



# Low-Code, High Impact:

Building an Optimal Path Toward  
Case Management Modernization



## The Challenges of Case Management Modernization

For decades, the Tennessee Office of Inspector General (OIG) relied on a combination of physical case files, spreadsheets and emails to track and manage its civil and criminal cases. Not only were these approaches outdated, but they were also scattered across disparate and siloed systems.

“Some information was in Excel spreadsheets; something else was in paper form; and something else was in a Word document on somebody’s machine somewhere,” says Aarti Smith, president and CEO of Chainbridge Solutions, who helped the office move to a modern approach. “There were several disparate systems with absolutely no visibility as to who knew what and who was sharing information with whom.”

This is a common scenario in many government agencies. While case management applications are at the heart of critical processes and programs across the public sector, many of them are outdated and inefficient. Modernizing them is vital to increase government efficiency, improve performance, and provide better citizen services and program outcomes. But converting

antiquated applications into modern programming languages, software protocols and hardware platforms costs time and money. Public sector agencies also require systems that are highly flexible, allowing agencies to adapt to evolving user demands and adhere to ever-changing regulations.

According to a recent national Center for Digital Government survey of more than 250 federal and state technology leaders, 78 percent of respondents said their agencies need a faster and less complicated way to build applications.

### A New Way

One common answer to the challenge of legacy modernization is traditional custom software development. While a custom solution provides an agency the flexibility to create a system unique to its organization, it requires large capital expenditures and can take years to complete.

Another answer is commercial off-the-shelf (COTS) solutions. While this approach may cost less than customized systems, it does not allow users to alter or build upon the code, thereby preventing organizations

from revising the solution to fit their specific requirements.

Neither of these two options fits governments’ need for fast, flexible modernization at an affordable price.

Some government agencies like Tennessee OIG are turning to an alternative solution: low-code application development platforms. Low-code platforms offer a unique solution to the challenge of legacy

**Nearly half of those familiar with low code see it as the optimal path for case management modernization.**



# 78%

of CDG survey respondents say their agencies need a faster and less complicated way to build applications.



# Best Practices for Modernizing Legacy Systems with Low-Code Platforms

## ● Reconsider Your Current Processes

Think about your processes and how you might want to change them before undergoing a modernization effort. With a clear focus on specific goals from the beginning, you are more likely to get exactly what you need from your low-code solution.

---

## ● Find the Right Platform for Your Agency

Research the available development platforms to select one that is ideal for your specific needs. Consider selecting a platform that uses a relatively ubiquitous coding language, as opposed to code that is unique to that platform. This will ensure that future developers on your team can easily revise the solution when needed. It will also prevent you from experiencing vendor lock in. Finally, look for a platform that is accredited and secure.

---

## ● Take Advantage of Training Systems


Most platforms provide training for users, as well as sessions that teach users to become trainers themselves. Consider how much support your organization will need to develop solutions using low-code development, and make sure the platform will provide that support.

---

## ● Remain Engaged in Solution Design

Some of the most successful low-code solutions come out of a close collaboration between the solutions team and the public sector organization. While many platforms have an implementation team that will help you start developing your solution, your team should work closely with them to jointly design an application. Your organization should provide feedback throughout the development process to ensure you have a solution that works for all stakeholders.

---



**A low-code platform allows government agencies to enjoy a solution tailored to their specific needs without the cost or time needed to build a customized system from scratch.**

modernization: They provide the flexibility of custom systems without the high cost of custom coding. Users can create application software through graphical user interfaces and configuration instead of relying completely on traditional custom computer programming.

Yet despite the potential of low code to more efficiently modernize solutions, many government leaders are unaware of the concept. According to the CDG survey, 40 percent of respondents said they had no previous knowledge of low-code development platforms. However, nearly half of those familiar with low code see it as the optimal path for case management modernization. With a clear understanding of low code's possibilities, government leaders can see how it can generate efficient, flexible and affordable solutions.

### **Building Solutions Using Low Code**

Low-code application development platforms offer a number of useful advantages as a legacy modernization solution. They not only allow agencies to create complete application software with less computer

programming than other solutions, but agencies also don't have to rely as heavily on the expertise of programmers, or pay for years of extensive programmatic support as they would with other solutions.

And unlike a COTS solution, a low-code platform is highly configurable. Distinct from traditional customized solutions (which are customized by amending the source code), low-code platforms are developed through wizards, forms and configuration code. This allows government agencies to enjoy a solution tailored to their specific needs without the cost or time needed to build a customized system from scratch.

Most platforms offer an array of templates or frameworks that an organization can choose from to begin producing their applications. For example, Entellitrak, Tyler Technologies' low-code application development platform for public sector case management, currently has more than 20 frameworks from which users can choose.

Tennessee OIG turned to low code as a means of modernizing its disparate legacy systems. Using the Inspector General Accelerator from Entellitrak as its baseline, department leaders worked with Chainbridge Solutions to

ultimately develop and implement the Civil and Criminal Tracking System. The agency sought a solution that allowed "the flexibility to make changes and tailor, putting their own flavors and colors onto what they were building," says Smith. "Low code was right in that sweet spot. While it is not asking you to start from scratch, you're also not building application framework like user management and role management. All of these things that take time to build are already built for you in the platform, and you're customizing it exactly to what you need," she says.

Within nine months, OIG developed and implemented a system using low code to streamline the multiple antiquated case management approaches (including spreadsheets and paper files) into one platform.

### **The Possibilities of Low-Code Development for Case Management**

Low-code platforms also allow agencies to constantly revise and expand their applications. As Bob Ragsdale, director of marketing for Tyler Technologies, explains, low-code platforms are like the frame of a car: "It's all there, and at any point in time you can push out upgrades to the engine, to the tires, so you can always continue to upgrade that



## Medical School Uses Low Code for Big Rewards

On the West Coast, a large university's teaching hospital boasts more than 1,300 medical residents participating in over 80 hospital programs.

Before 2014, the university used a "potpourri" of tracking systems to manage the residents' academic and employment records. From countless spreadsheets to an ill-fitting management tool that was originally designed to manage faculty appointments, the teaching hospital lacked a central management solution.

That's where low code came in. Using the Entellitrak platform, the university implemented a low-code resident management system (RMS) to track residents' progression between courses, residencies, locations and areas of practice, from their initial acceptance to the university through the day they become doctors.

According to university staff, the iterative process of implementing RMS is what made the solution so successful. When the university had built customized solutions in the past, it typically used a waterfall process.

**"Sometimes changes come and you have to reinvent. Low code allows you a lot of flexibility."**

"People would go away, design something and then come back, and it would not be right for us," says one staff member. "That's why we got into problems with our previous solution: It wasn't an iterative, demonstrable process."

Using low code, the university could continuously share pieces of the solution with stakeholders, get feedback and adjust course. The result was a successful solution that took only six months to implement.

The university continues to take advantage of the flexibility of its low-code system, adapting it to fit the ever-changing worlds of medicine and academia. Currently, the university is looking to expand the system to track clinical fellows.

For the university, this adaptability was key. Low code allows you to not only "quickly build something, but also adapt to changes as the organization changes," says the staff member. "Sometimes changes come and you have to reinvent. Low code allows you a lot of flexibility."

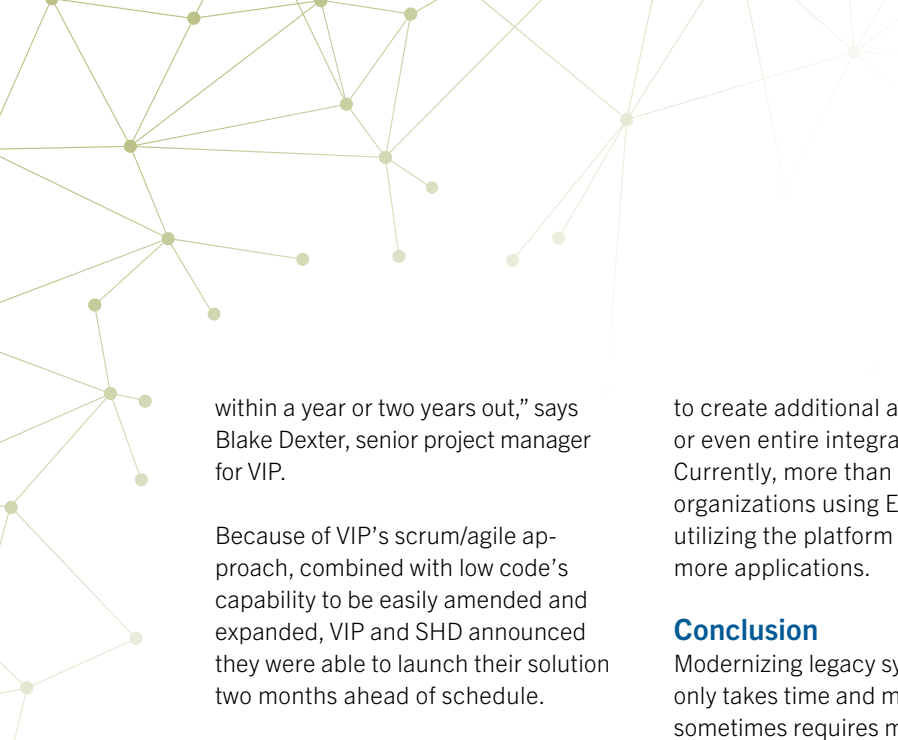
basic system. But any configuration and customization that you've done on top remains."

Agency leaders are empowered to make necessary changes and additions to their systems, constantly adapting to the ever-changing needs of their agencies.

The California Department of Social Services State Hearing Division (SHD) found this attribute critical as it worked in partnership with Visionary Integration Professionals (VIP) to implement a statewide Appeals Case Management System using Entellitrak.

VIP used an agile/scrum approach to implement the system for SHD. They worked with SHD to produce incremental components to the solution, thereby receiving continuous feedback from the state department to help improve the final product.

"Even as the project progressed, they were seeing some governmental changes that may be on the horizon



within a year or two years out,” says Blake Dexter, senior project manager for VIP.

Because of VIP’s scrum/agile approach, combined with low code’s capability to be easily amended and expanded, VIP and SHD announced they were able to launch their solution two months ahead of schedule.

Moreover, agencies using low-code development can start by building a specific application but can expand

to create additional applications or even entire integrated systems. Currently, more than 80 percent of organizations using Entellitrak are utilizing the platform to deploy two or more applications.

### Conclusion

Modernizing legacy systems not only takes time and money, it also sometimes requires making drastic changes to familiar systems. But low-code development platforms have the potential to make this process

faster and less costly. As Smith puts it, agencies can configure a low-code application to fit the requirements of their agency without the cost and time of customized solutions. “And that’s a much more satisfying solution, because it is exactly what they need.”

*This piece was written and produced by the Center for Digital Government Content Studio, with information and input from Tyler Technologies.*



Produced by:

The Center for Digital Government, a division of e.Republic, is a national research and advisory institute on information technology policies and best practices in state and local government. Through its diverse and dynamic programs and services, the Center provides public and private sector leaders with decision support, knowledge and opportunities to help them effectively incorporate new technologies in the 21<sup>st</sup> century. [www.centerdigitalgov.com](http://www.centerdigitalgov.com).



For:

Tyler Technologies (NYSE: TYL) provides integrated software and technology services to the public sector. Tyler’s end-to-end solutions empower local, state, and federal government entities to operate more efficiently and connect more transparently with their constituents and with each other. By connecting data and processes across disparate systems, Tyler’s solutions are transforming how clients gain actionable insights that solve problems in their communities. Tyler has more than 26,000 successful installations across more than 10,000 sites, with clients in all 50 states, Canada, the Caribbean, Australia, and other international locations. A financially strong company, Tyler has achieved double-digit revenue growth every quarter since 2012. It was also named to Forbes’ “Best Midsize Employers” list in 2019 and recognized twice on its “Most Innovative Growth Companies” list. More information about Tyler Technologies, headquartered in Plano, Texas, can be found at [tylertech.com](http://tylertech.com).