

Dynamic Digital Government  
**The seven elements you need  
in a technology platform.**

A diagram consisting of a white-outlined rounded rectangle at the top containing text. A vertical white line descends from the bottom center of the rectangle, passing through the Appian logo, and continues downwards to the bottom edge of the frame.

appian



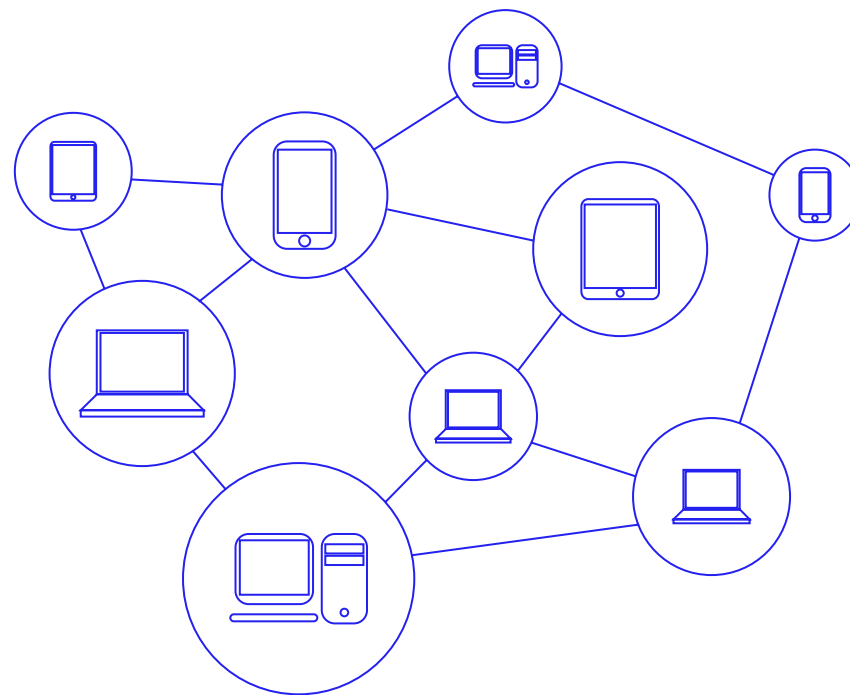
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**The demands on Federal agencies to modernize, optimize, and digitize operations are immense and growing. Federal IT organizations already face significant resource constraints in simply keeping legacy systems functioning. How are they supposed to innovate — and at the accelerated pace of 21st-Century government business?**

Federal IT leadership needs new ways of accelerating the development and delivery of game-changing enterprise software. Agencies need more and smarter automation to accelerate business processes with robots and cognitive services. They need to interact fluidly and knowledgeably with constituents across traditional, web, and mobile channels. They need to leverage the obvious cost and flexibility benefits of cloud technologies.

Federal Government IT modernization is all about speed-to-value for meaningful technology innovation. Doing this right requires the right kind of application development platform. The eBook examines the seven key elements of such a platform.



# 1 Low-code, Standards-Based Development

**Traditional coding simply can't keep up with demand. Gartner predicts that through 2021, market demand for app development will grow at least five times faster than IT capacity to deliver it.**

As a result of the forces behind Gartner's prediction, many government agencies are adopting low-code development platforms for their ability to enable a broad range of developers to rapidly build and deploy custom web and mobile apps—without the need for time-consuming coding. Plus, low-code tools allow non-technical resources to contribute as well, further reducing the burden on IT.

With the demand for custom applications increasing in the public sector, it's clear that organizations need a faster way to deliver—and low-code development platforms provide a proven way to shorten time-to-value for these new applications.

Forrester has benchmarked low-code at 10-20X the delivery speed of traditional application development.

Additionally, as efficiency, transparency, and flexibility are increasingly important to the public sector, the applicability for standards-based platforms is trending high as well. Due to this shift in innovation, when evaluating a platform to facilitate your IT modernization efforts, make sure to add “standards-based” to the requirement list.

## The benefits of a standards-based platform:

**Interoperability:** In the public sector, mission success today comes from the coordination of diverse systems, both on- and off-premises. Systems should be able to exchange information openly, regardless of where they reside and what technology is used. Properly managing the interactions between systems is critical to interoperability.

**Portability:** Cloud providers that operate infrastructure should not dictate what organizations do “up the stack” with their applications. By leveraging a standards-based platform, public sector agencies retain control and avoid being “locked in” to any particular vendor, thus ensuring future viability for the applications.

**Innovation:** The highest rates of innovation in the public sector come from open ecosystems, in which a community of developers improves code by addressing different use cases across different industries.

Leveraging a standards-based development platform removes unnecessary barriers and gives everyone access to the format's definitions. The transfer of information via an open standard is made more efficient and error-free because no interpretations or transformations are required--and openness increases adoption.

A low-code, standards-based development platform brings IT and the business together, enabling more rapid, iterative, and collaborative development. It is vital to evaluate platforms carefully and choose the approach that meets your agency's needs, now AND in the future.

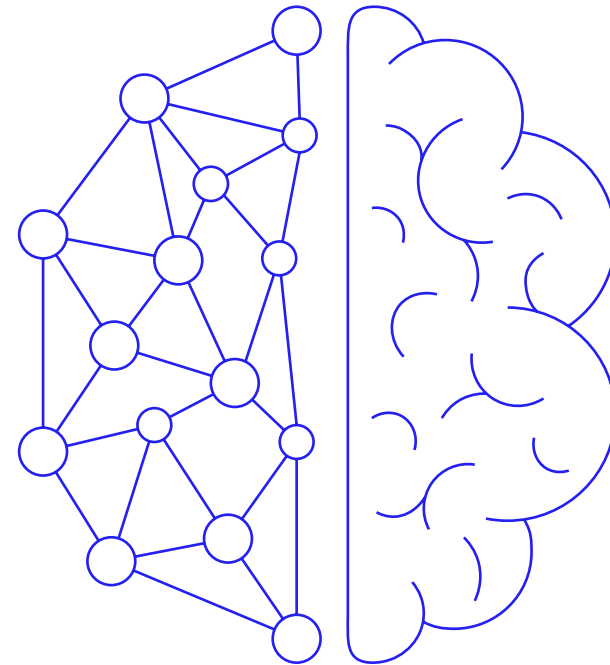
### Get the best of smart machines, robots, and people — in harmony.

Although the Federal government has made gradual strides toward overhauling its IT systems, agencies must place a greater emphasis on automation, and the new possibilities that come with emerging technologies.

From budget constraints to rapidly shifting constituent expectations, public sector organizations need to fully process data, integrate with existing legacy systems and effectively communicate with their stakeholders and citizens, while enforcing security, privacy and regulations compliance. Government workforces taking on increased workloads, with increased expectations and under increased scrutiny, while relying on dated and disconnected technology systems to make it all work.

Enter Intelligent Automation. By combining the power of artificial intelligence (AI), robotic process automation (RPA), business process management (BPM) and integration, these technologies can address speed, process improvement, quality, accuracy and even the citizen experience. At all levels

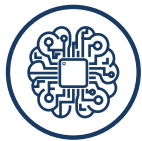
of government, automating processes allows time to focus on high-value, strategic initiatives. But in order to enhance programs and services, government agencies must first understand how to harness intelligent automation to reap maximum benefits.





## Robotic Process Automation

Robotic Process Automation (RPA) is an approach to intelligent automation that includes tools such as rules engines and screen-scraping. Public sector agencies are finding that RPA bots are valuable for automating mundane, repetitive tasks, such as cutting and pasting data from one system to another. These tools can work with existing IT systems, making them a great way to get started. The key is to start small: Decide what particular process to automate and then develop a proof of concept around it. From there, plan to scale the process across the organization and then move on to more complex tasks.



## Artificial Intelligence

Artificial Intelligence (AI) can solve a number of challenges that the public sector faces today. Governments are already implementing AI to improve the quality of citizen engagement—and deliver cost savings—through chatbots. Government call centers, which typically handle a high volume of fairly simple, repetitive communication tasks, are an ideal chatbot use case. Agents handling calls must toggle between multiple systems and manually enter information, which negatively affects the caller's experience. Chatbots can free the agent from these repetitive tasks and allow more time spent on developing customer-centric skills as

constituents engage with the agency through cognitive-powered text or voice chat. If they are used well, artificial intelligence services can make our government services faster and more tailored.



## Business Process Management

As conditions change, systems must adapt to meet new requirements. A key element in supporting these shifting environments is Business Process Management (BPM), which directly supports improved productivity and shortens cycle times for innovation within an organization.

When used effectively, BPM can uncover process inefficiencies and improve the quality of end-to-end processes while also ensuring regulatory compliance and improving government services to citizens by making it easier to modify decision rules and processes as requirements change. For government agencies, this can mean saving money and improving citizen services through organizational effectiveness, a key object of modernization.



## Integration

Governments, by definition, are responsible for providing a wide range of social and environmental services, and their IT systems typically include multiple data sources, spanning multiple industry sectors. No matter the size of the agency, governments must address the needs of the public, while managing their own financial and administrative affairs, often under the constraints of an extremely tight budget and limited resources.

Integrations through a platform supporting Intelligent Automation, empowers government to support multiple public data systems, and consolidate the data into a single, unified interface. By ensuring system interoperability, government agencies can improve service delivery, optimize workflows, and enhance knowledge transfers among all stakeholders.

Intelligent Automation offers government agencies huge potential to dynamically modernize the way they do business. And with a platform like Appian, your organization is not locked in to only one way of

making this a reality. You can use Appian's native integrations, or bring your own RPA and AI, with no penalty in loss of functionality.

Manual IT processes deplete agency resources, essentially prohibiting them from driving forward the federal government's long-term IT modernization efforts. In order to drive successful mission outcomes, Federal agencies need to adopt more modern systems that supports the inclusion of intelligent automation and takes advantage of the latest technology.

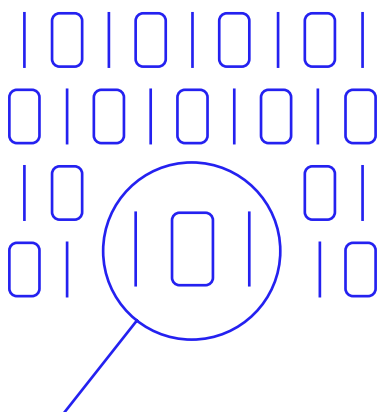
## 3 Dynamic Case Management

### Drive better decisions and faster case resolutions.

Dynamic Case Management allows you to manage all types of work, from traditional, structured BPM processes, to more collaborative interactions. It focuses on those processes like investigations or incidents that are unstructured or ad hoc and often require extensive interaction between human participants to achieve an outcome. Even more, it allows you to intelligently align all of that work so that people or systems working on related tasks are not leaving holes or duplicating or contradicting each other's efforts.

The digital era brings with it an unprecedented amount of data in a dizzying array of formats. Data can't just be collected, stored and retrieved; it requires indexing, integrating, searching, analyzing and sharing, all while adhering to privacy and security regulations. As the

government looks to dynamically modernize their operations and legacy systems, dynamic case management will play a powerful role in establishing more interactive and productive workflows and processes to support these evolving standards.



### Use Case: Constituent Case Management

In the public sector, one area that has reaped the benefits of dynamic case management is constituent case management. As technology continues to evolve, so do constituent expectations for their digital interactions with government. Moreover, they expect consistency across all these channels; they want to be able to access their case histories and rely on agencies to track their interactions. The bottom line? Everyone wants faster resolution of inquiries and benefits determinations—and dynamic case management can deliver.

Through dynamic case management, interactions between people, process, data, and content can be unified for better, faster, smarter decisions. And in today's government, that level of efficiency reduces costs, accelerates outcomes, and improves compliance requirements.



**Own your data and app logic and put it where you want, when you want.**

***“We are focused on providing our customers with the flexibility to deploy the Appian platform in environments that work best for their needs...”***

– Malcolm Ross, VP of Product, Appian

When selecting an enterprise platform to spearhead your IT modernization efforts, one of the most critical factors in your decision will be whether you choose cloud vs on-premise. Let's take a look at the benefits of each:



**Cloud:** The market for enterprise software in the public sector is moving rapidly to the cloud. Cloud computing is an emerging way to deliver enterprise applications that are dynamically scalable, virtualized, and delivered as a service over the internet. Organizations who deploy their platform in the cloud enjoy a number of benefits, including:

- Low startup costs
- Fast deployment
- Automatic upgrades
- No server maintenance
- Fast return-on-investment
- Predictable costs

Ensure a fast deployment and easy upgrades to the latest functionality and features. Add more users and performance as you need. Choose between a public or private cloud. Appian is highly secure and flexible thanks to the multi-instance architecture. Customers can choose between Appian's FedRAMP managed service offering in Amazon GovCloud, or deploy in any cloud provider. Appian is certified to run on Microsoft Azure and in Google's cloud offering.



**On-Premises:** Not ready to move to the cloud? Many organizations with strict data security or IT policies run applications on-premises. The on-premise application deployment model installs and operates from an organization's in-house server and computing infrastructure. Agencies have complete control over when and which upgrades will be introduced.

However, on-premise systems require a substantial investment to implement. Agencies have to invest in related hardware and IT staff to manage the system. Once the system is functional, it also requires time and money for routine maintenance and upgrading of the system.



**Hybrid:** More and more businesses are turning to a hybrid cloud model that mixes and matches dedicated hardware, private cloud platforms and public cloud services to meet their unique requirements.

Here are some of the benefits that make hybrid solutions so compelling to so many organizations:

- **Reduced Costs and Improved Efficiency**

Agencies can store their most sensitive data on dedicated hardware while simultaneously benefiting from the public cloud's cost efficiency and on-demand scalability.

- **Improved Security Capabilities**

Sensitive data can be stored on a dedicated server while running integrated, front-end applications in the public cloud — creating a seamless, agile and secure environment.

- **Driving Innovation and Future-Proofing IT**

Hybrid cloud allows government agencies to take advantage of emerging cloud technologies, while still retaining their legacy applications within their secure data centers.

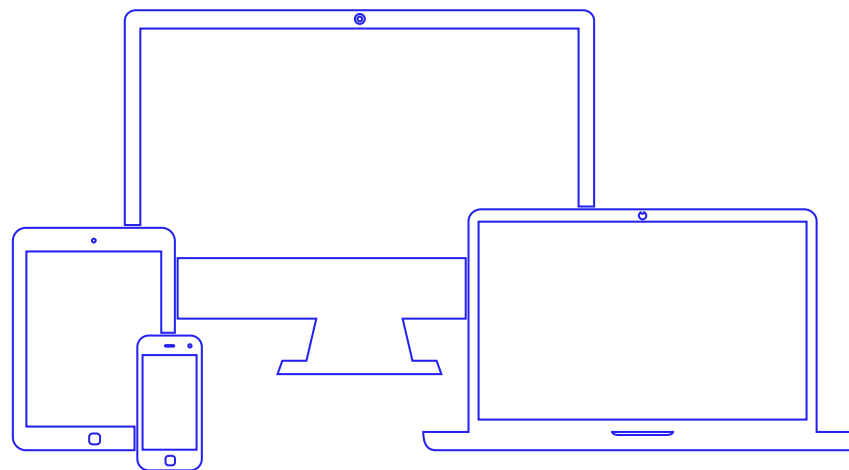
## 4 Deployment Flexibility

The hybrid cloud has an obvious potential to benefit many government organizations, however it is dependent on each situation and the desired outcome.

### Not All Platforms are Created Equal

To really drive change in public sector IT, a low-code, standards-based development platform needs to meet some crucial requirements:

- Fully leverage a cloud environment, while also supporting on-premise and hybrid deployments.
- Meet the most stringent security accreditations, including FedRAMP, Service Organization Controls 1, 2 and 3, and the Federal Information Security Management Act.
- Operate applications identically on the web and mobile devices through a single development effort.
- Provide proven enterprise-grade scalability. There are advantages and disadvantages to leveraging either a cloud, on-premises, or hybrid platform deployment — so why restrict yourself to one? By leveraging a platform that can easily deploy on either cloud or on-premises, it will support any future migrations your organization may undertake as modernization efforts continue. Even more, it ensures that any policies that are passed down can be adapted to with ease.



## Unite development and operations to ignite agility.

Today's federal IT challenges are larger and more complex than ever before. Federal CIOs are expected to execute their IT efforts in a complex and resource-constrained environment as their missions demand faster execution, more functionality, and better performance. Consequently, time-to-value is a critical factor when agencies are evaluating the merits of enterprise IT platforms. DevOps offers the potential to deliver on those requirements.

Increasingly, agencies are turning towards DevOps as a way to accelerate development and bring capabilities to their end users more quickly. Integrating development and operations teams together allows for continuous delivery by creating the right environment and agile development processes to support more frequent releases.

Commercial off-the-shelf software (COTS) does not fit well into a DevOps model. With COTS, the entire product has to be released at the same time. That thinking has been turned on its head with the push for DevOps-driven agility and the rise of low-code development. While these platforms are technically considered COTS, as they come packaged from an OEM, the applications built on top of them are entirely customer developed.

Thus, **a low-code development platform provides agencies with the best of both worlds:**

- The product assurance and continual improvement of the COTS toolset
- The flexibility and modularity of apps that integrate into a DevOps environment

At the core, DevOps is about getting developer teams and infrastructure operations personnel to collaborate early and continuously deliver new capabilities rapidly and smoothly. No more throwing software back and forth over the wall that has historically separated these very different functions. A digital platform capable of supporting DevOps has become a prerequisite in today's IT modernization environment.

## Make it simpler to scale innovation.

In the public sector's quest to attain faster time-to-value while driving dynamic modernization, reusable components are an important part of the equation. They enable enterprises to cost-effectively deliver fast, reliable and secure web-based applications by building pieces of functionality once and then simply reconfiguring them for use across multiple applications. The result is faster development time and fewer bugs.

At Appian, we are continually looking for ways to reduce development time and expedite delivery of value to our customers. As such, Appian has constructed configurable application starters that are based on knowledge and experience garnered from multiple real world implementations. In addition, because they are native Appian applications, customer-specific configurations can be done quickly to meet unique challenges.

**There are substantial benefits of building many different applications on one platform leveraging reusable components, such as:**

- **Faster application development:** Every new application is faster to build as it benefits from reusable components that are already built for existing applications.
- **Significant cost savings:** New application do not need new licenses and typically require much less effort.
- **Better collaboration agency-wide:** Best practices can be deployed across the organization to achieve better collaboration to drive organic innovation.

As government organizations evaluate digital platforms that will provide the speed-to-value necessary in today's IT landscape, the ability to employ reusable components has become an important element. By leveraging a platform such as Appian to employ reusable solutions and components, you'll be able to focus on making sure your solution meets your objectives and your user's needs, confident that the rest is handled by the platform. Furthermore, Appian objects can be leveraged by applications the your organization already owns and the same business rules and process models can be stored and governed centrally in Appian, while being leveraged by other legacy apps.

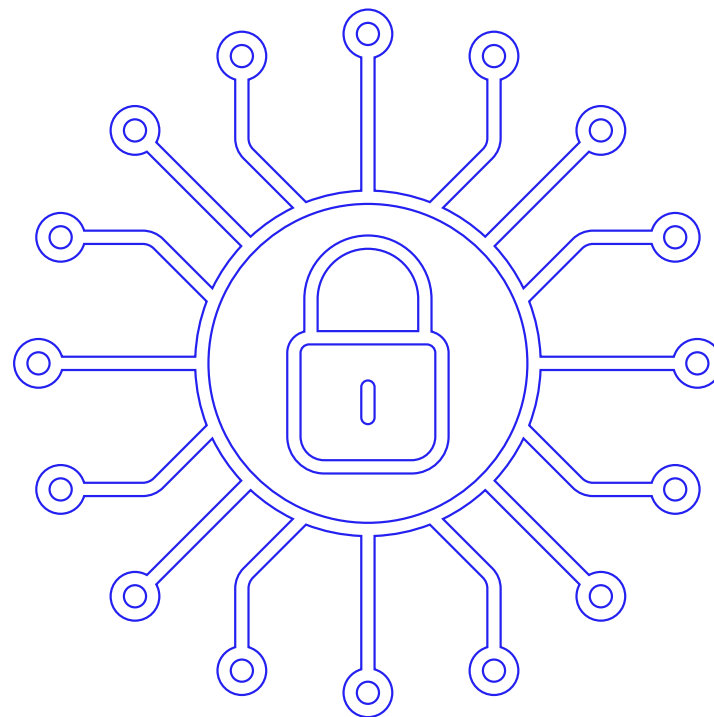
## 7 Security

### You don't have to trade security or reliability for speed.

Government organizations driven to dynamically modernize their IT platform may overlook important digital criteria that separate out winning platforms from tomorrow's legacy systems.

Application and data security are major concerns of public sector organizations today, and should not be overlooked when selecting a digital technology platform. Inadequate security can prevent applications from being deployed, while, security failures in deployment can expose your organization to severe consequences.

In the public sector, there are numerous security standards needed for a platform to be a viable solution. One such standard comes from the Federal Risk and Authorization Management Program (FedRAMP) a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services. Being FedRAMP Compliant means a cloud system has an established and highly secure environment that has withstood comprehensive audit review before federal agencies are authorized to engage the system.



## 7 Security



When selecting a digital technology platform, FedRAMP compliance is not a “nice to have” but a “must-have.” Appian Cloud is FedRAMP compliant and has received an Agency Authorization to Operate (ATO) at the Moderate level.

By achieving FedRAMP compliance, Appian has been deemed a viable solution to provide significant time and cost savings, improved security risk management, and enhanced program transparency for mission-critical federal operations.

It's the reality of today's world. You can always be more secure. Appian has more security certifications so you feel more secure. Why? Because you are.

### **Here are some other security factors that should not be ignored while evaluating a digital platform:**

- **Comprehensive, Third-Party Security Certifications**

Appian Cloud has a security and compliance program that meets more industry standards than other aPaaS vendors.

- **Third-Party Security Audits**

Appian undergoes frequent and regular third-party audits to validate controls are operating effectively to protect customer data.

- **Real-time Virus Protection**

What happens if a user mistakenly uploads a virus-corrupted file to your app? With Appian, nothing. Included virus protection means your apps stay healthy.

- **Advanced Governance Capabilities**

With advanced business activity monitoring and other governance capabilities, Appian helps you keep your business running as expected.

It's easy to be wowed by a new technology platform but it's a lot harder to evaluate what its impact will be to support years after the initial implementation. With more certifications than any low-code or BPM platform vendors, Appian continuously invests and innovates to protect our customers and ensure future platform viability.



## Conclusion: The Appian Way

**Public sector agencies are looking for proven solutions that stand that test of time. They are using taxpayer dollars to make these investments, so performance, trust, and capabilities matter.**

What also matters is that there is a roadmap for the future. This is very important because a public sector agency has to be able to rely on and leverage a long road map and lifecycle with a solution. When evaluating a digital technology platform, organizations must have long-term focus, despite speed of change and disruption in the technology industry.

Appian's industry-leading application platform has been recognized by industry analysts and customers alike for its ability to deliver business value faster, thanks to its easy, powerful, and unified attributes. From intelligent automation, case management and enterprise mobility, Appian's key to success is its focus on customer satisfaction, no matter the project size. This is possible due to Appian's comprehensive, standards-based architecture and proven delivery approach.

**Contact us today to learn more about how our platform can accelerate your dynamic modernization efforts.**





Appian delivers an enterprise low-code platform for digital transformation that enables organizations to revolutionize their customer experience, optimize their business operations, and master global risk and compliance.

Powered by industry-leading Business Process Management (BPM) and Case Management capabilities—and leverages the latest Robotic Process Automation and Artificial Intelligence capabilities—Appian's low-code approach radically accelerates the time it takes to build and deploy powerful, modern applications, on-premises or in the cloud.

**For more information, visit [www.appian.com](https://www.appian.com)**