Mastering Data

Leveraging Enterprise Information Management to Drive Citizen-Centric State Government

Guidehouse
Outwit *Complexity*

Introduction

There's a digital revolution brewing in state governments.[1] Across the US, consumers have become accustomed to the seamless service they receive from customer experience leaders such as Google and Amazon.com. A growing number of state governments are striving to deliver a similar experience to citizens—to provide them a single point of access for viewing and transacting across multiple government programs and services. Such an integrated model would also help state governments to operate more efficiently, reducing cost while improving the quality of service.

But this vision is far from the reality of most state governments. Citizens still view and interact with the government as a collection of disparate agencies and departments, each requiring them to provide the same information they may have shared with the state several times before. The disconnect is not restricted to the experience of citizens. Government employees who work in customer-facing programs also experience challenges due to lack of data integration. Without a holistic view of citizens, employees expend precious time and resources as they struggle to locate information, answer questions, and deliver timely services.

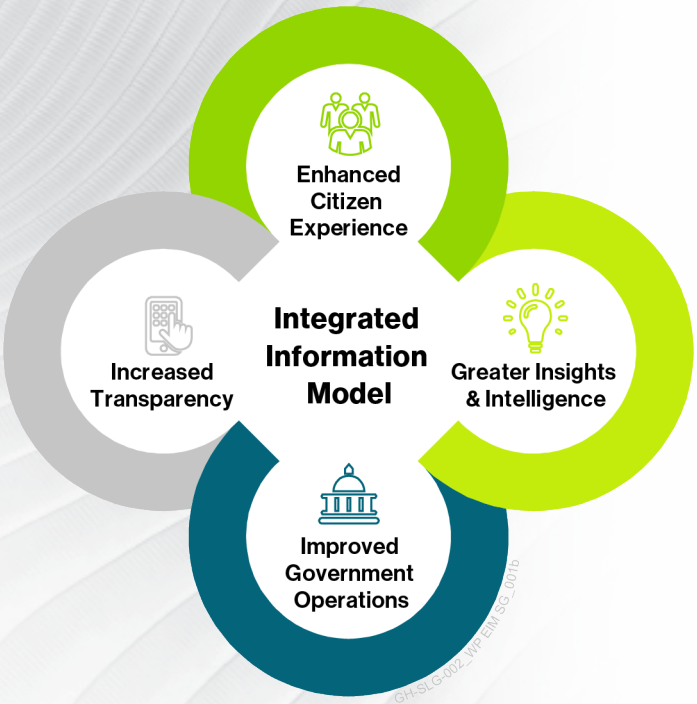
Many states are striving to become more citizen-centric, but few can deliver on this vision. Their data is fragmented, housed in silos across the state, and integrating the data is an uphill task in the heavily regulated environment. Typically, each agency accumulates its own information about the citizens it serves and sharing of data across department boundaries is minimal or suboptimal. These data silos inhibit transparency and make it difficult to integrate and analyze the wealth of information the state collectively owns.

An Integrated Information Model: The Foundation of Citizen-Centric Government

There is considerable hype about digital transformation and about mining Big Data to derive insights that improve policy decisions and quality of life for citizens. But realizing this citizen-centric vision requires something simpler and more fundamental than Big Data mining: it requires building a strong foundation for the state's structured data. Holistic, citizen-centric service requires an integrated view of the citizen. States must view data as a critical asset and be more strategic in how they store, classify, integrate, share, and analyze data so that it can be leveraged to drive better decision making.

Over the past decade, Enterprise Information Management (EIM) has grown in the commercial space, as companies have increasingly sought to gain advantages over their competitors and build better relationships with their customers. Customer experience leaders like Uber and Amazon, or retailers like Nordstrom and Starbucks view their information management and analytics functions as strategic differentiators that enable them to outperform their peers. It is evident to executives that their organizations can drive superior performance and demonstrable economic growth by creating an "Information Advantage" through enhanced information management capabilities. Therefore, data-driven business decisions, and data-centric programs supporting business transformations, have seen widespread adoption and significant investment.

[1] This paper will focus on state government, but the same concepts apply to local government as well.



In state government, however, the sheer enormity of trying to integrate data across multiple agencies that have grown to be autonomous has been so daunting that it has been largely avoided. The connection between data and its power to enable citizen-centric service transformations has not been apparent to many state government leaders. But this scenario is changing rapidly. Increasingly, state government leaders are coming to recognize the importance of mastering data to transform service delivery.

The transformation to citizen-centric government is only possible if states implement an integrated information model that gives agencies and departments easy access to accurate information about the state's population, where its businesses are located, how its geographies are divided, and how its citizens are served. States must break down the information walls between agencies and departments so that interoperability can be established, and data can be leveraged to improve the lives of citizens.

This paper explores the methodology for development of an integrated information model that enables states to better serve their citizens. We describe the challenges involved in making the transformation to citizen-centric government and outline the methodology for a roadmap that states can follow to help ensure their success.

The Challenges of Transformation

In working with state governments to make the transformation to citizen centricity, Guidehouse has observed a number of common challenges that must be overcome. The capability to present an integrated experience to the customer depends on the ability to integrate citizen data across several agencies and departmental data sources.

However, multiple of statutes and compliance and regulatory requirements impede such data integration. Lack of accountability and ownership creates a leadership void for critical programs or even prevents them from launching.

More tactical challenges exist as well, such as inconsistent terminology across state agencies and departments and lack of an inventory with information on what data exists and where. While development of a holistic customer profile is a highly desirable capability that enables government agencies and departments to know and serve their customers better, projects to integrate customer data face overwhelming security concerns related to protecting personally identifiable information.

While these challenges are significant, all of them can be addressed effectively. What's required is a strategic, systematic approach to information management, a generous investment in marketing and adoption, and the strong support of the state's executive leadership.

Addressing the Data Sharing Challenge

Creating an integrated information model requires data integration across departmental boundaries.

In Guidehouse's experience, sharing of data across departments, bringing autonomous departments together, and performing data integration within the constraints of different statutes and regulations that restrict data sharing and usage, are the biggest challenges states typically face in building an integrated information model.

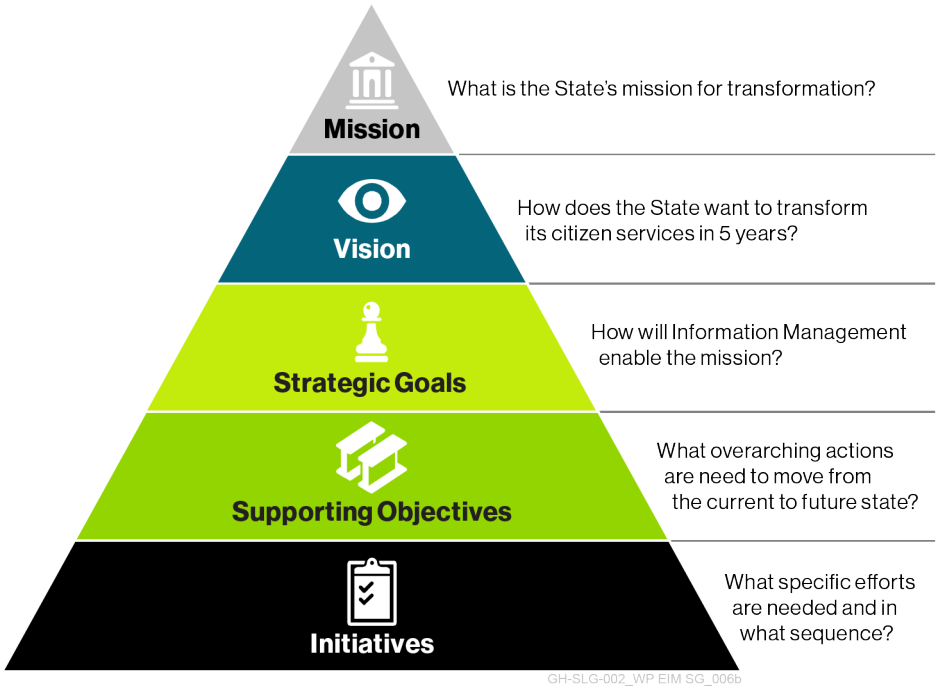
Sharing data across agencies and departments often requires lengthy cycles for establishing Data Sharing Agreements (DSAs), delaying implementation of critical programs. In some cases, protracted disputes over conflicting interpretations of legal statutes by different agencies lead states to abandon their transformation initiatives.

Ultimately, barriers to data-sharing must be addressed at the executive level and through active involvement of the state's legal counsel. The attorney general and other key state leaders should participate in the EIM initiative and establish a framework for sharing data that can be applied to a variety of projects. This approach eliminates the time-consuming effort of creating a new DSA to address each new project or data request. Software can be used to automate and monitor execution of security and privacy policies once a high-level framework is established.

The state's legal counsel can arbitrate inter-agency disputes over sharing of data, so that transformation projects don't stall. Having legal counsel serve on project teams can also help to ease concerns about privacy and security while ensuring that all relevant laws and regulations are being followed.

Creating an Integrated Information Model: Where to Begin

Implementing an integrated information model to support state government transformation requires collaboration among key agencies and strong executive support. It is critical to identify a project champion upfront who can offer support and sponsorship throughout the program lifecycle. The strategy and planning phase is crucial. With a champion onboard, the project team should identify the technology, process, and adoption goals of the program. The team should also develop an understanding of information assets and identify inflight data integration initiatives across the state. The next step would be to consolidate the desired information capabilities, the organization's strategic objectives, and the disparate data initiatives into a coherent future-state vision and roadmap. A typical roadmap for a program of this magnitude runs between three and five years and includes key data integration and change management initiatives. Based on Guidehouse's experience, an actionable, practical future-state vision and roadmap makes the transformation initiative "real" and goes a long way toward gaining the buy-in of key stakeholders. The strategy, visioning, and roadmap exercise is considered critical to the success of the program.



[2] The initiatives are further described in the section titled - "Developing a State EIM Program: Six focus areas".

The Power of Integrated Information to Drive Improvement

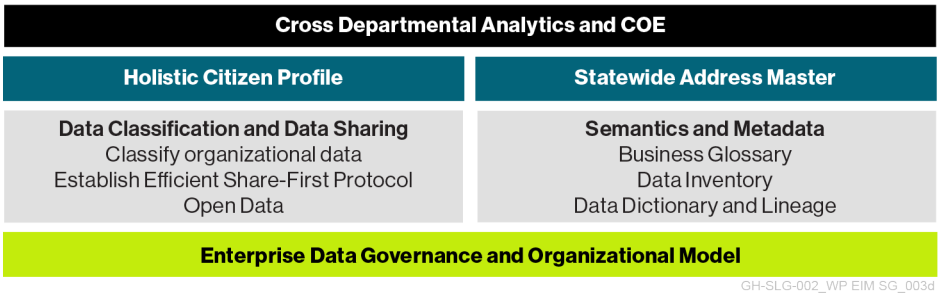
The governors of many states are starting to recognize the importance of collaboration across departments that address similar concerns, such as public safety and children's issues. They are striving to bring together these departments to foster collaboration, increase efficiency, and improve service to citizens. But such attempts cannot succeed without addressing how to integrate information.

For instance, a state might have a dozen or more autonomous departments dealing with children's issues. If these departments could share their data, they could identify opportunities to gain efficiency and deliver higher-quality service to children. They could determine, for instance, how a child from a low-income family moved through the state's educational, healthcare, and other systems, and the outcome of all the interventions made by the state. But with more than a dozen separate departments, operating in silos, it is difficult even to identify all of the services that a given child receives, and almost impossible to determine how the children ultimately performed as adults. How many were enrolled in public assistance programs? How were their children faring? What was the return on the state's investment?

This is the type of analysis that an integrated information model can enable. Such a model could be used to inform state policies and decision-making. In the case of children's services, an integrated information model could help to identify low- and high performing programs, eliminate redundant operations, and identify potential fraud and abuse, improving the quality of services to children while reducing the state's costs.

Developing a State EIM Program: 6 Focus Areas

There needs to be a concerted effort toward developing the organizational infrastructure needed to support the EIM program. That includes developing a data governance and organizational model, creating a streamlined process for sharing data, and developing a statewide data inventory. As a next step, more strategic and impactful efforts around establishing a citizen master, building a state-wide location master and establishing an analytics service center should be mobilized. Based on Guidehouse's experience in helping state governments establish statewide information management programs, six key areas deserve the focus of the transformation team.



Building a 360-Degree Citizen Profile

To promote more citizen-centric services, states must have the ability to uniquely identify individuals across state agency databases, encompassing all of the individuals' interactions with the state. To achieve this vision, the state must be able to integrate its data assets, correlate data sets, and develop a 360-degree view or profile of the citizen by integrating the data sets of different agencies. That's the objective of a "citizen master data" initiative. The citizen master data consolidates in a shared central platform a set of attributes that can be used to determine the identity of a given individual by any state department or agency. It serves as the single most reliable official source of truth for those attributes for the state. Developing a citizen master data requires integrating data sources across agencies. It involves the detailed work of determining how each piece of personal data stored in systems across the state relates to other pieces of data. For instance, the state must be able to know with a high level of confidence that "Michael Johnson" is the same person as "Mike Johnson" and "M.T. Johnson" in different systems, so that such information can be aggregated to gain a comprehensive view of the individual. By enabling a 360-degree view of a citizen's interaction with the state government, the citizen master data allows the state to organize its operations to deliver personalized experiences. States can also mine and analyze this consolidated data to improve service delivery, re-evaluate policies, and develop new customer-centric functions.

Location Master Data is Key

State operations must have access to reliable information about the location of businesses, homes, parcels, land areas, roads, city and county boundaries, school districts, sales tax jurisdictions, rights of way, bridges, and many other features. Incorrect or unreliable location information can result in increased spending and operational inefficiencies due to returned mail, inability to locate debtors, and inaccurate revenue estimates resulting from incorrect boundary information.

A centralized service for location data that leverages geographic information systems and includes a repository that agencies can reference while conducting their business will strengthen state government operations in many ways. A statewide repository for cleansed, standardized, validated, de-duplicated, and geocoded data will increase operational efficiency and reduce costs for several state functions, such as emergency response, debt collection, or jurisdiction validation during elections. Similar to the citizen master data, the location master data will create a reliable source for address data. The centralized service will make it easy for agencies to access location information when performing cross-departmental analytics.

Streamlining the Process of Data Sharing Across Departments

As noted earlier, the DSA process is often unwieldy, making data-sharing a time-consuming, frustrating effort that impedes process on critical initiatives. States should streamline the process by developing a statewide standardized protocol for data sharing.

A statewide standardized template for sharing data should be centrally developed and adopted by all agencies to enable an efficient, automated agreement progress. A central repository should be developed to house all DSAs across the state.

Departments can then query the database to identify data of interest and join in active agreements for sharing the data. Another way of addressing the convoluted DSA situation is through the creation of an all-inclusive master agreement. This will eliminate the need to create new DSAs for each new project or data request. And it radically reduces the time required to access and analyze data and deliver critical programs.

Establishing Data Inventory and Classification, Developing a Common Vocabulary

One of the core challenges in governing data assets at an enterprise level is the lack of published and formalized data definitions, standards, and privacy classifications. A state's capability to enable cross-agency data sharing will depend, among other things, on establishing a common definition and usage of business terms amongst the state agencies—a reliable source of truth for data definition and lineage for the state's master data and other interdepartmental shared data assets.

An enterprise business glossary and metadata system can be used as a platform for creating and managing a common business vocabulary, data dictionary, and translation capability for all agencies.

In order to break down data silos and share information effectively, state agencies need a system that tracks the lineage of data from its point of generation to archival. If agencies aren't aware, they can't share, so the data inventory and classification process is critical to the success of a state's EIM initiative.

Developing a Centralized Analytics Function

If master data management is about developing the data foundation, consolidating, cleansing, and correlating data assets, analytics is about utilizing that foundation, leveraging the data that is at the state's disposal to generate insights and bolster decision-making. But many state governments do not have strong analytics capabilities, at least not at the enterprise level.

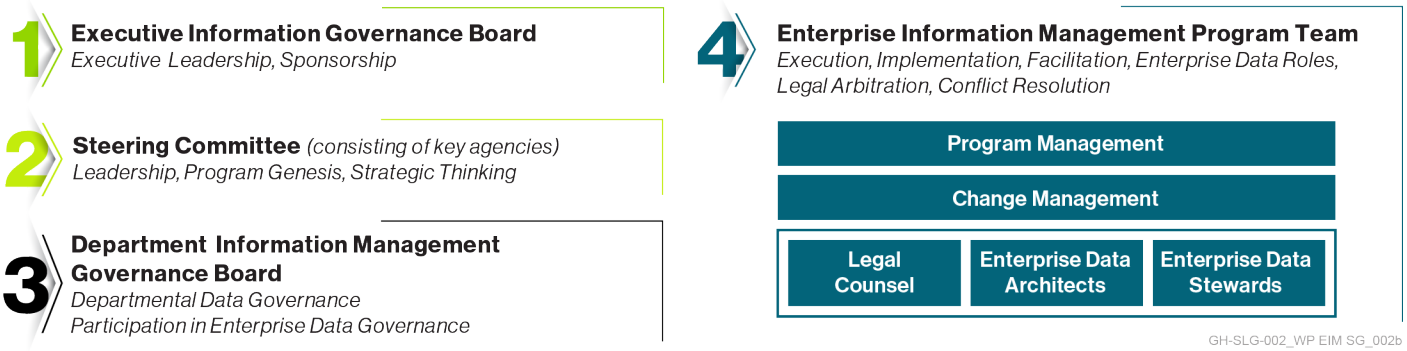
It's important to develop a centralized function for generating analytical insights easily and efficiently by correlating and aggregating data across agencies and providing tools and services to support data analysis throughout the state. States should consider establishing a service center with the goal of providing departments with a platform for performing their own enhanced analytics or accessing a centralized analytics service if they do not have skilled analysts on staff.

Creating a Data Community: Establishing a Data Governance and Organizational Model

In building an integrated information model, it is also crucial to develop an organizational model and a data governance charter. Data governance involves the development of statewide protocol for data-related accountabilities, management, classifications, processes, policies, and standards. This effort is essential to the establishment of ownership and accountability, which are critical to the success of any transformation initiative.

The data governance organization of an EIM program should act as the governing body for the state's data management operations. The organization should be designed to support, adopt, and carry out all the necessary activities related to achieving the goals of the program. It will have as its core philosophy the creation and promotion of a data-centric culture for the purpose of addressing and accomplishing the information management goals of the state. Several roles should be established as part of an accountability model.

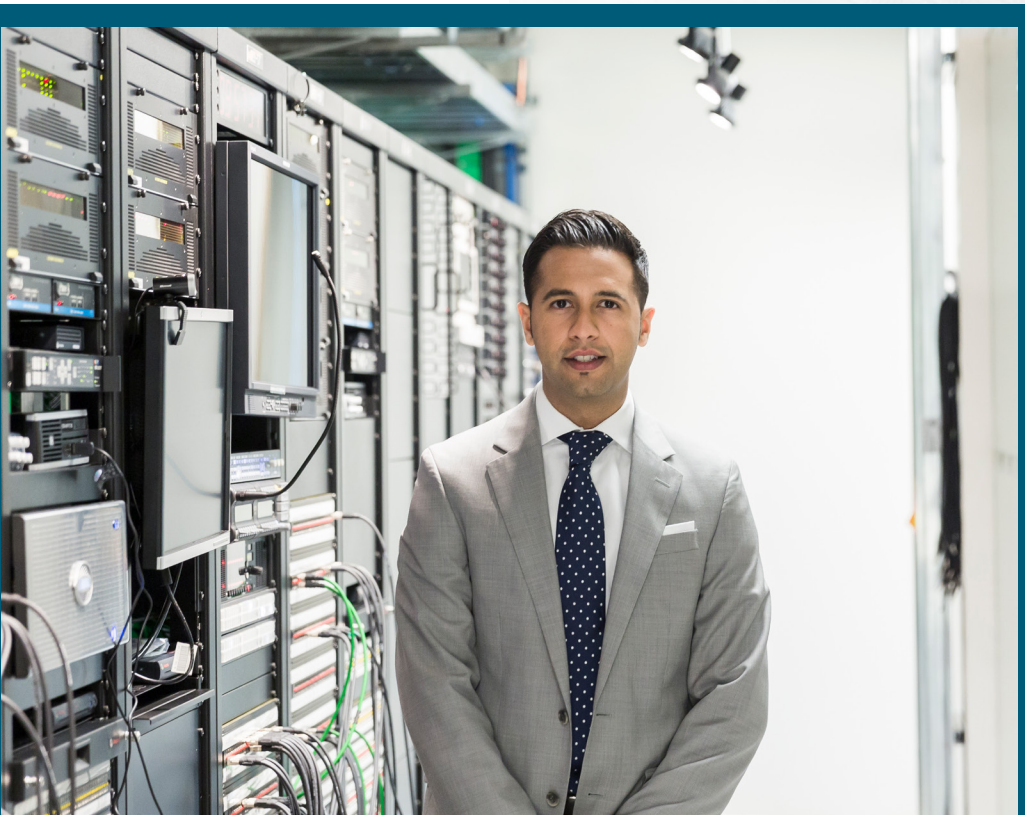
For example, each department should be assigned a chief data steward to oversee information management and governance within the department. The chief data steward, along with other assigned data stewards, would ensure the appropriate orchestration of people, processes, and technology required to manage the company's critical data assets. The stewards would be responsible for defining and undertaking projects and initiatives that improve or advance the information needs of the department's business, and for ensuring the day-to-day governance of data assets, through quality monitoring, approval workflows, escalations, and appropriate system validations.



Critical Success Factors

The following lessons, based on Guidehouse's experience, can help states to improve the odds of success in building an integrated information model and enabling citizen-centric government:

- **Adopt a case-based, incremental approach.** Focus on use cases to demonstrate the value an integrated information model. Deploy pilot projects to secure quick wins before attempting a full-scale, statewide implementation.
- **Develop a dedicated, cross-functional team.** Enlist team members from multiple state agencies and solicit the active involvement of the state's legal counsel.
- **Invest in adoption.** Focus on and invest generously in organizational adoption and communication. To solicit participation and secure buy-in, develop work groups with cross-department representation.
- **Identify synergies with other strategic initiatives.** Align with existing citizen-centric programs within the state; almost all such programs require the kind of robust, high-quality data that is developed in the course of building an integrated information model. Collaborate with the leaders of these programs to secure shared funding.
- **Win the support of executive leadership.** The buy-in and leadership of the governor and other key executives are critical to digital transformation and enabling citizen-centric government.



- **Stay grounded.** Balance the state's strategic priorities with an awareness of agency/department realities and pain-points.
- **Apply best practices in data management across industry sectors.** Regardless of sector, 80% of an integrated information model involves data management. Draw upon the experience of industry leaders in data management to accelerate progress and avoid pitfalls.

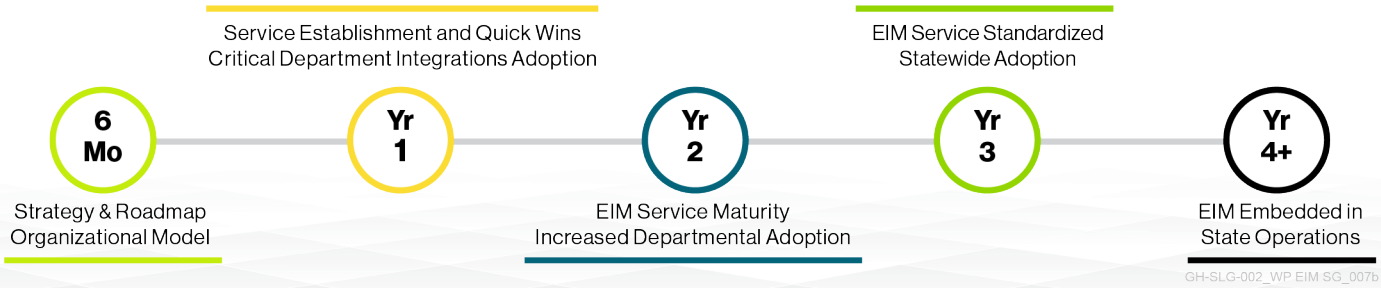
Realizing Benefits of Information Transformation

Focusing on the six core information management disciplines will enable a state to execute on its strategy of creating a citizen-centric service model with data as a core enabler. Once the model is in place, it will open up a host of possibilities for leveraging data to improve performance. For instance, with access to integrated information, the state could recognize in real time that Ronald Johnson is applying for a hunting license but has not yet paid his property taxes, and this information could trigger an email notifying him that he must pay the bill before a license will be issued. Or imagine a caseworker whose client is enrolled in a state disability program and is inquiring about services available to her. The caseworker could immediately access all of the client's interactions with the state, match the client's profile to other available services, and respond to her request immediately, rather than spending days or weeks piecing together information in disparate databases. Department of Education and Department of Health and Human Services could share information to determine if children with high needs are able to take full advantage of state-funded services. The efficiency gained by integrating information across the state can make a true difference for citizens, drive significant service improvements, and improve operational efficiency for the state.

Information Centric Approach for State Government Operations

Conclusion

Digital transformations are raising citizen's expectations. Citizens are demanding service levels equivalent to, if not better than, the experiences delivered by leading retailers and other customer-focused businesses. At the same time, state governments are facing budget constraints and looking for ways to do more with less. By mastering data, states can address their own needs for more efficient, cost-effective government while greatly improving the citizen experience. For government agencies that require assistance in developing or implementing an integrated information model, Guidehouse can help you through the complexity. We have extensive experience in working with state and local governments to develop integrated information models that drive more citizen-centric service. Much of the cost involved in developing an integrated information model can be linked to ongoing transformation initiatives. Most states are already implementing some or all of the workstreams we have described, but many of these efforts are piecemeal. By redirecting existing funding toward the development of a coordinated strategy, states can develop integrated information models without incurring a significant additional expense. For state government leaders searching for ways to improve performance, an investment in mastering data can yield substantial returns—for the state and the citizens it serves.



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About Guidehouse

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