

Technology, Media & Telecommunications Practice

Unlocking the value of personalization at scale for operators

In saturated, competitive telecom markets, harnessing the full potential of analytics-driven customer value management will be the key driver of future growth. Five elements will be essential to the task.

This article is a collaborative effort by Lars Engel Nielsen, Lars Fiedler, Stanislav Kucherenko, Marcelo Leal, Klemensas Mecejus, and Davide Schiavotto, representing views from McKinsey's Technology, Media & Telecommunications Practice.



As customer dynamics radically shift, the bar for 21st-century, digitally forward telecom operators has risen to even greater heights. More than ever, satisfying, retaining, and acquiring customers requires telcos to embark on a complex journey away from the business-driven campaigns that they have traditionally embraced and toward customer-centric, data-driven, highly personalized campaigns that are always on and always evolving.

This demand for personalization is part of a broader trend: Across industries, our research has found, companies that excel at personalization generate 40 percent more revenue than average players.¹ At the same time, amid the massive rise in e-commerce and broader changes in shopping habits spurred by the pandemic, consumers are increasingly willing to abandon brands that don't meet their expectations.

Roughly three-quarters of U.S. consumers tried a new shopping behavior during a recent three-month period, and over 40 percent tried a new brand.²

In saturated, highly competitive telecom markets, personalization at scale will be the key driver of future growth. By using data and analytics to create highly personalized experiences, operators can overhaul their approach to customer value management (CVM): the process of maximizing value at every stage of the customer life cycle, from acquisition to cross-sell to retention (Exhibit 1).

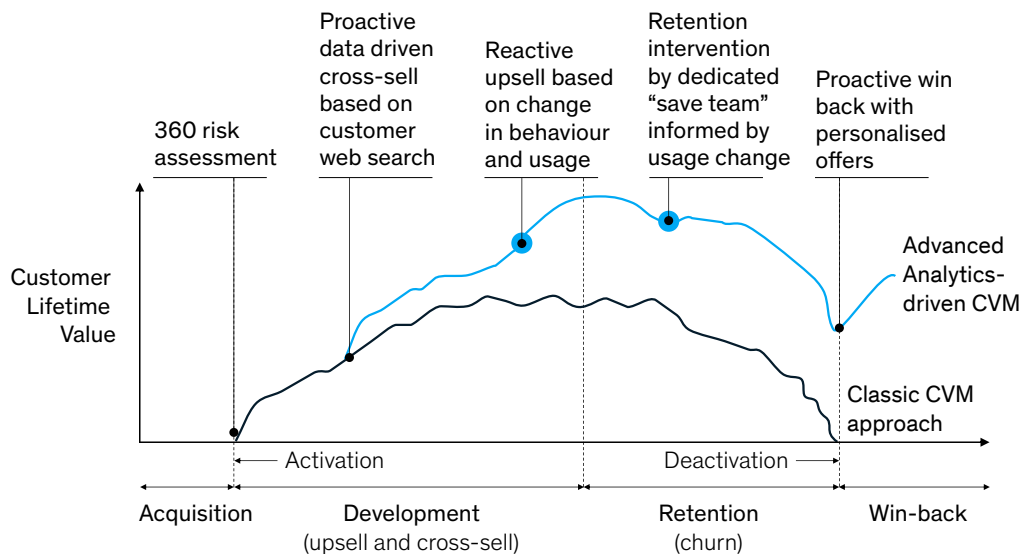
Telcos are broadly aware of this opportunity, and many are making significant inroads. Based on our experience working with operators across different geographies, we estimate that roughly a

¹"The value of getting personalization right—or wrong—is multiplying," McKinsey, November 12, 2021.
²"US consumer sentiment and behaviors during the coronavirus crisis," McKinsey, December 14, 2021.

Exhibit 1

By using analytics to create highly personalized experiences, operators can overhaul their approach to customer value management (CVM): the process of maximizing value at every stage of the customer life cycle.

Best-in-class telecom operators engage customers at key points



¹Based on recent client examples

quarter of telcos worldwide are just beginning their CVM journey, while approximately 70 percent have established successful pilot projects built around analytics-driven CVM engines. These operators, however, have not yet managed to scale their projects to fully capture the benefits associated with CVM. Very few telcos—only around 5 percent, we’ve found—are unlocking the full potential of analytics and data-driven personalization to achieve true competitive advantage and to maximize revenue growth.

And that potential is significant. In our experience, operators can increase revenues up to 10 percent, and customer satisfaction and engagement between 20 and 30 percent, by harnessing the full potential of analytics-driven CVM. To achieve these results, operators must not only develop the “brains” of CVM—that is, the data and analytic capabilities—but also the “legs” of the operation: by hiring the right talent, embracing agile operating models, ensuring that multiple channels are operating effectively and in sync, continually deploying business-driven use cases, and making

sure that CVM is viewed as the organization-wide priority that it is.

Five essential elements

Through our work with telcos worldwide, we have identified five elements that are essential for developing both the brains and legs needed to maximize the potential of data- and personalization-driven CVM (Exhibit 2).

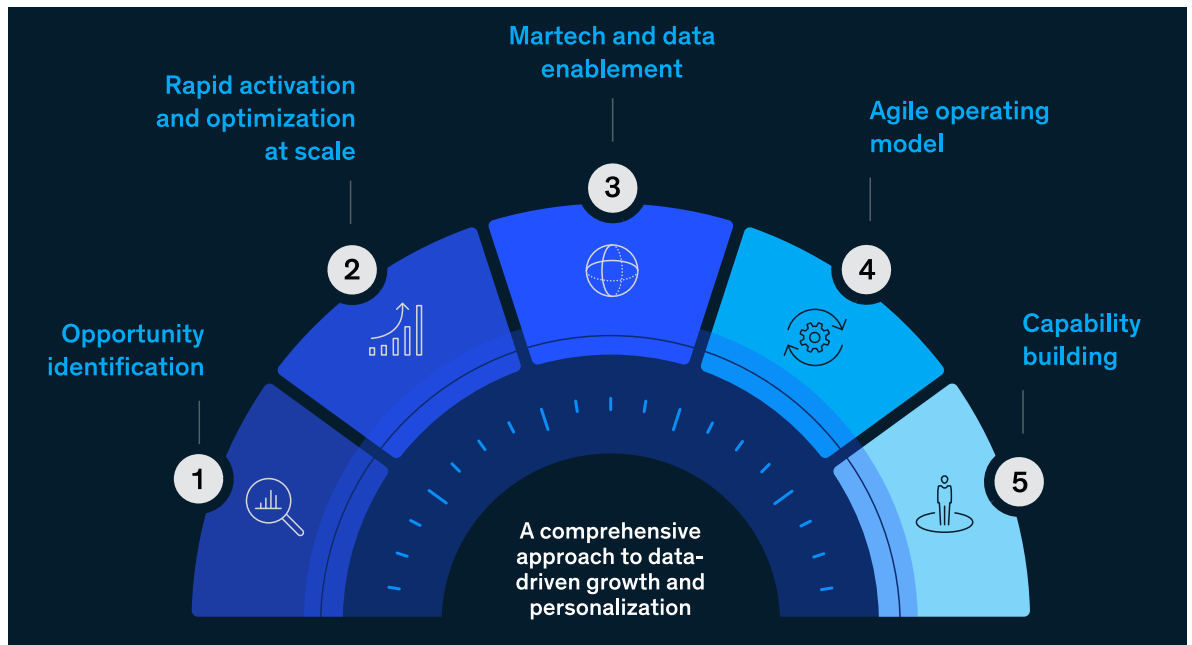
1. Lean into data and analytics to identify broader opportunities

Historically, telcos have seen churn reduction as the most fertile ground for data-based value creation, due to the high costs of customer acquisition. As fixed and mobile operators have joined forces in a flurry of mergers and acquisitions, operators have also leveraged data to maximize cross-sell and upsell opportunities.

To tap into the full potential of personalization, though, operators will have to take a more subtle, sophisticated approach to capturing value from

Exhibit 2

Five elements are key to maximizing the potential of analytics-driven CVM.



churn reduction and cross-sell/upsell opportunities. They will also need to look beyond those dimensions, finding creative ways to generate value during other moments in the customer life cycle.

Both strategies require a granular view of the pivotal moments that can bring the most value during early life and acquisition (where operators can benefit, for example, by improving the onboarding experience for new customers); the “in-life” stage (where operators can optimize cross-sell opportunities and offer distinctive customer service journeys, for example); and retention and renewal (where operators can introduce relevant campaigns, at the right time, to stem churn).

To build this granular view, telcos must redefine their approach to customer segmentation, moving from top-down, hypothesis-driven macrosegments to bottom-up, data-driven microsegments. Traditional, top-down segmentation classifies customers according to a predefined set of hypotheses about the characteristics that will influence their behavior, like demographics and usage information. But an exploratory, bottom-up approach to segmentation can be much more fruitful, uncovering new variables that determine behavior. Microsegmentation is also key. By leveraging data and analytics, operators can create hundreds of thousands of microsegments. Eventually, each customer will become a segment of one—receiving curated offers and messages.

A sophisticated approach to churn might entail pinpointing the specific reasons driving churn among different microsegments of customers. Or it could involve identifying different time horizons of churn, to determine which microsegments are likely to switch providers within several weeks, which within several months, and which within several quarters. This allows operators to introduce certain campaigns for customers who present an urgent threat of leaving and take a proactive, less expensive approach to churn management for the other groups.

An Eastern European operator took a sophisticated approach by developing a next-best-action churn

model, in which each customer’s likelihood to leave was broken down into several different scores, each one attached to a reason for churn, such as price sensitivity or poor network experience. This analysis of the drivers of churn allowed the operator to create actionable campaigns at the microsegment level, addressing specific pain points that were most likely to result in specific cohorts of customers switching to a new provider. Beyond the reason for churn, on which the designs of new offers and campaigns were based, the model also identified the most appropriate channel and timing of the outreach. One such campaign, for example, proactively targeted customers who had just received unusually large bills. Another campaign targeted people who were moving, with offers to install broadband service in their new home. This new approach to churn was part of a broader transformation that resulted in a tripling of the operator’s revenue from CVM, from around 2 percent to around 6 percent, within two years.

One Western operator sought to capture value from customers during the in-life stage, through increased efficiency in digital outreach campaigns. The operator had previously been taking a “spray and pray” approach to marketing, reaching masses of customers with little understanding of who they were or what might appeal to them. It was relying on an outside agency to handle every aspect of paid media, from strategy to execution to measurement; because of this arrangement, it lacked visibility into the data generated from campaigns. The data that it had, meanwhile, was scattered throughout the organization.

The operator built a sophisticated marketing data platform incorporating owned and third-party data to provide a 360-degree view of the consumer. This allowed it to measure the precise effect of each campaign on each customer. Based on these insights, the operator is now personalizing content and offers for unique microsegments (defined not by hypotheses but based on behavior patterns, such as their likeliness to respond to a previous campaign), optimizing marketing spend across channels using data-based insights, and targeting more

high-lifetime-value (LTV) customers. By replacing its traditional marketing engine with a customer-centric approach driven by real-time data, the operator is saving tens of millions of dollars a year in advertising costs.

2. Invest in rapid activation capabilities

Most operators today are slow to react to customer signals, in part because they are burdened by cumbersome legacy systems. It can take a month, or even longer, to record and process information from customers, and an additional four to six weeks to launch a campaign based on that information. By the time the feedback loop is completed and the campaign introduced, the critical moment will have passed. Additionally, operators often struggle to discern which customer signals are the most important.

Operators generally understand that data and analytics are the key to recognizing, processing, prioritizing, and responding to customer signals as quickly and efficiently as possible. Still, operators can and do stumble with this complex undertaking.

One common error they make is waiting to develop a fully comprehensive data lake to begin using advanced analytics. Instead, telcos are more successful when they introduce small use cases on a piecemeal basis. This ensures long-term business side buy-in, because concrete results are immediately apparent. It also allows operators to further hone their models based on each use case introduced.

By investing in rapid activation capabilities, telcos can focus on multiple use cases at once, deriving value from incremental opportunities and relieving themselves of the burden of identifying a single, transformative “big bang.” This allows operators to test out different approaches, learn from each, and scale what works best. Deploying automated, end-to-end execution, leading operators roll out new campaigns in one to two weeks. They create comprehensive portfolios of relevant, insight-based offers and continually optimize 50-plus campaigns at once.

Such rapid activation methods require algorithms that process a broad range of customer signals and can be refined with each new use case. Robust measurement processes should track the impact of customer interventions and feed that information back to systems and teams. These processes help operators deliver the right content through the right channels, at the right moments.

Outperforming operators develop sophisticated decision-making capabilities to identify the most important customer signals and respond to them in real time. For example, if a customer moves their SIM card to a new iPhone, a carrier might respond with an immediate offer for a new iPhone accessory. If a customer contacts a call center to complain about technical issues, they might receive a text offering technical support via chat. If they miss a monthly payment, they might receive an offer to align their monthly billing date with the arrival of their paycheck.

A determination to massively speed up the delivery of use cases, such as a next-best-offer engine to drive cross-sell, was central to one multinational operator’s CVM overhaul. Following a series of mergers, the operator sought to centralize and unify data and analytics across three countries. By focusing on clearly defined use cases, and working backward to develop the tools and capabilities necessary to activate them, the operator was able to centralize and unify data and analytics functions across all three countries.

The most ambitious operators go a step further, taking an asset-based approach to personalization. An asset-based approach accelerates the deployment of new use cases and allows multinational operators to rapidly expand campaigns and innovations from one country to the next. It draws on the latest analytics techniques (such as deep neural networks, reinforced learning, and supervised and unsupervised learning) to create unified data models, data processing pipelines, and machine-learning modeling pipelines. These components can be used across different geographies and applications. In spite of the local

nuances of specific triggers, customer behaviors, and activation strategies, many of the ingredients for processing and acting upon these signals, and measuring the results, are strikingly similar.

One European multicountry operator, for example, managed to create a robust personalization engine capable of deploying multiple use cases in a short time frame across several countries. The operator leveraged reusable data, analytics, and martech (marketing technology) components to create a centralized asset. By applying the asset—the personalization engine—across geographies, the telco was able to justify the substantial investment required.

3. Invest in fit-for-purpose martech and data

All too often, data collection projects can become siloed within the world of IT, which limits their value. To unlock the potential of personalization and CVM, business use cases need to drive the data.

Rather than letting “a thousand flowers bloom,” personalization leaders target a more narrowly defined set of customer outcomes and use cases that support them. They align organizational resources around these use cases and, after determining the desired outcomes, work backward. They build a data and martech road map with the end goal in mind, then identify the key enablers, complementary decisions, and investments required to make that vision a reality.

For example, if the chief business goal is to increase revenue from cross-sell, what are the data points needed to create the best possible algorithm, and how can that data best be collected? What data will make it possible to pinpoint the moments when customers are willing to purchase additional services or products, and to determine which campaigns or approaches are most effective, at which times, and with which microsegments?

Operators will also need to carefully consider how to build their martech stack, taking into account their legacy systems, starting point, and end goals. While it might seem obvious to identify a desired goal

and then work backward to achieve it, the massive undertaking of digitization can cause operators to stumble. There is no one-size-fits-all solution to martech, and operators often invest heavily in multiple solutions that don't fit their needs or are difficult to use. Throughout the industry, there is a tendency to start by building overly complex martech stacks to amass reams of data in service of developing comprehensive models. But data collection can be an endless exercise if there is no clear business objective.

A European integrated operator, for instance, had invested heavily to acquire a full suite of martech solutions that could potentially transform its CVM practices. Several months after the investment, though, the operator was still struggling to capture real value from these tools. Integrating the new set of tools with legacy systems was proving to be more complicated than anticipated. And the new tools—capable of fairly complex use cases—were only being used for basic applications, like managing email campaigns.

Like many telcos, the European operator was tempted to continue its martech shopping spree, hoping to identify a silver bullet for all of its problems. Upon recognizing that this would only add cost and complexity, though, the operator took a different path. It stuck with its existing tools and focused on extracting maximum value from them, regardless of the complexity involved. After several challenging months of problem solving with multiple technical experts, the first few complex use cases were deployed—with tremendous results. By tracking customers across multiple digital channels, including paid media, the operator was able to create highly personalized and relevant offers. Within several months, the paid media conversion rates increased tenfold.

The right martech solution can enable a fully omnichannel approach, in which customers are identified across all touchpoints, including digital, paid media, call centers, and stores. And martech presents another excellent opportunity for assetization, particularly among multinational

players. When operators use different martech solutions in different countries, they diminish the potential for cross-country knowledge sharing and hamper their ability to build reusable assets and solutions. Recognizing this, one multinational European operator started by conducting a thorough needs assessment in one country and invested in a martech stack aligned with those needs. After several months of development and iteration, it introduced the solutions in other countries, radically reducing time to market.

4. Commit to an agile operating model

Traditional CVM—featuring a few active campaigns a month, rudimentary personalization targeting macrosegments of customers, and longer feedback cycles—was possible with a waterfall approach, in which cross-functional collaboration was limited. Scaling personalization to drive sophisticated CVM, however, is an enormous undertaking that requires deep knowledge of customers, cross-functional collaboration, and rapid decision making in order to identify and deploy appropriate use cases and run hundreds of tests per year, all enabled by advanced data analytics and test-and-learn techniques. That level of organizational flexibility and pace cannot be achieved within the bounds of an antiquated operating model.

Instead, it demands an agile approach, which has a proven track record of helping organizations shorten time to market, elevate customer satisfaction, boost productivity, and attract and retain top talent.

Agile is not easy to accomplish, and many businesses face challenges along the way. We believe that within the telecom industry, there is a persistent lack of clarity around what “agility” actually means and how it can and should play out in practice. Agile is also a bold, radical transformation; for a traditional industry accustomed to incremental change it can be daunting. In fact, agile has been described as “conducting open-heart surgery while running a marathon”—being prepared to

dramatically change a company’s core operating model without missing a beat in performance.³

An agile structure is built around multidisciplinary teams of doers, with little management overhead. This is a stark departure from the traditional, siloed, hierarchical structures that tend to prevail throughout the industry.

Agile is key to unlocking the value of personalization because it integrates data and analytics experts throughout the organization, ensuring that data lakes and tools are in service of business-driven use cases. It also dramatically reduces time to market, enabling a daily rather than monthly horizon.

Following a merger, a Western European operator needed to shift its focus from volume to value. Instead of focusing exclusively on trying to capture new customers and stem churn, it sought new ways to extract value from every stage of the customer life cycle. The operator established a data analytics team to lead the way. But it soon became clear that this team was operating within a silo, cut off from the business it was supposed to be powering. Based on this discovery, and the accompanying realization that accelerating time to market was imperative, the operator embarked on an ambitious agile transformation.

As part of this, it reorganized its entire operation using customer-centered logic, forming 12 squads aligned with different stages of the customer life cycle. Squads were responsible for optimizing around their unique key performance indicators (KPIs), while five “competence chapters” ensured quality control by function (such as data science and campaign design) across squads. Within a few weeks, the agile teams achieved results that would have otherwise taken six to eight months. This was possible because of shorter feedback cycles, improved synchronization among cross-functional teams, diverse skill sets within teams, and clearly defined objectives that cut across different divisions.

³ Bo Krag Esbensen, Klemens Hjartar, David Pralong, and Olli Salo, “A tale of two agile paths: How a pair of operators set up their organizational transformations,” McKinsey, February 4, 2019.

This agile squad approach was a key driver of the operator's 10 percent revenue uplift.

5. Invest in talent and training to refine capabilities

To make the most of the personalization opportunity, telco leaders need to overhaul their approach to talent. Developing the right talent will be critical. This is particularly challenging at a time when employees are leaving their jobs in record numbers,⁴ making the already tough competition for technical talent that much fiercer.

Many of the skills needed to support personalization at scale are vastly different from the skills the industry has traditionally required. These newly relevant skills include digital and e-commerce acumen, advanced analytics, product management, and performance marketing. By mapping these newly relevant capabilities against their current talent base, telcos can anticipate the expertise and tools they will need as their personalization program advances. Inevitably, telcos will need to adopt a multipronged approach to talent. They will need to identify which roles require an influx of new talent, and where opportunities exist to train and reskill their existing workforce.

Well-designed trainings can go a long way to bringing veteran employees up to speed on agile ways of working and the role of data and analytics. Several operators have established “analytics academies,” where employees are educated on the basics of data and analytics and the role they will play in the organization moving forward. When successful, these academies make it possible for nontechnical workers to collaborate meaningfully with the data scientists on their cross-functional teams.

Other operators run boot camps focusing on customer experience, familiarizing employees with each step of the customer journey and shifting their orientation toward customer-centricity. These boot camps often mix formal, classroom-style training with on-the-job training, ensuring that new knowledge translates into new ways of working.

When it comes to attracting top talent externally, operators will need to compete with tech behemoths and start-ups by developing best-in-class practices across all stages of the hiring journey: sourcing candidates, assessing them efficiently and equitably, and cultivating them. Attracting the most exciting tech talent will remain a challenge for telcos in the foreseeable future. To make headway, some European telcos are partnering with universities to sponsor data and analytics courses, while others are organizing hackathons.

The switch to agile also requires changes to talent management. Valuing and paying people based on their position within a hierarchical structure doesn't work in a flat, high-speed organization. Extrinsic motivators like bonuses and job titles need to be reconsidered to effectively motivate agile team members.

Beyond top-down decisions about tangibles like compensation and job titles, which can be changed virtually overnight, the most ambitious telcos will fully reimagine their cultures. Workplaces that establish strong cultures, taking a page from tech behemoths and start-ups, are better positioned to attract and retain top talent in an extremely competitive market. Operators have an opportunity to boldly redefine their value proposition for employees by creating cultures that empower, inspire, develop, and invest in them. If CVM at scale requires both brains and legs, perhaps culture can be described as the beating heart of an organization—invigorating and empowering the brains and legs to work their magic.

Looking ahead

The imperatives outlined above will bring operators to a point where they are poised to succeed in today's challenging market. To continue that growth trajectory, here are some ways that telcos can amplify the impact of personalization at scale:

1. *Strive for 100 percent of touchpoints.* Today, even leading telcos are struggling to integrate data and analytics into every single one of

⁴ Aaron De Smet, Bonnie Dowling, Marino Mugayar-Baldocchi, and Bill Schaninger, “‘Great Attrition’ or ‘Great Attraction’? The choice is yours,” McKinsey Quarterly, September 8, 2021.

their customer touchpoints. When a customer browses online for a new offer, for example, the landing page and specific offers targeted at them may not take into account their offline activity, such as a visit to a store or a recent call to customer service. By striving to infuse data and analytics into all touchpoints (a complex challenge) and integrating online and offline channels, operators can truly transform customer experience and take customer value management to the next level.

2. *Switch from a next-best-offer to a next best sequence of actions mindset.* Operators are currently oriented toward a next-best-offer mindset, in which they are focused on selling products and services. Sometimes, though, the move that will generate the most value in the long run is delivering incredible service or solving a problem. By broadening their framework to consider the next best sequence of actions, operators can be more strategic about their contact strategy, contact cadence, and impact across all touchpoints.

3. *Make an ecosystem play.* Telcos have access to an unusual abundance of data. The most sophisticated ones can leverage this data to offer highly relevant third-party products and services, beyond connectivity. A first-rate, data-driven CVM engine allows telcos to be extremely precise in understanding what their customers need and how to target them with the right offer at the right moment on the right channel. If this deep understanding and capability can be applied across an ecosystem of services and goods, the potential for additional value creation becomes much greater.

The rules of customer engagement are changing rapidly for telcos worldwide. Those that harness the full potential of analytics-driven CVM, by developing both the brains and the legs of the operation, will be able to satisfy, delight, capture, and retain customers—unlocking the true value of personalization at scale.

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