DIGITAL EDGE25 AWARDS 2016

IDG Enterprise's annual Digital Edge awards recognize a select group of organizations that have made great strides toward becoming digital-centric enterprises. **BY MARY K. PRATT**

DIGITAL TRANSFORMATION is a popular buzzphrase with various definitions. But while there may be confusion about what the term means, the bottom line for the initiatives it's used to describe is always the same: Did the project deliver results? At these 25 organizations, the answer is yes.

The Digital Edge 25 awards recognize digital transformation initiatives with significant, measurable business impact. We enlisted a panel of executives, including past winners, to evaluate projects on complexity, scale, business outcomes and innovation.

Spanning more than a dozen industries, the winning entries include home health devices that feed data into electronic medical records via smartphones and novel ideas that became real-world business ventures through the use of sophisticated back-end software integration and simple user interfaces.

Read on for 25 stories of digital success.

THINKSTOCK

Members of the team that worked on the Starbucks College Achievement Plan project.

Arizona State University

UNDERGRAD STUDENTS GET A HELPING HAND WITH TUITION THROUGH A DATA-DRIVEN PARTNERSHIP WITH STARBUCKS

PROJECT: Arizona State University teamed with Starbucks to create the Starbucks College Achievement Plan (CAP). In this unique collaboration, Starbucks offers full coverage of undergraduate tuition to all its employees eligible for full- and part-time benefits. As part of CAP, ASU offers enrolled Starbucks employees a choice of more than 60 bachelor's degrees through on online platform as well as 24/7 tutoring in various subjects and access to a team of coaches and advisers.

To develop and deliver CAP, ASU used teams of developers dedicated to key performance indicators in the online education space as well as project managers and business analysts focused on maximizing efficiencies in the program process. ASU also utilizes Starbucks benefits eligibility data, financial aid information and details about academic majors to create custom experiences for CAP students, using cloud technologies to scale its offerings.

As part of the CAP initiative, ASU evaluated its processes and technologies to ensure it could reach all students in a meaningful and personalized manner. As a result, the school improved its online learning delivery systems. For example, students now have virtual access to on-campus resources on demand.

TECHNOLOGY USED: Cloud-based systems and services, including GreyHeller, PeopleSoft and Salesforce.

GOAL: To partner with Starbucks to offer quality online education for eligible Starbucks employees, and to further ASU's education innovation efforts.

RESULTS: More than 5,000 students have enrolled in the program. Retention rates are over 5% higher than those of non-Starbucks students pursuing undergrad degrees online.

Aflac

CUSTOMERS GET FASTER INSURANCE CLAIM PAYMENTS THANKS TO A TECH PROJECT COORDINATED WITH SEVERAL BUSINESS DEPARTMENTS

PROJECT: One Day Pay allows Aflac, a provider of supplemental insurance, to receive, process, approve and disburse payments for eligible claims in a single business day. It's an enhancement to the online service Aflac SmartClaim. Launched in 2009, SmartClaim enables customers to submit claims online and, thanks to the 2014 addition of Claims Direct Deposit, have disbursements directly deposited into their checking or savings accounts.

Now when a customer starts a claim online, the system recognizes initiation and is ready to start processing as soon as the signed claim form and all supporting documentation are received. The technology also enables customers to upload and electronically submit supporting documentation.

IT collaborated with the claims, legal, compliance, actuarial and marketing departments to develop the One Day Pay enhancement.

TECHNOLOGY USED: Middle-tier technology that automatically submits claim information to Aflac's batch process, which is built so that wellness claims are auto-adjudicated based on rules for claims approval and processing through in-house modified software.

GOAL: To enable Aflac to pay claims faster than any of its competitors and drive higher customer use of SmartClaim.

RESULTS: An 86.75% increase in the use of Aflac SmartClaim, which also supports Aflac's goals to boost customer satisfaction and cut its use of paper.

Barclays Bank

CROSS-FUNCTIONAL TEAMS DELIVERED AN AMBITIOUS INTEGRATION PROJECT THAT GIVES CUSTOMERS MORTGAGE DECISIONS IN NEAR-REAL TIME

PROJECT: In 2015, London-based Barclays Bank launched a project that fully automated the integration of its sales and origination system with Mortgage Brain's Mortgage Trading Exchange. This integration enables the delivery of near-real-time decisions to brokers who in turn can provide their customers with mortgage offers

ELLIOTT BROWN

in a single day. The technology replaced a mortgage application and lending decision process that was manually intensive and resulted in five-day servicing and a poor customer experience.

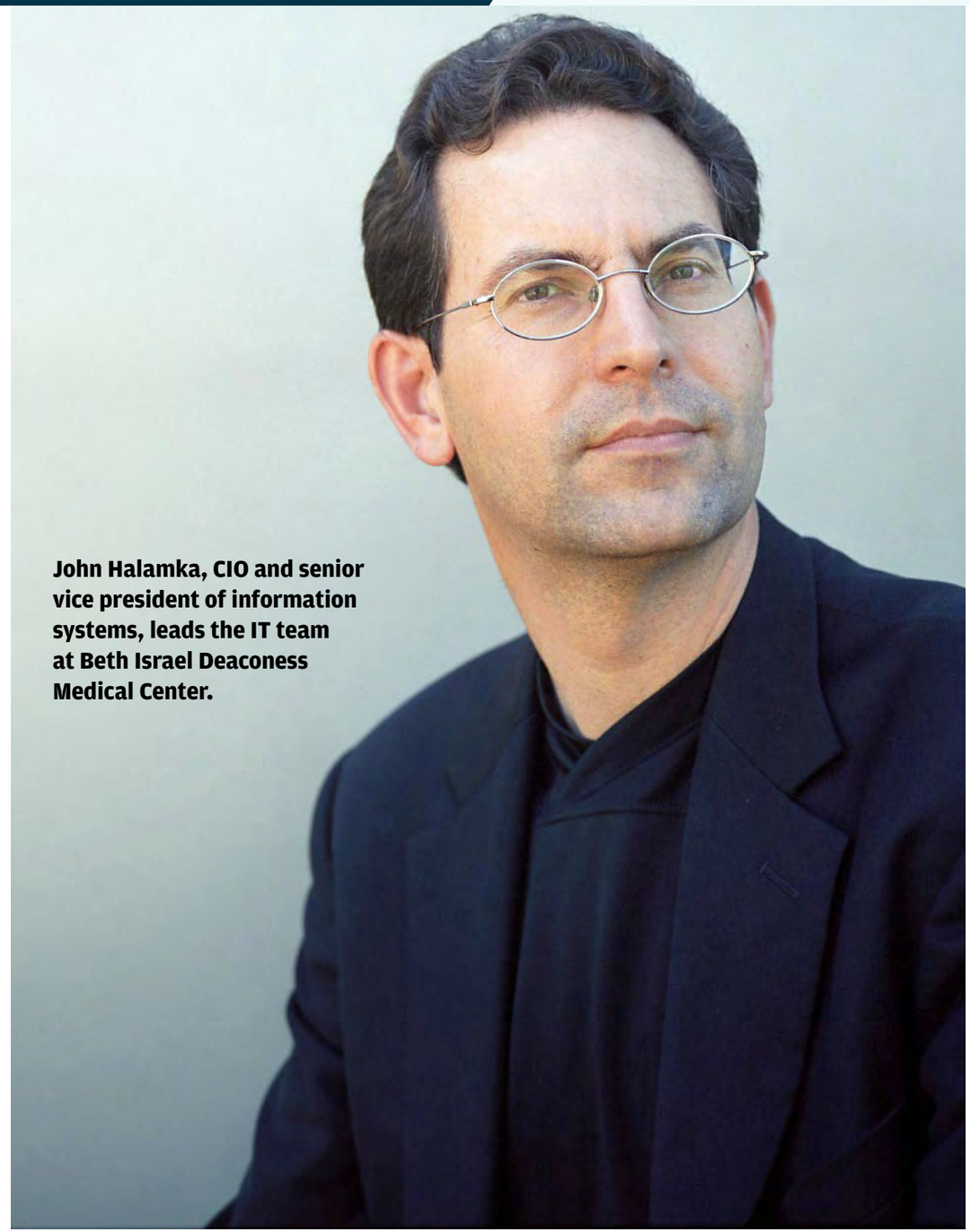
For this integration project, the IT team selected an architecture that could be reused to deliver new multichannel interfaces, allowing the bank to rapidly roll out enhanced sales processing to intermediaries, and mortgage applications through multiple digital channels, including fat clients and internet pages, and in future mobile devices. IT adopted an agile methodology to deliver the project in four phases over a year, working in cross-functional teams that included experts from the bank's intermediary management business and Mortgage Brain.

TECHNOLOGY USED: An existing .Net platform and much of the associated API code, Java, SQL servers and the Mortgage Brain application.

GOAL: To deliver near-real-time processing on lending decisions and a greater certainty of process to reduce broker and customer calls.

RESULTS: In addition to achieving the primary goals, the project also reduced manual underwriting needs, improving customer experience and operational efficiency. The project also delivered a system that can be used for additional commercial opportunities with internal distribution channels as well as external parties.

IT adopted an agile methodology to deliver the project in four phases over a year, working in cross-functional teams.



John Halamka, CIO and senior vice president of information systems, leads the IT team at Beth Israel Deaconess Medical Center.

Beth Israel Deaconess Medical Center

A CUTTING-EDGE APP GIVES CLINICIANS A TOOL TO MONITOR PATIENTS' HEALTH AND IMPROVE OVERALL CARE

PROJECT: BIDMC@Home, a native iOS application, links patients' smartphones and home devices to the electronic health records (EHR) system at Boston-based Beth Israel Deaconess Medical Center (BIDMC). This helps clinicians manage patient wellness on an ongoing basis and lets patients provide data about their activities, weight, blood pressure, glucose levels and more. It's an important tool for the hospital at a time when the healthcare system is moving from a fee-for-service financial model to an outcomes-based model where providers are paid for wellness, not sickness, and for the quality of care, not quantity.

The BIDMC IT team used native iOS middleware capabilities from Apple's HealthKit software platform to enable in-home devices to transmit data to patients' smartphones via Bluetooth low-energy connections. The team created a native iOS app to transfer data collected by HealthKit to the BIDMC EHR system via a NetScalar web application firewall and .Net web services. Patients can set privacy preferences and control the data shared.

TECHNOLOGY USED: Open systems for mobile, big data/analytics and cloud computing.

GOAL: To securely connect data gathered in patients' homes with BIDMC providers.

RESULTS: BIDMC@Home supports the hospital's mission to deliver effective healthcare while also ensuring its financial health.

BNY Mellon

A NEW QUERY TOOL ALLOWS EMPLOYEES TO ASK PREVIOUSLY IMPOSSIBLE QUESTIONS OF DATA SETS TO BOOST CUSTOMER SERVICE

PROJECT: The investment bank's proprietary big data and analytics tool, BNY Mellon Digital Pulse, was created to increase efficiency, reduce risk, drive profitability and improve the client experience. Digital Pulse captures, stores and analyzes data from various points — including transactions, processes and sensors, and business events — and then triggers meaningful actions and predictions. These actions include tech-generated alerts, automated workflows and human decisions based on new knowledge. Digital Pulse allows users to ask previously impossible questions of data sets.

The tool also uses information from application monitoring systems to detect potential problems with applications or patterns that could indicate fraud, which bolsters the bank's risk management and resiliency. Digital Pulse is one of the core components of BNY Mellon's NEXEN Digital Ecosystem, which has been rolled out to clients throughout the year. As a component of NEXEN, Digital Pulse monitors NEXEN Gateway (the client portal) and captures pertinent data, allowing the bank to more easily identify its clients' needs, refine their experience and spur the creation of innovative services.

TECHNOLOGY USED: HPE's Vertica, Apache Kafka, Apache Storm, Apache Spark and Hadoop.

GOAL: To put information into the hands of BNY Mellon employees and give them real-time data insights.

RESULTS: More than 30 business applications and processes are currently integrated with Digital Pulse, which is collecting more than 600 million data points per month.

BlueCross BlueShield of Tennessee

A BUSINESS INTELLIGENCE TOOL IDENTIFIES PATIENTS IN NEED OF HELP SO HEALTHCARE PROVIDERS CAN DIRECT THEM TO THE PROPER CARE

PROJECT: Analysts in the medical informatics department at BlueCross BlueShield of Tennessee created the Provider Quality Portal with a custom analytics platform to identify plan members who weren't getting the care they needed based on their age or health conditions. The portal, which went live in 2014, uses medical claims data to identify gaps in individual members' care and helps healthcare providers close those gaps by working with members to obtain the right tests, screenings and evaluations. With

REUTERS/BRENDAN MCDERMID

business intelligence technology collecting, sorting, analyzing and summarizing the data, providers can log in and follow instructions to engage with patients and direct them to the care they need based on National Committee for Quality Assurance standards.

The platform includes mobile BI applications and healthcare provider dashboards. The technology supports BCBST's Medicare Advantage Physician Quality Incentive Program, which measures providers on the care and service they provide.

TECHNOLOGY USED: Information Builders WebFocus for analytics and Omni-Payer for data quality.

GOAL: To create a portal that enables healthcare providers to identify members who aren't getting the treatment they need and work with them to improve their health.

RESULTS: Since the launch, BlueCross has been able to address more than 422,000 gaps in patient care, saving approximately $3 million.

Cisco Systems

A STREAMLINED COMPLIANCE REPORTING APPLICATION AND MORE AUTOMATED PROCESSES HELP DRIVE SIGNIFICANT PRODUCTIVITY GAINS AND MORE RIGOROUS TESTING

PROJECT: Cisco's Targa application provides a single system for both compliance project leaders and test engineers to structure test cases and test plans. It also allows these workers to execute testing and store test results as well as generate compliance reports that adhere to various regulations. The application was designed on a workflow-based cloud platform that enables easy-to-find requirements, configurable rules, flexible data and a unified architecture.

The Targa project (named after the classic Porsche sports car) transformed a largely manual process into a substantially automated one, with about 60% of manual processes automated and another 25% on track for automation. This resulted in significant productivity gains, with time spent on various key tasks during test planning and execution reduced by 300%. Moreover, the project's centralized data allows for simplified flows with zero redundancy. A powerful suggestion engine makes information available to test engineers when needed.

Flexible data elements allow Cisco to easily implement new products.

TECHNOLOGY USED: Cisco's intelligent business process management (iBPM) team provided iBPM, a SaaS platform, using Pegasystems; Oracle provided product life-cycle management and ERP software.

GOAL: To simplify business processes with the aim of increasing productivity by 15%, decreasing test setup and results-entry times by 20%, and improving the System Usability Scale scores by 100%.

RESULTS: Estimated productivity growth of 22%, with more rigorous testing requirements and guidelines added to the business process.

DIESMER PONSTEIN

City of Raleigh, N.C.

WITH GIS TECHNOLOGY, RESIDENTS CAN VISUALIZE HOW ZONING CHANGES WILL AFFECT THEM AND SHARE FEEDBACK WITH CITY OFFICIALS

PROJECT: The city government of Raleigh, N.C., developed the Interactive Unified Development (UDO) Zoning Remapping application to inform and engage with city residents about changes as the city sought to rezone 30% of its land area and approximately 35,000 parcels. The application is an online viewer that gives people a simple, intuitive way to visualize how zoning changes would affect them and share comments with city staff and elected officials. It includes a simple side-by-side comparison that lets citizens enter their addresses and see details about their current and proposed zoning statuses. The system also includes a separate interface that allows staff to monitor and respond to feedback in real time. An automated alert feature sends emails that notify city staff when comments are received and lets citizens know when they receive responses from the city. The end result is a map that displays all public comments and all responses from the city.

Justin Greco, architect and lead developer of the city of Raleigh's UDO Zoning Remapping application.

REUTERS/MARIO ANZUONI

TECHNOLOGY USED: A hybrid of enterprise GIS and open-source technology, with Esri software providing the foundation for enterprise GIS services. Esri's ArcGIS Server is used on the application back end, and the front end uses Leaflet, a lightweight open-source JavaScript mapping library.

GOAL: To effectively engage residents as the city moves through a rezoning process.

RESULTS: Citizens, city staffers and elected officials were able to conduct a two-way dialogue about proposed zoning changes, with the application providing transparency into the remapping process.

CVS Health

A SUITE OF DIGITAL TOOLS HELP CUSTOMERS MANAGE THEIR PRESCRIPTION REFILLS AND GET REMINDERS ABOUT PICKUPS

PROJECT: In 2015, CVS launched its Enhanced Mobile Pharmacy Solutions project, aimed at supporting its mission to help customers with their health goals and challenges. The new system features a suite of new digital tools to make tasks easier and more convenient for the retail and healthcare company's customers. These tools include

a text function that allows customers to receive messages to help them manage prescription pickups and refills; an app called Med Remind that allows customers and caregivers to get reminders and alerts by importing their prescriptions directly from their CVS.com accounts; a feature called In-Store Pharmacy Messages that uses beacon technology to send shoppers additional notifications; and Fast Mobile Prescription Pickup, which allows customers to pick up their prescriptions in a single scan using their mobile phones. These tools are intended to personalize the experience for customers and help them adhere to their medication regimens. In 2015, the system generated more than 13 million mobile visits per month, accounting for 3 million weekly visits on average.

The Enhanced Mobile Pharmacy tools are intended to personalize the experience for customers and help them adhere to their medication regimens.

TECHNOLOGY USED: The project was developed through a partnership of the CVS Health digital business teams, digital IT and other cross-functional partners.

GOAL: To create a seamless omnichannel digital strategy that unites CVS channels and integrates the pharmacy and retail store experience for customers.

RESULTS: In addition to enabling CVS to better engage with customers, the mobile enhancements are a competitive differentiator, helping CVS Health to draw in new customers and more effectively interact with top customers.

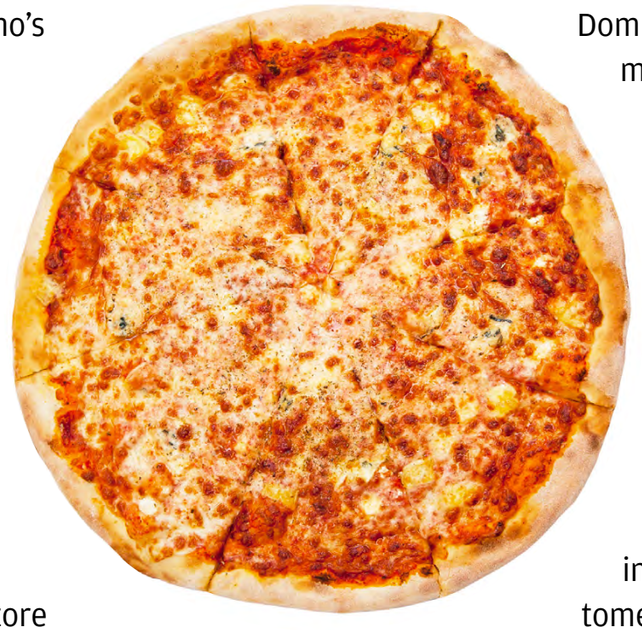
Members of the Domino's IT team.

Domino's

AN INTERFACE ON THIS PIZZA COMPANY'S MOBILE APP ALLOWS CUSTOMERS TO PLACE ORDERS, ACCESS PAST PURCHASE DATA AND SEARCH FOR COUPONS VIA VOICE COMMANDS

PROJECT: Half of the pizza orders that Domino's receives are placed via digital channels, and half of those come in through the chain's mobile app. To better serve customers and take advantage of new technology, the Domino's IT team added a voice interface (featuring a chatbot named Dom) to the company's iOS and Android mobile apps, so customers can now order pizzas

with voice commands. Partnering with Nuance Communications, a provider of voice and natural language communications systems, Domino's aimed to make Dom's voice sound natural, so the experience of ordering via Dom wouldn't be much different from interacting with a human beings in the store or on the phone. Dom uses Siri-like technology to capture customers' spoken statements and guide them through the ordering process. Dom can also access saved orders, suggest additions and find coupons. The IT team combined natural language with what customers saw online, which required the app to be intelligent enough to switch between voice and on-screen interfaces as it guides people through the process. In addition, Dom brings in more customer data, allowing Domino's to better track customers' eating and spending habits and thereby better customize the individual customer experience.



TECHNOLOGY USED: Nuance's intelligent multichannel virtual assistant technology.

GOAL: To use voice technology to enhance the ordering experience for customers.

RESULTS: Dom is now a recognized technology in the food industry and has processed 500,000 orders since its June 2014 launch.

Discover Financial Services

THROUGH A MOBILE APP OR WEBSITE, CUSTOMERS CAN FREEZE THEIR ACCOUNTS IN SECONDS IF THEIR CARD IS LOST OR STOLEN, PREVENTING UNAUTHORIZED USE

PROJECT: Discover introduced Freeze It to give customers more security and control over their accounts. The system enables customers to freeze and unfreeze their accounts in seconds using an on/off switch on the Discover mobile app or website. When a customer freezes an account, the card linked to that account can't be used to make purchases, get cash advances, or transfer balances. However, recurring scheduled payments tied to that card are allowed to continue. Account holders can use Freeze It to temporarily stop an authorized cardholder from making new purchases or to prevent unauthorized activity if a card is lost or stolen. In addition to providing customers with an added security feature, Freeze It promotes customer self-servicing.

TECHNOLOGY USED: Functionality was implemented in native applications on the Android and iOS platforms connecting across the internet via secure, custom RESTful services. Technologies used include Java, Objective-C, Apache, IBM WebSphere tools, and Oracle

THINKSTOCK

and Akamai systems.

GOAL: To offer new features to card holders and thereby improve customer engagement and satisfaction, which in turn could lead to an increase in the number of credit card applications and new accounts.

RESULTS: An increase in credit card applications and new accounts, and better customer engagement, with 72% of customers using the mobile app or website to manage their accounts. An average of 50,000 unique customers use Freeze It monthly, and more than 80% of surveyed customers say Freeze It is a differentiating benefit.

Discover account holders can use Freeze It to prevent unauthorized activity if a card is lost or stolen.

Intercontinental Hotels Group (IHG)

IHG BUILT A TRANSLATOR APP THAT SUPPORTS MORE THAN 13 LANGUAGES AND OFFERS TRAVELERS AUDIO LESSONS, CULTURAL CRASH COURSES, A CURRENCY TRANSLATOR, A TIP TOOL AND A WI-FI DIALER

PROJECT: The IHG Translator App gives travelers access to on-demand translations anywhere in the world, helping them deal with common travel frustrations such as language barriers and currency exchange questions. The app is also designed to assist users as they prepare for trips and help them experience the local culture more fully when they reach their destination. It supports more than 13 languages and offers features such two-way instant voice translation, the ability to type in phrases for translation, access to a live transla-

Above: IHG IT staffers Vinay Thomas, Doug Knudsen, Jeff Lett and Bill Laing.

tor for a fee, a key-phrase library with flash card learning modules and audio lessons, cultural crash courses and a quiz feature for learning about new places, a currency translator, a tip recommendation tool and a Wi-Fi dialer for placing calls via Wi-Fi. The app lets users learn and speak a region's language in formal, casual or slang style — a feature that differentiates it from many other translation tools. Furthermore, it offers exclusive content for IHG Rewards Club Members. IHG Translator was launched in November 2014, and a version for the Apple Watch was introduced in March 2015.

TECHNOLOGY USED: TripLingo

GOAL: To help IHG customers experience destinations as locals do and make the most of their travels.

RESULTS: In the year after its November 2014 launch, IHG Translator had approximately 32,000 iOS downloads and nearly 9,500 Android downloads. It has been downloaded in more than 10 countries.

BERNARD SPRAGG

Hilton Worldwide

HOTEL GUESTS CAN BROWSE FOR NEARBY RESTAURANTS AND NIGHTLIFE SPOTS USING A TOOL IN THE HHONORS APP THAT RATES VENUES BASED ON THEIR POPULARITY AMONG UBER RIDERS

PROJECT: Hilton partnered with Uber to expand its award-winning loyalty program app, HHonors, beyond its hotels' walls, a partnership that resulted in two new digital tools. The first offering, called Local Scene, is a digital guide hosted on the HHonors app that lets Hilton's loyalty members browse through a list of local restaurants and nightlife spots selected based on their drop-off/pick-up popularity with Uber riders. Travelers can scroll through top venues in 20 U.S. cities and opt to take an Uber to one without the need for added research or planning. Local Scene marks the first time any company has used Uber's rider drop-off/pick-up data to provide local recommendations. The second tool, Ride Reminder, is an automated reminder for Hilton guests to request Uber rides to and from hotels, with the destinations already preset.

TECHNOLOGY USED: Hilton and Uber engineers and mobile developers worked together over two months, using two key guiding principles: Innovate where it's important to customers and makes their lives easier and, second, engage the enterprise and do it fast.

GOAL: To drive usage of the new Local Scene and Ride Reminder features and the HHonors app and, by doing so, increase guest loyalty.

RESULTS: The project generated industry buzz and yielded an increase in the use of HHonors apps and features and an uptick in Uber ridership.

Intuit

A BIG DATA PLATFORM OFFERS HUGE STORES OF INFORMATION TO GIVE BUSINESSES INSIGHTS INTO CUSTOMER PURCHASES, INVENTORIES AND MORE

PROJECT: Intuit is the steward of data from 37 million customers. That stockpile includes a wealth of information from sources ranging from individual purchase histories to business inventories. Intuit Analytics Cloud (IAC) enables the company to provide small businesses with insights that were once available only to multimillion-dollar enterprises. Intuit also mines that data for insights that could lead to product improvements. The IAC is a petabyte-scale big data platform with a robust and scalable infrastructure that consists of data from Intuit products, customer experiences and third-party sources. Layered on top of the IAC are foundational services that allow company analysts, product managers and product development teams to access the data. The IAC provides an information-rich profile of customers, giving Intuit employees data for innovation and product development, and customers a more personalized experience.

Intuit's IT team, which developed the company's Intuit Analytics Cloud for small businesses.

TECHNOLOGY USED: Amazon Web Services cloud computing services, which allowed Intuit to develop, test and deploy data-driven technology quickly on virtual computing services; and Cloudera, for Hadoop distributed computing tools.

GOAL: To harness the power of Intuit's vast data repository.

RESULTS: The IAC puts real-time insights and indicators that predict future customer behavior into the hands of employees. The data is also used to drive increased approval rates for small businesses seeking loans, and it provided insights that led to improvements in TurboTax that enabled 415,000 additional customers to complete their taxes without calling customer support.

The Johnson Controls IT team, which developed the company's digital marketing initiative.

Johnson Controls

BY INVESTING IN A MARKETING FIRM, THIS AUTOMOTIVE PARTS COMPANY WAS ABLE TO CREATE A DIGITAL ECOSYSTEM TO DRIVE CUSTOMERS TO ITS PRODUCTS AND INCREASE BRAND LOYALTY

PROJECT: Johnson Controls decided to disrupt the way it handles marketing and customer interaction by investing in LTH Digital Marketing. The initiative sought to differentiate the company in the Mexico market by targeting consumers buying automotive batteries. The team studied how people behave when they need to buy new car batteries and then used that research to define the digital strategy and the tools required to enable it. The team first created a digital ecosystem and then used social media and ad campaigns to drive traffic to its digital tools. The team also created a mobile app so the company could engage with customers where and when they needed help, and the team integrated channels to ensure the company could support customer interaction across phone calls, email and chat. Johnson Controls defined a web-based loyalty program to reward distributors for their use of the new tools and collected information to support data-driven decision-making.

TECHNOLOGY USED: Partnered with IT services firm ITGlass to help with setup, maintenance and support of cloud-based needs at Amazon Web Services; Avaya and Salesforce.

GOAL: To use digital technology to differentiate from other suppliers in the auto battery market, thereby driving more consumers to its products.

RESULTS: Strong usage of the new tools among customers has supported increased brand loyalty.

Jet Propulsion Laboratory

A SELF-SERVICE ANALYTICS FUNCTION ALLOWS SCIENTISTS TO ASK 'WHAT IF?' QUESTIONS AND SEARCH FOR PATTERNS IN ENORMOUS AMOUNTS OF DATA IN JUST A FEW SECONDS

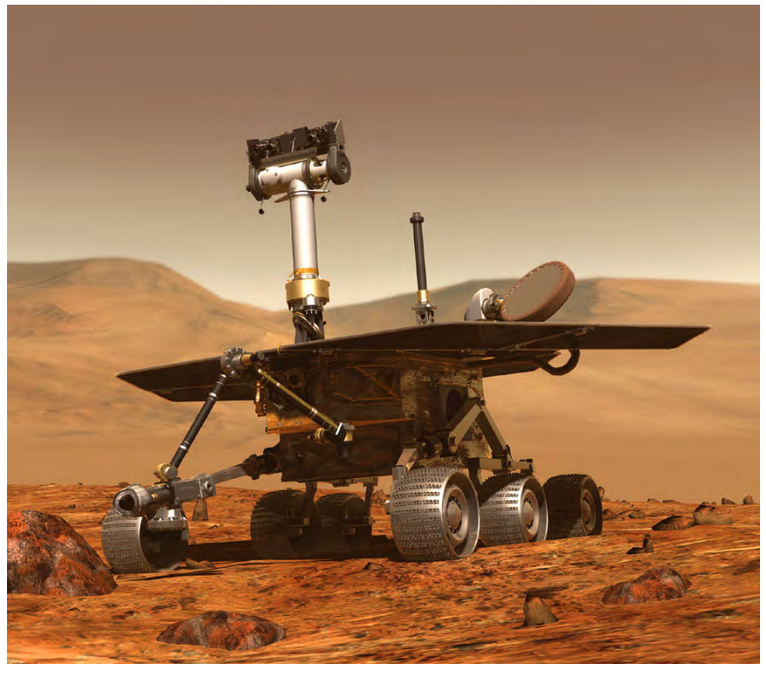
PROJECT: The IT team at JPL, a leader in robotic space exploration for NASA, developed a Rapid Search and Analytics capability to provide answers in seconds to complex questions that previously might have required months of manual research. The team provided this capability to specially trained experts as well as a wider range of users via a self-service analytics function that enabled them to interact with the data, ask "What if?" questions, and search for patterns in the data. To

do this, the IT team used software capable of searching and analyzing more than 12 billion telemetry data points, 7 million documents, 2,000 videos, thousands of PDF files, pictures and more, all within a few seconds. The team also built the system so it's capable of scaling up, as the amount of data to be collected in the next few years is expected to increase by a factor of up to 1,000.

TECHNOLOGY USED: Cloud computing in the Amazon Web Services GovCloud, public cloud and JPL's private cloud; open-source tools such as Elasticsearch; machine learning; graph databases; and intuitive graphics tools such as D3.

GOAL: To expand access to and analysis of petabytes of data.

RESULTS: Users have a fast and intuitive system to receive search results and graphical analytics capabilities within seconds of their requests; this access has delivered results whose benefits include saving a spacecraft launch from cancellation and increasing rover drive time on Mars by up to 40%.



An artist's rendering of a NASA Mars Exploration Rover.

NASA

Kaiser Permanente

VIDEO-VISIT TECHNOLOGY EMBEDDED IN THIS HEALTHCARE PROVIDER'S RECORDS SYSTEM ALLOWS PHYSICIANS TO PROVIDE CLINICAL CARE TO MEMBERS VIA VIDEO

PROJECT: Kaiser Permanente launched an integrated, enterprisewide platform for members and clinicians to conduct video visits and consultations. The technology provides another avenue for the organization's nearly 18,000 physicians to engage with and provide clinical care to members. This video-visit technology is embedded into Kaiser Permanente's electronic medical records system and fits seamlessly into the workflow of clinicians, allowing them to stay at their own workspaces when they conduct video visits. The technology is embedded into the patient portal (KP.org), and in Kaiser's flagship mobile app, and enables visits and consultations at any time from any location across all seven of the organization's regions. Clinicians access Integrated Video Visits directly from their schedules with the patient's chart open. Members can participate in video visits from a computer or a mobile device.

TECHNOLOGY USED: Vidyo for enterprise HD videoconferencing; Epic Systems developed the technology backbone for Kaiser's electronic medical records system called KP HealthConnect; My Health Manager on KP.org, which is directly connected to KP HealthConnect, giving members round-the-clock access to their health information and health management tools.

GOAL: Improved and expanded access to primary and specialty care providers and improved direction to appropriate level of care; higher patient satisfaction by saving time and travel costs; reduced costs by resolving patient needs virtually rather than expanding physical spaces; and optimization of resources by increasing potential capacity of outpatient office visits.

RESULTS: Video utilization has tripled with the addition of Integrated Video Visits on top of existing stand-alone video technologies.

Clinicians access Integrated Video Visits directly from their schedules with the patient's chart open.

Monsanto

BASIC MOBILE TECHNOLOGIES LIKE TEXT AND AUDIO MESSAGING GIVE SMALL FARMERS ACCESS TO CUSTOM ADVICE ON THEIR CROPS, WEATHER INFORMATION, MARKET PRICING AND OTHER RELEVANT INFORMATION

PROJECT: Monsanto Farm AgVisory Services sought to leverage the high levels of mobile device use in developing countries to deliver easily accessible, timely, relevant agronomic information to the small farmers who dominate agriculture in those regions. The resulting program is FarmRise – Mobile Farm Care, which now operates under the company's digital agricultural division, The Climate Corp. FarmRise – Mobile Farm Care features basic mobile technology, such as text and audio messaging, to give small farmers access to custom advice on their crops, weather information, market pricing and other relevant and actionable information. The goal is to help them be more productive, conserve their resources and increase their incomes. FarmRise – Mobile Farm Care also offers registered farmers an opportunity to receive push notifications on their cellphones on relevant topics to help them make real-time decisions around planting and harvesting. The underlying technology allows Monsanto to scale the program, expand it with new features and customize offerings based on the information needs of growers in different regions around the world.

FarmRise – Mobile Farm Care features text and audio messaging.

TECHNOLOGY USED: Content is stored in the Drupal open-source content management system; all components of the CMS are hosted on Amazon Web Services.

GOAL: To help the 500 million small farmers who work approximately 30% of the world's cultivated land access timely information that can help them increase productivity.

RESULTS: Provides small farmers with the same competitive intelligence that larger farmers in developed countries can access.

Sierra Club

AN ONLINE ENGAGEMENT PLATFORM CONNECTS PEOPLE INTERESTED IN SPECIFIC ENVIRONMENTAL ISSUES WITH STAFF AND OTHER VOLUNTEERS, DRIVING MEMBERSHIP AND INCREASING ACTIVITY

PROJECT: The Sierra Club sought to grow and diversify its audience, boost its online fundraising, create a deeper online grassroots movement across all of its campaigns and improve its business intelligence. The nonprofit also wanted to weave together its online and offline work, believing that that level of cohesion has the most potential to make change happen from the bottom up. IT produced an online engagement platform called AddUp to address those goals. AddUp is a destination for anyone who wants to take action on Sierra Club issues and get involved in the environmental group's campaigns.

National and regional campaign staff as well as volunteer-driven chapters enter campaign content into the system; content then connects in an automated way with users who have expressed interest in specific issues and/or live in specific areas.

TECHNOLOGY USED: Salesforce, which enables the organization to capture many different types of transactions, save them and create intelligence from them. Salesforce transactional data also allows the Sierra Club to create feedback for constituents on how they made a difference, a key part of the organization's vision. Blue State Digital provided development, design and strategy services.

GOAL: To leverage technology to further build momentum by plugging people into Sierra Club campaigns, connecting communities and bringing issues to the attention of changemakers.

RESULTS: AddUp has helped increase in the level of activity on issues. Within the first few months of its launch, the Sierra Club welcomed 350,000 new users who have generated more than 500,000 action items, such as petitions and letters.

JCOOKFISHER

United Breweries

INDIA'S LARGEST PRODUCER OF BEER CREATED A MOBILE FRAMEWORK THAT TRACKS KEGS THROUGHOUT THE SUPPLY CHAIN IN REAL TIME WITH RFID TAGS AND READERS

PROJECT: United Breweries, India's largest producer of beer, saw rapid growth of its draught beer business, prompting it to invest in a large number of returnable kegs. But the company faced challenges in tracking kegs as they moved between the brewery, distribution points, bars and then back to the brewery. A manual tracking system proved inadequate as volumes increased, so UBL used RFID technology to track kegs across the supply chain. With no standard products available to meet UBL's unique needs, the IT team built its own keg tracking system. IT built the software using the mobile framework and chose RFID over bar-code technology to ensure there were no scanning challenges on the ground. The team used RFID terminals that supported Global System for Mobile Communications (GSM) networks so that transactions could be uploaded to the server from the field. IT pursued a user-friendly design with a simple, intuitive interface to ensure ease of use. The team also built in offline capability through which data would be uploaded to the server periodically using a sync process; during the sync process, the required master and transaction data would also be pushed into the handheld device.

TECHNOLOGY USED: GoDB Tech built the entire software solution; TeamLiftss provided hardware components with RFID tags and RFID readers from Zebra.

GOAL: To better track beer kegs as they move through the supply chain.

RESULTS: Real-time tracking improved asset management and turnaround time of kegs in the system.

UPS

CUSTOMERS CAN CONTROL WHERE THEIR PACKAGES ARE DELIVERED THANKS TO PROPRIETARY ROUTING SOFTWARE AND THE INTEGRATION OF HUNDREDS OF APPS

PROJECT: The UPS Access Point network is a system of conveniently located independent retail locations that offer parcel pickup and drop-off services, thereby providing UPS customers with an alternative to home delivery. UPS My Choice is the company's consumer-facing delivery management and notification service. UPS Access Point and UPS My Choice were integrated to offer customers unprecedented control over their deliveries by allowing them to reroute packages to an Access Point location when they're not home for delivery. In

THINKSTOCK

addition to supporting online merchants by making delivery more convenient for consumers, UPS's new system has helped the local businesses that are part of its Access Point network by raising their profiles in their communities and driving foot traffic to them. UPS formed a cross-functional project management team to integrate the two programs, which ensured that thousands of complex modifications to more than 200 applications in various organizations were successfully made.

TECHNOLOGY USED: Proprietary routing software along with significant integration of hundreds of applications on a global scale.

GOAL: To make the delivery process more convenient for consumers, drive business for local merchants and cut operational costs.

RESULTS: Positive feedback from both consumers and business owners within the UPS Access Point network; an expansion of the UPS My Choice service to allow members to reroute packages from their home addresses to UPS Access Point locations before they go out for delivery, thereby meeting increasing demand for alternative delivery options.

MICHAEL LITTLE (BOTTOM LEFT)

The U.S. Postal Service IT team developed the Mobile Delivery Device, which includes real-time GPS data transmission.

U.S. Postal Service

A NEW HANDHELD MOBILE DEVICE OFFERS REAL-TIME DELIVERY TRACKING AND TWO-WAY COMMUNICATION BETWEEN CARRIERS AND SUPERVISORS

PROJECT: The Mobile Delivery Device (MDD), a next-generation, handheld mobile device with a Windows operating system, is revolutionizing the way the U.S. Postal Service (USPS) operates. MDD functions include real-time GPS data transmission, text- and radio-based two-way communications, and the digitization of tasks previously done by hand.

The USPS developed this technology to replace its Intelligent Mail Devices (IMD), an earlier generation of bar-code scanners. The need to replace the IMDs was urgent, because "smart" delivery is at the core of USPS services.

MMDs bring numerous capabilities, including real-time delivery tracking; two-way communication between carriers and supervisors that previously wasn't possible; and video and audio recording

capabilities. These capabilities drive improvements in areas such as route efficiency and employee training. MMD also provides a platform for future digital transformation that will help the USPS stay competitive in the modern on-demand economy.

The USPS technology team took less than 24 months to design, develop and deploy the MDDs.

TECHNOLOGY USED: Honeywell for handheld scanners and Infinite Peripherals for some of the scanning software.

GOAL: To develop a single tool that would make current operations more efficient using state-of-the-art sensors and networks; lay the framework for future growth; and bring the USPS, its customers and its employees closer together.

RESULTS: More efficient operations with the deployment of more than 260,000 MDDs, which also provide a platform to add new capabilities to drive further efficiencies and business offerings.

Verizon

Verizon IT team members Christian Flemming, Muhammed Shaphy, Nilesh Shroff, Rex Slay and Jagan Rangarajan.

A NEW MOBILE APP ALLOWS FIELD MANAGERS TO MONITOR AND COACH TECHNICIANS, PRIORITIZE JOBS AND CONFIRM THAT WORK IS COMPLETED, WITHOUT PRINTED WORK ORDERS AND PHONE CALLS

PROJECT: Verizon developed the Manager Central mobile app to give field managers a real-time geospatial view of technicians, vehicles, job commitments and network assets. The app enables field managers to monitor and coach technicians to fulfill appointment commitments, prioritize jobs on the fly, and confirm that work is completed. Before Manager Central was available, field managers relied on printed work orders and phone calls to technicians to manage workloads. Now more than 2,000 field managers across the globe use the app, which puts the information they need on their mobile devices so they can work in the field with technicians and customers.

Field managers can now proactively manage workloads, fleets and technicians from anywhere, allowing them to resolve issues before they negatively impact customers. Verizon designed Manager Central as an always-on device with real-time information flowing from other Verizon systems. A real-time dashboard relying on proprietary algorithms and predictive models provides a bird's-eye view to field managers.

TECHNOLOGY USED: The Android operating system and Android tools, Bing Maps for geospatial views, and Samsung tablets.

GOAL: To give field managers a real-time view of the field technicians so supervisors can better manage customer commitments and company assets, with an eye toward improving customer service.

RESULTS: Estimated savings of more than 48,000 hours of management time as well as more than 30,000 hours in technician time.

Western Union

A NEW MONEY-TRANSFER SYSTEM OFFERS CUSTOMERS MORE PAYMENT OPTIONS, CUSTOM LANDING PAGES AND MORE, ACCESSED FROM DESKTOP COMPUTERS, MOBILE DEVICES, KIOSKS OR IN PERSON

PROJECT: Western Union built an omnichannel system to provide a seamless experience for customers, whether they're conducting transactions from desktop computers, mobile devices or kiosks, or in a brick-and-mortar store. To do that, Western Union produced a money-transfer platform to deliver custom landing pages, A/B testing, personalization, offer management and internationalization. The platform also includes mobile apps. Western Union IT also delivered a next-generation payments platform to support consumer transactions, which account for approximately 80% of the money transfer company's overall revenue. Moreover, the company expanded payment options to offer customers more options for funding their transactions. It then focused on analytics and data management to improve its ability to build pictures of risk on individuals and transaction levels. Through the Hadoop platform, Western Union is able to support the pattern recognition and predictive modeling that allows it to personalize the user experience. These investments enable Western Union to deliver personalized services for returning customers, thereby providing them with the right currency and targeted recommendations.

REUTERS/ERIC THAYER

TECHNOLOGY USED: Hadoop, Cloudera, the Adobe Digital Marketing Suite and TIBCO tools.

GOAL: To deliver a multichannel system that provides a seamless customer experience whether the customer is transacting from a desktop computer, a mobile device or a kiosk, or in-person at a brick-and-mortar store.

RESULTS: Expansion of Western Union's core retail money transfer business and growth in new distribution channels; improved ability to respond to the rapidly changing complexity of customer behavior and preferences; a close to 30% year-over-year increase in digital business.

VMware

WITH DATA FROM THIRD PARTIES AND INTERNAL SYSTEMS, A SALES PLANNING AUTOMATION PROJECT DELIVERS MULTIDIMENSIONAL MODELING AND INSIGHTS

PROJECT: VMware faced several challenges that impeded its ability to grow, including a lack of analytics capabilities for business modeling and a lack of a global go-to-market strategy that was flexible enough to accommodate the nuances of local markets. To address those challenges, VMware undertook a sales planning automation initiative, Sagitta, aimed at building a competitive advantage through technology.

The initiative delivered multidimensional modeling capability; it also pulls in rules and data from many enter-

prise data sources, including third-party market research systems and internal systems. Sagitta allows executives to analyze business from different dimensions, including customer hierarchy/accounts, segments, product lines and new customer acquisitions.

The framework also allows for faster and more effective collaboration between sales and finance teams, with all users having a single view of the truth. Additionally, the framework contains built-in flexibility to extend global models to account for nuances in local markets, which ensures that solutions are optimized to the needs of all stakeholders and enables business flexibility.

The framework allows for faster and more effective collaboration between sales and finance teams, with all users having a single view of the truth.

TECHNOLOGY USED: Anaplan Territory and Quota Planning module; an enterprise data warehousing system, which served as the data repository for aggregating all data required for modeling in Anaplan; IBM's Operational Decision Manager.

GOAL: To establish a streamlined process and modeling capabilities to support a standard global go-to-market capability.

RESULTS: Created more accurate sales planning, which led to accurate booking commitments and revenue growth; helped improve time to market and overall business agility and operational efficiency.