



Digital Office Index 2022

Study on the digitisation
of business and administrative
processes in German organisations

Bitkom Digital Office Index 2022

With friendly support from



Background

Companies or organisations in Germany with at least 20 employees

The weighted overall result, which is representative, includes the following sectors:



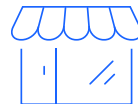
Automotive industry



Banks & financial service providers



Chemical, pharmaceutical & food industry



Commerce



Information technology & consulting



Machine & plant engineering



Other industries



Transport & logistics



Insurance companies



Utilities incl. telecommunications



Other services

Unweighted results we did not include in the overall result:



Public administration

Content

1 Core findings

2 Digitisation requirements

3 Digitisation progress

3.1 Digital technologies and services

3.2 Digital Office solutions

3.2.1 Automation and realisation of digitisation projects

3.2.2 Creation, transmission & receipt of invoices

3.3.3 Working with less paper

3.3 Digital business processes in operating divisions

4 Digitisation perspective

5 Digital Office Index 2022 and user types

6 Research design

1

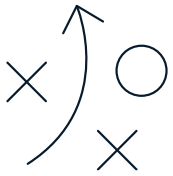
Core findings

Core findings: Digitisation requirements

Companies have recognised the importance of digitisation for quite some time now. However, the need for a strategic and coordinated approach is increasingly being identified.



89% ... are open to digitisation (+ 3 pps).



83% ... have their own digitisation strategy (+ 9 pps).



79% ... have a person who coordinates digitisation across departments (+ 5 pps).

Core findings: Digitisation progress

The use of digital office solutions has become standard in the last two years. Furthermore, digital communication channels are slowly but surely replacing traditional means of communication and making paper increasingly superfluous in German offices.



95%

ECM

... use ERP solutions (+ 18 pps), **77%** CRM solutions (+ 17 pps) and **76%** solutions (+ 8 pps).



72%

... use online meetings (very) often (+ 11 pps).



72%

... succeed in replacing letter mail with digital communication (+ 8 pps).

Core findings: Digitisation perspective

Regulatory provisions and the fear of data theft prevents some companies from investing in additional digitisation measures. Nevertheless, most recognise the advantages of the digital office and want to invest in digitisation. The COVID-19 pandemic has become the driver of digitisation.



65% ... worry about unauthorised access to sensitive company information.



44% ... say that COVID-19 has accelerated the digitisation of their business processes (+ 26 pps).



29% ... want to invest more in digitisation in 2022.

2

Digitisation requirements

Summary digitisation requirements

Digitisation strategies are gaining in importance

- Eighty-nine per cent of companies are generally open to digitisation this year, which is at a high level similar to two years ago (2020: 86 per cent).
- In contrast, the importance of a strategic approach to digitisation has increased significantly. 83 per cent of companies say they have a digitisation strategy (2020: 74 per cent). Among large companies with 500 or more employees, the figure is as high as 96 per cent.
- In addition, 8 out of 10 companies (79 per cent) have a person who coordinates digitisation across departments (2020: 74 per cent).

Increased mobile device use

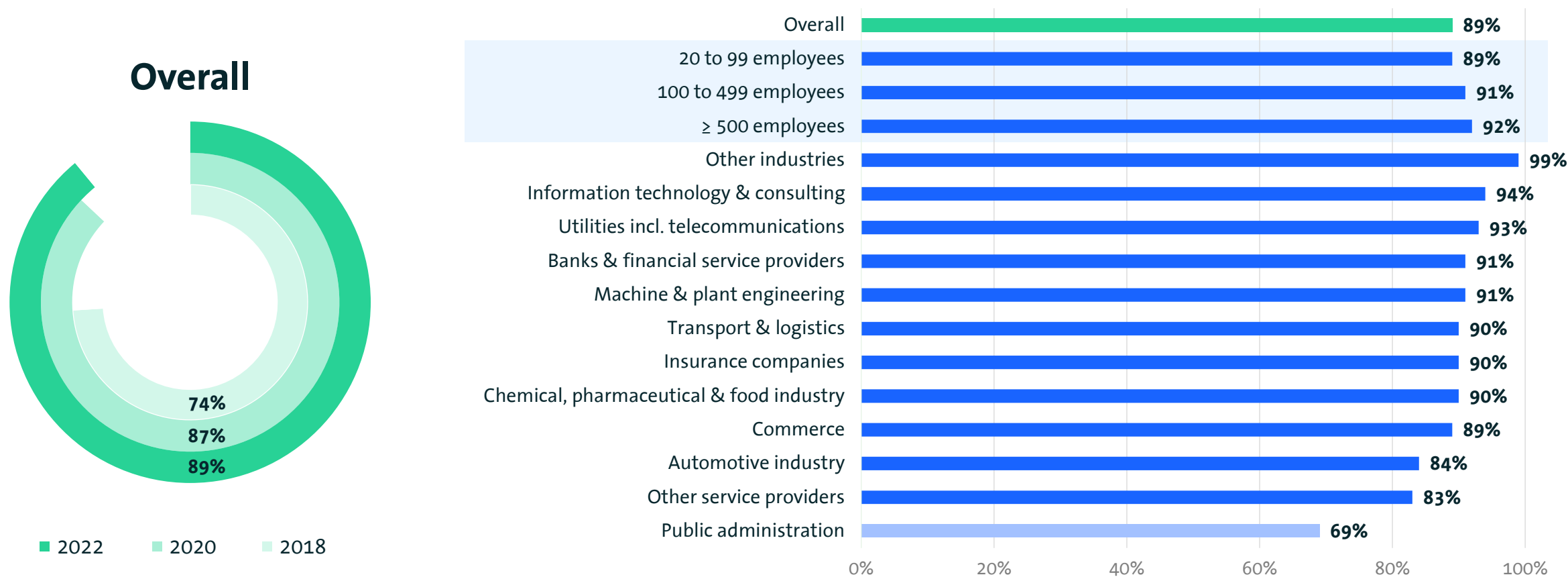
- In the course of the COVID-19 pandemic, mobile working has become much more critical. On average, companies provide 60 per cent of their permanent staff with mobile devices. That corresponds to an increase of five percentage points compared to two years ago.
- The frontrunners are banks and financial service providers. They provide almost all employees (93 per cent) with mobile devices.

Public administration lacks the necessary personnel

- Overall, 74 per cent of companies say they have employees with the necessary skills to push forward digitisation. However, only 45 per cent in the public administration sector state this.

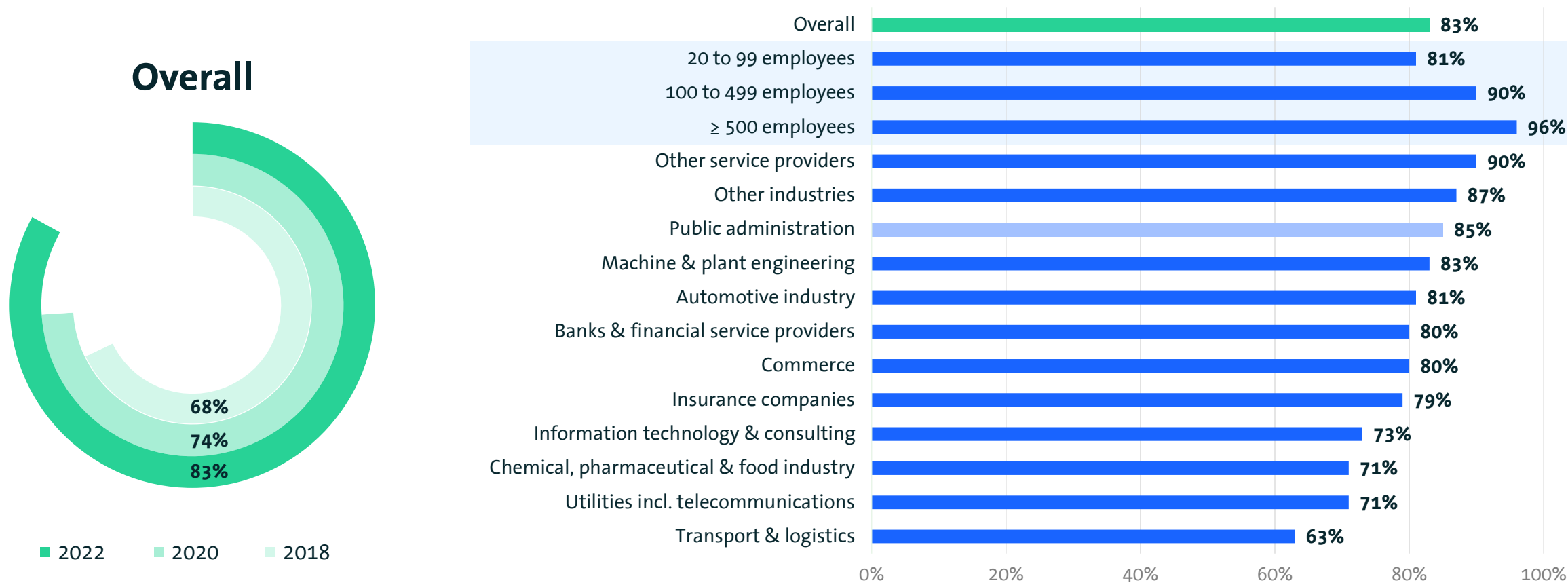
9 out of 10 companies are open to change

Companies open to digitisation



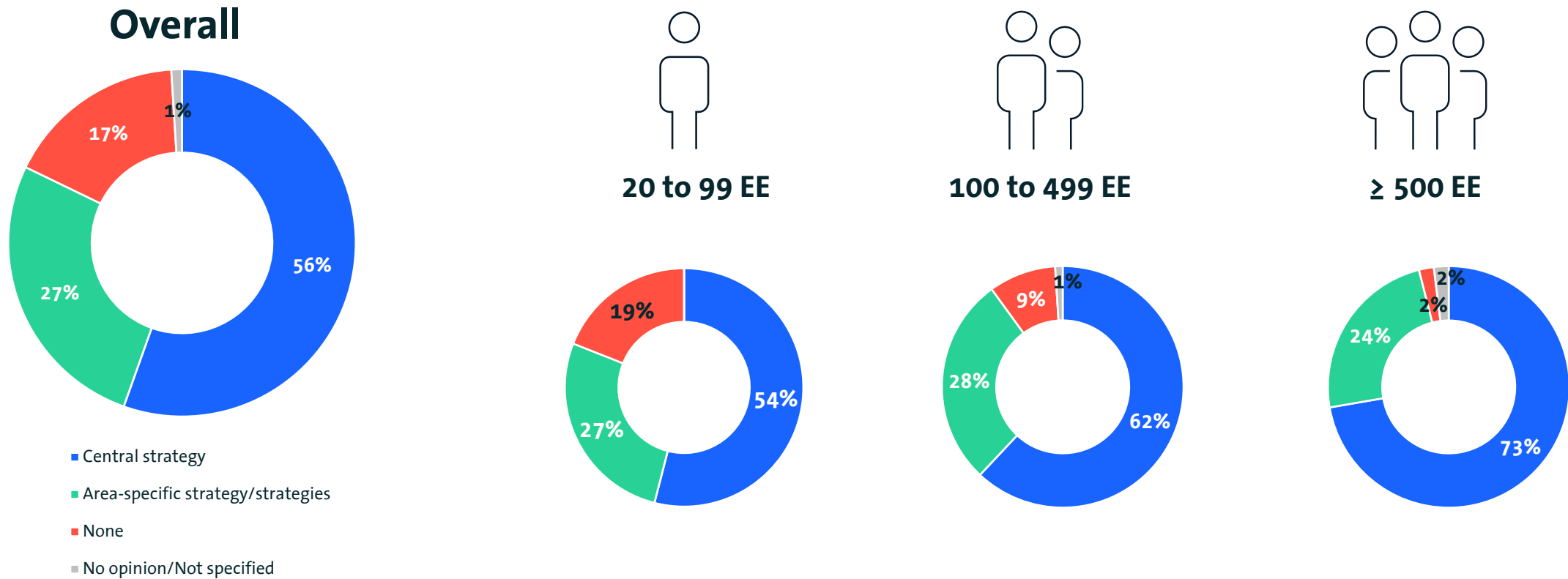
Digital strategies are gaining in importance

Companies that follow a digitisation strategy



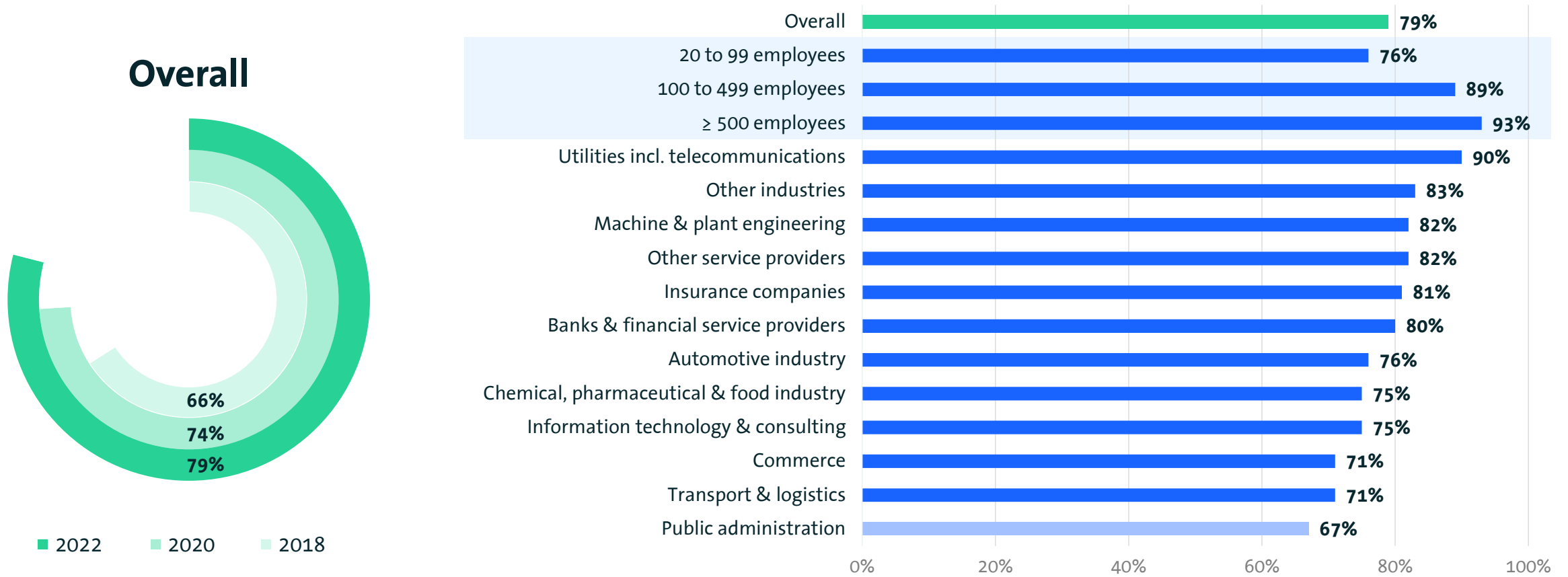
Almost every large company has a digital strategy

Which strategy does your company follow to tackle digital change?



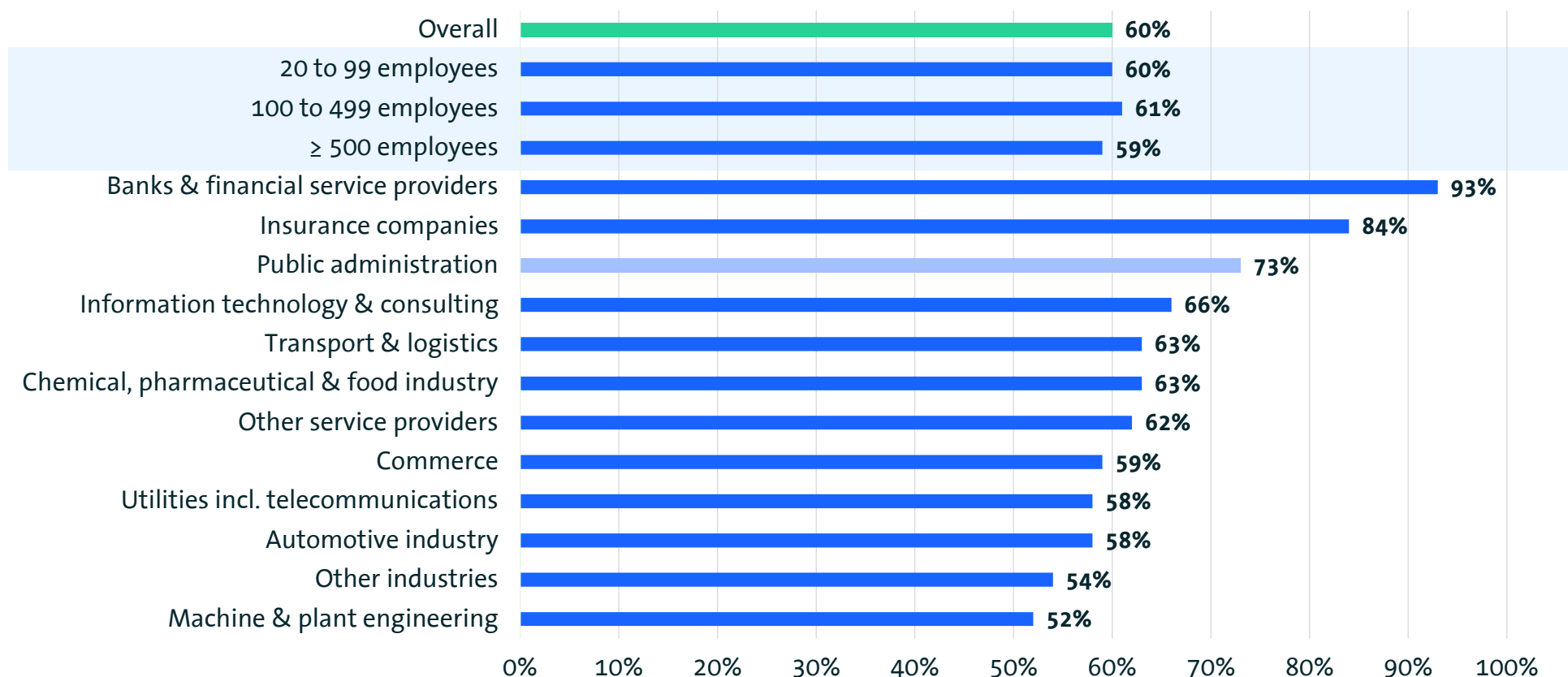
8 out of 10 companies have a digitisation officer

Companies in which one person coordinates digitisation across departments



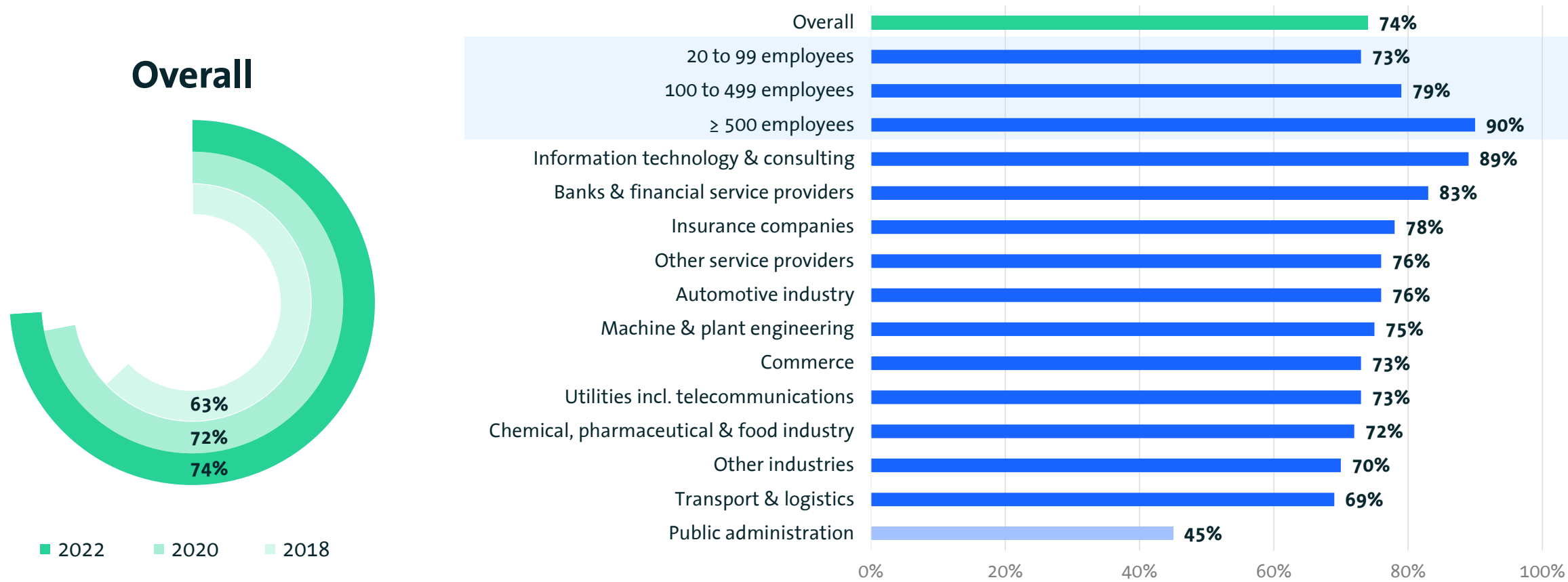
Banks and insurers, in particular, rely on mobile devices

What percentage of all permanent employees use a mobile device with internet access?



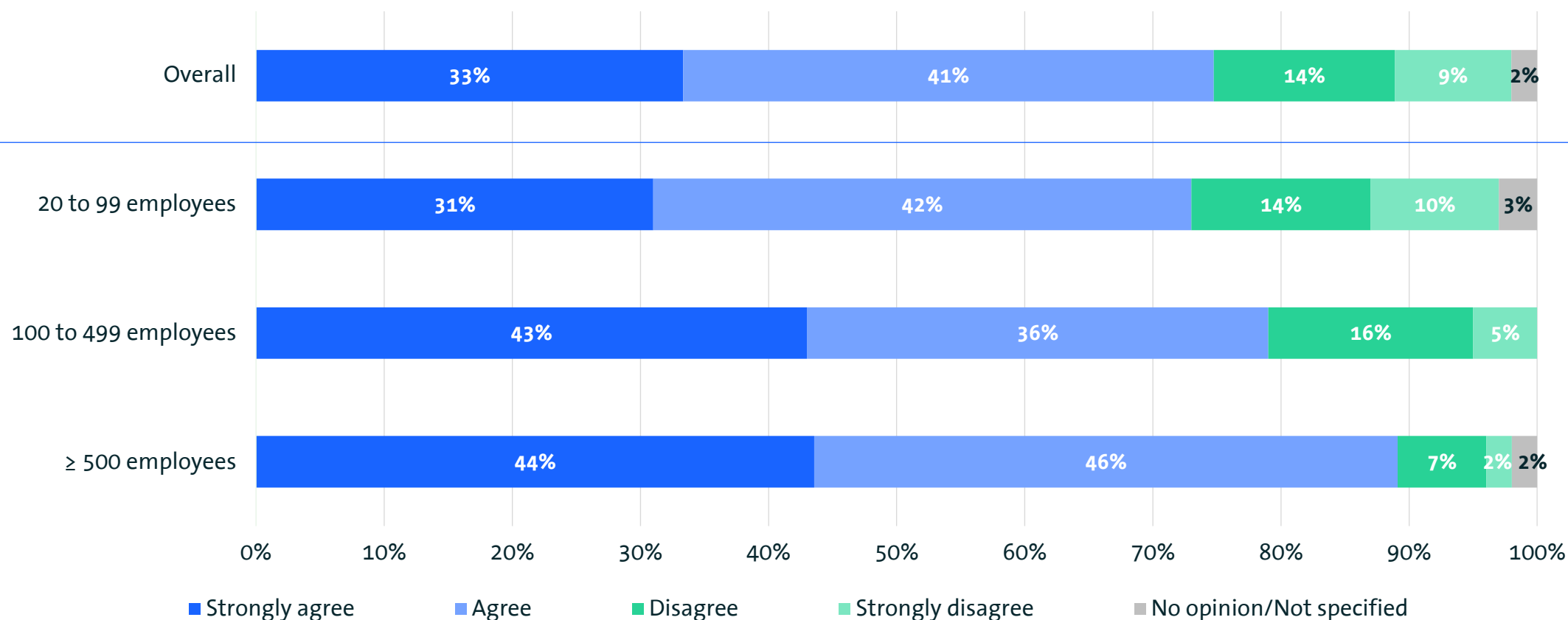
The administration lacks employees with digital competencies

Companies that have the employees required to push forward digitisation



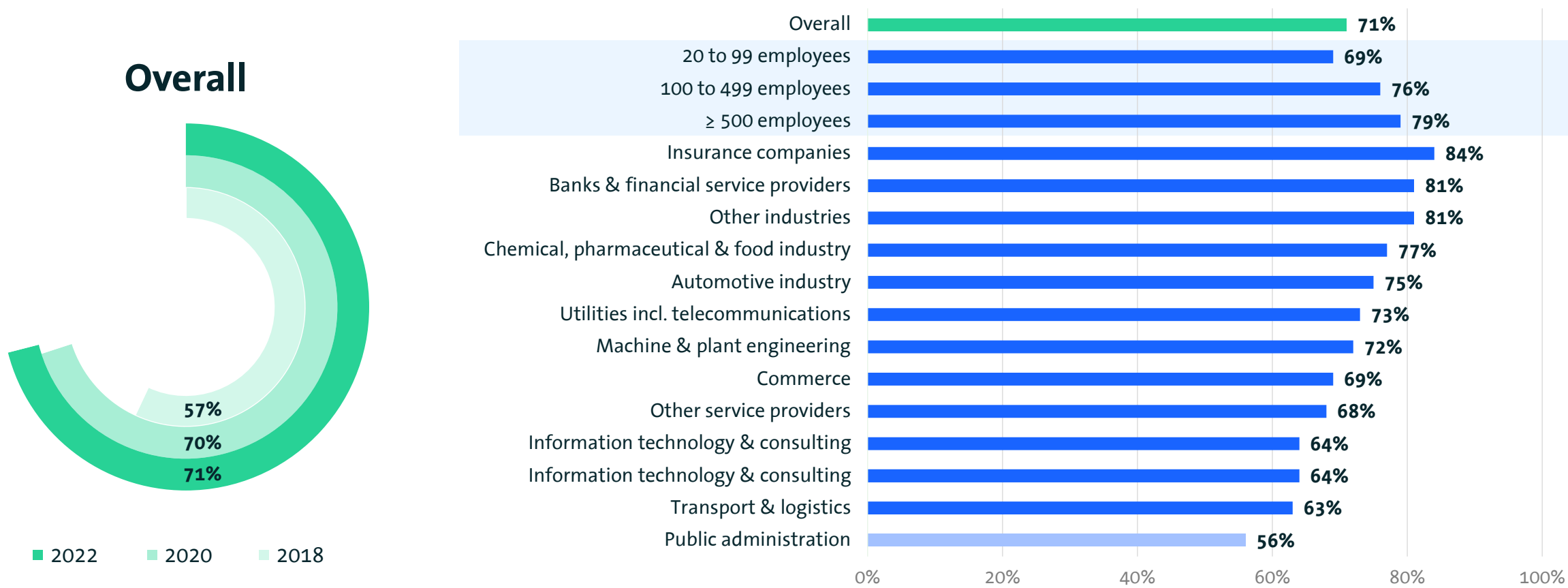
Every fourth company lacks the necessary personnel

‘In our company, we have employees with the necessary skills to push forward digitisation.’



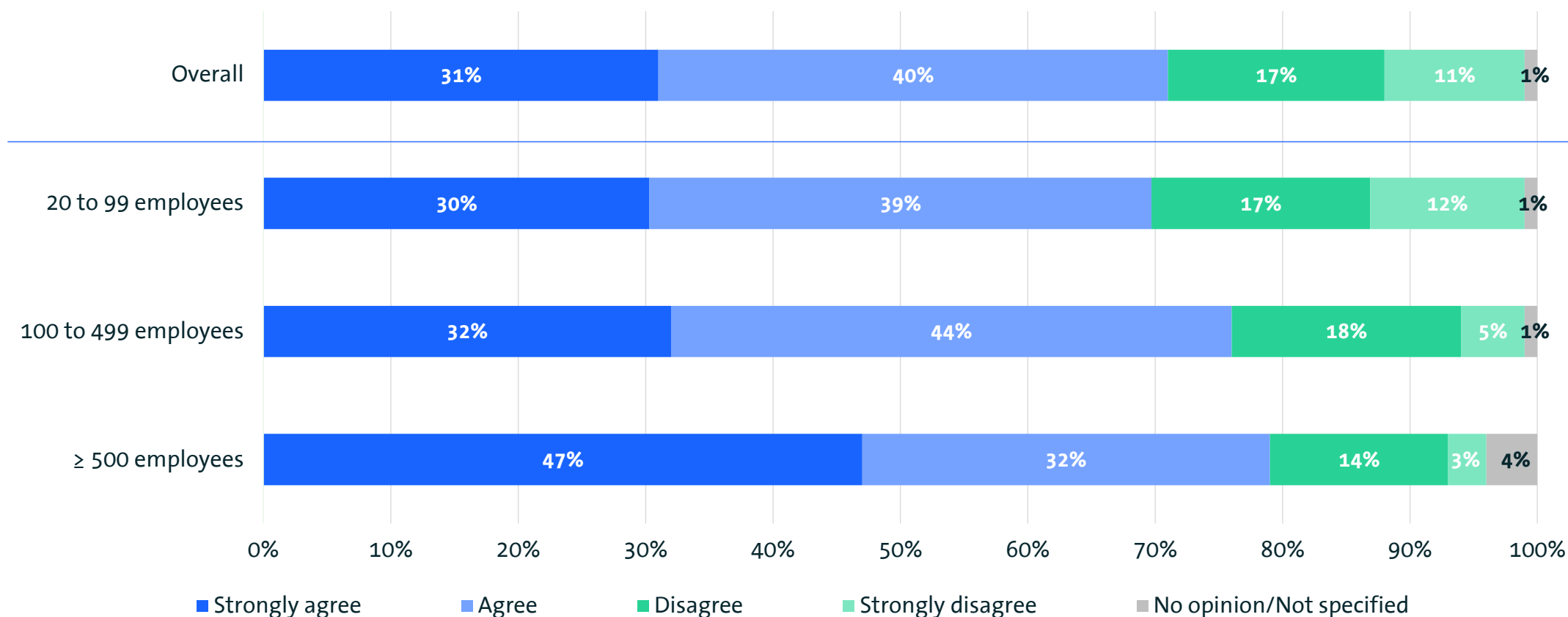
Seven out of ten companies invest in education and training

Companies that systematically invest in the digital education and training of their employees



Large companies, in particular, are willing to invest

‘We systematically invest in our employees’ digital education and training.’



3

Digitisation progress

Digitisation progress summary

Digital communication has increased

- Online meetings and video conferencing have increased significantly during the COVID-19 pandemic. Seven out of ten companies (72 per cent) use online meetings and video conferencing 'Very frequently' or 'Frequently'. At the beginning of the COVID-19 pandemic, the proportion was at 61 per cent. Traditional communication channels such as letter mail (2022: 48 per cent; 2020: 56 per cent) or fax (2022: 40 per cent; 2020: 49 per cent), are evidently losing relevance.

Digital office solutions have become the standard

- Almost every company (95 per cent) has at least one ERP solution in place. Two years ago, the share was 77 per cent. A similar picture emerges for CRM-related applications (2022: 77 per cent; 2020: 60 per cent) and ECM (2022: 76 per cent; 2020: 68 per cent).

Digital invoices and files instead of paper

- About half of all files in German offices have already been digitised. In addition, every twelfth company (8 per cent) has already gone completely paperless. Among large companies, the figure is as high as 16 per cent. Seven out of ten companies (72 per cent) create at least half of their invoices electronically (2020: 65 per cent).

Different approaches to implementation

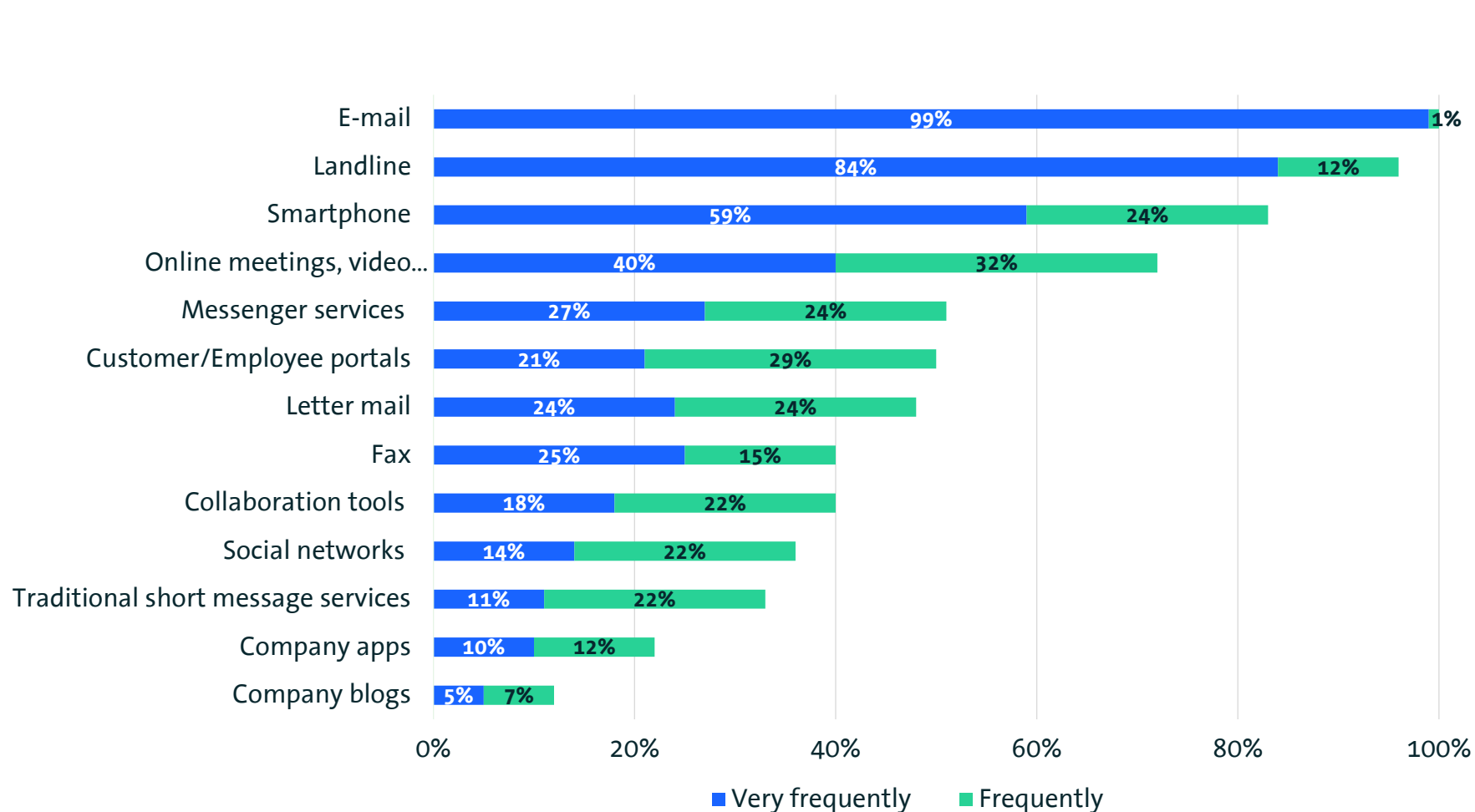
- More than two thirds of the companies (69 per cent) have clearly defined roles and responsibilities for implementing digitisation projects. More than half (55 per cent) rely on agile project management. One in two also ensures that projects are accompanied by continuous change management (50 per cent) or has established knowledge management (48 per cent).

3.1

Digital technologies and services

Communication channels are being digitised

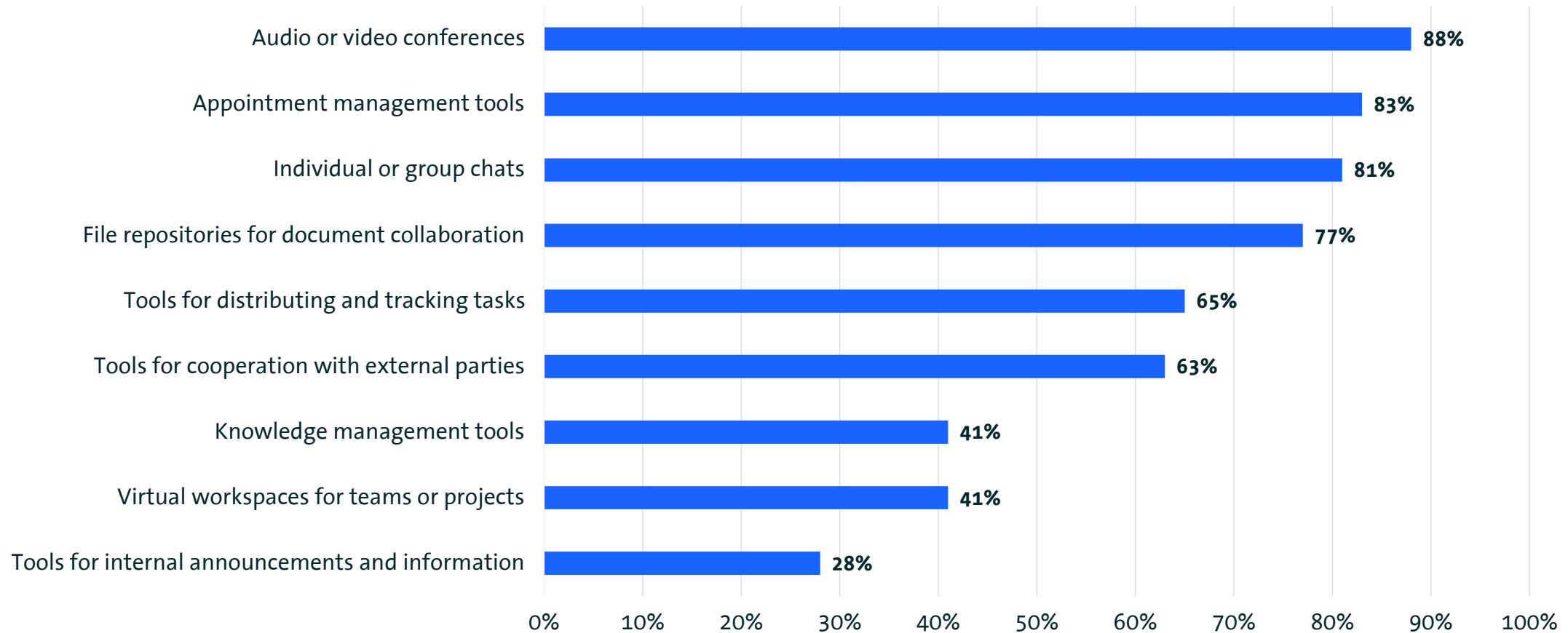
How often do you use the following channels for internal or external communication?



Top2-Boxes*		
2022	2020	2018
100%	100%	100%
96% ↓	100%	100%
83% ↑	81%	51%
72% ↑	61%	48%
51% ↑	50%	**
50% ↓	56%	38%
48% ↓	56%	71%
40% ↓	49%	62%
40% ↑	36%	**
36% ↑	29%	25%
33% ↓	34%	**
22% ↓	24%	11%
12% ↑	11%	5%

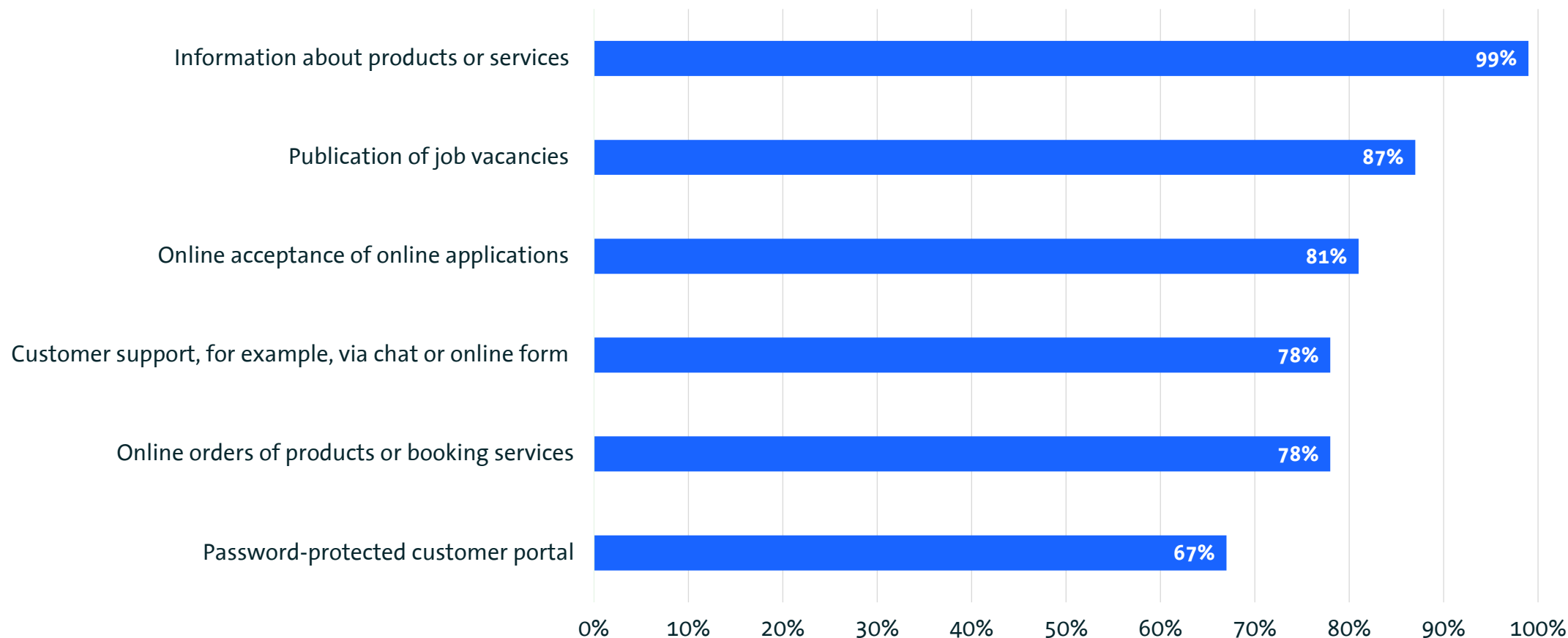
Multiple uses for collaboration tools

Which features of collaboration tools are in use in your company?



Websites are now also used for recruitment

What information or services do company websites provide?

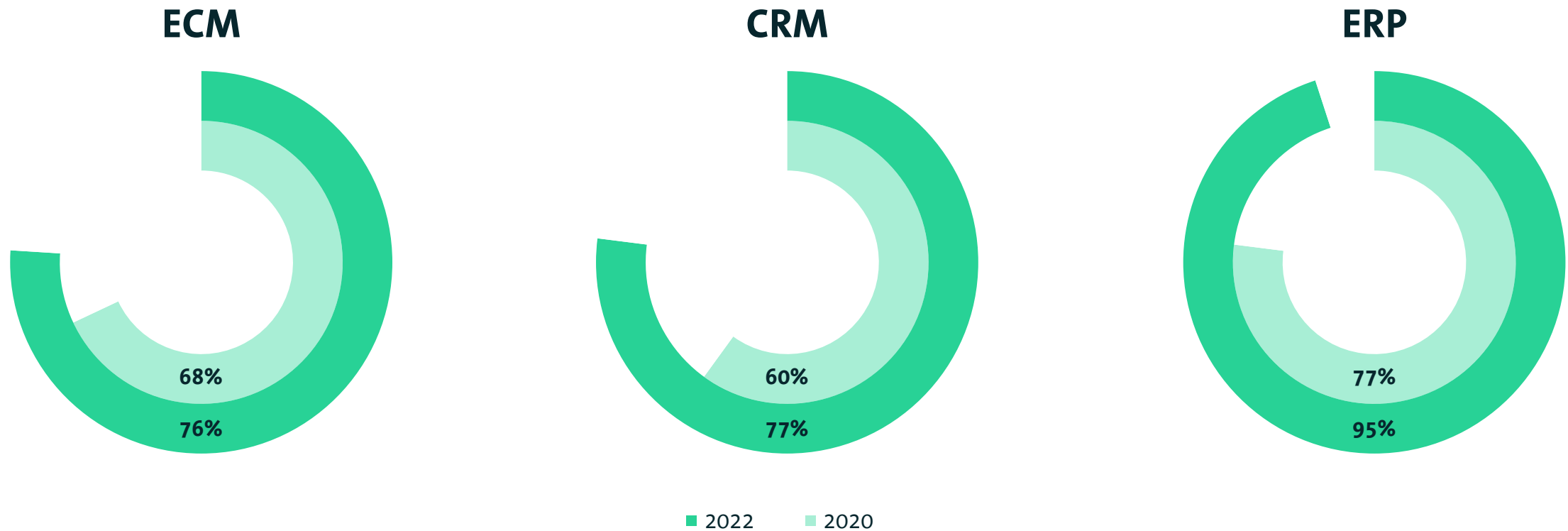


3.2

Digital Office solutions

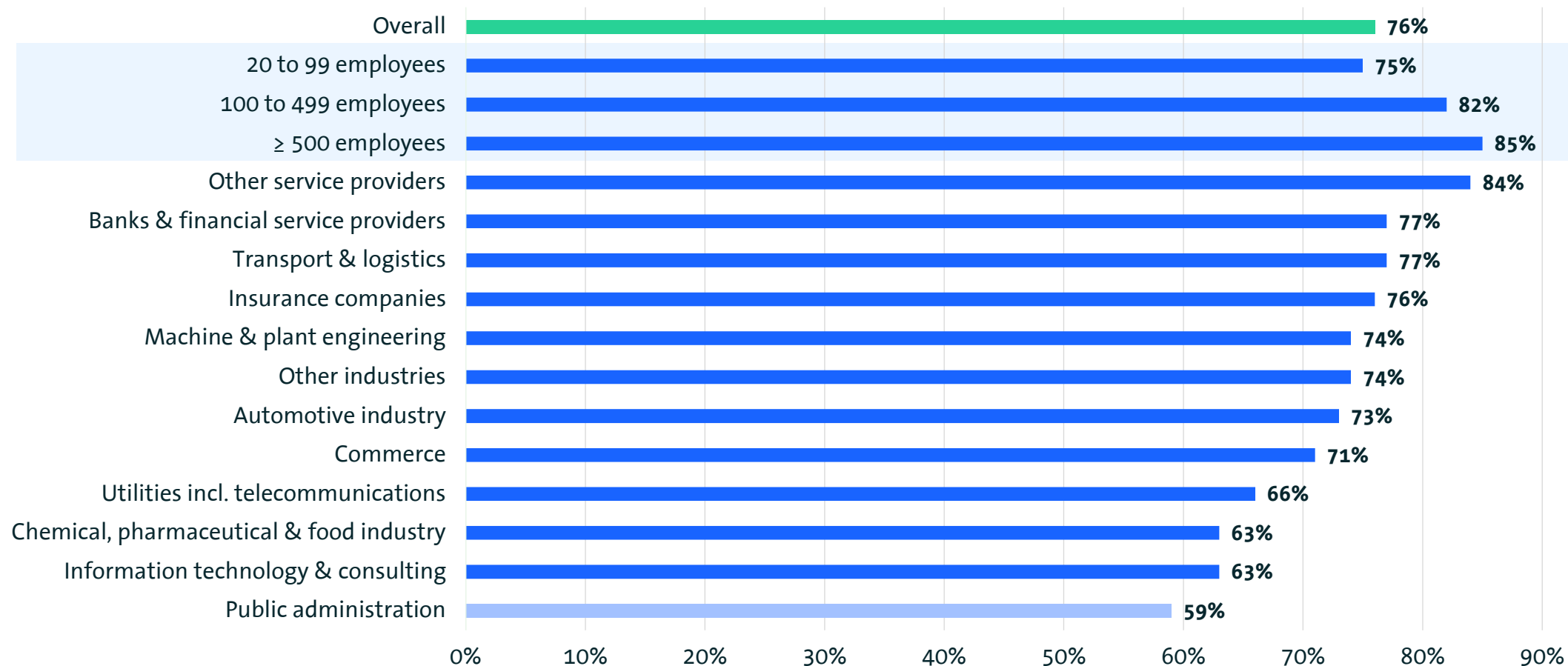
Almost all companies use digital office solutions

Companies that use at least one ECM, CRM or ERP solution



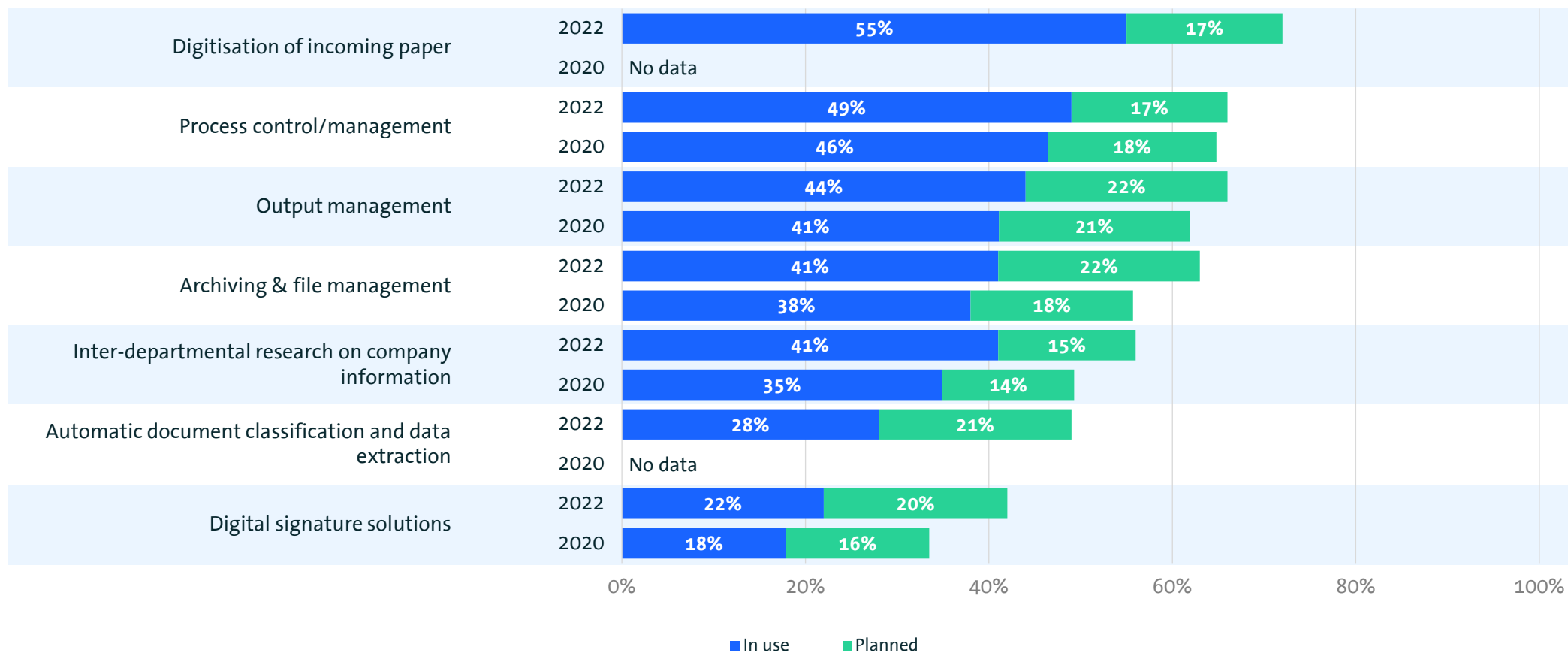
The service sector relies on ECM solutions

Companies that use at least one ECM solution



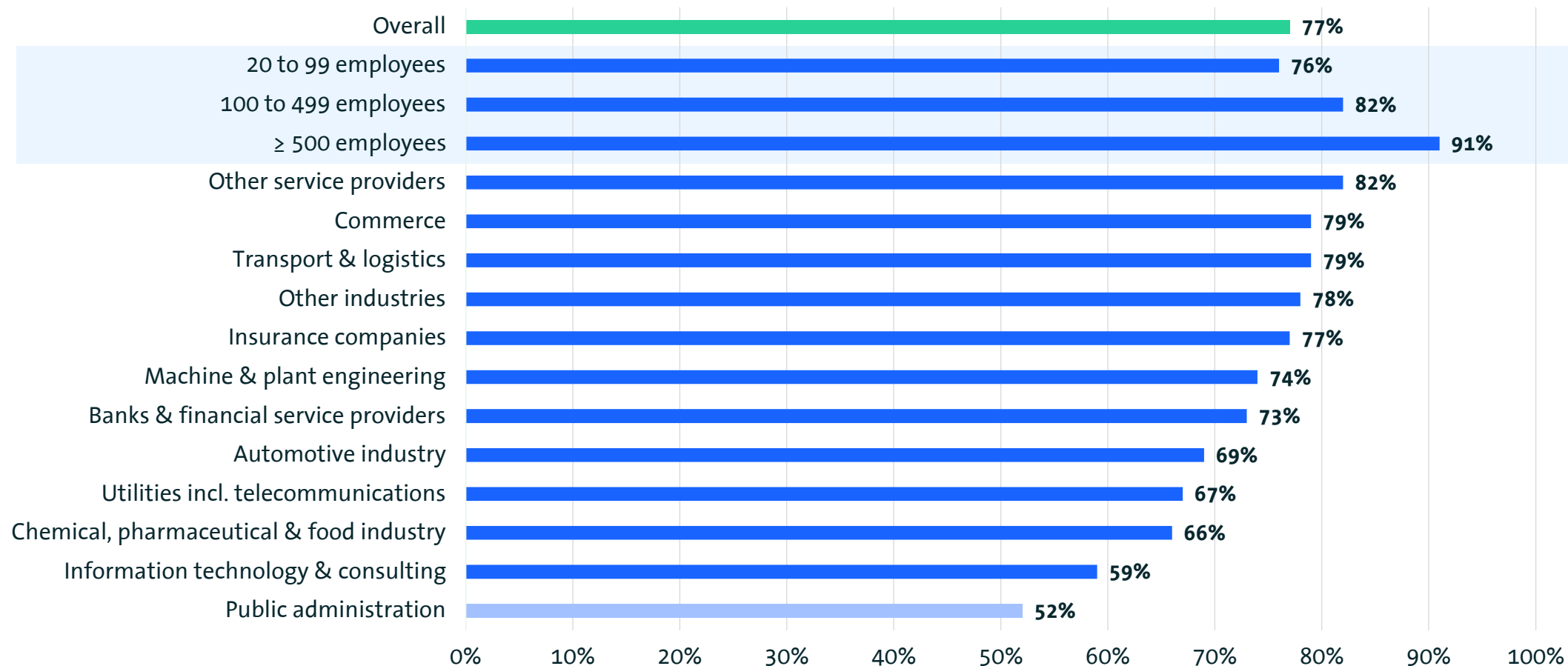
More than half digitise their paper receipt

For which of the following areas does your company already use or plan to use digital solutions for managing business-relevant documents and content?



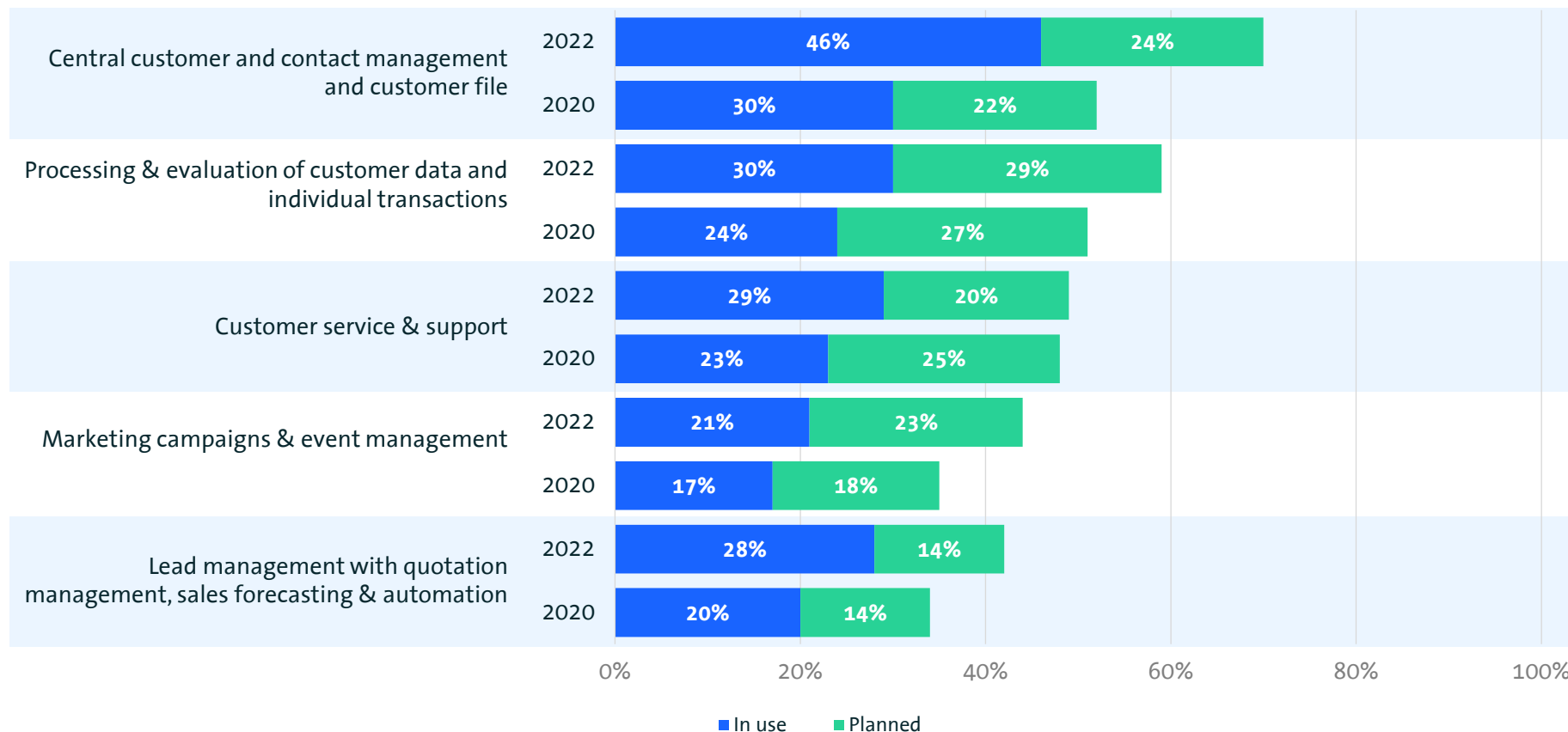
3 out of 4 companies use CRM solutions

Companies that use at least one CRM solution



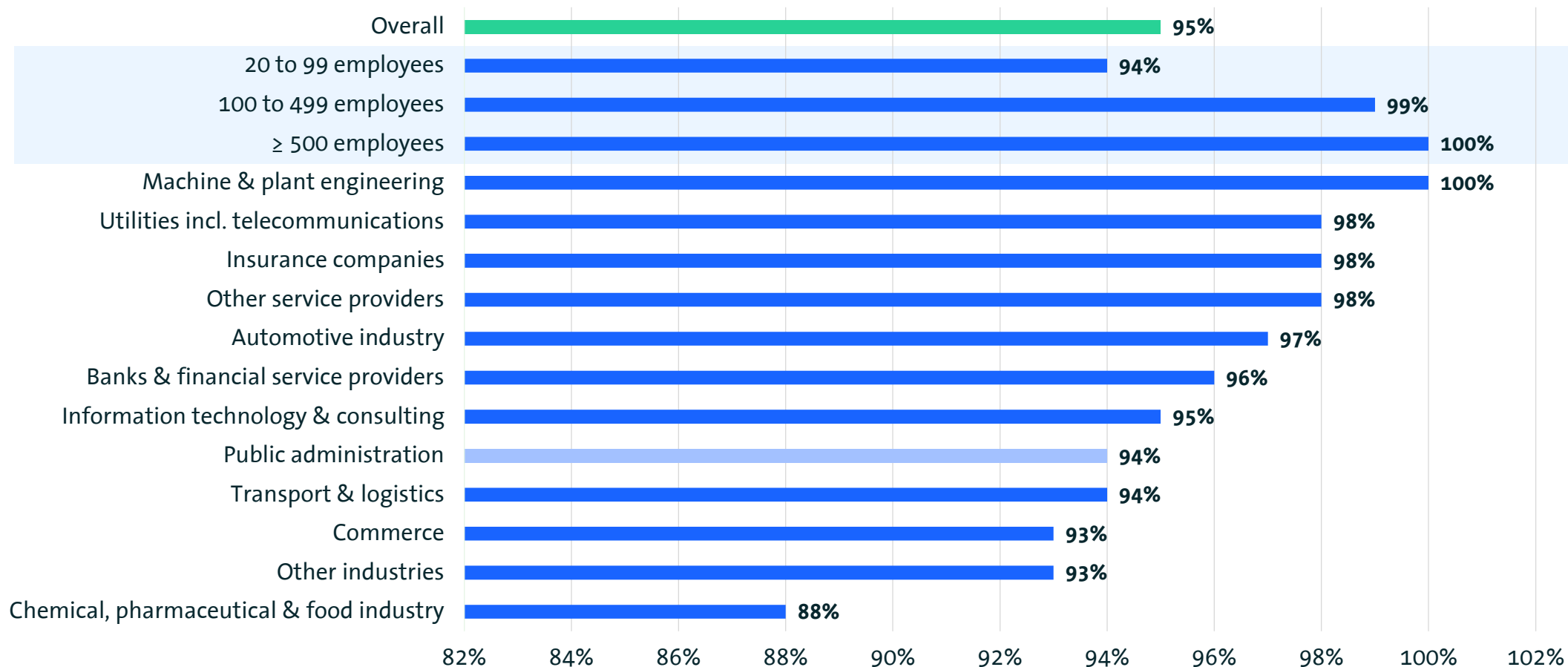
Customer and contact management gains relevance

For which of the following areas does your company use, or plans to use, digital solutions to manage customer data?



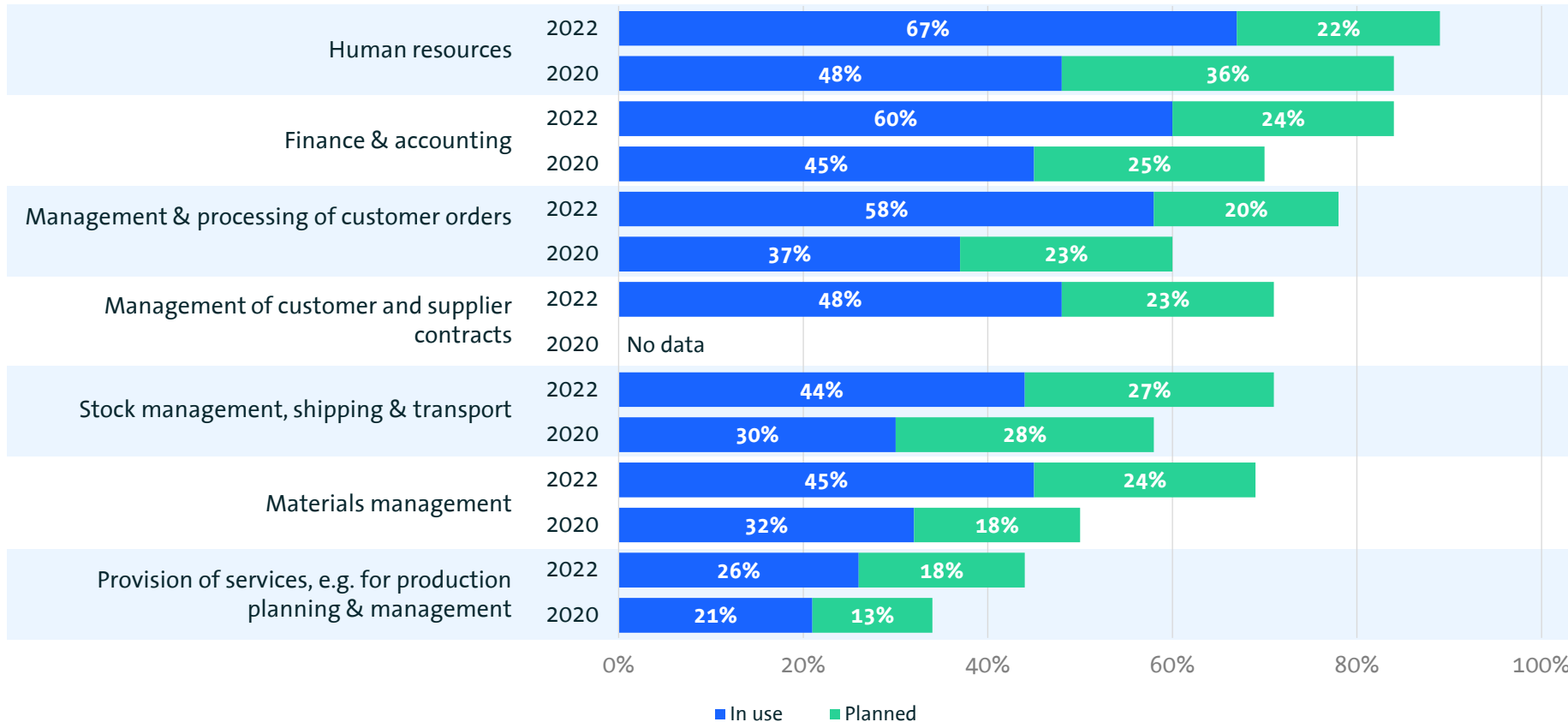
ERP solutions are the gold standard

Companies that use at least one ERP solution



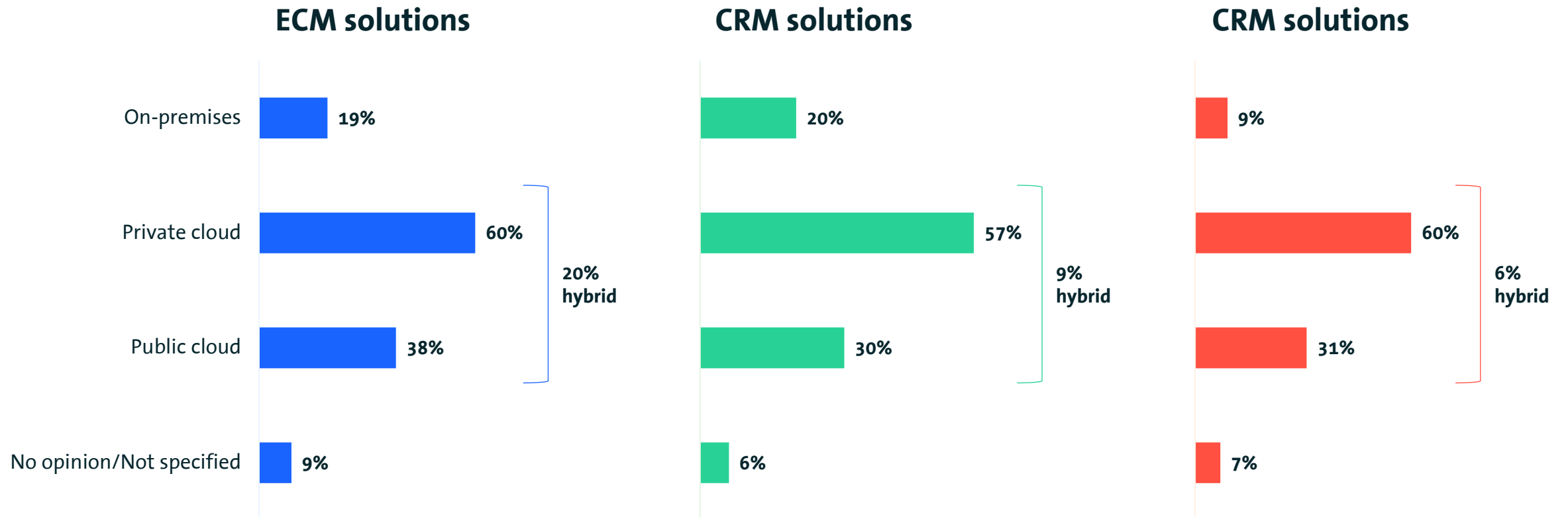
Personnel, financing, and invoicing are digitised, in particular

For which of the following areas does your company use, or plans to use, digital solutions to chart and control company resources?



Many of the solutions are operated in private clouds

Where do you use solutions from the following areas?



3.2.1

Automation and realisation of digitisation projects

Great potential for automation

Which of the following solutions for automating business and administrative processes do you use or plan to use?

43%

Automatic recognition of incoming documents and information



40%

Chatbots



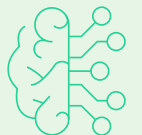
38%

Workflow management



13%

AI for process automation



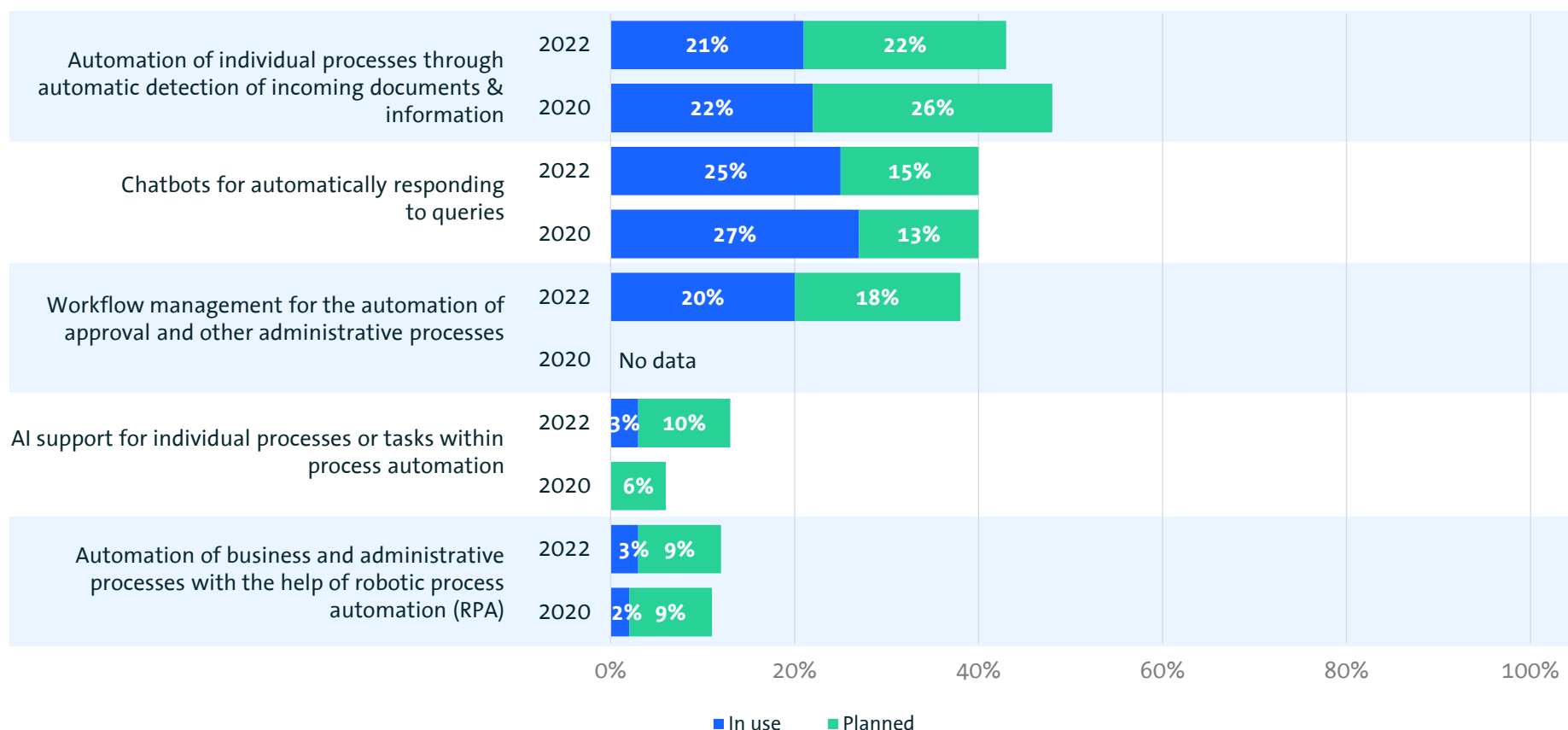
12%

Robotic process automation (RPA)



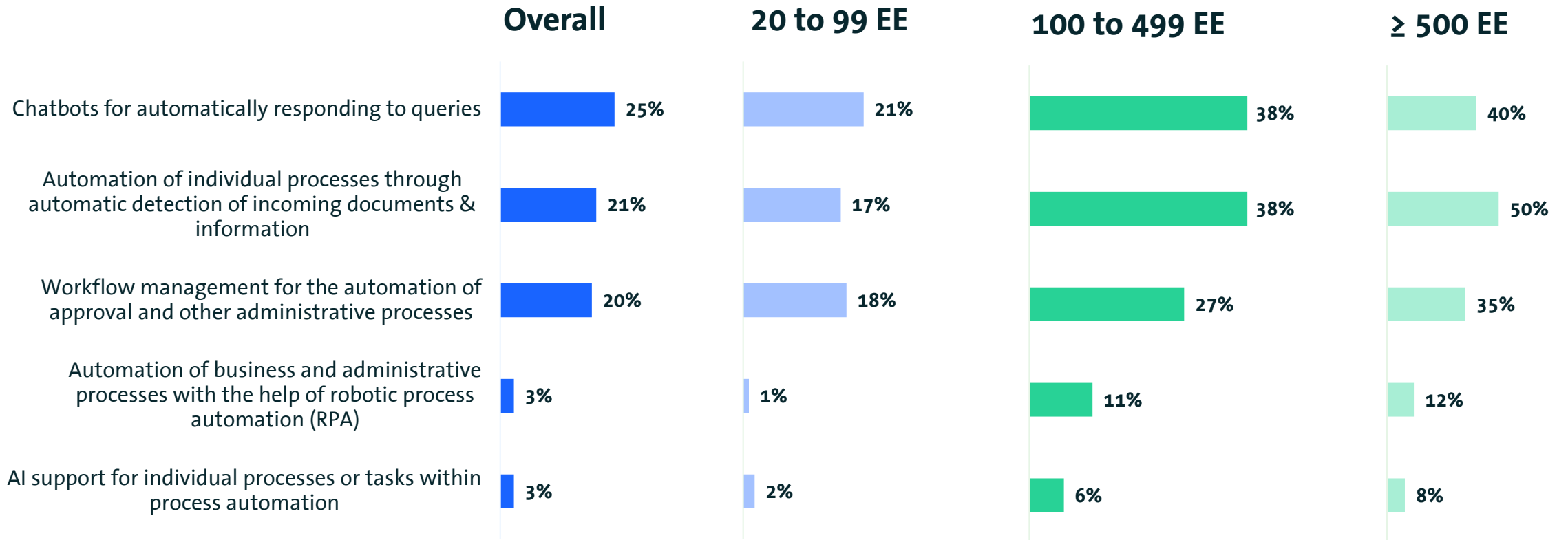
Businesses plan to automate

Which of the following solutions for automating business and administrative processes do you use or plan to use?



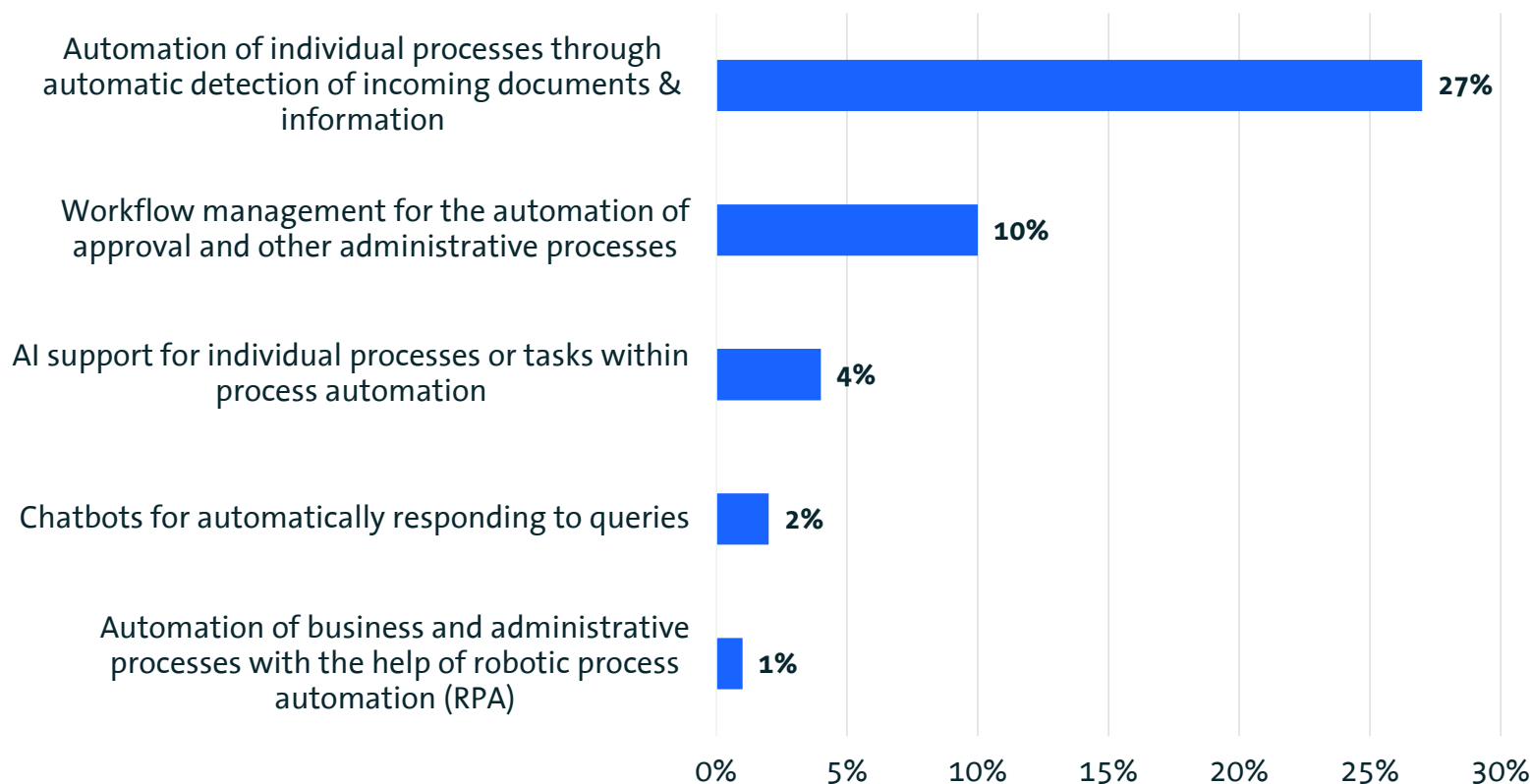
4 out of 10 large companies use chatbots

Companies that use automated solutions



More than a third use low-code or no-code approaches

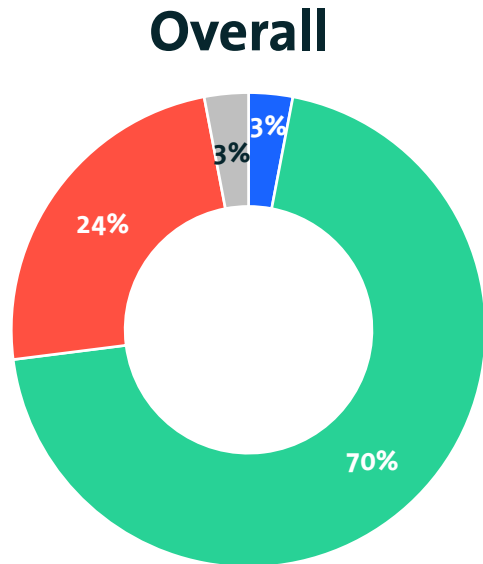
For which automated business and administrative processes solutions do you use low-code or no-code approaches?



35 per cent
of the companies that use
automated solutions use low-
code or no-code approaches.

IT specialists take the lead in automation projects

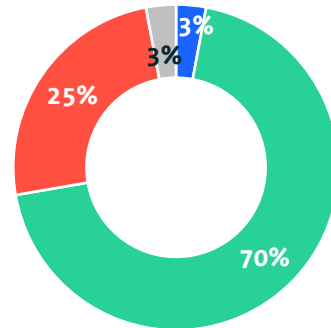
Who is involved in the implementation of automation projects at your company?



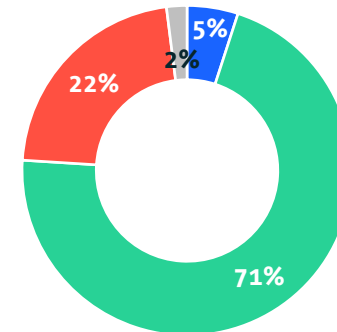
- IT specialists only
- IT specialists in charge + specialist departments
- Specialist departments in charge + IT specialists
- No opinion/Not specified



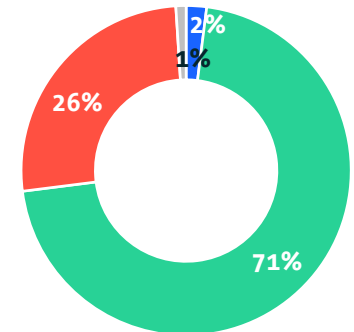
20 to 99 EE



100 to 499 EE

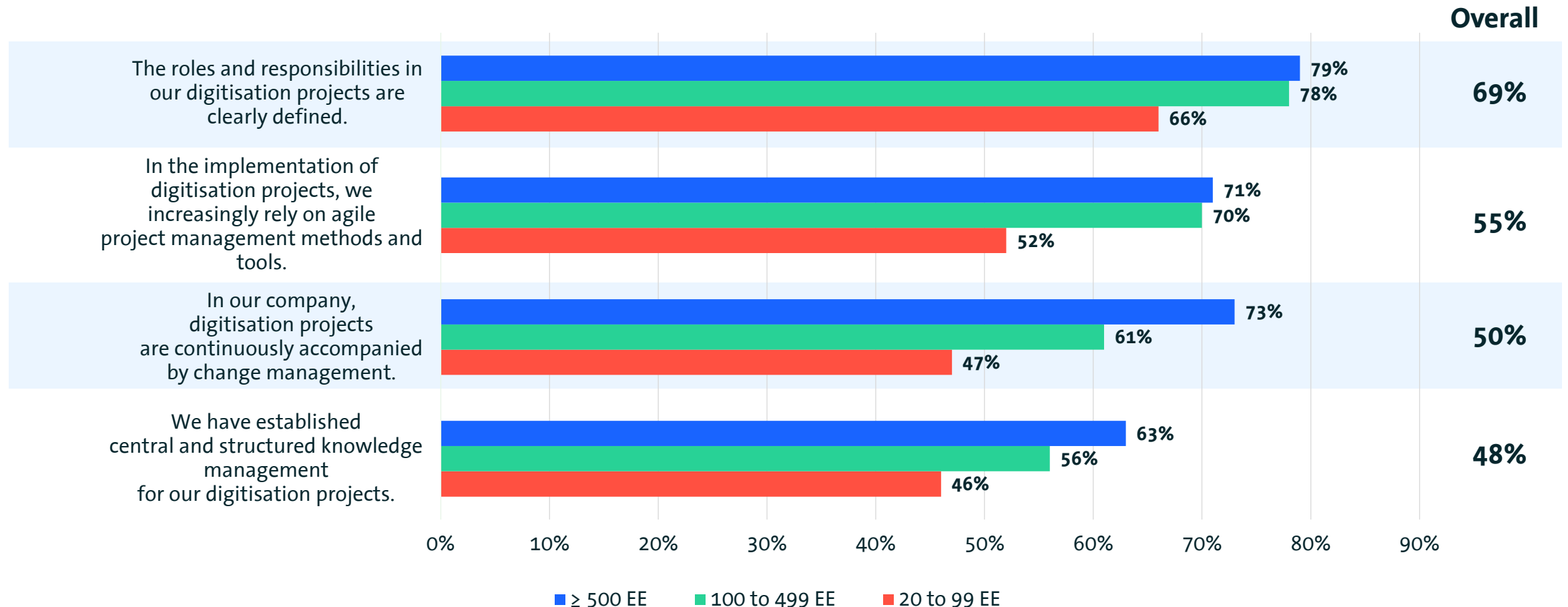


≥ 500 EE



More than half rely on agile project management

Which of the following statements on handling digitisation projects apply to your company?

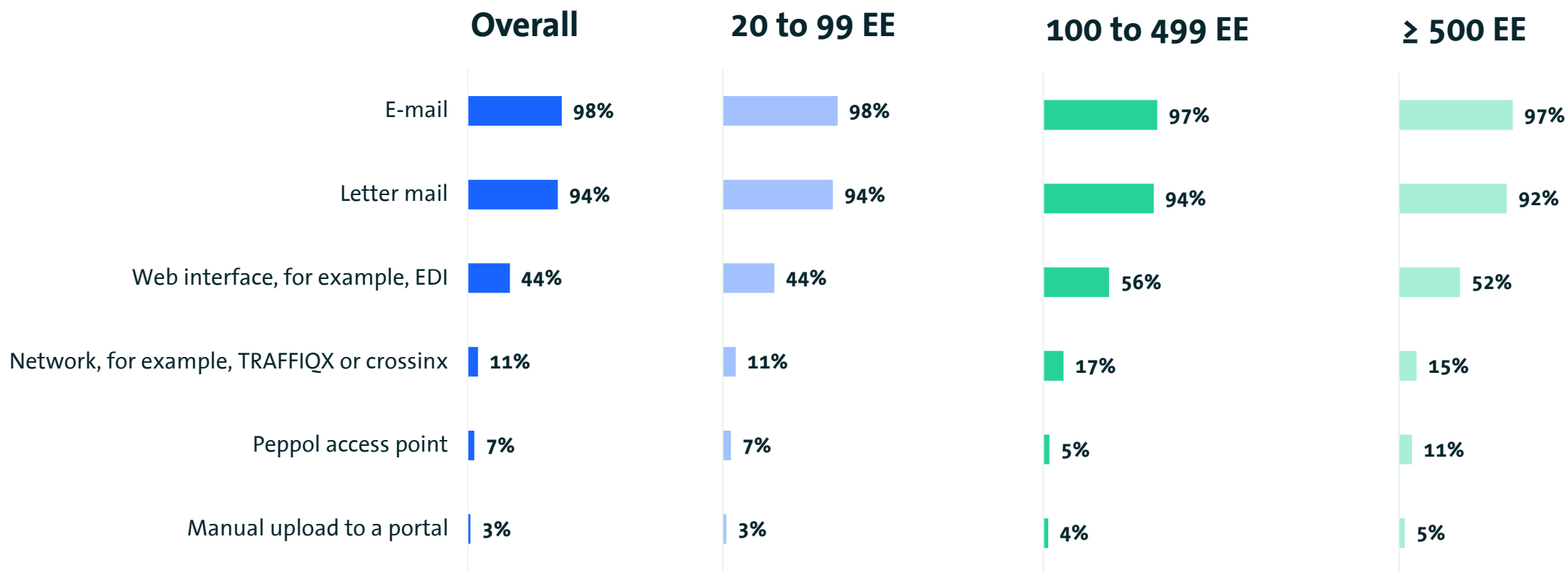


3.2.2

Creation, transmission & receipt of invoices

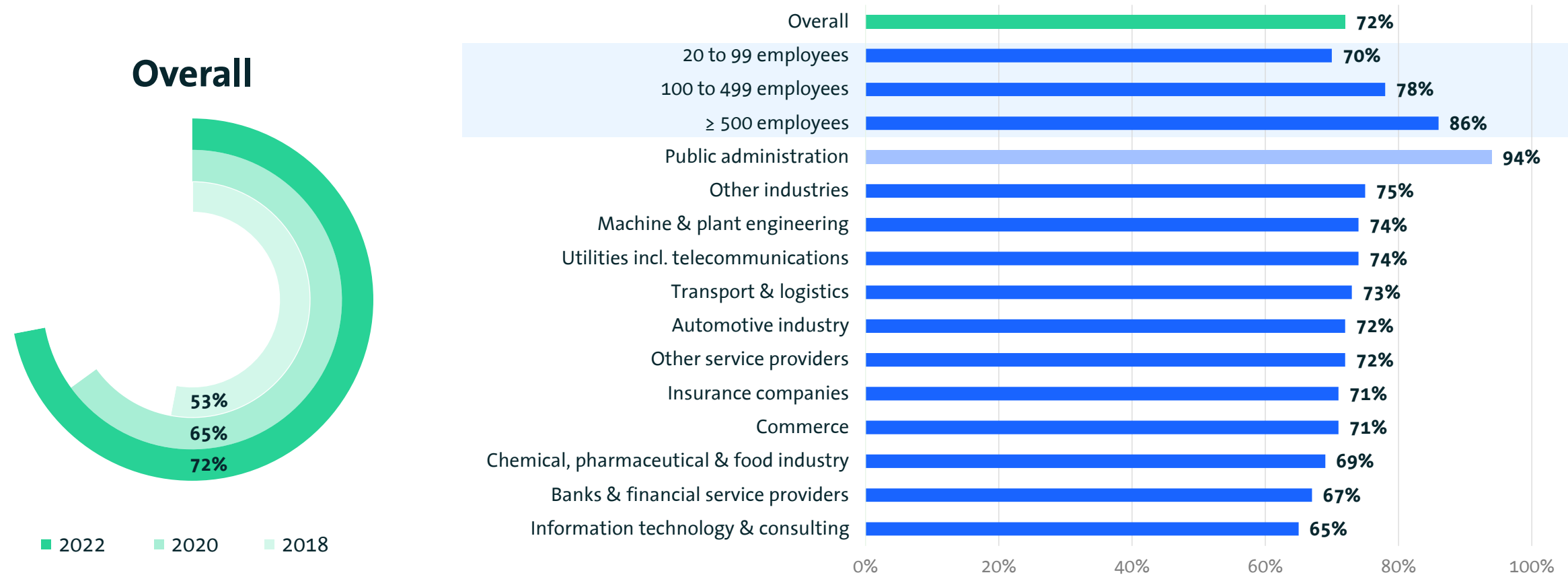
E-mail is the number one channel

Which receiving channels does your company make available to suppliers to transmit invoices?



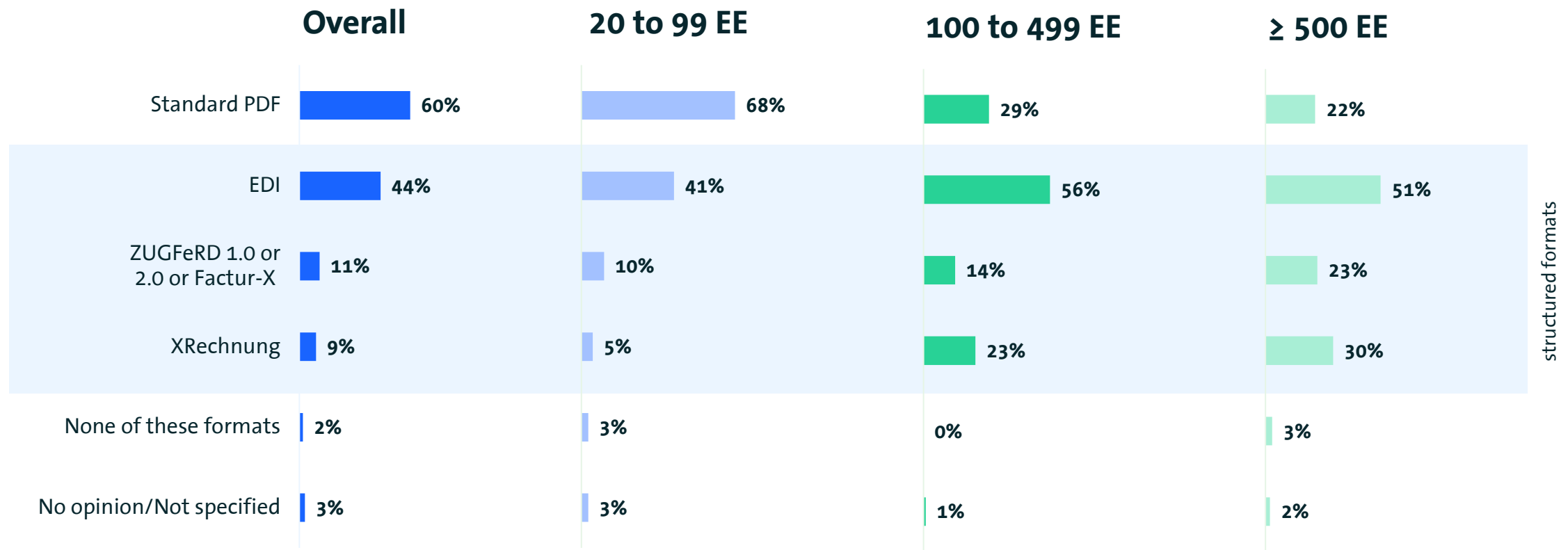
Public administration leads the way in digital invoices

Companies that issue at least half of their invoices electronically



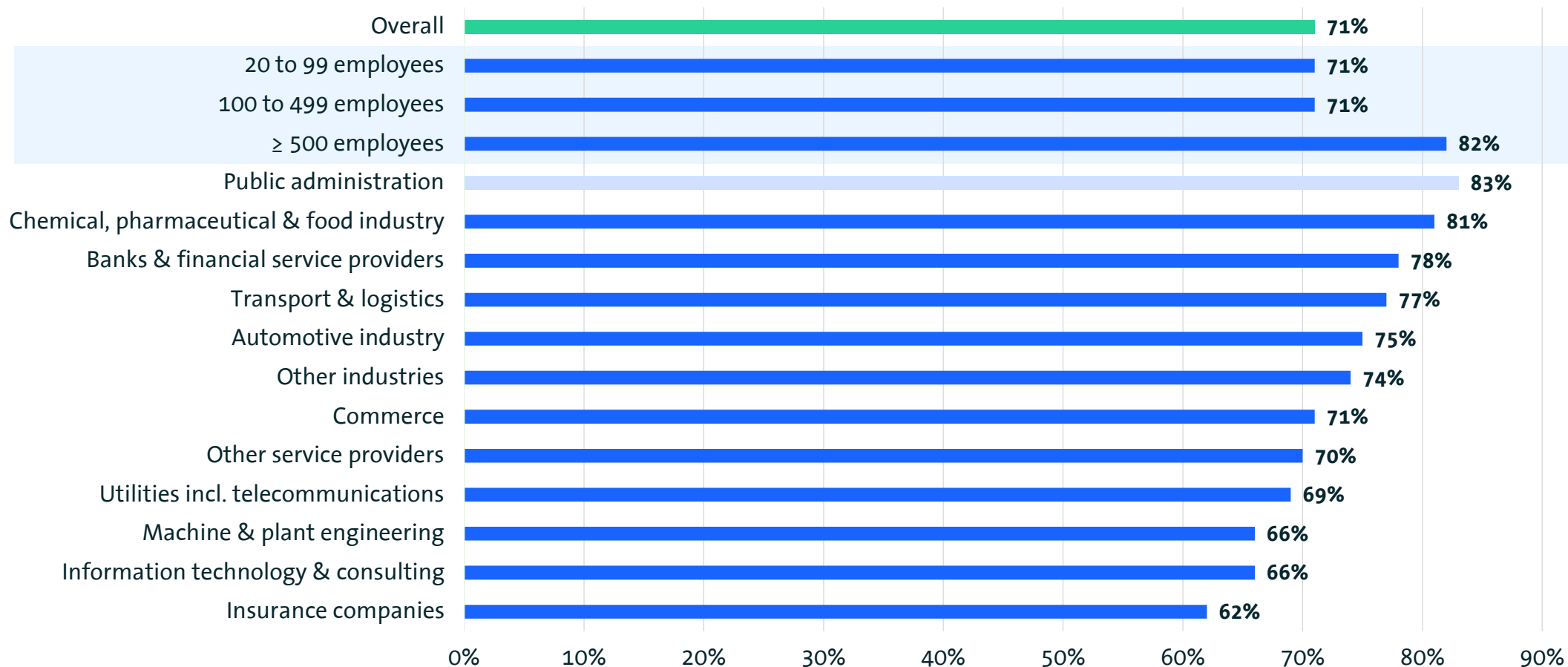
Standard PDF is still the leader in digital formats

Which formats does your company use for electronic invoicing?



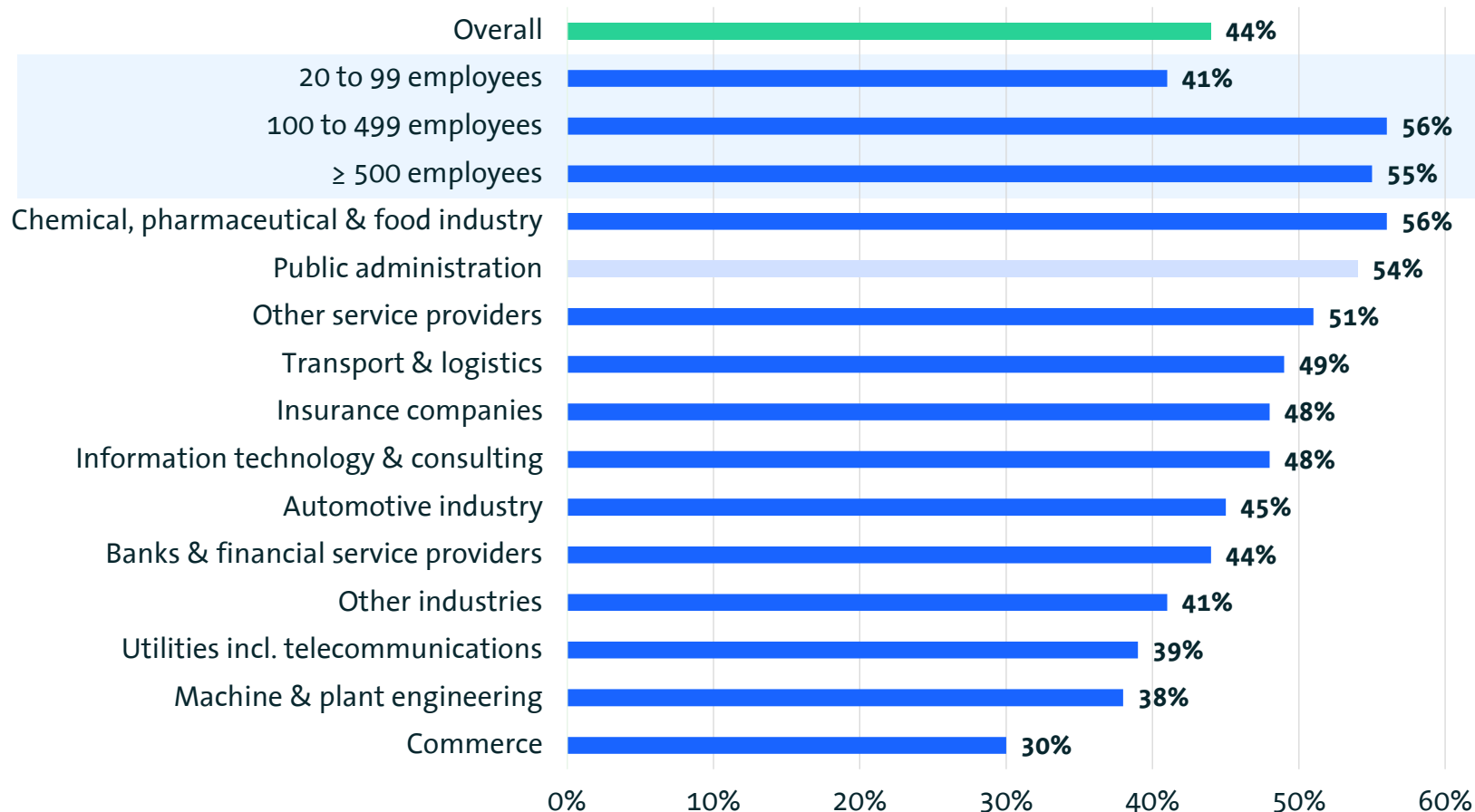
Electronic invoices are particularly relevant for the administration

Companies for which the exchange of structured invoice data is highly relevant



Electronic document data are less important in commerce

Companies for which the exchange of structured electronic invoice data is highly relevant



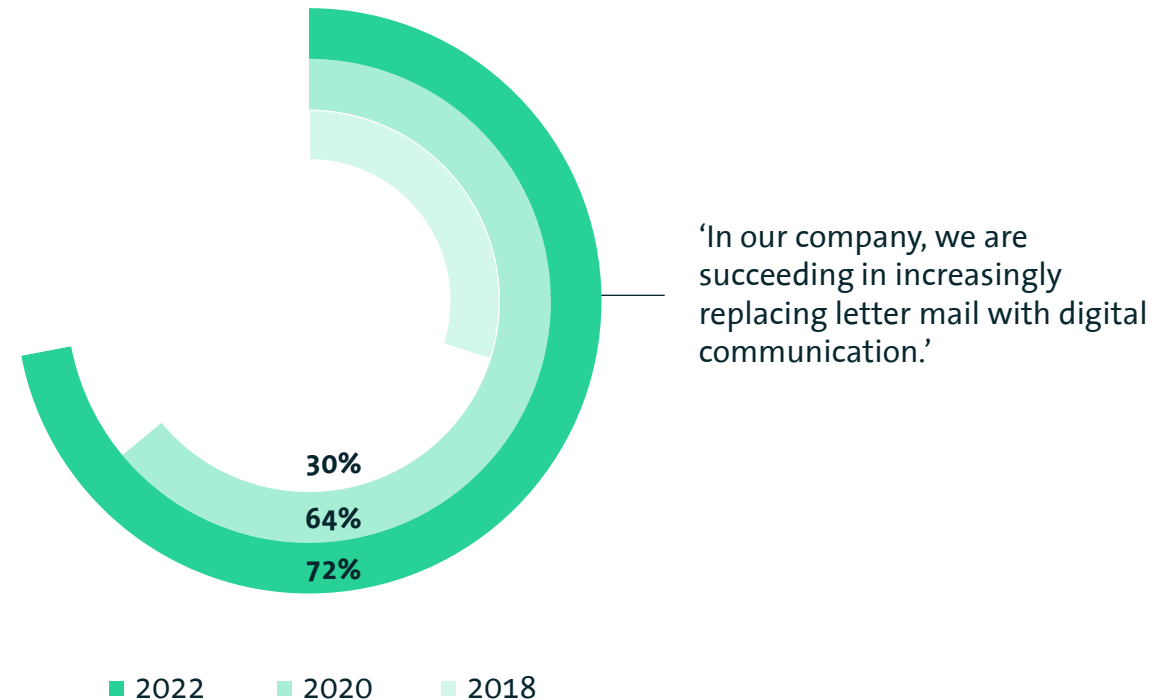
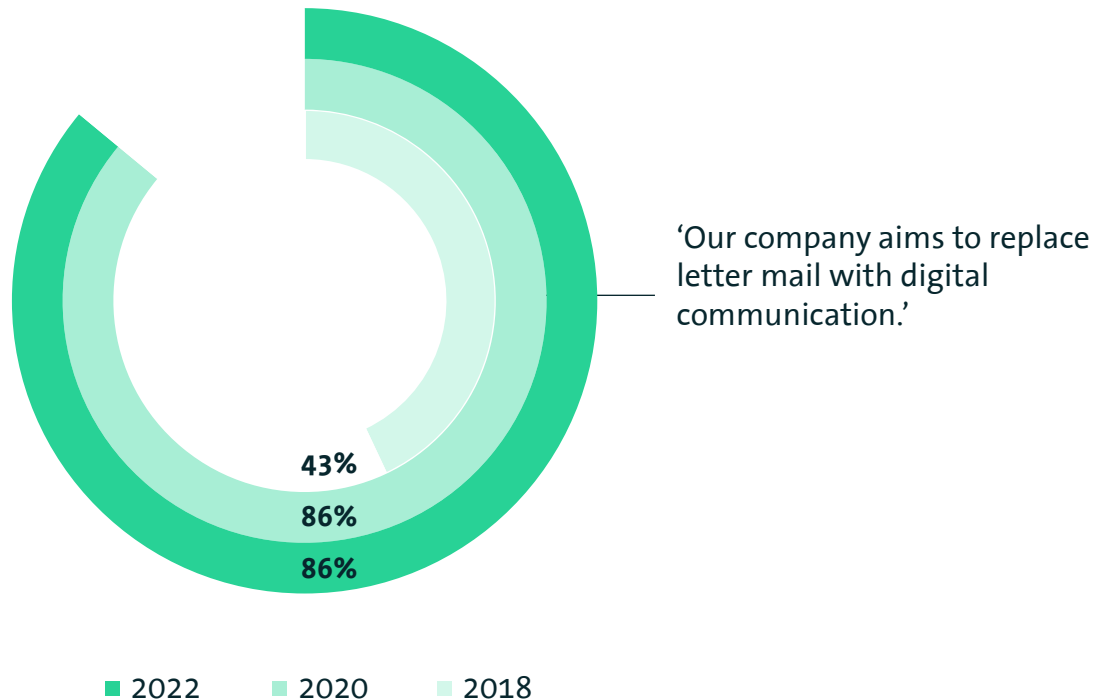
Electronic document data include catalogue data, tenders, orders, order confirmations and delivery notes.

3.2.3

Working with less paper

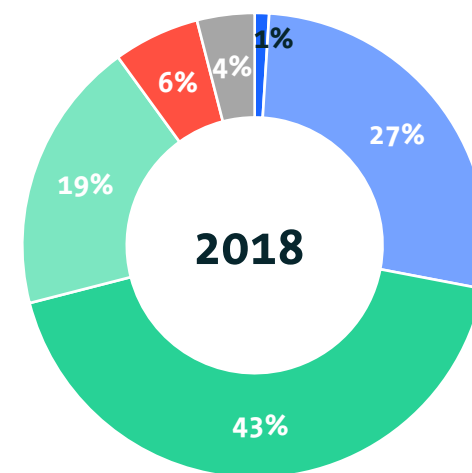
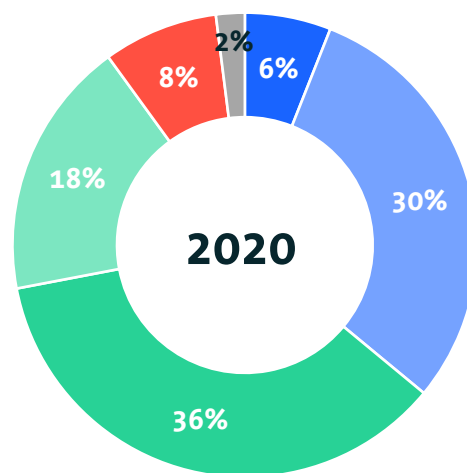
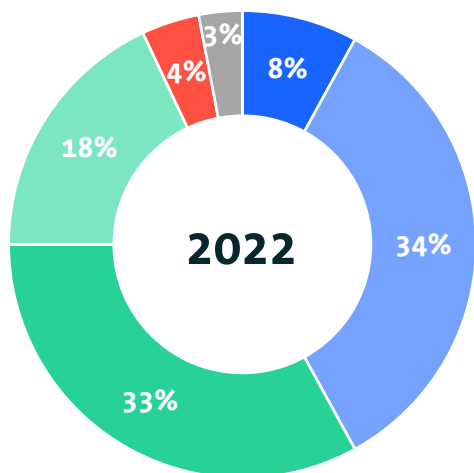
More and more companies are succeeding in replacing letter mail

Companies that (want to) replace letter mail with digital communication



Every twelfth company works paperless

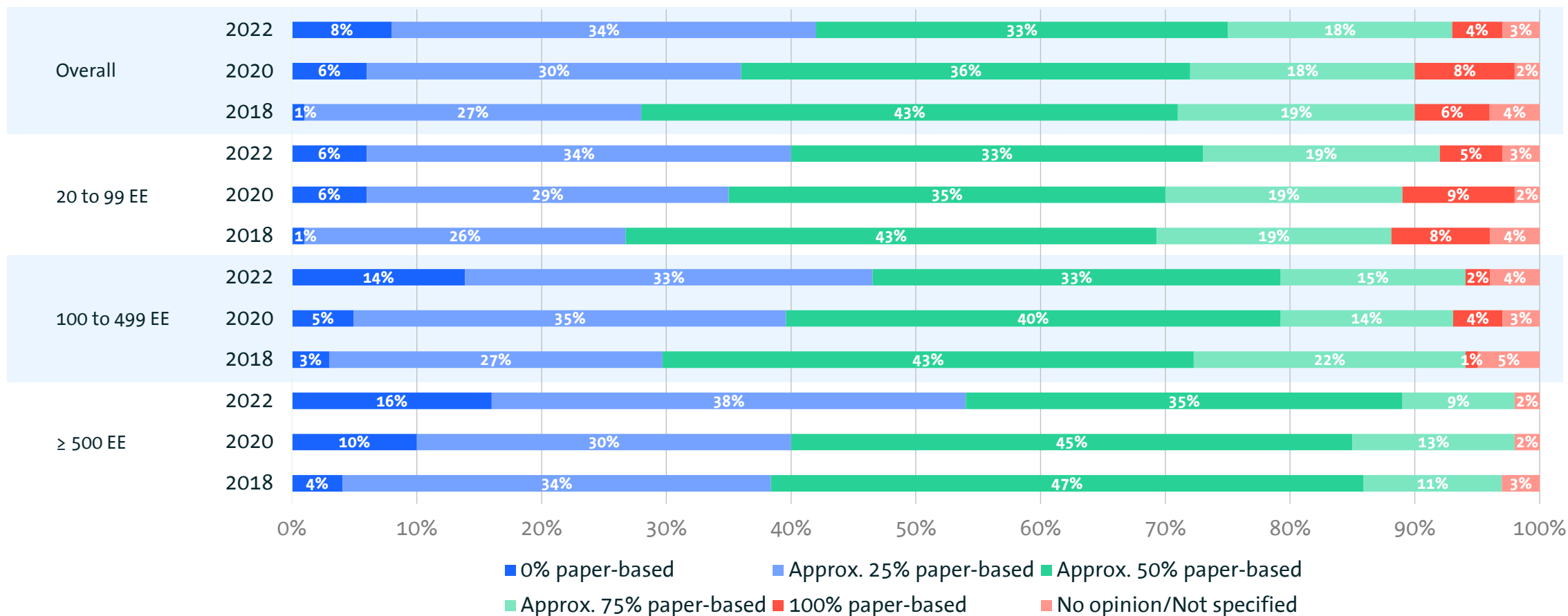
What proportion of your office and administrative processes is paper-based?



- 0% paper-based
- 25% paper-based
- 50% paper-based
- 75% paper-based
- 100% paper-based
- No opinion/Not specified

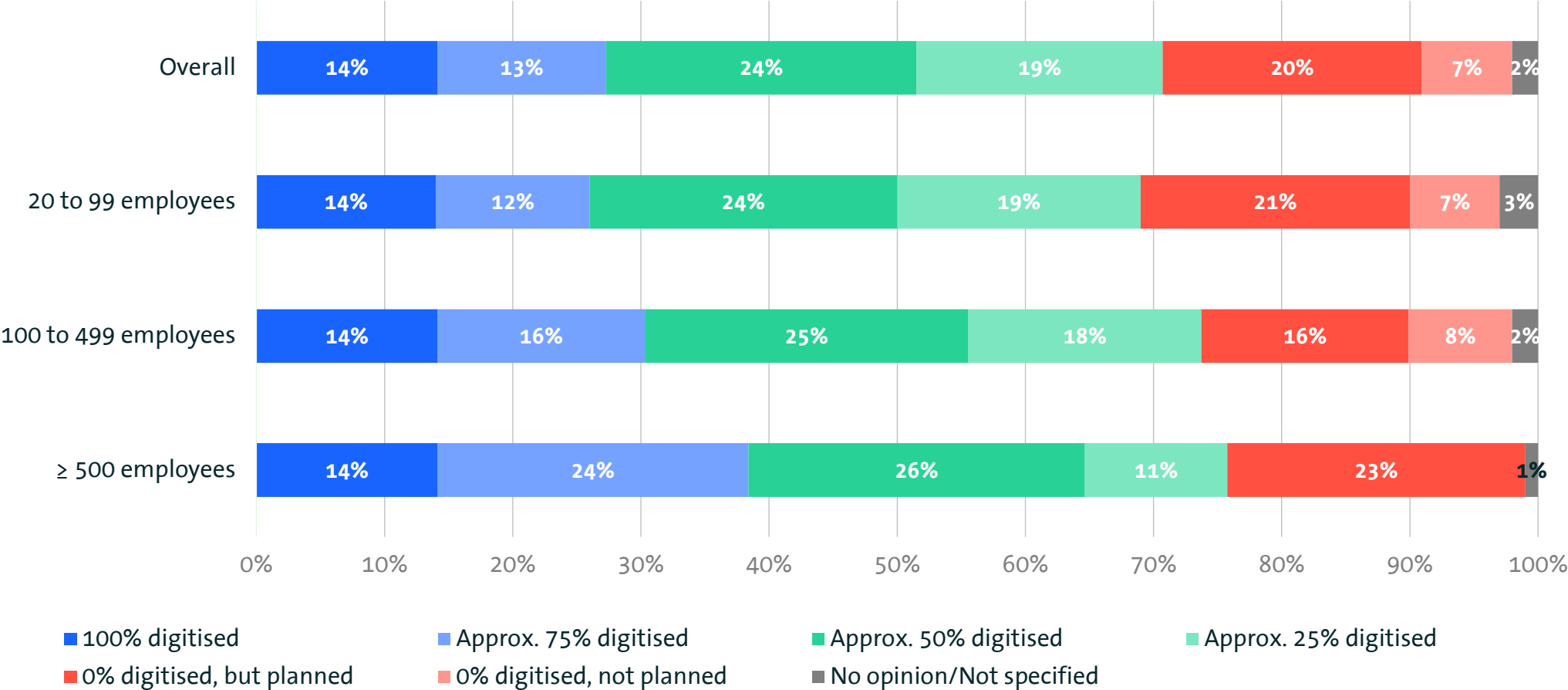
Large companies work predominantly paperless

What proportion of your office and administrative processes is paper-based?



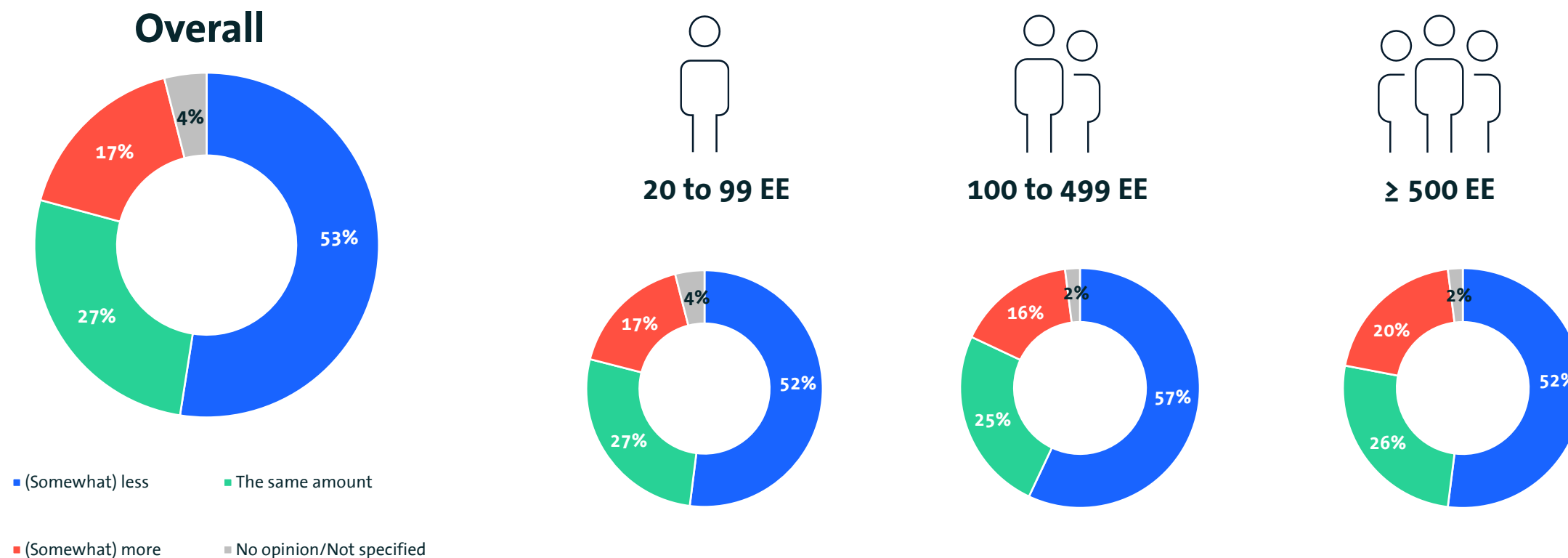
About half of all paper files have already been digitised

To what extent have you digitised your paper files already?



More than half print out less than last year

Does your company print more or less digital files than a year ago?

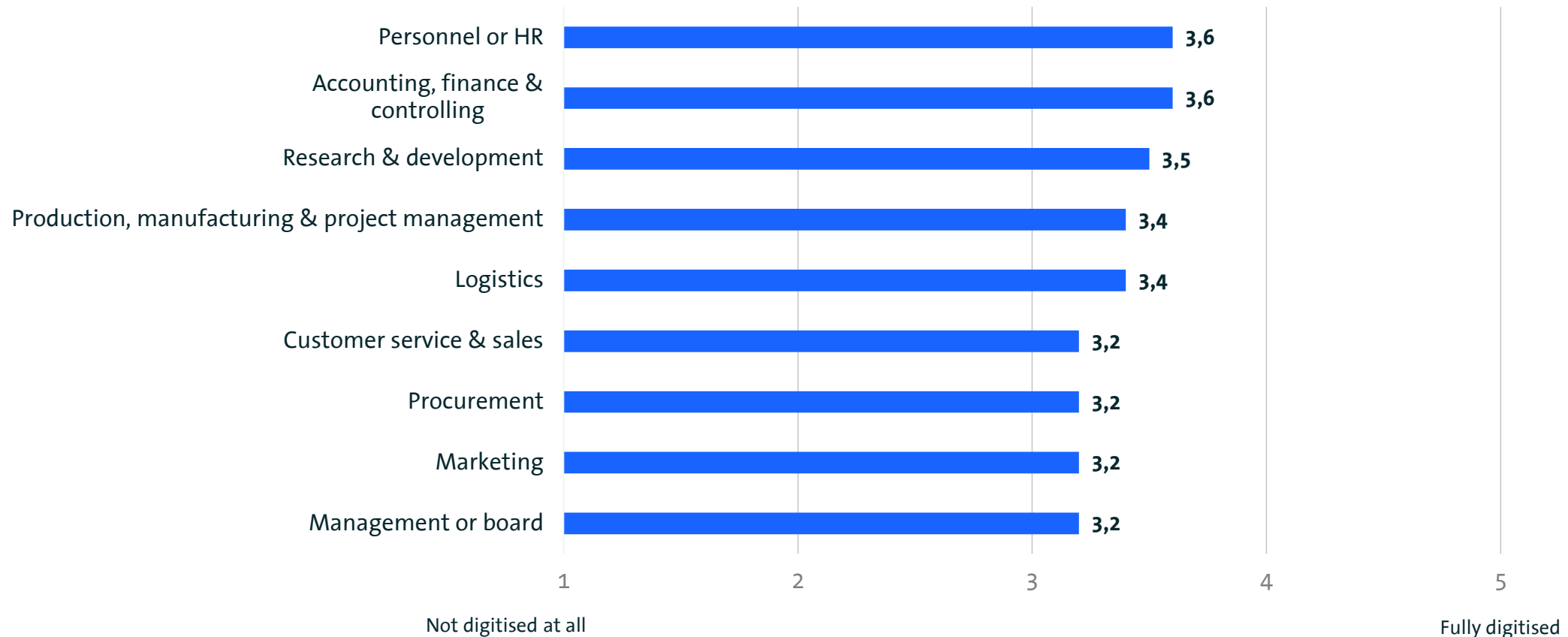


3.3

Digital business processes in operating divisions

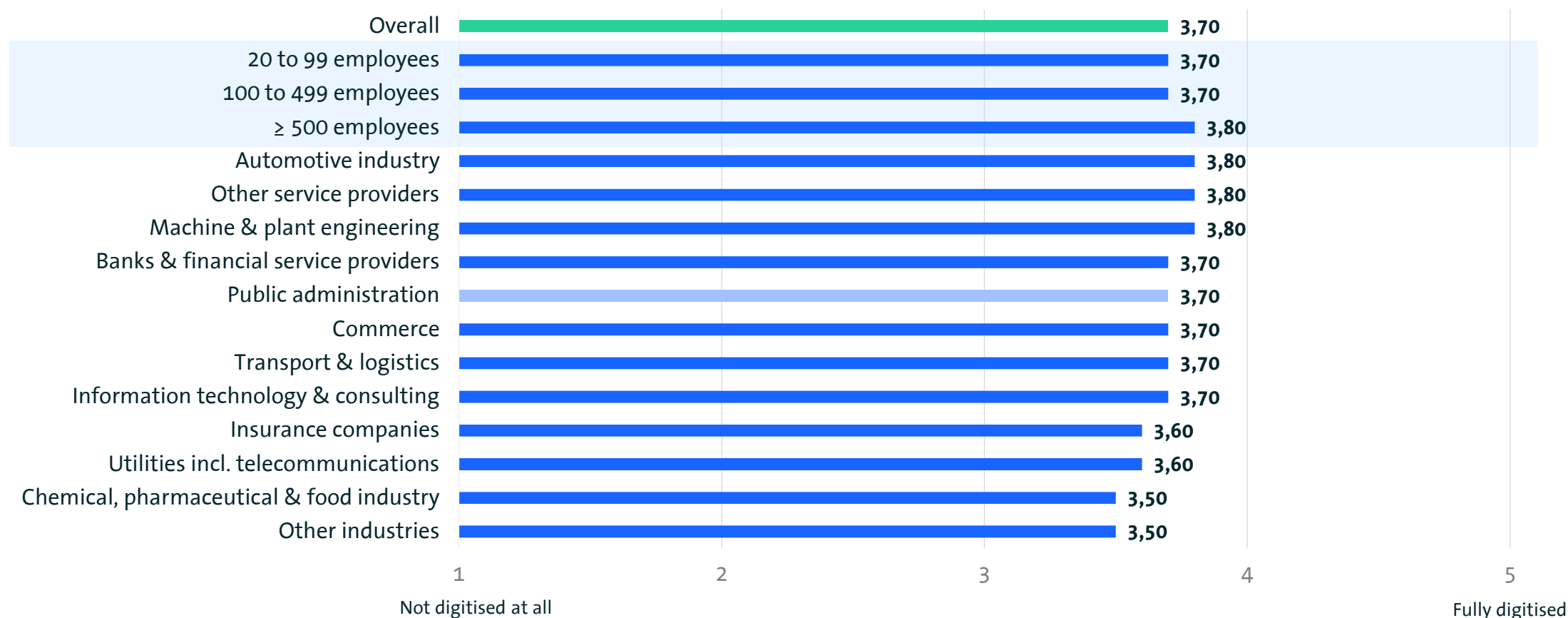
HR and accounting departments are the most digital

To what extent are company processes digitised in the following operating divisions?



All sectors want to become more digital

Where do you see the digitisation of your business and administrative processes in five years?



4

Digitisation perspective

Summary digitisation effects and perspective

The economic benefits outweigh the hurdles of digitisation

- The biggest hurdle to digitisation for many companies is the high level of investment needed (2022: 73 per cent; 2020: 70 per cent). In addition, two thirds fear unauthorised access to sensitive company information (65 per cent) or complain about the lack of qualified staff (64 per cent). However, only 19 per cent say that the economic benefits of digitisation are unclear to them (2020: 27 per cent).
- The fact that the benefits of digital solutions are noticeable for the companies is evident. Three quarters of Digital Office solution users (74 per cent) report that they have helped them meet their compliance guidelines (2020: 64 per cent). For 7 out of 10, performance (72 per cent) and transparency (70 per cent) of internal business and administrative processes have increased.

The majority wants to continue investing

- Thus, it is not surprising that companies want to continue investing in digitisation. One in three companies (29 per cent) say they plan to invest more this year than in 2021. For 53 per cent, investments are expected to remain the same, and only 14 per cent want to invest less.

The COVID-19 pandemic drives digitisation

- The COVID-19 pandemic has become a massive driver of digitisation. About half of companies say that the COVID-19 pandemic has accelerated the digitisation of their business model (2022: 49 per cent; 2020: 15 per cent) or business processes (2022: 44 per cent; 2020: 18 per cent).

High investment costs slow digitisation

What are the biggest hurdles to digitisation in your company?

73%

High investment costs



65%

Fear of unauthorised access to sensitive company information



64%

Lack of qualified staff



55%

Not enough time



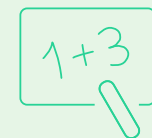
54%

Potential loss of data



53%

Not enough standards



52%

Legal and regulatory provisions



Demands on data protection and IT security too high?

What are the biggest hurdles to digitisation in your company?

51%

Requirements for data protection



51%

Requirements for IT security



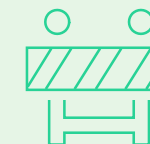
46%

Master data quality



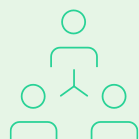
41%

Resistance within the company



33%

Lack of external consultation



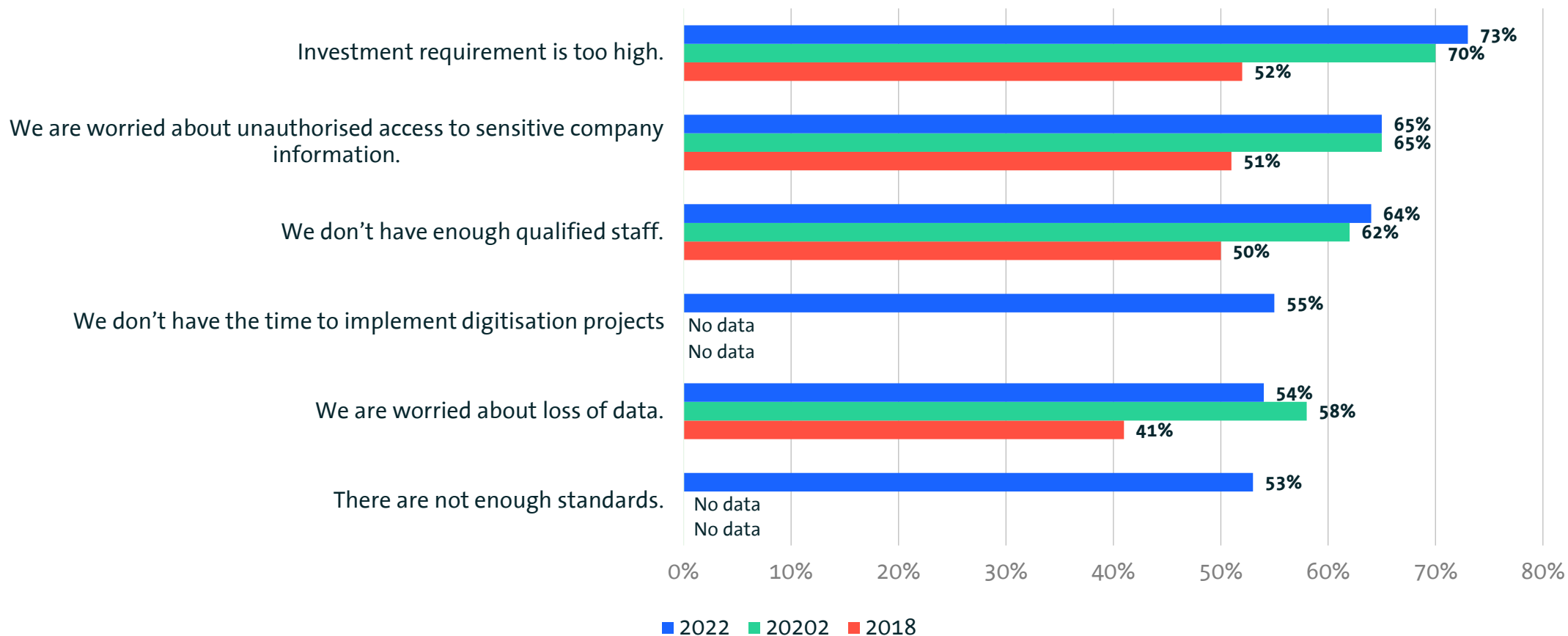
19%

Economic benefits unclear



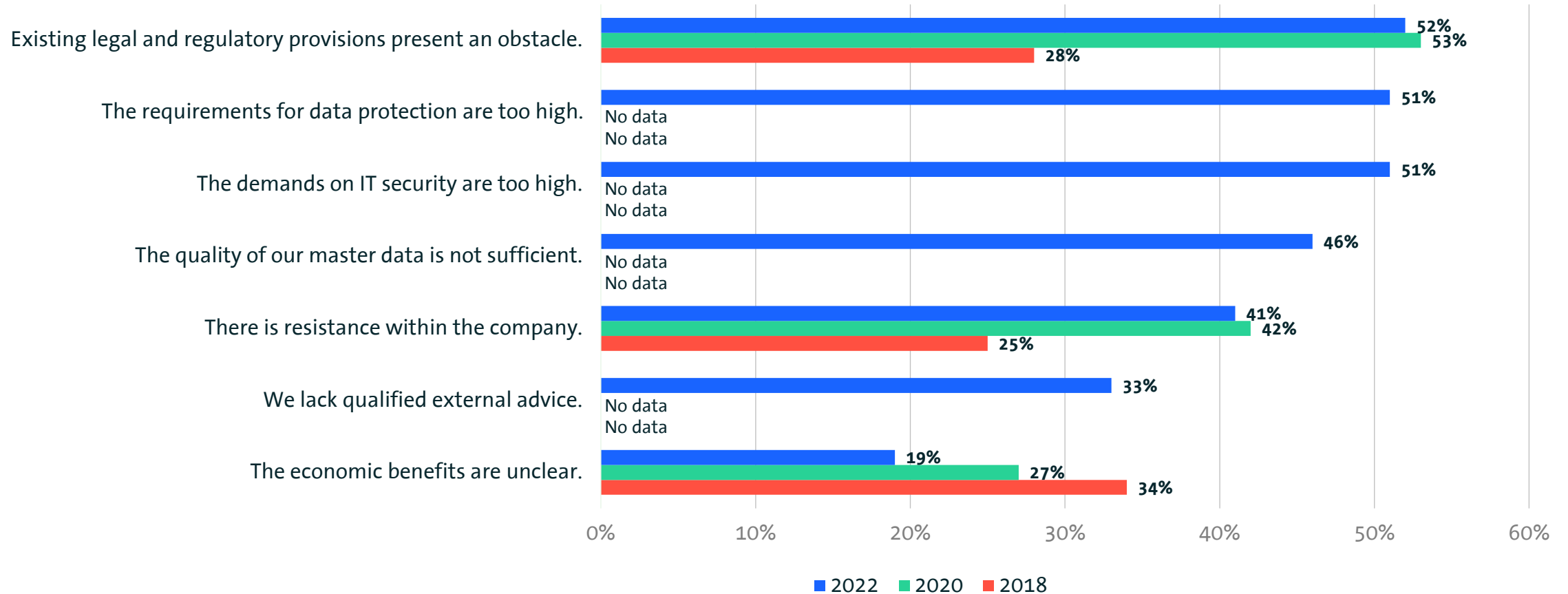
High investment costs remain the biggest hurdle

What are the biggest hurdles to digitisation in your company?



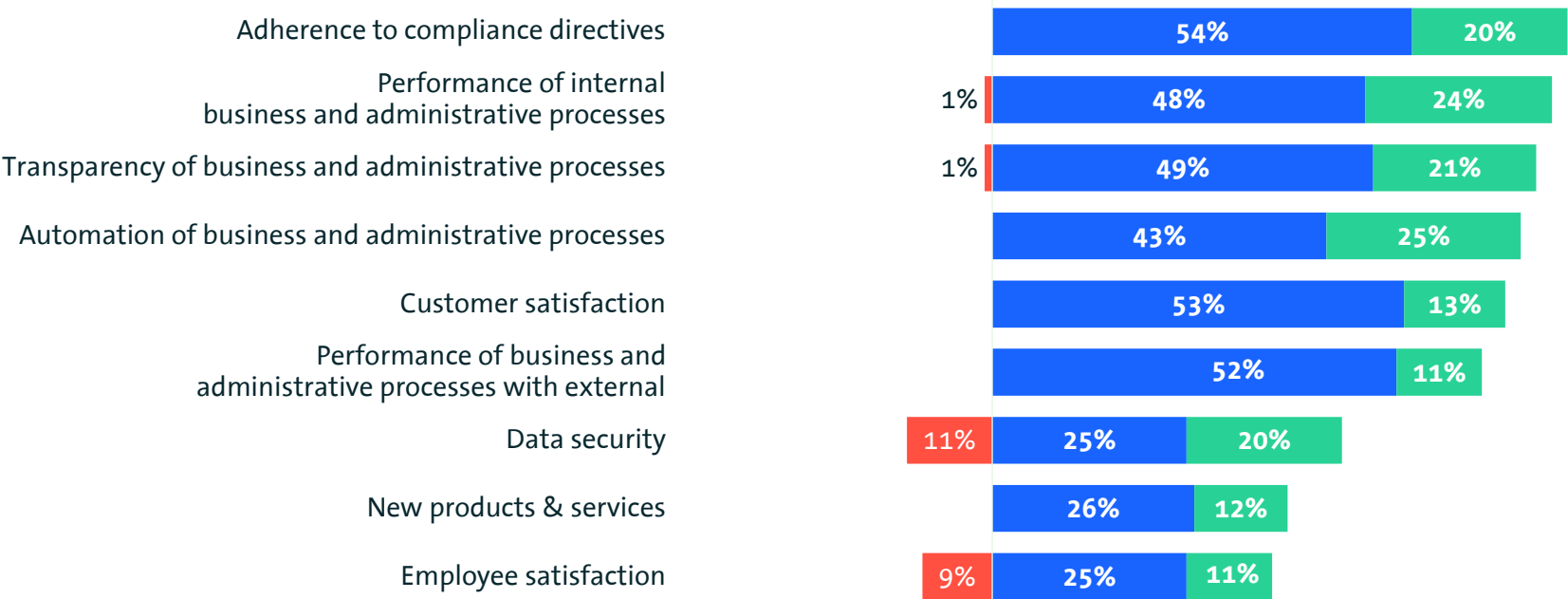
Most are (by now) aware of the economic benefits

What are the biggest hurdles to digitisation in your company?



Digitisation creates transparency

How do you evaluate the impact of digitalised business and administrative processes you introduced in the context of the following aspects?



Top2-Boxes*

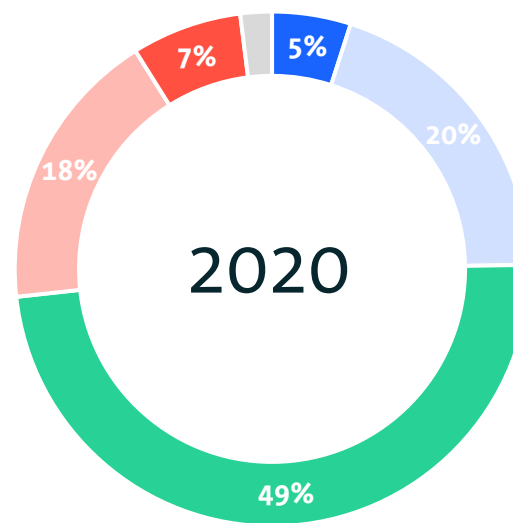
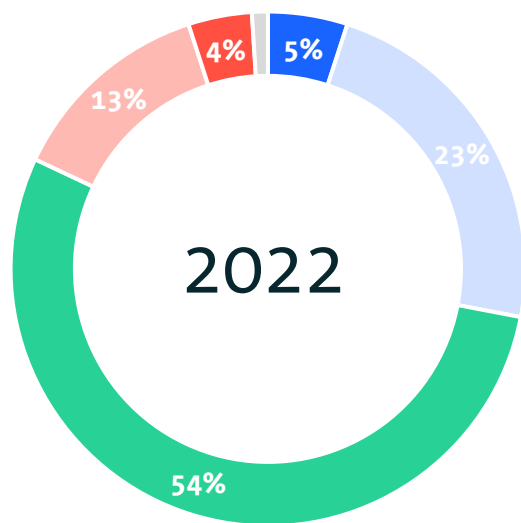
2022	2020	2018
74%	64%	68%
72%	66%	72%
70%	62%	46%
68%	65%	69%
66%	71%	65%
63%	69%	65%
45%	58%	46%
38%	32%	**
36%	27%	16%

■ Has decreased somewhat ■ Has decreased significantly ■ Has increased somewhat ■ Has increased significantly

Digital solutions can reduce administrative costs

How do you evaluate the impact of digitalised business and administrative processes you introduced in the context of the following aspects?

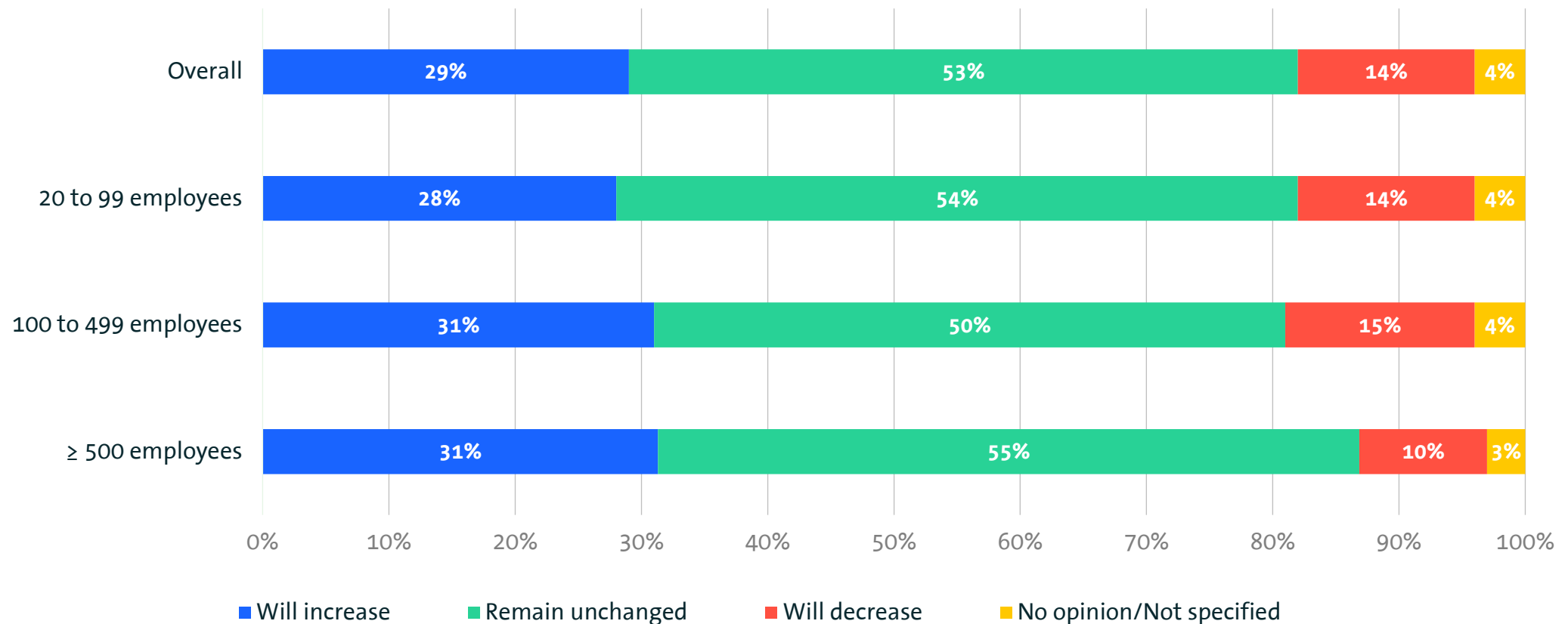
Amount of administrative costs...



■ Has increased significantly ■ Has increased somewhat ■ Remains unchanged ■ Has decreased somewhat ■ Has decreased significantly ■ No opinion/Not specified

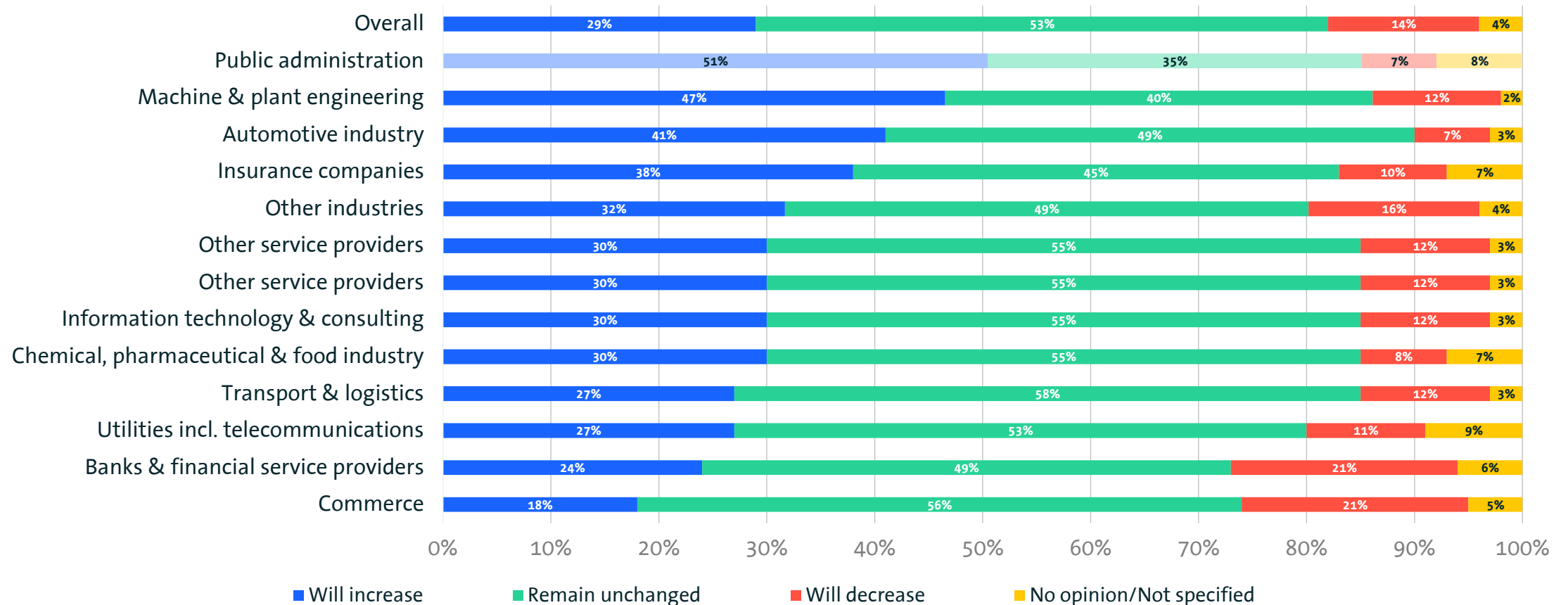
3 out of 10 companies want to invest more in digitisation

How is your company's investment in the digitisation of business and administrative processes expected to develop in 2022 compared to 2021?



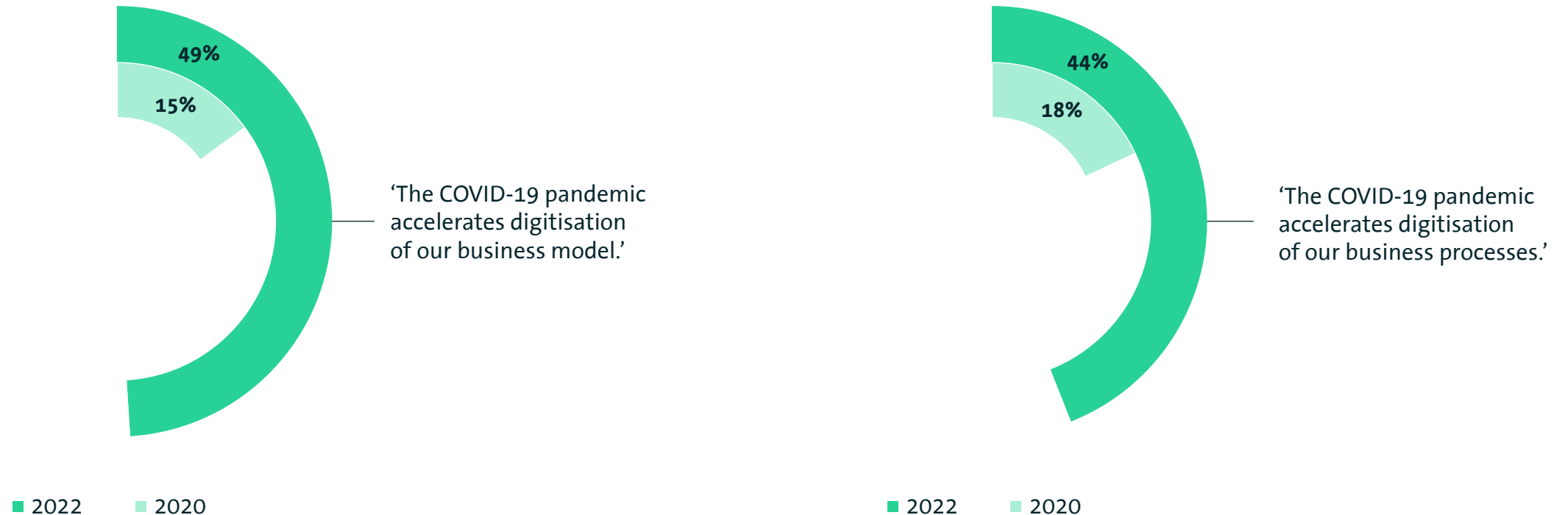
Administration, in particular, wants to invest more

How is your company's investment in the digitisation of business and administrative processes expected to develop in 2022 compared to 2021?



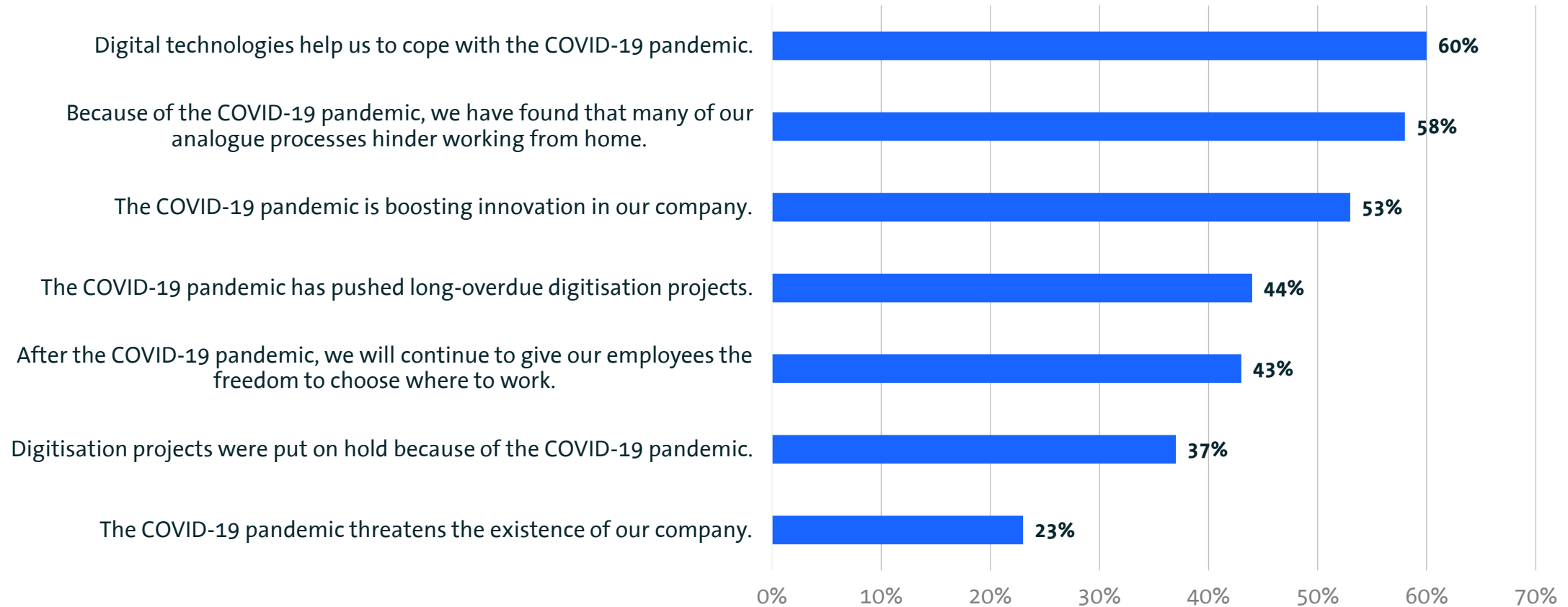
The COVID-19 pandemic has accelerated digitisation

To what extent do the following statements on the COVID-19 pandemic apply to your company?



4 out of 10 want to continue to enable mobile working

To what extent do the following statements on the COVID-19 pandemic apply to your company?

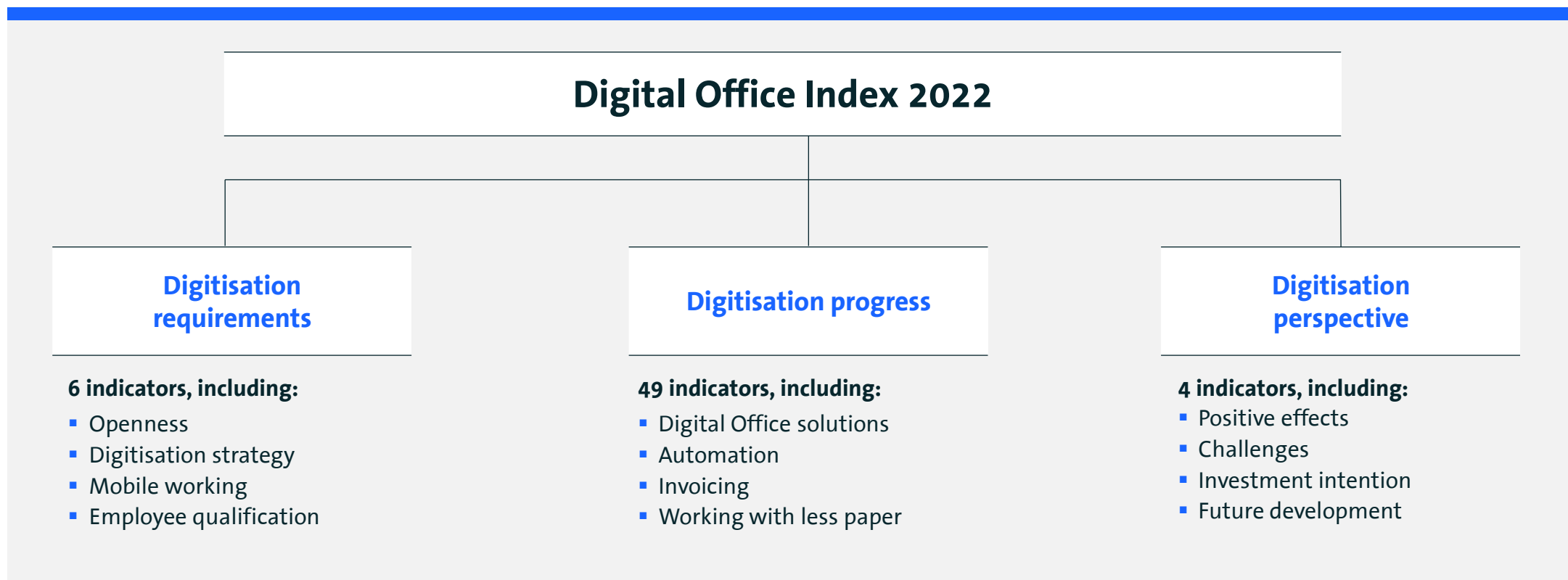


5

Digital Office Index 2022 and user types

Bitkom Digital Office Index 2022 – approach

Calculation based on **59 selected indicators** from three areas:

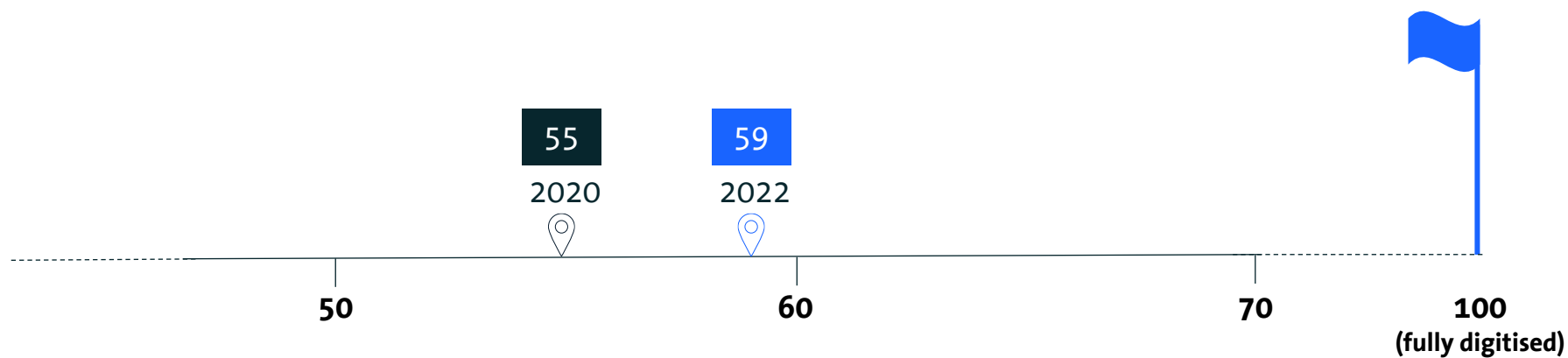


Digital Office Index 2022 Summary

Digitisation in German companies has gained momentum in the past two years

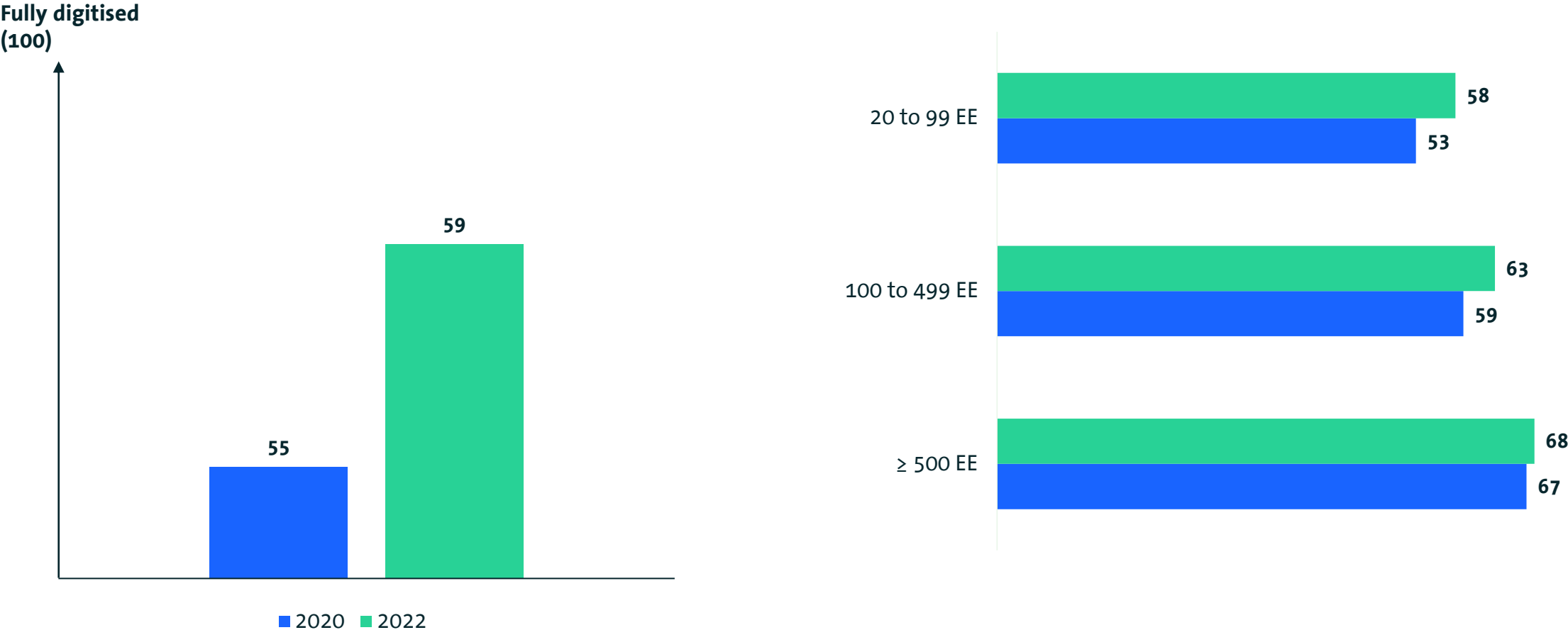
Rated on a scale of 0 to 100 points, German companies with at least 20 employees achieved an average of 59 points on this year's Digital Office Index. That is four points more than in 2020.

The list is lead by banks (61 points) and insurance companies (57 points). Looking at the size of the company, large ones lead with 68 points (2020: 67 points). However, small (2022: 58 points, 2020: 53 points) and medium-sized companies (2022: 63 points, 2020: 59 points) are catching up.



Small and medium-sized companies are catching up

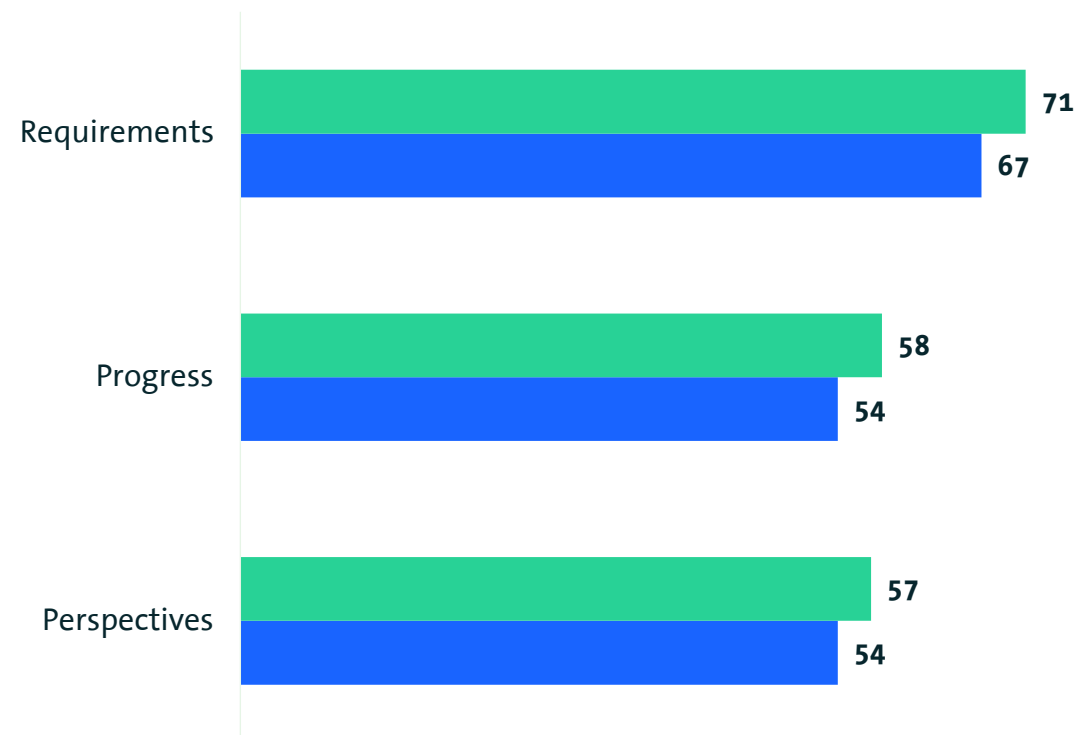
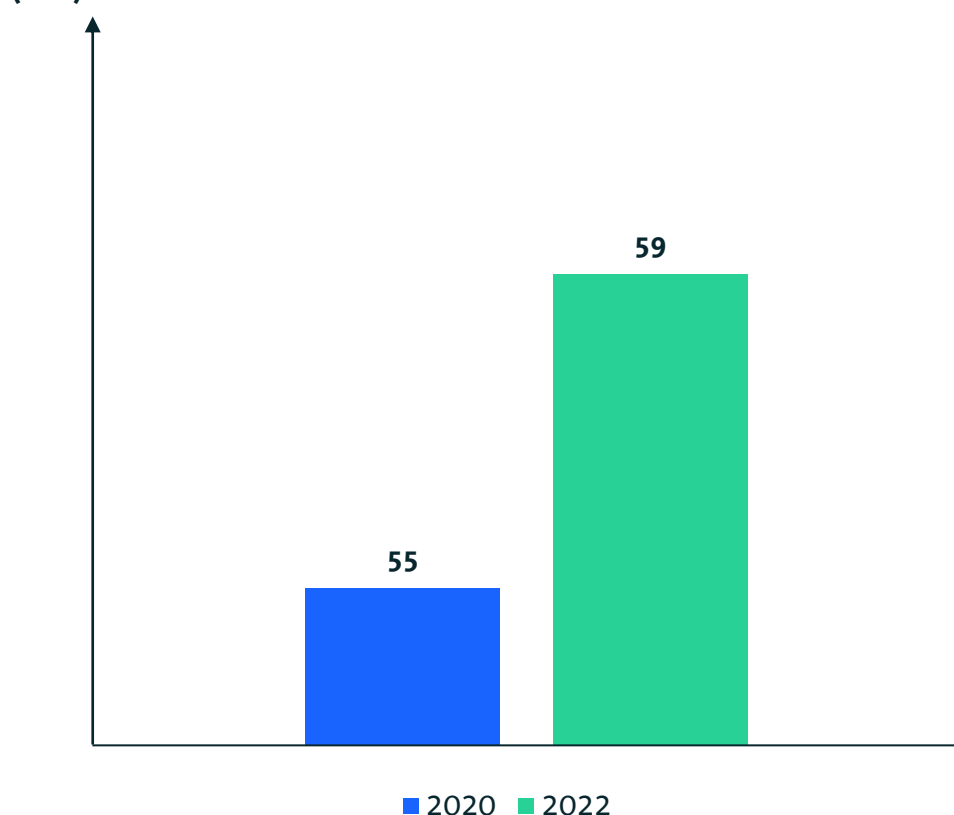
Digital Office Index 2020 and 2022 by company size



Digitisation in German offices increases

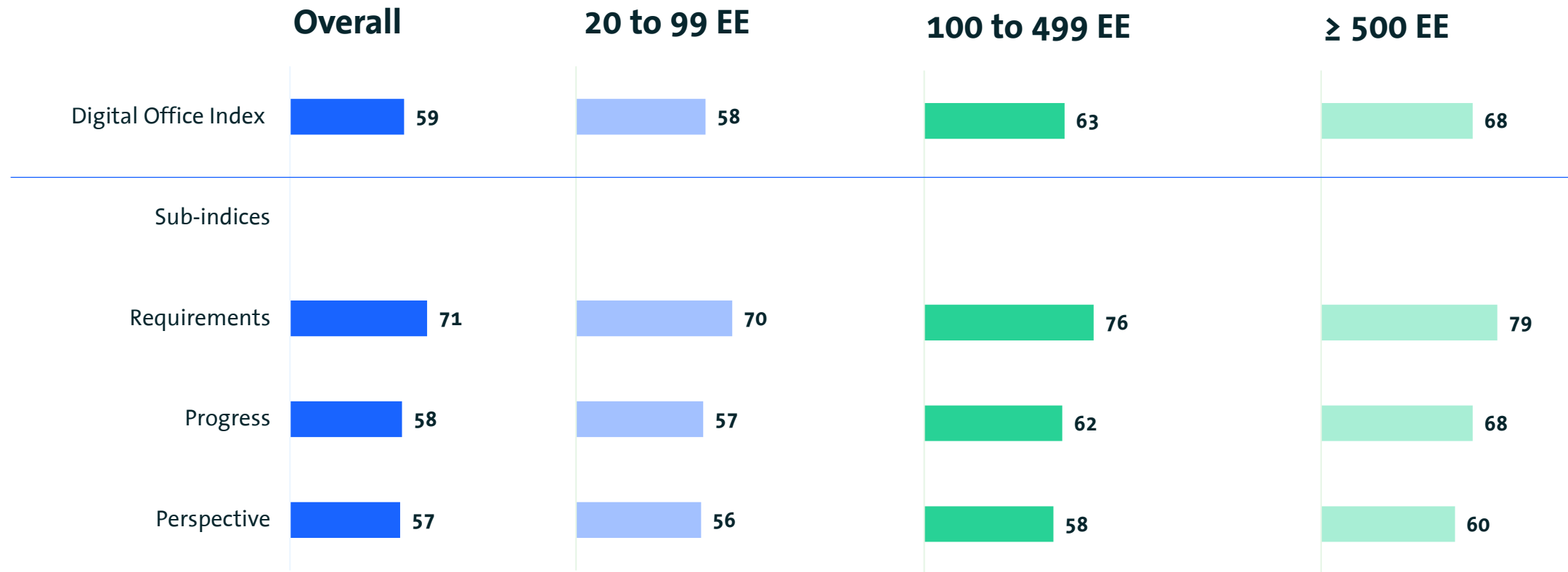
Digital Office Index 2020 and 2022 by sub-indices

Fully digitised
(100)



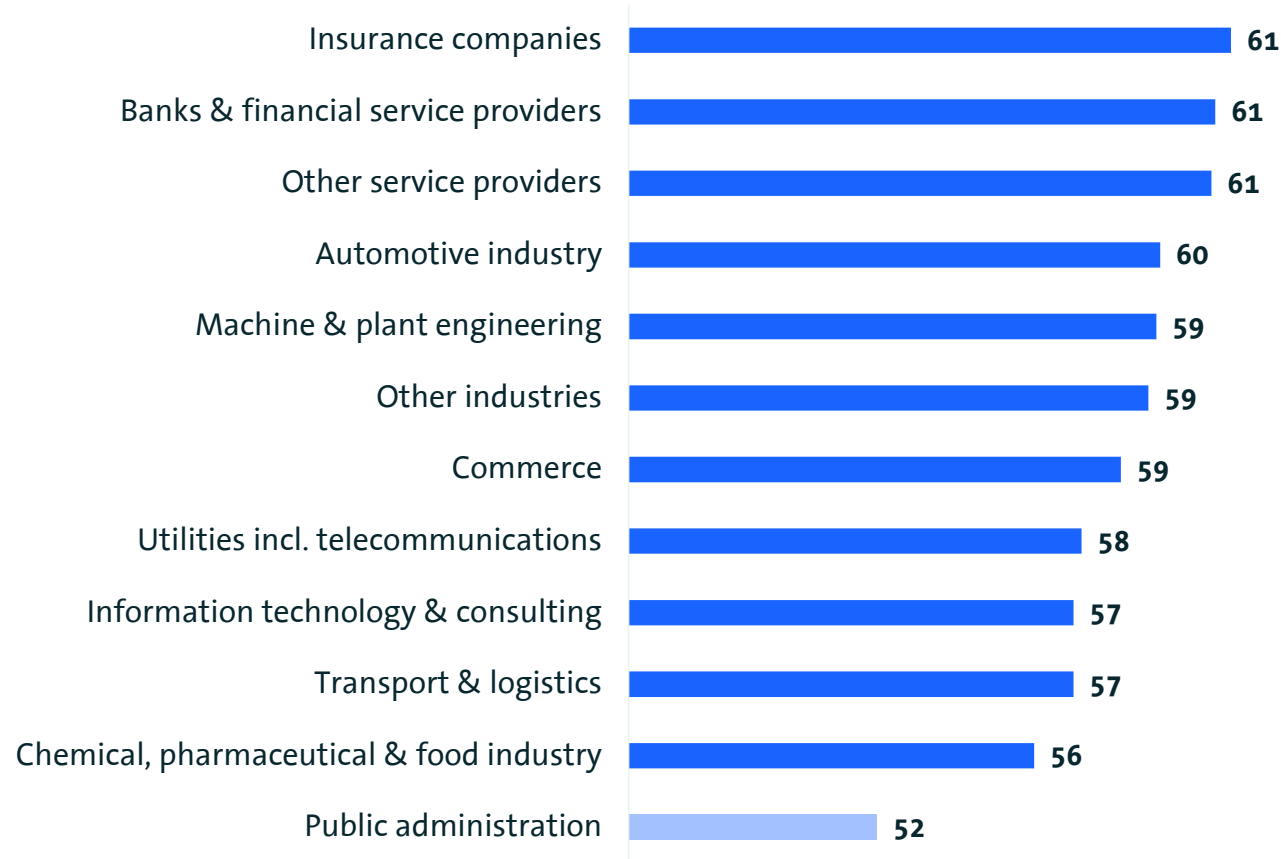
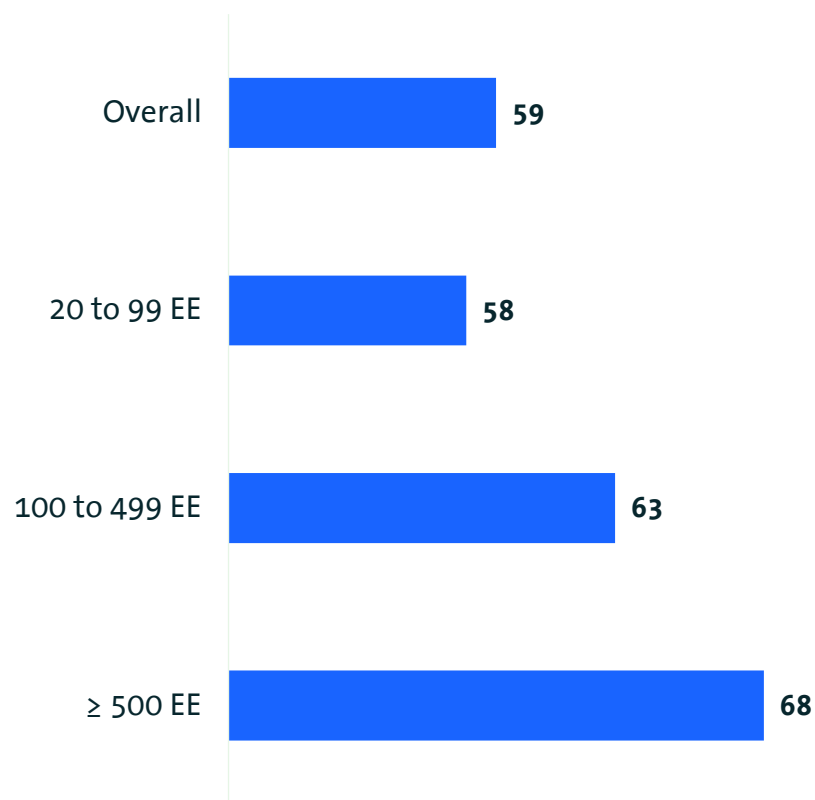
Large companies continue to take the lead

Digital Office Index 2022 and sub-indices by company size



Banks and insurance companies lead in digitisation

Digital Office Index 2022 by company size and sector

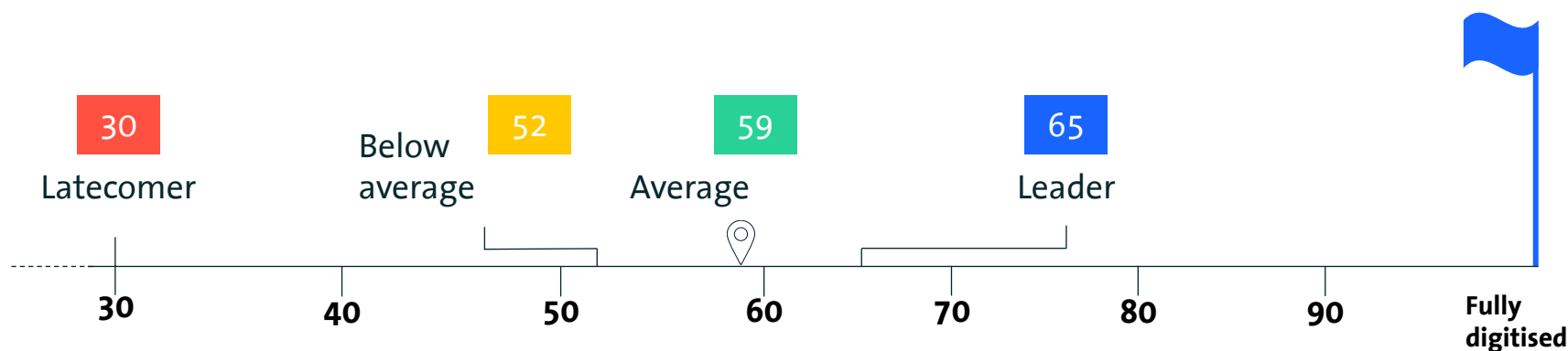


Digital Office user types 2022

Summary and approach

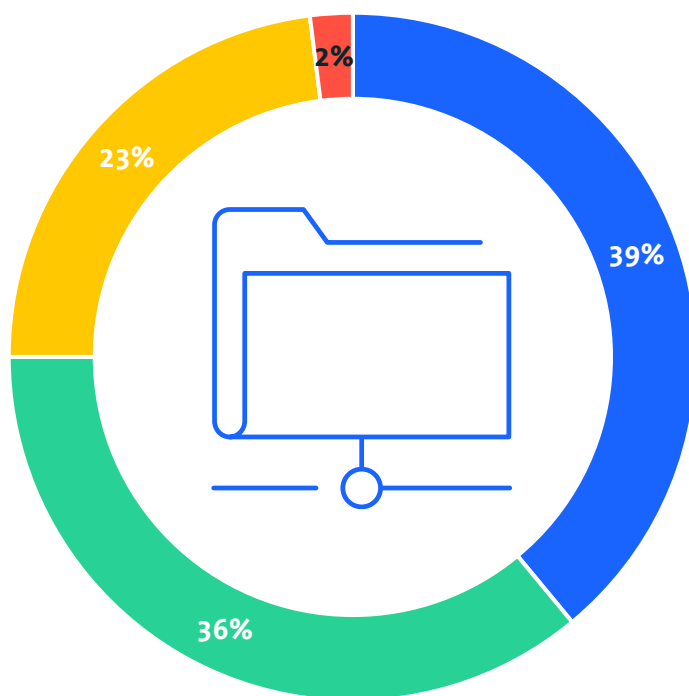
In an additional step, based on the 49 indicators of the digitisation progress, we conducted a hierarchical cluster analysis to create clusters/groups that are as homogeneous as possible. The results show that 4 out of 10 companies have become leaders in digitisation. The average score of this group is 65 points. Thirty-six per cent of companies are making average progress in digitisation (ø 59 points), 23% are below average (ø 52 points), and 2% fall into the latecomer category (ø 30 points).

The 'Leader' group is particularly strategic and coordinated in its approach, which is reflected in its digitisation progress. The 'Average progress' group represents the middle of the German economy. Companies in the 'Below-average-progress' group often have identical prerequisites but tend to be less successful in implementation. The latecomers, on the other hand, have missed the boat in many aspects and seem to be unwilling to digitise.

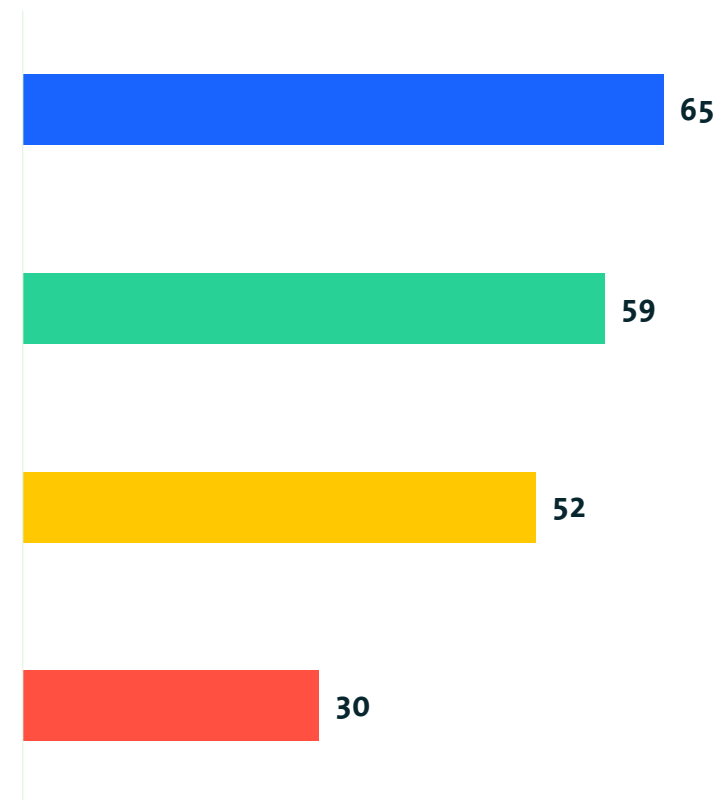


Digital Office user types 2022

User type distribution

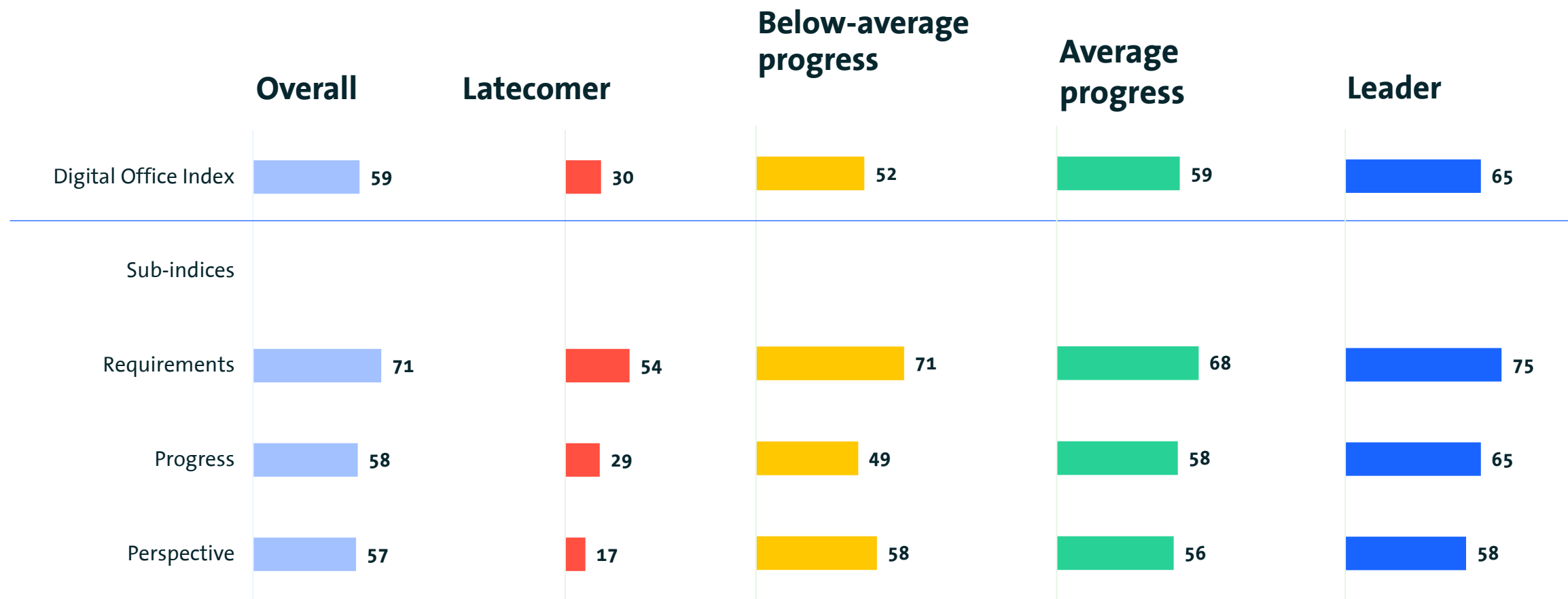


- Leader
- Average digitisation progress
- Digitisation progress below average
- Latecomer



Digital Office user types 2022

Digital Office Index and sub-indices by user type



Digital Office user types: Leader

Profile

At 65 points, the 'Leader' group scores above average on the Digital Office Index. In total, 39% of all companies with at least 20 employees are part of the 'Leader' group.

65

Digital Office
Index 2022

75

Subindex digitisation
requirements

65

Subindex digitisation
progress

58

Subindex digitisation
perspective

Typical features:

- The proportion of companies pursuing a digitisation strategy is above average in this group. These are predominantly central strategies.
- Nearly all companies have one person who coordinates digitisation across departments.
- Digital Office solutions are standard among the leaders. Practically all of them use ECM, CRM, and ERP solutions.
- Automation solutions are also used more frequently than the average.
- Invoices are primarily generated digitally.
- The majority of the paper files have already been digitised.
- Despite their lead, further investments in digitisation are planned.
- Most of the leaders are medium-sized and large companies.

Digital Office user types: Average progress

Profile

With 59 points, the 'Average progress' group corresponds to the average of the Digital Office Index. This group accounts for 36% overall.

59

Digital Office
Index 2022

68

Subindex digitisation
requirements

58

Subindex digitisation
progress

56

Subindex digitisation
perspective

Typical features:

- The majority of companies in this group follow a strategy to tackle digital change.
- The vast majority of companies has one person who coordinates the digitisation across departments.
- Almost all companies use ECM and ERP solutions – CRM solutions are less frequent.
- Electronic invoices are of great significance. Invoices are predominantly produced digitally.
- Just over half of business and administrative processes are already paperless, and more and more paper files are being digitised.
- To save paper, less is printed on average compared to last ago.
- Further investments in digitisation are planned for the current year.

Digital Office user types: Below-average progress

Profile

With 52 points, the 'Below-average progress' group is behind somewhat but has not yet missed the boat. Around 23% of companies with at least 20 employees belong to this group.

52

Digital Office
Index 2022

71

Subindex digitisation
requirements

49

Subindex digitisation
progress

58

Subindex digitisation
perspective

Typical features:

- The proportion of companies pursuing a digitisation strategy is within the overall index average.
- The same applies to the inter-departmental coordination of digitisation projects.
- The use of ERP solutions does not deviate from the average either. However, CRM solutions are used much less frequently, and ECM solutions are the exception.
- The creation of electronic invoices is below average.
- The number of digitised paper files and paperless business and administrative processes are also below average.
- However, the requirement to catch up is understood. Thus, digitisation investments are planned.

Digital Office user types: Latecomer

Profile

Compared to other user groups, this group scores lowest on the Digital Office Index – 30 points. This group accounts for 2% overall.

30

Digital Office
Index 2022

54

Subindex digitisation
requirements

29

Subindex digitisation
progress

17

Subindex digitisation
perspective

Typical features:

- There is no central digitisation strategy in place.
- Companies in this group often lack employees with the necessary skills to push forward digitisation.
- Nearly no Digital Office solutions are used.
- Invoices are predominantly produced in paper form.
- Almost all business and administrative processes are paper-based.
- The majority of the paper files are not digitised, and in most cases, this is not planned either.
- Investments in digitisation are seldom planned.
- Mostly smaller companies with 20 to 99 employees.

6

Research design

Research design

Contracting authority	Bitkom e.V. and the project group Digital Office Index
Population	Companies/Public administration organisations in Germany with at least 20 employees
Survey period and number of interviews carried out (sample)	2022: 13 December 2021 to 28 January 2022; n = 1,102 companies, n = 101 public administrations 2020: 5 May 2020 until 16 June 2020; n = 1,104 companies, n = 51 public administration 2018: 26 February 2018 until 29 March 2018; n = 1,106 companies 2016: 23 November 2015 until 18 December 2015; n = 1,108 companies
Sampling method	Disproportionately stratified random sample
Target audience	Chief Executive Officers/CEOs and Managing Boards/Heads of Government Body; Chief Digital Officers (CDOs); Chief Information Officer (CIO); Chief Operating Officer (COO); Chief Financial Officer (CFO)
Methodology	Computer-Assisted Telephone Interviewing (CATI); Average interview time 28 minutes
Weighting	The participants' statements were weighted to ensure that the results provide a representative picture by industry and size class for companies with at least 20 employees and the respective sector. The outcomes for public administration were not weighted due to lack of information on the population and therefore, not included in the overall result.
Statistical error margin	+/- 3 percentage points in the overall sample

Your contacts

Bitkom e. V.

Albrechtstraße 10
10117 Berlin
T +49 30 27576-0

@Bitkom_DOffice
bitkom@bitkom.org

bitkom.org



Nils Britze

Head of Business Process
Administration
n.britze@bitkom.org
T +49 30 275 76 201



Felix Lange

Research Consultant
Bitkom Research
felix.lange@bitkom-service.de
T +49 30 275 76 546