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Cybersecurity & French Enterprises: What does the latest survey of CISOs reveal about attacks, risks and resilience?

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#teissamsterdam19

Club des Experts de la Sécurité de l'Information et du Numérique

Barometer of the cyber-security in companies

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“opinionway

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Context and objectives

- **CESIN** provides a forum for **experts in security and digital technology** within large companies.
- CESIN and OpinionWay launched in 2015 their first major survey to assess, to get the opinion of CESIN members :
  - the **perception of cyber-security and its challenges**
  - the **practical reality** of the IT security in large companies.
- The survey is renewed every year. This last one, conducted at the end of 2018, provides updates of the results and new data on the impact of the digital transformation in companies.

METHODOLOGY

Methodology

Sample

Quantitative study carried out by OpinionWay among **174 members of CESIN** from the CESIN member file (498 members).

Data collection

Online data collecting via CAWI (Computer Assisted Web Interview) system

Fieldwork

From **November 23rd to December 26th 2018**.

Certification

afaq ISO 20252 Étude marketing et d'opinion AFNOR CERTIFICATION

OpinionWay conducted this survey respecting the **ISO 20252** standard.

Any total or partial publication must imperatively quote the following mention:
"OpinionWay Survey for CESIN"
And no resumption of the survey can be dissociated from this mention.

FINDINGS

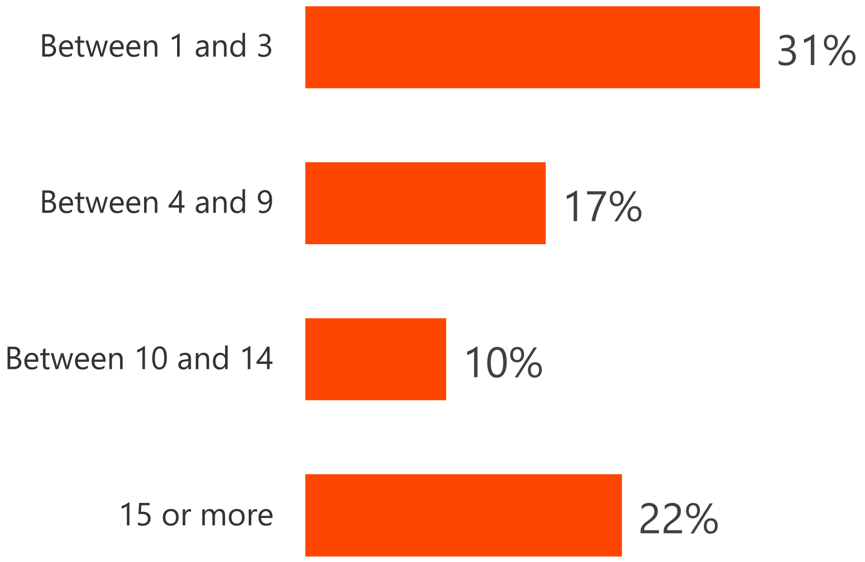
1. AN INCREASINGLY DECISIVE IMPACT OF CYBERATTACKS

The rate of companies affected by a cyberattack remains very high

Q5. How many cyberattacks have occurred in your company in the past 12 months?
Base: total sample (174)

80%

of companies have detected at least one cyberattack



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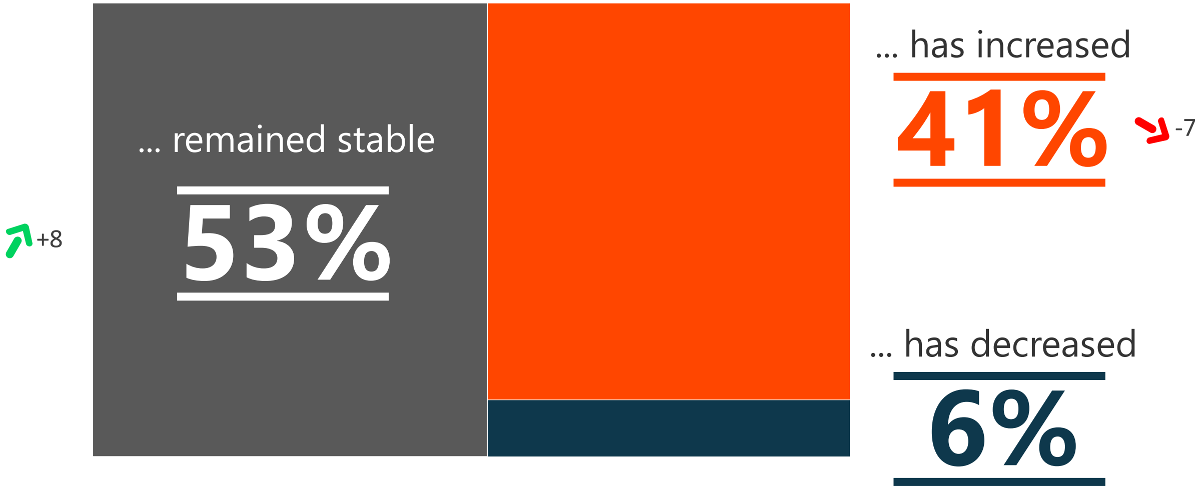
However, the number of cyberattacks per company tends to stabilize

Q5BIS. And compared to last year, this number of attacks found in your company... ?
Base: total sample (174)

In one year, the number of attacks...

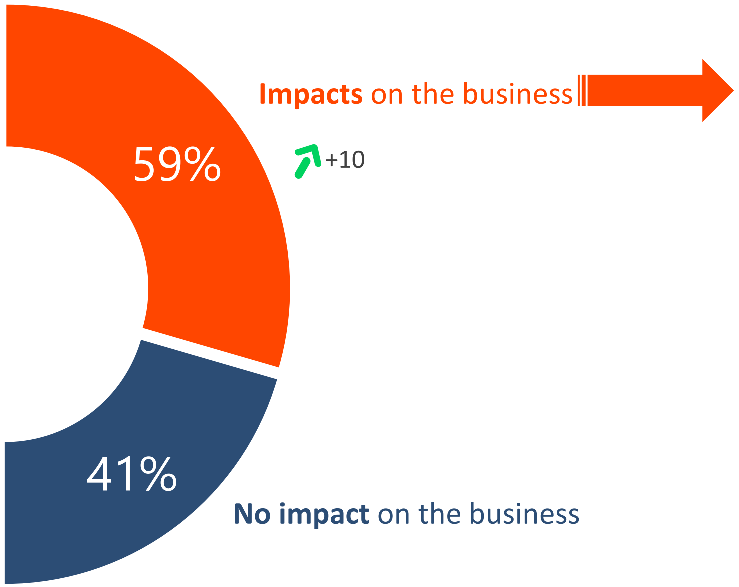


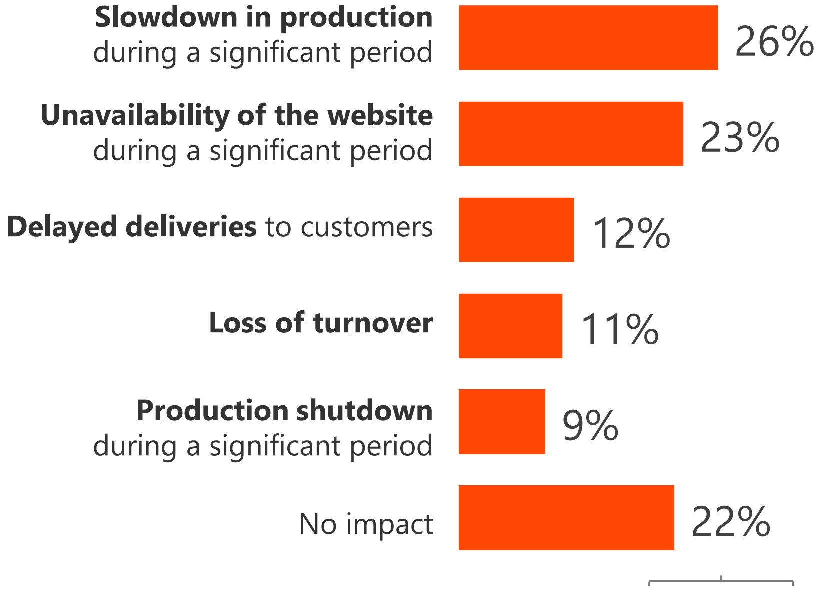
However, the number of cyberattacks per company tends to stabilize

↗↘ Significant evolution vs. 01/2018

On the other hand, cyberattacks have a greater impact on the business of targeted companies

Q30. What has been the impact of cyberattacks on your business?
Base: total sample (174) / Several possible answers





Impacts spontaneously mentioned by respondents: Increased workload, lower productivity of employees, bad reputation of the company

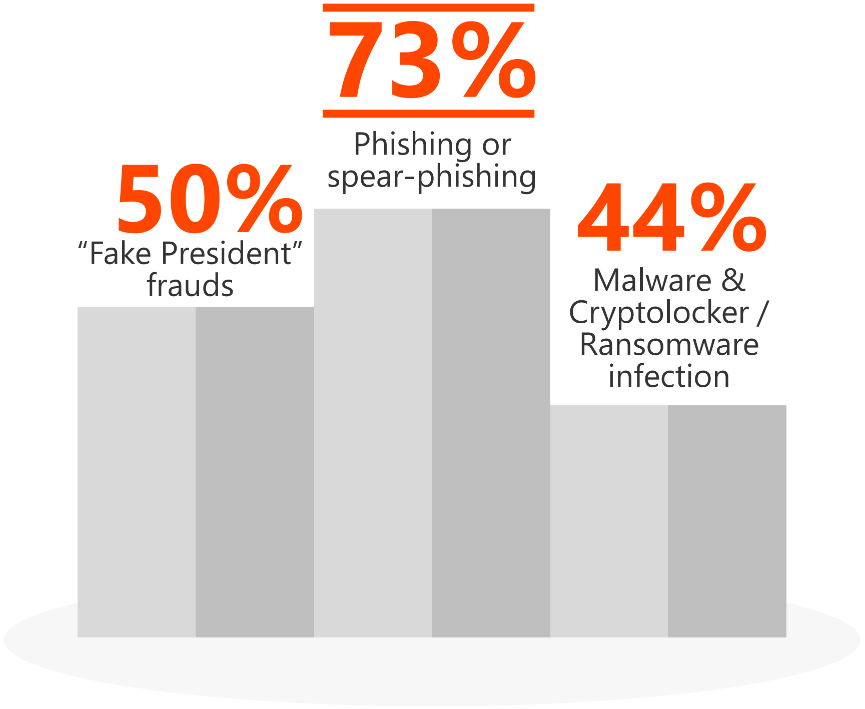
↗↘ Significant evolution vs. 01/2018

In 2018, phishing becomes the most widespread attack and contrary to what one might think, the “Fake President” frauds affect one in two companies

Q6. What types of cyberattacks has your business seen in the past 12 months?
Base: have detected an attack (139) / Several possible answers

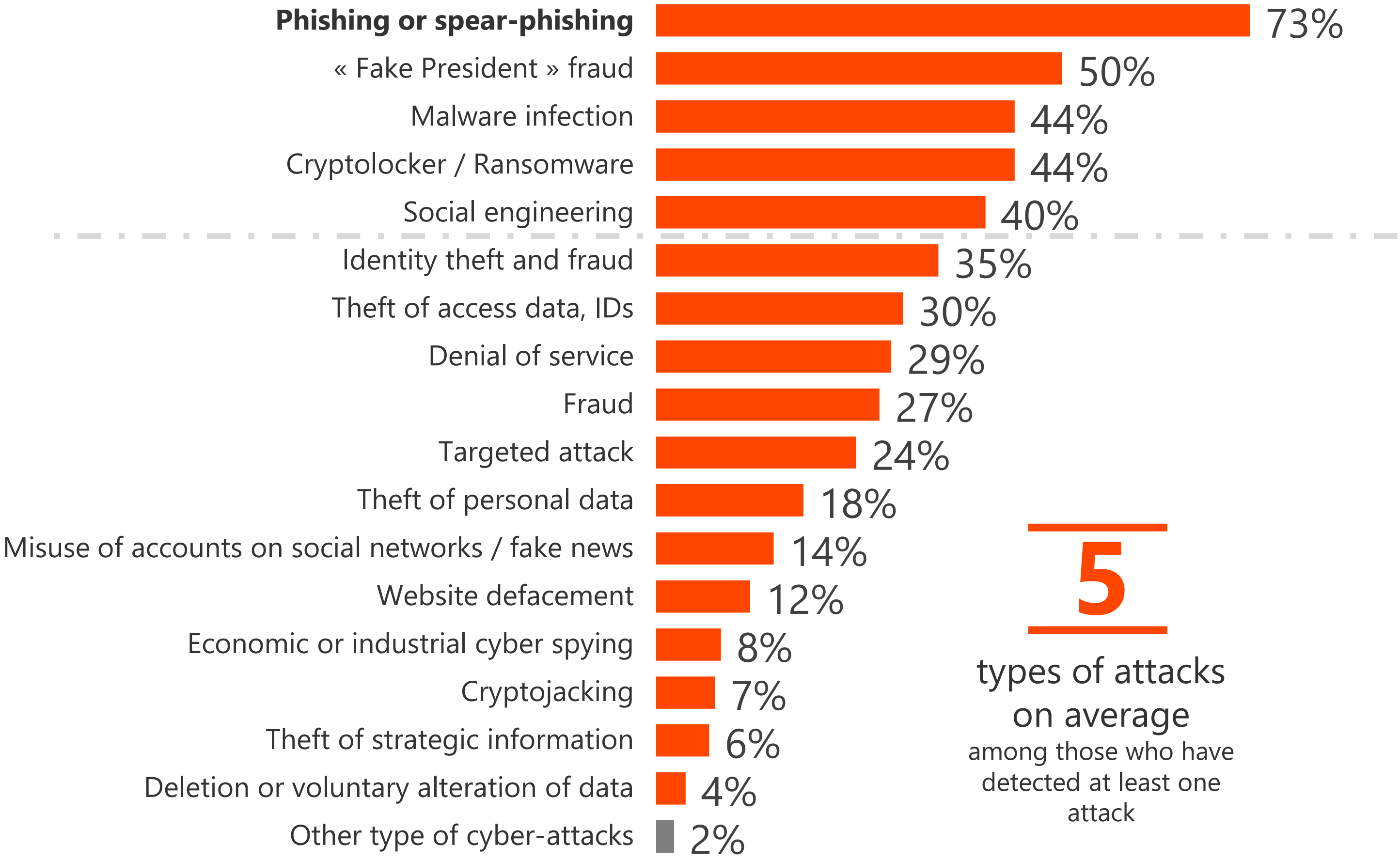
Cyberattacks suffered

TOP3



On average, companies face five different types of attacks each year

Q6. What types of cyberattacks has your business seen in the past 12 months?
Base: have detected an attack (139) / Several possible answers



5

types of attacks on average

among those who have detected at least one attack

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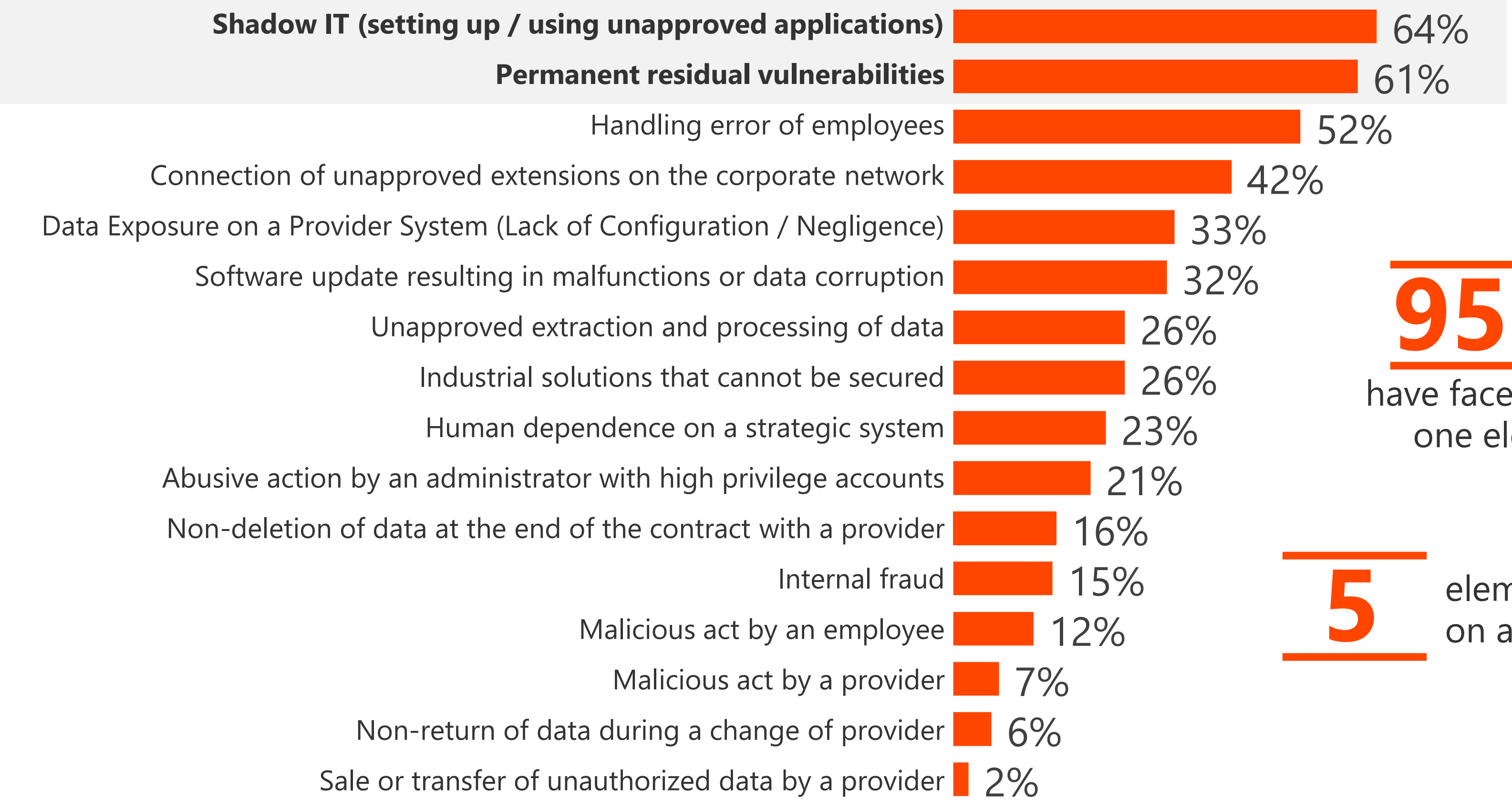
Shadow IT is the most common cybersecurity risk

Q6BIS. Which of the following cyber security issues did your company face in the past 12 months?

Base: total sample (174) / Several possible answers

The cybersecurity risks involved



95%

have faced at least one element

5 elements on average

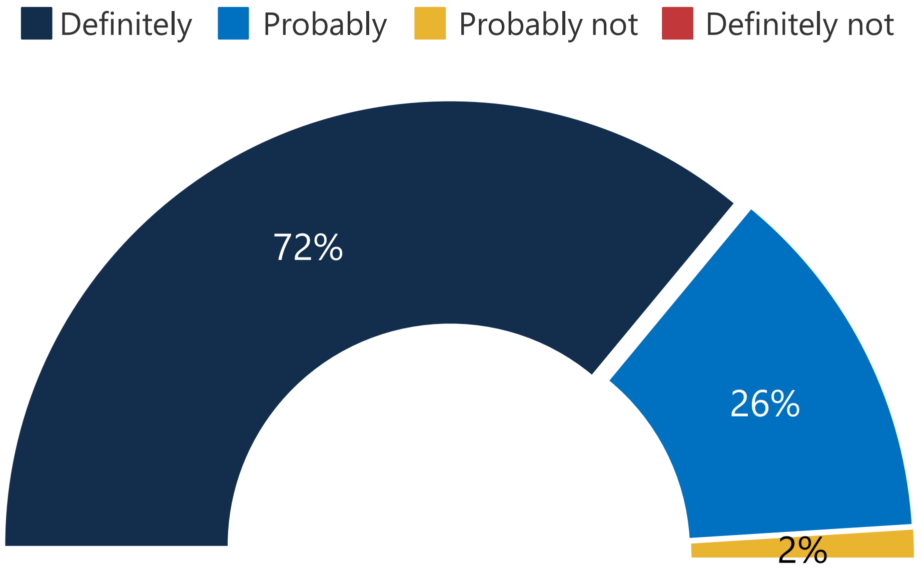
2. CLOUD AND IOT:
INCREASED RISKS ON ACCOUNT OF THE DIGITAL TRANSFORMATION

Digital transformation has an impact on the security of information systems across all companies

Q2BIS. In your company, does digital transformation have an impact on the security of information systems and data?
Base: total sample (174)

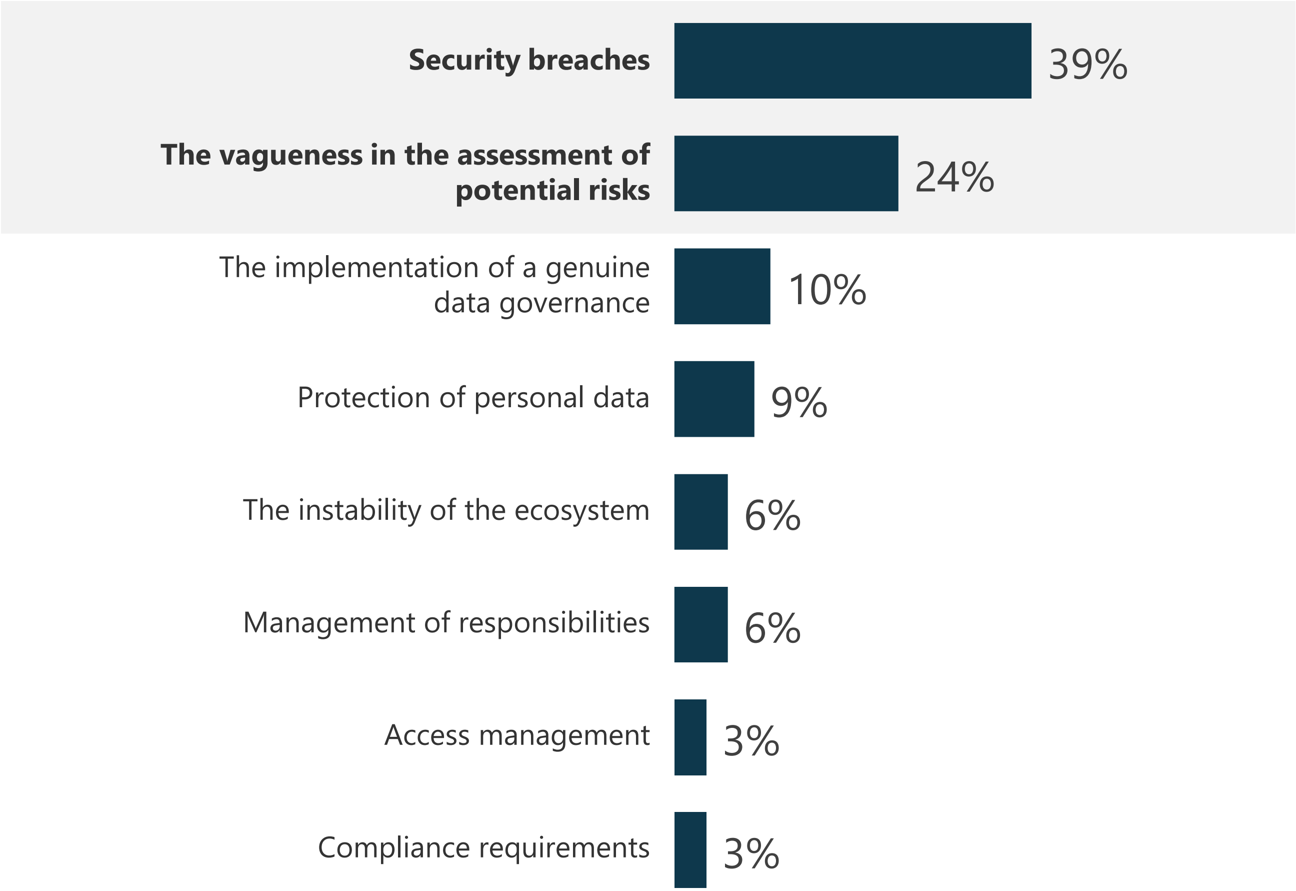
98%

consider that digital transformation **has an impact on the security** of information systems and data



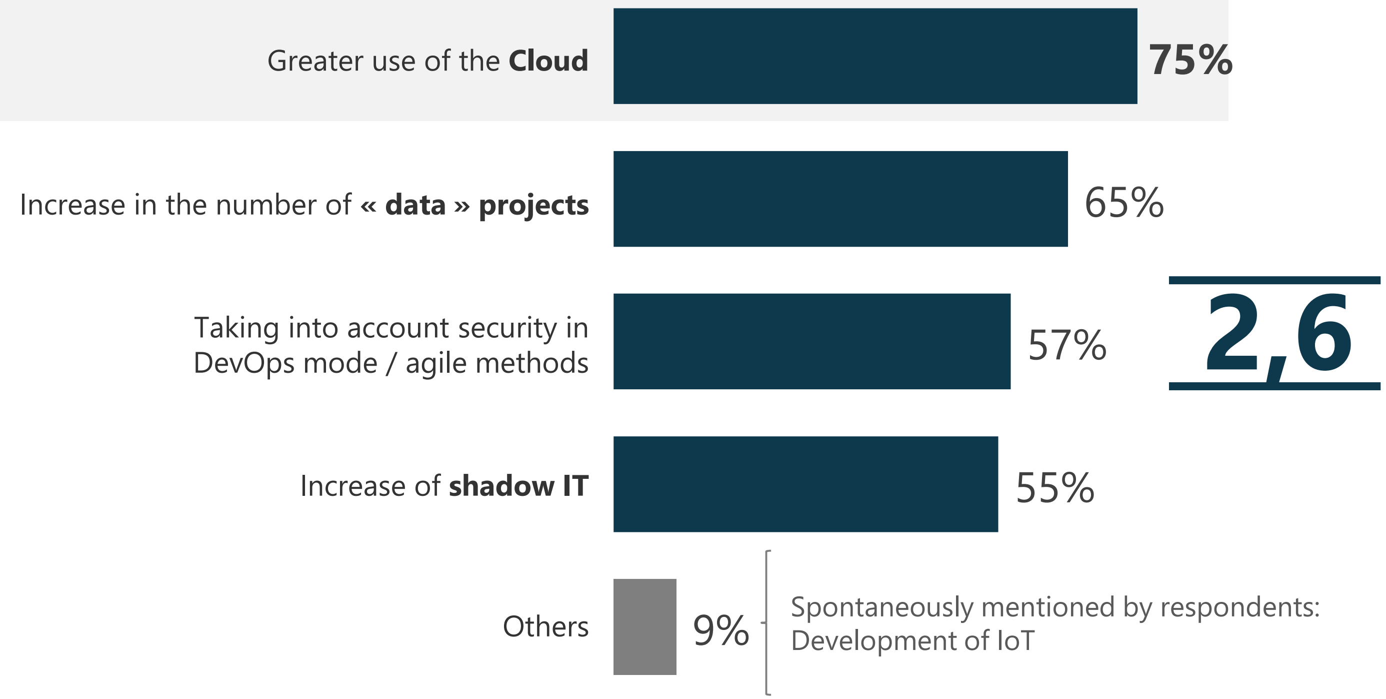
Security breaches remain the most prominent feature of IoTs

Q36. What do you think is the biggest challenge facing the CISO with regard to Internet of Things (IoT) in business?
Base: total sample (174)



… but the most frequent impact of digital transformation within companies is the use of Cloud

Q2BISV4. How does digital transformation impact the security of your company's information systems and data?
Base: consider that digital transformation has an impact on the security of information systems and data (170)

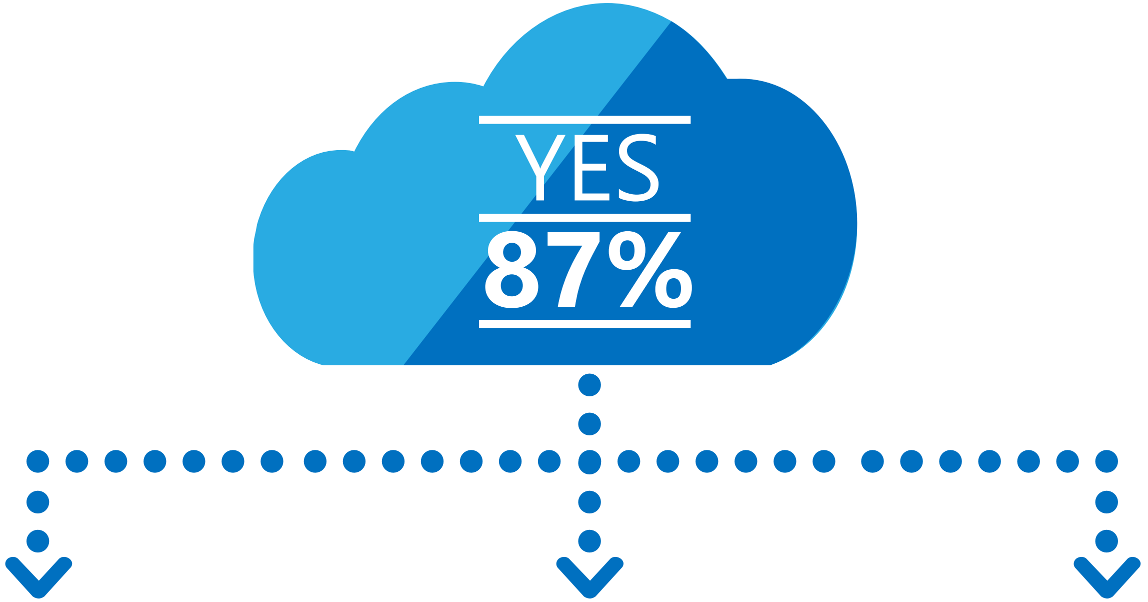


Spontaneously mentioned by respondents:
Development of IoT

2,6 type of impact on average

Most companies store at least some of their data in a Cloud … most of them in public clouds

Q20. Are some of your company's data stored in a Cloud?
Base: total sample (174) / Several possible answers



YES

87%

No

13%

Yes, in public Clouds

52%

Yes, in private Clouds only

35%

Yes, in hybrid Clouds

34%

In addition, the Cloud exposes companies to different risks, especially due to lack of control

Q22. In your opinion, do the following factors represent a low, moderate, or high risk for Cloud use?
Base: total sample (174)

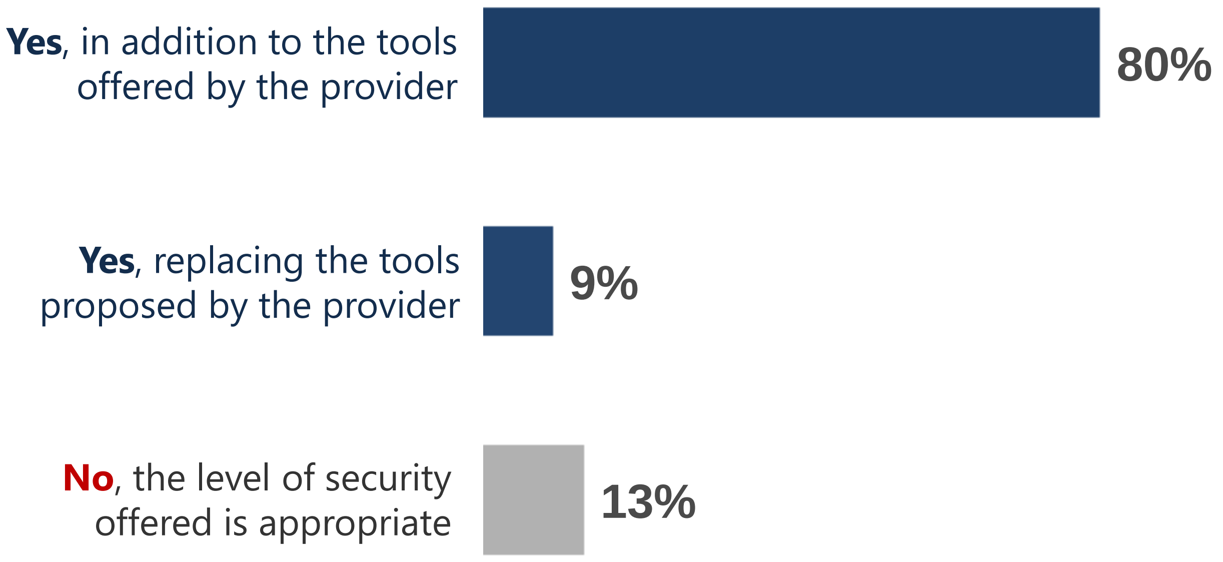
% A strong risk

52%	**Difficulty to control access by administrators of the host**
52%	**No control of the outsourcing chain of the host**
51%	**Non-deletion of data**
48%	Data storage in data centers abroad, outside French law
48%	Data storage in France but with foreign providers where the law of the country of origin also applies
48%	Difficulty to carry out audits (pen tests, control of configurations, visit on site)
47%	No control of the use made of it by the employees of your company
45%	Confidentiality of data with respect to the host
39%	No control of the security settings / weak encryption on the part of the host
36%	Data processing by the host without our knowledge
34%	Failure of partitioning between the different customers of the host
34%	Failure of the SOC (internal or external) from the Cloud
33%	Non-return of data
29%	Unavailability of data / application due to an attack on the host
29%	Systemic propagation of attacks and human errors
25%	Smurf attack from the web host
22%	Trapping a hosted application
21%	Low frequency of online versions and lack of security checks

To secure data stored in a public Cloud, CISOs are not satisfied with the tools offered by the provider…

Q23. In your opinion, does securing data stored in the Cloud require specific tools or devices?
Base: total sample (174)

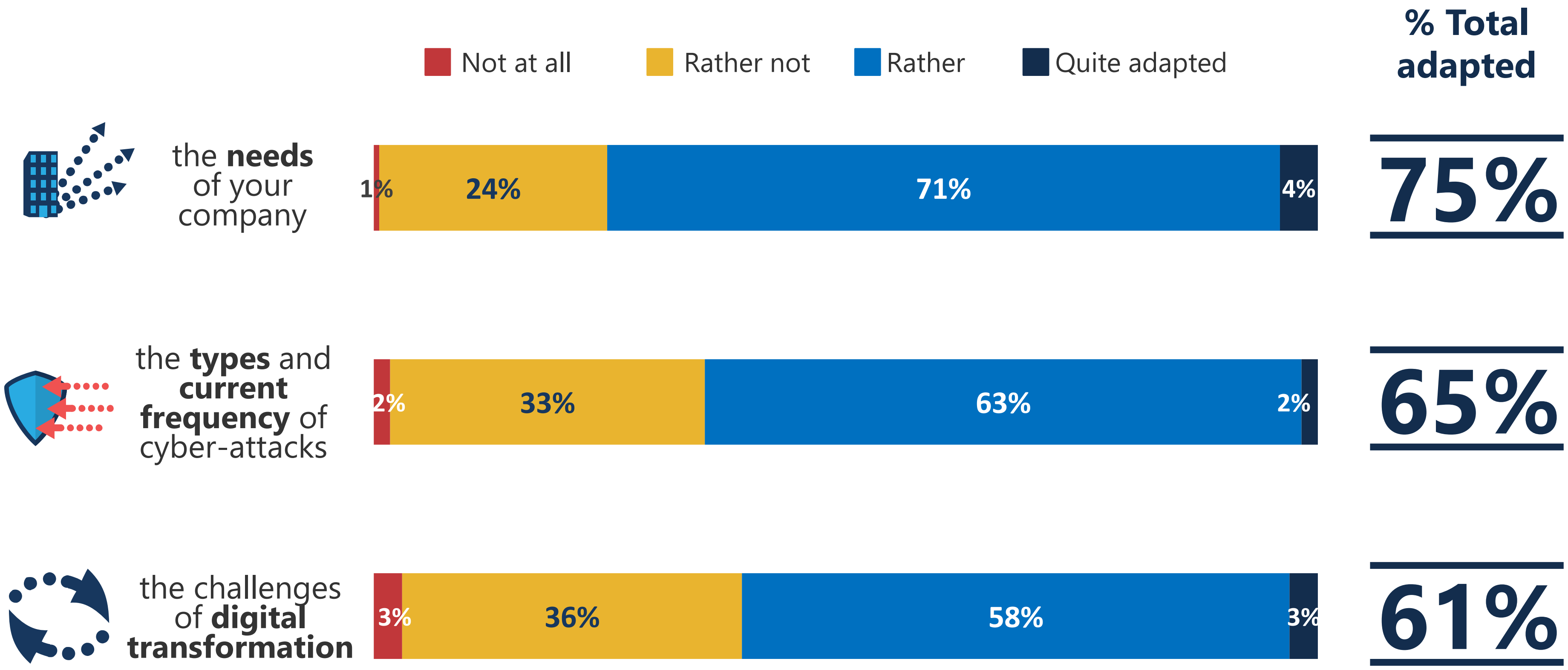
… 89% believe that securing data stored in the Cloud requires specific tools or devices



3. DEVELOPING CYBER RESILIENCE TO ADDRESS CYBERSECURITY RISKS

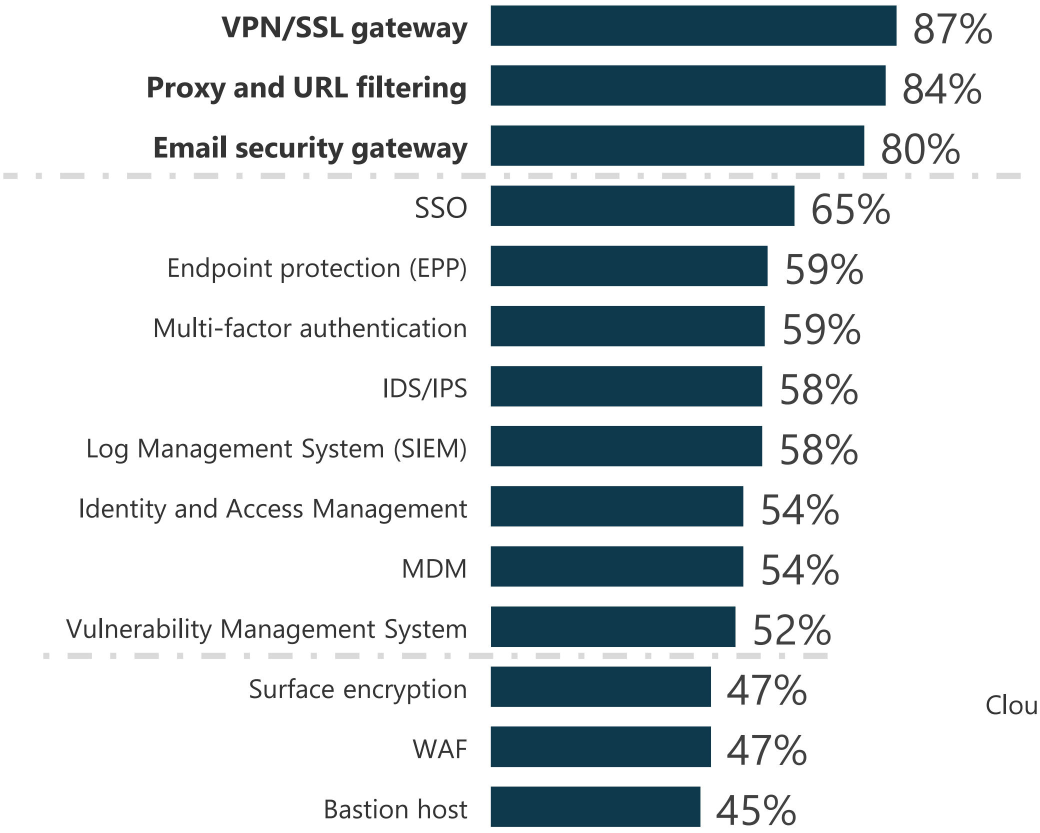
On a technical level, the proposed solutions seem in line with expectations of the companies but remain challenged by the digital transformation

Q29. To what extent do you think protection solutions available on the market are adapted or not to...?
Base: total sample (174)

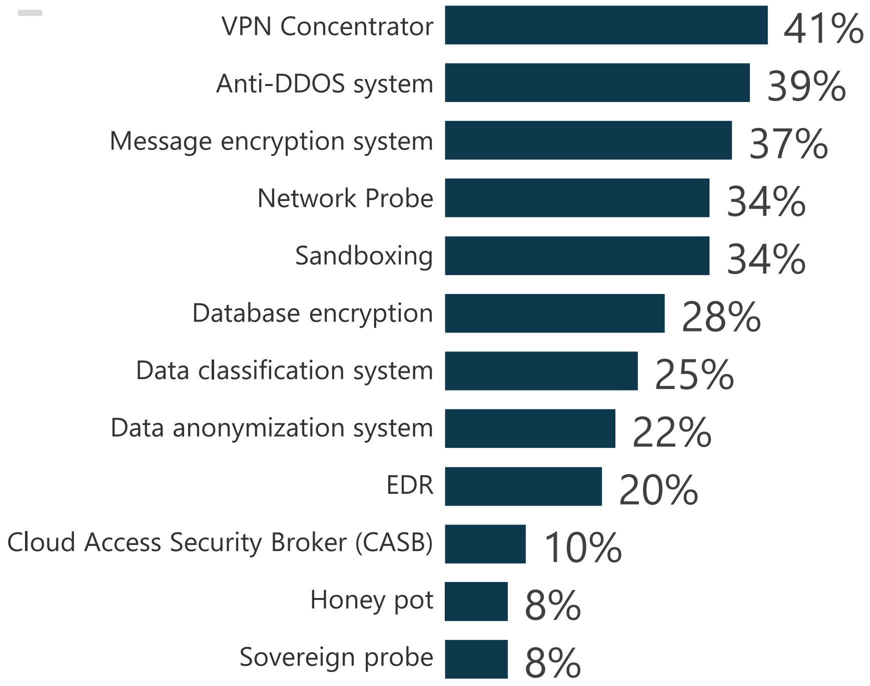


Concretely, companies deploy nearly a dozen solutions on average…

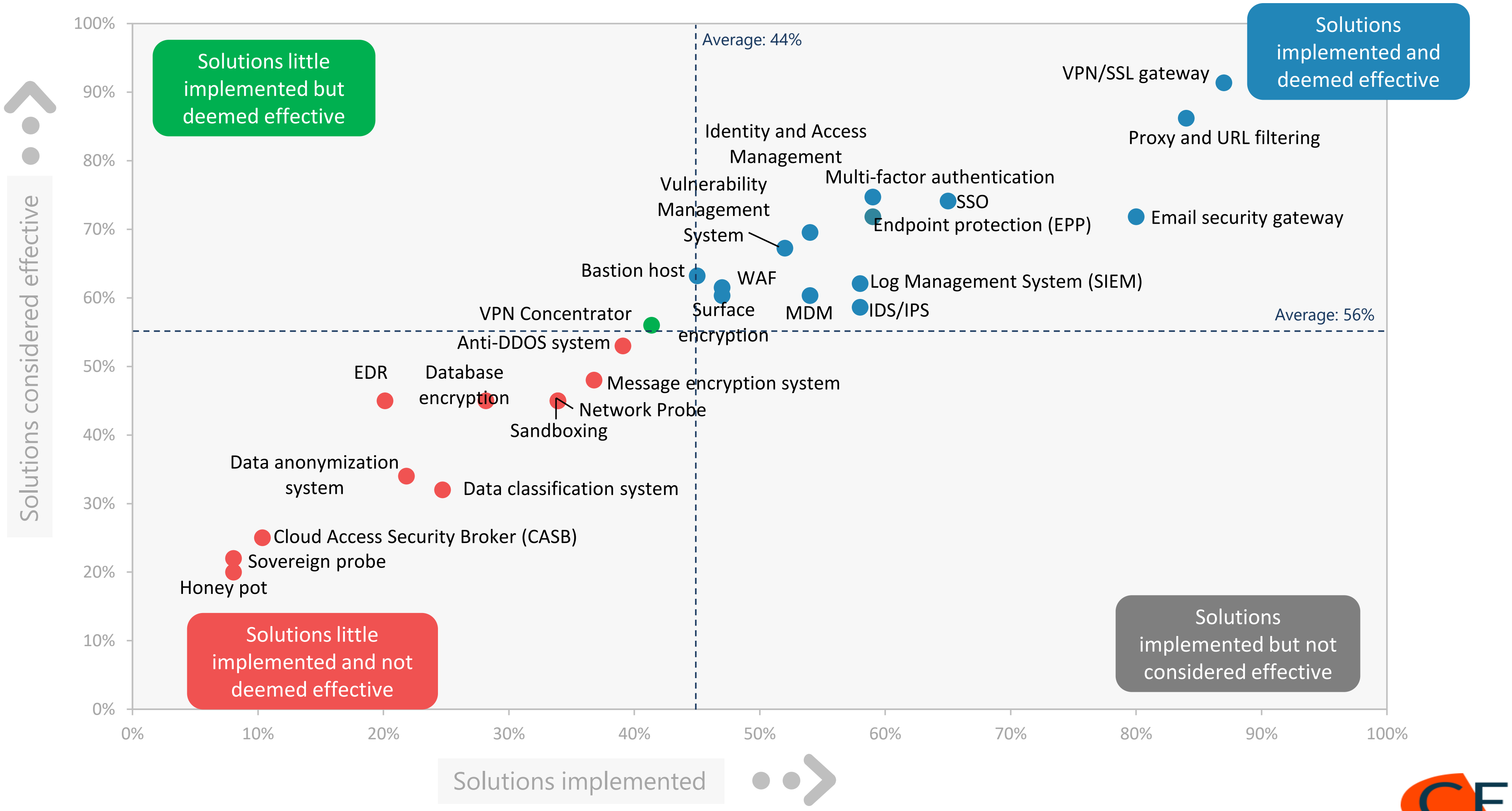
Q8. Which of the following protection solutions have been implemented in your company, in addition to the basics tolls (antivirus, firewall,…) *Base: total sample (174) / Several possible answers*



11,6 solutions on average



… and these implemented solutions are considered effective



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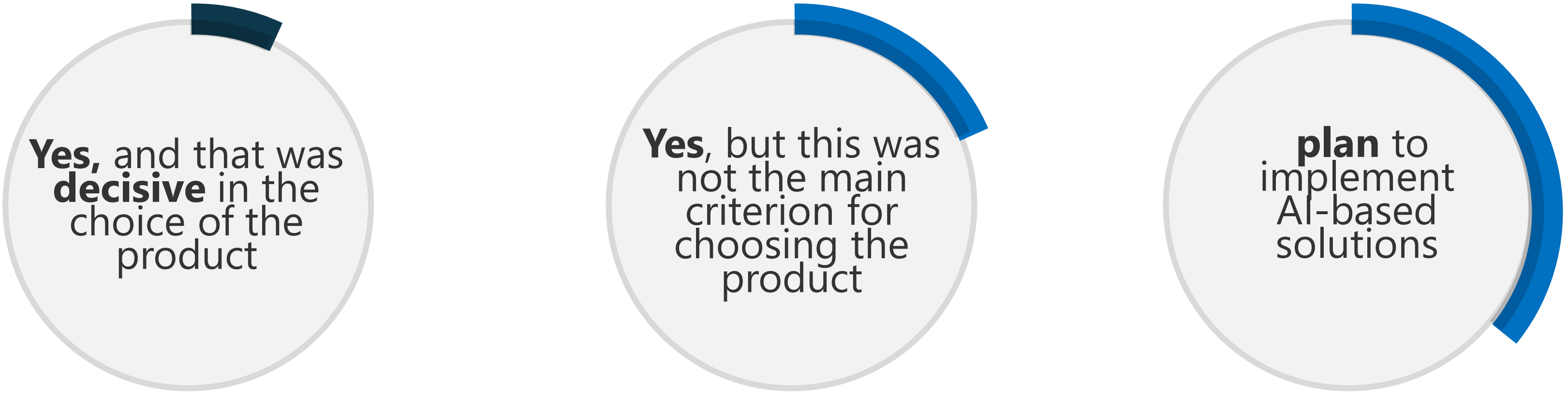
AI-based protection solutions to face cyber-risks are becoming increasingly popular…

Q40. Let's talk about the potential role of AI in IT security. In your company, have you implemented AI-based protection or detection solutions?
Base: total sample (174)

56% **have AI-based solutions in place or plan to do so**



6%

Yes, and that was **decisive** in the choice of the product

17%

Yes, but this was not the main criterion for choosing the product

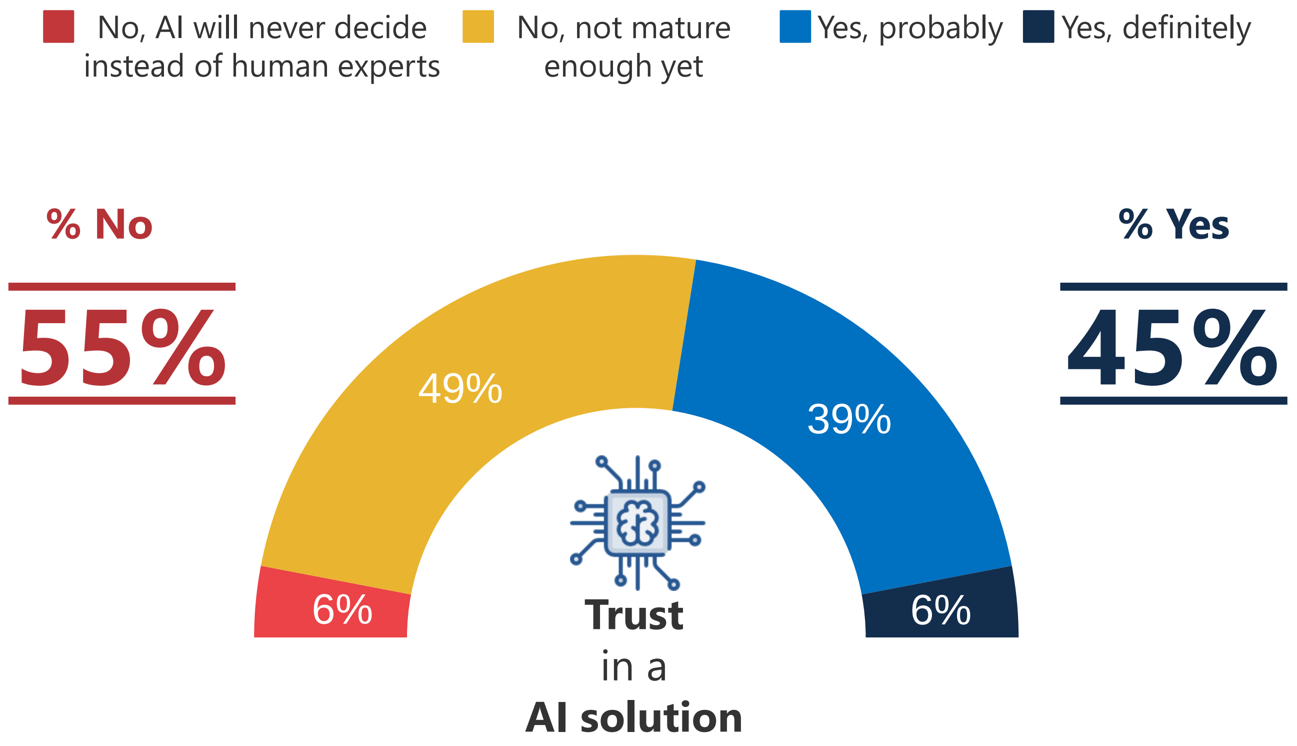
33%

plan to implement AI-based solutions

For 44%, it is not planned.

… even if human intervention remains necessary for CISOs

Q41. Would you be willing to let an AI solution make security decisions regarding detection and/or remediation?
Base: total sample (174)



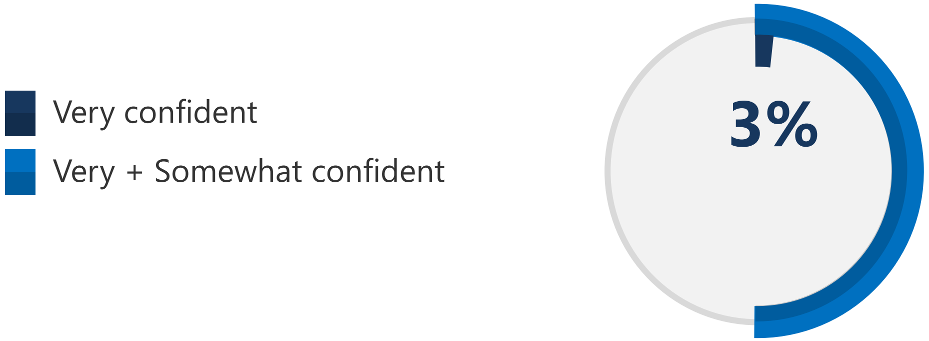
Despite all these solutions, confidence in the ability to cope with cyber risks is decreasing

Q26. For the future, would you say that you are very confident, somewhat confident, somewhat worried or very worried about...?

Base: total sample (174)

51% ↘ -12

Your company's **ability to cope** with cybersecurity risks

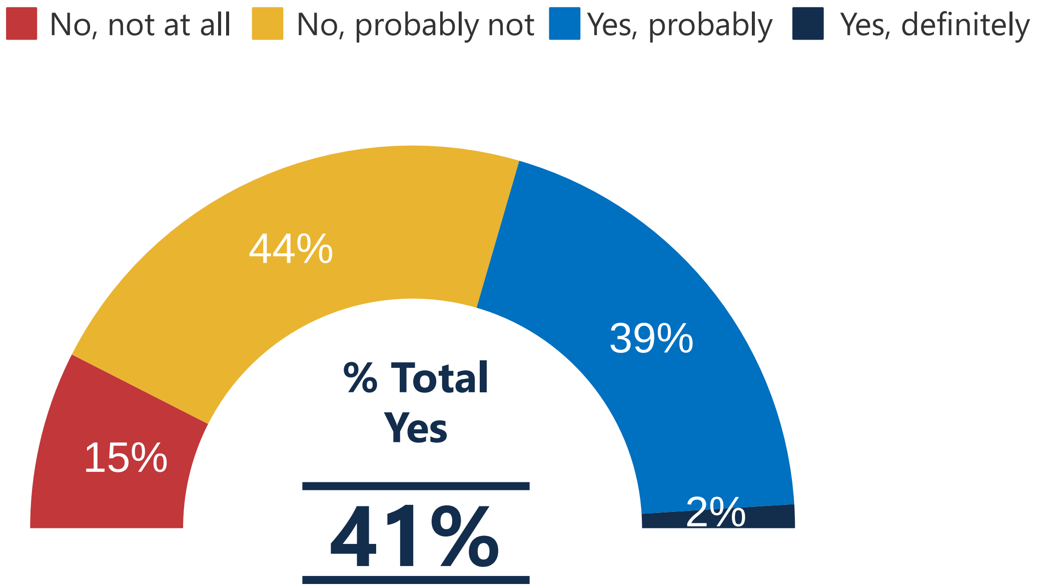


↗ ↘ Significant evolution vs. 01/2018

And less than half of the companies feels capable of handling a massive cyberattack

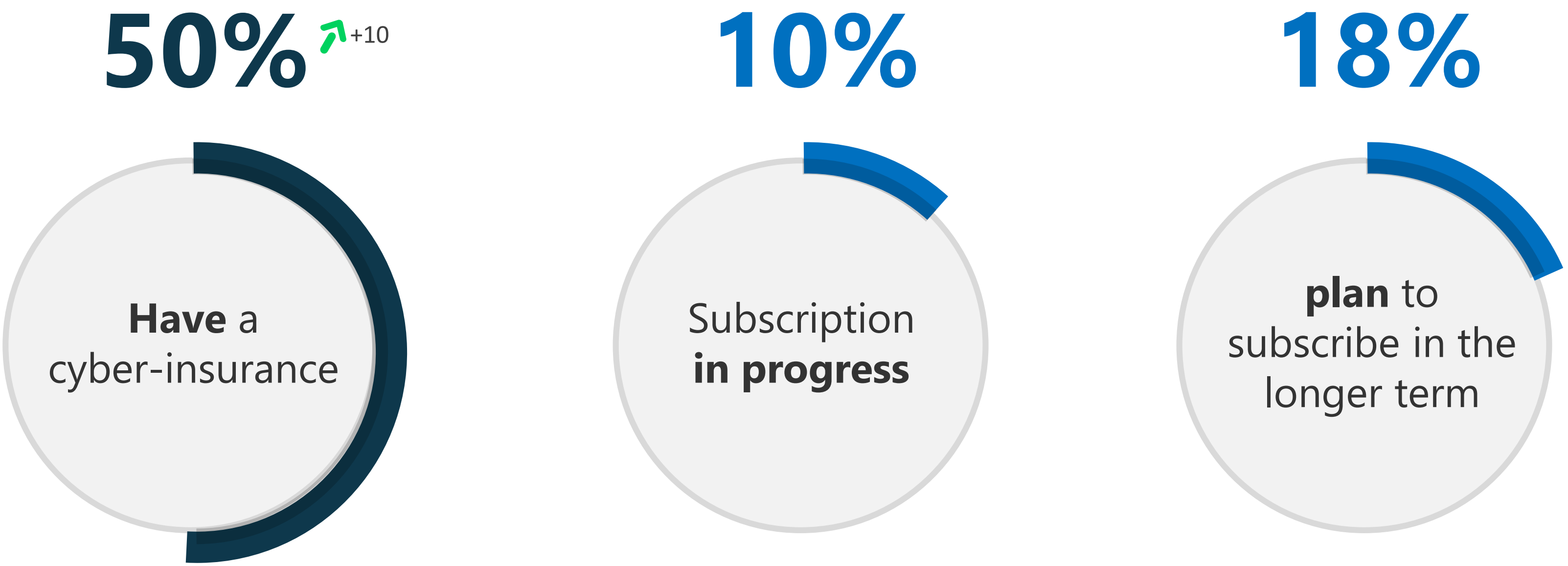
Q38. In your opinion, is your company prepared to handle a major cyberattack?
Base: total sample (174)

« Is your company prepared to handle a massive cyberattack? »



In this context, more and more companies subscribe to cyber-insurance

Q9. Does your company have a cyber-insurance?
Base: total sample (174)



50% ↗+10

Have a cyber-insurance

10%

Subscription **in progress**

18%

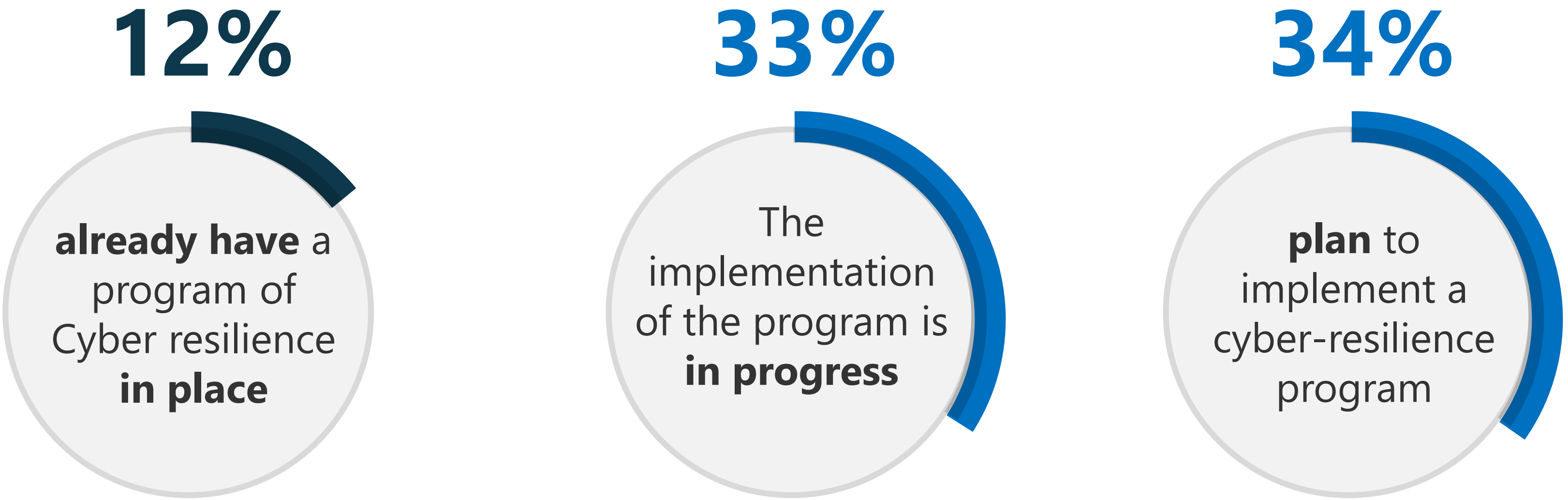
plan to subscribe in the longer term

↗↘ Significant evolution vs. 01/2018

Cyber-resilience becomes an issue for two-thirds of companies, which set up a program

Q39. Does your company have a cyber resilience program in place?
Base: total sample (174)

79% **have a cyber resilience program in place or plan to do so**



12%

already have a program of Cyber resilience **in place**

33%

The implementation of the program is **in progress**

34%

plan to implement a cyber-resilience program

For 21%, it is not planned.

4. THREE CHALLENGES FOR THE FUTURE

- AWARENESS
- GOVERNANCE
- RESOURCES

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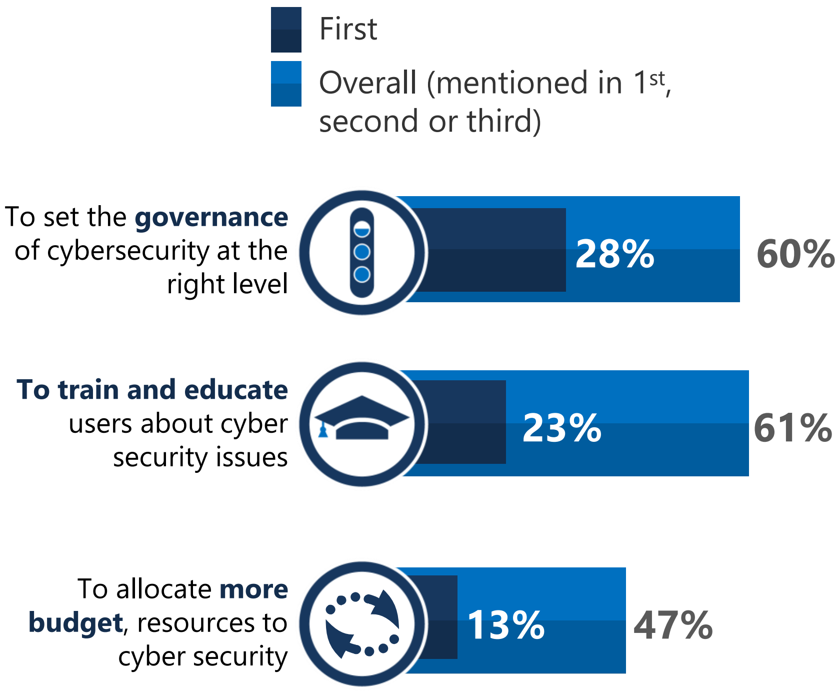
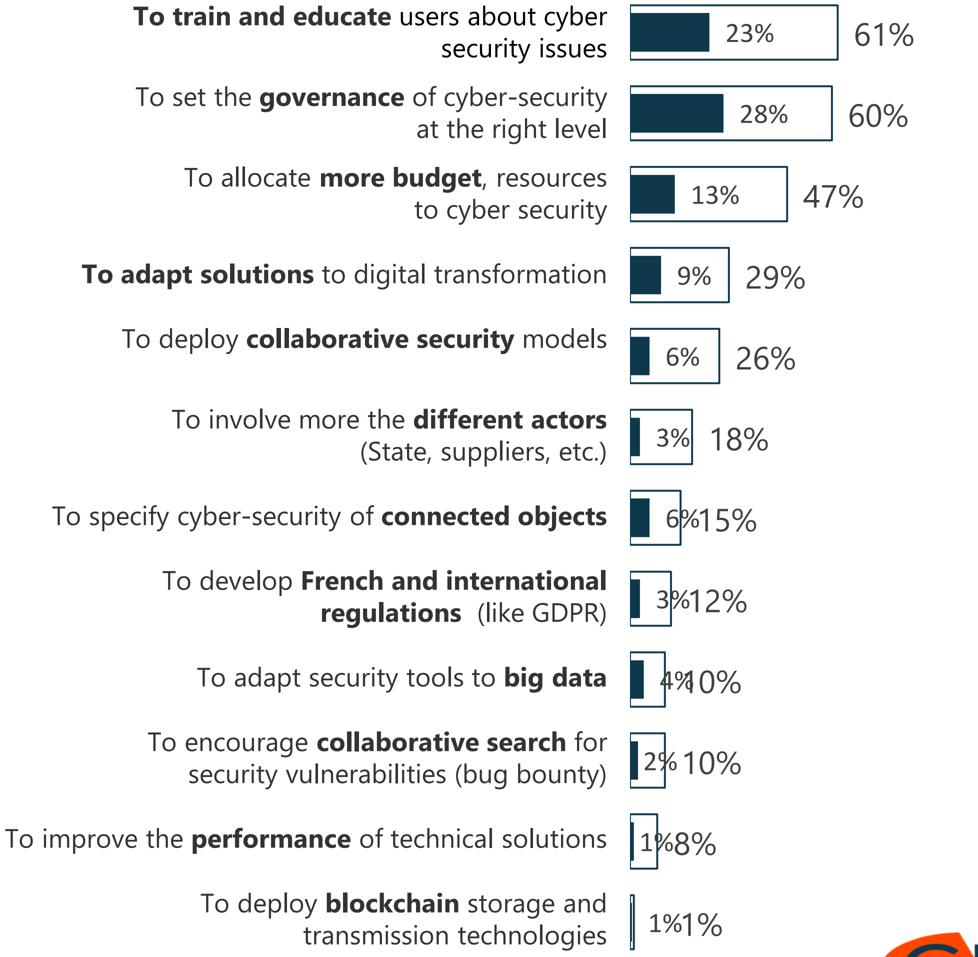
The challenge for the future remains more human than technical

Q28. Among the following issues, what do you think are the 3 challenges for tomorrow, for the future of corporate cybersecurity?

Base: total sample (174)

TOP 3 challenges





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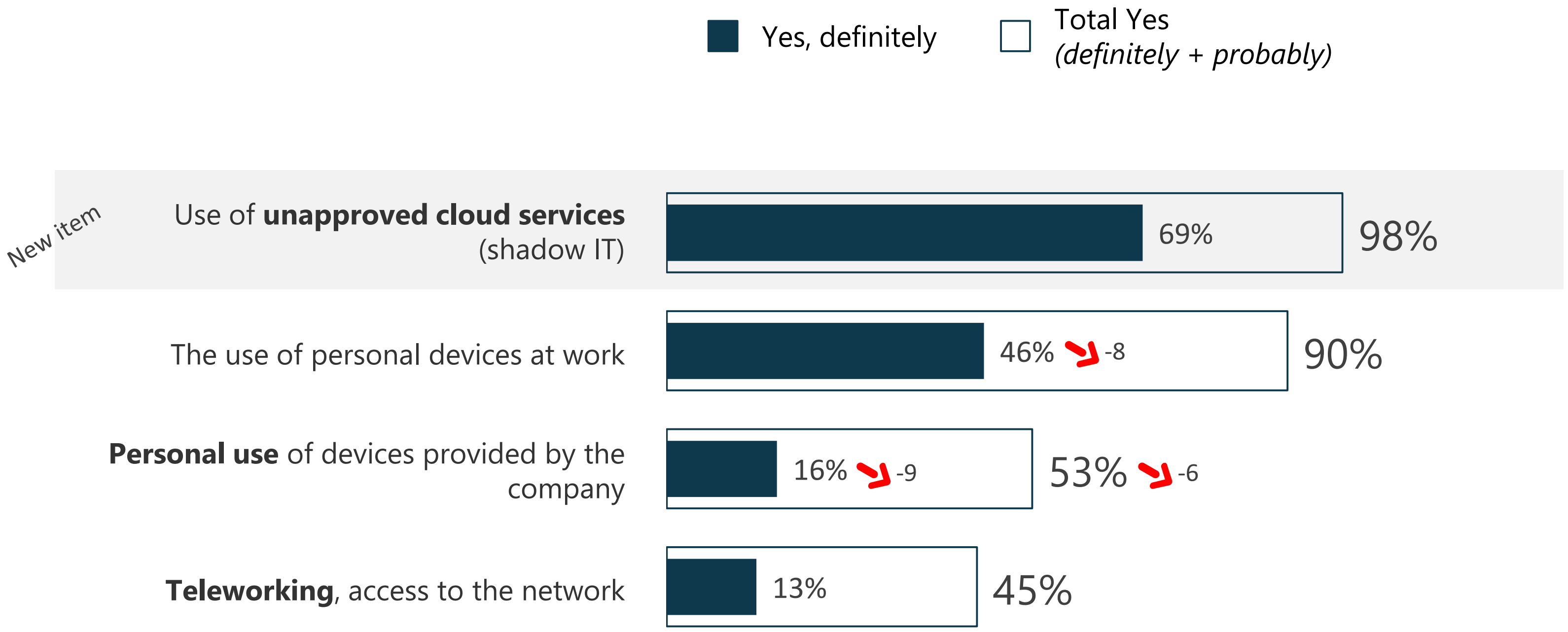
4. THREE CHALLENGES FOR THE FUTURE

- ▸ **AWARENESS**
- ▸ GOVERNANCE
- ▸ RESOURCES

Digital uses by employees represent a real risk, especially shadow IT

Q24. In your opinion, do the following uses of digital by employees represent a risk for corporate cybersecurity?
Base: total sample (174)

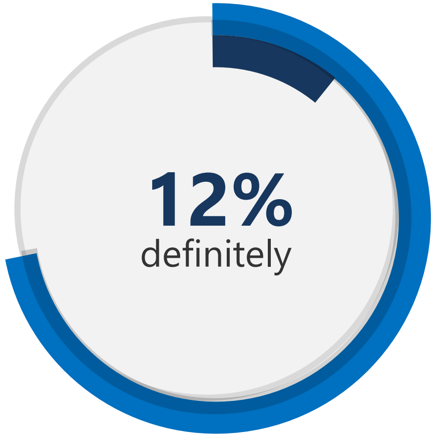


↗ ↘ Significant evolution vs. 01/2018

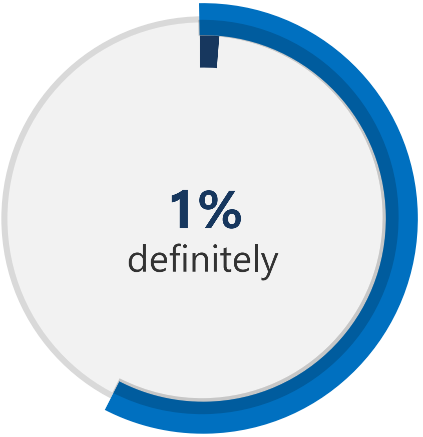
And even if they are aware of cybersecurity, employees are not very involved, according to CISOs

Q15. With regard to cybersecurity, do you think that the employees of your company …?
Base: total sample (174)

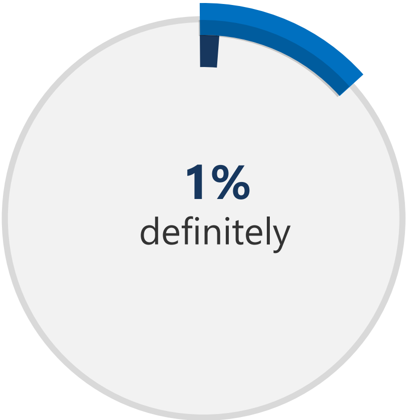
71%
believe that employees **are aware** of cyber risks



54%
believe that employees **respect the recommendations**

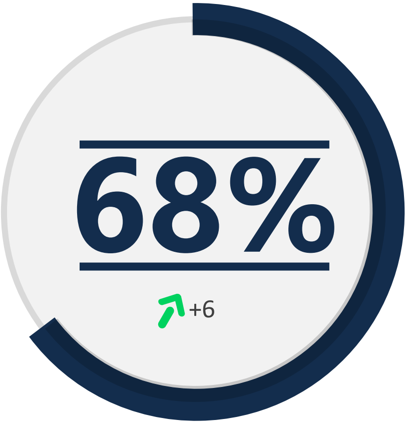


13%
think that employees take precautions **beyond the recommendations given**



In this context, more and more companies set up procedures to monitor the implementation of recommendations

Q15BIS. Have you set up procedures to monitor the implementation of recommendations by employees in specific situations, such as audits, fake phishing campaigns, internal controls, etc.?
Base: total sample (174)



have **set up procedures to monitor** the implementation of recommendations by employees

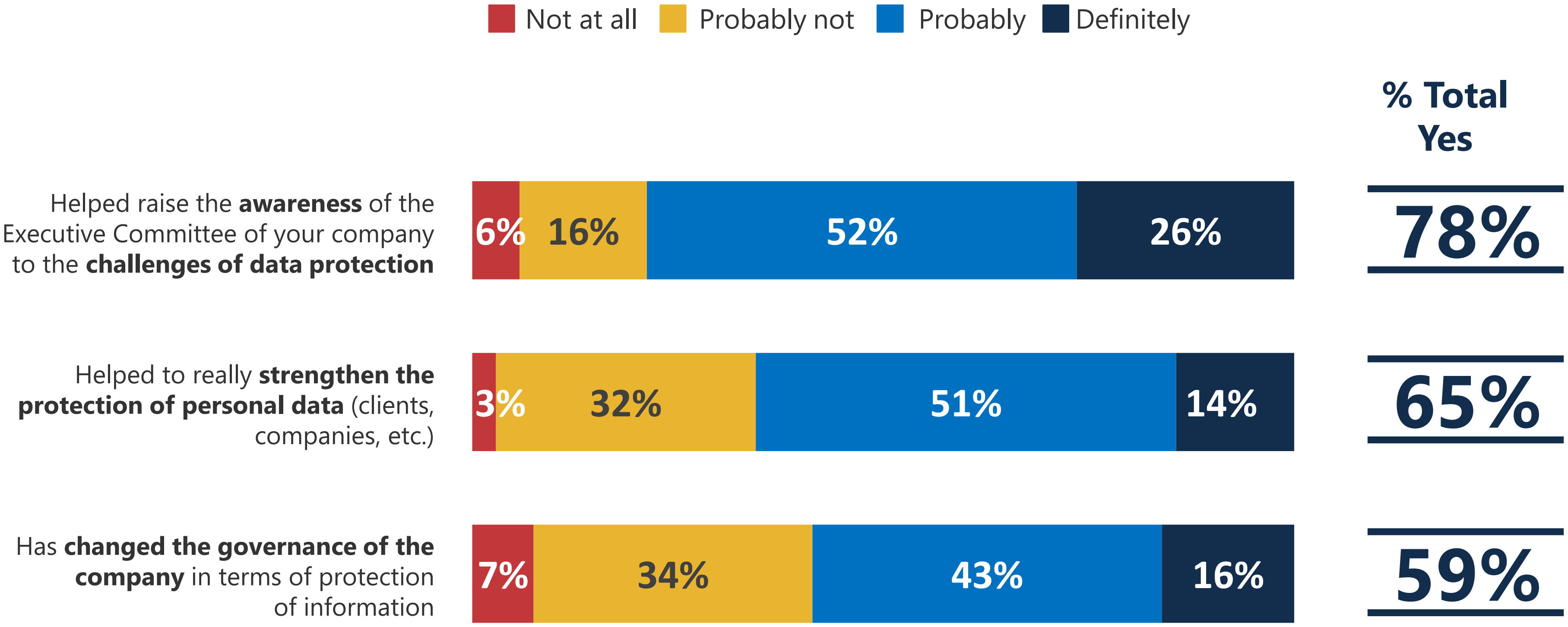
↗ ↘ Significant evolution vs. 01/2018

4. THREE CHALLENGES FOR THE FUTURE

- ▸ AWARENESS
- ▸ **GOVERNANCE**
- ▸ RESOURCES

GDPR compliance has raised awareness of data protection issues

Q32. Regarding compliance with GDPR, would you say that it...?
Base: total sample (174)

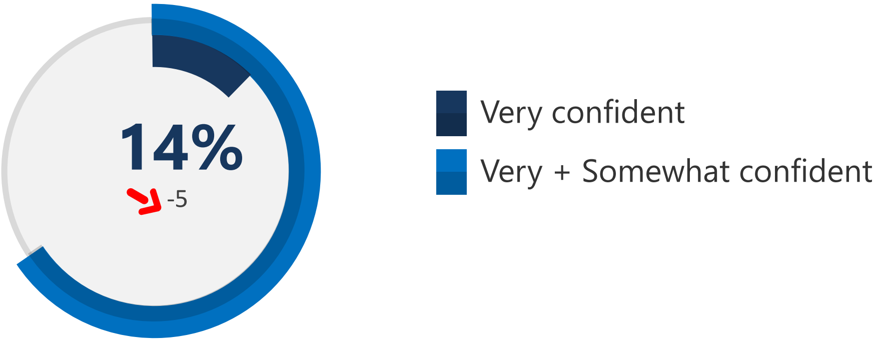


However, the CISOs show little confidence in the ability of their Executive Committee to take into account the issues of cyber-security

Q26. For the future, would you say that you are very confident, somewhat confident, somewhat worried or very worried about...? *Base: total sample (174)*

66% ↘ -5

Taking into account the issues of cyber security within the Executive Committee



↗ ↘ Significant evolution vs. 01/2018

4. THREE CHALLENGES FOR THE FUTURE

- AWARENESS
- GOVERNANCE
- RESOURCES

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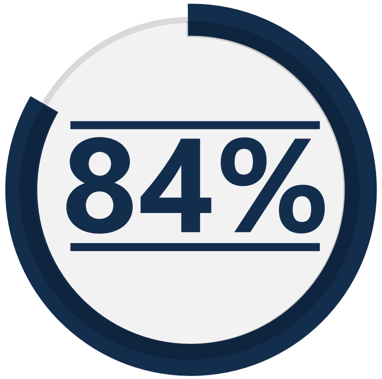
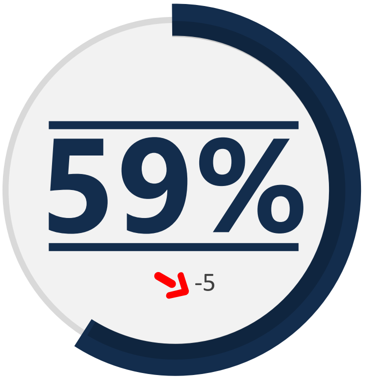
Most companies plan to invest more in cybersecurity, through solution acquisitions and budget increases

Q11BIS. In the next 12 months, does your company plan to...?
Base: total sample (174)

to acquire **new technical solutions** for protection against cyber risks



to increase the budgets allocated to the protection against cyber-risks

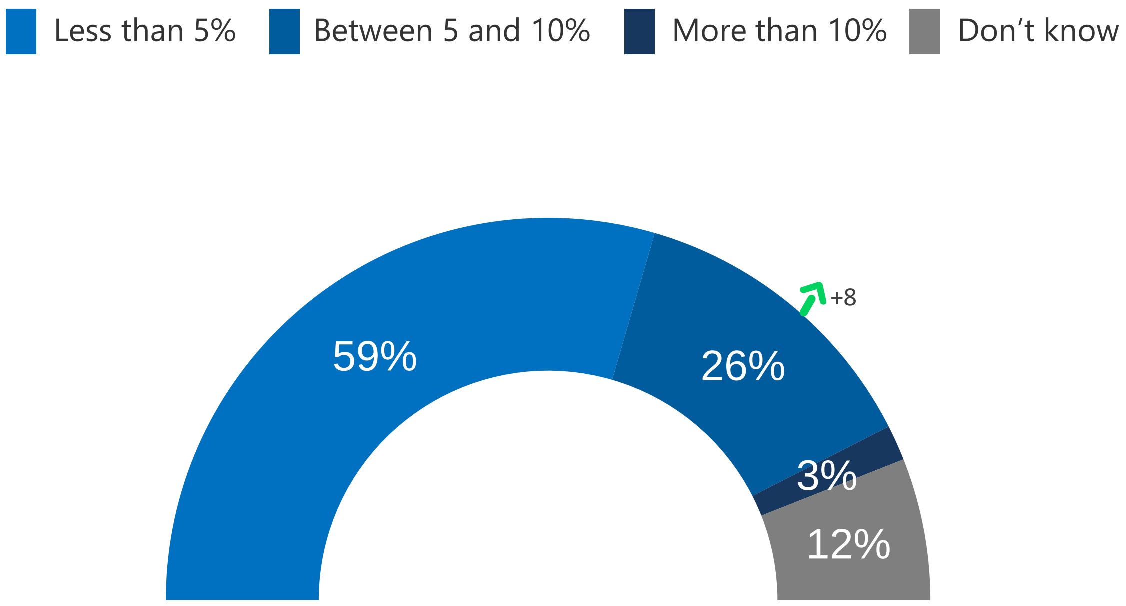


↗ ↘ Significant evolution vs. 01/2018

Investments are slightly more relevant within the IT budget devoted to security, even if it remains low

Q37. In your company, how much of the IT budget is spent on security?

Base: total sample (174)



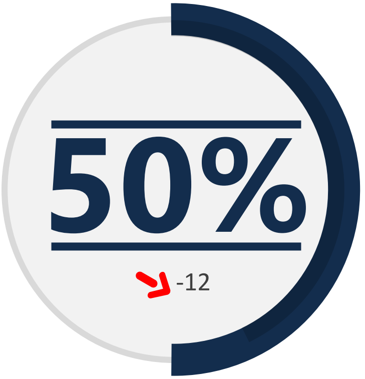
Significant evolution vs. 01/2018

On the other hand, the rate of companies planning to increase the workforce is declining

Q11BIS. In the next 12 months, does your company plan to...?

Base: total sample (174)

increase the workforce dedicated to the protection against cyber-risks

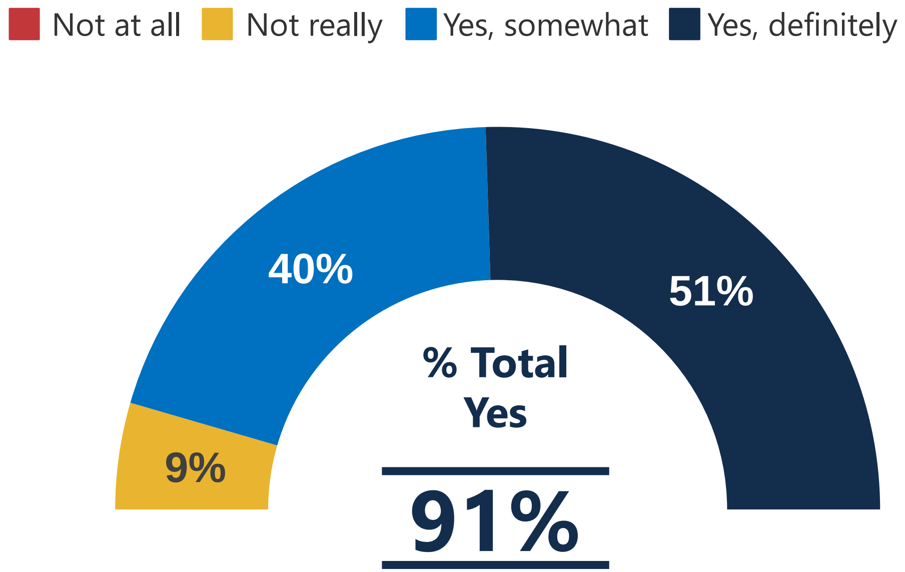


↗ ↘ Significant evolution vs. 01/2018

A situation that echoes a lack of qualified profiles observed by most CISOs

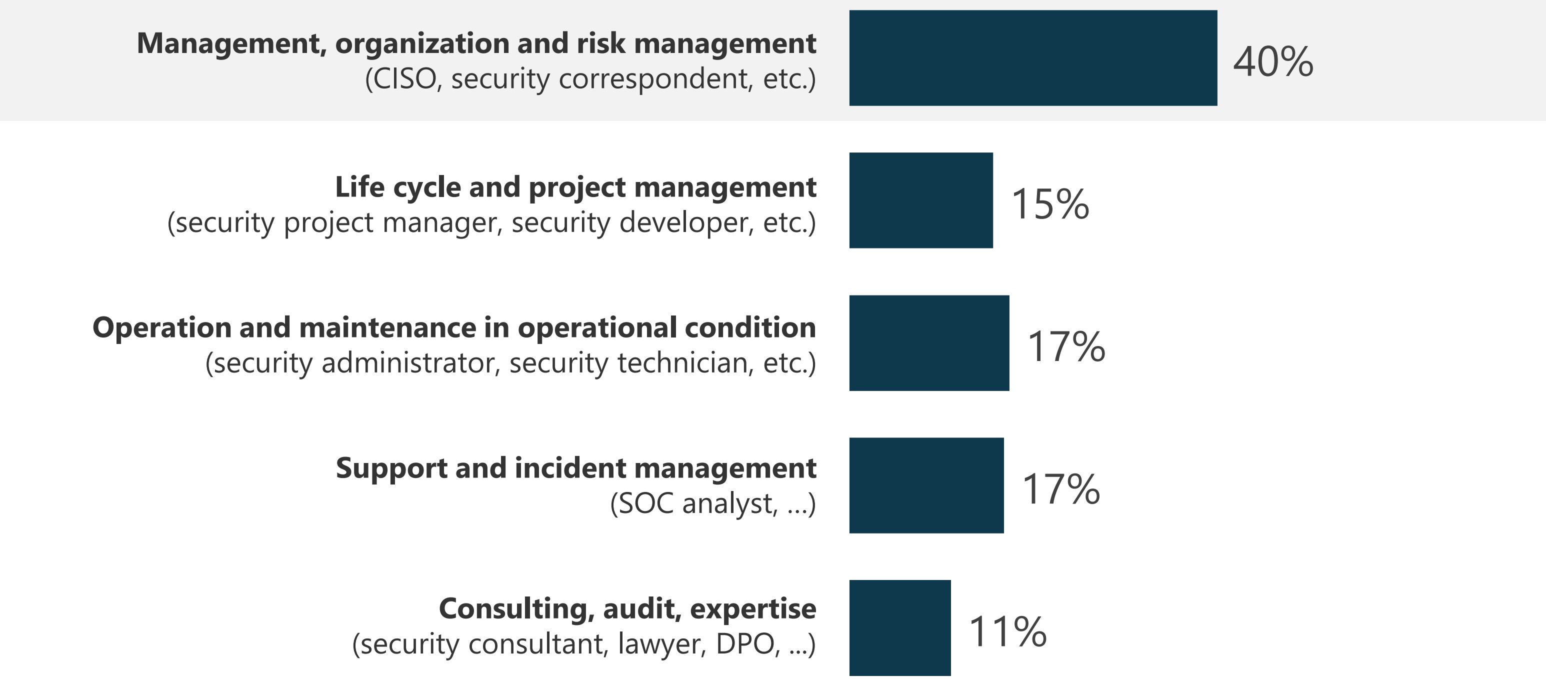
Q43. Finally, here are some questions about recruitment in IT security. Do you see a shortage of IT security profiles leading to recruitment difficulties?
Base: total sample (174)

« There is a **shortage of IT security profiles** on the market, leading to recruitment difficulties »



A shortage that primarily affects the business of risk management

Q44. Among the following IT security job, which one is the most affected by a shortage of profiles?
Base: total sample (174)



KEY LEARNINGS

Key learnings (1/2)

1. An increasingly decisive impact of cyberattacks

While the number of cyberattacks tends to remain stable, 8 out of 10 companies continue to be affected each year.

- The **impact of these attacks on the business** is up to 59%, **10 points higher** than last year.
- **Phishing** is the most common mode of attack (73% were victims), while **"Fake President" fraud** touches this year half of the companies, more than one could expect.
- **Shadow IT** is the **most common cybersecurity risk**, quoted by 64% of respondents as a cybersecurity risk to be treated.

2. Cloud and IoT: increased risks on account of the digital transformation

Nearly all companies (98%) believe that the digital transformation has an impact on the security of information systems and data.

Top issues: the **massive use of Cloud**, used by 87% of companies including 52% in public Clouds. A storage mode that raises **problems of non-control**, whether in relation to the **access to the company data** by the hosts (via the administrators or others) or with respect to the **subcontracting chain** practiced by the supplier. Regarding IoT, the most striking feature is the **security vulnerabilities** present in these objects.

These issues imply for CISOs **not to be content with security solutions offered by Cloud service providers** and to have **additional security tools** (versus those offered by the service provider), according to 89% of them.

Key learnings (2/2)

3. Developing cyber resilience to address cybersecurity risks

To counter these cybersecurity risks, the CISOs deploy a panoply of **technical solutions**, globally considered **adapted to their needs** (75%), even if some progress remains to be made in their adaptation to the digital transformation. Note the **importance of AI:** 56% of respondents have implemented or plan to use AI-based solutions; however, 55% believe that **AI will not replace human expertise** in safety.

Yet, CISOs are less confident than last year about the ability of their company to cope with cybersecurity risks (51% are confident, -12 points); and **less than half in particular considers that their company is prepared to handle a large cyberattack**. In this context, subscriptions for cyber-insurance are on the rise (+10 points), but **only 1 in 10 companies has set up a genuine cyber resilience program**.

4. Three issues for the future, mainly focusing on human dimension

According to the CISOs, the main issue for the future of cyber security is **training and user awareness** (61%). Employee usage brings its share of risks, especially via shadow IT. And if employees are sensitized, they remain little involved as they do not necessarily follow the recommendations. A significant pedagogical work remains to be done.

Governance of cyber security must also be at the right level for 60% of CISOs. Despite a positive impact of GDPR compliance on governance (59% of companies), confidence in the ability of the Executive Committee to take into account the issues of cyber-security is very uneven according to the sectors of activity.

Human resources are likely to be problematic, with a **shortage of profiles** observed by 91% of CISOs... At a time when 50% of respondents plan to increase the number of staff allocated to the protection against cyber-risks.

APPENDICES

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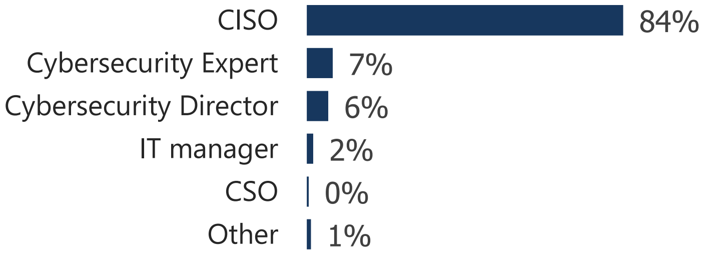
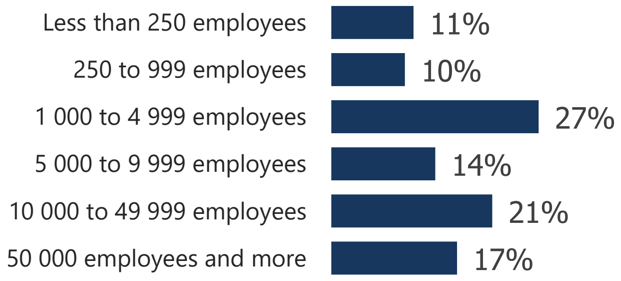
Respondent profile

174
members of
CESIN
participated in this survey

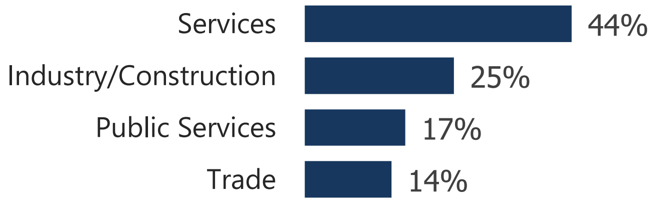
Profession of respondent:



Number of employees in the company:



Industry:


Services
Industry/Construction
Public Services
Trade