

# Governments Building For Change

Achievements and Best Practices



Build  
for  
Change



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# Executive Foreword



## Be resilient today. Be stronger tomorrow.

As I write these words, in the fall of 2020, the world looks very different than it did last year. The uncertainty and disruption of the past six months have affected every aspect of our lives and work. And for government agencies, the challenges can occasionally feel almost insurmountable.

More than ever, governments need to deliver a wide portfolio of absolutely critical services. But outdated systems, inefficient processes, and disconnected channels can slow down your speed of service and make it hard to keep pace with rapid change.

That's why now is the time to modernize. It's not always easy for our sector, but the success stories in these pages prove that it can be done. **These government agencies have all upgraded their business and technology strategy to be more resilient today and stronger tomorrow.**

Here at Pega, we're incredibly proud of our outcome-driven technology and our consistent ranking as the lowest-risk, highest-value modernization solution. But we also know great technology is only one piece of the larger digital modernization puzzle. True transformation requires forward-thinking individuals who can define a shared vision, inspire teams, and remain a steady force.

I hope these leaders and their stories will inspire you to become part of your organization's modernization movement. To learn more about these successes and the people who made them possible, please email me at [douglas.averill@pega.com](mailto:douglas.averill@pega.com) or visit [pega.com/government](https://pega.com/government).

Sincerely,

A handwritten signature in dark ink, appearing to read 'D. Averill', with a stylized, flowing script.

**Douglas Averill**

Global Government Industry Markets Leader  
Pegasystems

# Government Achievements and Best Practices





A man with a beard, wearing a blue blazer over a light blue shirt, is seated at a wooden table. In front of him is a tall glass of orange juice and a ceramic cup with a white top and a green bottom. The background is a blurred indoor setting with a brick wall and a window. A dark blue circular graphic with white dots is in the top left corner, and a teal rectangular graphic is behind the title text.

# Civilian Government







# Australian Community Support Organisation

## Overview

The Australian Community Support Organisation (ACSO) is a not-for-profit serving Victoria, New South Wales and Queensland, Australia. ACSO provides a wide range of programs for people transitioning from prison back into the community, as well as those who are either in or at risk of entering the criminal justice system. The organization's goal is to reduce crime, prevent recidivism, and improve public safety by managing a full range of services – including mental health and disability programs, drug and alcohol treatment, housing, and employment services – to help its clients achieve independence. Many of ACSO's clients come to the organization directly, while others are referred through its customers, such as the criminal justice system, the Department of Health, and other government agencies.

Managing each client's case requires a complex chain of business processes. ACSO chose Pegasystems to create more effective and efficient administrative and case management programs, with greater flexibility to adapt programs as requirements change. The ultimate goal: to afford ACSO caseworkers and staff more meaningful time with clients.

**“ When we build programs with Pega, people start talking about the art of the possible – how we can offer more to our customers, our clients, and our funders. It ceases to be an IT-only discussion and becomes a business discussion. ”**

**ZORAN BRZAKOVIC**

Chief Information Officer,  
Australian Community Support Organisation (ACSO)

## Improving lives through business process transformation

Before ACSO began migrating its existing systems to the Pega Platform™, its case management processes – intake, assessments, referrals, and treatment programs for each client – were cumbersome and inefficient. Case workers and administrative staff had to pull data from disparate sources, both internal and external, sometimes cutting and pasting from emails and spreadsheets or even retyping from faxes and paper forms. Generating reports was time-consuming and complicated. Now, caseworkers can easily generate highly customized reports and case note compilations. They also have the option of a real-time, dashboard view, where at any given point in time they can view all of the interactions they've had with a given client.

ACSO has also been able to automate aspects of its assessment report process using Pega. For each client, case workers perform comprehensive assessments, consisting of more than 300 questions. In the past, the assessor would write a report based on the answers – a process that took several hours. Now, the system can use Artificial Intelligence (AI) to generate a report, which the assessor can go into and customize, adding context and details as needed. What used to be a three- or four-hour process now takes closer to one hour, freeing up the assessors for more community impact and client-facing work.

## A more flexible, collaborative, and outcome-focused development process

Using the Directly Capture Objectives (DCO) capability within Pega, ACSO operations and IT staff can rapidly design and iterate programs in collaboration – ensuring the end results meets the customer needs. Before Pega, designing applications required ongoing back and forth between operations and IT, whereas now IT can bring operations staff into the room and demonstrate the lifecycle of their programs. Operations can immediately see and understand how the program will work, and provide their feedback in real time. When program requirements change or new functionality is needed down the road, IT can easily make the necessary changes in collaboration with operations.





## The future of public safety: predictive analytics

In the future, ACSO hopes to use the Pega Platform™ to implement predictive analytics and decisioning, to help minimize the risk of recidivism for their clients. Such a program would be able to look at the variables within a given client's case – substance abuse and mental health history, criminal justice history, treatments and programs used, etc. – and then predict what the likely outcomes for him or her will be, based on outcomes for other clients with the same set of variables. The program could then recommend which services and interventions would be most beneficial for that client.

### KEY FACTS

- Report time reduced from three or four hours, down to one
- 20,000 clients served per year
- 20+ complex programs supported, including substance abuse, mental health and disability services, justice, employment and residential services, and research and advocacy
- Real-time business and IT collaboration to ensure the end result meets customer needs

# Dutch Ministry of Economic Affairs

## Overview

A shared IT service center within the Dutch Ministry of Economic Affairs, DICTU is responsible for delivering IT services to multiple public organizations within the Dutch central government, such as inspection agencies, ministries, and monitoring organizations. DICTU hosts 1,500 applications, 800 of which are customized to support primary processes. DICTU employs more than 1,300 people.

Until recently, independent organizations within the Dutch government were responsible for their own IT, supported by 40 different data centers. The result was a highly fragmented system of platforms and applications with few opportunities for sharing or avoiding duplication of applications between different ministries and the departments within them. The Dutch government wanted to change that and achieve greater cost and time efficiency. DICTU is playing a critical role in the process, with help from the Pega Government Platform™.

**“ On the new platform, if a certain process, such as licensing, works well for one customer, another customer can benefit from it. That saves time and money for the taxpayer. It's great that we can offer this kind of smart technology to our customers within the government. ”**

WIM VAN DER LINGEN  
Enterprise architect, DICTU

## The goal: A standardized solution for government

DICTU's goal was to establish a single shared case-management service for different types of unique organizations within the Ministry of Economic Affairs to support their primary processes for permits and licenses, public services, and inspections – something that had never been done before by the Dutch government.

The legacy systems in place were hard-coded and highly customized and therefore difficult to update, adapt, and upgrade in accordance with new laws, security regulations, and procedures. Meanwhile, it was next to impossible for various divisions within each agency to duplicate or share applications with each other and then tailor them as needed. Manual procedures, such as using documents, email, and spreadsheets, were commonplace.

In 2016, DICTU began searching for a cloud-based platform that would satisfy all of its requirements for developing case

management applications:

- Turnkey IT for governmental inspections and agencies
- Improved business continuity and agility
- Short time-to-market
- Ability to do more with less
- Reuse and specialization (layer cake approach)
- Improved customer satisfaction
- Compliance with strict government security best practices

Pega was a 100% match for all of the requirements. DICTU soon began using the platform to develop shared case management services for the agencies within the Dutch Ministry of Economic Affairs, beginning with Health Inspection, the Telecom Agency, State Inspection of the Mines, and the Council for the Administration of Criminal Justice and Protection of Juveniles.

## A more efficient and collaborative way of working

Moving to the new platform required a mindset shift for Ministry agencies, both in terms of how they developed their IT and the way they did their routine work. The phased approach of agile scrum methodology was new to most people, but was quickly embraced when its benefits, namely speed and improved collaboration, became clear. Likewise, employees found that the case-oriented approach of the new platform, as opposed to the task-oriented approach they'd used previously, yielded better collaboration, efficiency, accuracy, and quality of service to government customers.

## Looking ahead: Government as a Platform

Now that the implementations for the first four government ministries are complete or close to finished, DICTU will help other agencies move to the new case management platform, via its subscription-based service, RijksZaak. With DICTU's solution, the digital transformation for civil servants and government customers is well underway.

### KEY FACTS

- A single case management platform for small- and medium-sized organizations within the Dutch government
- DICTU serves 240 different locations in the Netherlands, including 14,000 work stations and 13,000 mobile devices
- Improves the quality and effectiveness of the supervisory function of government inspections
- Improves business continuity and agility and reduces costs to taxpayers
- Leads the way in digital transformation for civil servants and government customers







# The UK Health Research Authority

## Overview

In the UK, the Health Research Authority (HRA) is an arm's length body of the Department of Health and Social Care. The HRA works alongside colleagues in Northern Ireland, Scotland, and Wales to review applications for health research, with the goal of protecting and promoting the interests of patients and the public and supporting high quality research that improves health and wellbeing. The agency handles approximately 5,000-6,000 applications per year across various types of health, medical, and social care research.

HRA provides the IT infrastructure that research institutions, pharmaceutical companies, and others use to submit applications for approval to undertake research. With multiple application routes and manual processes, the application and review process can be complex and time consuming for applicants, burdensome for HRA employees, and expensive to run. HRA needed to streamline its business processes and create a simpler pathway to application review and approval to bring the potential benefits of health research to the public more quickly—a need that has become much more obvious as researchers pursue treatments and vaccines for COVID-19. HRA felt these improvements were critical to maintaining the UK's reputation as an excellent place to do research. As its IT partner, HRA chose Pegasystems.

**“ We have started the journey with Pega to deploy more efficient processes to help researchers bring their knowledge to the public faster. The COVID-19 pandemic has highlighted the importance of streamlined systems to support health research in the UK. Our journey with Pega is just beginning, and we're now looking to migrate other HRA processes to the platform. ”**

MARY CUBITT Research Systems Programmes Director, UK Health Research Authority

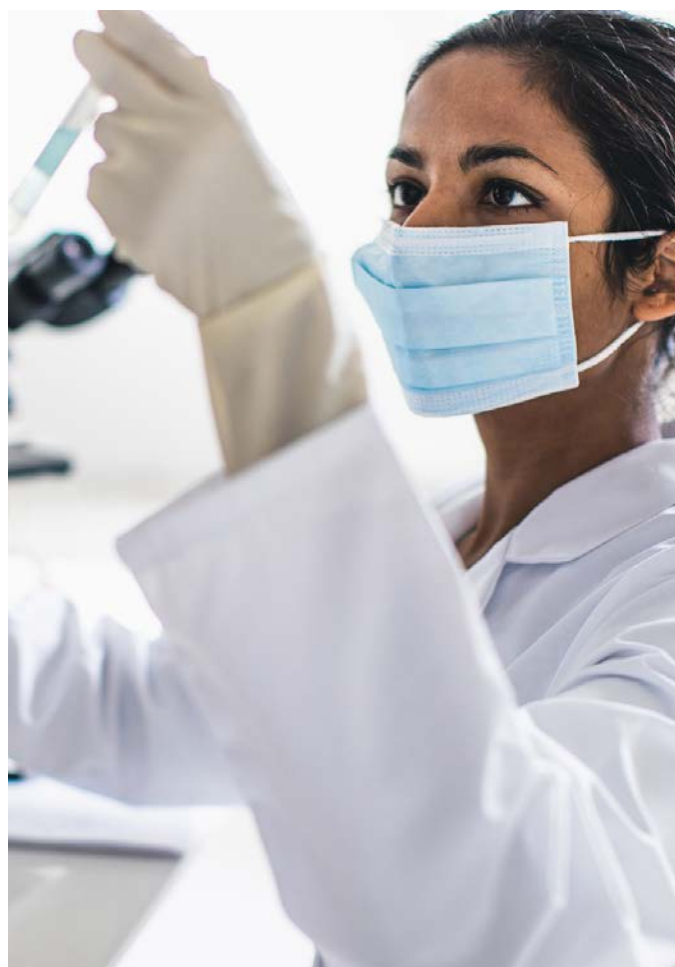
## Combining ways of working for a more streamlined application experience

HRA began its modernization efforts with a collaborative initiative with Medicines and Healthcare products Regulatory Agency (MHRA) known as the Combined Ways of Working (CWoW) pilot. The agency leveraged the Pega Government Platform™ to support a single application route and a coordinated ethics and regulatory review for clinical trials. Previously, applicants had to apply separately to multiple regulators, including both the HRA or its equivalents in Northern Ireland, Scotland, and Wales, whose focus is legal and

ethical issues and ethical review, and a second government agency, MHRA, which deals with medical considerations. With the new system, which facilitates the jointly-developed business process, applicants apply once and receive a single UK approval. As a result of the business and IT support, the application and approval process has accelerated significantly, from an average of 91 days end-to-end down to an average of 54 days. This means that researchers can commence work sooner and bring the potentially life-saving benefits of their work to the public without delay. This process is still in pilot phase with a number of applicant partners who are helping to further refine the development before it is rolled out further.

More recently, HRA added functionality allowing research applicants outside of the CWoW pilot to book a time for a study review online, rather than having to call for an appointment during business hours. This makes the process very convenient, especially in a post-COVID world, where working hours are less predictable. Staff previously tasked with telephone bookings are now free to provide more value-adding support to their applicants. Ultimately, this functionality will be used for all types of research applications that HRA handles, including those involving tissue samples and medical devices.

An additional development has released further functionality for researchers outside of the CWoW pilot to be able to submit changes to their legacy applications online. This has resulted in a more modern way to make these submissions and to reduce staff time uploading documents to legacy systems.





## The agility to iterate, adapt, and deliver rapidly

HRA wanted to be able to iterate and add new functionality incrementally while also keeping aspects of its legacy system in place for ongoing management of already-approved research, to avoid the risks of big-bang implementations and large-scale migration of data. Pega was able to meet the complexity of that challenge.

At the same time, HRA needed to be able to deliver quickly and make changes easily to accommodate variations in regulation, government policy, and process. This capability was of particular importance to HRA given the UK's imminent transition from the EU and the various process and regulatory changes that will accompany the transition. The HRA can rapidly adapt and deploy solutions, which not only saves time and money but mitigates risk.

Pega also enables HRA to deploy solutions with managed levels of access for different organizations and participants in the application process. This is critical, as there are a wide range of public and private sector players in the health research application process.

## Looking ahead: Expanding to other forms of research

HRA is continuing to develop and refine the CWoW process and in due course will gradually expand beyond the pilot group it began with to more clinical trial applicants. Research transparency is part of this refinement: HRA is making it easier for applicants to make information about their clinical trials available in the public domain, for the benefit of researchers elsewhere and as information for the public. An applicant dashboard will further enhance the application process, allowing applicants to see clearly where they are in the review and approval process and to make amendments to their submission. HRA plans to widen the use of Pega as a strategic platform, replacing the back-office case management system and related capabilities as well.

Looking ahead, HRA hopes to build upon the experience of CWoW for the other types of research they manage. This will require integrations with other government agencies and data sources. The robust reuse and specialization capabilities of the Pega platform are well suited to this task, allowing HRA to re-use and specialize functionality as needed for various processes.

HRA chose Pega in part because it had the capacity not only to address the authority's initial challenge but could, over time, be used to improve other parts of the business as well. The authority is building its IT expertise in-house and is now actively exploring other opportunities for using Pega to achieve business efficiencies and improvements.



### KEY FACTS

- Streamlined clinical trial application process to a single path, supporting shortened application and approval process from an average of 91 days to 54 days
- Added online, 24/7 booking of study review appointments
- Added functionality for online submission of amendments to legacy applications
- Plans to extend functionality to all application types, an average of 5,000-6,000 per year
- Poised for agile adaptation to any potential post EU transition regulatory changes
- Planning to leverage Pega to transform other research application and business processes



# Intellectual Property Australia

## Overview

Intellectual Property (IP) Australia is the government agency responsible for administering Australia’s IP rights system across four key divisions—trademarks, patents, industrial design, and plant breeder’s rights. The agency employs around 1,100 people to meet a growing volume of IP service requests, advises the government on legislation development, and promotes intellectual property awareness.

IP Australia is in the midst of a major business information and communications technology transformation program, known as the RIO (Rights-In-One). Partnering with Pega, the agency has transformed its case management technology from multiple legacy systems into one application to help it assess IP Rights applications faster.

In 2016, the agency designed, developed, and deployed its first Pega application, for designs. In 2018, the deployment was expanded to cover trademark business processes as well.

## IP Australia transforms operations and customer service

### Reducing approval times without compromising quality assurance

Demand for IP Australia’s services has experienced steady growth in recent years—a healthy indicator of the growing ideas economy. The agency processes approximately 850,000 customer service interactions each year, including approximately 160,000 new applications for IP rights, with nearly AUD\$210 million worth of revenue coming in through the organization.

To handle increased demand and transform the way Australians interact with IP Australia, the agency embarked on a digital transformation of its design administration and examination processes. Using the Pega platform, the agency

deployed and now maintains a streamlined digital process for application lodgement and processing. The deployment included the migration of approximately 17.5 million data records, an upgrade of front-end processing components, and the full replacement of the internal designs management system.

**“ We knew that the agility and flexibility of Pega would allow us to meet the demands of our customers moving into the future. ”**

**ROB BOLLARD**  
Chief Information Officer, IP Australia

### Part of a wider transformation program

Essential to IP Australia’s transformation was the creation of an agile development environment. Prior to implementing a range of technical solutions, including Pega, the agency could take approximately six months to roll out new functionality for its users and customers or respond to legislative changes. Now, as part of a broader program of work around continuous delivery, changes can be made and issues resolved in almost real-time.

It is within this new, agile environment that IP Australia has been able to expand its deployment to other areas. As the next step in its transformation, the agency deployed Pega Robotic Process Automation to streamline processes. Previously, staff had to access and move data across as many as seven different systems. With automation, routine data-entry tasks can be completed faster and more effectively. As a result, staff are now able to focus on the more complex parts of IP examination and administration.

Thanks in part to Pega, IP Australia has been able to migrate 500 million records from an aging Adabas Natural database on the Mainframe into RIO. One of the key drivers for undertaking digital transformation is reducing technical debt and complexity. Moving from legacy systems to a single dynamic platform has allowed IP Australia to decommission 35 systems and reduce the cost of ICT by \$1.4 million each year in annual licensing costs. Over the life of the new system, IP Australia will realize benefits of \$87 million dollars.





#### KEY FACTS

- Improved online transactions from 12% to 99.6%
- Migrated approximately 17.5 million design and 500 million trademark data records
- 160,000 new applications each year
- Sped up approval times with streamlined digital process
- Increased volume of transactions while maintaining quality assurance
- Migrated complex cases from existing systems and manual processes
- Created an agile environment where change can be effected easily and quickly
- Using Pega Robotic Automation to automate data entry tasks





# Registers of Scotland

## Overview

Registers of Scotland (RoS) is the world's oldest land registry, celebrating their 400th birthday in 2017. By providing a state-backed guarantee of ownership, RoS protects the public from fraud and financial loss, which could be caused by a lack of transparency in land transactions and land ownership. The agency is responsible for the management and administration of 18 land, property, and judicial registers.

RoS embarked on a business transformation in which Pega played a key transformative role to modernize client interactions, improve efficiency and responsiveness, and establish RoS as the default organization for register management in Scotland.

Registers of Scotland went live on the Pega Platform™ using a new case management application to replace their current paper-based systems for first registration of land ownership in Scotland. The initial solution deployment supports the default regular registration process path, with further work underway to enhance the application for exceptional registration paths and to digitize additional processes.

## Registers of Scotland improves efficiency and customer responsiveness

### The need to modernize and automate paper-based processes while complying with legislation

RoS needed to modernize existing inefficient paper-based processes for land ownership registration. The agency had to comply with the Scottish Minister's request to digitize all historic registers of land ownership, as well as enable on-line registration and conveyancing. RoS also needed to modernize to have more flexible processes, systems, and workforce to adjust to changing economic circumstances and, in particular, variations in the property market.



**“Registers of Scotland has been in existence for 400 years and has built an enviable reputation among our peers globally. With the implementation of the Pega Case Management Solution we now have an important element in our transformation to provide digital services that fully meet our customer’s expectations.”**

**CHARLES KEEGAN,**  
Registration and Transformation Director,  
Registers of Scotland

### Accelerating land registration and putting all historic paper records online

The RoS Case Management System (CMS) is a solution that accelerates the registration of land ownership in Scotland and supports migration of all land deeds to online, map-based records. The Pega solution handles the “First Registration” process, which is the initial registration of a property that is not currently registered digitally. The solution automates the creation of a registration case, including the scanning of paper documents, review, mapping, registration, quality assurance, and final return of the physical case documents to the submitting agent.

The previous paper-based process has service level agreements (SLAs) that are at 20 days for simple applications and 130 days for complex applications. Much of the processing time involved physically moving the case documents to be dealt with by various participants. The results of the initial go live case processing indicates that simple case resolution in a single day for all cases is achievable, and caseworkers are able to handle more cases than before.

### The initial release of CMS addresses four key value outcomes:

1. Digital case routing - faster movement of the work according to business rules that determine the preferred routing.
2. Digital case documents - associating scanned digital copies of the submitted documents that precludes the manual movement of the physical case documents (process acceleration) and reduces the risk of moving original paper deeds around RoS offices.
3. Improved business intelligence - enable the quantitative analysis of the workflow to identify and prioritize efficiencies.
4. Quality assurance - allow automatic sampling of work for quality assurance review and remediation of identified quality issues.

### Other areas of value include:

- Enhanced monitoring of case status. Currently cases which exceed SLA can expose RoS to reputational damage and financial penalties.
- Hands-free processing of steps that are currently done manually.
- Management of digital case documents to support archiving and reuse in the future.
- Electronically secured historic paper records to avoid risk of loss/damage and improve auditability.
- Greater ability to handle cases throughout, with reduced headcount, enabling RoS to maintain financial sustainability through a changing economic environment.
- Non-personal electronic information held has potential for sale to interested third parties and potential value add across other public sector organizations.

### The wider context and considerations

RoS recognized the need to improve the immediate issues surrounding initial land registration, but also the wider need for end-to-end digital transformation. The Pega Platform™ allowed for a phased agile approach to this transformation, with early payback with initial registration but potential to reuse solution components for exception paths. The ease of integration into the existing IT estate is key to the longer term ambitions for the wider use of the Pega enterprise platform. In addition, skills transfer and training of an internal RoS team allows them to be self-sufficient with changes to the existing solution and implementation of new ones.

#### KEY FACTS

- Oldest land registry in the world – established 400 years ago.
- Deals with roughly 400,000 land registrations a year, of which there are circa 41,000 First Registrations.
- Initial use of CMS shows the average time for processing of simple cases reduced from 17.7 days using the previous paper-based process, to 8.9 days with further potential to reduce cycle times

# Sveriges a-kassor: The Swedish Federation of Unemployment Insurance Funds

## Overview

Sveriges a-kassor, the Swedish Federation of Unemployment Insurance Funds, supports approximately 4 million members with unemployment insurance benefits. The 25 independent unemployment insurance funds, which cover citizens of employment age in Sweden, are generally organized by occupation. If a member becomes unemployed, the funds use member data and information such as occupation and salary to ensure that unemployment income is delivered as efficiently as possible. Sveriges a-kassor provides each of the 25 funds with IT system development, legal support, and a common IT infrastructure that enables secure payments.

When Sveriges a-kassor wanted to improve service to members and create a more efficient and accurate case management process, they partnered with Pegasystems. Now, the organization's various unemployment insurance funds are unified under a single, consistent IT platform that enables reuse and specialization, ensures consistency, and offers a web-based, digital experience for members and caseworkers. The robust, member-centric platform serves as the backbone of customer service, payments, the public facing portal, and case management, unifying the 25 organizations into a single source of truth.

**// With Pega, the 25 Sveriges a-kassor unemployment insurance funds can serve citizens more quickly and conveniently in a time of real need. At the same time, the system frees up caseworker time and brings ownership of system changes in house. //**

TOMAS ERIKSSON, CEO, Sveriges a-kassor

## Faster case resolution and better service for those in need

Sveriges a-kassor aims to ensure that members are able to pay their bills and support their families in a time of need. To do this, the organization needed to move from slow, paper- and phone-based processes to digital, web-based self-service, for faster case resolution. Now, instead of mailing forms, members can submit their information through an online member portal and even upload files if necessary. With the new system,

members can submit an online unemployment claim on Monday and receive payment as quickly as Thursday, whereas in the past it took weeks. Online member usage has increased from 65% to 97% since the new platform was implemented.

## Streamlined processes that rise to the demands of the COVID-19 pandemic

The COVID-19 pandemic has resulted in an increase in unemployment claims, which the new system has successfully scaled to meet. With 120,000 cases processed each Monday morning and as many as 80,000 concurrent mobile users in a four-hour time frame, caseworkers need to be able to work with maximum efficiency. With the new digitized platform, there's minimal need for caseworkers to re-enter or reformat member information, saving time and reducing the risk of error. Case managers have been able not only to meet the increase in demand; they're now available to spend more quality time with members to ensure their needs are met. Sveriges a-kassor hopes to make even more productivity gains in the future, with new analytic and reporting functionality to aid in caseload distribution and management.

## Meeting the demand for omnichannel access

Citizens today expect to interact with the government through whatever channel they choose, including smartphones, tablets, and traditional personal computers. Now, Sveriges a-kassor members can check their eligibility and process claims through any channel. The omnichannel nature of the Pega platform means that each application only needs to be designed once and will be reflected across any user interface. It's not necessary to redesign for each channel.





### A 360-degree view of the citizen

Thanks to the new platform, Sveriges a-kassor has a complete picture of the end-to-end member journey, including all interactions between members and case managers. The integration of multiple data sources means that case managers can easily determine where an unemployed member has previously worked, securely view previous salaries earned, and see what, if any, payments or assistance they're receiving from other government programs. All members' employment history is securely digitized and available in one place, making the benefit payment process quick and efficient, while protecting member privacy. The process is more transparent for members as well. They can view the delivery date of their unemployment payment in advance simply by checking online, allowing them to better plan and prepare.

### Reuse, specialization, and the agility to change

Thanks to the robust reuse capabilities of the Pega platform, the 25 Sveriges a-kassor funds can all leverage common processes and data while also accessing specialized functionality for their unique needs. For example, each fund can easily customize its portal to reflect its own brand identity and occupation-specific language. Another advantage of the new platform is that when there are regulatory or business process changes, the applications can be quickly adapted where relevant without the need to reinvent the wheel.

Meanwhile, because of the platform's intuitive user interface and consistent processes across all of the funds, minimal case-worker training is required. This reduces risk associated with worker inexperience, increases productivity, and enables better customer service.

#### KEY FACTS

- Improved scalability across 25 organizations and 4 million members
- Shortened case resolution times from weeks to minutes
- Increased online member usage from 65% to 97%
- Reduced time of unemployment payment processing to four days from initial request.
- Supports 120,000 cases processed each Monday and 80,000 concurrent mobile users in a four-hour timeframe





# U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives

## Overview

The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) is a law-enforcement and regulatory agency within the U.S. Department of Justice focused on protecting communities from violent crime. The agency is responsible for bringing to justice criminals and criminal organizations that illegally use and traffic firearms, illegally use and store explosives, commit acts of arson, bombings, and terrorism, and divert alcohol and tobacco products. ATF also has responsibility for the licensing and regulating of the firearms and explosives industries.

To support its operations, ATF had been using a suite of applications called the National Field Office Case Information System (NFOCIS). Special Agents, Industry Operations Investigators, Intelligence Specialists, and other ATF employees use these systems to enter, track, and compile diverse types of data for criminal investigations, regulatory inspections, and evidence management. In 2015, ATF launched the Spartan

Program Management Division to complete a business modernization effort and deliver a platform that would integrate the four legacy NFOCIS systems into a single, streamlined solution for processing criminal investigations and regulatory inspections. To achieve that goal, ATF chose the Pega platform.

## The need for a modern, unified case management system

The NFOCIS applications were first developed and deployed in 1998 and are, with one exception, based on a client-server architecture. Their age, infrastructure, and lack of functionality presented multiple challenges:

- Since the applications are built with custom code, making changes and updates is cumbersome and slow.
- Users had to rely on a disjointed array of methods—handwritten notes, paper forms, spreadsheets, email, etc.—for collecting, tracking, and compiling case data, often having to type and retype the same information multiple times.
- Since the applications were separate and siloed, each with different structures and interfaces, it was extremely difficult to share data between them or compile data from across the suite, hampering ATF's ability to detect, deter, and respond to criminal activity.

ATF needed to replace its outdated systems with a single, state-of-the-art system that leverages the latest web-based, mobile-capable, process-based IT tools to meet its mission requirements with greater speed, efficiency, and accuracy.

Using the Pega platform, ATF is working with Accenture Federal Services to create a unified case management system. ATF employees can enter, access, and compile data whether they are in the office or in the field. All data will be instantly accessible across the entire system rather than compartmentalized in different applications. The new system also enables process automation for both of the agency's critical mission areas, criminal investigations and regulatory inspections. Spartan offers robust mobile capabilities with support for geographic information system (GIS), offline usage, and camera.

**// We've been able to take a business-driven approach, as opposed to an IT-driven approach. We included experts from the different business areas in the ATF as part of the project team and collaborated using agile best practices to create a system that most effectively supports the needs and mission of field agents and improves public safety. //**

**A.J. FRY**

Supervisory Special Agent,  
Bureau of Alcohol, Tobacco, Firearms and Explosives



**Achieving speed and efficiency through agile methodology**

ATF is leading the way in the cultural and organizational adoption of the agile methodology in government. With the new platform, business and IT can collaborate to ensure the end solution meets the mission-critical needs of the field. As a result, the regulatory inspection application was developed with efficiency and deployed a full month ahead of schedule. In the months that followed, ATF deployed one to two updates a week—a pace of change that would have been impossible with the legacy system.

The agency has now fully deployed its regulatory inspection application, which supports uniform onsite explosives and firearms inspections. Spartan uses mapping and linking capabilities, tracks approval history, and connects and stores documentation. Through end-to-end agile scrum development, functionality can be iterated, implemented, and changed quickly as the agency's experience with the new system grows and as ATF's Special Agents' and Investigators' needs change.

Spartan is hosted in the Amazon Web Services GovCloud. On-demand scalability of the cloud enables ATF to address unanticipated needs that are triggered by major security events. It also allows ATF to rapidly deploy new releases of the software at the completion of each two-week development sprint.

**Delivering speed, accuracy, and convenience that serve justice**

ATF is using Pega to maintain its Fugitive database. This database contains a list of wanted persons and related arrest warrants that is used to support the Joint Support & Operations Center (JSOC) at ATF headquarters, who coordinate with Federal, state and local law enforcement agencies across the country when a fugitive is located. This allows ATF to confirm within minutes that there is an active warrant for the person's arrest. Errors or delays can make the difference between a criminal getting caught or getting away. Spartan provides ATF with efficiency and assurance that they can access accurate and reliable information at all times, improving the effectiveness of law enforcement coordination across the country.

ATF is now working on a new system for supporting criminal investigations. The new Criminal Enforcement application will support criminal investigations by enabling Special Agents to enter notes, photos, and other data directly into their mobile devices while in the field. Special Agents will then be able to easily assemble the data to open and generate robust investigations which can be worked on collaboratively throughout ATF.

**KEY FACTS**

- Successfully achieved the agile development process
- Deployed first application one month ahead of schedule
- Deployed one to two updates a week – a pace of change that would have been impossible with the legacy system.
- Consolidated four legacy systems into a single, modern, and unified solution for entering, accessing, and compiling data
- Empowered ATF personnel to access accurate and reliable information in real time
- Currently used by 1,000 ATF employees spanning 75 field offices







# U.S. Census Bureau

## Overview

The U.S. Census Bureau serves as the leading source of quality data about the nation's people and economy. Census data is used to inform a variety of social, economic, and political decisions, from congressional seat distribution to community planning to the distribution of more than \$675 billion in federal funds.

The Bureau uses a series of data collection methods to gather this data, including the Decennial Census of Population and Housing, which happens every 10 years. To modernize and streamline its data collection and processing operations, the U.S. Census Bureau launched the ECaSE (Enterprise Census and Surveys Enabling) project to create an integrated, enterprise solution for shared data collection and processing. The aim of the solution was to lower complexity and deliver savings for all censuses and surveys, with an initial focus on the 2020 Census.

Another modernization initiative for the 2020 Census was a new Customer Relationship Management (CRM) system for the Bureau's partner program. The CRM provided an integrated, digital communications platform for the Bureau's Community Partnership Engagement Program (CPEP) and Census National Partnership Program (NPP), both of which aimed to increase awareness and participation in the 2020 Census.

Pega played a key role in both data collection and partner program initiatives. The Bureau used the Pega Government Platform™ for its ECaSE operations, including:

- Survey Operational Control to manage and orchestrate case workloads and track the progress of response data collection across survey collection channels including web, mobile, paper submissions, and the Census telephone call centers.
- Field Operational Control that ingested all workload information across Census field operations, such as Address Canvassing and Non-Response Follow Up (NRFU), and assigned cases and distributed work orders to field workers.

- Data Collection:

- Survey Response Management to process and control survey data collected from the Census website, paper form submissions, field enumeration collection via mobile devices, and by phone through the Census' telephone call centers.
- Field Enumeration for collection through an application on the Apple iPhones used by field enumerators to perform surveys with residents that didn't respond either online, via phone, or via a paper questionnaire.
- Self Response instrument for response collection, used by Census Questionnaire Assistance (CQA) agents in the call centers to interview respondents that contacted a call center.
- Self Response case and event consolidation for all responses collected from the Census website and paper form submission along with sufficiency checks to determine cases to be enumerated.

**// Going digital with an automated system from Pega helped manage our village with more ease and efficiency than ever before. Plus, by implementing agile technology, we found ourselves very prepared for unpredictable changes and were able to pivot quickly as needed. //**

**ZACHARY SCHWARTZ**

DIVISION CHIEF, IT SERVICE MANAGEMENT OFFICE AT THE U.S. CENSUS BUREAU (GOVERNMENT CIO MEDIA & RESEARCH, SEPTEMBER 23, 2020)

**// Our response system has not had a single minute of downtime since we first invited people to respond online. //**

**STEVEN DILLINGHAM**

DIRECTOR, U.S. CENSUS BUREAU ([STATEMENT BEFORE THE HOUSE OVERSIGHT AND REFORM COMMITTEE, JULY 29, 2020](#))

## Testing the new data collection platform in the ramp-up to 2020

The 2020 Decennial Census marked a major shift from a primarily paper-based process to an automated, digital process for collecting data from every household in America. With shifts of this transformational magnitude, Census planned and conducted a series of live operational field tests to validate the technology, the operational plans, and the support of the new systems. This included the 2017 Census Test and the 2018 End to End Test.

These tests were particularly important to help the Bureau test its new mobile platform. In the 2020 Census, for the first time, enumerators were able to complete all aspects of their work on mobile devices, including receiving assignments, viewing the most efficient order for visiting each household, submitting their hours, and securely recording, encrypting, and transmitting each respondent's information. The mobile application enabled huge productivity gains: In 2010, enumerators completed 1.05 cases per hour worked, whereas in the 2018 End to End Test, they completed 1.56 cases per hour worked—a 48.57% improvement in productivity.

## Digitizing and optimizing the partner program for better participation

In the lead-up to the 2020 Census, the Census Bureau recognized a massive opportunity to use digital tools and other resources to communicate more efficiently and effectively with its partners. The partner program integrates two programs whose goals are to increase awareness and participation in the Census: the Community Partnership Engagement Program (CPEP) and the Census National Partnership Program (NPP). The CPEP includes tribal, state, and local governments, as well as community-based organizations, faith-based organizations, schools, media, businesses, social services, ethnic organizations, and others, while the NPP builds and strengthens relationships with businesses, industries, and organizations with national reach.

In the 2010 Census, many of the partner management and communication processes were highly manual and cumbersome, which proved challenging for employees and partners alike. By going digital with these efforts, the Bureau was able to efficiently communicate with its 400,000 partner organizations, sending automated alerts, reminders, and calls to action and giving them the appropriate resources to drive Census awareness and participation.



**// ...Our census takers achieved cumulatively a productivity rate of 1.92 cases or addresses per hour. This far exceeded the 1.55 projection. This was absolutely due in large part to the use of technology that was designed and deployed to the 2020 census, a major innovation over past paper-based censuses...the productivity rate of field staff in 2020 was literally nearly double that achieved during the 2010 census. //**

**TIM OLSON**

ASSOCIATE DIRECTOR FOR FIELD OPERATIONS, U.S. CENSUS BUREAU ([CENSUS.GOV](#))



// Our handhelds can tell you how long each question took to input the question. It can tell you how long the interview took. It can tell you exactly where you were standing relative to the address that you were supposed to be enumerating. It provides us with a tremendous amount of data and it provides that data in near-real-time, and so it allows us to have a very professionally refined quality review of things going on in the field. //

**AL FONTENOT**

Associate Director for Decennial Census Programs  
([Federal News Network](#), September 18, 2020)

## Exceeding expectations for data collection and partner engagement

The results of the 2020 Census were impressive, with the ECaSE system playing a pivotal role. Thanks to the real-time data and analytics on response rates that the ECaSE system supplied, the Bureau was able to accurately target low-response rate geographies and retarget to drive self-response rates. This ability to react and respond quickly was especially critical in instances where weather events, public health concerns, or other circumstances made getting survey responses challenging.

The Bureau was also able to seamlessly bridge the gap between their data collection program and partner programs: If responses were lagging in a given community or region, the Bureau could use the new CRM to quickly identify and reach out to partners in those areas, providing them with the resources they needed to increase education and awareness in their communities.

By the end of July 2020, four months after the Bureau had first invited people to respond to the Census, they had already received responses from almost 63 percent of households surveyed, with more than 92 million households counted. About 80 percent of those chose to respond using the internet. Moreover, the response system did not have a single minute of downtime. By mid-September 2020, with a full six weeks to go before the original October 31 deadline, the Census was already 90% complete. 220,000 enumerators in the field had completed more than 42 million surveys, despite months of delay due to the COVID-19 pandemic.

### KEY FACTS

- 2020 Census was the first to use a primarily digital process for data collection
- Pega software processed all responses for the 2020 Census, including via online, telephone, and paper responses in addition to the mobile app
- New data collection system was multichannel with a mobile platform for door-to-door enumerators
- New CRM platform automated communications with more than 400,000 partner organizations
- Zero system downtime
- 80% of self-responses received through internet
- 48.57% increase in enumerator productivity
- Census was 90% complete a full 6 weeks before deadline
- 400,000 unique logins supported in one weekend





# U.S. Department of Agriculture Natural Resources Conservation Service

## Overview

The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) provides America's private landowners with technical and financial assistance, including voluntary Farm Bill conservation programs that benefit both agriculture and the environment. Clients that work with NRCS through Farm Bill programs prioritize conservation and improve agricultural operations by upgrading soil productivity, improving water quality, and irrigating more efficiently. The goal of NRCS programs is to sustain farming, ranching, private forest lands, and wildlife for both current and future generations.

To improve overall customer service for private landowners receiving technical and financial assistance, including those participating in Farm Bill programs, NRCS introduced the Conservation Delivery Streamlining Initiative (CDSI) program. NRCS partnered with Pega to develop the integrated Conservation Desktop (CD) application, which implements streamlined business processes, improved information technology (IT) services, and enhanced financial management and accountability.

## A Single Interface for Delivering Conservation

Before the integrated Conservation Desktop application was created, staff at NRCS spent large amounts of time logging into disparate systems and disparate databases to provide technical and financial assistance requests from customers. The Conservation Desktop (CD) application, built using the Pega platform, unifies those legacy and disparate systems into a single, consistent interface and centralizes all the processes, workflows, and features inside one portal. This enables NRCS employees to offer options and alternatives to the private landowners faster and more accurately, and to deliver services more efficiently. The primary goal for CD is to provide a "single pane of glass" for the Field Office (FO) staff. In addition, with the help of systems integrator ASRC Federal Systems for CDSI delivery, NRCS and FPAC Business Center have adopted agile methodology to help reduce delivery risk and increase speed of delivery.

The integrated CD application provides foundational services for the FO staff, including document management, task management, and audit history throughout the lifecycle of technical and financial assistance request processing. Conservation Desktop also provides technical assistance through the creation of a science-based conservation plan, built with the creation of a geospatial map-driven process with enhanced geospatial layers and tools.

**“With the CDSI program, our Field Office (FO) staff are able to spend significantly more time in the field supporting our customers and conservation, and less time in the office working on manual, administrative work.”**

**GEORGE W. CLEEK IV**

Conservation Section Chief, Information Solutions Division,  
Farm Production and Conservation (FPAC) Business Center,  
U.S. Department of Agriculture











# U.S. Department of Agriculture Office of the Chief Financial Officer

## Overview

On May 15, 1862, President Abraham Lincoln signed legislation to establish the U.S. Department of Agriculture (USDA). Two and a half years later in his final message to Congress, Lincoln called the USDA, "The People's Department." For more than 150 years, USDA has impacted the lives of generations of Americans by providing leadership on food, agriculture, natural resources, rural development, nutrition and related issues based on public policy, the best available science, and effective management.

Today, USDA is made up of 29 agencies and offices with nearly 100,000 employees who serve the American people at more than 4,500 locations across the country and abroad. The Office of the Chief Financial Officer (OCFO) is responsible for the financial leadership of the overall USDA enterprise and manages approximately \$208 billion in assets and \$143 billion in annual spending.

Over the years, and in response to a number of executive orders, the OCFO's administrative charter evolved and it became a certified Federal Shared Service Provider for both financial and human resource (HR) management across the federal government. As such, financial, HR and payroll services are provided to customer agencies on a cost-recovery basis and are defined under service level agreements. Under the purview of the OCFO, the National Finance Center (NFC) assists other federal agencies by providing cost-effective, standardized and interoperable financial and human resource management solutions that support their strategic missions.

With the recent success of Food and Nutrition Service's \$70 billion-dollar grant program, the USDA's CFO began talks with other USDA and non-USDA agencies to leverage ezFedGrants, USDA's grants management solution. EzFedGrants is a comprehensive grants management solution, capable of administering from cradle to grave, the nearly \$100 billion of USDA loans, guarantees, and insurance that flow annually in support of American farmers and ranchers, and has been built

to scale to meet the grant requirements of additional external federal agencies. To accomplish this objective, USDA chose Pegasystems to serve as the grantee-facing, self-service portal, and core technology used to automate the many complex processes of the grants management lifecycle across many disparate organizations.

**“ezFedGrants is a holistic, modern grants management solution that allows USDA to meet its aggressive customer service, operational efficiency, visibility and compliance goals. As an example, USDA has been able to streamline the payments process using Pega integrated with SAP Financials and CRM from six to eight months on average down to just three business days.”**

**CHRIS COPPENBARGER**  
Senior Policy Advisor, USDA

## USDA holistic grants management solution improves efficiency, visibility and compliance

### Automated processes dramatically improve customer satisfaction, increase employee productivity and lower operational costs

USDA was able to capture, standardize and consolidate undocumented processes into Pega, allowing for massive operational efficiencies and cost savings with the very first go-live with the Foreign Agriculture Service (FAS). Soon after, the Food and Nutrition Service (FNS) successfully went live, processing its \$100+ billion portfolio through the ezFedGrants solution. Prior to this solution, many of the grant processes within these agencies were paper-based and could take months to transact. This inefficiency was compounded by USDA having 17 individual and autonomous grant-making organizations. USDA employees fielded high volumes of calls on a daily basis to track status of awards and payments. Time spent responding to these calls impeded employees from focusing on more important, value-add mission activities.

**BEFORE PEGA:**

- Payments required 14 human touches
- End-to-end payment processing took six to eight months on average
- Employees spent a disproportionate amount of time tracking down status of awards and payments for grant customers

**AFTER PEGA:**

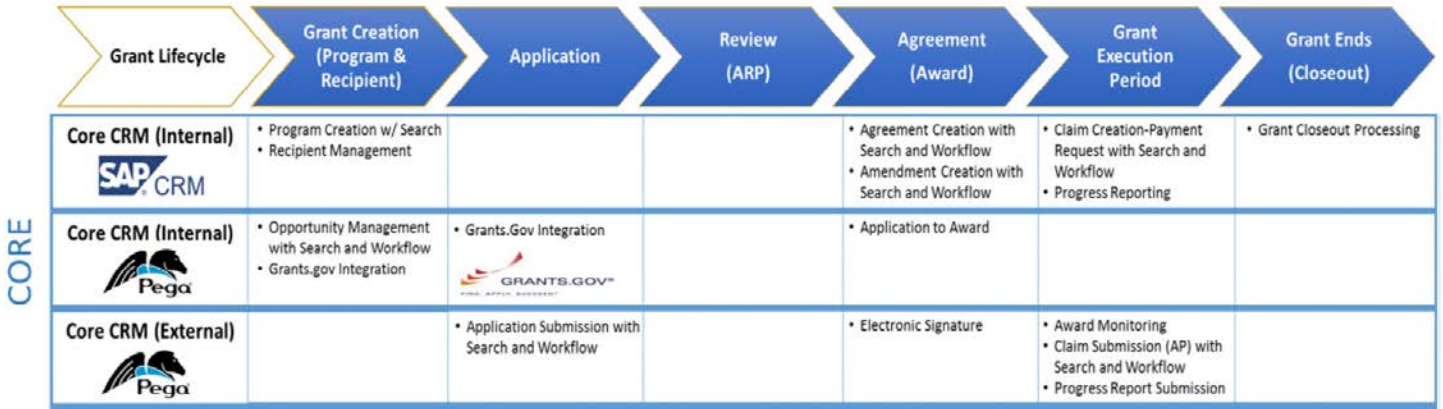
- Human touches are reduced down to a single touchpoint
- Payment processing now takes three business days, one of which is because of electronic funds transfer processing
- Customers are able to see award and payment status online through the Pega portal

Once USDA completes the rollout of its shared-service grants solution to all 17 USDA organizations, it will have one, uniform solution for grants across the department. Since the solution harnesses the USDA’s lean Six Sigma grants management process, the department is confident that 97% of its grant programs across the enterprise will be automated in ezFedGrants using Pega’s iterative, agile methodology. The cost savings from the number of systems that will no longer be needed within the individual organizations is significant. It is expected that the system will process more than \$500 billion in the next two years once external agencies begin migrating to exFedGrants.

Fully integrated solution eliminates data redundancy and enables compliance with hundreds of regulatory and statutory requirements, allowing full transparency to stakeholders

USDA selected best-of-breed technical platforms and integrated them together to form one holistic grants management solution. As a result, USDA leveraged Pega’s self-service portal to interface with external users and standardized many disparate grant program processes across the department using Pega’s robust intelligent business process management capability. The Pega solution is integrated with SAP CRM to manage transactional contracts and SAP Financials to meet its federal financial management and reporting requirements. Grants are now reconciled to the financials throughout the program lifecycle as automated alerts communicate discrepancies to external organizations and allow for reconciliation to the general ledger which is the single source of truth. Additionally, the solution captures the agreement terms and conditions, makes certain that checks and balances are in place and an audit trail exists to prove separation of duties.

Many other integrations exist including Grants.gov and USAspending.gov, which allow for ease of posting opportunities and enable maximum transparency to the taxpayer. Additionally, ezFedGrants is integrated to the United States’ System for Award Management (SAM) vendor registration solution, allowing the USDA to track important metrics such as vendor type and status, as well as manage to the Department of Treasury’s, “Do Not Pay Effort.” This holistic solution allows the USDA to manage grants throughout the entire lifecycle—from initial request for proposal to close out. Solution functionality allows the USDA to accommodate scope changes, reimbursements, awards through standard payments, advances, or electronic draw payments. Complex workflows allow for the USDA to follow the many federal, department, agency, and program regulatory requirements, while allowing both internal and external stakeholders full visibility into the status of its transactions. Easily configured dashboards give the USDA management team a 360-degree view of its programs in real time, allowing for greater operational efficiencies, as well as the ability to decrease potential fraud through improved visibility, tracking, and transparency. Moreover, stakeholders’ user acceptance and confidence in the accuracy of the data has increased exponentially since the single, integrated solution eliminates data redundancy and inefficiencies.



The Pega solution is integrated with SAP CRM to manage transactional contracts and SAP Financials to meet its federal financial management and reporting requirements.





### Agile solution is built to reuse components and scale

Standardizing to one integrated solution that allows for reuse of processes is projected to save USDA millions of dollars. Since the capabilities of the ezFedGrants have built off of one code base, derived from a single model development paradigm, the solution will continue to meet unique or changing grant requirements while meeting compliance objectives. Employees can focus on their mission instead of being overwhelmed with administrative minutia while meeting the rising expectations of their customers. In short, USDA can rest assured it has a robust, sustainable solution for the future.

#### KEY FACTS

- Enables the USDA to meet its mission more efficiently
- Improves service delivery and customer satisfaction
- Enables and improves employee productivity, while lowering the cost of managing grants
- Meets federal, department, agency, and program compliance requirements
- Improved accountability and transparency

# U.S. Department of the Treasury

## Overview

The U.S. Department of the Treasury is responsible for promoting economic prosperity and ensuring United States financial security. Within Treasury, the Bureau of the Fiscal Service supports the department's mission through exceptional accounting, financing, collections, payments, and shared services. To manage the post-payment lifecycle of all Automated Clearing House (ACH), FEDWIRE, and government checks paid out by U.S. agencies, the bureau used five legacy applications and multiple disparate processes. These systems maintain seven years' worth of government payment data, including seven billion records. In 2013, the Bureau of the Fiscal Service - a consolidation of the Financial Management Service and the Bureau of the Public Debt - partnered with Pegasystems to help Treasury further modernize, streamline accounting, and improve customer service.

## Ensuring federal government payments are secure, accurate and on time

To improve payment accuracy, customer service to U.S. agencies, and streamline accounting functions, the U.S. Department of the Treasury Bureau of the Fiscal Service began implementing a robust Post-Payment System (PPS) modernization project. This PPS was intended to be the foundation for accounting for all payment activity and facilitate the management of the nearly 1 million cases where payments have gone awry.

The scope of the modernization was to expand its legacy application functionality and provide web-enabled access for users to see payment information, ask questions, make stop-payment requests and view scanned images of cashed checks. As a result of the project, the bureau will have consolidated all post-payment life cycle management (electronic and checks) into a single digital system, making it easier for employees to support payment questions and special requests. With PPS, the U.S. Treasury sought to better manage exceptions, close gaps in the payment process, and improve customer service. One additional bit of good news for U.S. taxpayers is that this will reduce system operating costs by \$10 million per year.

## Complying with strict security requirements

To better prioritize and manage mission-critical cases at the U.S. Treasury, the department chose to implement the PPS system on Pega, an automated, agile platform to help manage 2 billion payments annually. Treasury cases contain confidential financial information that require high levels of security, and Pega's automation and security capabilities ensure adherence to strict federal government security requirements. Additional security features implemented include confidential desktop

scanning, secure document management, and a secure portal for financial institutions to view and take action on a variety of Federal Automated Clearing House (ACH) exceptions. ACH is an electronic network for financial transactions in the U.S. used to process credit and debit transactions in batches.

## More accurate payments and better transparency

To ensure the accuracy of government payments, Treasury turned to Pega to manage the agency's check and reclamation exception processing. As a result, Treasury implemented an electronic check reclamation process, helping ensure payment accuracy as well as providing a mechanism to quickly identify and remediate incorrect payments. As a result of the new electronic process, the Treasury Department could better focus resources on high-priority mission objectives.

## Meaningful benefits in multiple areas

PPS went live with three releases enhancing capabilities for returned payments and the handling of complex cases with multiple payee IDs.

The system enabled:

- The reduction of 1 million pieces of paper used as documentation
- Enhanced communications both internally and with other agencies and financial institutions
- The modernization of processes for ACH and check returns, and the handling of non-receipt claims
- Reliable data in a single system of record for all post payment activities
- Simplified reporting, cash management and reconciliation

Ultimately, PPS aimed to provide a one-stop comprehensive post payment services for government agencies and financial institutions and once fully deployed, will support a wide variety of use cases. The full release scope of PPS intended to provide:

- Enhanced and controlled processes over the recovery of more than \$12 billion annually on behalf of the U.S. Taxpayer
- Improved payment accuracy and customer service for nearly 300 U.S. agencies
- More efficient interactions with more than 11,000 financial institutions
- Compliance with strict federal government security standards
- Enrichment of the 200,000+ payee/customer engagement experiences, annually
- Expanded detection, and identification of payment fraud and the subsequent documentation of cases, for reclaiming funds and prosecuting fraudsters





#### KEY FACTS

- Processing 1.3 billion payments and accounting for \$3 trillion annually
- Reduce system operating costs by \$10 million per year for U.S. taxpayers
- Reduction of 1 million pieces of paper
- Adherence to strict federal government security requirements
- Facilitate management of nearly 1 million special cases
- Reliable data consolidated in a single system of record
- Simplified reporting, cash management and reconciliation
- Enhanced and controlled processes over the recovery of more than \$12 billion annually on behalf of the U.S. Taxpayer
- Expanded detection, and identification and adjudication of payment fraud
- Improved payment accuracy and customer service for nearly 300 U.S. agencies
- More efficient interactions with more than 11,000 financial institutions
- Improved payment integrity, visibility, efficiency, customer service, and value to the American public

**“** As we process more than 1.3 billion payments and account for \$3 trillion annually, the U.S. Treasury's Payment Management area needed a creative solution that could handle a massive volume of secure transactions. Through the integration of modernized post-payment processes into our unique, innovative systems design, we have significantly improved payment integrity, visibility, efficiency, customer service, and the value to the American public. **”**

#### WES JOHNSON

Deputy Executive Director  
Philadelphia Financial Center





# U.S. Department of Veterans Affairs

## Overview

The U.S. Department of Veterans Affairs is responsible for administering programs to support Veterans, their families, and survivors. Second in size only to the Department of Defense, VA has more than 400,000 employees and encompasses a network of more than 2,000 medical facilities, clinics, and benefits offices nationwide. The VA and Pegasystems have partnered since 2010 to allow VA to continually improve services and ensure those who have served their country can receive the absolute best care possible.

## Saving millions of taxpayer dollars and adapting to rapidly changing invoicing needs

To ensure the most advanced medical equipment and services are available for Veteran care, the VA Financial Services Center (FSC) implemented the Invoice Payment and Processing System (IPPS) on the Pega Platform™. IPPS is a unified, online invoice certification system that VA FSC uses to process payment on behalf of medical facilities nationwide for the purchase of hospital equipment.

Previously, multiple, siloed systems were stitched together, making communication among systems slow and expensive to maintain. With IPPS, VA FSC streamlined operations, improved accuracy, and decreased invoice processing costs by 33%.

The ability of IPPS to accommodate rapid change has allowed VA to leverage the application's existing functionality and adapt it to meet the unique payment types for other areas of VA. IPPS is now the enterprise commercial payment platform serving all three administrations: The Veterans Health Administration, the Veterans Benefit Administration, and the National Cemetery Administration. It will also be the payment solution for the future VA Integrated Financial and Acquisitions Management System.

With IPPS, VA has seen:

- 66% increase in annual invoice volume, to 2 million (up from 1.2M);
- 33% increase in dollar value of payments processed, to \$21 billion (up from \$14B);
- No increase in payment processing staffing levels, despite 66% volume increase;
- Cumulative cost reduction estimated at 40%; and
- Record-setting results on performance metrics, such as late payment rates and discounts.

## Achieving digital transformation across the VA

VA chose the Pega Platform to transform processes across the agency, replacing manual and paper-based systems with digital ones, to increase efficiency, transparency, and accuracy, and to improve the customer experience.

- **VA Debt Management Center** transformed its debt collection process from a highly manual, personnel intensive operation into a viable shared-service offering. The transformation reduced overall process cycle time and allows quicker transparency into a Veteran's case information, positively impacting the customer experience.
- **VA Centralized Patient Accounting Centers** used the Pega Platform, in combination with the FSC document management system, to automate the storage and retrieval of more than 7 million historical documents and process an additional 800,000 document pages per year from their seven sites. Cycle times for document storage have decreased from days to hours, and the cost of physical storage space has been eliminated.
- **VA Office of Acquisitions and Logistics** selected the Pega Platform to transform the ratification of unauthorized commitment process VA-wide. The new platform includes enhanced user interfaces and flexible workflows to improve transparency, cycle times, and reporting.
- **VA Financial Services Center** currently has four Pega Robotic Process Automation™ (RPA) use cases in various stages of development, with expected deployment in 2020. All of these replace manual human effort and are expected to deliver up to a 50% cost reduction, a rapid return on investment.

**“ We purchased the Pega platform a decade ago and it has become the centerpiece of our digital transformation architecture. It is more relevant today than ever and I expect this trend to continue into the future. Pega has been very smart about adding the right capabilities to its product roadmap. As our organization determines its future strategic direction, it's great to know Pega already has integrated capabilities like Robotic Process Automation (RPA) and Artificial Intelligence (AI) ready to go. ”**

### CLINT LOESER, CPA

Chief Operating Officer,  
VA Financial Services Center  
U.S. Department of Veterans Affairs



ABOVE: Quantico, Va. (June 28, 2015) U.S. Navy veteran Petty Officer 3rd Class Redmond Ramos pushes off strong to run in the men's 200-meter dash. The Department of Defense Warrior Games are an adaptive sports competition for wounded, ill, and injured service members and veterans. Approximately 250 athletes, representing teams from the Army, Marine Corps, Navy, Air Force, Special Operations Command, and the British Armed Forces are competing in archery, cycling, track and field, shooting, sitting volleyball, swimming, and wheelchair basketball. (U.S. Navy photo by Ensign Joe Scannell/Released)

RIGHT: SAN DIEGO (July 16, 2011) Retired Navy Captain Dr. Wayne Lapetoda pulls a tooth from a homeless veteran during the Veterans Village of San Diego Stand Down 2011. The stand down offered more than 1,000 homeless veterans with free services such as health and dental care, substance abuse counseling, legal and employment assistance and food and clothing distribution. (U.S. Navy photo by Mass Communication Specialist 3rd Class Dominique Pineiro/Released)

## Building a better customer experience

To increase visibility into customer requests, consolidate disparate call centers, and improve the customer experience, VA FSC implemented the enterprise-level Pega Customer Service application. As of 2019, Customer Service, also known as Customer Relationship Management (CRM) has been implemented for 12 product lines and counting, including payment services and local payroll support. The CRM suite includes two customer self-service portals, the core CRM interaction portal for call center staff, and a back-office portal to enable full visibility into a customer request from start to finish.

One of the key capabilities of the CRM is the Customer Engagement Portal (CEP), which allows VA commercial vendors and medical providers to have self-service access to invoice and medical claim status and payment details online, 24/7. This new portal reduced a time-consuming manual registration process from an average of 3 minutes per request to under 30 seconds. It also is a critical first step toward converting manual faxed forms into webforms, eliminating the current fax submission process, and improving visibility for customers into the status of their requests. With this capability, FSC will leverage Robotic Process Automation (RPA) to capture data from the webform and populate it without the traditional data entry process.

In addition, FSC is now able to use customer data to understand customer needs and pain points to drive process and system improvements. The new CRM using Pega validates that services meet customers' needs, ensures FSC can quickly identify any issues, and evaluates larger trends and impacts to make long-term process improvement decisions.

### KEY FACTS

- Second largest department in the U.S. Government, with more than 400,000 employees and 2,000 medical facilities, clinics, and benefits offices nationwide.
- Invoice Payment and Processing System (IPPS) for VA Financial Services Center streamlined operations, improved accuracy, and decreased invoice processing costs by 33%.
- IPPS now the enterprise commercial payment platform serving all three administrations within VA.
- IPPS enabled:
  - 66% increase in annual invoice volume, to 2 million (up from 1.2M) with no increase in staffing;
  - 33% increase in dollar value of payments processed, to \$21 billion (up from \$14B); and
  - cumulative cost reduction estimated at 40%;
- Pega Platform being used to transform processes across VA, replacing manual and paper-based systems with digital ones.
- VA Centralized Patient Accounting Centers automated storage and retrieval of more than 7 million historical documents and processing an additional 800,000 document pages per year.
- Robotic Process Automation expected to deliver up to a 50% cost reduction.
- New CRM reduced the manual registration process from 3 minutes per request on average to less than 30 seconds.













# U.S. Federal Bureau of Investigation

## Overview

The Federal Bureau of Investigation (FBI) within the U.S. Department of Justice is an intelligence-driven and threat-focused national security organization with both intelligence and law enforcement responsibilities. Staffed by close to 35,000 agents, analysts and other professionals, the FBI works around the clock and across the globe to protect the U.S. from terrorism, espionage, cyber-attacks, and major criminal threats, and to provide its partners with services, support, training and leadership.

As part of its mission, the FBI National Instant Criminal Background Check System (NICS) helps to save lives and protect people from harm by preventing guns from falling into the wrong hands. It also ensures the timely transfer of firearms to eligible gun buyers. As part of a federal mandate, NICS is used by Federal Firearms Licensees (FFLs) to instantly determine whether a prospective buyer is eligible to buy firearms or explosives. Before ringing up the sale, FFLs check with the FBI to ensure that each individual meets all of the eligibility requirements to purchase firearms or explosives. To improve scalability and to support future changes in legislation, the FBI partnered with Accenture Federal Services, who utilized the Pega 7 case management platform to modernize the NICS program, further strengthen safety controls and adapt to changing citizen demands.

## FBI modernizes to address firearm legislation and purchase volumes

### Keeping people out of harm's way

To improve scalability and more quickly respond to future changes in legislation, the FBI has modernized NICS using the Pega 7 case management platform. The bureau replaced its legacy system to support rules-driven background checks and continued robust integration with nationwide systems of record. With more than 25 million checks performed each year, the system is expected to scale effectively to handle large numbers of background checks or sudden spikes in volume. Furthermore, the FBI now provides a unified omni-channel end-user experience through its website as well as the NICS call center.

## Responding to changing citizen demands

As the political environment fluctuates and as crises occur, the United States experiences rapid spikes in gun purchases. The FBI has responded to these changing demands by implementing a system that can handle those volumes while ensuring accuracy for all background checks. By law, a background check must be completed within three business days of the request. This requirement helps protect the Second Amendment rights of U.S. citizens while enforcing existing gun control laws. The FBI is able to meet this requirement through the use of the new system.

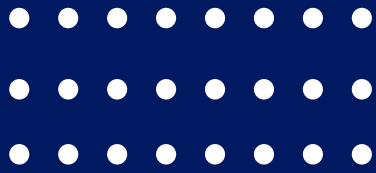
## The solution

Using Pega, the FBI created a public-facing website that is the interface for all registered firearms dealers. When an individual attempts to purchase a firearm, an authorized user is able to securely log in and quickly submit a background check request to the FBI. Using an omni-channel approach, the authorized user also has the option to pick up the phone and call the FBI NICS call center. Pega serves as the workflow engine to appropriately route requests where they need to go. If a request is denied, then it is routed to a separate system. Prior to implementing Pega, background check requests were processed manually and could potentially result in long wait times. With Pega, case routing between investigators and the contact center personnel is automated and accurate. As a result of significantly reduced call volumes to the contact center, FBI personnel will be able to process a larger number of background checks even with limited resources.

### KEY FACTS

- 25 million background checks annually
- Complex rules-driven case processing
- Quick response to changing firearms legislation
- From manual to automated processes
- Omni-channel user experience
- Adhere to the United States Constitution while enforcing gun control laws

# Defense and Intelligence



# Air Force Research Lab

## Overview

The Air Force Research Lab (AFRL) is a global technical enterprise, leading the discovery, development, and integration of warfighting technologies for U.S. air, space, and cyberspace forces. With a workforce of more than 12,000 people across nine technical directorates and 40 other operations across the globe, AFRL conducts research and development across a wide variety of scientific and technological domains.

AFRL was looking to modernize their legacy IT and improve information reuse across the organization. They began looking for a platform that would help leverage accurate and relevant data to optimize management, performance, and decision-making across the enterprise. It was important to AFRL to find a platform that would allow different units across the enterprise to easily create, share, and adapt applications and processes to fit the needs of each directorate or local conditions. After conducting extensive market research and a competitive down-select process, AFRL selected the Pega Government Platform™ for further evaluation through a competitive Other Transaction Agreement for Prototyping.

## The Challenge: Burdensome, Code-Based Tools

Since 2006, AFRL had been relying on a commercial-off-the-shelf (COTS) system that had been significantly customized over the years to enable AFRL to manage its science and technology programs. The customizations were problematic: Whenever AFRL had to upgrade the core COTS product, they had to spend significant amounts of money to put those customizations back in place. Moreover, adoption of the tool across the organization was poor as the tool didn't fit the way people worked. Most importantly, the tool was purely a data collection tool, when AFRL really needed an intelligent business process management suite (iBPMS).

Another major weakness of the AFRL's existing IT solution was it didn't enable different directorates to share applications. AFRL has IT shops in each of its directorates as well as headquarters; those shops have disparate platforms and technologies. This meant that if one directorate within the enterprise had an application that another directorate wanted to use, the application would have to be re-coded to fit their specific environment and requirements. It was costly, time consuming, and inefficient.

## A Flexible, Open Platform to Meet Both Enterprise and Local Needs

AFRL found a flexible, open solution that would meet the needs of their enterprise processes and could also be configured for the various local needs and conditions in different parts of the enterprise. The platform met four key selection criteria for AFRL: to inherit enterprise applications and be able to configure them to meet local conditions, to provide a unified design experience for developers, to optimize decision making, and to adhere to defensive cyber protection requirements.

**“Moving to the new platform will achieve better data quality as we'll have applications that fit the way people work. With better visibility, we will reduce data calls and increase the speed at which we make informed decisions to support the warfighter.”**

**Chadwick Pfoutz**

Deputy Division Chief, Enterprise Business Systems Division,  
Air Force Research Laboratory

Currently, AFRL is prototyping four different applications. The first is a task management application which can be used broadly throughout the organization. The others are for the management of science and technology programs: a planning application for POM (budget request submissions); a work unit management application that manages by cost, schedule and performance, all of which can be reported out to the Department of Defense; and a program management application. AFRL has a list of over 100 different applications currently in use – some particular to very specific units in the AFRL and others that are used in multiple units – which will ultimately be transitioned to the platform.

## Improved Data Quality for Empowered Decision-Making

The broader goal for AFRL in moving to the new platform is to improve data quality. In the legacy system, teams and leaders too often rely on spreadsheets and presentations to find the data they need, rather than looking to the system itself. With better data and, ultimately, data visualization tools and advanced reporting, leaders – whether at the division, branch or enterprise level – will have greater visibility into projects, enabling them to make more informed decisions. Meanwhile, accurate data from past research and projects will be readily available and accessible for future projects. With this advanced level of capability, agility, and reuse, AFRL is proving to be an innovator in defense IT modernization.

### KEY FACTS

- Adheres to defensive cyber protection requirements
- Inherits enterprise applications and allows for configuration to meet local conditions
- Optimizes decision making
- Improves operations and eliminates redundant costs across the enterprise
- Unified design experience for developers
- Intuitive user interface
- Scales for the AFRL workforce of 10,000 globally
- Open, flexible platform for federated development
- Ability to easily share and customize applications



# United States Marine Corps – Program and Resources (P&R)

## Overview

The U.S. Marine Corps' mission as America's expeditionary force-in-readiness since 1775 is to win the Nation's battles swiftly and aggressively in times of crisis. Marines fight on land, sea, and air, and provide forces and detachments to naval ships and ground operations.

In support of this mission, and in response to strategic imperatives from the National Defense Strategy, National Defense Business Operations Plan, Commandant's Planning Guidance, and the Department of the Navy Business Operations Plan and others, the Marine Corps is undertaking significant enterprise system modernization projects to reduce risk and increase efficiency, agility, and responsiveness. The initiative is being led by the Program and Resources Department (P&R), the principal staff agency responsible for developing, defending, and overseeing Marine Corps financial requirements, policies, and programs.

Within the P&R department is the Enterprise Business Transformation Office (EBT), which is tasked with modernizing the force, reforming business operations, and reducing business operations costs. EBT is responsible for the Business Mission Area (BMA) IT portfolio, which includes 14 functional area managers, among them Human Resources, Logistics, Financial, Acquisition, and Training and Education. The BMA's objective is to optimize the business operations portfolio such that funding can move to core warfighting missions.

## The Challenge: Improve access to data while reducing manual workarounds and cost

HQMC P&R EBT oversees the business operations across over 100 business systems and a few hundred applications. In many cases, critical data and information were getting trapped within disparate business areas, systems, and applications, limiting information sharing, obscuring risk, and creating duplicative work. The Marine Corps needed to evolve from siloed, bespoke systems and applications to a cloud-based, shared services environment that will accelerate modernization. They reached out to srcLogic, a Pega Gold Implementation Partner, who used the Pega Government Platform™ as the roadmap for their pilot plan to replace the Marine Corps' legacy systems with a cloud-based, agile, connected platform.

Changes to a defense agency enterprise architecture take time. U.S. Defense agencies must meet a number of controls to gain the Authority to Operate (ATO). In May 2018, the EBT Office began building out the new cloud architecture on a commercial cloud provider and, in April 2019, received an ATO for the base cloud layer. Over the next six months they

built platforms on top of that base cloud layer. One platform, the Pega Government Platform, provides security control inheritance for 390 of the 403 controls typically required for a moderate level application.

With the foundation in place, developers are now able to more quickly build and approve applications within weeks, not years. By sharing application management controls, rule sets, and services built on their Pega platform, EBT is able to reuse objects and components, building out application functionalities once, then implementing across other applications. For example, a function for digital signatures can easily be applied across all applications.

Shared services also make reuse possible across the organization. Capabilities can be shared across enterprises, organizations, and even other defense agencies with a Pega deployment. When an agency doesn't have to build each application from scratch, time to production is dramatically reduced.

## Starting small and acting fast

The Marine Corps has a long-term vision for transformation. By working with srcLogic on one particular application to start, EBT helped the Marine Corps successfully create an agile environment while demonstrating the long-term potential of the platform. The first application addressed MIC-P, the Managers' Internal Control Program (MICP), which provides the Marine Corps with a standardized process to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and encourage adherence to prescribed managerial policies. The MICP evaluates and reports on the effectiveness of internal controls throughout the organization to ensure effective operations, safeguard against fraud, waste, and mismanagement, and comply with laws and regulations.

Previously, complying with the MICP required hundreds of thousands of man-hours to gather and organize data from disparate sources, including Excel spreadsheets and Sharepoint. Many more man-hours were spent manually compiling reports to demonstrate compliance and explain issues not compliant with the managers' controls, then track the actions required to resolve issues and achieve a clean audit opinion. To help automate the process of tracking issue resolution and providing accurate reporting to senior

**“ The amount of time previously spent collecting information was time not being spent on the Marine Corps mission. Our system modernization has saved thousands and thousands of person-hours and related costs, ultimately allowing us to focus on the mission. ”**

**CAPTAIN ANDREW HUTCHEON,**

U.S. Marine Corps, IT Portfolio Manager, HQMC, Enterprise Business Transformation Office

*Quote sourced from: AFCEA Signal Webinar, “The Time is Now: Adopt Low-Code Automation to Make Agile Happen”, July 22, 2020.*



leadership, the Marine Corps and srcLogic developed an application called Managers Internal Controls Remediation and Reporting, MICRR.

With the new MICRR application, the Marine Corps was able to deliver a production-ready initial operating capability (IOC) in three months and full production rollout within six months, while leveraging an agile delivery methodology and using the low-code application development capabilities of the Pega Government Platform. Since initial delivery, the combination of low-code capabilities and agile delivery has enabled the Marine Corps development team to develop and deliver applications significantly faster, with new apps being built every three to four months. Plus, by using a comprehensive inheritance model for risk management framework control, the majority of application control issues are already resolved, leaving developers only a handful of controls to address.

The Marine Corps has fully embraced Agile methodology. Just as Pega provides developers with coding guardrails, Agile provides process guardrails. It provides a structure that enables flexibility but keeps a project moving quickly, successfully, and smoothly. “Organizing this work into an agile methodology has definitely paid off for our implementation,” says Captain Andrew Hutcheon, who is leading the Marine Corps’ Financial Management IT Portfolio modernization.

The ability to develop and implement applications across lines of business more quickly is a significant improvement for the Marine Corps. Another important benefit of the modernization product is the way data is collected and shared. By creating a structure for data collection and a single data environment, reporting can now be done in real time. This provides leaders with more visibility into risks as well as the ability to apply business intelligence to help identify further opportunities for improvement.

#### KEY FACTS

- Agile delivery methodology transforming manual to automated processes in months, not years
- The Marine Corps implementation of the Pega Platform operates under a Continuous ATO; speeding up the delivery of applications from years down to weeks.
- srcLogic, a Pega Gold Implementation Partner, delivered the full production version of MIC-RR in 6 months.



A woman with dark hair tied back, wearing a blue button-down shirt and a black bag, is looking down at a tablet computer she is holding. She is standing in front of a classical building with large stone columns and windows. The image has a teal and dark blue overlay on the right side with white dots.

# State Government

# California Department of Public Health

## Overview

The California Department of Public Health (CDPH) is one of the largest healthcare organizations in the U.S., serving 39 million people in the sixth largest economy in the world.<sup>1</sup> With 10 agencies employing approximately 8,000 employees, CDPH ensures the health and safety of California state residents and maintains public health-related data and statistics. CDPH provides a wide range of services, including community health monitoring, health education and outreach, healthcare facility assessments, and medical certification and licensing. The agency's programs currently issue more than 600,000 licenses annually—from environmental to food and prescription drug licenses.

CDPH implemented Pega to help streamline and integrate its licensing and monitoring services across multiple business units and services. Traditionally, obtaining a license took weeks or months – manually typing license applications into a legacy mainframe system, mailing paper applications, or processing in-person ones—slowing down state commerce. With Pega, CDPH is automating licensing practices so constituents can easily apply online and receive automated eligibility and approvals, reducing the process time from months to days.

## California improves customer experience with licensing program built for change

### Creating a more agile way forward

Pega is being used across four CDPH departments as part of an enterprise licensing program – Clinical Laboratory Professional Licensing, Electronic Laboratory Field Services, New Online Licensing Application, and the newest program, National Cannabis Licensing Services – with additional projects planned as CDPH modernizes its licensing processes department-wide.

“Processing 600,000 healthcare-related licenses annually, we needed an application that could support a large volume and be scalable across the State of California. With Pega, we have reduced manual processes and expedited the licensing process from months down to days.”

GARY NODINE

CIO, California Department of Public Health

### Responsive to changing regulations in real time

California was the first state to legalize the sale of cannabis for medical use and, as of January 1, 2018, became one of the first to issue licenses for the sale of recreational cannabis. The state needed an efficient system to address an influx of new license requests, spanning multiple license types. CDPH turned to Pega to create a technology infrastructure that reduced these typically complex, time-consuming processes to a centralized, user-friendly system that quickly and accurately determines eligibility and provides approvals. Leveraging the Pega Platform™, CDPH was able to design and implement the new system in a matter of months.

CDPH can now efficiently issue licenses and integrate with multiple data sources, departments, and other government agencies, allowing for easier background checks and ensuring public safety. CDPH is also poised to quickly add new license types, integrate with additional systems and applications – including those from outside vendors – and respond to changing regulations in real time. The system will ultimately be part of the Track and Trace system that monitors cannabis production from “seed to sale,” an important system for public health and safety.

#### KEY FACTS

- Reduced processes from months to days
- Automated and eliminated manual processes
- Improved government employee productivity
- Decreased development and deployment time
- Able to respond to changing regulations in real time



<sup>1</sup><https://www.forbes.com/places/ca/>





# Multi-State Disaster Recovery: New Orleans Deepwater Horizon Economic Claims Center

## Overview

The Deepwater Horizon oil spill in 2010 was the largest marine oil spill in history, releasing gallons of crude oil into the Gulf of Mexico and leaving businesses and citizens across a broad spectrum of industries in deep economic and ecological hardship. The resulting Deepwater Horizon Economic Claims Center (DHECC) settlement provided compensation to claimants across the Gulf South and beyond, providing relief for citizens in Louisiana, Texas, Florida, Mississippi, and Alabama as well as those impacted globally.

By 2012, hundreds of thousands of claims had been filed and the process had come under widespread criticism for lack of speed, transparency, and accuracy. In early 2012, as part of the settlement, the DHECC was created. In 2014 and 2015, the claims system was retooled using the Pega Platform to enable workflow, fraud, analytics, and reporting. Since then, DHECC has brought more than \$10 billion in claim awards to the Gulf South, resulting in unprecedented economic and ecological development.

**“The way Pega handles complexity, scale, and change was critical to the success of our systems. With 500-plus major rule changes, it was essential we have a platform that allowed us to quickly and easily make changes.”**

**CHRISTOPHER READE**

CIO, Deepwater Horizon Economic Claims Center (DHECC)

## Reinventing a claims process already in motion

DHECC was faced with formidable challenges in creating a new, more streamlined claims system: a 1,000-page settlement document, 24 claim types with multiple variations of each, and ongoing changes to rules and policies. When DHECC was created, hundreds of thousands of claims were already in process, so the new system had to handle all of the legacy claimants and claims that were part of the Gulf Coast Claims Facility (GCCF) and had to deduplicate awards already made. Finally, the system needed to integrate with more than 12 external systems, including a fraud and abuse solution, and four major vendors who had to physically review and adjudicate each claim and supporting documents as well as document their findings.

As a court-supervised settlement program, based in New Orleans, robust documentation was still required to ensure the program is meeting legal standards. The program was under significant public scrutiny as well, due to the difficulties around the claims management process.

## Building for change and seamlessly integrating multiple systems

After an extensive search, DHECC chose to partner with Pega for its new claims management system. A team of developers worked to fully customize Pega's business process management framework, integrating the workflow with fraud analytics, a complete lifecycle and ticketing system, and change control processes.

Since DHECC first began the claims process, there had been more than 500 changes to rules and policies around claims handling. Because Pega automatically updates and documents every instance where a change has an impact, with no need for manual coding, DHECC has been able to incorporate ongoing changes. The new claims system automatically maintains a complete log of what ruleset was in place at the time of each claim so that a full audit trail and justification for payment amount can be demonstrated.

The other strength for DHECC is Pega's open system integration and flexible architecture. The claims process is complex and multilayered, consisting of multiple systems, applications, and technology vendors. DHECC was able to build a system that streamlines it seamlessly on one unified platform.





### Managing claims on a massive scale

DHECC's claims system has significantly increased efficiency and reduced the time from claim submission to resolution, while complying with all legal and security requirements. On an average day, tens of thousands of users access the claims application, including thousands of attorneys, unrepresented claimants, the oil company itself, class counsel, and approximately 2,000 reviewers. DHECC has processed claims from hundreds of countries, all 50 states, and multiple industries, consisting of more than 20 million documents. The very last of more than 500,000 Deepwater Horizon claims are now being processed and are scheduled to be completed within a year.

#### KEY FACTS

- Largest class action lawsuit of all time
- 1,000-page settlement document
- More than \$10 billion paid claims
- 500+ changes made to settlement rules and policies along the way
- Tens of thousands of users accessed claims application daily throughout the claims process
- Since 2012, processed more than 500,000 claims







## New Jersey Courts

### Overview

Courts and law enforcement officers are the most visible part of the legal system. Although many legal issues and disputes will not even reach the courthouse, each year approximately 7 million new cases are filed in New Jersey's courts. In those cases, judges are called upon to decide disputes involving topics such as criminal law, motor vehicle violations, divorce, other family matters, wills, contracts, defective products and basic American rights. People set the agenda for New Jersey Courts (NJC) through these cases, and it is through these cases that the courts influence its citizens. While modernizing their legacy court case management systems, New Jersey passed revolutionary criminal justice reform legislation in November of 2014. This reform is creating a fairer criminal justice process for its citizens and improving public safety. To meet legislative mandates and transform their organization, NJC:

- Developed multiple applications with an agile approach, beginning with the Unified Complaint Entry (UCE) project
- Created Public Safety Assessment (PSA) application to assist judges with real-time decisions on a defendant's risk to society based on proven statistical models and to assess the likelihood of a defendant appearing in court
- Implemented speedy trial policy changes to increase efficiency and productivity of the justice system from arrest to trial
- Retired three legacy applications and created a unified system that streamlined complaint entry for more than 40,000 mobile law enforcement officers
- Modernized case management applications across the court systems and reused functionality to lower development cost of ongoing projects
- Developed a mobile application for pre-trial services staff to monitor and communicate with defendants prior to their trial

## New Jersey Courts leads the way in criminal justice reform

### Improving efficiency and automation for law enforcement and the courts

Approximately 2,500 municipal court staff members and 40,000 law enforcement personnel access New Jersey Courts' (NJC) applications for criminal or traffic information. To streamline the justice process for police officers and court administrators, NJC retired three legacy applications and developed a Unified Complaint Entry (UCE) system in less than nine months. The quick development time was a result of NJC's clear vision and the agility of the Pega Platform™. With UCE, all 40,000 New Jersey police officers enter complaints or tickets directly into a mobile unified complaint entry system, such as a traffic violation or arrest. The system automatically manages each case from initial entry, generates the court date for the defendant and manages the entire lifecycle of the case. The Pega Platform™ allows NJC to execute business rules, automate business processes and manage the lifecycle of a case to ensure the efficient and accurate flow of information to all judicial parties.

With pre-trial services, the return on investment is being felt immediately. NJC has successfully digitally transformed the pre-trial detention process from fingerprinting to a judge's release decision. The organization is now capturing every event, process and decision point within the Pega Platform™. From start to finish, NJC staff can now process a defendant in under 20 minutes. This process would previously take the courts three hours to complete. This includes an in-person interview, recommendation to a judge and risk assessment processing. There are 80,000 defendants to process per year, and the time savings from this process alone are significant. There are many other benefits expected from criminal justice reform, including a fairer and more objective approach to pre-trial release decisions and a significant reduction in costs to manage the State's correctional facilities.

“With 40,000 New Jersey law enforcement officers and 2,500 municipal court staff using Pega for automated end-to-end criminal justice processes, we are now able to do great things with the processing power in front of us.”

**JACK MCCARTHY**  
CIO, New Jersey Courts



## Improving citizen lives while providing judges with real-time decision support

To improve public safety and fiscal responsibility, NJC developed the Public Safety Assessment (PSA) application that assesses defendant risk. Using business rules defined by a third party and approved government policy, PSA generates a score that assesses the risk of a defendant to society based on factors such as criminal history. The PSA also provides a score to the judge that assesses the risk of the defendant failing to appear in court. These risk scores enable judges to make more informed, real-time decisions when determining the appropriate next best action for a defendant pre-trial.

## Ensuring the right to a speedy trial while reducing taxpayer costs with case management

With nine out of 10 U.S. individuals awaiting trial in jail because they cannot afford bail<sup>1</sup>, criminal justice reform helps ensure low-risk defendants are able to continue earning income for their families before trial and high-risk defendants remain in jail. It also reduces jail overcrowding and the associated taxpayer costs. A study published by pretrial.org found that pretrial incarceration costs taxpayers \$9 billion each year or anywhere from \$60 to \$200 per bed per night<sup>2</sup>. To reduce incarceration costs and increase judicial process efficiency, a defendant now must be indicted within 48 hours after arrest and a case must go to trial within 90 days. NJC is able to remain compliant and streamline the judicial process from arrest to trial using automated business processes and built-in case lifecycle management.

## Effective and efficient pre-trial monitoring

To improve pretrial appearance outcomes for both the court and defendants, NJC implemented the Pre-Trial Monitoring (PTM) application. Using electronic monitoring, pretrial services officers are able to efficiently monitor defendants released by the court and remind them of their upcoming court dates and other court orders. Case lifecycle management helps the pretrial services officer better manage a smooth pretrial process and helps defendants remain compliant with court orders.

## Municipal Automated Court System

### Simplifying case management with application reuse

Managing the lifecycle of each individual case has been made easier by centralizing the entire court system, integrating multiple systems of record and automating processes. With the Municipal Automated Court System (MACS) application, NJC now has an inventory of case management services and a framework to maximize application reuse with every new release in the future. In addition to eliminating redundant processes and systems, NJC has a unified entry system for all of its court functions, including scheduling and calendaring, charges and statutes, payment processing, bail and document management—enabling efficiency and real-time decisions.

### New jersey courts saves taxpayers \$5m through reuse

New Jersey Courts (NJC) saved \$5 million by identifying 18 common use cases and reusing those processes across all of its court systems with a unified platform. This means common processes such as scheduling and payment processing used by the municipal, criminal, probation, civil, and family courts, can be reused. As a result, the agency was able to reduce development time by 6,000 hours and save more than \$5M in development cost through application reuse and the agility of the Pega Platform™. The agency also expects to see significant savings in future maintenance costs, as the unified platform allows NJC to be flexible for change.

Keys to NJC's success include the organizations:

- Vision to transform and digitize their business
- Commitment to train over 75 staff members on the Pega 7 Platform
- Use of the agile methodology for application development

NJC continues to evolve and is well positioned to complete their digital transformation while keeping up with the pace of change in legislation and business need.

### KEY FACTS

- ~7 million new cases filed annually
- 80,000 defendants processed annually
- 40,000 New Jersey law enforcement personnel empowered with mobile complaint entry
- 89% reduction in defendant processing time—from three hours to only 20 minutes
- 87% increase in efficiency to enter a complaint
- \$5 million+ in savings from reusing functionality across the courts
- Reduced development time by 6,000 hours
- 96% reduction in cost through electronic defendant monitoring
- Developed new complaint entry application in 9 months that resulted in the retirement of 3 costly legacy applications
- Embraced agile methodology to help reduce risk and increase speed of delivery
- Trained over 75 staff members on the Pega 7 Platform while maintaining project delivery speed





# New South Wales Department of Planning, Industry and Environment

## Overview

The New South Wales Department of Planning, Industry and Environment (DPIE) provides Australia's most populous state with a wide range of services related to planning, zoning, building, and conservation. As the Department has grown in size so has the complexity of its projects, systems, and procedures. Now, with help from the Pega Platform™, the Department is transforming the way citizens, property developers, local councils, and professional bodies submit applications to, and interact with, the NSW planning system.

## The need for more streamlined processes and a better customer experience

Previously, the planning process utilized a significant number of bespoke applications across the various councils and the Department. Not only were these applications costly to run, they also demanded a high level of effort and resources to stay fully operational. Additionally there was a high reliance on a number of cumbersome paper-based systems that frequently required inconvenient face-to-face interactions.

The Department knew that it needed to make sweeping changes in order to meet legislative demands, operate more efficiently, ease the burden of the planning process for local and state government, and improve the application process for citizens. To address these issues the agency initiated a digital transformation of its planning process. The goal is to eliminate paper-based processes, improve application completion times, increase transparency, and ensure greater accountability of all stakeholders.

## A better, faster, more transparent experience for customers

The Department used the Pega Government Platform™ on Pega Cloud® to create the NSW Planning Portal, where state and local government can engage the community and industry and meet their legislated obligations from the convenience of their home or office in a 24/7 environment. The application process has been digitized and integrated into a single digital platform—a seamless alternative to what was previously a disparate range of manual processes that could only be conducted in person and during business hours.

The new system also integrates spatial information from across NSW in near real-time. The moment an applicant puts in the location of their proposed development, they get an indication of what will be required in their application process and so gain a clearer understanding of the process. This transparency of planning information also helps improve the quality of the applications lodged.

## An agile, collaborative approach for greater efficiency and flexibility

Given the organization's size and its large breadth of projects, the Department wanted to be able to take a staged, agile approach to rolling out new applications. Another consideration was how rapidly the Department and local councils would be able to make changes in response to legislative changes, user needs, and consumer feedback. Scalability, flexibility, and the ability to re-use applications were also high on the Department's list of priorities. Pega was the platform that met all of these requirements.

With Pega, local councils have been able to participate in the design and build process, enabling them to ensure that applications meet their process and workflow needs. For councils that adopt the ePlanning digital services, training can be completed in a matter of hours instead of days or weeks, and onboarding is nearly immediate.

**// With Pega, the Department of Planning, Industry and Environment was able to work efficiently together with small groups of stakeholders including councils, state agencies, and industry, to design a fully integrated digital solution. Improving the customer experience was a top priority and central to our design methodology. //**

**GINO CAVALLARO,**

Executive Director ePlanning, New South Wales  
Department of Planning, Industry and Environment



## Off to a strong start and ready for further expansion

Since its launch in December 2018, over 2,000 development applications have been submitted through the ePlanning Online DA service. Since then over 600 have been processed, demonstrating a significant reduction in completion time of over 50%.

The Department also developed an online service to facilitate state agency consultation on development applications, the Online Concurrence and Referral service, which launched in January 2019. With the new system, the average completion time has fallen from 40+ days to less than 20 days. The speed with which new applications can be implemented has enabled the Department to sustain a rapid pace of progress. When the Online DA and Concurrence and Referral services were launched, of New South Wales' 128 local councils only a handful signed up. Now there are over 50% of NSW councils using these services, with a projected 100% of councils to be using them by year end.

### KEY FACTS

- Across NSW, 100,000+ applications are submitted annually by citizens, property developers, local councils, and professional bodies
- ePlanning Portal created to centralize, streamline, and simplify application process
- Average submitted application completion time has fallen from 40+ days to less than 20 days
- Reduced application determination times of over 50%
- Better customer experience for citizens of NSW registered to use planning system









# New South Wales Transport Management Centre

## Overview

The New South Wales Transport Management Centre (NSW TMC) in Australia is the state government authority dedicated to improving the customer experience on the NSW transport network. NSW TMC controls all vehicle, rail, ferry and bus operations across 18,000 kilometers of roads and more than 5,000 bridges and tunnels. To minimize delays and provide timely and accurate information to travelers, the NSW TMC enhances transport coordination services, as well as its monitoring and management of the NSW road network. The agency partnered with Pegasystems to develop a proactive incident management system, incorporating its existing road sensor network, intelligent transportation systems, electronic message boards, and billboard signs for thousands of users.

**“ In just four months, we have already seen significant benefits from Pega and our fault management solution, including improved utilization of engineering resources and prioritization of fault handling leading to faster response times. ”**

**CHRIS RUWOLDT**

Principal Manager Transport Operations Systems,  
New South Wales (Australia) Transport Management Centre

## Improving the travel experience and reducing costs in four months

To ensure a positive experience for individuals traveling in New South Wales, the agency built the Fault Management Service (FMS), a seamless, decision-based incident management solution. FMS more efficiently tracks, manages and responds to a myriad of transport-related events. As a result of agile

methodology and Pega capability, the agency was able to deliver results in just four months.

## Managing transport activity and incidents faster

FMS enables the agency to dynamically route and resolve faults reported from more than 20,000 remote devices, including variable message and speed limit signs, traffic signals and monitoring devices. The solution enables NSW TMC staff to more quickly resolve incidents, using Pega's business rules to automate prioritization and escalation as well as facilitate dynamic process flows to technicians in the field.

## Better citizen service and reduced costs

NSW TMC improved citizen service levels as a result of more accurate communication and smoother travel, and reduced costs with more efficient operations. Through better utilization and prioritization of remediation activities, the organization evaluates and responds to events faster. As a result of the FMS program, the agency was awarded “Best Use of BPM Technology” at the annual Gartner BPM Summit 2013 in Sydney, Australia.

## Preparing for future change

Now the agency has an agile incident and case management system that enables sophisticated intelligent response. The agency chose Pega because it supports current requirements as well as provides an agile foundation for future changes within the agency and associated organizations. Over time, NSW TMC expects to continuously reduce response times as processes are further refined based on data. Specifically, the agency plans to incorporate collaborative incident management, allowing even better collaboration among support and operations personnel.

### KEY FACTS

- Go-live results in just four months
- Smoother experience for travelers in New South Wales
- Faster response to device faults
- Seamless, transparent fault management network-wide



# Queensland Department of Education

## Overview

The Department of Education in Queensland, Australia provides services to more than 800,000 school students and almost 300,000 children enrolled in early childhood services across the state. Queensland is Australia's second largest and third most populated state, and its most culturally and geographically diverse.

Each year, the Department of Education responds to complaints from parents, students, and other customers, on topics ranging from policies and procedures to departmental decisions and actions, to student resource scheme fees. In the 2017-2018 financial year the department received just under 7,000 customer complaints.

Recently, the department engaged Pegasystems to develop a new system for managing customer complaints that would allow it to more efficiently and effectively address the needs of its customers and meet its reporting and compliance obligations.

The Department of Education previously relied on spreadsheets to track and manage complaints for each business unit and significant manual effort was required for data collection and reporting. There was also limited complaint information available, which hampered the ability to efficiently review and analyze customer complaints to identify trends, issues, and opportunities for improvement.

## A seamless enterprise solution for complaint management

The Department's new Customer Complaints Management System (CCMS) provides a comprehensive, enterprise solution for collecting, storing, and analyzing customer complaints. Automated notifications and escalations within the CCMS assist with resolving complaints within required timeframes, while streamlined workflows and business processes are generating efficiencies for frontline complaints staff.

The Pega Government Platform™ (PGP) provides the Department of Education with a simple, easy-to-use interface and the ability to rapidly build and deploy applications, leveraging the platform's built-in case management framework. PGP can also be easily integrated with other systems and extended to other use cases in the future.

The CCMS provides a reliable, centralized repository for complaints data and reduces the manual effort needed to collect complaints data for reporting and analysis. The CCMS can also allow the user to capture additional information, such as complaint sub-categories at both the complaint and issue levels, and to identify trends for proactive management.

## A rapid implementation and a blueprint for the future

Using Pega's agile methodology, the Department was able to turn the project around in just four months. The CCMS provides a modern, easy-to-use system for managing complaints that can be expanded in the future.

### KEY FACTS

- Implemented in four months
- Created a reliable, centralized repository for all customer complaints
- More effective and efficient complaints management, processes, and capabilities
- Improved reporting and analysis for better decision making
- Alignment with current Australian standards for complaint management









# State of Maine

## Overview

The State of Maine serves 1.3 million residents that rely on services from the state's 14 government agencies, which employ more than 13,000 workers. The agencies offer a variety of citizen services, including transportation, unemployment benefits, health and human services, licensure and more. To further enhance its citizen-centric services, Maine partnered with Pegasystems. With the resulting IT transformation that includes a plan to consolidate disparate IT systems statewide, Maine has already experienced value by improving efficiency and citizen satisfaction.

**// You see that manual process? In 40 hours we're going to change that process for you. And that gets them so excited, because everybody has the frustration of doing the two-, the three-, the four-year project. //**

**JIM SMITH**  
CIO, State of Maine

## State of Maine plans for the future: Boost productivity and transform citizen services

To transform citizen service and improve employee productivity, the State of Maine has implemented a robust cloud solution on a unified IT platform across multiple lines of business. As a result, the state is experiencing a 90% increase in development productivity and 10% improved efficiency at the outset of the program. The solutions, deployed on Pega Cloud, are part of a business plan that will help the state reduce numerous operational silos and deploy more efficient, transparent, and agile processes among its 14 government agencies.

### Improved productivity and accuracy

Maine is eliminating paper-based citizen-service processes that often require employees to physically move papers from desk to desk. By digitizing key IT systems and processes, the state is improving productivity, cutting costs, and reducing opportunities for manual mistakes.

## Eliminate duplication, simplify customer experience

Maine's goal is to reduce costs and duplication by taking an inventory of all processes throughout the state and distilling them into a common process foundation that can be reused across its 14 agencies. By reusing components and developing applications only once, Maine will be able to create a consistent look and feel throughout all agencies, providing a more seamless citizen experience. The state will also be able to eliminate the extra development effort and reduce the cost of creating duplicate processes and applications.

## Agile, automated agencies

The state also plans to use the new, agile, automated system to allow rapid application development tailored to each agency's specific needs. To make accessing government services easier for citizens, Maine aims to eventually converge its systems into a consistent user interface requiring one user name, one user password, and one data set for any government service. This means that citizens will increasingly have a consistent experience across government services.

## Reduce process time from months to hours

Maine has found that some processes that once required 40 days to complete can now be completed in four hours, increasing agency staff productivity and greatly improving citizen satisfaction. The goal is to have the same efficiency and productivity across all processes with each agency transformation.

### KEY FACTS

- Improved work efficiency from 40 days to 4 hours
- Increased initial development productivity up to 90%
- Reduced time-to-market projected to be from years to hours
- Reduced system set-up time from months to hours





# State of California Franchise Tax Board

## Overview

The State of California (CA) Franchise Tax Board (FTB) is the second largest tax agency in the U.S. and the fifth largest economy in the world, processing more than 16 million personal income tax returns and 1 million business tax returns annually. The agency provides services and information to help taxpayers file accurate and timely state tax returns and pay the proper amount owed.

With personal income tax supplying the majority of the state's revenue for citizen services, CA FTB needed to close a tax gap between what citizens owed and what they voluntarily paid in their returns. Key to achieving this goal was the ability to quickly validate statewide tax returns against the complex and changing tax code. To accomplish this, CA FTB chose Pegasystems as the core technology to accurately validate the state's tax returns. The Pega application is part of the Enterprise Data to Revenue (EDR) Project initiative, addressing enterprise operations and system modernization.

**“ Our tax modernization resulted in efficiencies, many new citizen service options, and additional revenue in just phase one of the project. The Pega case management solution played an important role in our modernization success. ”**

**JOHN SULENTA**

Chief Information Officer, California Franchise Tax Board

## State of California improves customer service, generates \$3.7 billion for citizen services

To improve the customer experience and reduce costs, the State of California (CA) Franchise Tax Board (FTB) initiated the Enterprise Data to Revenue (EDR) project. Pega Government Platform™ was selected to be part of EDR, first to automate paper correspondence processing and then as the platform used to process personal income tax returns, handling as many as 960,000 returns per day. Between 2011-2016, as a result of improved processes and automation, EDR generated more than \$3.7 billion in additional state revenue and an additional \$1 billion annually.

Additionally, EDR provides secure self-service options for taxpayers, validates returns, and automates and standardizes manual processes. Taxpayers can even choose from correspondence delivery options, such as email, phone, text messages, or secure chat, allowing them to receive faster responses to questions—and quicker tax refunds. EDR delivers greater transparency and control as well: taxpayers can view their filed returns, payments and withholding, correspondence, and accounting details all in one place.

The application also enables CA FTB to intelligently automate the tax return process for any possible scenario, leading to faster resolutions on both tax refunds for citizens and payments to the state. For example, the system enables the agency to more easily recognize and handle abnormal filing situations, such as identification of potential fraud or if a taxpayer owes previous back taxes.



## Improving employee productivity, reducing internal costs

To save employee time spent on avoidable tax return errors, CA FTB implemented an accuracy validation system using Pega. Approximately 20% of inaccurate tax returns are a result of taxpayers failing to pay taxes, incorrect tax forms, and other exceptions. CA FTB's goal was to reduce the number of exceptions, automatically validate rules, and educate taxpayers on how to process taxes more accurately and efficiently. With the new capabilities, tax returns are analyzed and validated automatically, reducing processing costs and improving employee productivity. Prior to Pega, validation was a manual process.

## From paper-based to digital

Nearly eliminating inefficient paper-based processes, EDR automates the processing of approximately 1 million digital and paper-based tax returns. Once documents are scanned, an application on the Pega Platform™ identifies the type of correspondence and automatically routes it to the appropriate person or department, allowing for more efficient case assignment and processing of work. Previously, CA FTB used a storage room with large volumes of paper documents that were manually sorted into various categories.

## More modernization ahead

In the second phase of its Tax Systems Modernization effort, CA FTB plans to build on the successes of EDR. The focus is to build upon enterprise process improvements, increase services for taxpayers, and increase revenue for State of California citizen services. Phase two will bring all business systems into one single case management system, retiring legacy systems. This includes audit, collections, and filing enforcement systems. FTB will also continue to centralize data, automate manual processes, improve communications, and provide access to important knowledge and insights for the benefit of California taxpayers and the state.

### KEY FACTS

- \$3.7 billion generated in revenue for the State
- 16 million personal income tax returns and 1 million business tax returns processed annually
- 24,000 tax returns processed in an hour
- Up to 960,000 tax returns processed per day at peak time
- 24/7 self-service for personal income tax correspondence
- Reduced average cost to close a tax year

// Through our modernization effort, we've adopted Pega as our current case management standard for both tax and non-tax applications. //

**BRYAN RAU**

Director of Enterprise Development Bureau, California Franchise Tax Board







# Texas County & District Retirement System

## Overview

The Texas County & District Retirement System (TCDRS) helps 294,000 Texas employees plan for the future by providing retirement, disability, and survivor benefits. These individuals are employed by more than 700 counties and districts, organized by water, hospital, appraisal, emergency services and more. TCDRS helps these counties and districts compete with the private sector to hire and retain talented staff by providing competitive retirement benefits at affordable rates. The agency serves a wide range of people, from millennials to retirees, and offers a variety of services. To improve its customer experience and facilitate rapid responses to changing government and financial regulations, TCDRS partnered with Pegasystems.

**// Pega is allowing us to become more customer-centric, whether it's providing better self-service to our customers externally or providing the means to our internal users to provide better customer service. //**

**KRIS VALENTA**  
Chief Strategy Officer  
Texas County & District Retirement System

## TCDRS delivers superior omni-channel customer experience

To provide the very best customer service to Texas employees and improve efficiency, Texas County & District Retirement System (TCDRS) implemented a four-phased strategic initiative. As a result of this effort, all member requests can now be submitted online and are processed automatically or through Pega workflow. Furthermore, employers can now run cost-benefit studies in just seconds, reducing customer wait times by weeks. This is a significant impact for TCDRS which processes more than 20,000 beneficiary updates per year. TCDRS was also able to eliminate five costly systems.

### A modern, customer-centric experience

To accomplish all this, TCDRS used the Pega Customer Service application, which allowed it to modernize its services, enabling a seamless omni-channel experience for customers, as well as self-service capability. With omni-channel, TCDRS created a customer-centric model for a wide range of ages, from millennials to retirees. Additionally, the application accelerates the time it takes to get benefits to external and internal customers, ensuring employees receive their eligible retirement benefits as quickly as possible.

## Improved customer and employee productivity with self-service

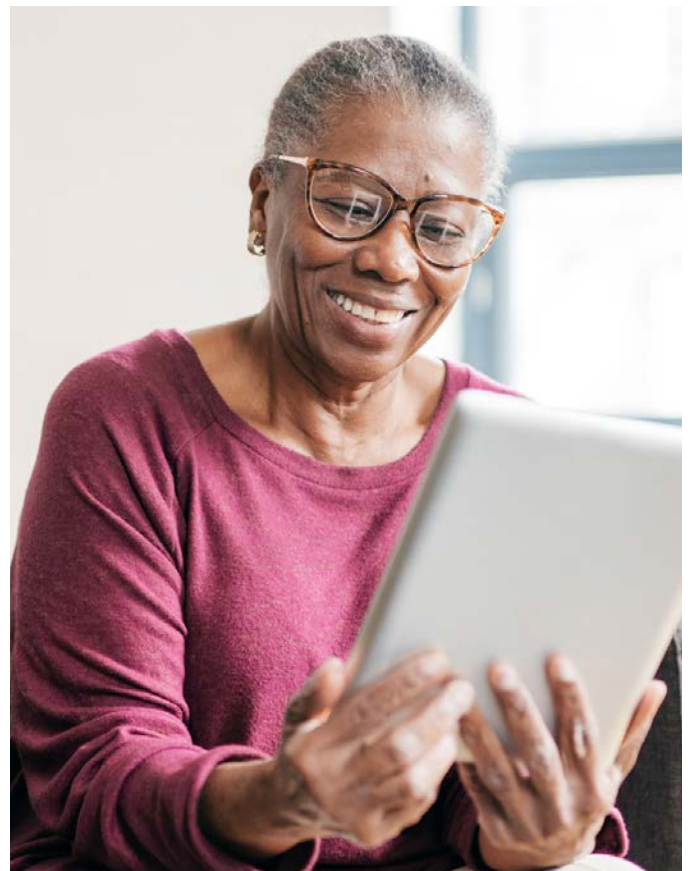
The self-service model provided by TCDRS ultimately provides better productivity and service, reducing TCDRS employee workloads and producing more efficient results for customers. Customers can access benefits on their own time, rather than only having the option during normal business hours.

## Reduced costs and redundancy through reuse

TCDRS was able to eliminate five costly systems using Pega which allows components and processes to be reused agency-wide, yet allowing for specialization where necessary. Furthermore, the application enabled TCDRS to digitize and deploy common, transparent processes with rapid, agile development.

### KEY FACTS

- 100% of beneficiary updates now conducted online
- Eliminated five costly systems
- Reduced customer wait times by weeks with ability to conduct cost-benefit studies in just seconds
- Improved customer service both externally and internally
- 294,000+ Members
- 760+ Employers







# Vermont Office of Professional Regulation

## Overview

The Vermont Office of Professional Regulation's (OPR) mission is to protect the public through effective professional licensing and enforcement. To do this, the OPR supports and administers 60,000 licenses each year, including over 200 license types, for 50 different professions in the State of Vermont, ranging from architects to physicians to tattoo artists.

For nearly ten years, the OPR was using a commercial, off-the-shelf application to manage their licensing and enforcement activities. During this time, the pace of regulatory change and the growth in new licensing responsibilities accelerated. This, together with the cost and difficulty of adapting the hard-coded, legacy application, made it nearly impossible for OPR to keep up.

The OPR realized they needed a new, modern, cloud-based platform they could easily adapt to their changing business environment. After extensive research and evaluation, the OPR determined that Pega was the only product that would meet their needs.

**“ Pega has helped us achieve our goal of creating a state licensing system that delivers unprecedented service to the citizens of Vermont while driving productivity gains and process improvement. ”**

**JIM CONDOS,**  
Vermont Secretary of State

## Automating, streamlining, and transforming every process.

Now with its processes 100% online, the OPR has successfully designed and implemented its Next Generation Licensing Platform (NGLP), which has automated and streamlined the full spectrum of OPR workflows, from license administration and renewals to regulatory compliance and enforcement.

The previous solution was limited in its ability to automate the hundreds of work processes the OPR staff used, and as a result a significant amount of work was done manually. It was slow, inefficient, and cumbersome for staff and citizens alike. The new solution completely transformed the way the OPR works.

- Processes that previously used snail mail or face-to-face meetings now happen online.
- Advanced self-service and case management capabilities expedite the licensing and approval process.
- An improved central database gives employees visibility into historical context and status of licensed professionals to ensure that licensees are providing the best service to citizens.
- Employees can log in and work on cases from anywhere, giving them greater worksite flexibility.
- A mobile version of the application is planned, which will allow applicants and employees more flexibility.

## The freedom to make changes with speed and focus

One of the key benefits for the OPR is the way Pega enables the agency to make changes, updates, and enhancements to the application as needed, whether for regulatory or operational reasons. If a workflow isn't working for the staff who use it, it can be put into the enhancement queue and addressed. In one recent example, the OPR decided to redesign the enforcement module of the NGLP. Process owners worked with the IT team to modify the application to give employees the option to link, clone, or relate separate complaints from citizens about licensed professionals. This new flexibility allows staff to investigate complaints more efficiently.



**Using new data insights to optimize staffing and earn public trust**

With the new solution, the OPR has insight into metrics and data they didn't previously, such as time to process different types of applications or complaints, number of complaints received for a given profession or individual, most common complaints, etc. This improves operational efficiency, allowing supervisors to adjust and rebalance staff workloads as needed, based on real-time metrics. The availability of data also helps the customer experience and public advocacy: OPR now provides applicants with estimated turnaround times and demonstrates the agency's efficiency to taxpayers.

The statistics have been impressive: When a new profession category, Notaries Public, was recently added, the OPR's nine staff were able to onboard and process almost 13,000 applicants in just six weeks. On another occasion, the agency had to rapidly license 3,000 nurses on an emergency basis. The average time to process a nursing application was just 45 minutes.

With Pega, local councils have been able to participate in the design and build process, enabling them to ensure that applications meet their process and workflow needs. For councils that adopt the ePlanning digital services, training can be completed in a matter of hours instead of days or weeks, and onboarding is nearly immediate.

**KEY FACTS**

- The Vermont Office of Professional Regulation (OPR) processes 60,000 licenses annually, including over 200 license types for 50 different professions
- Replaced legacy, off-the-shelf solution that was too difficult and costly to adapt and enhance as needed
- Processes are now 100% online
- New solution automates and streamlines all of the OPR's processes: administration, renewals, compliance, and enforcement
- Data transparency delivers both operational and advocacy benefits
- 13,000 applicants for notary public licenses onboarded and processed just six weeks
- 3,000 nurses licensed with an average of turnaround time of 45 minutes per license



# Pega for Government Customer Engagement

The most intelligent, agile, and complete customer engagement solution

A Pega data sheet

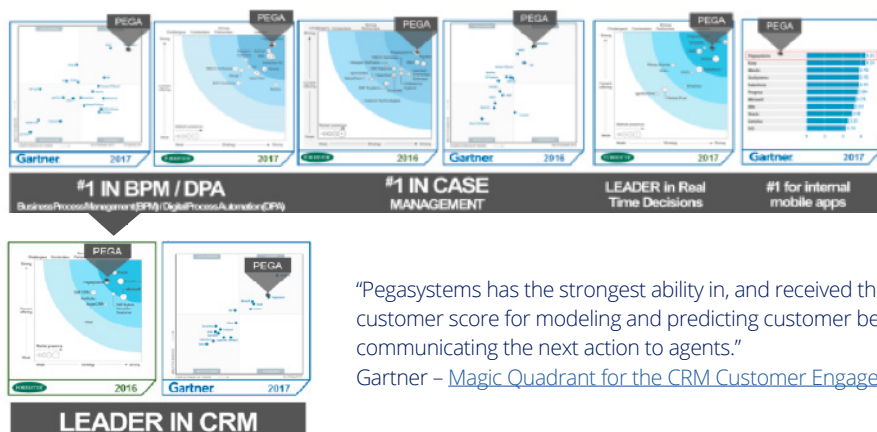
## Intelligent. Transparent. Customer-centric.

Pega helps the largest, most complex government organizations around the world achieve policy objectives and improve citizen lives. Our industry-leading strategic applications and unified platform seamlessly connect government enterprises to their constituents, in real time and across channels.

Most importantly, Pega allows organizations to efficiently and cost-effectively adapt software to meet today's rapidly changing requirements. Through a configurable, unified platform, Pega's Government Customer Engagement solution provides unparalleled agility and:

- Intelligence and relevance to every constituent interaction, with powerful knowledge and proactive outreach to keep constituents informed.
- On-premise or cloud deployment, with robust mobile and social engagement capabilities. Pega is completely portable and ready anytime, anywhere, for both constituents and government field workers.
- Visibility, accountability, and control, through rich analytics and reporting, providing public sector leadership with relevant, actionable, and real-time information.
- Operation optimization, through the automation of processes, dramatically improving performance and cost efficiencies.
- Integration with existing systems, allowing for transformation at a pace that makes sense for your government organization.

**We are number one in case management, mobile application development, business process management, real-time decision management, and digital process automation. No other vendor can make that claim.** Our unified product is considered a leader in these categories, as well as: cross channel campaign management, sales force automation, CRM customer service and support, and enterprise CRM suites. What makes Pega unique is the fact that we provide all of our capabilities on a single, unified platform.



"Pegasystems has the strongest ability in, and received the highest reference customer score for modeling and predicting customer behavior, and for communicating the next action to agents."

Gartner – [Magic Quadrant for the CRM Customer Engagement Center](#), 2017

### Challenge

Constituents and government employees expect service to be fast, easy, and right the first time – regardless of channel. Most government organizations, however, find it challenging to evolve systems or train staff fast enough to maximize value. These organizations are hindered in their modernization efforts by the cost of maintaining legacy systems across multiple silos, reduced budgets, risk avoidance, and political dissonance.

### Solution

Governments across the world leverage Pega's Customer Engagement solution to modernize legacy applications, streamline processes, and meet ever-evolving constituent expectations. Customers applaud Pega's ability to bring fast time-to-value, extremely rapid deployment, efficient reuse, and sharing of enterprise-level processes. With real-time decisioning powered by AI, agencies are improving the government experience through guided personalized next best actions using any preferred channel.



## Capabilities for seamless customer journeys

Pega's Government Customer Engagement solution provides a rich set of capabilities designed to enhance the customer experience, improve user productivity, and increase customer satisfaction. Our solution is flexible and designed to be tailored to meet the specific needs of your organization. Key capabilities include:

- **Omni-channel interactions:** Pega delivers a consistent user experience across any channel, such as desktop, mobile, chat, interactive voice response (IVR), phone, and social media. Channels are managed through model-based design, which enables you to design your application once and have it reflected on any channel or user interface.
- **Pega Intelligent Virtual Assistant™:** Pega's AI-powered virtual assistant leverages natural language processing (NLP) and text analytics to deliver personalized, intelligent engagement for self-service interactions. Every conversation, action, and contextual detail is captured and the data can be fed back into Pega's machine learning algorithms, to provide both supervised and unsupervised learning models. These improve NLP and better predict next best actions when servicing future customers with similar requirements. Further, sentiment analysis and real-time analytics enable continuous optimization.
- **Pega Social Engagement for Customer Service:** Monitor social channels to analyze constituent sentiment and respond proactively.
- **Pega Chat™:** Chat allows customer service representatives to interact with customers from your website, by engaging in a text conversation to address one or more questions. No plug-ins or downloads are required to use Pega Chat.
- **Pega Web Mashup:** Embed Pega capabilities within your existing self-service experience. Pega Web Mashup allows you to deliver a consistent customer experience and enables you to make updates to the process in a single location, without making process changes in multiple places.
- **Pega Co-Browse™:** Two or more parties can securely share the same web page with just a single click.
- **Pega Knowledge™:** Manage the complete content lifecycle, from creation to publication, to recommend relevant, timely information based on a constituent's web interactions and employees' activities.
- **Pega Robotic Automation™:** Optimize the way employees work by easily simplifying, automating, and integrating the technologies and processes on the desktop to get more work done, faster.
- **Composite view:** Consolidate relevant customer information from your legacy systems, interaction data, and customer service requests into a composite view of the customer relationship. Customer composites provide relevant account detail, interaction history across channels, open and recent customer service requests, and display it dynamically based on the customer context and current situation. Guided, intent-driven processing: Intent-driven processing guides users through every customer interaction, reducing training time and ensuring service consistency. Service processes can be specialized to the customer and circumstance, enabling personalized service for customers, but without compromising efficiency.
- **Pega Call™:** Connect the constituent management solution with telephony systems for a seamless experience.



# Pega Government Platform

Innovative legacy modernization: Low risk. No code.

## A Pega Government data sheet



## Achievable modernization with flexibility, innovation, and control

### What is Pega Government Platform™ (PGP)?

PGP is a no-code solution, allowing business and IT users to collaboratively build applications together with model-based design, ensuring the final solution meets end-user needs.

PGP uses a layered architecture that captures the complexity of your organization, allowing you to reuse common assets resulting in tremendous cost savings, while still allowing you to specialize. Only Pega provides this patented, reusable architecture, called the Situational Layer Cake.

PGP empowers agencies to:

- Improve quality and efficiency.
- Reduce risk.
- Break down organizational silos.
- Better serve citizens.
- Empower your agency to keep pace in a world of rapid change.

Traditionally, agencies and systems integrators have had two choices for modernizing government operations:

1. Custom development: Applications that are costly and time-consuming to develop and maintain. Once these custom or government-off-the shelf (GOTS) applications are actually delivered, the functionality is obsolete or does not meet business requirements.
2. Commercial, off-the-shelf (COTS): Applications that can be inflexible and inadequate, forcing government organizations to spend more for customizations that require additional delivery time and then drive up the cost of future operations and maintenance.

But now there is a more cost efficient, innovative modernization option. Pega offers a distinctly superior solution for transforming operations, consistently ranked by analysts like Gartner<sup>1</sup> and The Forrester Wave™<sup>2</sup> as a leader.

With our proven Pega Government Platform, you can model and deploy highly automated applications in a fraction of the time and cost of custom development. Plus, you're in full control of the application at all times. No need to depend on vendors or IT every time a programming modification is needed. So when policies and requirements change, you can truly be agile and respond quickly and stay up-to-date.

### Challenge

Government agencies struggle to modernize legacy systems while rapidly delivering citizen-focused services. As stewards of taxpayer dollars, these organizations are challenged with the need to be innovative and modernize, while simultaneously responding to ongoing policy changes.

### Solution

The agile, secure, unified Pega Government Platform™ (PGP) solution gives agencies a tool for transformation without having to “rip and replace” existing systems. With PGP, you can realistically phase-in your modernization strategy with minimal impact to your operations.

### Low risk, cost-effective, practical modernization

PGP supports today's legacy modernization initiatives by enabling low-risk wrap and renew options, allowing you to phase-out old code or systems in a timeframe that is realistic, mitigates risk, and improves business outcomes immediately.

### Continuous innovation

Align development projects with your agency mission from start to finish, using model-driven application development that facilitates business and IT collaboration. Pega enables your organization the flexibility required to manage its own business policies and objectives without being trapped with inflexible tools or programming languages.

### Reap the benefits of an agile approach

Keep operations running without interruption, while continuously modernizing, thanks to Pega's intelligent, adaptive technology, which empowers application delivery in quick, iterative sprints.

### Developer friendly, government ready, and faster time to value

- PGP offers your developers invaluable, easy-to-use tools to innovate, including a government-oriented data model, case types, portals, dashboards, building block accelerators, and processes that can be easily consumed through Pega Express.
- PGP, coupled with Pega Express, is a powerful capability which provides an assembly style of tools to build government applications quickly. It provides developers an easy way to build models, mock up processes, and drag-and-drop capabilities based on your business needs.
- These capabilities and solution frameworks, built for public sector customers, can help your organization accelerate solution delivery, improving overall total cost of ownership.

### Accessibility and compliance

- Pega collaborates with partners, like the Carroll Center for the Blind, to ensure PGP applications are capable of meeting international accessibility standards.
- Pega is committed to providing products that allow customers to design, build, and run secure applications. It also provides a broad range of security capabilities to prevent malicious use of, and access to, an application.
- Pega is continually engaged with independent external security consultants to evaluate the Pega® Platform for security vulnerabilities, and diligently works to help government organizations meet global privacy and data regulations.

### Connected end-to-end on any device

- PGP offers your organization the ability to seamlessly connect your front-end, customer facing technologies to your back-end legacy systems – modeling just once and deploying on channels of your choice with responsive design.
- Pre-built wizards use web services that require no configuration for quick integration with existing systems.

### Cloud-choice solution

- PGP allows you to select which architecture works for you – on premise, full-cloud on any infrastructure, or hybrid.

In today's environment, government organizations must future-proof technology and embrace innovation. In times of great change, you need low risk. Meet your mission more efficiently by modernizing and building for change with Pega Government Platform.

### According to a third party study, compared to Java, Pega is:

- 40 times faster at mobile development.
- 8 times faster at analysis and design.
- 8 times faster at introducing change.<sup>3</sup>

1. Gartner Critical Capabilities for Mobile App Development Platforms 2017; Gartner Magic Quadrant for BPM-Platform-Based Case Management Frameworks 2016; Gartner Magic Quadrant for Intelligent Business Process Management Suites 2016; Gartner Magic Quadrant for the CRM Customer Engagement Center 2017; Gartner Critical Capabilities for BPM-Platform-Based Case Management Frameworks 2016.

2. The Forrester Wave™: Digital Process Automation Software, Q3 2017; Real-Time Interaction Management, Q2 2017; The Forrester Wave™: CRM Suites For Enterprise Organizations, Q4 2016; The Forrester Wave™: Cross-Channel Campaign Management, Q2 2016; The Forrester Wave™: Customer Service Solutions For Enterprise Organizations, Q4 2015.

3. <https://www.pega.com/faster>





# A Market Leader



- Robotic Process Automation<sup>1</sup>
- Critical Capabilities for Robotic Process Automation<sup>2</sup>
- Intelligent Business Process Management Suites<sup>3</sup>
- Critical Capabilities for Intelligent Business Process Management Suites<sup>4</sup>
- Multiexperience Development Platforms<sup>5</sup>
- Critical Capabilities for Multiexperience Development Platforms<sup>6</sup>
- Enterprise Low-Code Application Platforms<sup>7</sup>
- Critical Capabilities for Enterprise Low-Code Application Platforms<sup>8</sup>
- CRM Customer Engagement Center<sup>9</sup>
- Critical Capabilities for CRM Customer Engagement Center<sup>10</sup>
- Multichannel Marketing Hubs<sup>11</sup>
- Critical Capabilities for Multichannel Marketing Hubs<sup>12</sup>
- CRM Lead Management<sup>13</sup>
- Critical Capabilities for CRM Lead Management<sup>14</sup>
- Sales Force Automation<sup>15</sup>
- Critical Capabilities for Sales Force Automation<sup>16</sup>

# Pega Certifications & Compliance

FDA CFR Title 21 Part 11

For more information, visit the Pega Trust Center on [pega.com](https://www.pega.com)

# Start your digital transformation journey with Pega

Visit [pega.com/government](https://www.pega.com/government) for more information and client success stories.

1. Gartner Magic Quadrant for Robotic Process Automation Software 2020
2. Gartner Critical Capabilities for Robotic Process Automation Software 2020
3. Gartner Magic Quadrant for Intelligent Business Process Management Suites 2019
4. Gartner Critical Capabilities for Intelligent Business Process Management Suites 2018
5. Gartner Magic Quadrant for Multiexperience Development Platforms 2020
6. Gartner Critical Capabilities for Multiexperience Development Platforms 2020
7. Gartner Magic Quadrant for Enterprise Low-Code Application Platforms 2020
8. Gartner Critical Capabilities for Enterprise Low-Code Application Platforms 2020
9. Gartner Magic Quadrant for the CRM Customer Engagement Center 2020
10. Gartner Critical Capabilities for the CRM Customer Engagement Center 2020
11. Gartner Magic Quadrant for Multichannel Marketing Hubs 2020
12. Gartner Critical Capabilities for Multichannel Marketing Hubs 2020
13. Gartner Magic Quadrant for CRM Lead Management 2020
14. Gartner Critical Capabilities for CRM Lead Management 2020
15. Gartner Magic Quadrant for Sales Force Automation 2020
16. Gartner Critical Capabilities for Sales Force Automation 2020
17. The Forrester Wave™: Real-Time Interaction Management 2020
18. The Forrester Wave™: Digital Process Automation Software 2017
19. The Forrester Wave™: Digital Decisioning Platforms 2018
20. The Forrester Wave™: Robotic Process Automation 2019
21. The Forrester Wave™: Sales Force Automation 2017
22. The Forrester Wave™: Customer Service Solutions For Enterprise Organizations 2015
23. The Forrester Wave™: CRM Suites For Enterprise Organizations 2016

# FORRESTER®

- Real-Time Interaction Management<sup>17</sup>
- Digital Process Automation<sup>18</sup>
- Digital Decisioning Platforms<sup>19</sup>
- Robotic Process Automation<sup>20</sup>
- Sales Force Automation<sup>21</sup>
- Customer Service Solutions<sup>22</sup>
- CRM Suites<sup>23</sup>

# Pega Experience:

- 321% ROI with 12-month payback period
- 75% development cost savings
- 75% improved end-user productivity
- 50% reduced time-to-market

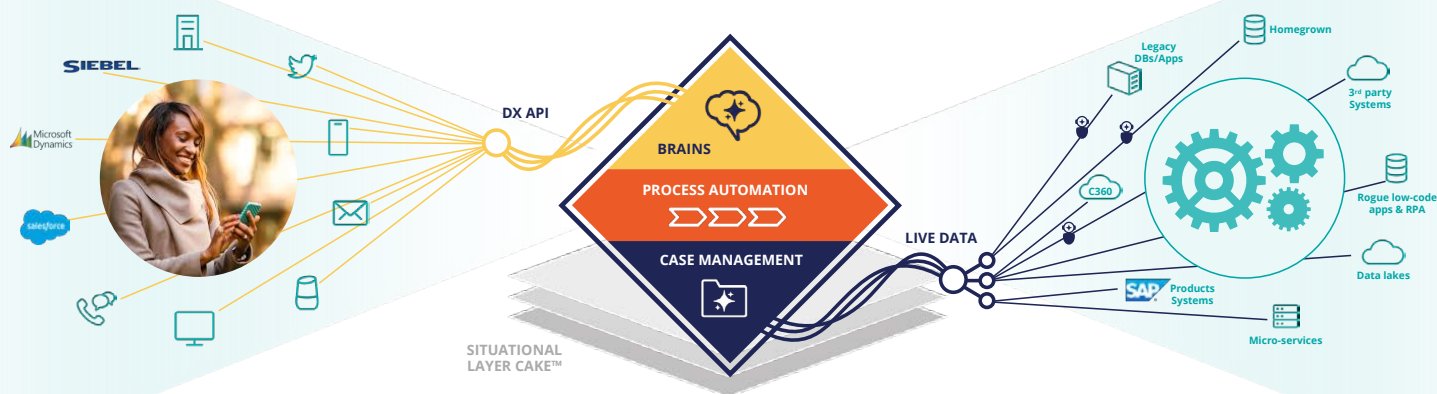
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# Pega Infinity

Revolutionary software that unifies customer engagement and digital process automation

## Center-out™ Business Architecture



### BRAINS

Augmented Intelligence that works across channels and processes

### PROCESS AUTOMATION

End-to-end automation for each customer Microjourney

### CASE MANAGEMENT

Wraps your processes, logic, data, and intelligence with context

### DX API

Provide consistent omni-channel experiences

### LIVE DATA

Insulate users and customers from back-end complexity

### SITUATIONAL LAYER CAKE

Layers manage variation, reduce complexity, and enable reuse



## About Pegasystems

Pega is the leader in cloud software for customer engagement and operational excellence. The world's most recognized and successful brands rely on Pega's AI-powered software to optimize every customer interaction on any channel while ensuring their brand promises are kept. Pega's low-code application development platform allows enterprises to quickly build and evolve apps to meet their customer and employee needs and drive digital transformation on a global scale. For more than 35 years, Pega has enabled higher customer satisfaction, lower costs, and increased customer lifetime value.

For more information on Pegasystems (NASDAQ: PEGA), please visit us at [www.pegacom/government](http://www.pegacom/government)



# Modernization that meets the mission

EDITION IX



Build  
for  
Change