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Mississippi brings agile and modular techniques to child welfare system contract

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The State of Mississippi is about to upgrade its child welfare information system, a system used by about 1,800 state employees in 82 counties, supporting the wellbeing of about 5,000 children across the state. The system was built in the early 2000s, and the employees who use it are stymied by an inefficient interface and aging infrastructure. 18F is helping Mississippi design and run a modern procurement process that can save taxpayers money and deliver better results for caseworkers and the children they serve.

Mississippi's initial response to solving this problem was a classic waterfall approach: Spend several years gathering requirements then hire a single vendor to design and develop an entirely new system and wait several more years for them to deliver a new complete solution. According to the project team at Mississippi's Department of Child Protective Services, this "sounds like a good option, but it takes so long to get any new functionality into the hands of our users. And our caseworkers are clamoring for new functionality." Instead, they're taking this opportunity to build the first agile, modular software project taken on within Mississippi state government, and they're starting with how they award the contracts to build it.

"In the interest of serving the children of Mississippi in the most efficient and effective manner, our team is working diligently to design, develop and implement a new software solution to support the critical services provided by the Mississippi Department of Child Protection Services (MDCPS)," said Dr. David A. Chandler, Commissioner of Mississippi Department of Child Protection Services. "Once fully implemented, this software solution will be a model for future Comprehensive Child Welfare Information System (CCWIS) projects around the country and one that every Mississippian can be proud of. The approach the team is taking is innovative, and I'm proud of the work they've done already."

With some guidance from 18F, the [state recently released an RFP](#) calling on vendors to build a simple prototype based on a single user story, a set of data, and a few requirements. "We'll provide them with instructions on what we want them to build," said a representative from the Mississippi project team. "It's not a very complicated challenge, but it's more to assess how they put together and use their team, and how quickly they can develop and deliver the service." The goal is to create a qualified group of vendors the state can then use throughout the project.

Once this pool of vendors is selected, instead of awarding the entire contract to a single company, Mississippi will release many smaller contracts over time for different sections of the system. This is great for Mississippi. Inspired by the agile approach, they'll only need to define what needs to be built next, rather than defining the entire system all upfront.

This is also great for vendors. Smaller contracts mean smaller vendors can compete. Small businesses can't manage or deliver on large multi-million dollar software development contracts, and so are often precluded from competing. But with this approach, many contracts could end up in the single-digit millions (or less!). Smaller contracts means more small businesses can compete and deliver work, resulting in a larger and more diverse pool of vendors winning contracts and helping the state.

Approaching the project in a modular, agile fashion can be more cost effective and less risky than a monolithic undertaking. To do it, they plan to take an approach called the "[encasement strategy](#)," under which they will replace the system slowly over time while leaving the legacy system in place. It will work like this: The old database will have an API layered on top of it and then a new interface will be built, one component at a time, without risking the loss of data or major disruptions to their workflow. Each module will be standalone with an API interface to interact with the data and the other modules. If they decide to replace a module five years from now, it won't really impact any of the others.

18F has used this approach on several of our own products including [our work with the Federal Election Commission](#), and it's great to see the State of Mississippi doing the same. Another upshot of working this way, according to Christine Townsend of Mississippi, is that the state can set up a group of states using the same approach to share lessons learned, and maybe even code, with each other. So far, the State of California — which [recently began work on its own child welfare system](#) — has been sharing their experiences with Mississippi, and as other states begin to implement their own systems they may be able to open the conversation more widely.

Rafael López, the commissioner of Department of Health and Human Services' Administration on Children, Youth and Families, the federal office that works with Mississippi, California, and other states on their child welfare system, says: "We applaud Mississippi's efforts to procure and develop new technology services to better support families in the state's child welfare program. Caseworkers, and the children and families they serve, require 21st century technology and solutions to respond quickly and efficiently. Our children and families deserve nothing less."

Mostly, though, Mississippi is eager to help the people who need it most. In a statement, the project team said, "We're really excited to get needed technology services to our staff to meet the needs of our children in Mississippi. We're really confident about what we're doing and how we're doing it."

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