

**HOW FEDERAL, STATE,  
AND LOCAL AGENCIES CAN  
DRIVE MISSION IMPACT  
THROUGH DATA**

SOLUTION PARTNERSHIP WITH:



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1

# INTRODUCTION



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## What does Strategic Portfolio Management look like in the Fed Gov?

Many government agencies struggle with accessing data in legacy applications, siloed systems only used by one department in an agency, or disparate systems created to meet one specific need within an agency.

To address the inefficiencies that arise from disparate and disconnected data lakes, Congress passed [The 21st Century Integrated Digital Experience Act \(IDEA\)](#) in 2018. At its core, IDEA challenges federal governmental agencies to create data-centric organizations that allow their local, state, and federal agency customers to make data-informed decisions using all available data sources independent of where, how, and in what format they're stored.

By leveraging tools like the Data Cloud from Snowflake, Software AG can help government agencies free their data from legacy applications, silos, disparate systems, or even business partners. Having done so, agencies can meaningfully connect their data sets, speed delivery to customers, and realize significant return on the investments they've made in gathering, analyzing, and storing data.

Software AG's Government Solutions group's mission is to use advanced API technology and IT integration solutions to digitally transform government-produced digital products. Software AG's business partners— Amazon Web Services (AWS) and Snowflake – have the experience, technology, and proven expertise to provide robust solutions that allow agencies to communicate seamlessly by upgrading existing IT systems to government-approved digital products.

# 2

## **CREATING A COHESIVE DIGITAL TRANSFORMATION STRATEGY**





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## Creating a cohesive digital transformation strategy

A digital transformation strategy is the detailed roadmap of how agencies will use the technology and how the changes will improve communication between agencies at all levels. A digital transformation is the integration of digital technologies that enhances communications between agencies, the workforce, and the customers using these agencies' IT systems.

A successful transformation strategy requires two components:

- **Technological expertise**
- **An agency culture receptive and motivated to make changes that improve IT systems**

It is imperative to understand that any agency desiring to transform or update its digital systems must still meet day-to-day operational demands. Therefore, agencies must be active participants in creating their digital transformation strategy.

At the same time, agency leadership must prepare the organization for a cultural change regarding how it views data and IT systems. Digital transformation is not a one-and-done proposition. To be successful, stakeholders must embrace ongoing efforts to maintain data integrity as being mission critical.

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Software AG's objective for digital transformation is to create IT systems that possess a consistent look and feel, whether users are at the local, state, or federal level. To build confidence and strengthen working relationships, Software AG work with an agency partner to choose a small IT system challenge that can be completed quickly.

Once agreeing upon the appropriate digital transformation strategy, Software AG coordinate all required resources to implement and test proposed technology and processes. Software AG, its business partners, and agency participants can then gather feedback and make any refinements in both the solution and its processes.

One reason for "starting small" – besides building deep working relationships with Software AG's agency partners – is to allow Software AG to implement and prove the effectiveness of an IT solution with a first and fast approach.

Building on this success, any upgraded IT systems are better prepared to scale and transform as an agency grows. Most critically, the teams who will work within this environment every day have been an integral part of the solution every step of the way.



**3**

**MAINTAINING AND  
STRENGTHENING  
DATA SECURITY**







## Maintaining and Strengthening Data Security

A cybersecurity-conscious culture is paramount to protecting agency IT systems. Software AG and its business partners are cybersecurity-focused organizations, having achieved and maintained two key Federal certifications.

Those key certifications are:

- **FedRAMP Moderate certification with 325 cyber security controls for federal IT systems**
- **StateRAMP High certification with 421 cybersecurity controls.**

These rigorous certifications verify a Cloud Solutions Provider's (CSP) cybersecurity posture for hosted IT systems, whether residing in the cloud or an on-premises environment.

Working with a FedRAMP-certified Cloud Solution Provider (CSP) like Software AG provides agencies with a streamlined implementation process. In addition, FedRAMP approval allows security authorization of an IT solution to be reused across federal agencies. Other agencies benefit from much of the work already done from the previous authorization. Finally, Software AG-approved IT solutions reduce any Authority To Operate (ATO) timelines.

FedRAMP approval, coupled with an IT transformation platform like Alfabet and the use of an Architecture of Integrated Information System (ARIS) business process management tool, allows agencies to maintain documented business processes and data that can be used to support future IT projects. Smooth integration of these two applications is pivotal in Software AG's ability to quickly develop future IT systems by reusing approved artifacts.

# 4

## **OVERCOMING DATA ACCESSIBILITY VULNERABILITIES AND CHALLENGES**





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## Overcoming Data Accessibility Vulnerabilities and Challenges

One of the challenges of transforming older IT systems is accessing legacy data stored in outdated technology systems.

Whenever accessed, legacy data immediately enlarges the attack surface that cybercriminals can exploit. When this legacy data is accessible, an agency's immediate concern should be securing the data and ensuring it meets the compliance standards applied to existing data sets. Outdated security controls, vulnerabilities, and access controls can jeopardize an IT system if these security threats are not mitigated before the legacy data is saved in a modern-day IT system.

Old and unused data also create vulnerabilities. Customer records, emails, spreadsheets, databases, and financial data can all be considered legacy data. Data not regularly used can put a company at significant risk for data breaches which can result in litigation and fines for over-retention of data. In developing data transformation strategies, agencies need to define what types of legacy data they want to maintain.

Any legacy data that can help make an informed decision should be retained, and legacy data that keeps a business in compliance legally or for a specific period is also valid data that must be properly preserved. As such, prioritizing what legacy data to keep and what to destroy appropriately is essential in managing legacy data.

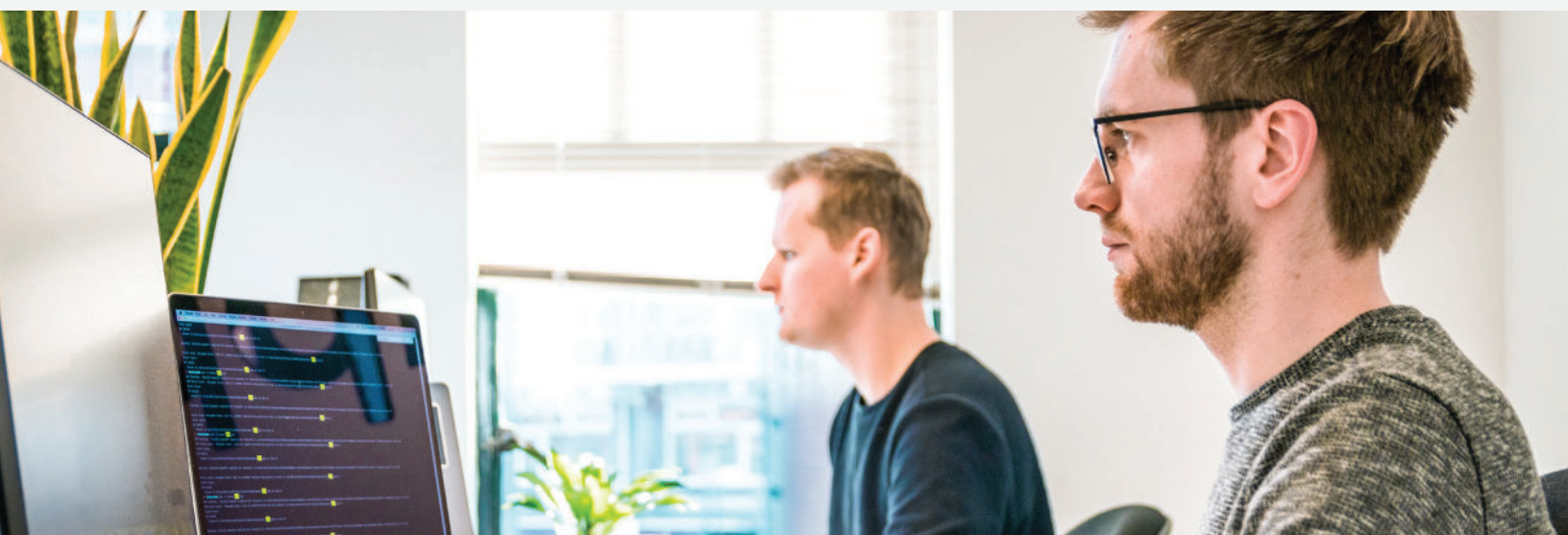
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Additional challenges are presented by data structure and location. For many agencies, most data is saved in an unstructured format in PDF files, word processing documents, emails, survey responses, and audio or video files. The same concept can be applied to semi-structured data in log files, social media posts, graphs, and XML or JSON files. Unstructured and semi-structured data are untapped resources that contain valuable information that can enhance business operations and decision-making.

However, locating data in siloed IT systems can be challenging, particularly if a department develops an application for a specific use that other business departments are not aware of.

Empowering agencies' data owners and users is critical in identifying how legacy data can improve the agency's business operations. As a result, agency participants must play a critical role in identifying siloed systems. Software AG's ability to efficiently scan locations across networks for siloed data will empower agency participants to identify the importance of the legacy data, then associate it with relevant current data.

Finally, to maintain the quality and security of the upgraded IT systems, agencies must establish a robust data governance program. Without a comprehensive data governance program, the IT systems will slowly degrade, as the data used in these systems are not properly managed for integrity, security, and usability regularly.



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**MAKING DATA MORE  
DISCOVERABLE**





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## Making Data More Discoverable

Data discovery is a challenging process. Agencies may not be aware of unused data sources, which may have been created for a single specific purpose but are sitting unused by, or unknown to, the majority of the agency.

Any discovered data that provides value needs to be assigned a security level. The five security levels for government agencies are Top Secret, Secret, Confidential, Sensitive, and Unclassified data. In some situations, unclassified data can be combined with another piece of unclassified data to make it sensitive data. In that instance, the unclassified data must be assigned a Controlled Unclassified Information (CUI) security level.

In addition, not all discovered data will be useful to an agency. As part of its digital transformation work, the agency staff need to determine how the discovered data can either meet present needs, or add value to other data. If neither condition applies, the data must be appropriately destroyed per cybersecurity destruction procedures and best practices.

Any agency data marked for disposal must be appropriately deleted according to the data's last assigned security level. Some discovered data may be automatically deleted if it has been retained beyond an appropriate timespan, and contains no sensitive information. Other data types with a security level assigned and marked for disposal must adhere to the current disposal procedures. Even physical hardware that stores security-level data must be appropriately destroyed and documented.

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The main reason why data discovery is such a challenge is that it requires the agency's staff to map any discovered data to one or more data sources that benefit an agency's decision-making and overall business performance. Data discovery can potentially take an agency's employees away from their day-to-day duties, impacting their daily business operations.

Despite that, mapping and classifying discovered data is an essential step in the digital transformation strategy. As a result, it's highlighted as a critical path item that impacts daily agency operations. Therefore, an effective transformation strategy plan includes Software AG's work to minimize impact on the agency's day-to-day operations while steadily moving forward as a team to meet the plan's goals and schedule.



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**BUILDING FOR  
FLEXIBILITY AND  
SCALABILITY**







## Building for Flexibility and Scalability

One of the tenets of Software AG's digital transformation strategy is building IT systems that are flexible and scalable as an agency grows, or scaling back services when demand decreases.

As an example:

**[Snowflake's flexible architecture\[4\]](#) is compatible with a wide variety of data formats and easily integrates with popular data analysis tools, allowing Snowflake to analyze data from multiple sources using [StreamSets](#). Snowflake will enable agencies to scale resources to match their data needs without affecting performance, and automatically optimize the use of computer resources based on usage and workload patterns. Snowflake's architecture separates storage from computing, allowing an agency to optimize and manage each separately.**

7

**DRIVING MISSION  
IMPACT THROUGH  
DATA INTEGRATION**





## Driving Mission Impact Through Data Integration

Software AG uses a vendor-neutral approach to digital transformation to integrate leading software solutions. This approach allows Software AG to adapt, test, and implement state-of-the-art technology quickly. Software AG's StreamSets, a cloud-native data integration platform, enables agencies to move and process data across multiple systems via its user-friendly interface that allows users to design, deploy, and manage data pipelines easily.

Modernizing legacy data can be challenging, but the challenge is lessened by using data integration capabilities that help identify value-added data, connecting to multiple data repositories, and building data pipelines that move data quickly and securely from a source to a destination. Additionally, using a no-code/low-code programming platform can ease the burden on application development teams and make it easier and faster to deploy new applications that come online quickly and scale to generate new data sources and repositories.

Agency data owners and users can benefit from a data integration platform with a low-code development environment. A low-code environment helps democratize data integration and accessibility by empowering business process owners and data owners. Deploying a platform with out-of-the-box connectors for common applications, which can graphically map and transform data, helps overcome accessibility challenges that agencies will face.



Software AG's webMethods platform delivers an API-led approach to hybrid integration that helps agency data consumers and IT leaders align with an agency's data strategy. The webMethods platform offers a number of connectivity capabilities.

Those include:

- **300 Connectors, built for popular enterprise applications, making it easy to connect systems without the time-consuming task of creating point-to-point integrations.**
- **Mapping and transformation capabilities to create common data formats from data residing in disparate systems.**

Software AG's core philosophy of a first and fast approach to IT solutions is most impactful when coupled with a committed agency and a number of engaged agency participants in the digital transformation effort.

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Software AG helps you create incredibly connected experiences for your constituents, employees and partners with an enterprise-grade iPaaS that integrates anything, anywhere, any way you want.

To learn more, visit [www.softwareag.gov.com](http://www.softwareag.gov.com)

Snowflake's Government & Education Data Cloud enables data sharing, collaboration, and informed decision-making in the public sector. Organizations can modernize and accelerate cloud migration, as well as collaborate and share data within and across agencies and departments. It also provides public sector leaders with holistic views of citizens, students, and patients and helps prevent and protect against fraud, waste, and abuse.

To learn more, visit: [www.snowflake.com/public-sector](http://www.snowflake.com/public-sector)

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