deciding which customers receive which message, a task that had previously occupied dozens of people. These employees now spend more time understanding customer behavior, creating content, and developing the brand. Moreover, while it used to take a couple of months to get a message from concept to delivery, the organization now puts 25 new marketing messages into the hopper each week, most of which remain available indefinitely for future use, ready to be delivered when the context is right.

We also helped an airline build a system for remarketing abandoned flight searches, taking into account hundreds of signals to determine the best offer for each potential customer. The system allows new offer types to be tested the moment they became available with no disruption, no statistical calculations, and complete confidence that the cost of experimentation (such as irritating customers with irrelevant offers) will be minimized.

Our self-learning personalization approach is producing results for companies as diverse as a bank in India, a pharmacy chain in the US, a fast-fashion retailer in Europe, and a life insurance company in Korea.

## More Time for Value

The ability to scale personalization is transformational. Self-learning personalization not only boosts results, it also frees the marketing and analytics teams to engage in higher-value activities, as we saw in our work with the multi-vertical retailer.

Marketing teams can focus on producing compelling content. They can focus on creating messages that appeal very strongly to some people—but they don't need to find who those people are, and they don't need to find large subgroups to appeal to. Analytics teams can look for the signals that will improve targeting (the AI system will test them) and provide marketers

feedback on the characteristics of customers for whom there are no relevant messages so far.

## Making the Change

Some data science teams have managed to automate A/B testing in segmentation cells, but few if any outside of academia have taken it down to the individual customer level. One reason is that it's not easy—and the technology isn't the only challenge. There's a lot of change management to be done, because **bionic processes**, which combine human and machine capabilities, are very different from the way most companies do things today. These processes

require new skills (both technical and foundational) and different types of teams (agile, cross-functional), and they depend on democratized access to data and a modern, modular tech stack. Traditional metrics and KPIs appropriate for segmentation-based approaches no longer apply.

It all adds up to a significant undertaking, but many marketers are finding that the results make the effort more than worthwhile. The risks of standing pat can also be significant. Those that stick to the old ways of “personalizing” may soon find themselves paying a price in terms of lost sales and share as more and more leading brands deploy self-learning personalization.

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