Vendor Profile

Accenture Federal Services — Providing AI Solutions to the Federal Government

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IDC OPINION

As artificial intelligence (AI) proliferates in government agencies and is deployed for mission-critical operations, it will make or assist in decisions having significant impact on almost every aspect of individuals' lives. Recognizing that AI is an emerging field, it is important for agencies to stay abreast of relevant innovations and technological trends as industry leaders are constantly developing new tools and techniques in the field of AI. Agencies should leverage these investments and expect their industry partners to have deep government, analytics, and technology expertise, including rapid prototyping capabilities to accelerate the testing and feasibility of new AI solutions in a low-risk environment. IDC Government Insights believes that:

- Many of the traditional systems integrator relationships with government agencies in the forward-looking area of AI are ready for disruption.
- The solution providers that are strategic in approach, have broad-based partnerships and processes, and have onboarded key talent and expertise combined with a design-centered approach to deploying technology will enable sustainable agency outcomes.

IN THIS VENDOR PROFILE

This IDC Vendor Profile examines and analyzes the AI solutions offered by Accenture Federal Services (AFS), a business unit of Accenture providing strategy, consulting, and technology services to the U.S. federal government. Data and information for this document has been gleaned from IDC's participation in briefings and conversations with AFS executives, AFS' federal government clients, and participation in an AFS Design Studio Analyst briefing on January 16, in Washington, D.C.

SITUATION OVERVIEW

Company Overview

Accenture is a $41.6 billion (2018) professional services company with over 469,000 employees. It provides a broad range of services and solutions in strategy, consulting, digital, technology, operations, and IT services to clients in over 120 countries and 40 industries. Accenture employs 20,000 analytics professionals, including 6,000 deep AI experts and 3,000 data scientists, and it is responsible for over 1,500 patents and more than 250 applications and solutions. Accenture has more than 45 research partnerships with leading institutions like Massachusetts Institute of Technology (MIT), Stanford, and Carnegie Mellon. Accenture invested a significant portion of its global R&D investments (which totaled $791 million in *FY18)* in AI, machine learning (ML), and predictive analytics. Currently, Accenture holds 150 biometric patents and 125 video analytics patents that use AI.

May 2019, IDC #US45071019

Accenture Federal Services supports the U.S. federal market and is known for its support of agency ecommerce systems, including StudentLoans.gov, Healthcare.gov, IRS.gov, and significant aspects of DLA's supply chain. Accenture Federal Services' Applied Intelligence practice has more than 1,000 data scientists, statisticians, solution architects, engineers, and AI experts working directly with clients and other Accenture project teams supporting cloud-based delivery of advanced AI and data science solutions through its Fed-ramped platform-as-a-service (PaaS) offering. According to Washington Technology's Top 100 List of 2018, AFS revenue was $2.3 billion, with 62% from civilian agencies.

Company Strategy

Accenture's strategy is to enable clients to remain competitively agile in a world dominated by change and enable leaders to act with speed and confidence – setting the stage for clients to not just survive but thrive in the now, the new, and the unknown.

Accenture's approach to assist clients is based on building an industry-leading partner ecosystem, deploying world-class technical resources, and investing in innovation and proven solution accelerators.

Partner Ecosystem

Accenture maintains strategic, global joint ventures with the leading cloud vendors, such as AWS, Google, Microsoft, and Oracle, and is recognized as a significant partner for many technology vendors that are embedding AI into their platforms, such as SAP, SAS, Salesforce, and ServiceNow. Accenture also has developed relationships with AI-specific software companies like IBM Watson; robotic process automation (RPA) vendors like UiPath, Blue Prism, and Automation Anywhere; video analytics companies like Veritone; hardware companies like NVIDIA and Intel and call center companies like Nexidia and Pegasystems. In addition, Accenture Ventures tracks approximately 200 AI-related start-ups that focus on key technology areas such as vision, natural language processing, data preparation, and machine learning. Accenture has taken minority investments in start-ups like Malong Technologies, Paxata, and 1QBit. Accenture has over 150 technology alliances with market leaders and innovative AI start-ups.

In addition, Accenture has established research and training partnerships with academic institutions like Massachusetts Institute of Technology, Harvard, Stanford, Duke University, Georgia Tech, Northeastern, Turing Institute, and Stevens Institute of Technology in the United States. Internationally, partnerships include ESSEC Business School and Das Deutsche Forschungszentrum für Künstliche Intelligenz (DFKI) in Europe.

Accenture is also active in many AI and related groups and associations, including:

- Partnership on AI (focused on advancing the understanding of AI technologies – including machine perception, learning, and automated reasoning – through research, organized discussions, sharing of insights, and thought leadership)
- IEEE Standards committee for AI (IEEE is the world's largest technical professional organization for the advancement of technology.)
- World Economic Forum (Center for the fourth industrial revolution)
- Royal Society of the Arts (vice chair, Citizens AI Jury advisory group, sponsored by Deep Mind)
- Data & Society (member)

- Centre for Information Policy (member)
- International Association of Privacy Professionals (member)
- Centre for the Future of Intelligence (partnership)

AI Expertise and Technical Resources

AFS has assembled AI talent under the guidance of personnel with AI expertise, including:

- **Dom Delmolino, Chief Technology Officer, AFS.** Delmolino is responsible for the oversight, strategy, and definition of AFS' technical offerings. He has worked with large government agencies to design database architecture, directed the development and deployment of sales and customer database software, and managed a database R&D establishment. His expertise includes system and data modernization, agile application and database development for high performance, and rapid deployment of large-scale systems.
- **Dr. Ian McCulloh, PhD, Chief Data Scientist, AFS.** McCulloh has a military, academic, and research background and extensive expertise in computational social science and military tactics and strategy. He founded the West Point Network Science Center and created the Army's Advanced Network Analysis and Targeting (ANAT) program. In addition, he directed interdisciplinary teams of scientists at the Special Operations Command Central (SOCCENT) and Central Command (CENTCOM) that were drafted to conduct global social science research in counterterrorism and modern warfare. Prior to joining Accenture, McCulloh served as associate professor at the Johns Hopkins University School of Public health, senior lecturer in Hopkins' Whiting School of Engineering, and senior scientist at the Johns Hopkins University's Applied Physics Laboratory. His latest research focused on strategic influence in online networks.
- **Bryan Rich, Managing Director, Applied Intelligence.** Rich developed and founded News Imaging, a company focused on automating pattern detection and analytics in real-time open source data. His expertise includes professional services skills and developing analytics/AI platforms with a focus on cognitive automation and leveraging AI and ML to increase efficiency at speed and scale.

In addition to onboarding key talent and expertise, Accenture provides technical resources to federal agencies. Examples include:

- Accenture has a network of 28 Fjord Design Studios globally — including Accenture Federal Digital Studio, a fit-for-purpose design studio in Washington, D.C.
- At the Accenture Federal Digital Studio, AFS works closely with federal clients using human-centered design across end-to-end processes. Using agile practices, in combination with cloud-based DevOps, teams of AFS employees and government clients develop rapid prototyping and cocreate solutions. The studio also gives federal clients opportunities to immerse themselves in real-world AI use cases and experience AI solutions in action. AFS believes that this type of collaborative, iterative development is fundamental for the experimentation required for effective AI solutions and for building organizational competency. AFS supports these efforts with its Agile Institute, dedicated to the specific requirements of U.S. federal agencies. The AFS Agile Institute has provided certification training for nearly 4,000 employees in leading disciplines, including ICAgile and the Scaled Agile Framework.
- Accenture has seven labs in Silicon Valley; Washington, D.C.; and around the world. With more than 200 researchers, these labs focus on co-innovating with clients on specific proof of concepts in applied AI and exploring emerging technologies and trends that can benefit clients.

- Accenture also has Applied Intelligence Innovation Centers. The goal of these centers is to innovate and incubate solutions that will support client delivery. These centers are applied R&D institutes that work with clients to address a range of goals. Five of the centers are exclusively dedicated to advanced analytics. Teams rotate between the centers and client sites to bring expertise in and out of the centers.
- The new Accenture Federal Services Cyber Center brings AI-based cybersecurity-as-a-service to federal agencies. Within the Security Operation Center (SOC), Accenture uses machine learning to prioritize top issues dynamically, achieving a 95%+ true positive rate to minimize time spent chasing false alerts, a common challenge within traditional SOC operations.
- Accenture's Data Science Center of Excellence has a highly specialized team of more than 100 data scientists who use advanced data mining, machine learning/deep learning, and other artificial intelligence tools and techniques to accelerate step-change innovation (i.e., three or more steps away from current offerings and industry solutions). This center has published over 130 AI business and research reports over such topics as explainable AI, edge analytics, and data-driven enterprises.
- Accenture myWizard has AI capabilities to help organizations standardize the engineering of AI solutions and make advanced and AI-driven software engineering techniques a standard practice. This tool was developed based on 20 years of client experiences. Accenture indicates that over 55,000 Accenture software engineers use myWizard's collection of AI, automation, and analytics tools to continuously drive efficiency and quality across the software life cycle and IT operations as well as infusing AI into modern engineering practices for predictable and high-speed production releases.
- Accenture created its Applied Intelligence Platform (AIP) by combining its connected platforms-as-a-service IoT platform with the Accenture Insights Platform. The AIP allows organizations to apply preconfigured self-learning industry solutions, as well as develop new solutions, without the need for deep data science expertise. AIP combines edge analytics, automated AI, and advanced analytics with an integrated suite consisting of a preconfigured architecture, and the Accenture Federal Digital Studio — an advanced application development design studio, with a catalog of predeveloped intelligent industry solutions and apps. The Federal Design Studio uses publicly available data sets to support clients in exploring the art of the possible with design, data, and AI. The AIP vendor-agnostic PaaS solution has FedRAMP moderate authorization with dedicated, United States-based performance and security monitoring.

Supporting Agency Outcomes

Accenture has assisted agencies automate routine processes at scale and use machine learning to enhance employee judgement, and it offers a FedRAMP authorized insights platform. Further:

- Accenture works with several robotic process automation partners to apply automation to routine processes that require no human judgment. AFS helped automate the audit process for a federal agency charged with oversight and monitoring of over 6,000 institutions. For the size and scope of this auditing task, it took 3–4 months. Time-consuming elements of the audit process included determining which institutions to audit and manually assessing the Office of Inspector General inputs, executing queries, and combining results.

  The Accenture team used automation and ML to automate manual data processing tasks, running this task in minutes compared with the hours it took to manually process the data. This freed up auditors to focus on more value-added tasks such as analyzing data and using their own judgment to more effectively identify the right institutions to audit.

- Accenture helped an agency that manages social welfare benefits with significant fraudulent claims. This agency undertook a very time-consuming task of predicting which claimants belonged to high-risk fraud groups. This involved 100 analysts and investigators reviewing more than 15,000 locations. In addition, the investigative oversight unit devoted more than half of its resources to prevent this program's fraud, waste, and abuse.

  The Accenture team developed an intelligent support solution using natural language processing and machine learning to read and comprehend millions of claims and automate the fraud detection process. The agency piloted the program in seven states, yielding an improvement of 20% more fraud detection over current manual methods, with 23,000 fraud cases filed in the first three months. All of the agency's beneficiaries benefitted, as claims processing time decreased by more than 10%.

FUTURE OUTLOOK

Accenture believes that AI represents a new way of working and will bring about profound and unanticipated changes within organizations and impact the lives of citizens in ways that are difficult to predict today. Therefore, Accenture advises clients to adopt an organizational change model that focuses on rapid learning and adaptation. Accenture provides an AI-driven organizational change model as a framework for how agencies can begin this process. Key elements include:

- Defining an AI journey and strategy, including an AI operating model with identified stakeholders and objectives, a defined AI talent strategy, required ecosystem partners, and initial prototype initiatives
- Building a talent strategy and learning architecture designing AI-specific talent profiles and segments with competency frameworks, developing the required competencies, and designing curriculum and learning paths
- Executing rapid upskilling programs by building and launching targeted learning initiatives and monitoring progress against established goals
- Measuring progress

ESSENTIAL GUIDANCE

Advice for Accenture Federal Services

AFS brings a broad range of industry or functional-specific solution frameworks and accelerators to government, accompanied with tools such as myWizard, which helps Accenture improve productivity by reducing effort in standardizing the engineering of AI solutions and increasing throughput.

As the agency's digital transformation needs become more demanding and sophisticated, it is critical that Accenture stays active in partnerships, acquisitions, and investments in technology companies and leverages this expertise to bring commercial best practices to government and its ecosystem. IDC recognizes Accenture as a company with a creative buying spree and a light-touch integration process. The acquisition of Fjord, a United Kingdom-based agency, kept its brand after being bought in 2013 (and is one of the key pillars of Accenture Interactive globally), is an example of integrating new skills while enabling independence in creativity and innovation.

Many agencies have an unclear vision and strategy about the future of work (FOW). IDC defines this future as work based on technologies such as artificial intelligence, data analytics, robotics,

augmented and virtual reality, and intelligent process automation. These technologies will change who or what is doing work and will impact workers' skills, behavior, and organizational culture. In deploying robotic process automation, AFS is helping agencies develop AI-specific talent strategies and learning architectures that allow workers to learn and adapt, becoming skilled in relevant, higher-value tasks. In doing so, AFS is assisting agencies comply with many federal mandates, including the President's Management Agenda requiring that agencies shift from low-value to high-value work. IDC Government Insights recommends that AFS consider expanding its FOW portfolio, and provide AI-based solutions that address talent acquisition, development, and retention, to support agencies as they look beyond the traditional methods to staff the required FOW skill sets. AFS may also want to consider supporting agency workspaces via AI solutions that provide secure enablement of the federal workforce as staff collaborates with constituents and ecosystem partners.

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LEARN MORE

Related Research

- *Responsible AI in Government and Vendors Providing Tools Testing for Bias* (IDC #US45068919, forthcoming)
- *IDC PlanScape: Responsible and Ethical AI for Federal and State Governments* (IDC #US44856318, February 2019)
- *IDC FutureScape: Worldwide National Governments 2019 Predictions* (IDC #US44390018, October 2018)
- *IDC FutureScape: Worldwide Digital Transformation 2019 Predictions* (IDC #US43647118, October 2018)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2018: National Civilian Government* (IDC #US43635818, March 2018)

About IDC

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