

Forrester Opportunity Snapshot: A Custom Study Commissioned By Compuware | March 2018

# Modern Mainframe KPIs Are Key To A Successful Digital Strategy

Rethink Mainframe DevOps To Boost Speed And Efficiency

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# Modern Mainframe KPIs Are Key To A Successful Digital Strategy

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## Drive New And Agile Solutions With Mainframe KPIs

The market imperative for outpacing competitors and delivering innovative solutions has never been more evident. While it's long been predicted that the rapid growth of cloud adoption would spell the end for mainframe, in reality mainframe lives on — and grows — as the heart of many businesses. Despite its reputation as an old platform, mainframe powers a critical portion of the customer experience. Since mainframe is not going away, businesses must implement modern tools and processes to make mainframe development a driver of high-quality applications delivered quickly and efficiently. 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.

Compuware commissioned Forrester to explore this situation and how firms approach the challenge of a growing mainframe environment, yet shrinking workforce. Further, we asked these firms how measuring performance in quality, velocity, and efficiency would accelerate their digital business. The demographic makeup of the decision makers we surveyed is as follows:

*Example KPIs offered to survey takers:*

- › **Quality** — number of defects, failure rates
- › **Velocity** — features the development team can deliver in a specific amount of time
- › **Efficiency** — time spent developing, number of defects captured prior to production deployment



### Countries

- › **51%** UK, France, and Germany
- › **49%** US



### Top five industries

- › **9%** IT/high technology
- › **6%** Healthcare
- › **6%** Insurance
- › **6%** Financial services
- › **6%** Retail



### Titles

- › **14%** C-level
- › **15%** Vice president
- › **42%** Director
- › **29%** Manager



### Departments

**100%** involved with mainframe in the departments of IT, enterprise architecture, application development, and operations.

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## Mainframe Workload Increases, Runs Customer Experience

The demise of mainframe is not only exaggerated, but our study found that businesses developing on mainframe are likely to increase the workload in the coming months. The percentage of firms running more than half their business-critical workloads on mainframe will increase seven points in one year.

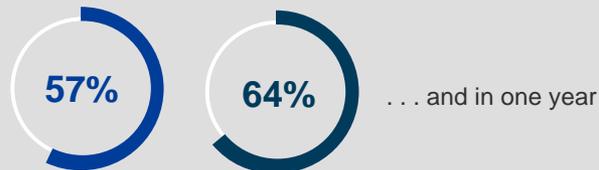
### MAINFRAME PROCESSING IS CRITICAL TO CUSTOMER-FACING APPLICATIONS

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. Seventy-two percent of decision makers say their customer-facing applications are completely or very reliant on mainframe processing.

*As mainframe workload increases — driven by modern analytics, blockchain, and more mobile activity hitting the platform — customer-obsessed companies should seek to modernize application delivery and remove roadblocks to innovation.*

The majority share of critical applications running on mainframe will increase seven points in one year.

Firms running more than half their business-critical workloads on mainframe today . . .



Base: 160 mainframe developers and decision makers at companies in the US and EMEA  
Source: A commissioned study conducted by Forrester Consulting on behalf of Compuware, February 2018

Mainframe processing is critical to the success of customer-facing applications.



**72%** Firms that say their customer-facing applications are **completely or very reliant** on mainframe processing

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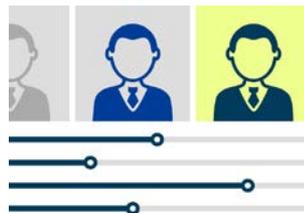
## A Potential Crisis Looms As The Mainframe Workforce Shrinks

Mainframe workload may be increasing, but the generation of developers with the greatest experience has begun to retire. And with the market's focus on hiring for newer coding languages, a shortage in mainframe workers is forming. Our survey found:

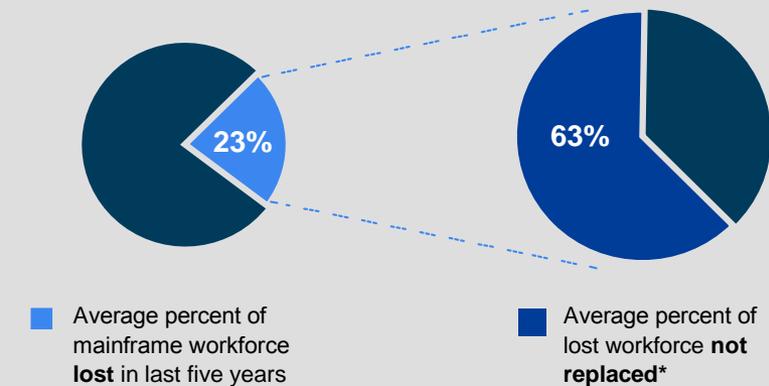
- › On average, firms report losing 23% of their mainframe workforce in the last five years.
- › Of that lost headcount, 63% remains unfilled.

### FIRMS ENCOUNTER OTHER SKILLS-RELATED CHALLENGES

Relatedly, roughly one-quarter of firms report difficulty onboarding new developers and/or difficulty addressing their nonmainframe team's lack of mainframe knowledge. These challenges compound the loss in workers, signaling that not only are positions difficult to fill, but that there is a mounting skills gap among the remaining workforce.



Firms have lost roughly one-quarter of their mainframe workforce, and nearly two-thirds of those positions remain unfilled.



Base: 150 mainframe developers and decision makers at companies in the US and EMEA

\*Base: 144 mainframe developers and decision makers at companies in the US and EMEA who have lost workforce

Source: A commissioned study conducted by Forrester Consulting on behalf of Compuware, February 2018

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## In A Complicated Landscape, Firms Prioritize Improving Quality First

Firms developing on mainframe face a potential crisis if they fail to modernize their strategy and accelerate mainframe development to be as competitive a deployment as cloud.

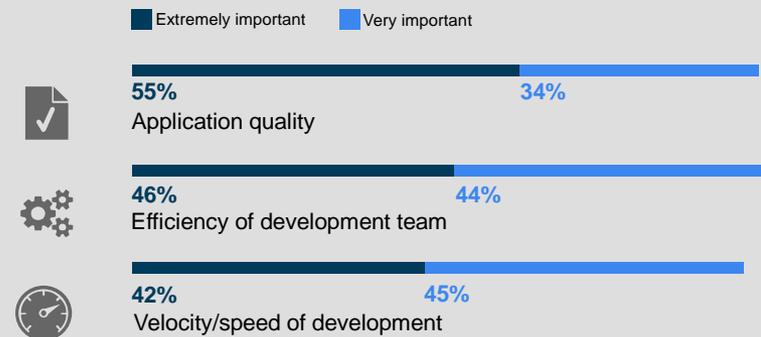
### QUALITY IS OF THE GREATEST PRIORITY TODAY

Decision makers report that while the three areas are generally important, quality is top of mind. Firms must adopt a modern strategy and instead seek to improve quality, velocity, and efficiency simultaneously.

*To optimize mainframe development, firms should apply modern frameworks that give equal priority to quality, efficiency, and velocity.*



### Efficiency and velocity lag behind quality in extreme importance.



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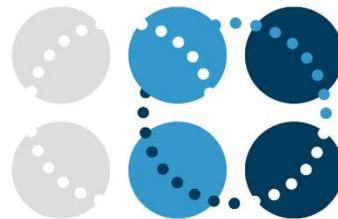
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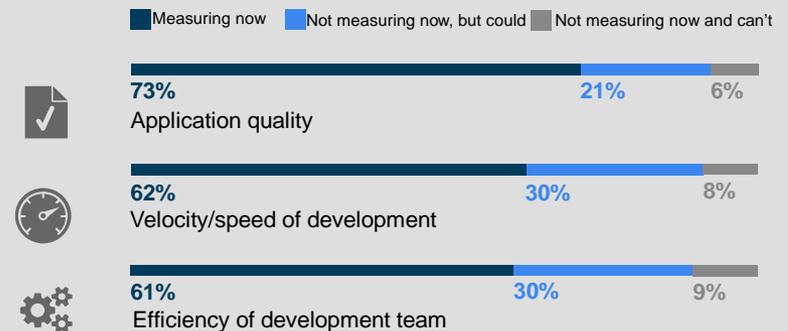
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## Tracking Improved Velocity And Efficiency Takes Backseat To Quality

What firms choose to measure in the form of KPIs determines where they'll focus their efforts. Although firms must accelerate delivery by increasing velocity and efficiency in kind with quality, a staggering 30% of firms could be measuring velocity and efficiency, but choose not to. An additional 8% to 9% are unable to measure velocity and efficiency because they do not have the data or methods to do so.



The nearly one-third of firms that choose not to measure velocity and efficiency will fall behind.



Base: 160 mainframe developers and decision makers at companies in the US and EMEA

Source: A commissioned study conducted by Forrester Consulting on behalf of Compuware, February 2018

Note: Percentages may not total 100 because of rounding.

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## The Shrinking Mainframe Workforce Damages Performance

Although the major focus is on quality, the reduction in mainframe workers has and is expected to damage performance across the board. As a result of a shrinking workforce:

- › Quality and velocity suffer most today.
- › Efficiency will decrease most in the future.

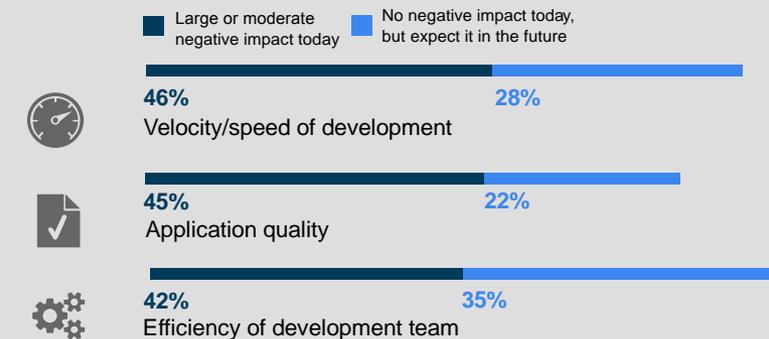
### IN ORDER TO COMBAT MOUNTING CHALLENGES, FIRMS MUST MEASURE AND IMPROVE IN ALL THREE AREAS

Businesses are more focused on quality of mainframe development than velocity and efficiency. This is potentially a relic of a mindset focused on relatively bug-free, but long waterfall release cycles.

However, in order to modernize their strategies, firms must prioritize velocity and efficiency as much as quality. Implementing KPIs that will measure progress and truly drive success in all three areas is critical.



### A reduced mainframe workforce damages all three key areas.



Base: 129 mainframe developers and decision makers at companies in the US and EMEA  
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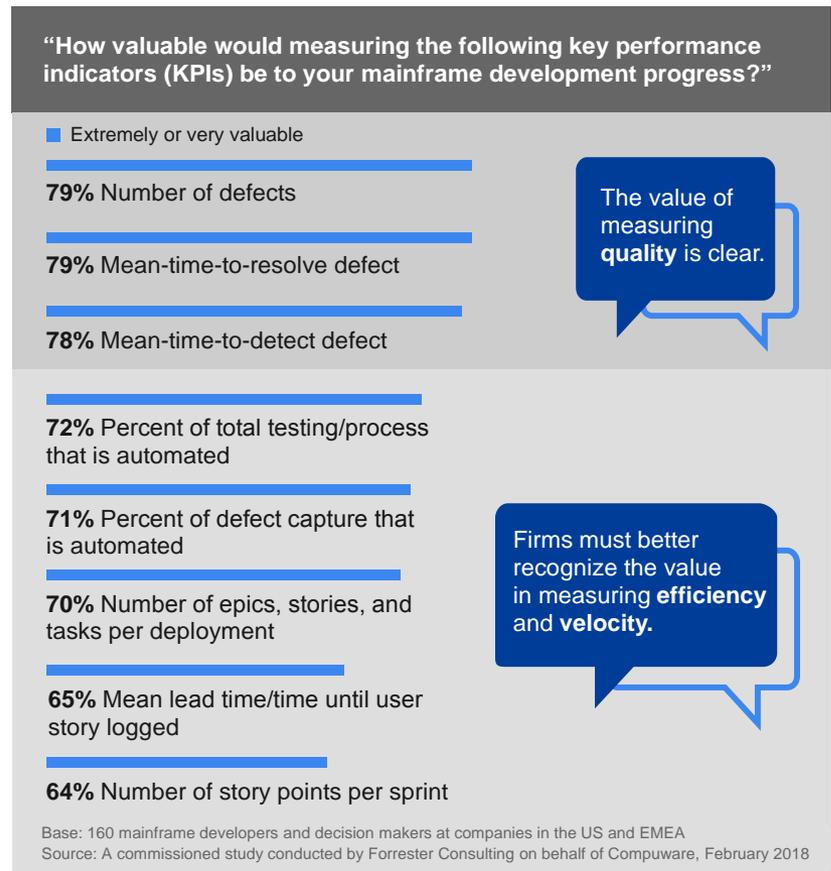
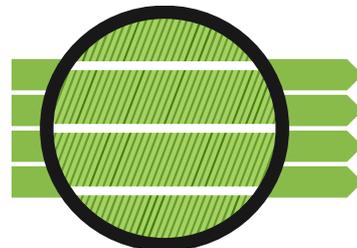
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## Value Of Quality Is Clear, But Firms Must Increase Priority Of Velocity And Efficiency

To succeed in the digital age, firms will need to manage increasing workloads, and therefore increasing development work, with fewer workers. To do this, they must adopt a modern mainframe strategy that maintains quality while increasing the importance of velocity and efficiency. We found:

- › The value of measuring and improving traditional quality indicators is top of mind.
- › Velocity and efficiency indicators lag in importance from where they should be to accelerate performance.

*KPIs like mean lead time, number of epics per deployment, and metrics that drive automation will harness velocity and efficiency, even as the skills gap of the workforce expands.*



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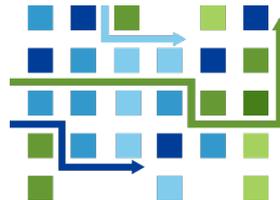
## The Right KPIs Drive Technical And Business Performance

Decision makers agree that measuring strategic mainframe indicators comes with major benefits. Firms that measure and drive performance in the three key areas of quality, velocity, and efficiency expect:

- › Better customer experience.
- › Increased speed-to-market.
- › Increased agility in digital business.

### DECISION MAKERS MUST ADDRESS DISCREPANCIES IN TECHNICAL AND BUSINESS BENEFITS

When asked the technical benefits of measuring KPIs on mainframe, less than one-third reported a reduction in customer-discovered defects. Since 59% say they expect better customer experience, it's clear there is a disconnect from what constitutes improved experience for customers.



Driving performance in quality, velocity, and efficiency means better customer experience and increased speed-to-market.

59% Better customer experience

51% Increased speed-to-market

49% Better able to respond to digital demands

42% Better alignment across IT and business users

41% Increased revenue

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## It Is Business Critical To Focus On The Right Mainframe KPIs

Mainframe is alive and growing at the heart of many businesses. IT decision makers cannot afford to treat their mainframe applications as static environments bound by long release cycles, nor can they fail to respond to their critical dependence on a retiring workforce. Instead, firms must implement the modern tools necessary to accelerate not only the quality, but the speed and efficiency, of their mainframe, as well as draw skilled people to work on the platform. The key takeaways from our study are:

- › A potential mainframe crisis looms as critical workloads increase, but the workforce shrinks.
- › To measure mainframe performance in a complicated landscape, firms today prioritize quality first and velocity and efficiency second.
- › To succeed in the digital age, firms 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.

### ABOUT FORRESTER CONSULTING

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### METHODOLOGY

In this study, Forrester conducted an online survey of 160 US and EMEA organizations to evaluate mainframe development challenges and objectives. Survey participants included decision makers in mainframe development from IT, enterprise architecture, application development, and operations. The study was completed in February 2018.

### Project Director

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