**THE 2018 BMC MAINFRAME SURVEY RESULTS**
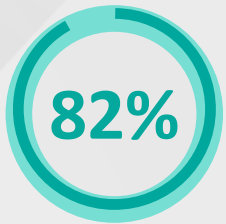
# The Mainframe's Bright Future

# 2018 Mainframe Survey Highlights

## Modernization Continues

**82%** Use **Java** in their mainframe environment

**48%** Practicing **Agile/DevOps** in their **mainframe** environment, **13%** have plans to do so

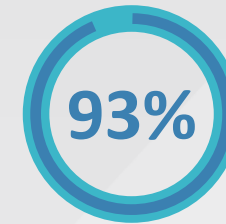## Transformation Underway

**63%** of respondents were **under age 50**, up 10 percentage points from 2017

**23%** of workforce is **female** and **12%** are professionals **under 30**, both are increasing percentages

## Optimism Increasing

**93%** of **executives continue to believe** in the long term viability of the platform. The highest level recorded in 13 years.

Mainframe Platform Strengths of **Availability** and **Security** are increasingly valued

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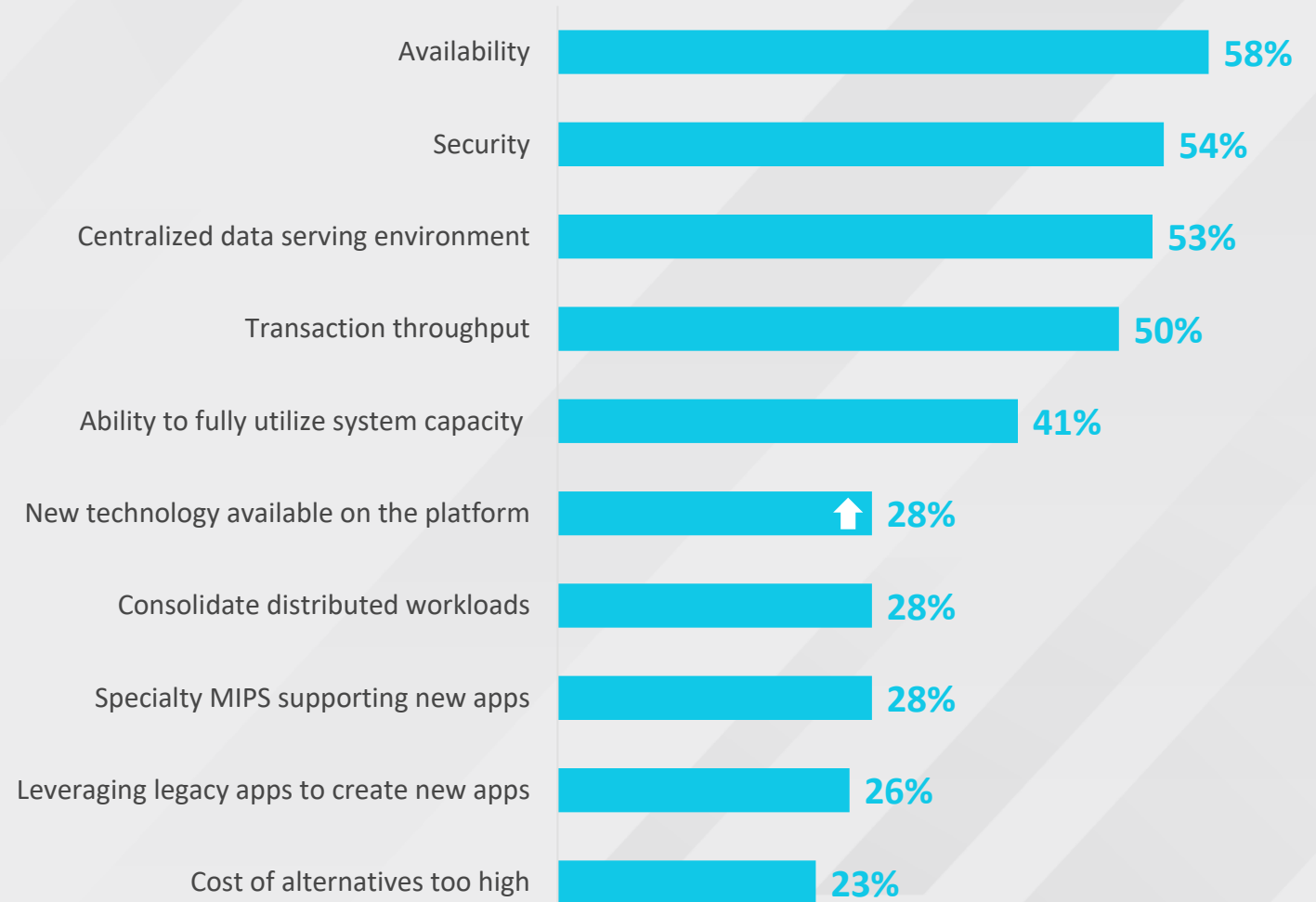# Mainframe Strengths Support Digital Business Requirements

## Digital Business Values the Mainframe's Strengths

**Availability, Security, Data Serving** and **Transaction Processing**

**+** 2018 showed the increasing importance of the mainframe, as almost every area of strength increased in percentage of respondents, as compared to 2017.

**+** Large MIPS shops (10,000+) are very upbeat on these mainframe strengths: availability (72%), transaction through-put (71%), security (69%), and centralized data serving environment (69%).

**Because of these strengths, the mainframe is the most trusted platform to handle growth generated by digital business.**

| | |
|---|---|
| Availability | **58%** |
| Security | **54%** |
| Centralized data serving environment | **53%** |
| Transaction throughput | **50%** |
| Ability to fully utilize system capacity | **41%** |
| New technology available on the platform | ⬆ **28%** |
| Consolidate distributed workloads | **28%** |
| Specialty MIPS supporting new apps | **28%** |
| Leveraging legacy apps to create new apps | **26%** |
| Cost of alternatives too high | **23%** |

Note: Arrow indicates a significant difference at the 95% confidence level

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# Digital Business is Increasing Mainframe Activity Levels

## Changes in Last 12 Months
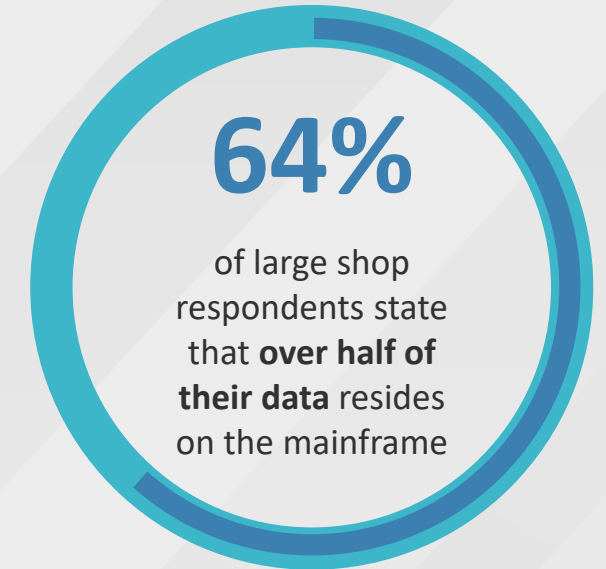
Levels increasing across five key categories



**51%**
of respondents state that **over half of their data** resides on the mainframe
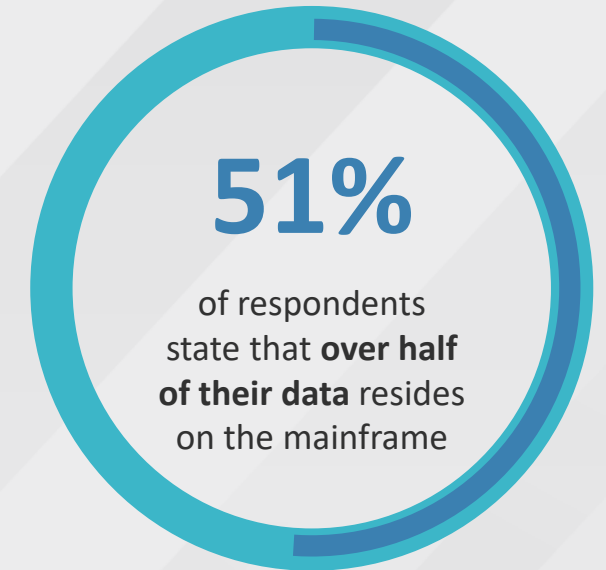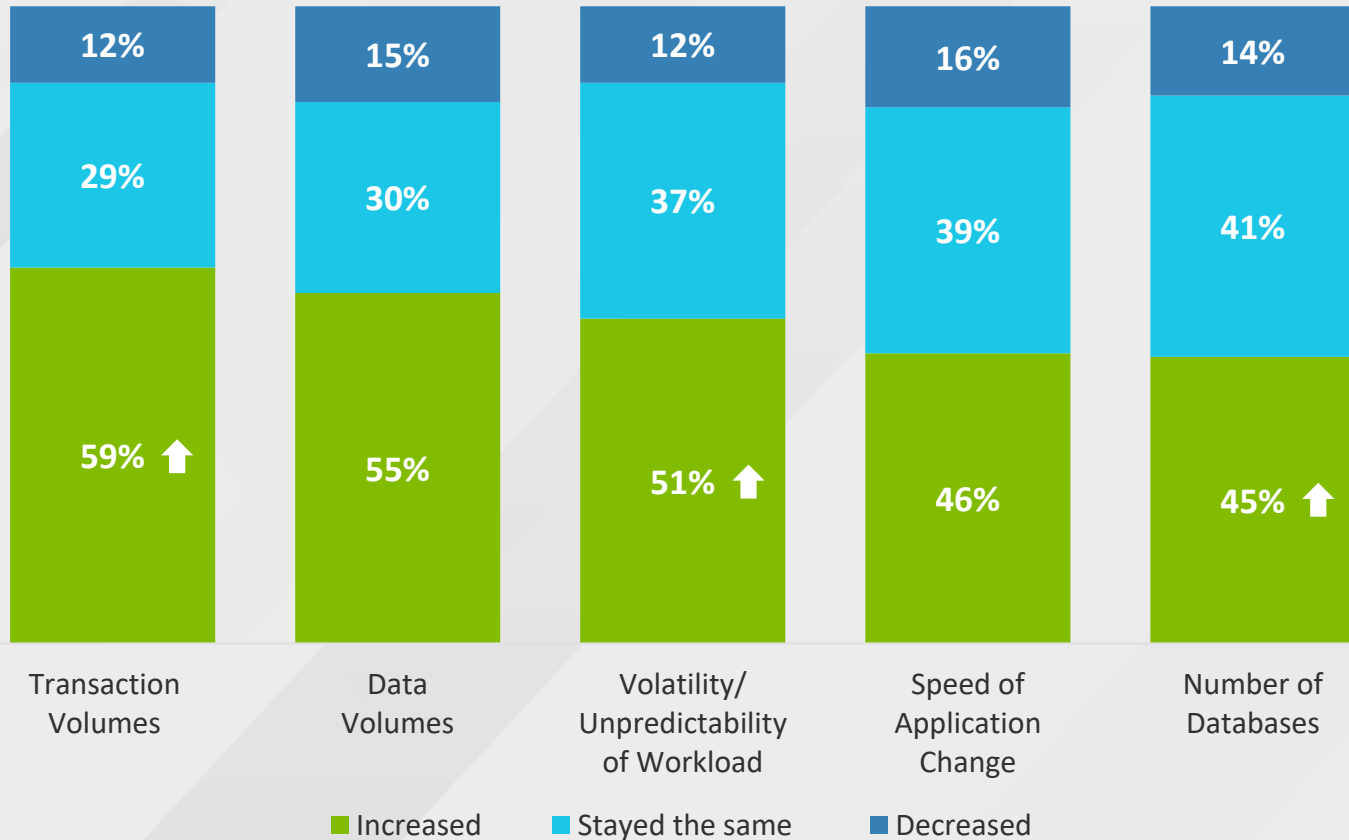
This activity level has driven **60% to have a positive outlook for MIPS growth**, the highest level in three years.

Chart: stacked bar chart with categories:

| Category | Increased | Stayed the same | Decreased |
|---|---|---|---|
| Transaction Volumes | 59% | 29% | 12% |
| Data Volumes | 55% | 30% | 15% |
| Volatility/ Unpredictability of Workload | 51% | 37% | 12% |
| Speed of Application Change | 46% | 39% | 16% |
| Number of Databases | 45% | 41% | 14% |

Legend: ■ Increased  ■ Stayed the same  ■ Decreased

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# Large Shops are Increasing at a Faster Rate

## Changes in Last 12 Months

Large shop changes across five key categories (MIPS base of 10,000 or more)

**Transaction Volumes**
- Decreased: 5%
- Stayed the same: 14%
- Increased: 81%

**Data Volumes**
- Decreased: 8%
- Stayed the same: 13%
- Increased: 79%

**Volatility/Unpredictability of Workload**
- Decreased: 6%
- Stayed the same: 32%
- Increased: 62%

**Speed of Application Change**
- Decreased: 6%
- Stayed the same: 34%
- Increased: 60%

**Number of Databases**
- Decreased: 9%
- Stayed the same: 34%
- Increased: 57%

Legend: Increased | Stayed the same | Decreased

## 64%

of large shop respondents state that **over half of their data** resides on the mainframe

This activity level has driven **70% of large shops to have a positive outlook for MIPS growth**, the highest level in three years.

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# Digital Business Impacts on Priorities

**Top Priorities**

+ **"Application availability"** improvement focus areas include:
faster problem determination, improved automation, visibility into end-to-end performance, and the elimination of planned outages.

+ **"Application modernization"** and **"data recovery"** ranked higher with executives, while technical staff view "application availability" and "application modernization" as higher priorities.

+ **"Cost reduction/optimization"** and **"data privacy/ compliance/security"** are the top two priorities for both executives and technical staff.

+ **"Staffing and skills"** are now tied for 5th with "implementing cloud technology" and "data recovery."

Application availability

Application modernization

Cost reduction/optimization

Data privacy/compliance/security

Staffing/skills

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# Shifting Mainframe Challenges

Application availability

Application modernization

**Cost reduction/optimization**

**Data privacy/compliance/security**

**Staffing/skills**

**Top Challenges**

+ **Cost** continues to be a challenge, but not as in years past, **declining 7 percentage** points. According to the responses, the goal is to keep expenses in check, but respondents realize optimization is the key to doing this.

+ **Security concerns** increased in importance among executives from 2017. The top reason for the change was compliance with regulators and internal auditors. National regulations and **GDPR** were the regulations most cited.

+ **Staffing/skills** shortage is still a challenge, as experienced mainframe workers retire and the next generation continues to come up to speed.

+ **Executive perception** of the mainframe remains as a challenge. However, executive perception of this challenge continued to improve year over year with a six point increase from 2017.

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# Application Modernization Is Happening

Critical applications are growing and are the same in 2017 and 2018. These include:

**Transactional systems**

**Backend data server**

**Analytics**

**Big data**

**42%** Say "**application modernization**" is a priority in the next year.

**Of those that are taking advantage of new technology:**

**56%** Updating applications to new languages

**40%** Updating applications to use new application server technologies

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# Modernizing the Mainframe with New Techniques and Technology

**How Are They Modernizing?**

**82%** Are using Java, an increase of 9 percentage points over the last 3 years.
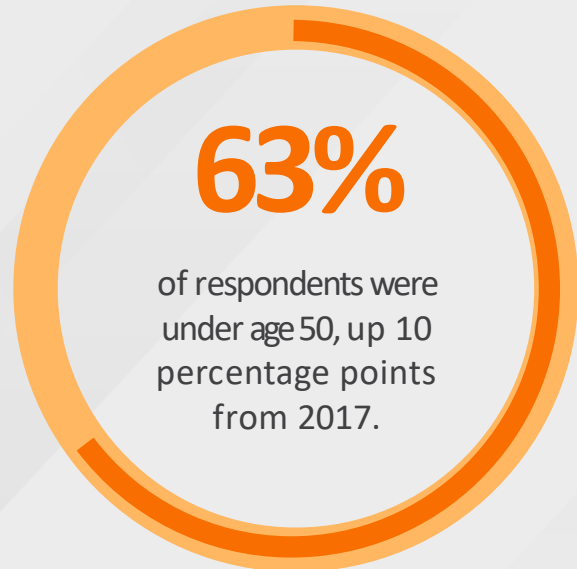
**65%** Java use in the production mainframe environment, up 11 percentage points over the past 2 years.

**41%** Of large shops are enabling access to their data using APIs, through deploying z/OS Connect.

**33%** Are ensuring data remains secure by deploying the latest encryption techniques.

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# The New Look of Today's Workforce: Gen-Z, Millennials, Gen-X

Respondents show a shift in demographics over prior years.

**51%** of under age 30 respondents are women

**72%**

of respondents are Gen-Z, Millennials, Gen-X

**63%**

of respondents were under age 50, up 10 percentage points from 2017.

**90%** of Latin American,
**82%** of EMEA,
**75%** of APJ,
& **63%** of North American workforce is Gen Z, Millennials, or Gen Xers

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# Modernizing The Organization

Organizations are modernizing and executives are making sure the right talent is on board to manage the new technologies.

**40%**
said they will train or cross train existing employees.

**32%**
said they will hire inexperienced staff and train them.

**62%**
believe it takes less than four years to bring inexperienced staff up to speed.

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# MAINFRAME: KEY TO THE FUTURE OF DIGITAL BUSINESS

**To ensure success with this powerful platform, keep these three things in mind:**

## Evangelize the mainframe

Share your vision and positive experiences, so other companies can effectively reinvent their businesses in a continually evolving digital business environment.

## Engage your new workforce

New, fresh, and innovative workers with an abundance of energy and enthusiasm for the mainframe are available. They are ready to be given a chance to shine.

## Embrace new techniques and technologies

Use new solutions to optimize your mainframe to overcome your organization's challenges with today's growing transaction volume, data volume, and workload volatility.

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# BMC ZSOLUTIONS |
# UNLEASHING THE POWER AND VALUE OF YOUR MAINFRAME

### SYSTEMS
Simplify your systems and performance management and keep them running and performing at their best with intelligent and automated solutions

### DATA
Ensure your applications and your data are always available and optimized with next generation, automated solutions

### SECURITY
Enhance services across the mainframe and enterprise to deliver on your growing security and compliance requirements

### COST
Optimize your mainframe costs with more efficient software, productivity improvements, and proven cost-reduction solutions and strategies

SYSTEMS

DATA

COST

SECURITY

Self-Managing
Mainframe

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# Thank You

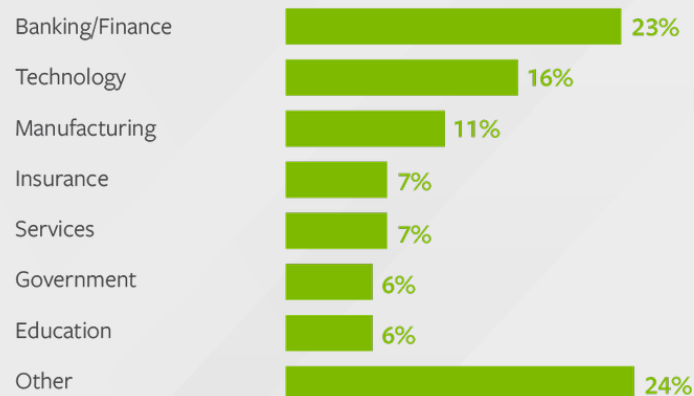Click to get your copy of The 2018 BMC Mainframe Survey:
https://www.bmc.com/info/mainframe-survey.html

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# Demographics - Companies

## Industries
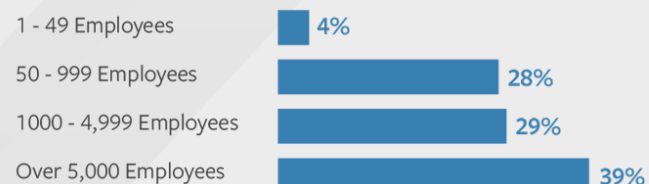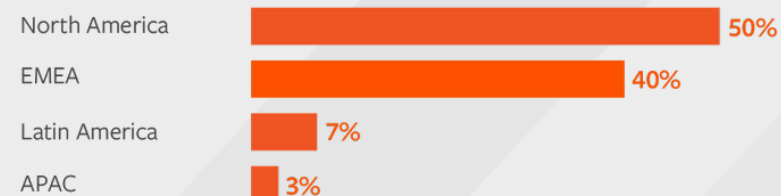
| Industry | |
|---|---|
| Banking/Finance | 23% |
| Technology | 16% |
| Manufacturing | 11% |
| Insurance | 7% |
| Services | 7% |
| Government | 6% |
| Education | 6% |
| Other | 24% |

## Geography

| Region | |
|---|---|
| North America | 50% |
| EMEA | 40% |
| Latin America | 7% |
| APAC | 3% |

## Number of Employees

| | |
|---|---|
| 1 - 49 Employees | 4% |
| 50 - 999 Employees | 28% |
| 1000 - 4,999 Employees | 29% |
| Over 5,000 Employees | 39% |

## Revenue

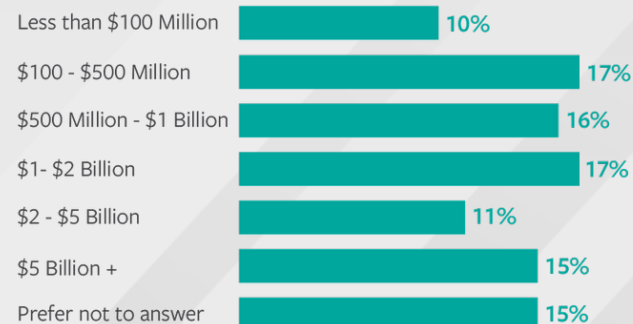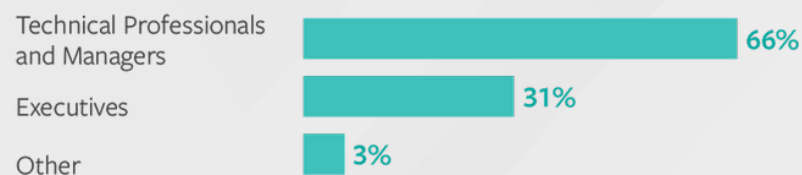| | |
|---|---|
| Less than $100 Million | 10% |
| $100 - $500 Million | 17% |
| $500 Million - $1 Billion | 16% |
| $1- $2 Billion | 17% |
| $2 - $5 Billion | 11% |
| $5 Billion + | 15% |
| Prefer not to answer | 15% |

The survey was open between May 15, 2018 and June 1, 2018. It was distributed worldwide and offered in 6 languages: English, French, Italian, Spanish, German, and Portuguese. 1,122 surveys were completed.
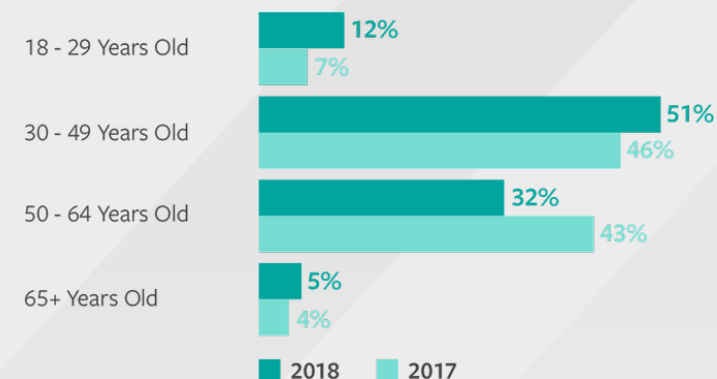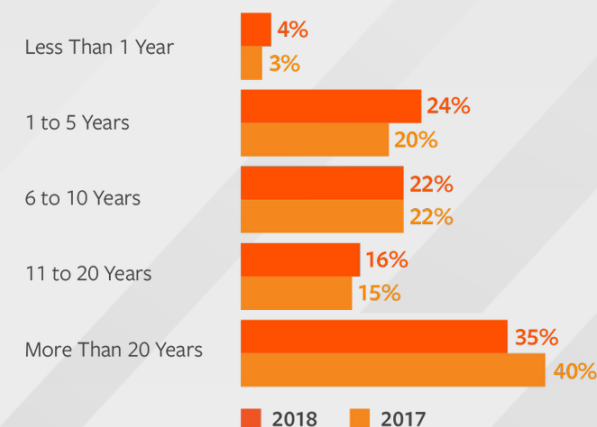
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# Demographics - People

## Job Function

| | |
|---|---|
| Technical Professionals and Managers | 66% |
| Executives | 31% |
| Other | 3% |

## Gender

| | |
|---|---|
| Male | 77% |
| Female | 23% |

## Age

| | 2018 | 2017 |
|---|---|---|
| 18 - 29 Years Old | 12% | 7% |
| 30 - 49 Years Old | 51% | 46% |
| 50 - 64 Years Old | 32% | 43% |
| 65+ Years Old | 5% | 4% |

## Years of Experience in a Mainframe Environment

| | 2018 | 2017 |
|---|---|---|
| Less Than 1 Year | 4% | 3% |
| 1 to 5 Years | 24% | 20% |
| 6 to 10 Years | 22% | 22% |
| 11 to 20 Years | 16% | 15% |
| More Than 20 Years | 35% | 40% |

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