

Growing Florida's Knowledge-Based Economy

The Florida Technology Council, by Cyndy Loomis

The Challenge - For decades agencies within Florida's government have collected electronic data on the services provided to citizens. Specific state entities were created to deliver these services (i.e. education, child welfare, Medicaid) and data became siloed in these agencies as technology evolved. With few exceptions, the state has not looked beyond a single state agency to share data for comprehensive individual or family services.

Florida is well positioned to leverage its data and use analytics to grow our state's knowledge economy. Strong executive leadership can transform Florida's use of this powerful data set for public and business consumption. Changing the dynamics from Florida being a "data collector" to a "knowledge user" is within our grasp. For example, if we learn that specific touchpoints with children increases safety and improves education outcomes, a cost-effective integrated service model for our kids can be created.

The Possibilities - Imagine for a moment a 12-year old girl living in poverty in Central Florida who can finally receive one-stop services to improve her life and place her on a trajectory for lifelong success, whether it is free school lunch sponsored by the Florida Department of Agriculture, child welfare assistance from the Florida Department of Children and Families, or reading assistance from the local school district. Through data sharing and collaboration, Florida has the means to correlate data from multiple sources to provide child-centric services and transform this girl's life rather than providing disparate services. We can also learn which services have the most impact and at what cost. The conversation is then transformed into how we can serve the whole child, what services result in positive outcomes, and which are most cost-effective.

Alternatively, consider an entrepreneur who wants to open a specialized medical facility along Florida's panhandle. Image this entrepreneur accessing Florida government information to make data-driven decisions. A location could be selected by identifying a "service desert" through medical facility data from the Florida Agency for Healthcare Administration or by determining an area of medical need as derived from data from the Florida Department of Health. The entrepreneur may also need workforce information from the Florida Department of Economic Opportunity to ensure there are sufficient skilled workers. Florida's ability to provide this integrated data to business owners can facilitate successful corporate growth and expansion.

Similarly, there are clear and known predictors to indicate when a child may enter a human trafficking situation (e.g., living in poverty, entering the foster care system, known disability, runaway, history of abuse). Florida currently collects data on each of these factors in some way, but the information resides in disparate agencies and social services agencies. By drawing information into a data set and overlaying geographical maps of hot spots for human trafficking from law enforcement Florida could target funding for intervention programs.

Other State Examples - Other states, such as North Carolina and Ohio, have knocked down the information walls of their individual agencies to use data for the greater good. These states have recognized that they have a treasure chest of valuable information to improve the lives of their citizens. Unfortunately, removing data silos often begins with a tragic incident that could have been prevented—whether it is an overdose from an opioid addiction or a death from child abuse—followed by strong executive leadership to require data sharing. Once a commitment is made to share interagency data and remove roadblocks, the hard work begins. Some states struggle to assess and catalog the data they already have (which can take years), while

others have found success through an iterative approach to improve citizen services one data set at a time (e.g., to prevent and reduce human trafficking or increase fiscal transparency).

Success Stories - There are multiple examples where state data sharing have impacted outcomes. Worldwide approximately 40 million children younger than 15 are subjected to abuse each year. The Florida Department of Children and Families is using shared data and analytics to assist investigators and case managers in identifying high-risk situations before tragic outcomes occur. The Department has accomplished this by integrating child related data across disparate internal agency sources to provide case managers one data view. Advanced analytical methods calculate overall risk scores for each child, predictive models identify potential vulnerabilities, and changes to the child's situation alerts case managers of potential harm.

The Arizona Department of Health Services is also using big data analytics and machine learning to identify patients at high risk of opioid abuse and opioid-related deaths. In this case, five years of hospital discharge, birth, death, state trauma registry, and emergency medical services records are made accessible in a secure environment at the state's health services headquarters. Dashboards allow data teams to identify demographic and geographic patterns of opioid-related hospital encounters and opioid-related deaths. Additional data analysis enable the team to develop models that predict the risk of a patient abusing opioids or dying from future use. Outcome-based data is then used to direct program funding.

The Challenges - So what are the challenges ahead for the State of Florida to make gains towards becoming a knowledge-based economy? Our analysis has revealed two concerns, both which have merit. The first concern is data privacy. Each state agency is regulated by various data privacy laws such as HIPAA (healthcare), FERPA (education), CJIS (law enforcement), among others. These laws are in place to protect an individual's privacy. While these are legitimate concerns and privacy laws must be followed, other states have overcome this obstacle through strict sharing agreements or use of aggregate information. The second concern is data security. Once cross-agency data is combined or linked, any data breach has wide reaching ramifications. Thus, Florida's data sharing efforts can only proceed when tight and uniform data security policies and protocols are in place.

Next Steps - Florida should take strong action to transform our state to become a knowledge-based economy. This does not mean we are in uncharted waters since there is much to be learned from others. For example, North Carolina's efforts began after a preventable incident, a subsequent executive order to require data sharing, and the creation of a government entity responsible for data sharing (while also adhering to data privacy and security). In Ohio, the state Chief Information Officer created a data lake from data sets specific to a public policy challenge focused on infant mortality. This data is providing the Ohio Legislature insight into policy changes to improve outcomes. Florida should join these ranks to create smart use of our state's data to transform citizen services, direct state dollars to the greatest area of need, and foster opportunities for innovation in the knowledge-sharing global ecosystem.

About FTC - Technology is the foundation of the new worldwide economy and is a critical element for extending Florida's growth beyond tourism and agriculture. Every Florida business, citizen, and the 27,000+ registered technology companies rely on technology for business innovation, growth, and prosperity. Other state economies are growing faster than Florida by becoming knowledge-based, globalized, entrepreneurial, IT-driven, and innovation-focused. Florida ranked 24th among the 50 states on these dimensions in a 2017 report by the [Information Technology and Innovation Foundation](#).

The Florida Technology Council (FTC), a 501(c) 6 educational non-profit association, is playing a pivotal role in defining Florida's technology future by highlighting four areas where technology advancements are critical: identifying effective economic policy tied to technology, creating Florida's knowledge-based economy, securing and protecting citizen data, and developing a technology skilled workforce. This article addresses *Growing Florida's Knowledge-Based Economy*.