Creating the Personalized Utility

Transforming Your Business into the Amazon, Netflix or Lyft of Energy
The Customer Experience Challenge

Ten years ago, the smartphone didn’t even exist, and yet today, wireless home-based Artificial Intelligence (AI) has reinvented the way consumers and businesses interact. The pace of change is unprecedented and rapidly accelerating. And not only is this changing the technologies customers use, but it’s also influencing customers’ expectations for what the customer experience should be.
A Few Key Definitions

When it comes to the technology of customer engagement, here are a few important and increasingly common terms that play a key role in shaping the future of the utility industry:

**Personalization:** The ability of a company to deepen customer relationships through insights, messages and offers that are specifically relevant and systemically delivered to each customer for all customer journeys. This definition is true for any industry focused on personalizing the customer experience, but for utilities it’s equally critical that this is done by using utility-specific data, is integrated into any relevant utility channels, and is built to meet utility-focused business needs.

**AI:** The ability of computer software to perform at the level of a human expert. Using techniques such as machine learning, natural language processing, pattern recognition and more, AI enables software applications to address a wide range of complex problems by combining factual knowledge with heuristic (learned) knowledge across large and disparate data sets.

**Predictive analytics:** The application of advanced analytics techniques that uses available data and various techniques such as statistics, AI, data modeling, and others. This enables reliable predictions about future outcomes or the recommended best course of action.

**Internet of Things (IoT):** The internet of things is a collection of interrelated physical computing devices which are able to transfer data over a network without requiring human-to-human or human-to-computer interaction. These devices, such as Smart Speakers, refrigerators, thermostats, LED lights and home security systems have enabled consumers the ability to manage their home energy usage more than ever before.
Leading companies that have set a higher bar for customer engagement include online retail companies like Amazon, entertainment companies like Netflix, and ride sharing companies like Lyft and Uber. With customer personalization over a decade old, it has already enabled these companies (and others) to use predictive analytics to create a better, more targeted customer experience. In large part, these leaders have become successful by being hyper-focused on the customer, reducing friction, and creating a delightful, memorable, and even addictive experience.

For many utilities, this approach represents a significant change. Just 38% of consumers consider their utility on par with other businesses that provide a personalized experience.¹ For decades, both the customer and the utility expected nothing more than a stable, reliable, and transactional service relationship. But the world has changed. Today, customers have far more options around their energy usage than ever before with solar, smart thermostats, energy efficiency, retail choice, and much more. They also now demand more relevant, targeted, and personalized interactions for all their customer experiences, including those with their utilities.

In fact, if given the opportunity, 80% of utility customers would consider purchasing electricity, energy-efficient products or related services from alternative providers,² and 66% of utility customers now believe that utility communications aren’t relevant to them.³ Additionally, consumers expect a consistent, personalized experience in all relevant communication channels. As customers face more options and also shift their expectations utilities need to look toward personalization as the key to transforming their customer experience, in the same way Amazon, Netflix, Lyft and Uber did.

80% of utility customers would consider purchasing electricity, energy-efficient products or related services from alternative providers

66% of utility customers now believe that utility communications aren’t relevant to them
But with such a tall order, where should utilities even begin to increase brand awareness, drive revenue, decrease cost to serve, and improve customer satisfaction?

Combining proven experience with the lessons learned from innovators in other industries, Uplight has uncovered a roadmap utilities can use to take better advantage of their data, improve customer engagement and, ultimately, chart their own road to personalization success. **Utilities can now take advantage of years of experimentation and learning from these personalization pioneers to instantly apply the most relevant takeaways and insights to their own organizations.**
Reaching Your Customers on Their Journey

In each customer’s journey, there are a number of key, common points at which they need to interact with their utility. These might be when they need to start or stop service, report an outage, or perhaps request financial assistance (see Figure 1). Although many of these ‘journey points’ are shared, each customer’s specific mix of journey points is unique, as are their communication channel preferences, demographics, service history, and more.

In fact, every step in a customer’s journey is a critical opportunity for a utility to manage costs, add value, and meet the individual customer’s needs. By applying concepts and strategies taken from personalization best practices, we can understand how, for each customer journey category, pioneers such as Amazon, Netflix, or ridesharing companies, might have approached these experiences.

**FIGURE 1**

Eight Customer Journey Points

- Bill management
- Requesting service
- Energy Efficiency
- High usage, and demand alert notifications
- Low-income program/Financial assistance request
- Other program or offer enrollment
- New rate plan enrollment
Customer Journey: Bill Management and Low-Income Programs

Amazon has been legendary in its use of data such as purchase history, items currently in the shopping cart, items the customer has already rated and liked, and what other customers have viewed and purchased, to create predictive analytics models that inform and drive specifically relevant and systematically delivered recommendations across the entire buying experience—on the website, mobile, and email.

According to McKinsey, 35% of all Amazon sales are generated from their recommendation engine.

Then, Amazon has made acting on these recommendations effortless by providing a one-click, end-to-end experience. For utilities, effective personalization means presenting the best offer at the right time through all channels. This is especially true for the many customers who struggle to pay their bills on time and could benefit from some form of assistance such as levelized billing, free or reduced cost energy efficiency work, or help paying their bills altogether. This critical customer group can have a significant impact on a utility’s OpEx costs due to the constant flux of their situation such as late payment status, current address, or income level.

Staying abreast of relevant information, and their best course of action, for all low-income customers is impossible without AI assistance.

A utility following an Amazon-like model would have confidence in knowing the best option for each customer at any given time. They would take often abundant customer usage, premise, program participation, weather and other data to generate hidden insights and then rank each customer’s best, and next best action for them to take.

This increases customer satisfaction and reduces the back-office churn. A more mature utility could also use the insights generated from their analytics solution to proactively find and target customers who have missed paying their bills or are consistently late, targeting them with offers to enroll in a low-income program before any issues escalate. By doing so, a utility would be able to make enrollment as simple as one-click ordering, reducing any drop-offs.

Key Takeaways:
- Personalization is proven to increase customer engagement with a company.
- Utilities already have the data to provide a personalized experience.
- Serving low-income customers with a personalized experience will increase customer satisfaction AND improve a utilities’ bottom line.
Customer Journey: High Bill and Energy Efficiency

Powered by innovative AI that translates speech into text, Google Home isolates your voice from hundreds of other sounds in the background. By appending "Hey Google" to the beginning of a request, the technology is able to complete over 1,000 types of tasks, from ordering pizza to turning on the lights to checking bank accounts.

And because Google Home is built on the foundation of Google’s own powerful predictive analytics, it is already revolutionizing a customers’ ability to quickly act on smart, targeted recommendations. By leveraging this powerful intersection between AI, predictive analytics, and in-home devices in the same way Google does, utilities can also better address high bill inquiries or requests for help to understand how to manage energy—two of the largest use cases for utility customer service—more automated, transparent, and customer friendly.

“Google Home is the cornerstone of [the AI-driven] future: A smart, easy-to-use, always available digital assistant-hosting smart speaker that learns about us, helps us control our environment, and is available from our smartphones for use on the go.”

— BRANDON VIGILIAROLO, TECHREPUBLIC
CREATING THE PERSONALIZED UTILITY

Key Takeaways:

- Today’s predictive analytics can ensure utility customers are provided with the most relevant information—ensuring the utility remains their energy trusted advisor.

- Customers are more than how they use energy. Only a complete 360° view of the customer ensures that the best experience possible is provided.

- Meet the customer where they are, including on IoT channels so they are more likely to positively respond to your offers.

For example, a utility might uplevel the billing and energy usage experience either by using an Google-like AI to power IVR systems or by integrating directly with Google Home’s API for IoT use. Customers could ask and immediately receive replies to questions like, “Hey Google, How can I save money on my bill?,” “What is my energy bill so far?,” and “Am I on the best rate?” When designing a program for customers with high peak-time usage, predictive analytics software can ensure that when a customer asks a question, they are offered the right product or recommendation that fits their specific needs. This means not offering a new HVAC system for an elderly couple on a fixed income and instead ensuring they are on the best rate or providing a free, already programmed, smart thermostat.

A utility must go beyond analyzing energy usage and compiling a complete 360° view of their customers, because it is during the billing-related moments that personalized recommendations have the greatest impact. Most customers don’t think about their energy bill or usage very often, so utilities must be ready with the most relevant information when that moment does occur in order to keep customers engaged and coming back for more.
The magic of companies like Lyft and Uber have been their ability to take the friction out of private transportation. They have completely redefined the entire customer experience by making improvements to getting a ride, ride payment, vehicle conditions, driver demeanor, and lengthy and random wait times. By creating customer and driver profiles—complete with photos—each party in the transaction is able to have a more personal relationship. In addition, both the driver and the rider can see each other’s locations on a map. Ride-sharing companies also provide real-time status updates, including ETA and pricing estimations; empowering the customer to take control of the transaction.

For utilities, engaging the right customer at the right time is top of mind, particularly for a complicated issue such as time of use (TOU) rates. A utility inspired by ride-sharing companies could boost engagement in TOU rates by providing employees with a 360° view of the customer—empowering them to provide accurate information on anticipated rate impacts and other offers which could best help the customer manage their bill. Most importantly for customers, a utility could use the best practices of ride-sharing companies to provide the customer with proactive alerts consisting of specific energy saving tips prior to peak energy season, offering not just a generic reminder but a personalized message.
Using the ride-sharing model, utilities could create more proactive alert notifications to better serve customers. Not only could utilities notify customers of potential bill impacts when transitioning to a high usage season, but also provide tangible actions to take, such as a link to a home energy assessment, customized tips to reduce energy usage, a better rate plan recommendation, or a rebate toward a more efficient appliance; putting the customer in the driver seat.

**Key Takeaways:**

- Customers are expecting a more proactive approach by all companies they do business with, including utilities.

- Educating customers on various rate options must also include their potential impacts so that the customer can be confident in their decisions (and not be surprised!)

- Proactively engaging customers at critical points in their customer journey will increase customer satisfaction and program adoption.
Customer Journey: Other Program
Enrollment and Offers

When personalizing recommendations, Netflix has an exceptionally “sticky” and engaging product. The company has revolutionized the way that we consume media and entertainment, and is now responsible for 35% of downstream network traffic during primetime hours in North America.\(^5\)

To help customers easily decide what to watch in an ever-expanding catalog of options, Netflix’s personalized video ranker (PVR) algorithm ranks the entire Netflix catalog for each customer based on customer ratings, viewing history, geography, preferences, and other data signals to determine which content to display. The recommendation engine is powerful, influencing over 80% of what customers consume on Netflix.\(^6\) Customers are three to four times more likely to view their top personalized video recommendations than content on the most popular videos list.

Many utilities have an expanding number of programs, services, and offers, but also have limited customer interactions, so they need to get each one right or risk low conversion rates, wasted marketing dollars, and unmet participation goals. And when facing too many options, many customers will get confused and take no action at all—increasing the overall cost to serve.

When providing compelling recommendations for customers, utilities inspired by Netflix could leverage cloud-based software to analyze customer account, current program enrollment, energy profile, weather, and other data and systematically deliver specifically relevant actions, programs, and rate plans for each customer. Upon new account activation, a utility might also then be able to ask a few quick questions to immediately craft recommendations, while also continually improving the algorithm with the new data. By ensuring that enrollment from each recommendation is easy, seamless, and available through a customer’s preferred channel—just as hitting the button to watch a selected program is—a utility can create a better customer experience and drive more conversions.

“The recommender problem is to make sure that... each member in our diverse pool will find something compelling to view, and will understand why it might be of interest.”

- CARLOS GOMEZ-URIBE, FORMER VP OF PRODUCT INNOVATION
- NEIL HUNT, FORMER CHIEF PRODUCT OFFICER, NETFLIX
The Power of Personalized Utility

Innovations by companies like Amazon, Netflix, Lyft and Uber have both disrupted and reinvented traditional industries. Luckily, they have created a wealth of knowledge that can be applied to utilities who are experiencing the challenges of their own disruption—and it all turns on their ability to successfully personalize the customer experience. Using these companies as examples, the road to personalization is more approachable and attainable.

By embracing personalization, utilities will be better equipped to meet their goals and objectives by:

- Increasing awareness and enrollment in key programs and services—which also increases customer satisfaction.

- Boosting customer value by systematically offering the right customer experience, product, or offer at the right time.

- Reducing the cost to serve by addressing potential issues before they arise and improving operational efficiency with self-service tools.

- Generating new sources of revenue with value-added programs and services.

- Improving customer satisfaction by increasing awareness of offers and programs and proactively communicating with customers before issues arise.

For many utilities, achieving personalization is inextricably linked to deploying a new CIS, either because the new CIS will provide the personalization capability or because no other IT projects will be supported during the CIS roll-out. Indeed, updating and maintaining the CIS are mission-critical projects for any utility, but customers certainly don’t have the patience to wait five or more years for a CIS upgrade to be completed—even if a utility overcame the difficult challenge of securing regulatory approval for the tens to hundreds of millions of dollars to pay for it. And given the rapid increase of change, when the new system is finally ready, it may fail to meet the evolving needs of both the utility and the customer.
In 2018, National Grid collaborated with Uplight on a pilot which focused on improving service to the more than 650,000 LMI customers in their Rhode Island and Massachusetts territories. With the goal of enhancing customer service, reducing operational expenses, and successfully demonstrating the technology and business processes for delivering a personalized customer experience through multiple communication channels, National Grid was operational in 10 short weeks. By the end of the pilot National Grid was able to achieve:

“Providing a personalized customer experience is a required capability for National Grid as we move forward [...] Not only do our customers expect it, but it is also a key enabler to achieving our other corporate objectives, from operational expense management to the introduction and growth of innovative new services and programs. To succeed, personalization must be comprehensive, and that is the solution Uplight is providing us.”

– TERENCE SOBOLEWSKI, CHIEF CUSTOMER OFFICER, NATIONAL GRID

200-400% increase in email open rates
15% improvement in trust scores among surveyed customers who went through the improved contact center experience
16% increase in arrears collections
14% decrease in call volume for customers who enrolled
53% increase in program enrollment on average through call center channel, with some as high as 120%
Personalization cloud technology enables utilities to start with small, achievable steps, realize quick wins, and use the savings to invest in the next step of a longer term roadmap—seeing results right away. Because the technology is agile, it can meet the needs today as well as in the future.

Leveraging predictive analytics using cloud software can be more scalable, pervasive, faster, and cheaper than other solutions. This kind of approach is also compatible with legacy systems including existing CIS’s—no matter the age—and is future-proofed to work when systems are upgraded. Not only can this technology coexist with legacy systems, it can also replace technology or address difficult new features that would otherwise require an additional, more costly investment. For example, personalization cloud technology can also integrate directly with a utility’s data lake or aid in the creation of one.
Four Best Practices for Personalization

There are a whole host of items a utility must consider when thinking about deploying a personalization solution, including a change management plan, business case development, budget management, team considerations and of course, technology. There are four foundational technology elements to consider:

1. Industry-Specific Data Model

While many IT solution providers tout software for utilities, in many cases they are simply generic, horizontal solutions disguised by minor changes. These solutions often don’t take into account the unique data model and operational realities faced by utilities, involving varying types of usage data, numerous n-to-n relationships between customers, meter endpoints, and physical buildings. And while this can sometimes be addressed with custom code, many of these generic, non utility-specific solutions become out of date the minute the utility’s situation changes. However, with a utility-specific data model, these problems can be solved out of the box, be continuously improved for all clients on an ongoing basis, and always be up to date.

2. Built-in Operational Predictive Analytics

Many traditional IT solutions are based on one or more databases, and lack the capability to extract trends, patterns and other relationships that can be used to calculate future behavior. While business intelligence tools and data warehouses have made it easier to draw meaningful insights from this data, driving personalization into the customer experience requires that underlying systems have more powerful predictive analytics capabilities. These include the ability to look across and extract meaning and best action recommendations from disparate sources such as monthly billing, AMI, demographics, past behavior, outage information, service info, and geographic information. It also includes the ability to perform real-time analysis at the speed of customer operations.

“Customers are really loving it. I am having customers say, ‘You are so amazing and thank you for giving me this information.’”

– CSR USING UPLIGHT’S PERSONALIZATION PLATFORM
Once the utility-specific data model is in place and the appropriate predictive analytics are performed, a ranked list of next best actions (NBAs) are created for each customer. Relevant NBAs are then presented seamlessly through all channels, creating an ecosystem of multi-channel next best actions (NBAs). Most utilities have experienced channel confusion at one time or another—where customers are presented different or even conflicting information in different channels or are offered the same solution in one channel after accepting it in another. This can lead to frustration, high internal costs addressing the issue, and ultimately erode a utilities’ highly valuable trusted advisor status, culminating in low customer satisfaction. By having a system in place which ensures the appropriate NBA is always presented no matter the channel of choice for each customer means higher levels of engagement, lower operating costs and happier customers.

---

**Recommendations Presented Consistently and Systematically Across All Channels**

“I love the tool, it’s great. It gives us everything we need at our fingertips.”

— CSR USING UPLIGHT’S PERSONALIZATION PLATFORM

“I don’t tend to offer paperless billing, but seeing it in the tool makes me think to offer it.”

— CSR USING UPLIGHT’S PERSONALIZATION PLATFORM
Given the various types of data involved in personalization and the breadth of applicable customer experiences, it is important that systems are highly scalable and easy to integrate into an evolving IT enterprise architecture. Utility data is complex, and traditional relational databases are simply not well suited for this environment, making a modern, services-based architecture critical. This modern approach unlocks the ability to work with a wide variety of data types and enables the ability to quickly scale, while also offering industry standard methods for integrating with systems that can range from 25-year-old bespoke CIS, to more modern solutions. This also allows personalization to become a bridge to future IT investments—enabling customer experience improvement to still progress without being blocked by long and expensive IT projects.

"It worked magically and my customer was very happy with the offers!"

CSR USING UPLIGHT’S PERSONALIZATION PLATFORM
Personalization: How to Get Started in the Real World

By its very definition, full personalization is all encompassing—consisting of all departments, all offers, all channels, and all customers. With good reason, most utility leaders are excited to start with as many of these as they can. But in the real world, many utilities operate with limited or over-booked IT resources, siloed and antiquated systems, and variable data quality, which makes full personalization unfeasible.

The good news is that Uplight has found a way to get started and immediately see results without boiling the ocean.

From our experience and our work with utilities like National Grid, we have developed the 1-2-10 plan for kicking off our personalized utility—consisting of one business objective, two channels, and ten offers. Once a utility starts with their own version of 1-2-10, they can easily scale up to the full vision of personalization.

Select ONE business objective: Focus on a business objective where personalization can deliver value quickly. This can be to reduce contact center repeat calls, engage customers in a new TOU rate or ensure low-income customers are enrolled in the most beneficial offer. It is important that maximum value can be delivered to the utility quickly.

Choose TWO channels to engage customers in: Focus on the two channels where most of the customers from your business object participate in. For low-income customers, this will primarily be the contact center and either email or text. If the business objective is to engage early adopters into a new energy storage program then the right channels might be in-home devices or an app. Engage your customers where they are.

Get Started with a set of TEN offers: Once your business objective and delivery channels have been selected, focus on identifying a set of about 10 possible customer offers, programs, products or messages that address your business challenge and, ideally, also benefit multiple business units across your utility. This ensures that the benefits of your new personalized utility are felt across the organization and customers have more reasons to return and engage the utility.
Delivering Next Best Actions on Any Channel

Multichannel NBAs are the foundation of any personalized experience. Delivering a consistent message across all channels is critical. When interacting with businesses today “consumers use an average of almost six touch-points with nearly 50% regularly using more than four”. And while the underlying message might be the same across channels, the way it is presented should be tailored to each channel. Here are a few tips, then, for how to optimize your NBAs on several of the primary engagement channels utilities use:

1. **Contact Center**
   The contact center is the most expensive customer engagement channel for utilities. On average utility customers call their contact center just over twice a year, with each call providing a perfect opportunity for both the utility and its customers to benefit from personalization. By enabling access to Multichannel NBAs directly in the customer record CSRs can provide insights, programs or special offers which are directly relevant to the customer’s needs at that moment. The result should be higher C-Sat, reduced secondary calls and increased program/offer adoption. Additionally, these same customers who call in are likely already being actively marketed to by other groups within the utility through other methods such as email or postal mail. Since most consumers need multiple exposures to an offer before they’re ready to commit, it makes sense to provide these same, relevant offers to them also at the time of a call.

2. **IVR**
   Because of the tremendous savings benefit to a utility when a customer issue can be resolved before they even get to a CSR, it’s no surprise that utilities have been investing in improved self-service functionality such as adaptive IVR systems. And while this is certainly an excellent step towards a better customer experience, but these are still systems geared towards the masses. By layering truly personalized customer offers into these systems, callers can not only better address their issues, but also walk away feeling the utility anticipated what was actually important to them.
**MyAccount**

Customers are demanding more digital self-service along with the information needed to help them make informed decisions around best managing their energy. Utilities also benefit from moving customers into lower cost-to-serve channels. An effective MyAccount portal accomplishes all of these objectives and more. Customers are able to start/stop service, pay their bills, see their historical energy usage and even enroll in some programs. However, customers are still confused as to what the best program options are for them and will look to the utility to be the trusted advisor that steers them in the right direction. Personalized energy insights coupled with relevant offers within the MyAccount portal increases program adoption, customer satisfaction and strengthens the utilities brand.

**Email**

Historically, utilities have relied heavily on bill inserts and postal mailers to communicate with their customers. The challenge was that messaging had to be crafted in a generic manner to reach the largest audience possible. This left many with messages that didn’t pertain to them and so ignoring anything from their utility. As customers increasingly opt out of paper messaging altogether, most utilities have turned to email as a way to better engage their more digitally-inclined customers. These customers, however, also expect email messaging to be both relevant and valuable. By layering personalized messaging into an email campaign, utilities not only gain better engagement, they gain a low cost, high return channel that can quickly engage customers who have historically ignored their utility.
Text
Just like email, text is another low cost, high return channel option for better engaging customers who don't want to invest time thinking about their utility. Text is already gaining traction as the preferred channel for outage communications, and can be easily leveraged for a range of other personalized messages including safety, new programs, and other relevant offers.

Smart Speakers
Smart Speakers and other home IoT (Internet of Things) devices, such as Amazon's Alexa or Google's Google Home, have provided a rapidly growing opportunity for many businesses to newly engage with their customers. Offering features such as voice control AI and multiple-device interconnection, these platforms are expected to be found within 54% of homes by 2023. For customers who want fast, reliable and relevant everyday information and help, such as paying their bill, understanding why their bill was higher this month, or even forecasting of their upcoming bill, this is a perfect channel. Smart speakers can even be used to quickly enroll in relevant programs which benefit both the customer and utility, such as a TOU rate or paperless billing.
Conclusion

Delivering on the promise of personalization can seem daunting, but leading digital customer experience companies like Amazon, Netflix, Lyft and more have paved the way. By harnessing over a decade of expertise in personalization and predictive analytics, utilities can yield greater customer satisfaction, decreased cost to serve, strengthened brand awareness, and increased revenues just as others have done before them.

Utilizing cloud-based analytics software, customer engagement best practices, and advisory services, Uplight is helping many utilities transform their customer experience and internal operations. By applying smart learnings from pioneering leaders in an array of industries and adopting customer personalization through innovative, agile cloud technology, utilities can radically innovate without a huge IT investment—all while making incremental technology changes and funding each step with savings from the previous initiative. Even while looking towards a longer IT roadmap, utilities can tackle the challenge at their own pace and deliver real value to their customers from the very beginning. Just as no one journey is the same for every customer, each utility will have their own journey as well—and the road to impactful customer personalization is easier than they think.

Footnotes

About Uplight

Born from the merger of Tendril and Simple Energy, and the acquisitions of FirstFuel, EEme, EnergySavvy and Ecotagious, Uplight is the leading provider of end-to-end customer-centric technology solutions dedicated solely to serving the energy ecosystem. Uplight provides software and services to more than 75 of the world’s leading electric and gas utilities, with the mission of motivating and enabling energy users and providers to accelerate the clean energy ecosystem.

Uplight is the leader in Demand Side Management, Energy Analytics, Utility Marketplaces, Utility Personalization, and Home Energy Management. Together, these solutions form a unified, end-to-end customer energy experience system that’s proven at enterprise scale, yet nimble enough to deliver innovative solutions quickly. Utility leaders at all levels rely on Uplight and its customer-focused digital energy experiences to improve customer satisfaction, deliver energy and capacity outcomes, reduce service costs, increase revenue, and reduce carbon emissions.

2580 55th St #100, Boulder, CO 80301

Interested in learning more about how Uplight can help you accelerate the clean energy ecosystem? Send us a note research@uplight.com or visit www.uplight.com

uplight.com