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# Why State Governments Should Consider Mainframe as a Service



**Atos**

Trusted partner for your **Digital Journey**

# Introduction

For state government agencies that process high-volume transactions, nothing can compare to the power of mainframe computing. Many state government agencies rely on mainframe computers for processing high-volume transactions, including motor vehicle departments, finance, health and Medicaid, social services and tax departments. Yet, mainframes are not without their drawbacks: They are costly to operate, the bulk of personnel with mainframe knowledge are retiring, and many state governments are finding their way to alternative platforms on which to run diverse workloads.

## Should I go?



Many states have begun moving applications off of mainframe platforms as non-mainframe solutions become increasingly available, costs increase around maintenance and many agencies begin to find it increasingly difficult to hire and maintain mainframe support staff, according to a report by [The National Association of State Technology Directors \(NASTD\)](#).

“Existing support personnel are retiring and there is not a lot of mainframe capability in younger age groups,” said Robert Duncan, senior account executive with Atos, a leading provider of information technology services. “Consequently, availability of mainframe resources for state agencies is a real challenge. That represents significant risk to the agencies because they have critical applications running on the mainframe and they need people to support them 7x24.”

As more client agencies abandon mainframes, cost per user will increase, driving even more clients away from the mainframe. In fact, 79% of the states do not see future demand for mainframe power among their agency clients. This raises concerns of “the last man standing” scenario, in which one agency remains as the sole mainframe user, absorbing all the mainframe costs for the state, according to the NASTD report.

# Or should I stay?

Yet, there are reasons that agencies maintain mainframe platforms. According to the NASTD survey, 95% of survey respondents point to legacy application support as the main reason to retain state mainframe computing power.

"Mainframes have long been viewed as a reliable, available and serviceable platform on which to run core applications and store associated data. But as time has gone on, they have remained untouched, as have the apps that run on them," according to the [Mainframe Modernization Survey 2018](#). "In most cases they are written in legacy languages such as COBOL, PL/I and Assembler, which, if it isn't already, is likely to become a problem in the not too distant future, as the next generation are not learning these languages," the survey states.

Could organizations such as state agencies survive without mainframes? They certainly couldn't survive without the applications that are on their mainframes.

According to the Mainframe Modernization Survey 2018, which polled 500 senior IT leaders across Europe and North America, almost all senior IT decision makers (99%) reported that their organization's mainframe applications are considered important. Not only that, just under 30% say that the applications on the mainframe are mission critical.

Moreover, mainframe processing is critical to the success of customer-facing applications.

"For those businesses using it, mainframe forms the backbone of their digital customer interactions. While mobile and cloud applications get the most attention, nearly all of what they do depends on data and processes living in mainframe applications," according to a [2018 Forrester Research Consulting survey](#) of 160 mainframe developers and decisionmakers. Seventy-two percent of those surveyed say their customer-facing applications are completely or very reliant on mainframe processing.

Further, in coming decades mainframes will continue to play a prominent role in business automation. Mainframe remains an essential environment for business-critical applications in many organizations: More than 70% of all business IT operations happen on mainframes.

Mainframes are open, flexible, and secure and are typically part of total Information and Communications Technology (ICT) service delivery. They can be deployed as stand-alone systems or integrated with other platforms.

# Why agencies outsource their mainframes to Atos



## Focus on core business

- Unburden resources, prepare for digital transformation
- Innovation, make optimal use of platform capabilities



## Continuity

- High availability, graying of specialized staff, access to SMEs, compliance



## Flexibility

- Seamlessly scale up and down, pay as you go
- CapEx -> OpEx



## Lower TCO

- Size does matter in mainframe
- Lower price per MIPS, usage-based charging



## Transition and service delivery

- Low risk: excellent record as a reliable mainframe service provider conducting many migrations without business disturbance
- High customer satisfaction



# Drive new and agile solutions with mainframe key performance indicators

Despite its reputation as an old platform, mainframe powers a critical portion of applications that help improve the customer experience. Government agencies, businesses and providers of mainframe services must implement modern tools and processes to make mainframe development a driver of quick and efficient high-quality applications. One critical element of business modernization is a robust program of key performance indicators (KPIs) designed to focus firms on the metrics that will truly increase quality, velocity, and efficiency of development, according to a [2018 Forrester Research Consulting survey](#).

To succeed in the digital age, states will need to manage increasing workloads with fewer workers. To do this, they must bring greater focus to velocity and efficiency of mainframe development and leverage KPIs and metrics as workforce skills gaps expand.

## The increasing need for mainframe as a service

With legacy applications to maintain, mainframes are not going away anytime soon. However, mainframe talent constraints are a major concern for the 53% of state agencies still managing their mainframes in-house. This, combined with costs of replacing mainframes outright makes it necessary for agencies to consider outsourcing mainframe operations.

Enter mainframe as a service (MFaaS), which transfers support of the mainframe infrastructure to a capable third party, relieving agencies of these common and very real concerns.

MFaaS, sometimes called mainframe cloud, provides compute and storage capabilities as a cloud service. While agencies still

retain the costs for compute, storage and batch time consumed in normal operations, the MFaaS provider takes care of upgrades and maintenance, which can translate to dramatic cost and risk avoidance for government agencies.

As a result, government workers can focus on business functions rather than on the mainframe infrastructure.

## Atos creates fully-leveraged mainframe data center hubs

Atos' MFaaS solution provides organizations with a fully managed mainframe infrastructure consisting of hardware and operating system (OS) software, transaction processing, database and timesharing software. Key benefits of the service include:



Access to up-to-date mainframe hardware, software and support



Delivery of mainframe functionality where and when customer demand requires

Atos' MFaaS also provides Atos-owned hardware, software and technical support 24 hours a day, 365 days a year. It provides remote access for development, training and additional capacity for applications.

The infrastructure components (hardware and software) are kept up-and-running, up to date, and ready-to-use. Atos monitors performance of the infrastructure and changes the capacity available to deliver the service as required.

"The Atos MFaaS offering is a fully leveraged environment, distributed across two different data centers in Irving, Texas and Charlotte, N.C.," said Barry Robinson, mainframe solution architect at Atos. The mainframe data center hubs share compute capacity, direct-access storage devices (DASD), and virtual tape storage. The service is based on resource-based pricing and offers full failover protection both within the local data center and to the remote data center in case of a disaster event.

The mainframe hub data centers are equipped with the most current mainframe technology and specialty engines to accommodate the latest innovations in areas such as artificial intelligence, blockchain and cloud object storage.

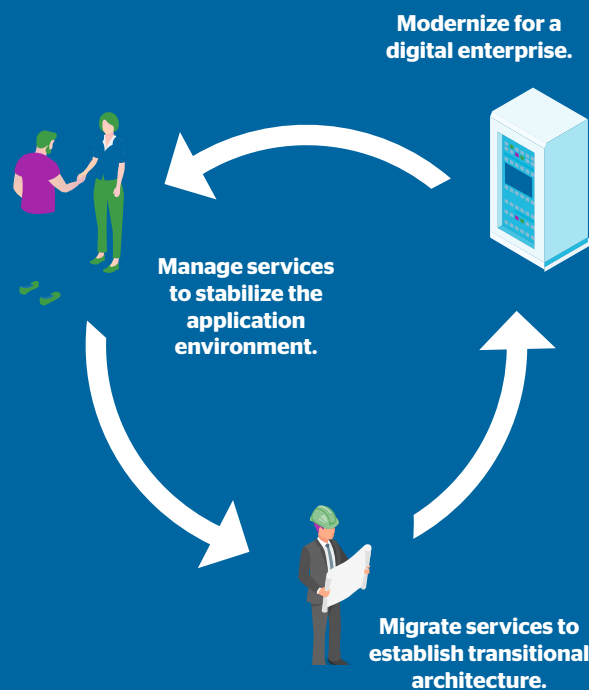
Atos also has compliance capability built into the MFaaS offerings. States have a tremendous amount of compliance responsibility. They must adhere to complex regulations such as the Criminal Justice Information Service (CJIS), Federal Information Security Act (FISMA), Health Insurance Portability and Accountability Act (HIPPA), IRS 1075 and The Payment Card Industry (PCI) Data Security Standard.

"Agencies tell us what they need, and we build it in. Some states want to get out of managing compliance," Duncan said. In addition, state IT decision makers do not have to worry about regularly certifying personnel to manage compliance in order to meet audit requirements.

## Atos Syntel: manage, migrate, modernize

The business landscape is evolving at an alarming pace. Built-to-last legacy enterprise systems struggle to keep up with the pace of change. Therefore, to maintain a competitive edge, it is important to revive, re-host and reengineer legacy systems. Modernizing critical IT systems could mean a huge investment. Atos Syntel's legacy modernization solution – Manage, Migrate and Modernize (MIII) – enables state agencies to modernize their IT systems with minimal investment.

Atos Syntel's legacy modernization services transform businesses into digital enterprises with loosely coupled, flexible, service-oriented integration and accelerators. Atos' legacy modernization services can help state agencies transform while they continue to perform. The migration and modernization framework makes an IT portfolio agile and robust enough to scale up and match the demanding business needs under IT governance.



# MFaaS allows for the mainframe to modernize

As government agencies and enterprises modernize their IT infrastructures to offer better services to constituents or customers in a rapidly changing digital world, how does the mainframe fit into present day modernization efforts?

As mainframe workloads increase, driven by modern analytics, blockchain, and more mobile activity hitting the platform, customer-obsessed companies and organizations should seek to modernize application delivery and remove roadblocks to innovation, according to the 2018 Forrester Research Consulting survey.

With modernization in mind, Atos continues to provide and develop mainframe services, as well as working to continue optimizing the pricing and performance of mainframes. Currently, Atos is developing services including Linux on IBM z, Big Data analytics, blockchain, mobile on z and machine learning initiatives.

## Enrolling in the Atos Mainframe Academy

Atos addresses the mainframe expertise shortage by teaching prospective candidates about how to manage mainframes. Most universities and colleges discontinued mainframe curricula in favor of x86 computer platforms to offer candidates a quicker path to careers.

Atos has developed an internal training program for a long-term career path utilizing multiple training providers, along with leveraged training from 3rd party software vendors. Additionally, educational content from 3rd party software vendors is collected and used as additional study materials.

Atos can develop new mainframe talent from a global resource pool and ensure candidates are educated in all technical aspects of mainframe engineering. Graduates both understand and can observe best practices to ensure that mainframe operations are always highly efficient.



# The bottom line in mainframe as a service

With many legacy and critical business applications still living on the mainframe – and unlikely to move anytime soon – agencies shouldn't write off mainframes just yet.

Instead of spending large portions of limited budgets nursing aging mainframe computers along, moving to an MFaaS offering can prove a viable option for many state governments. MFaaS provides the benefits of a mainframe computing platform without the responsibility of keeping the hardware up to date or training staff, allowing governments to get back to what they do best: Serving their citizens.

Atos has extensive experience in mainframe services, holding a market-leading position in Europe and North America. With over 40 years of experience, Atos is strategically positioned to provide flexible solutions to meet varying requirements, as well as improve total cost of ownership.

Atos MFaaS can offer state governments big iron without big headaches. Talk with Atos today, and begin to reap the rewards of mainframe computing delivered as an efficient, modern service.





# Case Study: MFaaS slashes state agency mainframe costs

With the aim to beef up security and cut costs, IT managers at a state technology agency recently sought to refresh their mainframe environment from one that had been in place for nearly a decade. As the lead IT agency for the state, it provides shared tech services (using mainframes) to other government organizations across the region. It also provides mainframe services to the state's residents, including tax submissions and Medicaid/Medicare health reimbursements.

With the contract up on its current mainframe service, which contained crucial citizen data, officials wanted to reduce mainframe costs, improve security and add flexibility around pricing.

Atos' MFaaS offering allowed the IT agency to do just this while remaining compliant with federal government regulations, including the Federal Information Security Management Act (FISMA), a stringent security regulation.

"The state was outsourcing but did not receive any relief on costs," said Robert Duncan, senior account executive with Atos, a leading provider of information technology services. By turning to Atos, IT officials refreshed their entire mainframe environment, introducing encryption into the mainframe environment and improving security. Atos provided a flexible pricing model along with features that allow the state agency to make decisions that are best for the business.

With crucial personal data stored on the mainframe, the state sought out a mainframe service that could comply with stringent regulatory requirements and be delivered entirely onshore. It also needed to design a system with its multi-sourcing service integrator in order to integrate service desk tooling, alerts and manual tickets into a third-party service desk system. Additionally, the state had to integrate chargeback reporting and service-level agreement information into the new mainframe system.

Finally, it would require extensive work to migrate or replace its existing mainframe software.

The agency turned to Atos, which evaluated the existing environment and determined that the mainframe's MIPS could be cut in half, from 4,000 to 2,000, and the number of logical partitions could be reduced, greatly reducing software and operating costs.

Both the mainframe and the agency's storage solutions were completely refreshed, improving uptime, support costs and encryption at rest. Ultimately, the IT agency was able to improve security and glean more than \$70 million in savings over its previous system.





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# About Atos

Atos is a global leader in digital transformation with 120,000 employees in 73 countries and annual revenue of € 13 billion. European number one in Cloud, Cybersecurity and High-Performance Computing, the Group provides end-to-end Orchestrated Hybrid Cloud, Big Data, Business Applications and Digital Workplace solutions through its Digital Transformation Factory, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting-edge technologies and industry knowledge, Atos supports the digital transformation of its clients across all business sectors. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos Syntel, Unify and Worldline. Atos is listed on the CAC40 Paris stock index.

Find out more about us

**atos.net**

Let's start a discussion together



To learn more about Atos' security solutions:

<https://atos.net/en/products/data-center-applications-transformation/it-modernization>

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