

A responsive state and local government depends on systems that communicate with customers through available channels such as email, Web and social media, and is able to keep up with rapidly changing requirements and demands. In this environment, software development presents additional challenges to developers, domain experts and executives, beyond those in private industry. These include:

- Budgets that tend to be more rigid and constrained
- Regulatory changes that occur unpredictably
- Older architectures that remain in place longer than they should
- Increased cost to support older applications that require specialized skills
- Scarce resources available to change or modernize an application

What's needed is a next-generation development platform that is more agile and less costly.

The Application Development/ Procurement Dilemma

Build or buy? This is a question that has haunted government for decades, with each leadership change prompting organizations to change their views on whether to construct or procure new software solutions.

Although custom-built software provides IT with complete control over all aspects of the application design, middleware and user experience, it can be costly to develop in terms of time, money and resources. Beyond the initial project delivery, it's also costly to manage and maintain these applications, increasing the total cost of ownership and limiting the resources available for new business solutions.

Also, custom applications are usually one-off solutions, built from the ground up, with little possibility of reusing functionality by other business applications. Common architectures, platforms and development frameworks are often created within organizations to remedy this deficiency. Although there are plenty of these available from which to choose, they still require highly paid programmers to use, and must be continually updated as technology advances. This results in an IT maintenance burden and a brake on business development.

In contrast, buying a commercial off-the-shelf (COTS) package or soft-ware-as-a-service (SaaS) solution can be faster and less expensive, but limited customization and extension options usually result in a poor fit, or organizations must adapt internal processes to match the limitations and capabilities supported by the software. What's needed is a way to achieve the benefits of custom application development, but with the speed, savings and low maintenance costs of COTS or SaaS-based solutions.

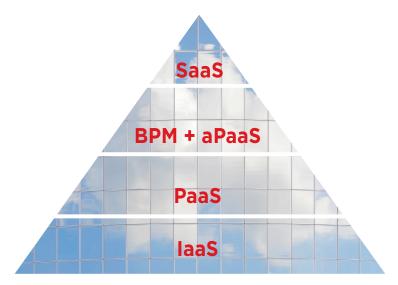
State and Local Government Pain Points

This dilemma is amplified for state and local government agencies. Due to budget and staff constraints, government IT often cannot keep up with the demand for new business applications, since available resources are needed to maintain the current application portfolio. However, shifts in regulations, department organization as well as security and compatibility requirements mean rapid changes are often required, and don't fit the long-term release schedules of traditional development. The level and cost of the development talent needed only increases as existing applications age and grow more complex over time.

In response to this, "shadow IT" groups commonly form to work around central IT, as development and other IT staff are simply overburdened. As a result, shortcuts are taken that lead to solutions based on nonstandard or older technology choices. This results in a more complex IT environment, unmanaged application portfolios and increased security vulnerability.

Figure 1.

The spectrum of cloud offerings.



The Cloud Platform Promise

Solutions from cloud providers promise answers to overburdened IT departments. Figure 1 shows the types of cloud offerings typically available to government. Cloud-hosted SaaS business applications reside at the top and, as previously stated, offer cheaper and faster solutions as long as they're structured the way your organization requires. At the bottom, infrastructure as a service (laaS) allows IT organizations to offload much of its data center infrastructure and management needs, reducing effort and cost as a result.

Our focus is on the platform-as-a-service (PaaS) offerings that have emerged in the middle, including application platform as a service (aPaaS), integration platform as a service (iPaaS) and others. PaaS allows professional application developers to deploy their code into a ready-made hosted environment without concern for the underlying technology. While this indeed saves time and some costs, it still requires highly skilled developers and custom coding.

Fortunately, the next step above PaaS—aPaaS—also combines business process management (BPM+aPaaS) to deliver rapid application creation by subject matter experts and provide the ability to animate the data through dynamic business processes. This is now available as a cloud offering.

Business Process Management Application PaaS

Software AG's AgileApps Live is an application platform as a service (aPaaS) with BPM capabilities. When you combine all the capabilities of aPaaS with the human-centric workflow capabilities of BPM, you now have the ability for subject matter experts, business analysts and entry-level developers to visually build and deploy process-driven application solutions in weeks rather than months. AgileApps Live is part of the Software AG Live Unified PaaS suite of tools that includes application development, process mapping, portfolio management and integration services.

AgileApps Live differs from the developer-driven PaaS approach in a number of ways. For starters, AgileApps Live enables business analysts and subject matter experts, who may not otherwise specialize in software development, to specify, build and deploy an end-user solution.

It combines a visual process designer with a library of configurable, plug-and-play functions that enable the rapid creation of multi-channel applications without the need for programming or other specialized knowledge. In turn, AgileApps Live takes an innovative "orchestration-based" approach to application creation. With it, you can do the following:

- Create applications through a browser-based Web application that enables information workers to engage with data and processes easily and intuitively. There's no need to install complicated development tools.
- Easily design forms that interact with data and processes, using rule-based and role-based layouts.
- Configure business processes with a graphic workflow designer to release the power of multichannel collaboration. No programming is required to create business processes, assign tasks, plan for escalations or send custom notifications.
- ✓ Easily add business-aware application elements such as business rules, service levels, social media integration and case management with the click of a mouse, not code.
- ✓ Engage the public with data-rich, personalized Web forms that are easily created using the design wizard.

AgileApps Live includes the added value that it's a cloud-based platform that can also be deployed as a stand-alone solution. This gives you all of the benefits of the platform without requiring you to move to the cloud right away; you choose to migrate to the cloud and all of its advantages only when you're ready. Best of all, as the platform is updated in the future, your AgileApps Live applications will continue to work and leverage new features without requiring a rewrite.

An Iterative and Agile Approach to Case Management

Most government applications exist to manage cases, which can be a request from a citizen for services, a helpdesk ticket, a call to a 311 center, a new hire, a travel request or new records added to a file. AgileApps Live allows you to focus on the workflows, rules management and business processes needed to manage these cases, instead of low-level code. With AgileApps Live, you can take the following steps to application creation:

- 1. Describe the data fields you need and the relationship among them, without coding.
- 2. Visually build the business process workflow by dragging and dropping workflow steps and assigning roles, rules and service levels to each.
- **3.** Customize the Web forms and multichannel interfaces used to interact with citizens and case managers.
- **4.** Publish the application, which will run in any browser or mobile device.

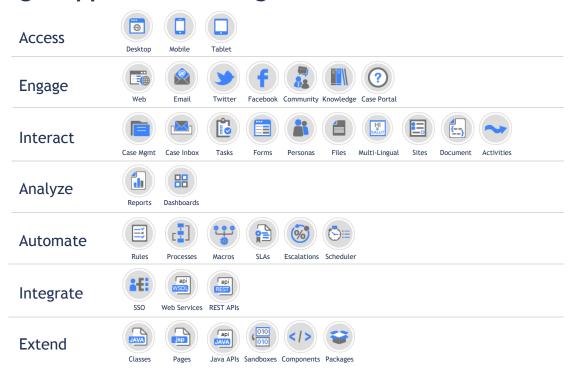
This approach allows subject matter experts to directly transfer their knowledge of the business problem into a working model that demonstrates and validates the business requirements for the solution. It extends and formalizes the notion of iterative design and prototyping, yet it production-enables the result. With AgileApps Live you can rapidly and iteratively assemble an application, deploy and review it, and then refine and modify it for a production rollout in a fraction of the time of a custom development project.

Integrate and Leverage Existing IT on Your Way to the Cloud

More and more government agencies are adopting a "cloud first" strategy to reduce costs and operate more efficiently. The AgileApps Live BPM+aPaaS approach allows you to reuse your existing investments in infrastructure through an on-premises version you can run on your own servers. When you're ready, your applications can be rapidly moved to AgileApps Live in the cloud.

Application cloud-enablement can be accomplished over time, application by application, with a hybrid hosting model. Using this common, standard approach to application assembly saves resources regardless of deployment location, and helps avoid maintenance nightmares associated with traditional development.

AgileApps Live Building Blocks



AgileApps Live Addresses "Chronic Pains" in Government IT

The term "chronic pain" is used here to describe the IT-related challenges that government organizations often face repeatedly, with no good solution. "That's just the way things are" can be heard in many organizations, where frustration has led to resigned acceptance. However, AgileApps Live is a next-generation development platform that cures these chronic pains. Let's examine these pain points in more detail, as seen by different stakeholders.

From the CIO perspective, AgileApps Live resolves the following:

PAIN POINT: Unexpected issues, from disasters to new regulations, arise every day, requiring CIOs to react immediately. However, the lack of skilled developers and the rigors of custom coding make keeping up with even the existing demand for applications impossible.

SOLUTION: AgileApps Live allows non-IT and entry-level IT staff, with the right permissions, to visually build and deploy process-driven application solutions in a fraction of the time.

PAIN POINT: The business depends on legacy applications written for older technology and in outdated languages. These cannot be easily eliminated or modernized, and may become a security vulnerability on the network.

SOLUTION: AgileApps Live allows vulnerable applications to be rapidly replaced with secure ones that can be deployed in a private, stand-alone environment or a hybrid government cloud as an alternative.

From the business analyst perspective, AgileApps Live resolves the following::

PAIN POINT: Business analysts have difficulty understanding how the finished system will behave, or if it will ultimately fulfill their requirements. Traditional prototype development can take too long to provide the business with validated requirements for a final solution.

SOLUTION: AgileApps Live allows business analysts to quickly illustrate requirements with a working prototype rather than static documents. This allows real-time validation of requirements with business owners.

From the program owner perspective, AgileApps Live resolves the following::

PAIN POINT: Regulatory requirements, organizational changes and unpredictable events create a need for unplanned updates to existing core business applications before the next scheduled release.

SOLUTION: AgileApps Live allows subject matter experts to rapidly create temporary applications that connect to these core business systems to meet changes in regulations, urgent user requirements or other unplanned events, without disrupting release schedules. It helps you bridge one full application cycle to the next without being constrained by a lack of time and resources.

From the power user perspective, AgileApps Live resolves the following::

PAIN POINT: Tech-savvy workers create their own ad-hoc solutions to their business problems because IT is too busy (aka shadow IT). This nonstandard approach results in maintenance and support nightmares for the IT department.

SOLUTION: AgileApps Live empowers the power user to quickly build out creative solutions without increasing IT workload. These applications can be deployed in the cloud with minimal IT involvement.

Unfortunately for IT, the tools employed by power users to solve problems are often the most easily available (i.e., Microsoft Access or Lotus Notes) and might not necessarily represent the best choice to ensure IT control and long-term flexibility and agility. Applications built upon older architectures and out-of-date technologies are difficult to secure, scale, enable for mobile users or replace using traditional IT methods.

AgileApps Live can rapidly replace all of these applications and address their shortcomings and long-term organizational concerns, providing a migration path for future technology upgrades without the need for extensive IT involvement. It also helps address the challenges associated with newer, transformational technology trends such as mobility and "bring your own device" (BYOD).

Getting Started with AgileApps Live

AgileApps Live resolves the build versus buy dilemma by introducing a third option: assemble. Applications can be assembled with Agile-Apps Live to dramatically reduce the time from business need definition to business solution delivery. By orchestrating unique solutions to your business problems, government can achieve the benefits of both building and buying solutions—without the shortcomings. Contact Software AG or visit agileappslive.com and get started right away.

Learn more by visiting **AgileAppsLive.com**



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