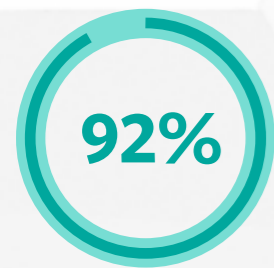# bmc

The Mainframe's Bright Future

EXECUTIVE SUMMARY

Top Findings

The survey results indicate that the mainframe is evolving to meet and exceed the business needs of executives and IT teams today.

93% of executives continue to **believe in the long-term viability** of the platform

92% **predict long-term viability** (3rd straight year of increases, highest level since 2013)

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

Modernization

Respondents agree application availability and modernization are top priorities for their organizations in the coming year. Many are integrating their mainframe with new techniques and technologies to rapidly adapt to a changing digital environment.

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

65% report using **Agile/DevOps** practices overall and 48% are using Agile/DevOps practices in their mainframe environment

33% use **pervasive encryption** in their mainframe environment

Transformation

Organizations are shifting from reactive to proactive in their mainframe approaches, with the increasing demands of digital business as the main drivers.

Organizations are realizing that they must:

Evolve their attitude toward the mainframe – This has already started with the continuing positive trends for the future of the mainframe.

Embrace new technology – Application modernization is one of the top responses for priorities.

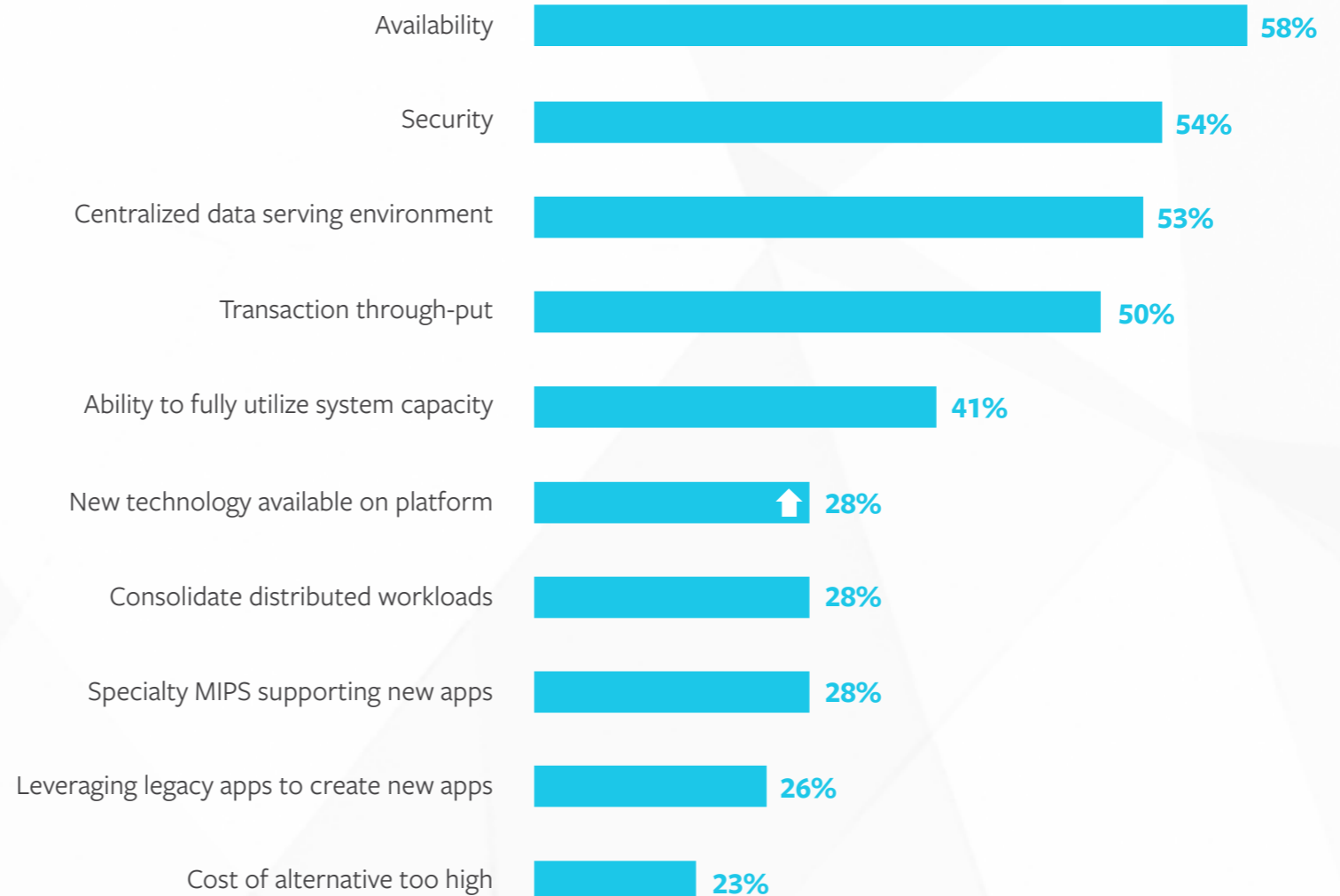**Develop their workforce –** Respondents indicated that this is a top priority.

Today's mainframe is well-positioned to lead organizations in an ever-evolving digital environment.

Growth – Mainframe's Future Is Bright

+ Respondents recognize just how strong of an asset the mainframe is to drive today's digital business.

+ 2018 has shown 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 confident in 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.

Category	Percentage
Availability	58%
Security	54%
Centralized data serving environment	53%
Transaction through-put	50%
Ability to fully utilize system capacity	41%
New technology available on platform	28%
Consolidate distributed workloads	28%
Specialty MIPS supporting new apps	28%
Leveraging legacy apps to create new apps	26%
Cost of alternative too high	23%

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

Top Priorities

+ Ensuring "**application availability**" is consistently a top priority and improvement focus areas most cited were faster problem determination, improved automation, visibility into end-to-end performance, and the elimination of planned outages.

+ Executives then rank **"application modernization"** and "data recovery" higher, while technical staff view "application availability" and "application modernization" as higher priorities.

+ Executives and technical staff agree that **"cost reduction/optimization"** and **"data privacy/ compliance/security"** are the top two priorities.

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

Priorities and challenges are aligned and show commitment to keeping the mainframe as the backbone of their digital environments.

Application availability

Application modernization

Cost reduction/optimization

Data privacy/compliance/security
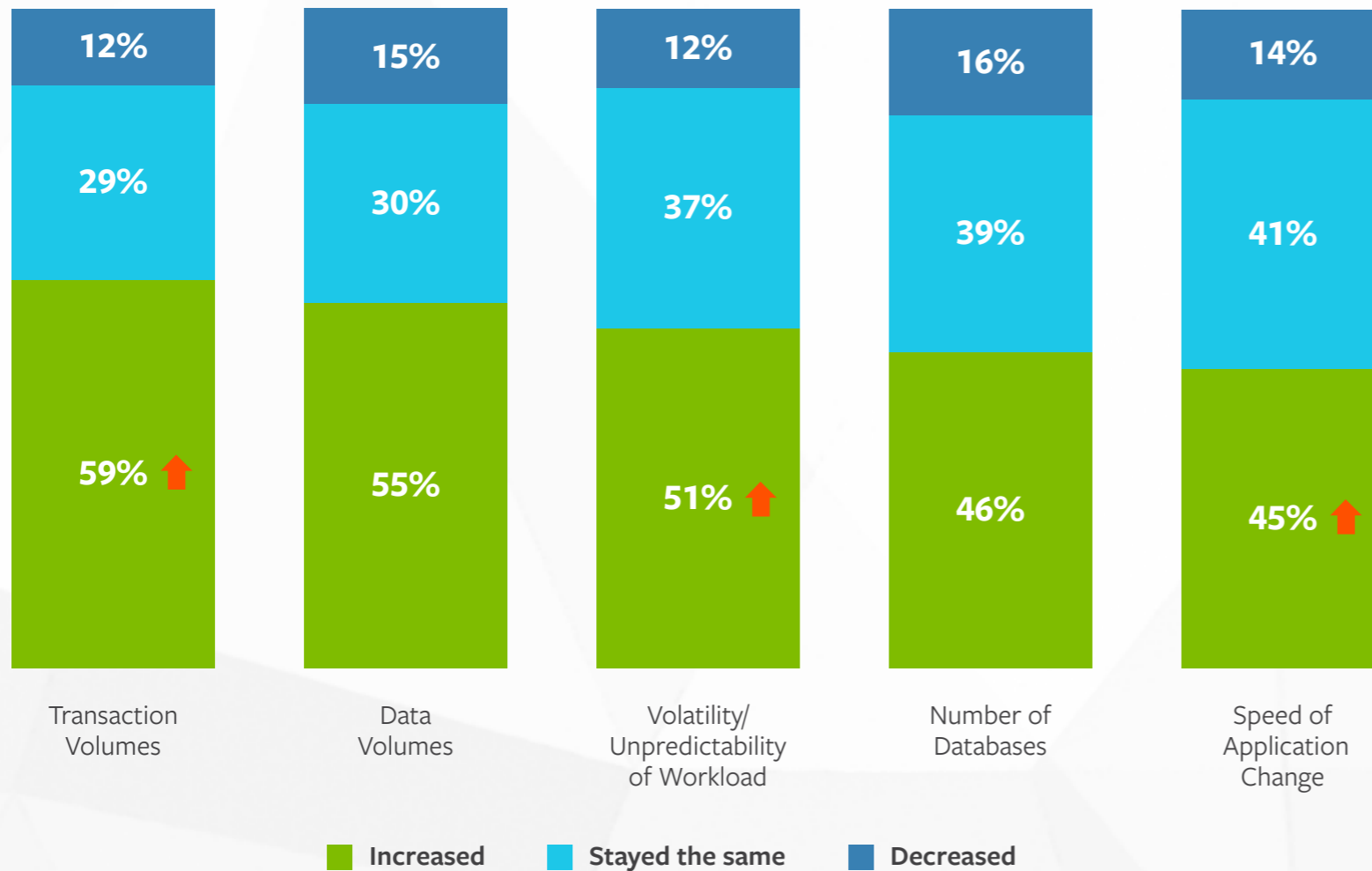
Staffing/skills

Top Challenges

The top three challenges remain cost control, staffing/skills shortage, and management perception of the mainframe. While these are challenges, each presents an opportunity for the mainframe to shine, as shown in the top priorities.

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

+ **Staffing/skills shortage** is still a challenge, as experienced mainframe workers retire and the next generation continues to come up to speed. Trends in workforce numbers show even younger workers and growth in the experiences of these workers. Companies are willing to train existing employees and hire and train new talent, but it's still taking time to bring everyone up to speed.

+ **Executive perception** of the mainframe as a long-term solution is the highest in three years, a six point increase over 2016. While still a concern, the relative merits outweigh the costs and the perception is shifting positively year over year.

GENERAL FINDINGS | ACTIVITY

Mainframe Growth

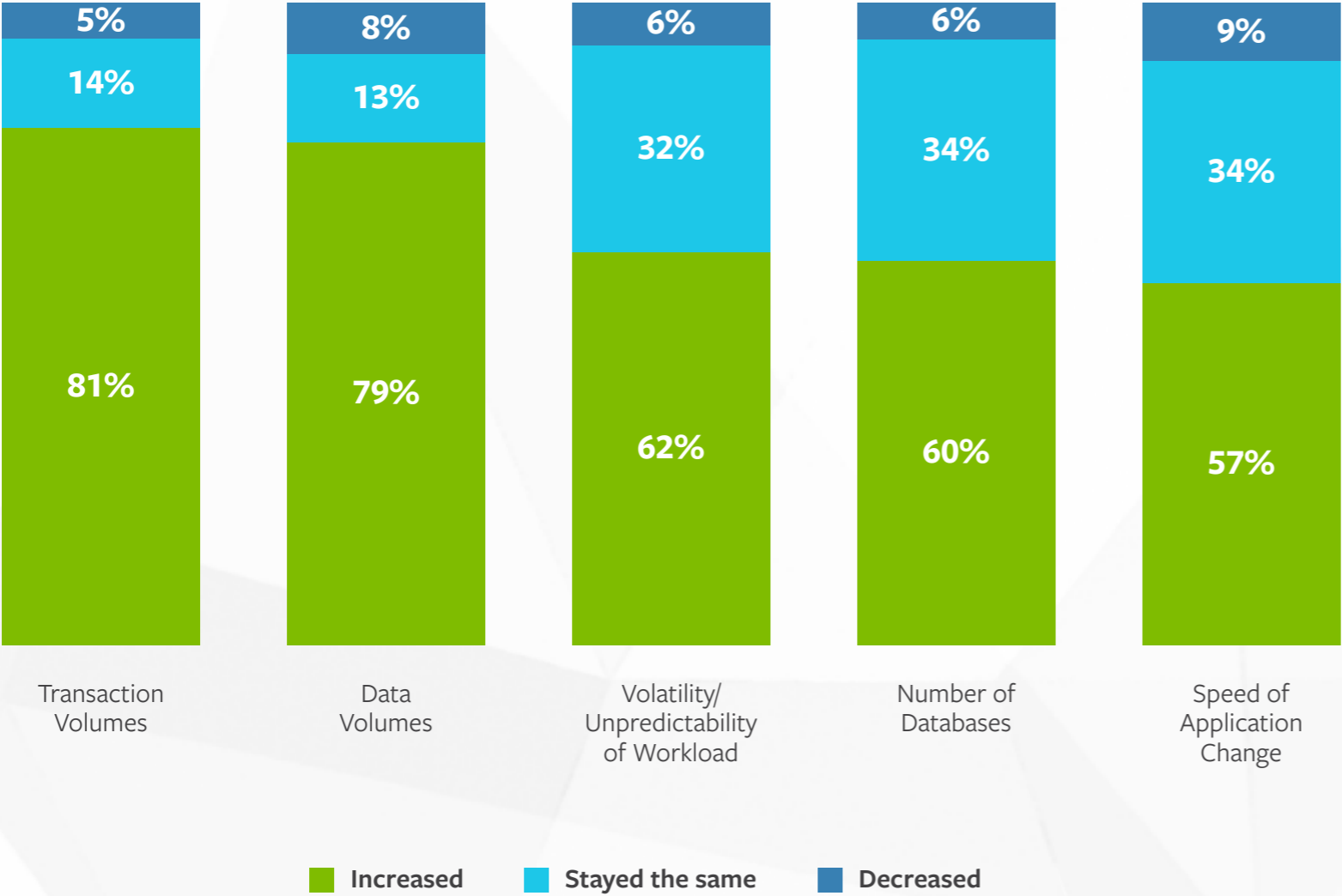Digital business is still driving growth in the mainframe in five key categories.

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

Legend: ● Increased   ● Stayed the same   ● Decreased

This activity level has driven 60% to have a positive outlook for MIPS growth—the highest level in three years.

51%

Over 51% of respondents state that over half of their data resides on the mainframe.

+ Mainframe environments are handling significant increases in the number of databases and transaction volumes as well as an increasing trend in data volume. The platform is increasingly relied upon to handle the demands of the digital business environment.

+ Workload volatility and unpredictability have increased significantly over the last 12 months in mainframe environments, but the speed of application change has not slowed down significantly. Mainframe environments are keeping up with the pace of demands and rising to meet the challenge.

GENERAL FINDINGS | ACTIVITY

Breakout — Large Shops

Large shops* outpaced all respondents with their increases.

	Transaction Volumes	Data Volumes	Volatility/ Unpredictability of Workload	Number of Databases	Speed of Application Change
Decreased	5%	8%	6%	6%	9%
Stayed the same	14%	13%	32%	34%	34%
Increased	81%	79%	62%	60%	57%

Legend: ■ Increased ■ Stayed the same ■ Decreased

This activity level has driven 70% of large shops to have a positive outlook for MIPS growth.

* Large shops defined as more than 10,000 MIPS

PROOF POINTS | MODERNIZING THE PLATFORM

How Are They Modernizing?

Mainframe organizations are working more diligently than ever to modernize and optimize their operations by running efficient transactional applications and reducing planned outages, using advanced technologies like Java and exploiting automation where it benefits them the most.

+ Java usage increased 9 percentage points over the last 3 years to **82%**.

+ Java use in the production mainframe environment has grown to **61%**, up 11 percentage points over the past 2 years.

+ Organizations are enabling access to their data using APIs, with **41%** of large shops deploying z/OS Connect.

+ To ensure data remains secure, respondents are deploying the latest encryption techniques, with **34%** of large shops using pervasive encryption.

42% of respondents say **"application modernization" is a priority in the next year.** The goal of application modernization is to create new business value from existing applications. Keeping legacy solutions running smoothly can be time-consuming and respondents want software that can help them bridge the gap to updated technology.

Of those that are taking advantage of new technology:

56% are updating applications to new languages

40% are updating applications to use new application server technologies

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

Transactional systems

Backend data server

Analytics

Big data

PROOF POINTS | MODERNIZING THE WORKFORCE

Organizational View

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.

Today's Workforce

Respondents showed a shift in age, experience, and outlook as retirements are in full force.

63%

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

+ 95% of Millennials & 90% of Gen Xers believe in the growth and long- term viability of the platform

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

Investment in the platform and people backs up the positive trends we have seen throughout the survey data.

MAINFRAME: KEY TO THE FUTURE OF DIGITAL BUSINESS

The mainframe continues to drive digital business, now more than ever. Mobile applications and digital business practices have effectively rewritten the ways companies operate, and the results of the **2018 BMC Mainframe Survey show a bright future for the mainframe** in how companies run their business and reinvent it, as it is uniquely capable of scaling to handle ever-increasing consumer demands efficiently and securely.

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.

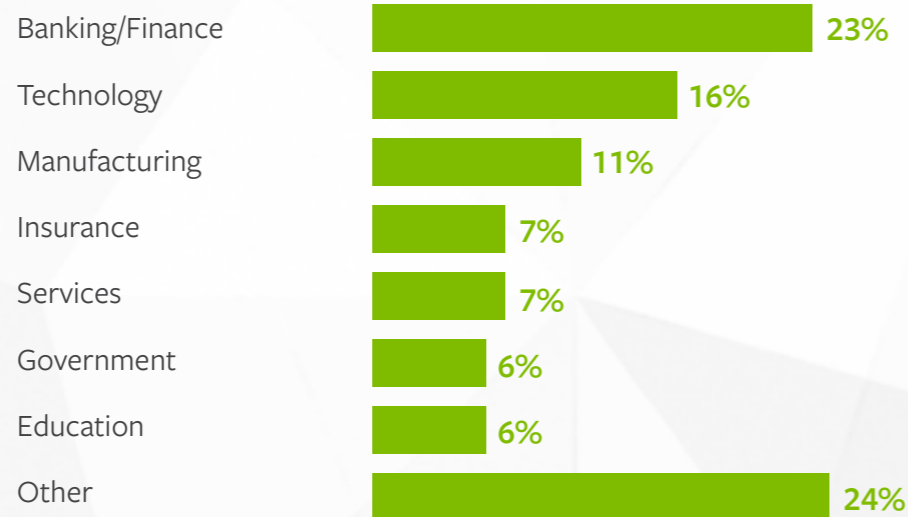### Embrace new techniques and technologies

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

The mainframe is a powerful and versatile platform that has a track record of over 50 years of innovation. BMC continues to support the mainframe and its customers with solutions and services to maximize the effectiveness and evolution of this vibrant powerhouse.
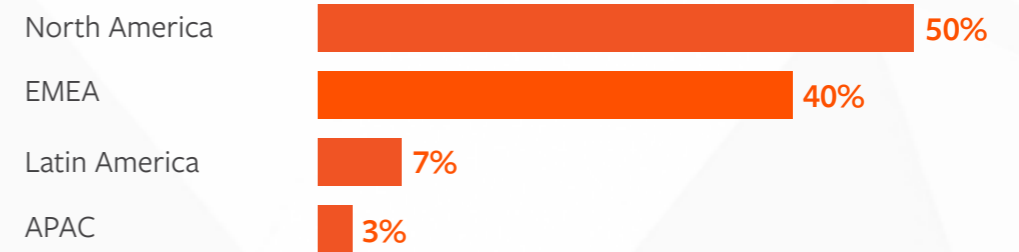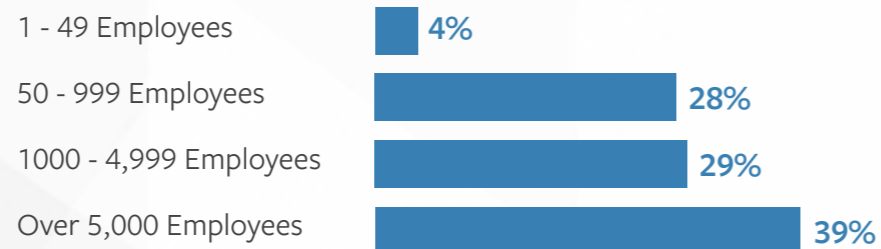
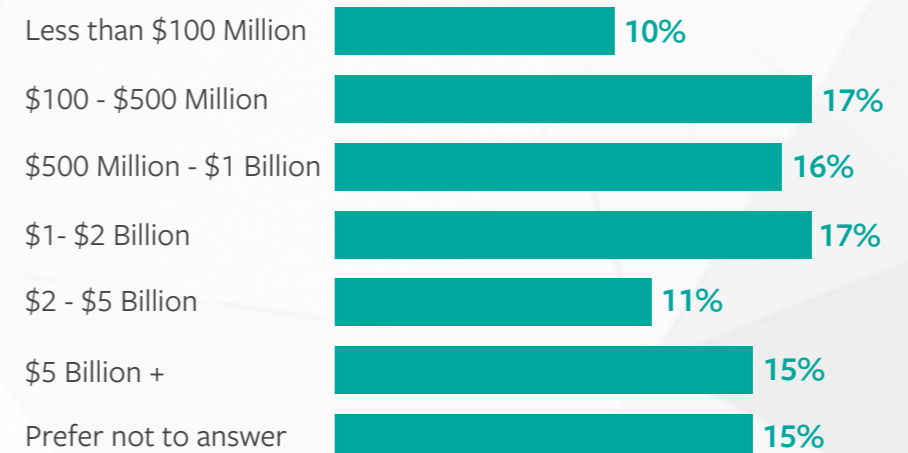# DEMOGRAPHICS | COMPANIES

Industries

Banking/Finance	23%
Technology	16%
Manufacturing	11%
Insurance	7%
Services	7%
Government	6%
Education	6%
Other	24%

Geography

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

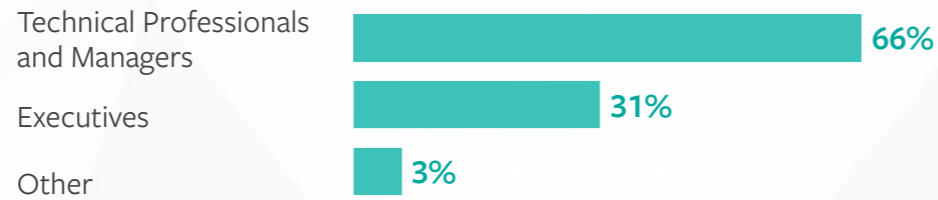|	
Less than $100 Million	10%
$100 - $500 Million	17%
$500 Million - $1 Billion	16%
$1- $2 Billion	17%
$2 - $5 Billion	11%
$5 Billion +	15%
Prefer not to answer	15%

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.
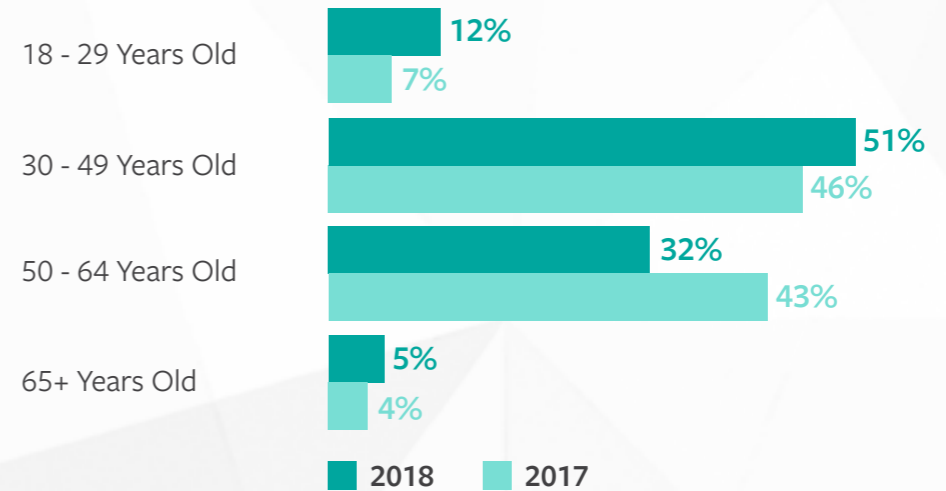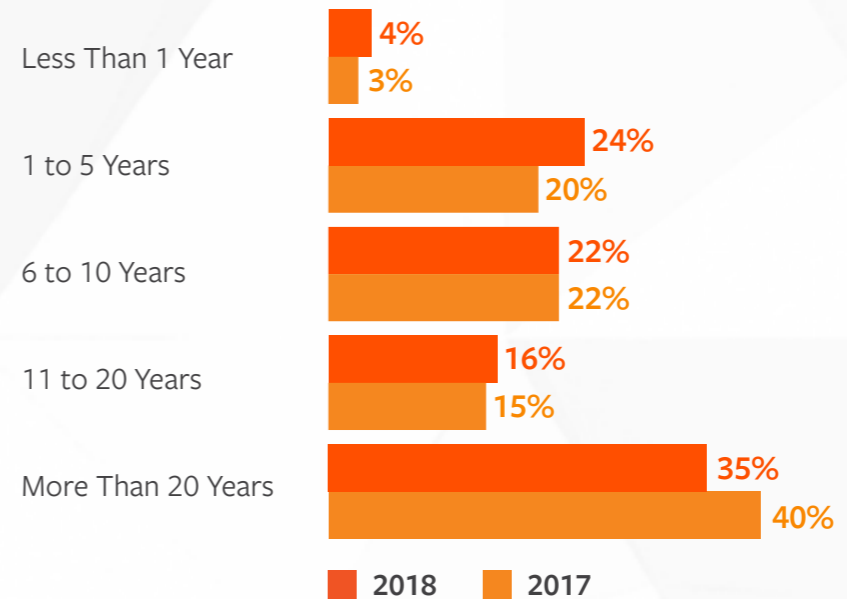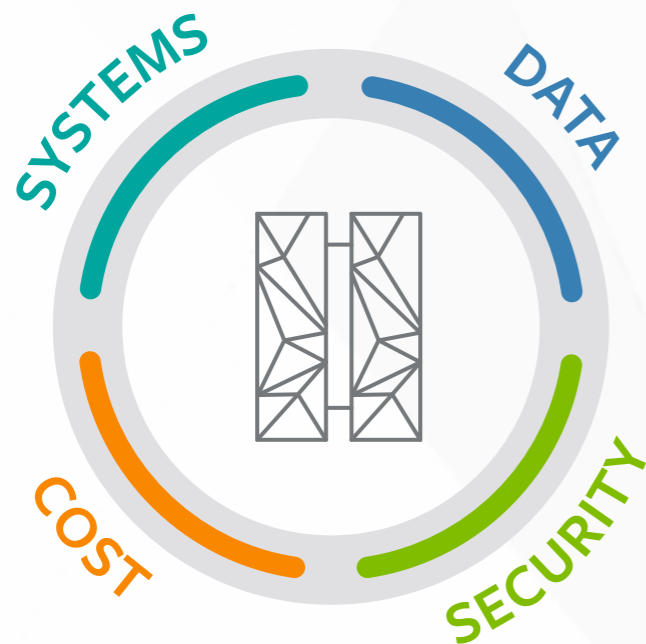
DEMOGRAPHICS | PEOPLE

Job Function

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

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%

■ 2018 ■ 2017

Gender

Male	77%
Female	23%

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%

■ 2018 ■ 2017

BMC ZSOLUTIONS |
UNLEASHING THE POWER AND VALUE OF YOUR MAINFRAME

BMC can help you modernize and transform your mainframe to manage today's evolving digital business with innovative and intelligent solutions for your systems, data, and security. BMC solutions provide advanced analytics and automation to maximize performance and availability, secure your platform, optimize your costs, and increase your staff's efficiency.

SYSTEMS

DATA

SECURITY

COST

Self-Managing 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

Learn how BMC can transform
your mainframe management at

bmc.com/mainframe

About BMC
BMC helps customers run and reinvent their businesses with open, scalable, and modular solutions to complex IT problems. Bringing both unmatched experience in optimization and limitless passion for innovation to technologies from mainframe to mobile to cloud and beyond, BMC helps more than 10,000 customers worldwide reinvent, grow, and build for the future success of their enterprises.

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