SMarter Ways To serve
Applied Customer Engagement+ for Federal
Customer expectations are rising dramatically.

Led by digitally smart service providers, customers increasingly want to interact and transact 24/7 via frictionless, connected experiences spanning every possible channel. They expect organizations to immediately recognize them (while also respecting their privacy), anticipate and be responsive to their unique needs, and engage them in more relevant and personalized ways.

This level of customer service inevitably raises the bar for all, as consumers have liquid expectations: Their best experiences become their benchmark for every encounter. In other words, the standards set by customer service leaders—whether Amazon or Uber—quickly become the norm across all industries.

This presents both challenges and opportunities for federal customer service leaders. According to Accenture research, 85 percent of the American public already expects government to deliver digital services equal to or better than their commercial counterparts. And while government faces unique constraints in serving the public, it also has the ability to change the game by capitalizing on commercial innovation and emerging technologies.

Specifically, change is afoot with the adoption and increasing maturity of artificial intelligence (AI) solutions for customer service. Powered by machine learning with underlying natural language processing (NLP) and intelligent automation capabilities, these solutions have the potential to support the full lifecycle of requirements – from engaging citizens and answering questions to processing requests and optimizing decisions.

Combining and integrating these capabilities as a platform to serve customers and citizens enables what Accenture calls Applied Customer Engagement+. This approach can achieve the rare feat of not just scaling operations through automation for greater efficiency and potential cost savings, but also delivering a more convenient, intuitive, and desirable user experience.

For many high-touch commercial services—such as banking, hospitality, telecommunications, and insurance—Applied Customer Engagement+ is serving as the cornerstone of their service strategy. These forward-leaning organizations are using innovative offerings and seamlessly enabling and integrating channels that offer both high personalization and cost-effectiveness. In doing so, they can deliver a highly differentiated, individualized user experience, at scale, for every customer engagement. Commercial leaders applying Applied Customer Engagement+ have experienced a 30-percent reduction in operating costs and a 2-3x improvement in customer satisfaction alongside reduced customer churn.

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Of course, most federal organizations are not vying for market share. Their issues are often more complex, and their audiences more diverse—frequently encompassing the entire American public. In this context, Applied Customer Engagement+ can help federal agencies address unique and particularly complicated needs, including meeting the needs of underserved populations more consistently and effectively—leading to better outcomes that are at the core of the mission.

This report makes the case for Applied Customer Engagement+ and explores how federal organizations can use it to deliver services at scale with improved speed and accuracy while also decreasing costs and enhancing the user experience for both citizens and the federal workforce. It also identifies ways to start—and progress—on the journey to reinventing customer service and experience with AI.

Managing the Digital Shift

Leading companies have understood their customers’ changing expectations and have invested in service capabilities to create simple pathways across channels. Most companies, and now government agencies, are racing to understand how they need to evolve—all while new innovative capabilities, many of which are driven by AI, are reaching the point of market-ready maturity.

Government customer service leaders agree that both the scale and complexity of the issues that they must address are increasing. In many cases, employees are responding to an endless series of recurring customer requests that often require repetitive tasks and diminish their ability to focus on more complex, higher-value customer needs. The result: an environment that satisfies no one.

However, they are not alone. Despite success among leading digital brands, service remains a pain point for many other providers as well as their customers. Customers continue to express frustration about long wait times, unhelpful representatives, redundant information requests, and ineffective self-service systems.1 In many cases, the variety of channels introduces more potential points of frustration into the customer experience. On the provider side, companies may be relying on a one-size-fits-all support model rather than empowering their most self-sufficient audiences to answer their own questions so they can devote greater personal attention to those who most need it.

Even as there is much work to be done in integrating longstanding channels, new interaction models keep taking shape. Digital interactions are becoming increasingly valued over traditional voice exchanges. According to the 2018 Accenture Digital Consumer Survey, satisfaction with standalone intelligent virtual assistants was almost universal—94 percent—with two-thirds of virtual assistant owners using their smartphone less as a result.
There’s also growing recognition that people particularly prize transparency and personalization, with experiences tailored to their specific preferences and choices, and easy access to accurate information showing status and progress of service requests. What distinguishes service leaders—from Amazon in e-commerce to Chipotle in quick-service restaurants and Uber in transportation—is the level of visibility and control that they provide to their customers.

Expanding use of self-service is critical to meeting these challenges, but with a caveat. Historically, self-service options available from government were often limited to the simplest use cases, and even then, results have been mixed. Furthermore, some have inconsistently implemented self-service across siloed services, making it difficult both to find and to navigate. A common example is poorly designed and legacy IVR systems, which can fuel customers’ frustration when trying to complete even basic requests.

Fortunately, a new generation of conversational AI tools—think chatbots, virtual assistants, and intelligent agents that use NLP to engage and serve users—are increasingly ready to perform many tasks once delegated to human agents. With a natural language interface, access to deep subject-matter knowledge, and lightning speed, they can often serve customers both better and faster, making them a preferred customer service channel for some requirements. And given their commercial pedigree, they are increasingly available today for a variety of roles at varying levels of sophistication.

**Accenture and Verizon Win Global Telecoms Award for AI-Powered Customer Service**

Verizon Communications collaborated successfully with Accenture to take advantage of AI and intelligent analytics to help Verizon customers resolve issues more quickly and easily. This successful partnership was recognized as the “AI and Automation Initiative of the Year” at the 2019 Global Telecoms Awards.

The implemented solution helps proactively steer customers to an AI-powered digital assistant that uses interpretive AI to provide an enhanced, consistent and personalized customer-service experience. Using machine learning, the digital assistant has been designed to become smarter over time.

According to Nancy Clark, senior vice president of customer service for Verizon, “by teaming with Accenture and using leading-edge artificial intelligence to assist customers, we have been able to provide them with a fast and easy way to meet their needs.”
Despite the successes to date, a number of disappointing pilots have shown that conversational AI isn’t an off-the-shelf technology. Rather, significant thought and planning is required to embed the context needed to respond effectively to a wide variety of requests. Furthermore, conversational AI shouldn’t be viewed as a cure-all, as many requests are still best served by humans. As a starting point, Applied Customer Engagement+ works to segment these queries to the most effective channel and ensure a smooth handover from bot to live agent, where needed. The long-term potential is to build “collective intelligence”—with customer service reps (CSRs) and automated systems working together seamlessly to deliver better service than they could achieve independently. In this context, conversational AI tools can be viewed as peers that extend the reach of the customer service workforce by performing similar tasks. However, they can also be used to enhance contact center performance. This might encompass conversational AI tools that assist agents by monitoring calls to prepopulate forms, provide real-time agent recommendations or alerts, complete tasks to finish transactions, or provide ongoing quality assurance and coaching.

In the face of rapidly changing expectations, shifting channels, and emerging models, the private and public sectors alike recognize that there must be a better way to engage with the people they serve. Applied Customer Engagement+ builds upon conversational AI to help organizations meet liquid expectations by increasing the scope, volume, and quality of customer service interactions.

Do Existing Bots Fit the Bill?

The federal space already has several prominent chatbots – SGT STAR at GoArmy.com, Julie at Amtrak, and Emma, the virtual assistant at U.S. Citizenship & Immigration Services (USCIS). Each of these provides value to their users. But they also illustrate the limitations of Boolean rules-based interaction tools.

Under the hood, most function as enhanced search engines, providing another way for customers to access general information. For example, Julie can provide the day’s train schedule, but she can’t tell you whether your train is on time or running late. Similarly, Emma can converse enough to collect some basic information from you, but she can’t update you right now on the status of your case with USCIS. For that, Emma still must transfer you to a live agent.

To be sure, these resources represent great progress in federal customer service. They also illustrate how quickly the technology has changed. Today it’s possible to support truly conversational AI – where self-learning AI can adjust and respond based on dynamic customer responses. Unlike rules-based bots, conversational AI is also being continually trained in new customer questions and requests.
The Case for Applied Customer Engagement+

Applied Customer Engagement+ taps into AI’s rapidly evolving capabilities—including voice-to-text/text-to-voice translation and natural language processing, understanding, and generation, as well as machine learning—to deliver a superior user experience. By combining AI-powered solutions with omnichannel analytics, Applied Customer Engagement+ unlocks new opportunities to transform the way service is delivered.

Through Applied Customer Engagement+, federal agencies can take greater advantage of capabilities like conversational AI. While specific terms may vary by organization, there is a common hierarchy of capabilities. At a basic level, a simple chatbot can be programmed to respond to a defined set of queries with standard responses. That’s useful but not transformative. In contrast, a virtual assistant gains natural language processing capabilities that enable it to respond to a broader range of requests. At the top of the stack, an intelligent agent or advisor gains reasoning and execution capabilities that allow it to actively advise users and perform simple tasks. Intelligent agents are what transform traditional self-service.

What makes Applied Customer Engagement+ so powerful is self-learning, or more specifically, machine learning.

What makes Applied Customer Engagement+ so powerful is self-learning, or more specifically, machine learning. By running sophisticated but autonomous analytics across a variety of data sources—call logs, CRM records, and search topics, to name a few—new insights can be uncovered, and dynamic business rules created for future interactions. By mining these real-world encounters, we can better understand user requirements as well as the most effective solutions or responses being used. This knowledge base can then be used to support both virtual intelligent agents and human advisors in making more complex, judgment-based decisions.

The availability of more capable intelligent agents makes it possible to shift a higher percentage of call-center inquiries to a digital self-service channel. In many cases, this can be done voluntarily—for example, offering to start an application or process while someone is waiting in a call queue. Here, faster service can be a powerful incentive.
Figure 1: Potential impact of AI-powered customer care

Of course, not every query can be handled by an intelligent agent. In more complex situations, the intelligent agent may help to pre-process the application before handing off relevant information, context, and recommendations to the live agent to complete the transaction. This approach helps deliver on the promise of a seamless omnichannel experience.

For the more complex issues left for live agents to resolve, AI solutions can work alongside human agents to assist in troubleshooting and improve speed to resolution. As a starting point, technologies, such as robotic process automation (RPA), can be used to handle data entry or other routine tasks during a customer interaction, freeing agents to focus their attention on higher-level activities. Furthermore, cognitive tools can build upon machine learning to proactively suggest next best action and other recommendations on how agents can respond to specific requests in real time. Given that trained professionals are assessing each recommendation, this can also be used for training the system to further develop the software-based intelligent agents.
Experience Design at the Heart of Applied Customer Engagement+

Government customer service leaders know that technology alone won’t deliver a great experience. Instead, it needs to be aligned with their customers’ needs and expectations, including those not always clearly known or expressed. Human-centered design is critical to ensuring AI solutions can interpret customer and agent needs—and interact effectively to meet them.

DIVE DEEP INTO CUSTOMER EXPERIENCE
Some agencies already have invested in assessing end-to-end customer experience using human-centered design and ethnographic research methods, including interviews, contextual observation, and heuristic evaluations. These techniques reveal opportunities to improve customer experience and service delivery across all touchpoints, often indicating where and how self-service can deliver the most value and be most widely adopted.

STUDY PREFERENCES AND BEHAVIORS
Immersive research methods can help discern how customers move across channels in a multi-touchpoint experience – for example, initiating a loan application online, phoning a call center when a question arises, and then returning to the online experience to submit the application and monitor its status. Research helps pinpoint which service requests are prime opportunities to enable self-service—for instance, “one and done” transactions or questions usually resolved on the first call; common informational requests that are relatively easy to explain; and issues that require data input to authenticate and initiate or continue a more complex service process.

IDENTIFY COMMON CHALLENGES
Synthesizing research findings will surface common challenges users face in the tasks they are seeking to accomplish. One of the most pressing challenges is that customers don’t always express their intent in the same terminology that the service provider uses—especially if it’s a scenario the provider didn’t envision in the first place. This disconnect results in the customer being routed to inefficient service channels.

MAP INTENTS
A key focus of Applied Customer Engagement+ is using experience design to envision and orchestrate specific interactions to advance the user journey. When providers understand customers’ intent better—and sooner—they can proactively intervene in many cases with a self-service option optimized for the intended task. Taking advantage of natural language processing and natural language understanding, these interactions can be codified and dynamically delivered across countless scenarios.

What distinguishes commercial market leaders is the care and effort they invest in designing these interactions. Simply mining an FAQ or other knowledge source can create dialogue flows that don’t adequately anticipate user expectations and unstated needs. By using specialized user interface design techniques and tools like journey mapping, as one example, organizations can design conversational AI tools to share information in the right context at a moment that matters. That, in turn, enables them to quickly and effectively guide the user to their appropriate answer.
Once that subset of intents is mastered, scale the capability to include more intents or the same intents across more channels. Extend the chatbot or voicebot so that it integrates with live agents, making handoffs more seamless. For example, if the first project was a chatbot, use the learnings from that effort to launch a voicebot that runs off the same technology.

Consider, too, how AI-powered service could be applied for purely internal functions—particularly the IT helpdesk. Imagine having a voicebot-based password reset capability and how many human resources could then be deployed to higher-level troubleshooting and support needs. Implementing that solution also provides another avenue for experimentation and skill building among employees.

When implemented well, Applied Customer Engagement+ creates an ecosystem where customers prefer to use automated channels to answer simple questions or complete transactions. Just as Amazon, Chipotle, and Uber have extended transparency and control, federal agencies can extend Applied Customer Engagement+ across channels so it’s easy for people to access the information and services they need. Automating more customer needs also reduces call volume—freeing agents to focus on more complex customer questions and requests.

**The result: Better experiences at a lower cost.**

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**Improving Taxpayer Experience: Revenue’s Voicebot**

Taxes can be confusing no matter where you go. For example, Ireland’s Office of the Revenue Commissioners (Revenue) receives three million calls a year seeking assistance. The challenge for John Barron, Revenue’s CIO, is that while most of these calls are not especially complicated, they all require time, attention, and friendly assistance.

He recognized the potential to use AI, especially natural language processing, but also the need to implement intelligent agents effectively. Instead of trying to address every potential scenario, he focused his first pilot on a subset of calls related to tax clearance. The goal was to prove out the technology, including customer receptiveness and satisfaction with the new approach.

Barron and his team took advantage of Accenture’s conversational AI platform to reduce time-to-market to just a few months while providing future flexibility. As part of the development, Accenture experts in both AI and voice experience design collaborated to create a truly human and intuitive experience.

Building on their analysis, they developed a solution that encompasses more than 200 unique dialogue steps, addresses 18 possible use cases, and has the capability to recognize 21 intents. It drew together speech detection, text-to-speech, and natural language processing technology. An early learning was the need to craft very targeted questions for the agent to ask to ensure that the customer was guided down the right path.
The first bot went live in June 2018 and quickly exceeded expectations, handling more than 2,000 calls in the first six weeks. Its performance showed that it was clearly meeting user expectations:

- **50 to 60 percent** of calls are handled from start to finish by the voicebot
- **70 percent** of first-time applicants engaged with the voicebot when submitting their application
- **75 percent** of tax clearance holders were able to retrieve an Access Number
- Only **10 percent** of calls were transferred due to failure to understand

The bottom line: This voice-first pilot answered Revenue’s needs and is delivering improved customer service, reduced costs, and increased efficiency.

Creating an Automated Experience Customers Love

Implementing Applied Customer Engagement+ across all of your channels and touchpoints takes time, but real progress can be achieved in the near term. Start with a strategy to help in prioritizing impact, feasibility, and desirability—and use that strategy to identify both quick wins and longer-term strategic priorities. Whether implementing a new intelligent agent or a full customer engagement platform, don’t try to cover every possible interaction. Stand up an agent that’s trained to address a discrete number of customer needs on a select set of digital properties. Prove the concept in terms of the utility—enhancing the AI’s training while also building the organization’s own capacity for successfully managing such initiatives.

For many organizations, AI-powered customer engagement will progress through three major stages (see Figure 2):

01 **Inform.** Providing customers and/or agents with relevant information. This could be accomplished with existing chatbots.

02 **Intervene.** Proactively guiding users through a specific process or transaction using tools like virtual assistants.

03 **Interpret.** Assessing and proactively addressing higher-order needs, whether the customer is interacting directly with the AI or the AI is in the background helping the customer service rep. For AI to reach this level, an organization would need higher-level training on customer intents and conversational flows.
**Figure 2: A look at how Applied Customer Engagement+ would affect interactions**

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<th><strong>ANTICIPATE</strong></th>
<th><strong>ASSIST</strong></th>
<th><strong>ADVISE</strong></th>
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<tbody>
<tr>
<td></td>
<td>AI → Customer</td>
<td>Customer ↔ AI</td>
<td>Customer ↔ Agent ↔ AI</td>
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<tr>
<td><strong>INFORM</strong></td>
<td>Proactive Informational Initiation</td>
<td>Customer Knowledge Prompting</td>
<td>Agent Knowledge Prompting</td>
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<tr>
<td><strong>Informational</strong></td>
<td>AI proactively pushes information to customer</td>
<td>AI help requested by customer to gather information</td>
<td>AI pushes or agent pulls information during an interaction with a customer</td>
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<tr>
<td><strong>INTERVENE</strong></td>
<td>Proactive Service Resolution</td>
<td>Customer Transaction Assistance</td>
<td>Agent Service Support</td>
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<tr>
<td><strong>Transactional</strong></td>
<td>AI proactively helps a customer start or finish a task (service resolution)</td>
<td>AI help requested by customer to complete an action (transactional chatbot)</td>
<td>AI provides help in completing an action to agent during an interaction with a customer</td>
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<tr>
<td><strong>INTERPRET</strong></td>
<td>Proactive Interaction</td>
<td>Customer Support Escalation</td>
<td>Agent Coaching</td>
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<tr>
<td><strong>Deep Learning</strong></td>
<td>AI recognizes patterns in customer activity and reaches out about potential issues or opportunities</td>
<td>AI escalates to agent based on sentiment analysis, pattern recognition, and contextual data from a user profile within an existing conversation</td>
<td>AI advises on how to interact with customer, including recommending phrases to use</td>
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Preparing for a ‘Human+’ Workplace

Technology in the workplace affects workers on every level. Today’s employees can leverage the latest technologies to reinvent existing roles and find new, innovative ways to adapt and thrive in the post-digital era. And while much of the conversation about AI has been about the threat of eliminating jobs, in reality, AI empowers workers to become what Accenture calls “human+.”

When it comes to customer service, federal organizations can use AI to make everyone “superhuman” (see Figure 3):

- **Customers** can self-serve by interacting with a channel-specific chatbot or voicebot.
- **Customer service representatives** can engage with AI as a virtual co-worker. Agent-assist or augmentation AI can listen to real-time conversations and suggest relevant resources to offer the customer; other tools can monitor the speed and clarity of the agent’s speech and advise when to slow down or when to adjust based on tone of the customer’s voice.
- **Back-office employees**—including those at service centers responsible for converting physical files to digital content—can get help from RPA tools that automate those repetitive processes. That frees their time and talent to focus on activities that deliver more value.
- **Customer service leaders** benefit from the power of machine learning and advanced analytics to help make predictions and to run what-if scenarios for how to optimize limited resources to better serve customers while gaining operational efficiencies. For example, natural language processing can be used for sentiment analysis to gauge satisfaction, with automated alerts used to flag emerging issues.

**Figure 3: Use AI to make “super humans” throughout the customer service journey**

**“Help me help myself”**
Inform | Intervene | Interpret

**“Respect my time”**
Agent Chatbox | Agent Assist | Agent Coach
AI-enabled customer service and customer experience tools are evolving quickly, offering commercial and government organizations unprecedented opportunities to reshape engagement. While the opportunities are vast, the first steps can be straightforward. Start with a holistic strategy and business case. Focus on areas that will deliver the greatest value and/or be the most expeditious to automate. Then use momentum from those implementations to extend and expand quickly—transforming how the organization engages with customers and delivers mission outcomes.

For federal, the stakes and challenges are even higher than for the private sector. Federal organizations must deliver against very specific missions with constrained and often shrinking resources. And while most businesses can focus efforts on customers who generate higher profits and/or cost less to serve, government exists to serve everyone. Although expectations are higher, customers don’t demand perfection. They want journeys that are increasingly effortless thanks to integrated channels and greater personalization. Above all, they want providers to take ownership for the customer service they deliver. With Applied Customer Engagement+, federal organizations have a framework for advancing toward service without compromise:

**Better experience. Better outcomes. Better costs.**
About Accenture Federal Services

Accenture Federal Services, a wholly owned subsidiary of Accenture LLP, is a U.S. company with offices in Arlington, Virginia. Accenture’s federal business has served every cabinet level department and 30 of the largest federal organizations. Accenture Federal Services transforms bold ideas into breakthrough outcomes for clients at defense, intelligence, public safety, civilian and military health organizations. Visit us at www.accenturefederal.com.

About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world’s largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With 482,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at www.accenture.com.

References

1 Accenture Global Customer Pulse Research (2008-2016)