

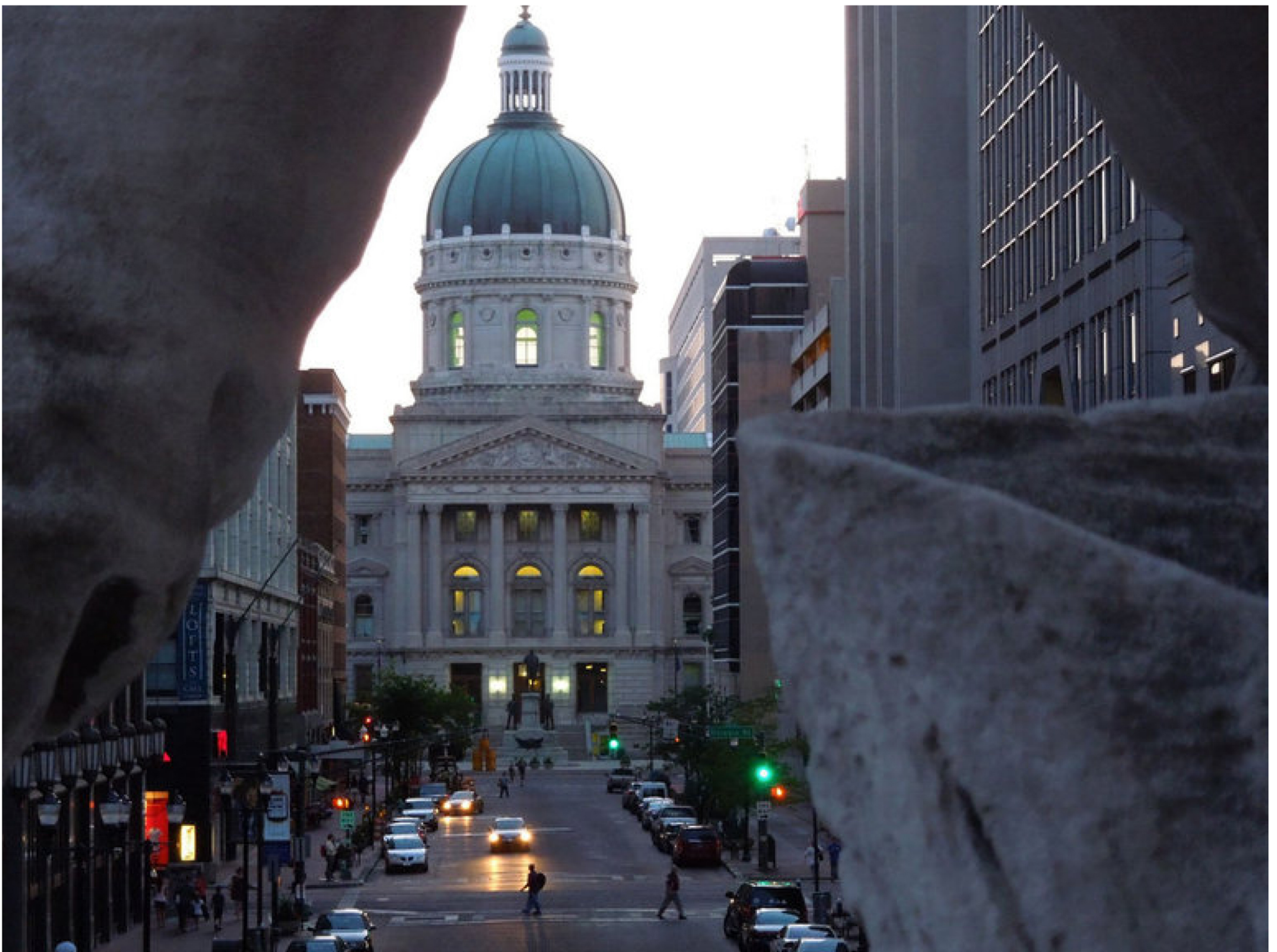
SOLUTIONS FOR STATE AND LOCAL GOVERNMENT

GOVERNMENT TECHNOLOGY

Indiana Leads the Way in Visualization, Mobility and Analytics Integration

Amid achievements, state officials continue to add technical and programmatic value with their efforts in the use of new mobile tools.

BY STEPHEN GOLDSMITH, DATA-SMART CITY SOLUTIONS / JULY 7, 2015



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Although countless governments across the country can now claim some digital accomplishment, few have managed the wholesale transformation of government services in recent years better than Indiana, with its child and infant welfare efforts.

Over the past decade, the Hoosier State's child welfare caseworkers have traded in notepads for mobile tools. They've also swapped out a cumbersome IT system for an innovative case management software pioneered by the Annie E. Casey Foundation. And in the state health department, officials have used highly sophisticated data analytics to take on one of the worst infant mortality rates in the country.

Amid these achievements, Indiana's state officials continue to add technical and programmatic value with their efforts in the use of new mobile tools. Data mining of information continues, and visualization tools adopted by the state promise much broader use of performance data. A data analytics effort using in-memory relational database management tools is providing sophisticated insights into the seemingly intractable problem of infant mortality.

FROM NOTEPADS TO MOBILE TOOLS

The embrace of mobile tools by governments across the country has been pivotal in empowering public sector workers to do their jobs effectively from anywhere.

Slowly but steadily, driven by service demands and private sector innovation, public officials have provided mobile tools to their workers to improve in-the-field decision-making, allowing information to flow more quickly to those who need it. Vendors have gradually improved mobile functionality for their data services, but the lack of affordable real-time data networks impedes this progress. However, in places like Indiana's Department of Child Services, public leaders faced with daunting challenges have driven technological innovation. Before Judge Jim Payne became the newly-created agency's first director in 2005, child welfare caseworkers in the field had few resources at their disposal. Equipped with paper notepads, they were unable to access real-time information about the children and families they served. But under Payne's leadership, the department turned away from a paper-centric approach to tech-driven human services. In 2007 and 2008, Payne gave caseworkers IBM ThinkPad tablets so they could access and update case files wherever, whenever. By making it easier to get work done on the go, the ThinkPad rollout removed a disincentive for caseworkers to spend time with clients in the field while also transforming what they were capable of doing away from their desks. When the ThinkPads grew out of date in 2013, the agency deployed laptops and

iPhones instead, devices used by the majority of the agency's caseworkers today. Last year, the agency also ran a pilot program to test the use of iPads in child welfare work, according to James Wide, spokesperson for Indiana's Department of Child Services.

FROM LEGACY IT TO CLOUD COMPUTING

Cloud technology is providing governments with computing resources that are making service delivery cheaper, more flexible, and more efficient. Although privacy concerns have stymied some of these advances in the past, recent federal policy changes have opened the door for greater adoption of cloud technologies at the state level, especially for sensitive human services like child welfare.

These changes are making a difference in Indiana. The state is poised to become one of the first beneficiaries of a [2013 federal program \(http://www.acf.hhs.gov/programs/cb/resource/acf-0a-pi1301\)](http://www.acf.hhs.gov/programs/cb/resource/acf-0a-pi1301) that made it easier for states to request federal funding for innovative software solutions. After [receiving a waiver \(http://www.aecf.org/blog/federal-funding-for-truly-21st-century-technology/\)](http://www.aecf.org/blog/federal-funding-for-truly-21st-century-technology/) last summer exempting the state from traditional rules around commercial-off-the-shelf (COTS) software, the state is moving forward to claim federal funding for the technology, according to Wide. That could mean big things for COTS software solutions like the one that's helping support Indiana's Department of Child Services.

Indiana's efforts after 2005 were directed at "fixing" a legacy system to make its information more portable for caseworkers. When that failed to succeed, the agency began in 2010 to develop a more advanced information management system. In 2012, the agency implemented a new cloud-based child welfare case management system called Management Gateway for Indiana's Kids (MaGIK). That platform uses innovative cloud-based software called Casebook, developed by a nonprofit supported by the Annie E. Casey Foundation. Casebook offers caseworkers a variety of tools to aid their work, including collaboration support, graphic visualizations, and embedded metrics. Wide says Casebook has proved popular with caseworkers. "Our caseworkers do like being able to access this function from anywhere, as it is web based," Wide told me. "It is also relatively easy to navigate and has the look and feel of systems they are familiar with."

Yet simply giving more digital information to field workers is not enough. Under the leadership of Indiana Governor Mike Pence and CIO Paul Baltzell, state officials knew they needed more analysis to support workers and managers – as well as more open data to provide transparency. They added Software as a Service (SaaS) tools facilitating cross-agency analytics and decision support combined with the metrics in Casebook designed to support caseworkers in the field. Now, caseworkers and their supervisors can access metrics to see just how effectively they are serving children. Indiana is producing robust open data visualizations to assist citizen-driven accountability while also rigorously protecting the privacy of those whose personal information caseworkers need.

FROM TOO MANY INFANT DEATHS TO TARGETED RESPONSES

In state capitols and city halls across the country, the embrace of predictive analytics is transforming government data from an after-the-fact archive to a resource that guides proactive decisions. These are not simply boutique projects, but are in fact the beginning of a new wave of data-driven governance.

Last year, Indiana Governor Pence launched an effort to combine the benefits of data analytics with sophisticated in-memory computing tools and new visualization options. The initiative is called the Management and Performance Hub, and it's housed in a Silicon Valley-esque workspace in the statehouse.

The initiative's top priority, as well as that of the state's Department of Health, has been to harness predictive analytics to lower the state's infant mortality rate, long one of the worst in the country. In 2011, the state had the sixth highest infant mortality rate in the U.S., with 7.7 deaths per 1,000 babies born alive.

The state crunched data to figure out why the infant mortality rate was so high. The most important predictor of infant mortality, it turned out, was the number of prenatal visits; mothers who went to the doctor fewer than 10 times during their pregnancies accounted for about 65 percent of infant mortality cases, according to a report on the initiative. Now, armed with the knowledge of how important prenatal visits are to infant health, the state is targeting its efforts accordingly.

TOWARD A NEWLY RESPONSIVE GOVERNANCE

As Indiana's success story demonstrates, the use of newly available data, mobile tools, cloud technology, and personalized responses has already produced the most significant changes in how our cities are run in over a century. Going forward, we should expect the Internet of Things to play a pivotal role in furthering this transformation by providing city leaders with better and more timely information than ever before.

Fundamentally, the digitization of government aids public officials in moving government from producing *activities* to producing data-driven *results* – fewer fires and child abuse cases, rather than more inspections and home visits. In cities across the country, we're already seeing glimpses of how the Internet of Things can power this shift. In Louisville, Ky., GPS-enabled inhalers enable policymakers to better understand the effects of environmental factors on public health. In Chicago, air sensors around the city will signal environmental issues.

Looking ahead, we should expect to see more states and municipalities succeed in rolling out responsive governance, not simply because they are committed to technology for technology's sake, but because they embrace technology as a means of addressing high-priority issues like child and infant welfare. Technology, after all, is only part of the solution – it must be coupled with broad changes in outdated and bureaucratic job classifications, needless layers of oversight, and narrow labor rules. Technological solutions will produce transformative change when knit together by a strong leader who can overcome internal and external resistance, has the courage to commit to transparency, and has the ability to divert resources to front-end investments that will pay off with better, cheaper, and faster results.