

# Mainframes Are A Critical Part Of Modern IT Strategies

Unparalleled Processing Power And High Security Make The  
Mainframe A Strategic Component Of Hybrid Environments

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## Mainframes As A Path Forward

Is the mainframe a modern application platform or a dinosaur of an era gone by? To further understand current perceptions about the mainframe's place in the enterprise and subsequent plans for its role in future IT strategies, Forrester conducted five qualitative interviews and surveyed 261 business and IT decision makers in the US with authority or influence over mainframe strategy.

We found that most view their mainframe as a strategic component to hybrid cloud environments and plan to keep key workloads on mainframes given their high processing and transactional capabilities and unmatched security. Investment and interest in mainframes is also on the rise as leaders across industries understand and gain value from its enduring role in today's technology landscape.

## Key Findings



Mainframes are mission-critical, with growth in mainframe usage expected to increase over the next two years — including the amount of data and applications on the mainframe and transaction volume.



Most professionals (74%) see the mainframe as a long-term strategic platform. As a result, most are actively upgrading their environments despite challenges acquiring the right staff and skills.



Companies need improved operational efficiency, security, and compliance to meet business needs and operate in a hybrid environment. The mainframe supports these capabilities.

## Mainframe Usage Increasing For Most

Mainframe utilization is increasing with expectations for growth across applications and data. Transaction volume is stable or rising for more than eight in 10, and seven in 10 are moving or have moved distributed workloads to the mainframe to harness its processing power, reliability, and data security.

The rising tide of data storage and new applications is lifting interest and investment in all enterprise-scale platforms, including the mainframe. Although more than half are actively planning to replace some mainframe applications with hybrid cloud or on-premises technology, 66% of those respondents said they would never fully replace the mainframe with a cloud-only approach.

The chief mainframe operations leader at a federal government agency said: “I’m not comfortable with losing control of my data. Depending on how valuable your data is to you and your customer base, it should drive some of your decisions as to how much control of your data you’re going to put in somebody else’s arena.”



74%

believe the mainframe has long-term viability as a strategic platform for their organization.

66%

would never fully replace the mainframe with cloud.  
(of those who are actively planning to replace the mainframe with on-premises/hybrid cloud or with public cloud technologies)



“I would say **mainframe is one of our highest priorities**, the primary reason being **most of our business-critical applications or mission-critical infrastructure runs in the mainframe.**”

- VP of security engineering and risk for a financial services organization

## Data Protection And Security Features Spur Mainframe Modernization

Respondents continue to make new investments in mainframe technology across key priorities, which include improving security detection/response, protecting data, and improving operational efficiency.

Data protection and security are critical for companies, and mainframes remain one of the most secure and powerful platforms available. However, as the tech landscape becomes increasingly complex, companies need to ensure the data moving to and from the mainframe and at rest on it is airtight and secure. As a result, companies are focused on modernizing the mainframe toolset (80%), identifying/preventing data breaches (78%), increasing security (73%), and expanding its footprint (70%) in order to meet increased transactional demand and further reduce the risk to data in-flight and at rest.

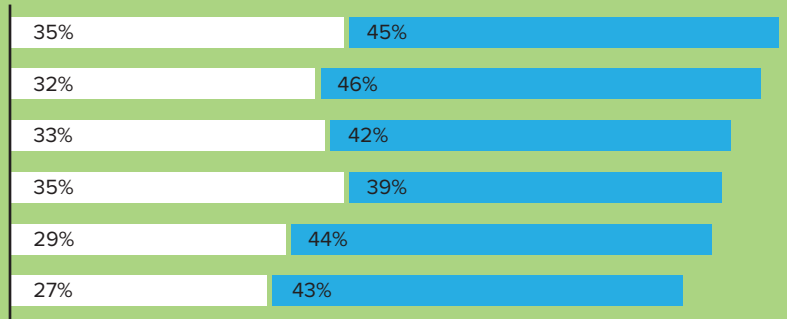


“We do have some data in a public cloud, but not customer information. **Any HIPAA information** is all maintained **on site. Security is huge.**”  
 – Director of IT at a healthcare organization

### Top 6 Mainframe Priorities For The Next 12 Months

- Critical priority
- High priority

- Modernizing mainframe toolset
- Identifying and preventing data breaches
- Automating mainframe operations
- Increasing mainframe staffing/skillsets
- Increasing security for the mainframe
- Expanding mainframe footprint

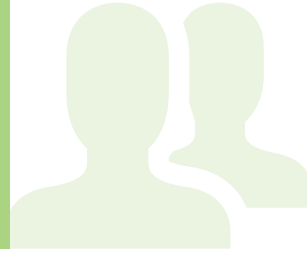


## Mainframe Resources Pose Challenges For Teams

Although many IT leaders can find the mainframe tools they need, challenges around mainframe resourcing (including staffing and funding) are common pain points across industries. More than half of mainframe teams (54%) are underfunded, and a whopping 71% are understaffed. Talent gaps in the workplace push many to train or reskill employees, and 54% will use outside resources to accomplish their mainframe goals.

As the VP of security engineering and risk for a financial services organization noted: “Finding experts is definitely a challenge. Bringing people onboard and trying to train them and bring them up to speed is a long-term investment from a personnel perspective. It takes at least one to two years to bring them up to speed. . . . Mainframe is a niche skill, so it definitely is a challenge.”

### UNDERSTAFFING/ TALENT GAPS



71%

Our mainframe team is **understaffed**.

56%

There are **major talent gaps** in the workforce for skilled mainframe personnel.

### TRAINING AND RESKILLING



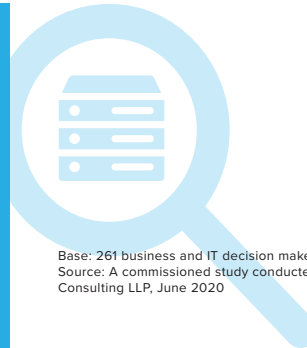
51%

We have the **resources required to train** our staff on the mainframe.

59%

There are **mainframe knowledge/skills gaps** among our own mainframe personnel.

### OUTSIDE RESOURCES



54%

We **plan to use outside resources** to accomplish our mainframe goals in the next three years.

## Mainframes Are Here To Stay For Most Organizations

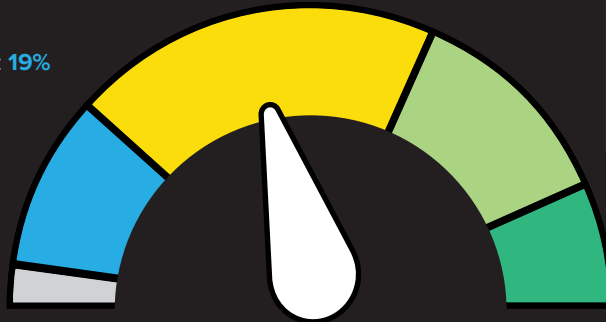
Three in four professionals (74%) see the mainframe as a long-term strategic platform, despite challenges with managing perceptions about the technology. Most respondents indicated they are not planning to fully retire the mainframe, and nearly eight in 10 said the mainframe is perceived as either modern or mature.

For most, the use of the mainframe will never disappear, despite the belief that mainframes are being eliminated as the demand for cloud-based services grow. As the VP of security engineering and risk for a financial services organization noted, “Our tech leaders value mainframe technology more and are looking at it as a modern technology – partially because there are a lot of modernization efforts going on.”

### Mainframe Perceptions

“Which best reflects the way the mainframe is perceived at your organization?”

- It is antiquated technology from the 1960s that should be retired: **5%**
- It is legacy technology, but we are keeping it going: **19%**
- It is mature technology that provides good value to our business: **40%**
- It is modern, but we haven't kept pace with the latest updates: **24%**
- It is a modern cloud platform: **13%**



“There is a perception that the mainframe is too expensive. **The cost perception is very narrow-minded** because they don't really look at the total cost to support a distributed environment.”

- Director of IT at a healthcare organization

## Mainframes And The Hybrid Cloud Future

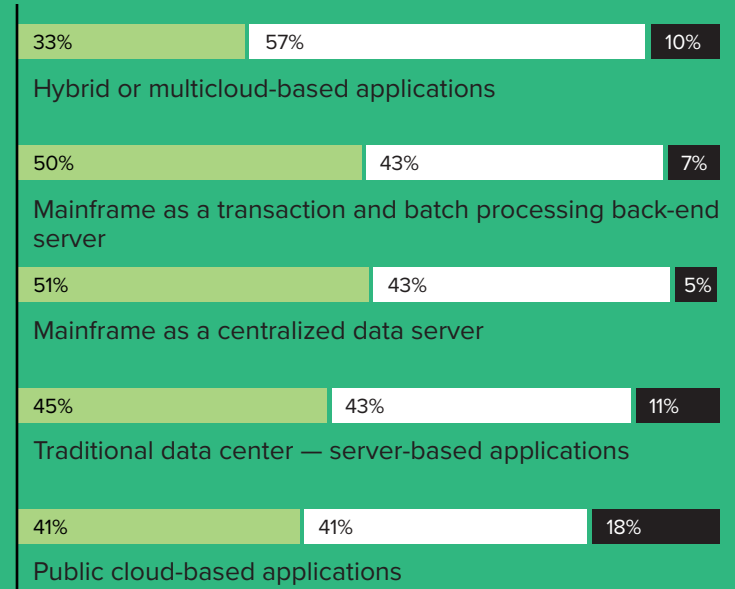
Companies recognize mainframes are an integral part of their technology landscape. In fact, 91% identified expanding mainframe footprints as a moderate/critical priority in the next 12 months. As workloads on other platforms continue to increase, mainframe workloads are also rising. In two years, respondents expect a 12% increase in applications and a 9% increase in data residing on the mainframe as organizations shift to a hybrid IT environment.

The VP of security engineering and risk at a financial services organization provided an example about mainframe workloads increasing at their company. Every time there is a release in a new customer-facing feature in mobile or web channels (like smart banking), mainframe usage increases: “Our transaction volume has increased quite a lot over the past five to 10 years. It’s the result of adding more users, adding in more processes that revolve around data, and implementing new solutions for various applications . . . such as smart banking.”

## Technology Implementation Status

“What is your company’s current implementation status when it comes to the following technologies?”

- Widespread deployment
- Limited deployment (by application, use case, or business unit)
- Planning to use



## Mainframes Offer The Reliability And Efficiency That Companies Need Most

Mainframe decision makers note that the top benefits of keeping and adding workloads on the mainframe include things companies need most: improved operational efficiency, security, and compliance. The unmatched processing and transactional power that mainframes provide — plus the stability, reliability, and unparalleled security built into the mainframe — ensure its place in the future of managing workloads. The chief mainframe operations leader at a federal government agency said one major benefit is that “mainframes don’t have a single point of failure. . . . I can lose a piece of it and still be able to operate and dynamically shift my resources to another place.” Further, the director of IT at a healthcare organization noted the mainframe’s unmatched processing power and transactional capabilities.

### Top 5 Mainframe Benefits

- 1 Improved overall operational efficiency
- 2 Improved security monitoring
- 3 Better adherence to regulatory and privacy compliance
- 4 Well-managed access (authentication and authorization)
- 5 Reduced risk to the business

### Mainframe Processing Power And Security:

“The mainframe is doing exactly what we pay for it to do: reliably crunch large amounts of data.”

- Senior IT and project management director at an energy company

“We process billions of transactions a day on our mainframe. Billions! To do that same thing on a distributed platform, we’d need to build another data center in order to put all the equipment there to make it work.”

- Director of IT at a healthcare organization



## Conclusion

Mainframes are a critical part of future hybrid cloud strategies and environments across industries:

- **Mainframes are the linchpin to hybrid cloud models.** Investment and interest are on the rise as companies validate the mainframe's enduring role in supporting and running modern workloads.
- **Security on the mainframe is unmatched.** As companies invest in new platforms and apps, the reliability, transaction processing power, and data protection mainframes offer against cyber risk is crucial. New features like pervasive encryption and passports provide even greater compliance and control for data in flight and at rest.
- **Talent gaps push companies to seek outside help.** Leaders are seeking qualified candidates and external resources with the right mainframe skills to fill critical gaps.

### **Project Director:**

Emily Drinkwater, Market Impact Consultant

### **Contributing Research:**

Forrester's Application Development & Delivery research group

## Methodology

This Opportunity Snapshot was commissioned by Deloitte Consulting LLP. To create this profile, Forrester Consulting created custom survey questions asked of 261 quantitative respondents and five qualitative interviewees. These respondents were manager-level and up decision makers in the US with authority or influence over mainframe decisions. The custom survey was completed in June 2020.

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## Demographics

### COMPANY SIZE (N=210)

>\$5B: 12%

\$1B to \$5B: 68%

\$500M to \$999M: 20%

### GOVERNMENT TYPE (N=51)

Federal: 57%

State/local: 43%

### INDUSTRY

Energy/utilities: 20%

Financial services/  
insurance: 20%

Government: 20%

Healthcare: 20%

Transportation/logistics: 20%

### RESPONDENT LEVEL

C-Level executive: 20%

Vice president/  
undersecretary: 28%

Director/agency head: 42%

Manager: 10%



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