

8 Business Drivers Motivating Mainframe Migration to the Cloud With AWS

How OpenFrame and AWS help businesses achieve their goals

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AWS Migrating Using OpenFrame

Rehosting moves existing mainframe applications to x86 distributed systems. The migration starts with a source code analysis by TmaxSoft that sets the stage and uncovers performance improvement opportunities. TmaxSoft's advanced automated migration tools move the code to a distributed environment. There is no reformatting required, and data and code remain unchanged, thereby retaining business logic and end-user experiences. An extensive set of tools is available to move mainframe data to an isolated database tier that supports industry-standard SQL databases. When your distributed system is on AWS, you can automatically scale resources to match user demand and integrate with new AWS services like CloudWatch, RDS, S3 and EMR. After the migration to AWS is complete, you can access mainframe data in a relational datastore with existing data analytics tools. You also have the option of supporting mobile with presentation tools that address the application layer.

Why Cloud? Why Now?

For decades, most large-scale companies have used mainframes to host and run the software applications that make up their legacy systems. Often these mainframe computers and their applications are inherited from mergers and acquisitions, or from deferred IT investments. Today, it is estimated that more than half of core business processes may still run on a mainframe system. But maintaining and relying on these often-antiquated applications pose cost and modernization challenges. Organizations are torn between the need to manage costs while maximizing the value of their mainframe. This leads them to ask, “If our system is not broken, why fix it?” But these companies are finding the status quo increasingly challenging to maintain, and are merely putting off the inevitable. Failure to modernize an obsolete system becomes an increasing liability over time, leading to ever-escalating costs and the inability to take advantage of newer technologies. This puts an organization at a competitive disadvantage—a disadvantage that will only continue to grow.

By migrating some or all of their digital assets to the cloud, businesses can achieve transformational results. They can move and innovate faster, modernize aging infrastructure, scale globally, get better insights from their data, and restructure organizational models to create better customer experiences. Over its 13+ years of experience helping thousands of organizations successfully migrate to the cloud, AWS has observed eight business drivers that emerge as the most prevalent motivators for migration.

COST REDUCTION

Business Driver 1: Cost Reduction

Mainframe migration has been proven to dramatically reduce infrastructure and operating costs. For example, for the financial services arm of a global conglomerate, the costs of running a portfolio management system fell by 66% after rehosting. You can reallocate the saved costs to innovation, such as replacing legacy apps with more flexible, reusable, and modern ones that can deliver new customer experiences. With moving to cloud, you can have a more flexible cost model such as pay-as-you-go and subscription based models.



50% to 75%
*annual cost reduction per
customer*



12%
*Lower on AWS vs.
multi-cloud customers*

AGILITY & STAFF PRODUCTIVITY

Business Driver 2: Agility & Staff Productivity

In an age when digital disruption is the order of the day, business agility is how the world's most successful companies thrive. An agile and nimble business that can change on a dime or deliver performance and results as soon as they're required is able to provide customer and user preferences, expectations, and satisfaction. Business agility and innovation go hand in hand, and they can even drive each other. Innovation offers agility and agility inspires innovation. For example, responses to a survey indicate that customers would like the option to communicate live with a customer service representative, so a company integrates video chat into the next iteration of its website. Or an app that makes it possible to apply for a mortgage in less than 15 minutes enables a company to use the time saved from not processing the applications manually to offer insurance or auto loans which is a key component of successful innovation and business..

Due to the limited resource of legacy systems' skills, new talent will be required to exploit the latest technology such as AI and machine learning, robotic process automation, IoT, and big data to deliver innovation and agility without affecting performance. Open systems are one way to deliver a nimble tech stack and another way is the cloud. A third way is the combination of open systems on the cloud.



Agility

37%

Decrease in time to market



Staff Productivity

62%

better IT staff productivity

IMPROVED SECURITY & OPERATIONAL RESILIENCE

Business Driver 3: Improved Security & Operational Resilience

Do you think mainframes systems are highly secure?

- Mainframes are an integral component of large IT infrastructure, handling 68% of the world's production IT workloads. One reason for their popularity is their built-in advanced security features.
- Resource Access Control Facility (RACF) is a tool for managing user access to critical resources and is an add-on tool which provides security for mainframe systems
- Exposures increase the risk of breaches, rising Total Cost of Ownership (TCO), potential outages, and compliance issues.
- Without dedicated solutions, secure file transfers are not only difficult to set up but also inefficient - using costly CPU cycles, increasing the operating and administration costs, complexity, time delays, and potential errors.

Migrating and modernizing with OpenFrame and AWS improves security to help protect against cyber attacks, define and manage access policies with TACF, RACF equivalent on OpenFrame, and prevent unauthorized disclosure and modification using encryption and policy-driven controls. AWS also helps ensure resiliency, providing high availability and high performance with virtually unlimited failover capacity.



43.4%
fewer monthly security
incidents



7x
less downtime

Hardware/Software End of Life

Business Driver 4: Hardware/Software End of Life

Many organizations migrate to AWS due to the end-of-life (EOL) of their hardware/software licensing and/or support. These companies see the cloud as an opportunity to improve depreciating capabilities and to end or shorten refresh cycles.

OpenFrame from TmaxSoft is the most complete mainframe rehosting solution in the market. It enables you to move mainframe workloads to open system environments, with little or no change to existing legacy program business logic. You save on costly mainframe contracts, more effectively leverage critical data, and gain a more flexible, modern and transparent environment.

Migrate mainframe based environments to AWS and achieve



Support
at a lower cost

36% Savings
using AWS over three years, by
right sizing instances with
Migration Evaluator

Up-to-Date
Software

DATA CENTER CONSOLIDATION

Business Driver 5: Data Center Consolidation

Your IT department should not be in the business of managing data centers — it should be in the business of delivering value to your organization. The way enterprises own, manage and utilize data centers will continue to evolve. Is it smarter to keep workloads in your own data center or utilize a managed service provider's data center? What type of hosting model are you currently maintaining? What type of cost consumption model are you currently utilizing? Organizations managing their own data centers are often challenged with fluctuating capacity, and paying for it, regardless of actual consumption. The costs for maintaining mainframe data centers is high along with longer disaster recovery cycles and procurement processes as compared to cloud deployments. Without the right hybrid migration strategy, you will miss opportunities to consolidate and optimize applications and services, losing out on savings and increasing risk.

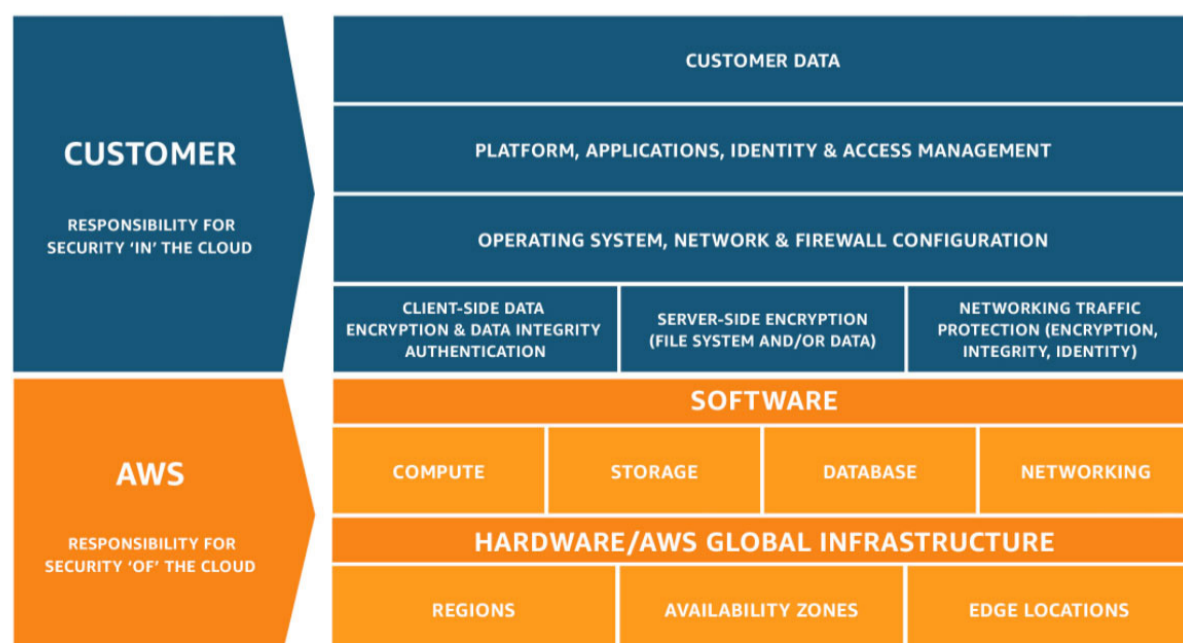


DIGITAL TRANSFORMATION

Business Driver 6: Digital Transformation

Companies don't pursue digital transformation for the fun of it. Transformation, after all, is a slow, amplified version of change—and change hurts. They pursue digital transformation to avoid financial ruin. Whether such ruin comes quickly or slowly is beside the point. Those who fail to modernize will, in due time, fail to win and retain customers.

And where will all those customers go? To competitors, who have modernized and are delivering experiences that meet modern expectations. Digital transformation is thus critical to staying competitive. No less critical is software delivery performance. Software powers the world. You cannot digitally transform without transforming how you build and deliver software. Organizations can spend less time managing data centers and more time running their businesses by migrating to AWS with OpenFrame.



Mergers & Acquisitions

Business Driver 7: Mergers & Acquisitions

When OpenFrame customers choose to migrate to AWS, they gain access to a global network of data centers – enabling rapid, strategic scalability with its multiple global regions and availability zones.. AWS also makes it easier to integrate digital assets, shortening and streamlining M&A procedures.

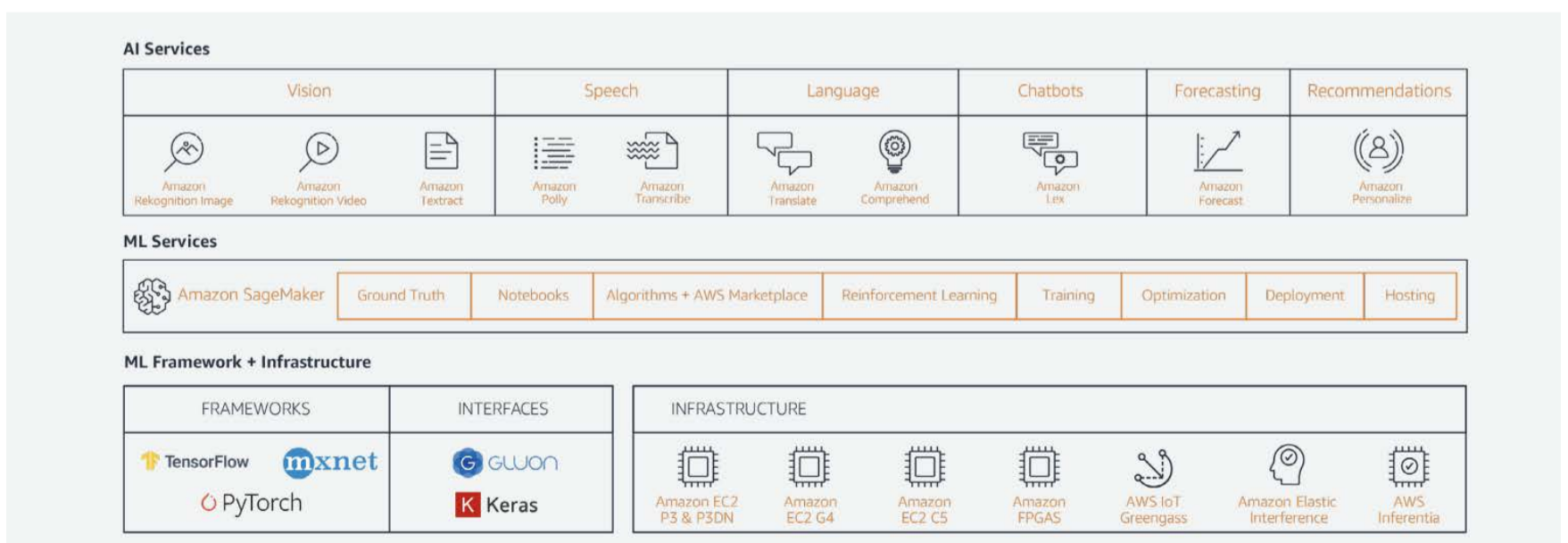
[Explore the full breadth and depth of AWS Global Infrastructure](#)



NEW TECHNOLOGIES

Business Driver 8: New Technologies

Migrating to AWS with OpenFrame is a more economical and practical solution for meeting the data storage and computational requirements of emerging technologies such as artificial intelligence/machine learning (AI/ML) and Internet of Things (IoT). Data analytics is critical for businesses to gain a competitive advantage. Mainframe proprietary storage solutions such as virtual tape libraries (VTLs) hold valuable data locked in a platform with complex tools. This can lead to higher compute and storage costs, and make it harder to retain existing employees or train new ones. When mainframe data is migrated to a stored in a cloud storage service, however, it can be accessed by a rich ecosystem of applications and analytics tools such as Amazon Athena and Kinesis for interactive analysis, Amazon EMR for big data processing, etc..



CASE STUDY

COLONY BRANDS

The Solution

Moving to the cloud would also eliminate high mainframe and infrastructure costs. The long-term goal was to shut down the mainframe completely. After weighing several options, including application rewriting, SC Data Center, Inc. decided that rehosting their mainframe was the best choice. It would allow them to move legacy apps to the cloud without a major rewrite that could affect business logic and code. It would set them up to re-architect and create new apps in the new cloud environment for the future.

The company also needed reliability and availability for all the processing, especially the real-time credit approvals. A deciding factor in their choice of OpenFrame was the Active-Active Cluster, which provided the reliability and availability SC Data Center, Inc. needs to deliver efficiency, performance and speed. The project scope for rehosting with OpenFrame involved moving all of the client's legacy applications to the AWS cloud. This included interpreting the mainframe's 3,685 COBOL applications and the 327 mainframe assembler programs, migrating the mainframe's 867 middleware and on-premises CICS transactions and 5,766 batch processes, modernizing 4,741 datasets and 400 datacom tables and installing OpenFrame operation and management functions in the new environment. In addition, TmaxSoft teamed up with the customer and vendor to enable the Assembler-based proprietary software to run flawlessly in production.

CHALLENGES

- Six Core Business Systems running on IBM Mainframe
- Closed mainframe environment that prevented innovation and efficiency
- Legacy apps that were affecting performance
- High infrastructure and mainframe costs
- Reliability and availability concerns

RESULTS

- 75% annual cost reduction
- Increase in ROI compared to mainframe
- Matched the historic performance delivered with the mainframe technology
- High availability and reliability
- Has the infrastructure for innovation and business agility
- Were able to build a fully integrated automation solution to streamline customer data management



AWS & OPENFRAME

The Best Choice for Migrating Your Mainframe

TmaxSoft is a global software innovator focused on data management, middleware and Mainframe modernization, with solutions that offer enterprise CIOs viable alternatives to support their global IT powerhouses and drive competitive advantage. TmaxSoft has based its growth on a strong foundation of research and development, along with a sustained commitment to innovation. Today, we work with over 2,000 customers around the world. TmaxSoft was founded in 1997, and today we have over 1,700 employees in 20 strategic centers around the world.

- **OpenFrame** is a proven solution for quickly moving legacy mainframe applications and data to an open system environment with a significant reduction in annual run costs and little to no changes in the business logic.

Ready to get started?

Accelerate end-to-end adoption of AWS with OpenFrame:
<https://www.tmaxsoft.com/products/openframe/>

