Companies personalize products, offers, content, and communications for a variety of reasons — to treat customers uniquely, to make them feel special, and to encourage them to spend more. Firms rely on various analytical methods, including recommendation engines, business rules, and collaborative filtering, to make personalization work across inbound and outbound customer interactions. This report highlights how customer analytics should serve as the foundation for personalization efforts across channels.

Marketers’ approach to personalization is patchy

The ability to present customers with relevant products and offers that accurately reflect their stated and unstated needs — which we call personalization — is a goal for every marketer. While orchestrating the multitude of components has never been easy, the splinternet is making it harder, giving rise to new consumer touchpoints that inherently enable, but also challenge, marketers to deliver personalization (see Figure 1). Meanwhile, consumers now expect and appreciate personalized experience from their interactions with companies. It’s not as though marketers don’t seek to personalize, but their current attempts:

- **Emphasize digital channels.** The Web’s instant flow of data made it an ideal early channel for real-time personalization efforts. Amazon.com and, later, Netflix popularized product personalization and recommendations. Email also quickly emerged as a popular channel to test personalization. As a result, marketers evolved personalization practices for digital channels, ignoring nondigital channels such as the contact center, in-store kiosks, automated teller machines (ATMs), and bank branches.

- **Focus on superficial customer attributes.** Personalization technology has grown well beyond greeting people by first names, into complex, real-time decision engines that make offers. But marketers still rely on stated demographic attributes to execute personalization because of the easy availability of this data in a customer profile. One retail bank executive told us that the customer’s post-login experience on the bank website consists of addressing the customer by name and including a message or offer based on the customer’s account profile — a fairly basic execution of post-login personalization.
• **Fail to determine causal impact of personalization.** At best, most marketers track the impact of personalization on lift in response rates, incremental conversion, and email open rates. Very few companies take this further and establish the causal impact of personalization on loyalty, customer satisfaction, and customer retention. For example, a leading Canadian retail bank tracks direct-mail personalization performance through traditional net lift models that currently do not tie into customer retention metrics.

**Figure 1 Personalization Is A Complex Process Involving Multiple Components**

Sporadic Efforts Trade Relevance For Convenience

Personalization relies on a set of analytical methods that uses customer data to refine the next possible interaction with the customer. Current analytical approaches include collaborative filtering, business rules, segmentation, and simple filtering (see Figure 2). But these popular methods to execute personalization:

• **Project aggregate group behavior to individuals.** To simplify the execution of personalization, firms rely on segmenting customers based on similar historical behaviors, in the expectation that those customers will exhibit the same behavior in the future. For instance, a bank might score customers into segments and assign predefined rules meant to trigger specific cross-sell offers. The business rules and triggers are both static, based on the segment's aggregate characteristics determined at a point in time; they do not consider the dynamic interactions of an individual customer.
• **Rely on asynchronous customer data.** Personalization is only as good as the strength of the customer data that feeds the analytics engine. In most firms, that means that the analytics process still relies on “good enough” but broken data from limited sources to make an educated guess about the customer’s next interaction. Integrating customer data from across marketing channels is still the No. 1 challenge for CI professionals.

• **Encourage channel myopia.** Executing personalization is closely tied to the technology available in a particular channel to deliver personalized offers, messages, or products. For instance, the various forms of web personalization — website segmentation, behavioral targeting, and web content management — are all methods that allow for personalization only on the Web (see Figure 3). As a result, marketers struggle with consistent cross-channel personalization.

### Figure 2 Analytical Techniques Used In Personalization

<table>
<thead>
<tr>
<th>Analytical method</th>
<th>What it is</th>
<th>Statistical method</th>
<th>Channel context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple filtering</td>
<td>Simple filtering relies on predefined groups or segments to determine what content is displayed or what service is provided.</td>
<td>Clustering or sequence</td>
<td>Web</td>
</tr>
<tr>
<td>Collaborative filtering</td>
<td>Collaborative filtering is commonly recognized as &quot;others who viewed this product also viewed . . .&quot; and relies on product data.</td>
<td>Association/affinity</td>
<td>Web and eCommerce</td>
</tr>
<tr>
<td>Segmentation</td>
<td>Segmentation refers to descriptive models that categorize customers into groups based on implicit or explicit customer attributes.</td>
<td>Clustering</td>
<td>Web and nondigital channels</td>
</tr>
<tr>
<td>Business rules</td>
<td>These are rules that constrain some aspect of the business and always resolve to be either true or false.</td>
<td>Decision trees</td>
<td>Web and nondigital channels</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
Use Customer Analytics To Get Personal
For Customer Intelligence Professionals

Figure 3 Popular Applications Of Web Personalization Techniques

<table>
<thead>
<tr>
<th>Application</th>
<th>What it does</th>
<th>Why it is important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website segmentation</td>
<td>This creates segments to take customers through different navigation paths.</td>
<td>Customers in different segments have different preferences and needs.</td>
</tr>
<tr>
<td>On-site behavioral</td>
<td>It matches marketing messages to customers whose online behavior implies</td>
<td>It increases the relevance of product offers and marketing messages, increasing</td>
</tr>
<tr>
<td>targeting</td>
<td>interest in a particular product or service.</td>
<td>conversion rates.</td>
</tr>
<tr>
<td>Recommendation engines</td>
<td>These determine what products to show visitors, based on past purchase</td>
<td>This increases the relevance of product offers and marketing messages, increasing</td>
</tr>
<tr>
<td></td>
<td>history or path to visit the website.</td>
<td>conversion rates.</td>
</tr>
<tr>
<td>Website content</td>
<td>This allows site users to select displayed content; the site also dynamically</td>
<td>It increases relevance of content and offers.</td>
</tr>
<tr>
<td>customization</td>
<td>serves content based on past browsing behavior.</td>
<td></td>
</tr>
</tbody>
</table>

ELEVATE PERSONALIZATION WITH AN ANALYTICALLY DRIVEN APPROACH

Customer analytics is the key to enabling greater personalization, as it can distill customer insights from a broad range of sources, including usage, billing, and demographic data. These insights are generated both from implicit and explicit preferences shown by customers. For analytically driven personalization to work, CI professionals must:

- **Use predictive modeling to understand customer patterns.** Effective personalization uses data about customers and prospects to influence their behavior and encourage them to act in a certain way — whether it is to make a purchase, fill out a form, or download a white paper. It is equally essential to anticipate customer behavior and be prepared with the most appropriate offer to which the customer is most likely to respond. Predictive modeling helps identify patterns in customer data, which can be correlated with propensity toward future action.

- **Activate personalization with cross-channel campaign management technology.** To leverage the insights from predictive models, marketers should use cross-channel campaign management technology to deliver personalized messages, offers, and products to the right customers across channels. Cross-channel campaign management technology also enables marketers to continue, track, and log the customer dialogue for future personalization.³

- **Automate decisions with a real-time decision optimization engine.** Firms cannot automatically design business rules for individual customers. Instead, firms should employ a decision-management approach to manage customer interactions as they happen — such as which discount to offer a multichannel customer or what product to cross-sell to the customer. The decision management approach is much more effective in a real-time personalization context, as it can adapt to individual customer interactions.⁶

61430 Source: Forrester Research, Inc.
• **Refine personalization with testing tools.** Firms don’t get personalization right the first time. Getting all of the elements of personalization to work at the same time requires an iterative process. Testing tools help refine personalization goals by optimizing messaging, landing pages, subject lines, offers, products, and just about any attribute that the firm is personalizing for the customer. Online testing, in particular, benefits companies with increased conversions in terms of orders and visits.\(^7\) Champion/challenger testing refines offers and decisions iteratively by continuously adapting and improving personalization.\(^8\)

**Analytically Driven Personalization Benefits Both The Customer And The Organization**

When done right, personalization is a win-win initiative for the customer as well as the organization. We find that because of personalization:

• **Customers benefit from better recognition . . .** At the very least, customers expect to be recognized and serviced appropriately during an interaction with a firm, especially when they have a history of interactions with the firm. For example, Assurant Solutions, a leading provider of specialty insurance, uses a real-time analytics platform to personalize the call-center experience by effectively matching the right call-center agent to the right customer.\(^9\)

• **. . . and get relevant offers and experiences.** Brands provide valuable content in an attempt to appeal to consumers and encourage loyalty.\(^10\) For example, Verizon used web interaction optimization to personalize experiences for its website visitors and present them with relevant offers. Verizon tested how audience segments react to different offers by randomly rotating creative assets. This process continued until the algorithmic models within the web interaction optimization tool could predict how different segments react to different offers with a high degree of confidence.\(^11\)

• **Organizations benefit from increased customer retention . . .** In the current economy, more and more firms have embraced the notion that they should focus at least as much on retaining existing customers as on acquiring new ones. And, obviously, increasing customer retention directly affects incremental revenue.\(^12\) Notwithstanding some recent woes, Tesco, the UK-based retailer, heavily relies on advanced analytics to personalize offers to gain the lifelong loyalty of its customers. Using its loyalty program, it constantly mines shopper insights to personalize discounts and offers for its members.\(^13\)

• **. . . and realize significant returns.** Firms that personalize offers based on historical behavior benefit in terms of redemptions as well as new customer acquisition. For example, a big-box retailer uses predictive analytics and decision management to offer individualized discounts for its members at its stores. By targeting offers extended to individual customers based on their past purchase patterns, the retailer was able to increase redemption rates and increase membership in the first six months of rollout.
FIRMS MUST BALANCE FIVE ELEMENTS BEFORE PLANNING PERSONALIZATION

CI professionals have expertise in data, technology, and analytics — all important ingredients of personalization. But to make the analytically driven personalization work, they must (see Figure 4):

- **Prioritize what to personalize.** Marketers have a massive choice of assets to personalize for the customer — web pages, product and service recommendations, email, dynamic prices, discounts and offers, and marketing and advertising messages. Prioritize what to personalize by:
  1) distilling the intended outcome, such as improving online shopping experience or improving discount redemption rates, and 2) looking back at A/B tests for clues to positive customer responses that explicitly show how an offer or piece of content worked better than others.

- **Estimate customer’s expectation of personalization.** Thanks to Amazon-like shopping experiences, customers expect a higher degree of personalization from digital channels than other channels. Before embarking on a significant technology investment for personalization, understand the level of expectations from customers through preference surveys, feedback forms, and even face-to-face interactions.

- **Distinguish between known and unknown attributes.** Successful personalization depends to a very large extent on using known data about personal preferences and behaviors of existing consumers. But when targeting prospects, firms need to rely heavily on analytics to build proxies for the unknown attributes of prospects. For example, this might mean judging a user’s interests based on recently visited websites or based on other known details that are similar to those of existing customers. With every accepted or rejected offer, prospects are giving more clues about their preferences.

- **Understand the level of analytical complexity.** The analytics complexity to execute personalization ranges from basic segmentation to real-time self-learning personalization. The level of sophistication in personalization depends on where the firm is in its analytics and technology adoption. For instance, to achieve real-time, self-learning personalization, the firm must already have an advanced data infrastructure that seamlessly ties all customer and prospect data together. Work backward from what personalization is supposed to drive and then choose the appropriate analytical methodology.

- **Choose the interaction context.** The interaction context is the channel, either inbound or outbound, though which the customer or firm initiates a contact. To orchestrate cross-channel personalization, stitch the various channel deployment technologies together by evaluating the integration capabilities of single-channel vendors, such as Adobe Omniture, Baynote, or X Plus One, and multi-channel vendors, such as FICO, IBM Unica, Infor, or SAS.
USE CUSTOMER ANALYTICS TO GET CRAFTY, NOT CREEPY, WITH PERSONALIZATION

As consumers become more accustomed to personalized offers and messages, firms must balance how they leverage customer analytics to drive relevance with respect for the customer to avoid being perceived as creepy. To do this, CI pros must:

• **Treat personalization as a process, not an outcome.** Analytics relies on a steady stream of customer data flowing into the customer intelligence processes. The accuracy of personalization improves over time, but only if the underlying analytical methods refine offers and messages based on the new customer interaction information.

• **Allow customers to opt in to personalization.** Having the ability to opt in to personalized services and offers helps customers worry less about privacy and how their behavioral data is used. Customer analytics must also account for current customer contact and preference data.14

• **Balance “what not to offer” with cross-sell.** While the goal of personalization may well be to increase customer retention through cross-sell, knowing what not to offer is equally important to ensure that customers are not annoyed at hypertargeted offers.
ENDNOTES

1 In an online context, personalization can be defined as broadly as one-to-one interactions (e.g., greeting returning customers by name or simply enabling them to save preferences) or one-to-many interactions (e.g., versioning a website for different segments of visitors). See the December 27, 2007, “Which Personalization Tools Work For eCommerce — And Why” report.

2 The Internet will splinter due to the rise of powerful connected devices and the spread of social technologies. Forrester calls this phenomenon the splinternet. See the January 26, 2010, “The Splinternet” report.

3 Sixty-two percent of consumers find personalized retail websites useful when shopping online, i.e., when an online store recommends products based on other items that the consumer may be browsing or buying (e.g., “You might like . . . ”). Source: North American Technographics Retail Online Benchmark Recontact Survey, Q2 2010 (US).

4 CI professionals clearly feel the pain of big data and channel proliferation. When asked about their biggest challenges with marketing programs, “creating a single view of the customer with other marketing channels,” cited by 50% of respondents, topped the list. See the July 19, 2011, “CI Teams: Blocking And Tackling Is Not Enough” report.

5 Marketers look to cross-channel campaign management applications that enable them to act on and react to empowered customers rather than just integrate more channels. In the future, marketers will select applications for their ability to orchestrate the always-on, bi-directional, and cross-channel dialogue between customers and businesses. See the January 31, 2012, “The Forrester Wave: Cross-Channel Campaign Management, Q1 2012” report.

6 Based on real-time data, scoring, and analytics, real-time decisioning leverages that information to inform inbound or outbound marketing engines. Decision management helps identify interactions to influence or to which to apply various business rules, such as “if [x], then [y]” rules, for optimizing campaigns. See the September 27, 2011, “Demystifying Real-Time Intelligence” report.

7 Eighty-two percent of respondents to the Q2 2010 Global Online Testing Forrester Wave Customer Online Survey said that conversions increased as a result of A/B and/or multivariate testing. See the November 17, 2010, “The State Of Online Testing 2010” report.

8 Champion/challenger testing is a systematic, empirical method of comparing the performance of an existing strategy, decision, offer, or model against new ones. If the challenger offer or decision outperforms the champion, it becomes the new champion.

Brands will appeal to the 47% of consumers who respond positively to valuable content — entertainment, information, and advice — and to the 45% of consumers who establish brand preference with complementary services. See the November 30, 2011, “Visible Value Differentiates Brands And Drives Loyalty” report.

Verizon uses both product-driven optimization to target the right product to each visitor and experience-driven optimization to target the right offer/message to each visitor. See the September 11, 2007, “Case Study: Verizon Scores With Web Interaction Optimization” report.

Speaking at Forrester’s Marketing Forum during the height of the recession, a senior vice president at FedEx estimated that a 1% improvement in customer retention had resulted in $100 million in revenues. See the December 14, 2011, “Must-Have Analytics For Your Retention Tool Kit” report.


CI pros will have to better understand the workings of authorization managers and how they can get access to relevant consumer data. See the February 6, 2012, “Five Ways Personal Identity Management Changes Customer Analytics” report.