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RESEARCH HIGHLIGHTS

Cybersecurity in the C-suite and Boardroom

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Research Objectives

As organizations embrace digital transformation initiatives, business outcomes become inexorably linked to technology areas like application development, cloud computing, and IoT devices. Therefore, these technology assets must be protected to ensure continuity of business operations. The link between cybersecurity and the business has led to an industry declaration that, "Cybersecurity is a boardroom issue." This statement is true yet simplistic. Executives and corporate directors have a fiduciary responsibility to shareholders and/or owners, so they are ultimately responsible for everything that drives the business, including managing cyber-risk and safeguarding business-critical technology assets. That said, cybersecurity can be a highly technical discipline. This brings up a few questions: Do executives really understand cybersecurity and its role in the business? And as technology further dominates the business landscape, are they investing appropriately in cybersecurity and driving a cybersecurity culture throughout their organizations?

To explore the answers to these and other questions, ESG surveyed 365 senior business, cybersecurity, and IT professionals at organizations in North America (US and Canada) and Western Europe (UK, France, and Germany) working at midmarket (i.e., 100 to 999 employees) and enterprise-class (i.e., more than 1,000 employees) organizations.

THIS STUDY SOUGHT TO:

Explore the role of cybersecurity in the business.

Uncover where progress is being made and areas that need more focus and investment.

Examine the relationships between security and business executives.

Compare the actions of leading organizations with those that lag behind.

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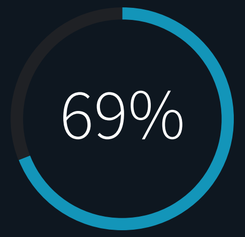
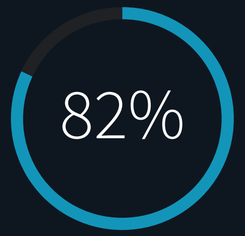
Research Highlights



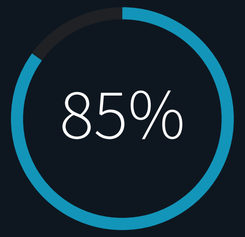
CYBERSECURITY IS STILL LARGELY PERCEIVED AS A TECHNOLOGY AREA.

Sixty-nine percent of business and technology leaders believe that cybersecurity is entirely or mostly a technology area with little or no linkage to the business, while another 11% equate cybersecurity with regulatory compliance. Additionally, many organizations rate themselves as only adequate or poor in areas like their executives' commitment to cybersecurity and treating cybersecurity as a critical component of business strategies. In aggregate, the research indicates that most organizations don't strive for "good security," but rather they settle on "good enough" security.



CYBER-RISK MANAGEMENT IS INCREASING.

To manage risk, organizations piece together aspects of multiple frameworks, models, and services such as the NIST cybersecurity framework, ISO 31000, and the Factor Analysis of Information Risk (FAIR). Despite these guidelines, however, 82% of organizations claim that cyber-risk has increased over the past 2 years due to factors like increasing cyber-threats, greater integration of technology within the business, and a growing attack surface.



CORPORATE BOARDS ARE GETTING MORE ENGAGED WITH CYBERSECURITY BUT STILL HAVE A LONG WAY TO GO.

Many board members are more active with cybersecurity education, leading to a situation where 85% of corporate boards are more engaged in cybersecurity than they were two years ago. Still, many boards must be drawn into cybersecurity through some type of catalyst, like new regulatory compliance requirements, the introduction of a new cybersecurity program, or in reaction to a data breach in the organization's industry.

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ENTERPRISE CYBERSECURITY PROGRAMS REMAIN UNEVEN.

When senior business, cybersecurity, and IT managers stack ranked aspects of their organization's cybersecurity program, engineering and SDLC, endpoint security, and third-party risk management were the most immature areas. Organizations are investing in program areas like IT operations, cloud security, and information security. In other words, they don't seem to be intent on improving the immature areas of their programs.

ORGANIZATIONAL CYBERSECURITY GAPS REMAIN.

Despite CISOs and CIOs typically having a close relationship, nearly half of respondents claim that the relationship between security and IT teams is only somewhat well aligned or not very well aligned. While security and IT do relatively well in collaborating on security technology deployment and IT infrastructure, they aren't nearly as well coordinated in areas like application security, DevOps, or end-user support. Other corporate executives are often only somewhat involved or not very involved in other areas of cybersecurity like establishing a cybersecurity culture or prioritizing security investments.

THERE IS PLENTY OF ROOM FOR IMPROVEMENT.

Respondents had plenty of suggestions for improving the alignment of cybersecurity and the business like bringing the security team into business planning, increasing cybersecurity training for board members and executives, and improving data analysis for decision support.

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Cybersecurity is still largely perceived as a technology area.

Cybersecurity Remains a Technology Area, but There Is Some Slow and Steady Progress

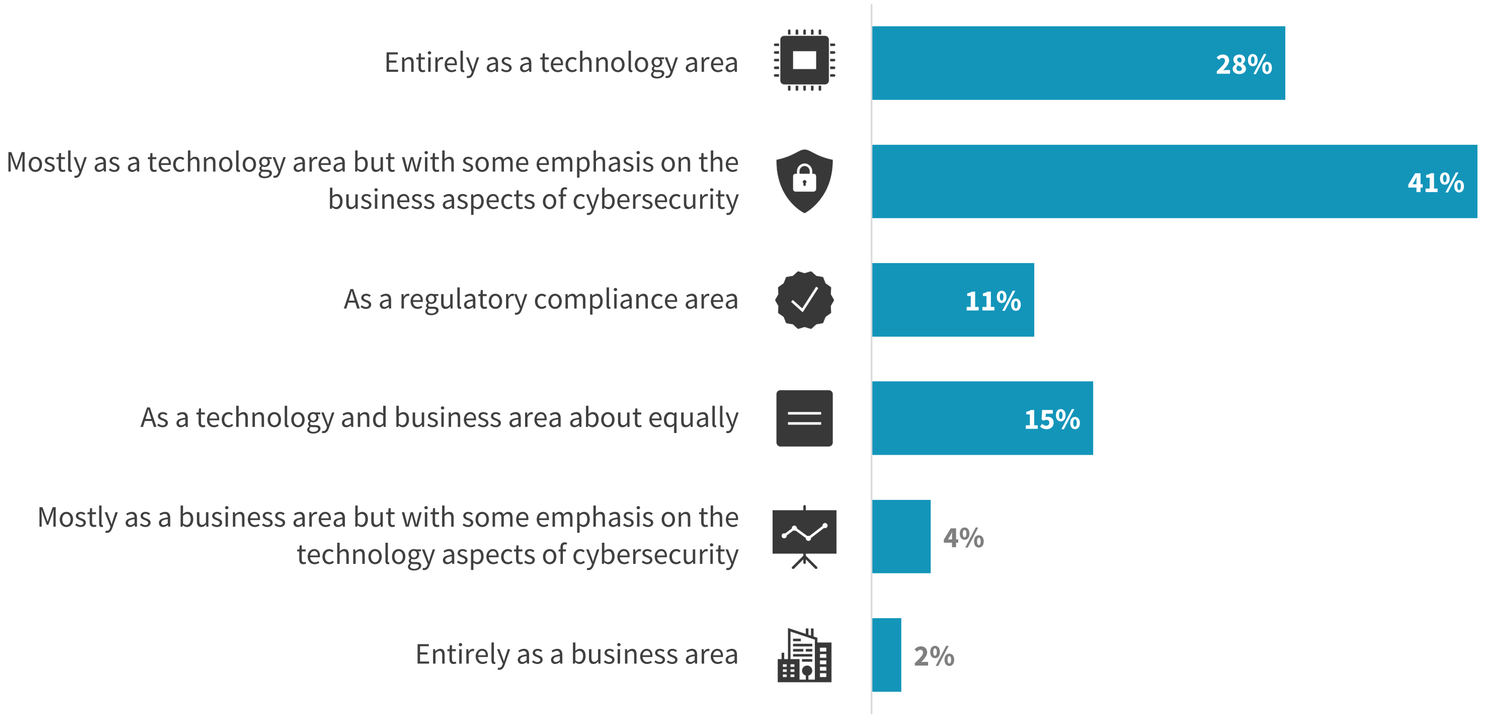
A majority of survey respondents say that their organization perceives cybersecurity as either entirely or mostly a technology area with some emphasis on business. Furthermore, 11% equate cybersecurity to a regulatory compliance area.

ESG finds this a disheartening metric that characterizes this research study. One would think that with nearly universal adoption of new digital transformation applications and business processes, cybersecurity would be considered a technology and business area, but only 15% of respondents believe this is the case.

There is a bit of positive news hidden within this data as 60% of respondents see cybersecurity playing a business role, albeit a minor one in most cases. Cybersecurity remains a second-class citizen, but it does appear to be making slow and steady progress.

> ***A majority of survey respondents*** *say that their organization perceives cybersecurity as either entirely or mostly a technology area with some emphasis on business.*

How cybersecurity is viewed.



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A Large Percentage of Organizations Remain Content with ‘Good Enough Security’

Cybersecurity professionals often lament that their organizations don’t want good security; they want “good enough” security. In other words, business executives are only willing to fund cybersecurity people, processes, and technologies that help the organization comply with regulations and provide basic protection. Unfortunately, ESG’s data indicates that this minimalist attitude remains persistent in several areas. For example, 41% of organizations rate their C-level executives’ commitment to cybersecurity as only adequate or fair, 43% rate their organization’s intention to build cybersecurity into business processes and IT initiatives as adequate or fair, and 54% rate their company-wide commitment to cyber-hygiene as adequate, fair, or poor. Even more telling, non-technical managers having cybersecurity responsibilities is rated adequate, fair, or poor by 69% of organizations.

Cybersecurity organizational culture.

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Cyber-risk management is increasing.

Organizations Rely on Multiple Risk Management Standards, Leading to Varied Metrics and Complex Operations

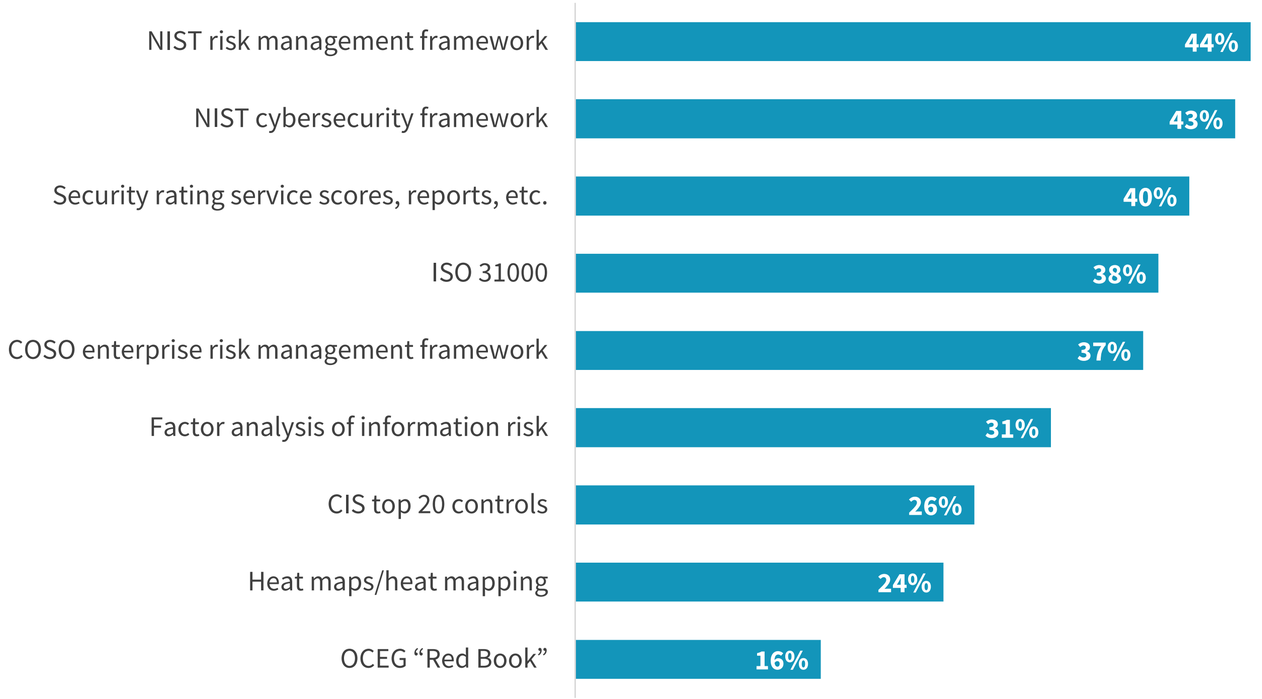
Ask any CISO to identify their primary responsibility and they'll likely tell you it is managing and mitigating cyber-risks to the business. To accomplish this task, organizations employ numerous frameworks, standards, and services, like the NIST Risk Management Framework (NIST 800-53), the NIST cybersecurity framework, or security scorecards and rating services.

Based on qualitative interviews conducted for this project, CISOs tend to create their own risk management guidelines by piecing together industry standard frameworks deemed as the best fit for their organizations. While this can help them categorize and manage cyber-risk, it also creates a customized risk management framework, making it more difficult to input external data or compare internal and external risk factors. Each CISO seems to have their own preferred cyber-risk management model, so each time an organization changes its security executive, it begins anew with cyber-risk management and an associated enterprise cybersecurity program.

CISOs should network with other industry security executives in pursuit of a more universal cyber-risk management standard.

> ***CISOs tend to create their own risk management guidelines*** *by piecing together industry standard frameworks deemed as the best fit for their organizations."*

Frameworks and standards used to benchmark cyber-risk.



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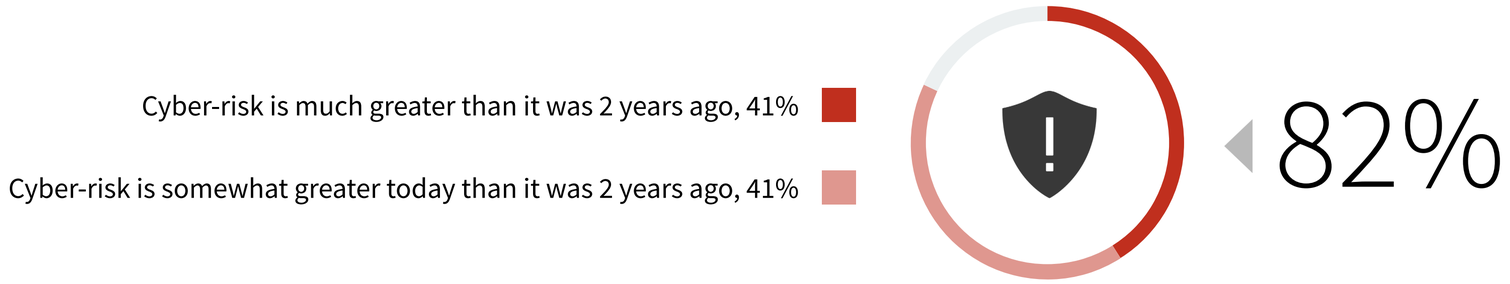

Drivers of heightened cyber-risk levels.

Cyber-risk Is Increasing Due to External Factors and Business Practices

A vast majority of organizations (82%) believe that cyber-risk has increased over the past two years. What's behind this increase? Survey respondents point to an increase in cyber-threats, a greater dependence on technology for new types of business processes, and an increasing attack surface, among others.

As cyber-risks rise, it's important to make sure that business and IT initiatives are supported by the right level of security oversight and controls. Why? Digital transformation initiatives are often built on new technologies like microservices, utilize IoT devices, change rapidly, and collect and process large data repositories, introducing new security vulnerabilities. Given this situation, a targeted attack could lead to business disruption or a costly data breach.

Mitigating these risks depends upon strong cooperation between business, IT, and security teams from the initial planning stages of digital transformation projects.

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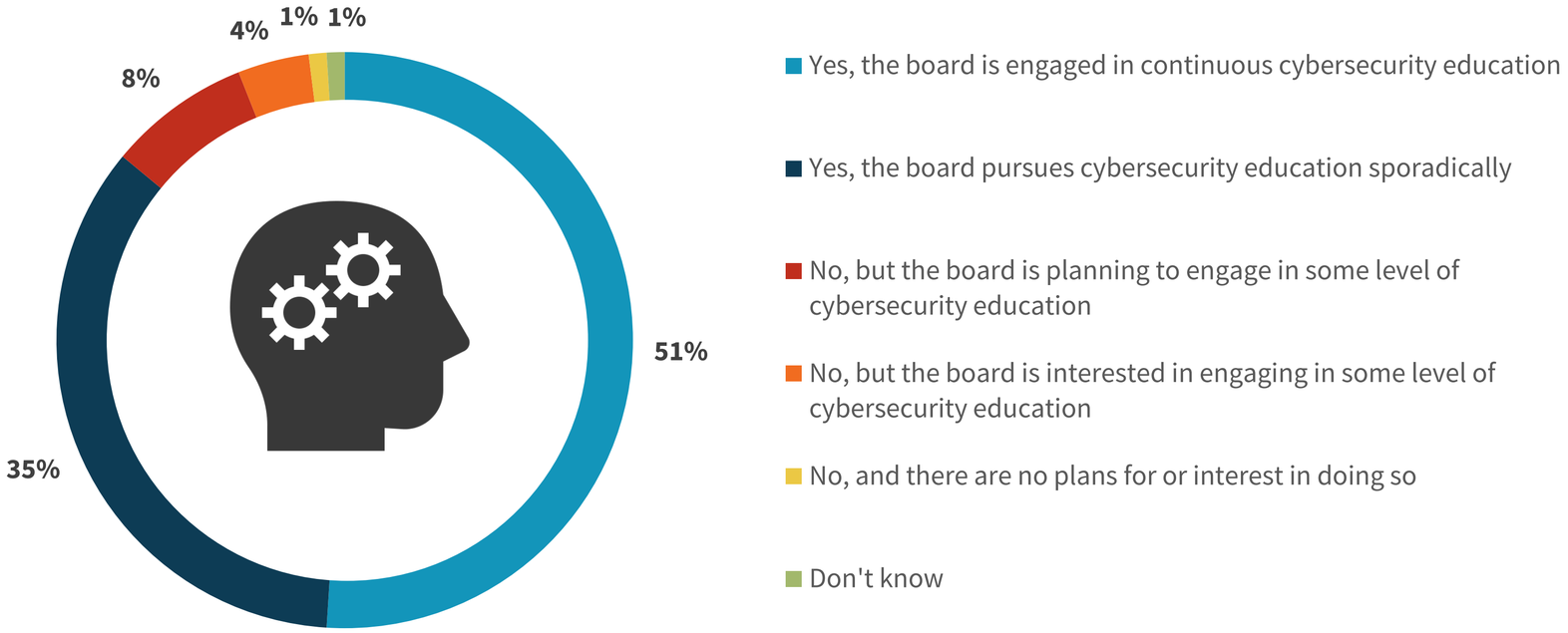
Corporate boards are getting more engaged with cybersecurity but still have a long way to go.

Nearly Half of Corporate Boards Engage in Continuous Cybersecurity Education

One or several corporate board members have some knowledge and experience with cybersecurity, and just more than half (51%) of organizations say that their board of directors engages in some type of continuous cybersecurity education. Usually, this is the CISO's responsibility, but some organizations bring in outsiders for board-level cybersecurity education. ESG believes this is a best practice that should be emulated broadly.

> **51%** *of organizations say that their board of directors engages in some type of continuous cybersecurity education.*

Board of directors' level of engagement with cyber education.



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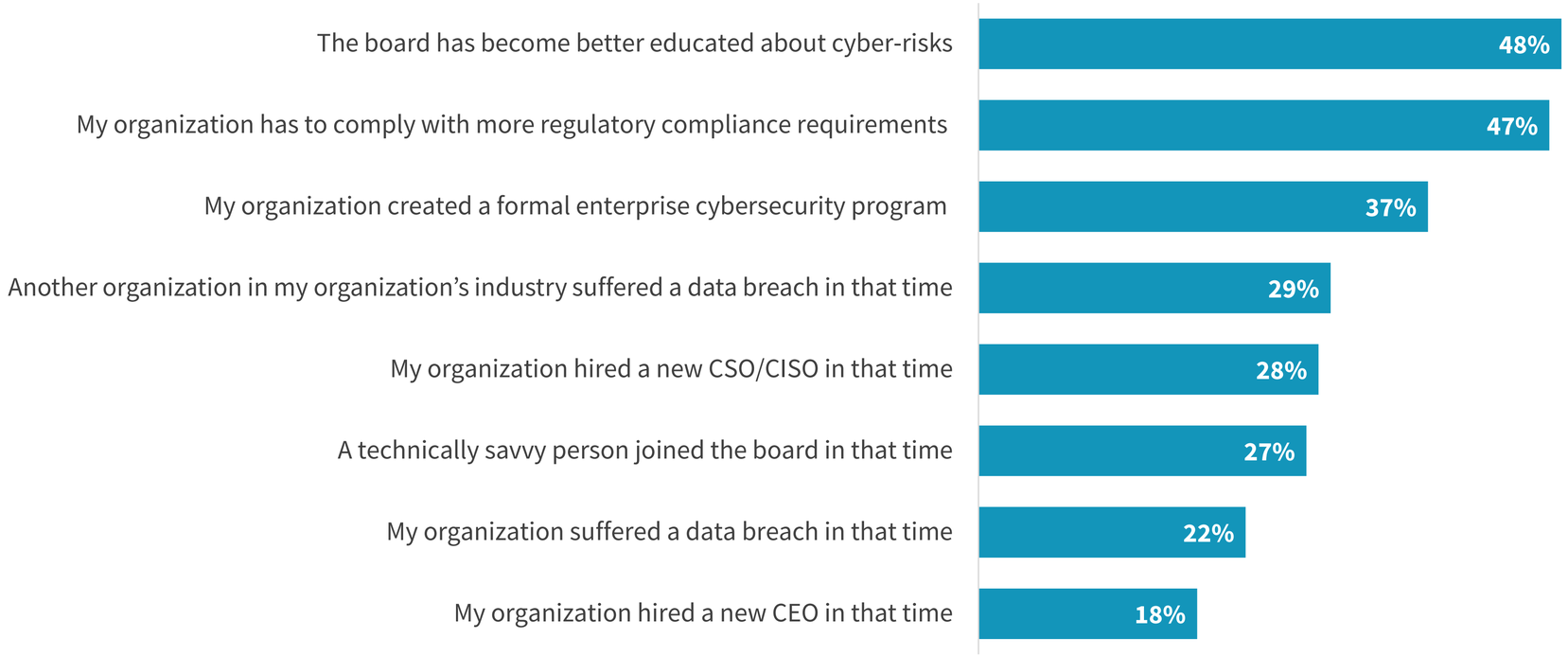
The board of directors is **much more** engaged with cybersecurity status, decisions, and strategy than it was 2 years ago, 45%

The board of directors is **somewhat more** engaged with cybersecurity status, decisions, and strategy than it was 2 years ago, 40%

85%

Reasons for more cyber-engaged boards of directors.



Corporate Boards Have Become More Engaged with Cybersecurity

A majority (85%) of organizations say that their board is more engaged with cybersecurity today than it was two years ago for several reasons. First, boards are more educated on cybersecurity than in the past. When board members are more educated, they ask tougher questions, dig into issues, and make the leap from cybersecurity to business issues. Aside from this proactivity, however, corporate boards often lead more passively to cybersecurity through regulatory compliance requirements, the introduction of a cybersecurity program (by the CISO), or an industry data breach. Rather than wait to be drawn in, corporate boards at leading organizations are driving this agenda on their own.

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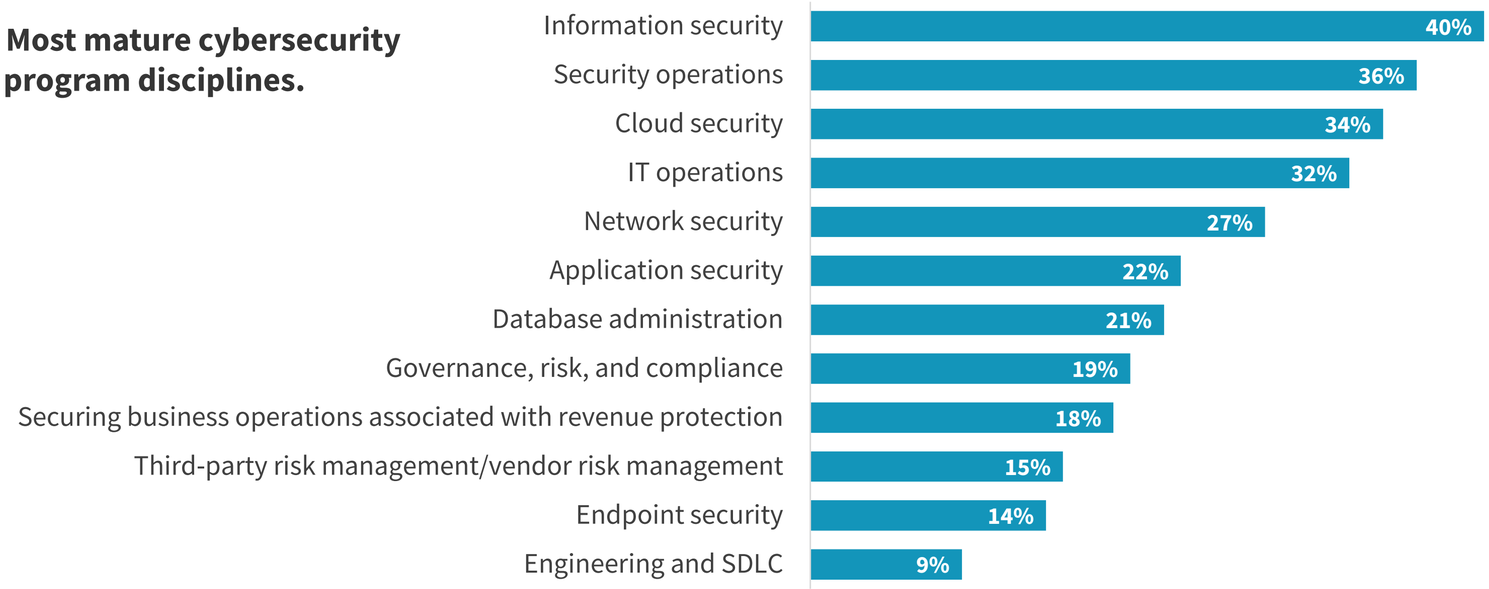
Enterprise cybersecurity programs remain uneven.

Maturity Levels of Cybersecurity Program Areas Vary, as Do the Subsequent Investment Levels

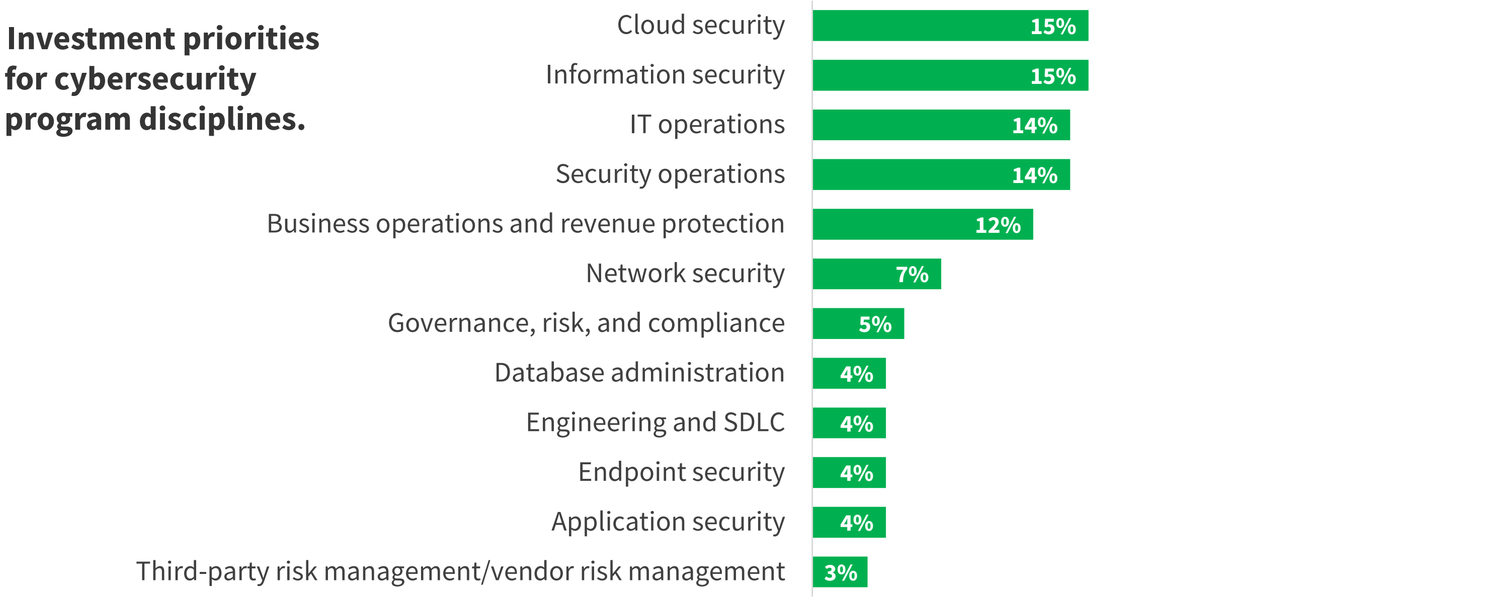
An enterprise cybersecurity program should include multiple areas with focus and investment skewed to areas that support business operations. When asked which program areas are most mature, 40% of respondents identified information security (i.e., protecting the confidentiality, integrity, and availability of sensitive data), 36% said security operations (i.e., threat prevention, detection, and response, etc.), and 34% pointed to cloud security (i.e., security of cloud-based applications, data, and workloads). Alternatively, the least mature areas were third-party risk management, endpoint security, and engineering/secure development lifecycle (SDLC).

Given the proliferation of cloud-native applications and remote workers, it would be safe to assume that organizations are investing in these areas, but the data indicates that this is not the case, as investments are focused on more mature categories like IT operations (16%), cloud security (15%), information security (14%), and security operations (14%). CISOs and business managers must do more to align investments to acute security needs that impact the business in the short and long term.

Most mature cybersecurity program disciplines.



Investment priorities for cybersecurity program disciplines.



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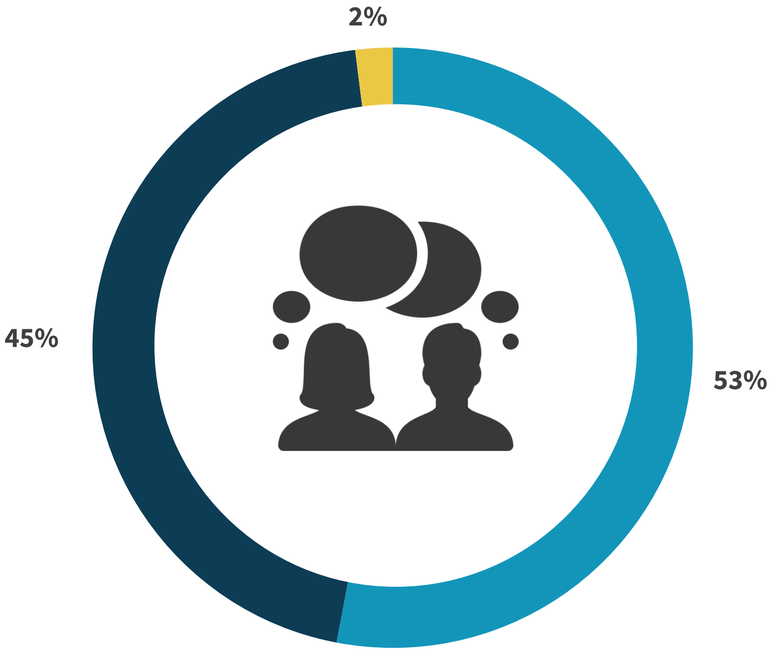
Organizational cybersecurity gaps remain.

Security and IT Are Not Well Aligned at Almost Half of All Organizations

While the research indicates that CISOs work more closely with CIOs than any other executives, security and IT teams don't always do as well. Nearly half (45%) of respondents say these two groups are only somewhat well-aligned (i.e., security is sometimes but not always part of IT planning, implementation, and operations), and 2% said security and IT were not well-aligned at all. This lack of alignment is especially concerning as these two groups must collaborate in areas that could impact the business like protecting critical IT assets, monitoring activities, and mitigating risk.

> ***Nearly half (45%)*** *of respondents say security and IT teams are only somewhat well-aligned."*

Alignment between IT and cybersecurity groups.



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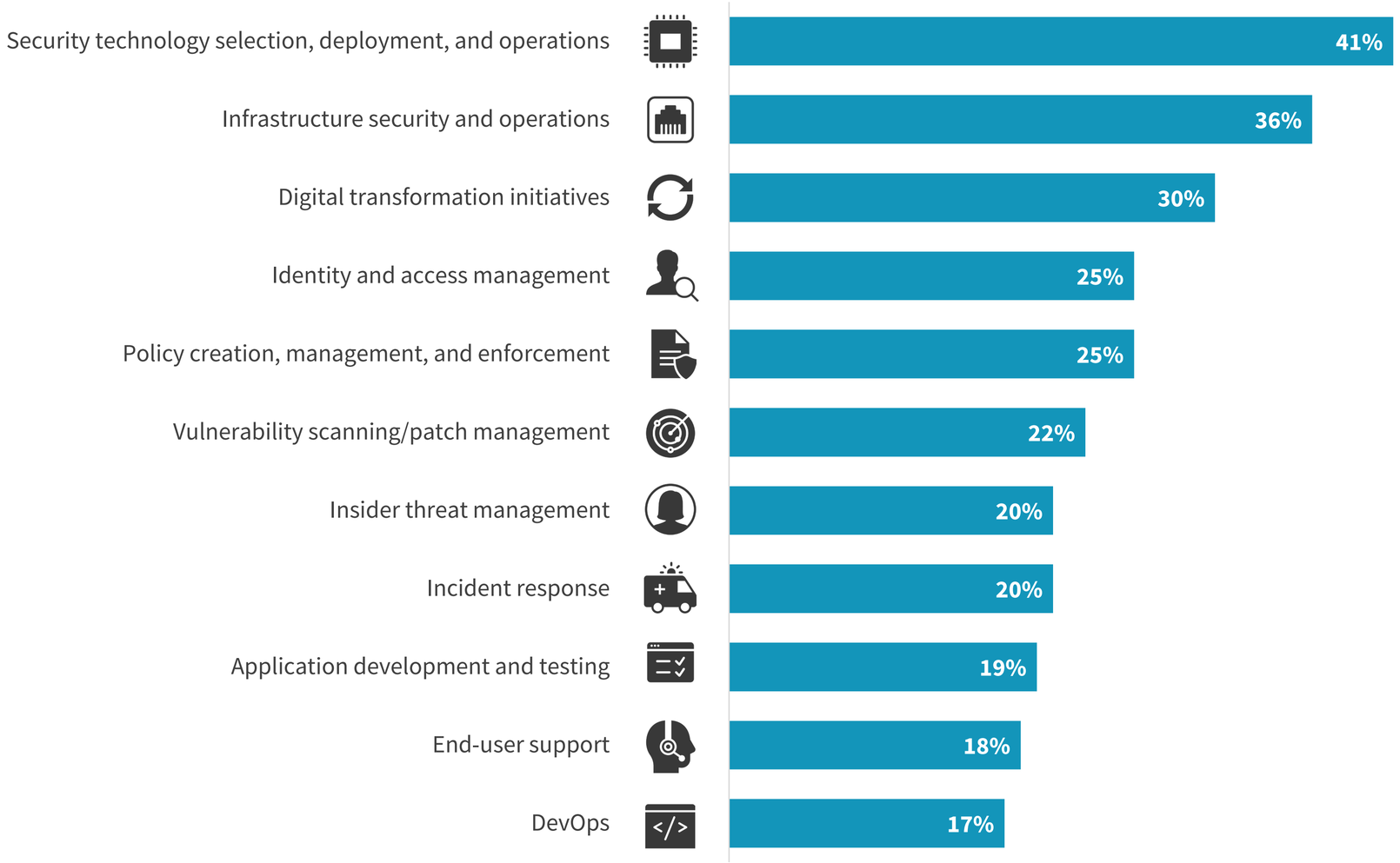
Areas of greatest synergy between IT and cybersecurity groups.



IT and Cybersecurity Cooperation Is Skewed Toward Fundamental Areas

ESG's research also reveals that security and IT groups work best together in areas like security technology selection, deployment, and operations, and infrastructure security and operations. This isn't surprising as security and IT teams have been doing things like configuring servers, deploying firewalls, and inspecting network traffic for over 20 years. What's concerning, however, is that security and IT teams aren't nearly as coordinated with other requirements like DevOps, end-user support, and application development/testing. Furthermore, only 30% of respondents say that IT and security teams work best on digital transformation initiatives. This is somewhat alarming as digital transformation initiatives drive modern businesses, so security and IT teams should be tightly coordinating activities from the onset of all projects.

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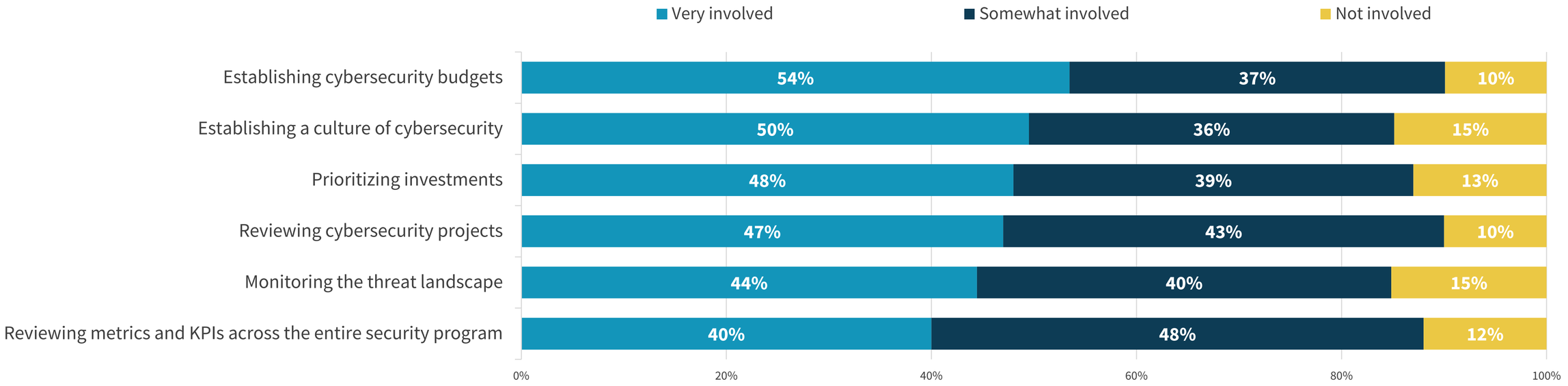
Executives Remain Cursory to Cybersecurity Activities

When it comes to executive involvement in cybersecurity, there is good and bad news. The good news is that a majority of organizations continue to invest in cybersecurity as other ESG research indicates that more than 60% increased their security budgets in 2020.* The bad news? This ESG research project reveals that between 45% to 60% of executives are only somewhat involved, not very involved, or not at all involved in many critical cybersecurity activities. For example, executives are somewhat involved, not very involved, or not at all involved in reviewing metrics and KPIs across the entire security program. So, while organizations are investing in cybersecurity, executive teams know little about ROI on security technologies.

The data also reveals an alarming trend that executives are only somewhat involved, not very involved, or not at all involved in establishing a cybersecurity culture at their organization. Lacking this, cybersecurity will remain a technology-centric requirement rather than a crucial aspect of a 21st century business. This situation will only improve if business executives champion cybersecurity throughout the organization, where every employee believes they have a role in protecting the organization. This starts at the top, driven by CEOs and corporate directors.

Level of executive involvement in cyber activities.



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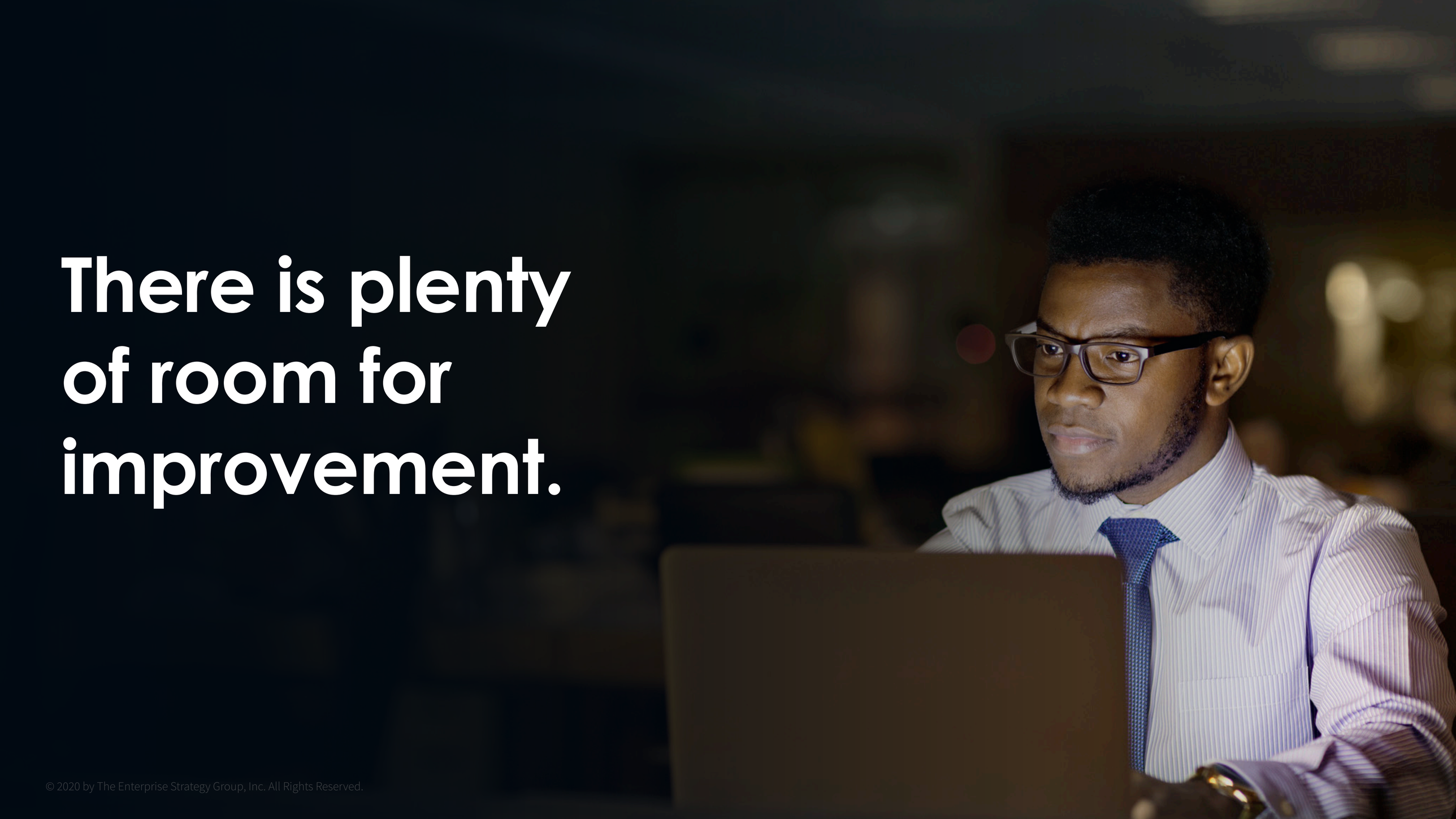
There is plenty of room for improvement.

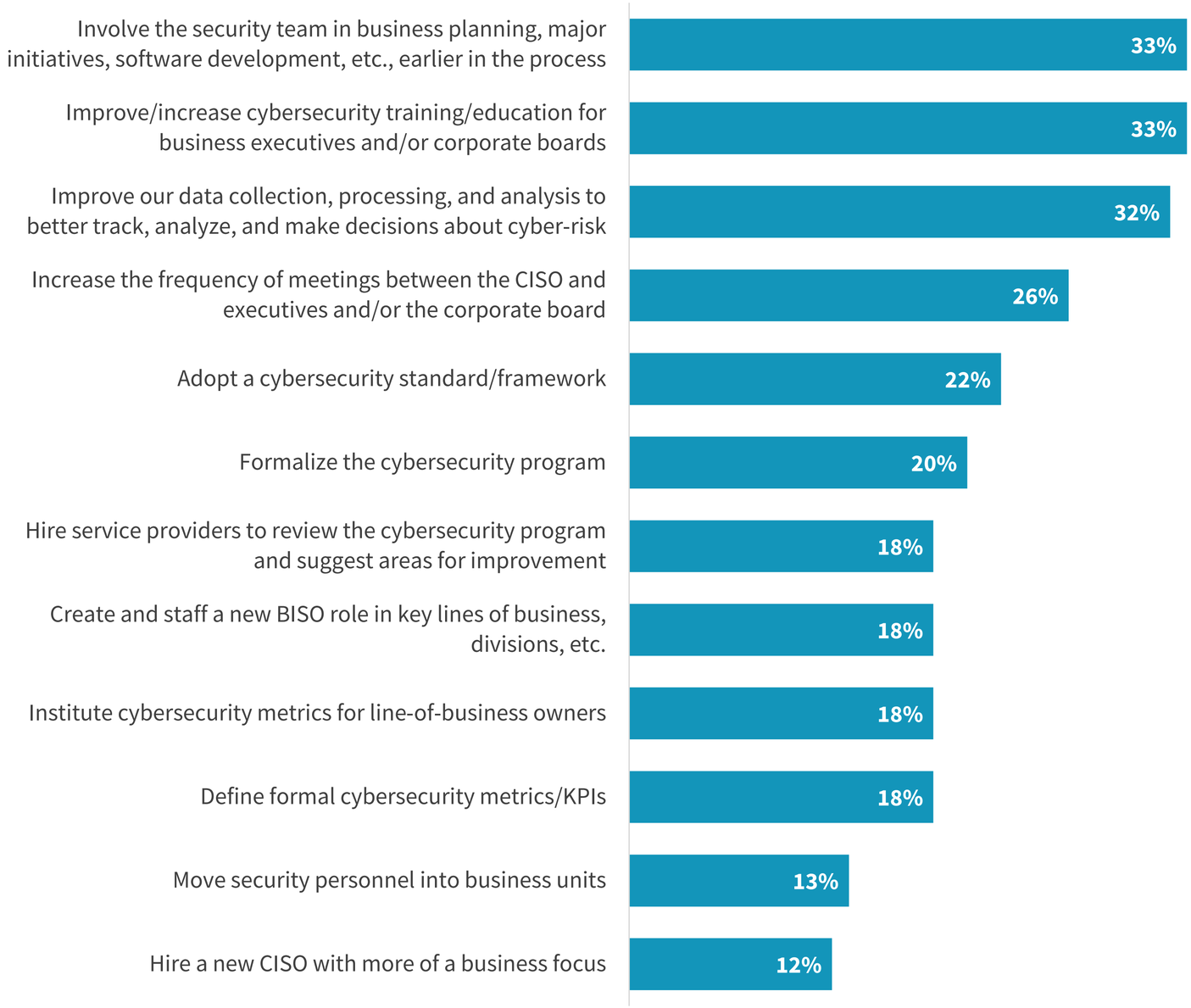


What Can Be Done to Improve Cybersecurity Alignment with the Business?

When it comes to the relationship between cybersecurity and the business, results are mixed. Corporate boards and executives are more educated and involved than they were in the past while CISOs are more actively participating in business planning and strategy. Alternatively, business executive and board involvement in cybersecurity seems cursory at best at most organizations.

Survey respondents pointed to numerous ways for their organizations to bridge the business/cybersecurity gap. For example, one-third suggested getting the security team more involved with business planning and major IT initiatives earlier in the process, 33% recommended improving/increasing cybersecurity training/education for business executives and corporate boards, and 32% proposed improving data collection, processing, and analysis to improve cyber-risk management.

Actions likeliest to improve cybersecurity and business alignment.



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Recommendations

INSTITUTE THE RIGHT REPORTING STRUCTURE.

Forty-five percent of CISOs report to CIOs while 42% report to CEOs. Through its data analysis, ESG discovered that a CISO to CEO reporting structure is a best practice for leading organizations. This makes sense as a direct reporting structure means more cybersecurity exposure for CEOs and more business input for the cybersecurity team. Thus, this is a good place for organizations to start.

FORMALIZE THE CYBERSECURITY PROGRAM.

Too many cybersecurity programs are haphazard and technically focused. To align cybersecurity and the business, cybersecurity programs must be top-down, formalized and documented, and highlighted by KPIs and established metrics. This will help CISOs better communicate with business executives about the role of cybersecurity in the business using a common language.

EMPLOY BISOs.

Note that 18% of organizations say that they would better align cybersecurity and the business by creating a BISO role in key LOBs and divisions. ESG agrees. A business executive with cybersecurity knowledge could drive security at a granular level into business processes, critical assets, sensitive data, and employee roles. This would also help align security with business productivity.

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Trend Micro, a global leader in cybersecurity, helps make the world safe for exchanging digital information. Leveraging over 30 years of security expertise, global threat research, and continuous innovation, Trend Micro enables resilience for businesses, governments, and consumers by providing connected security across the IT infrastructure.

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About ESG

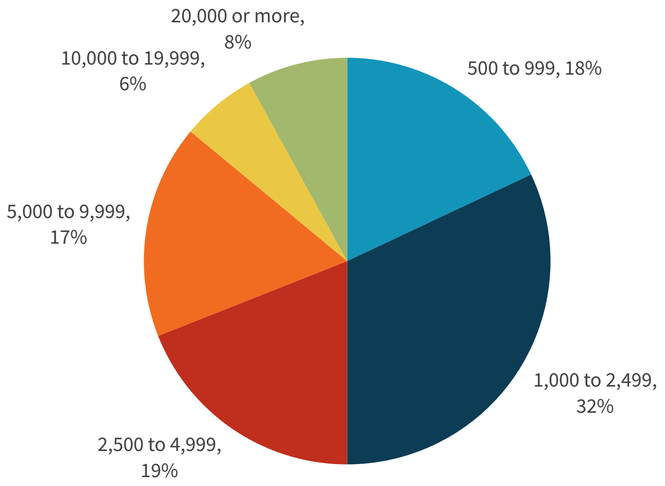
Enterprise Strategy Group is an IT analyst, research, validation, and strategy firm that provides market intelligence and actionable insight to the global IT community.

Research Methodology

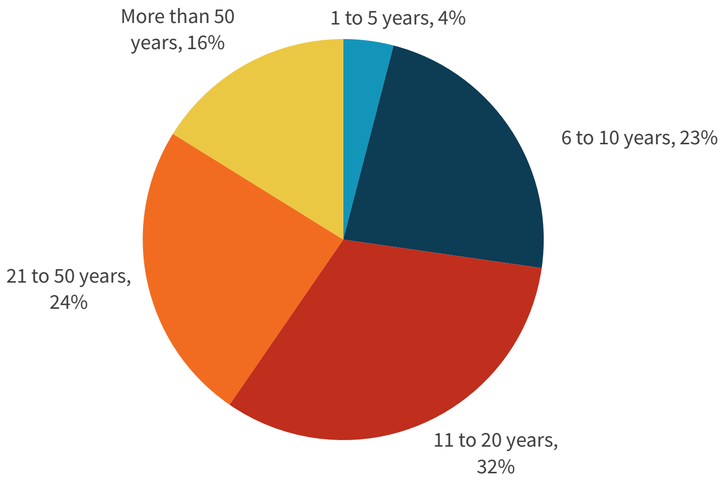
To gather data for this report, ESG conducted a comprehensive online survey of senior business, cybersecurity, and IT professionals from private- and public-sector organizations in North America (United States and Canada) and Western Europe (UK, France, and Germany) between September 28, 2020 and October 24, 2020. To qualify for this survey, respondents were required to be senior business, cybersecurity, and IT professionals personally responsible for or familiar with their organization's environment and strategy. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on a number of criteria) for data integrity, we were left with a final total sample of 365 senior business, cybersecurity, and IT professionals.

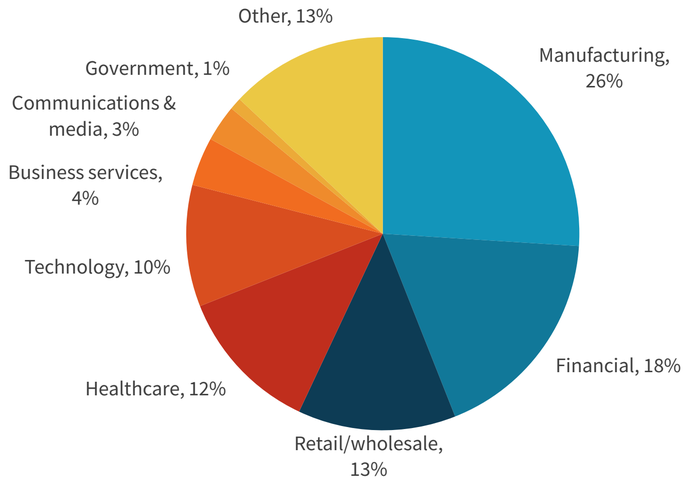
RESPONDENTS BY NUMBER OF EMPLOYEES



RESPONDENTS BY AGE OF COMPANY



RESPONDENTS BY INDUSTRY



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