DATA-DRIVEN IMPLEMENTATION & DIGITAL DISRUPTION READINESS INDEX

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RESEARCH DESIGN & OBJECTIVE

Research Objective

To determine organizations' status in data-driven implementation.

To determine organizations' status in digital disruption readiness.

Respondents Criteria

C-level positions, senior managers and business owners

Methodology

Quantitative: Online survey

Fieldwork Period

Online survey (5 – 31 May 2020)

Sampling

Area : Indonesia
n = 35 respondents

RESPONDENTS PROFILE

Gender

Male	80%
Female	20%

Organization size

SME	34%
Large	66%

Industry

Food & Beverage	17%
Chemical	6%
Electronics	3%
Finance & Banking	29%
Energy	6%
Telecommunication	3%
Health service	6%
Consulting	9%
Others	23%

Age

< 40 y.o	20%
40 – 45 y.o	57%
45 + y.o	23%

Position

Business owner	9%
Director	29%
CEO/ President Director/ Country Head	6%
General manager/ Senior Vice President	20%
Senior manager/ Vice President	34%
Others	3%

Digital Disruption Readiness Index

LOADING . . .   25%

Key Findings   4D Matrix   Data-driven Implementation   Digital Disruption Readiness

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KEY FINDINGS

Data & decision-making process

80% companies have their own research team. The figure is much higher for large companies (91%) than their SME counterparts (58%).

Other than internal research team, companies also focus on its digital infrastructure, hire external agency, and paid data from other sources.

Among these 4 spending, large companies invest significantly more on digital infrastructure (25.2 billion), followed by external research agency (3.3 billion), internal research team (915.3 million), and other sources (80.6 million).

Amongst SMEs, different picture emerges. Micro and medium companies spend the most on digital infrastructure whereas small companies spend it on internal research team.

Effective decision-making is the primary objective of using a data integration for the executives.

Additionally, an integrated data is especially used by companies that have research team in order to analyze, interpret, and deliver data in meaningful ways.

Although data integration is perceived as important, it's not considered very effective in enabling collaboration within the company, especially for those that don't have a research team.

Ambitions of data-driven implementation

Most companies (71%) are planning to improve their data-driven implementation, mainly by applying a data-driven mindset, making an integrated/ consolidated data, and focusing on its internal development.

Digital technologies and market disruption

Overall, attitude towards digitalization is positive.

Of Industry 4.0 trends, executives consider collaborative to be the most disruptive effect, followed by IoT and fintech. However, they don't perceive these trends to be disruptive enough for their companies.

Most executives are already aware of Industry 4.0 facets. Although big data is commonly used, IoT is considered the most important to their company now.

Executives have very positive attitude towards Industry 4.0, mainly because it improves efficiency in marketing, operation, and production, as well as providing more responsive customer service.

On the other hand, the lack of data security is a worry among executives as they see data privacy and increasing digital fraud as the downsides of Industry 4.0 to their business.

In addition, SMEs think Industry 4.0 would increase competition in the market which has a negative effect for them.

Ambitions of digital disruption readiness

Most companies (71%) already have a plan to improve their digital disruption readiness.

They're aware of the shift towards digitalization and currently adopting digital technologies to improve their readiness concerning digital disruption.

Digital Disruption Readiness Index

LOADING . . .   50%

Key Findings   4D Matrix   Data-driven   Digital
                                     Implementation   Disruption
                                                        Readiness

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4D MATRIX

Digital Disruptive

4D

Digital Disruption

Data-driven

- Large companies
- SMEs

Laggard

Data-driven

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4D matrix's findings

1 Company size doesn't seem to influence data-driven implementation and digital disruption readiness. In other words, large companies don't necessarily implement data-driven decisions and aren't always responsive to current digital phenomena.

2 Roughly 1 in 3 companies scores well in both digital disruption and data-driven score. This indicates that these companies use data to a large degree in strategic decision-making, as well as use digital technologies heavily in operating their business.

3 More companies are data-driven ready than digital disruption ready. The implementation of data-driven decision-making takes a priority as they still face difficulty in combining data from many sources which results in slow bureaucracy.
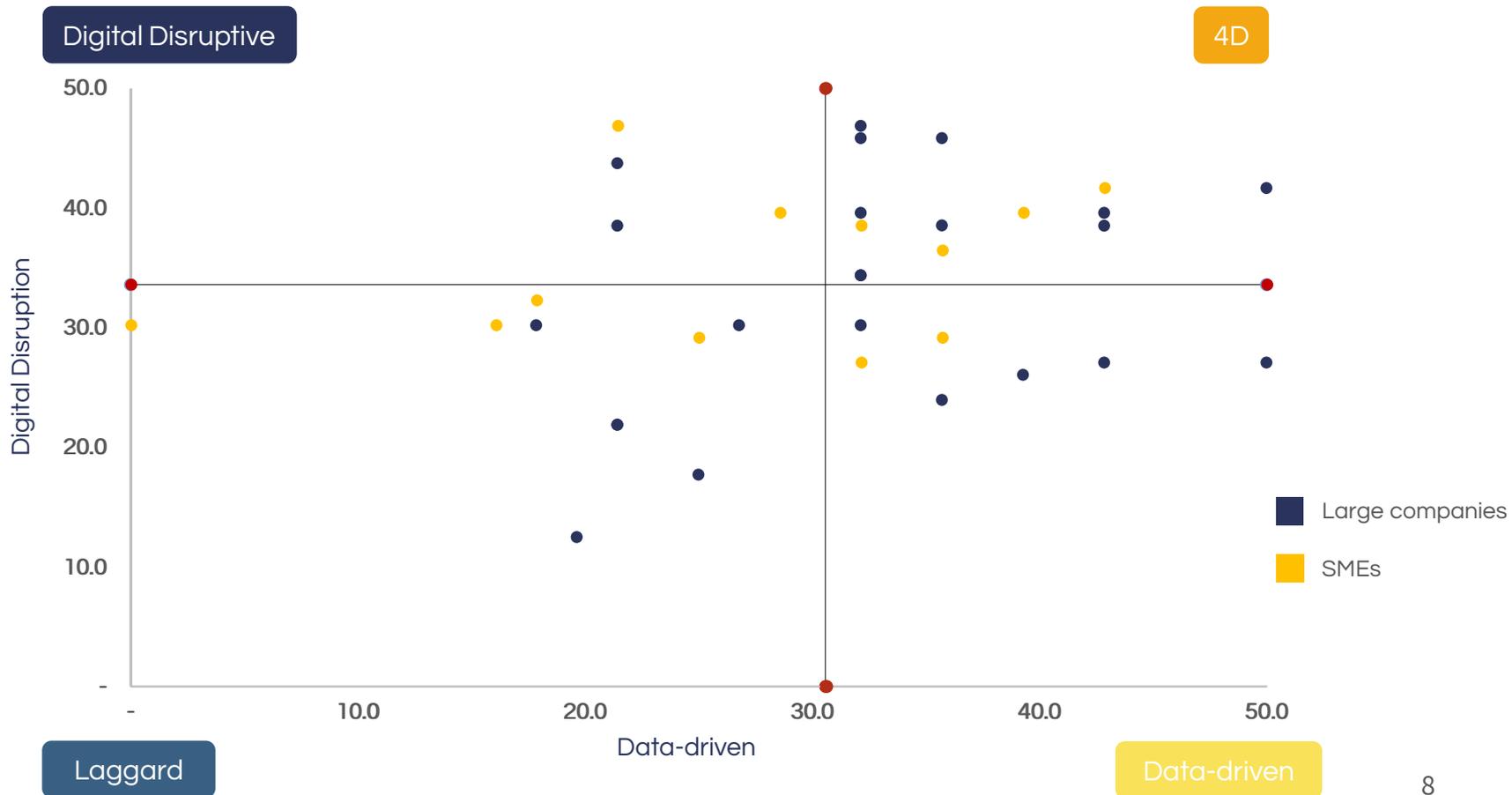
Digital Disruption Readiness Index

LOADING . . .   75%

Key Findings   4D Matrix   Data-driven   Digital
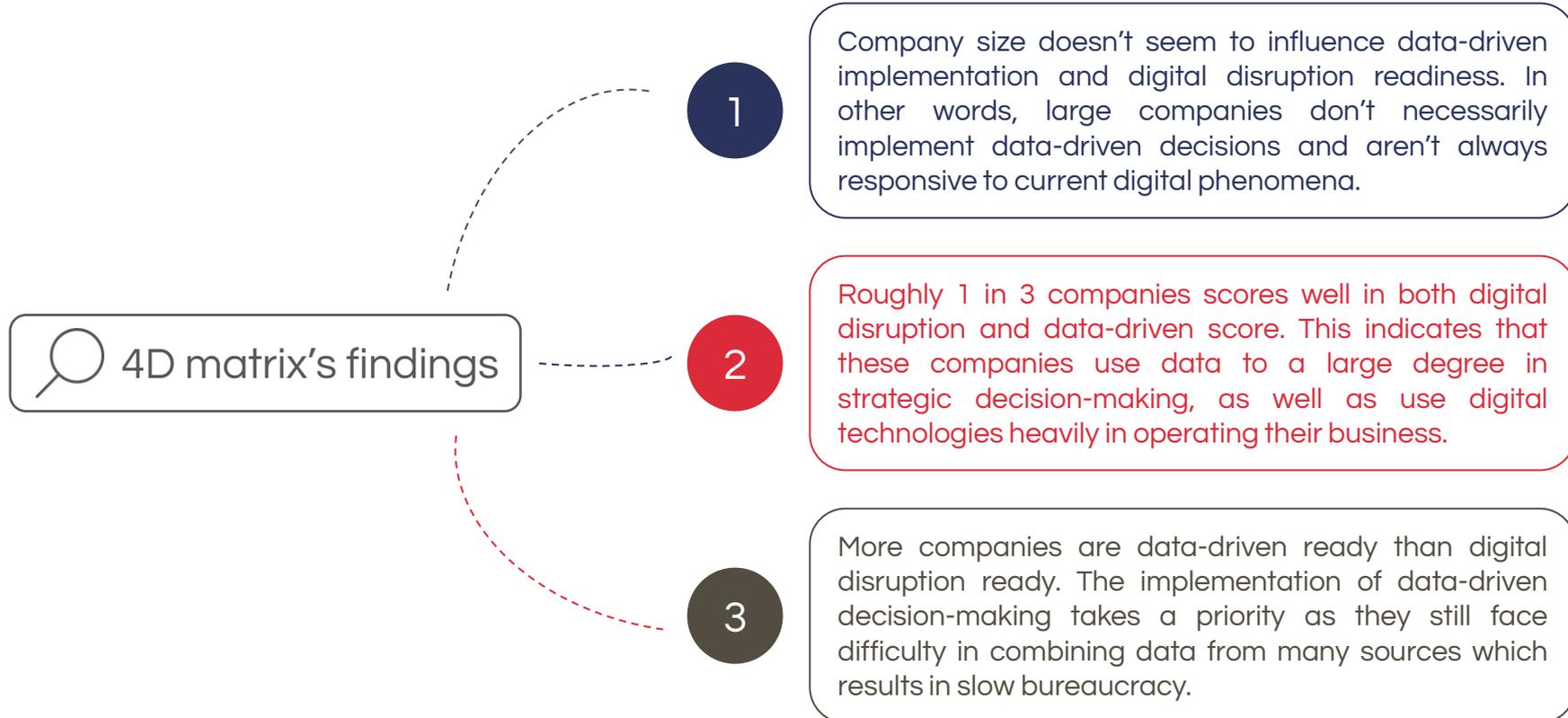   Implementation   Disruption
                                                               Readiness
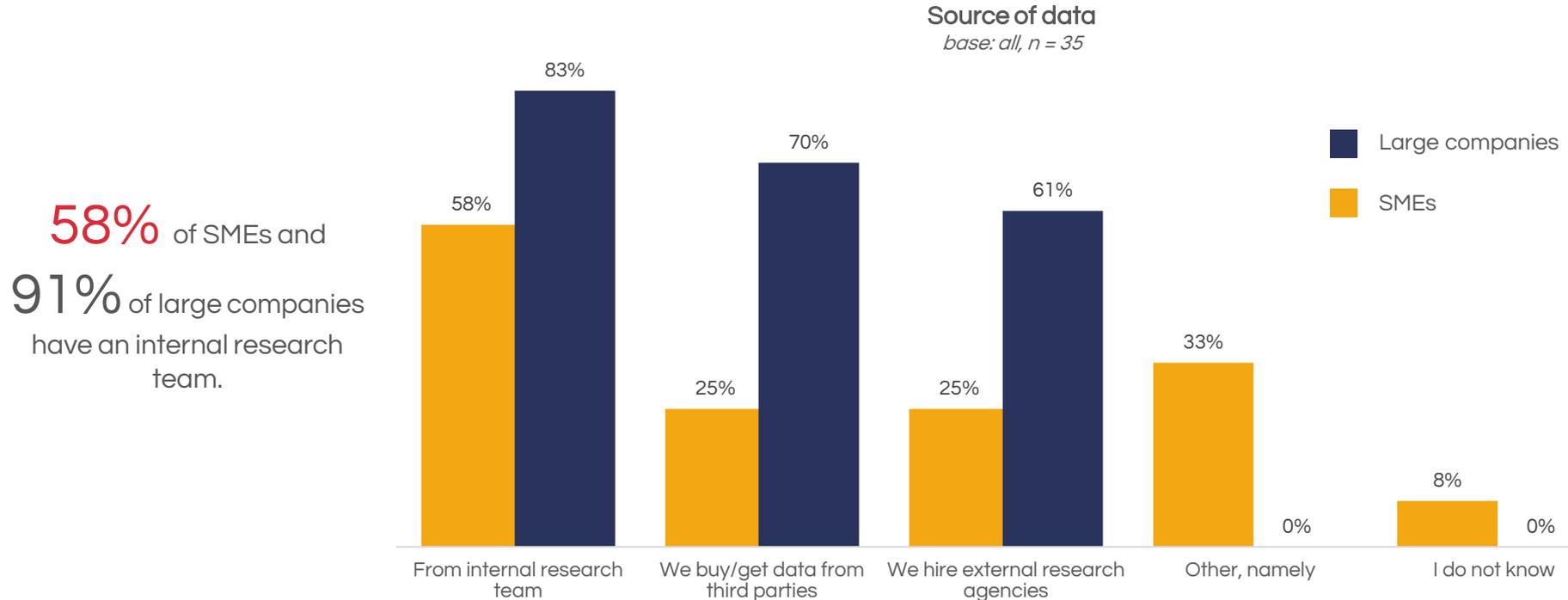
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DATA & DECISION-MAKING PROCESS

In general, 80% of companies have their own research team which also acts as their most important source of data. Unlike SMEs, large companies don't rely solely on internal research to get data. In addition, companies that scores low in both digital disruption and data-driven usually don't have a research team.

58% of SMEs and

91% of large companies have an internal research team.

Source of data
base: all, n = 35

Legend:
- ■ Large companies
- ■ SMEs

Category	SMEs	Large companies
From internal research team	58%	83%
We buy/get data from third parties	25%	70%
We hire external research agencies	25%	61%
Other, namely	33%	0%
I do not know	8%	0%

DATA & DECISION-MAKING PROCESS (2)

Market analysis, customer satisfaction, and customer behavior research are companies' most used primary data. Meanwhile, government reports, news articles, and other reports are the most used secondary data sources.
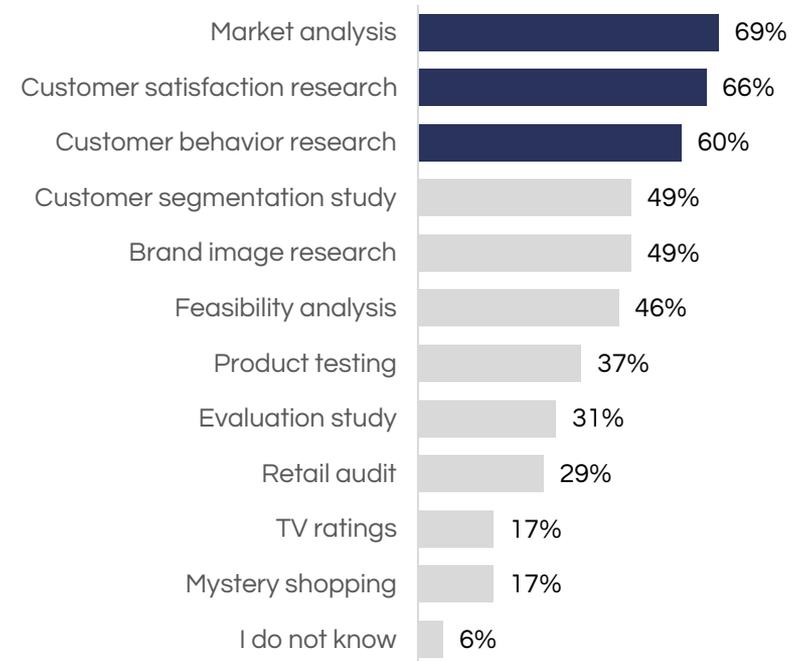
Secondary data
base: all, n = 35

Government report	82%
Newspaper articles	71%
Other company reports	68%
Journal articles	62%
White papers	44%

Primary data
base: all, n = 35

Market analysis	69%
Customer satisfaction research	66%
Customer behavior research	60%
Customer segmentation study	49%
Brand image research	49%
Feasibility analysis	46%
Product testing	37%
Evaluation study	31%
Retail audit	29%
TV ratings	17%
Mystery shopping	17%
I do not know	6%
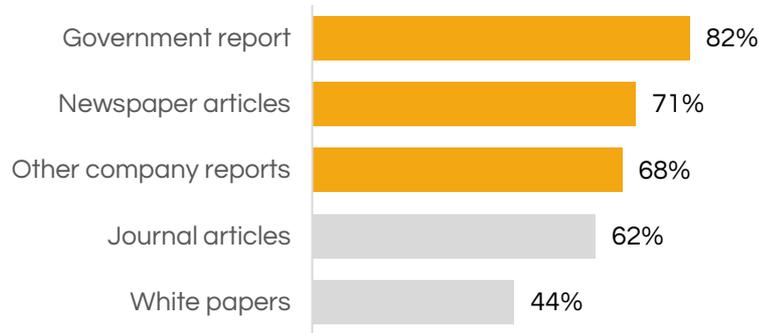
For decision-making process, **60%** already use data to a great extent, both for individual and organizational decision-making process.

Q3. Which of the following primary data do you or colleagues use in your organization regularly?
Q4. Which of the following secondary data do you or colleagues use in your organization regularly?
Q10. To what extent do you use data in decision-making process?
Q11.To what extent does your organization use data in decision-making process?

DATA & DECISION-MAKING PROCESS (3)

Among these 4 spendings, companies spend the most on digital infrastructure by a considerable margin. On closers inspections, Large companies' spending dwarfs that of their SME counterparts, especially for digital infrastructure and external research agency.

Internal research team

On average:
Rp621.8 mio

Micro companies: Rp13.3 mio
Small companies: Rp42.5 mio
Medium companies: Rp51.5 mio
Large companies: Rp915.3 mio

External research agency

On average:
Rp2.3 bio

Micro companies: Rp3.3 mio
Small companies: Rp33.3 mio
Medium companies: Rp52.5 mio
Large companies: Rp3.3 bio

Digital infrastructure

On average:
Rp18.9 bio

Micro companies: Rp20.3 mio
Small companies: -
Medium companies: Rp101.5 mio
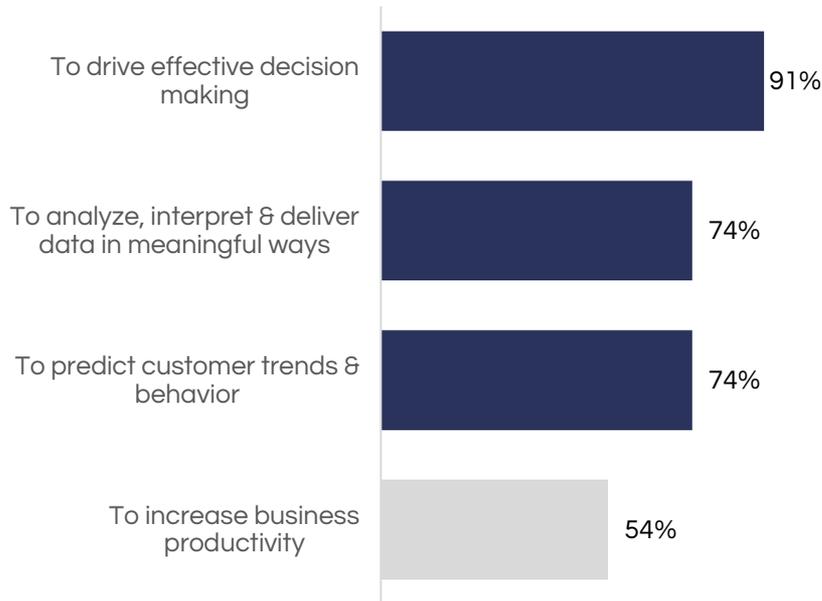Large companies: Rp25.2 bio

Other sources

On average:
Rp62.2 mio

Micro companies: -
Small companies: -
Medium companies: Rp52.5 mio
Large companies: Rp80.6 mio

Q5. How much does your organization spend yearly on…?

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DATA & DECISION-MAKING PROCESS (4)

In general, data integration is as perceived important, especially to drive effective decision-making. However, data integration in most companies is still on moderate level. Only one third sees the opportunity of data integration in enabling collaboration within the company, while the other two third think other aspects are more important than data integration.

Objectives of using a data integration
base: all, n = 35

Objective	%
To drive effective decision making	91%
To analyze, interpret & deliver data in meaningful ways	74%
To predict customer trends & behavior	74%
To increase business productivity	54%

Data integration situation in the company
base: all, n = 35

Statement	Moderately	Very well
Our digital security is state-of-the-art	57%	20%
Our analytics solutions are up-to-date	54%	14%
All our data is unified or in one database	54%	14%

■ Moderately ■ Very well
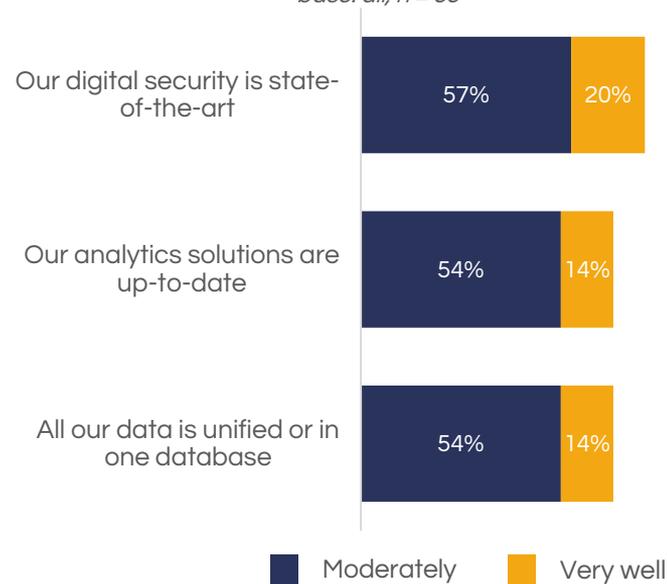
Only **37%** consider data integration enables collaboration within the company

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Microsoft Excel is still by far the most popular analytical tool. Other popular tools are SAP and Power BI for Large companies, and SPSS and Python for SMEs. An expensive tool like SAP is hardly used by SMEs, but neither is the more affordable one like Power BI.

Analytics tools
base: all, n = 35

Legend:
- Total
- Large companies
- SMEs

Tool	Total	Large companies	SMEs
Microsoft Excel	89%	83%	100%
SPSS	37%	35%	42%
SAP	37%	52%	8%
Power BI	37%	52%	8%
Python	26%	26%	25%
R	14%	17%	8%
I do not know	6%	9%	0%

Q8. What analytics tools does your organization use to process data?
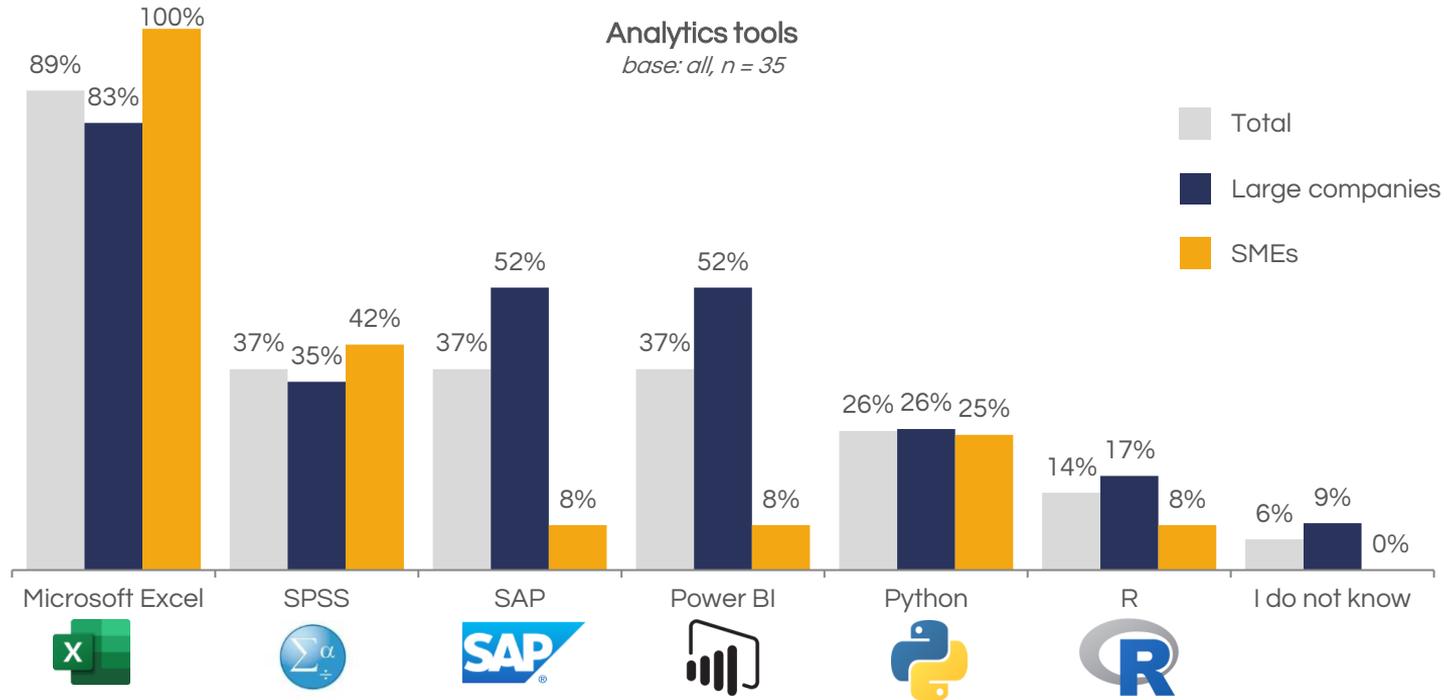
DATA-DRIVEN AMBITIONS (2)

Difficulties in combining data from different sources is the top problem for companies in decision-making process. One fourth of SMEs' executives consider their company not to have problems regarding effective decision-making.

Problems in decision-making process
base: all, n = 35

Legend:
- Total
- Large companies
- SMEs

	Total	Large companies	SMEs
Difficulties in combining data from different sources	63%	70%	50%
Decision-making is subject to human biases	34%	40%	25%
Dependence on large amounts of personalized data	31%	35%	25%
Slow bureaucracy	25%	30%	17%
None	13%	5%	25%

Q13. In your opinion, what are the main problems in your organization in terms of effectiveness in decision-making?
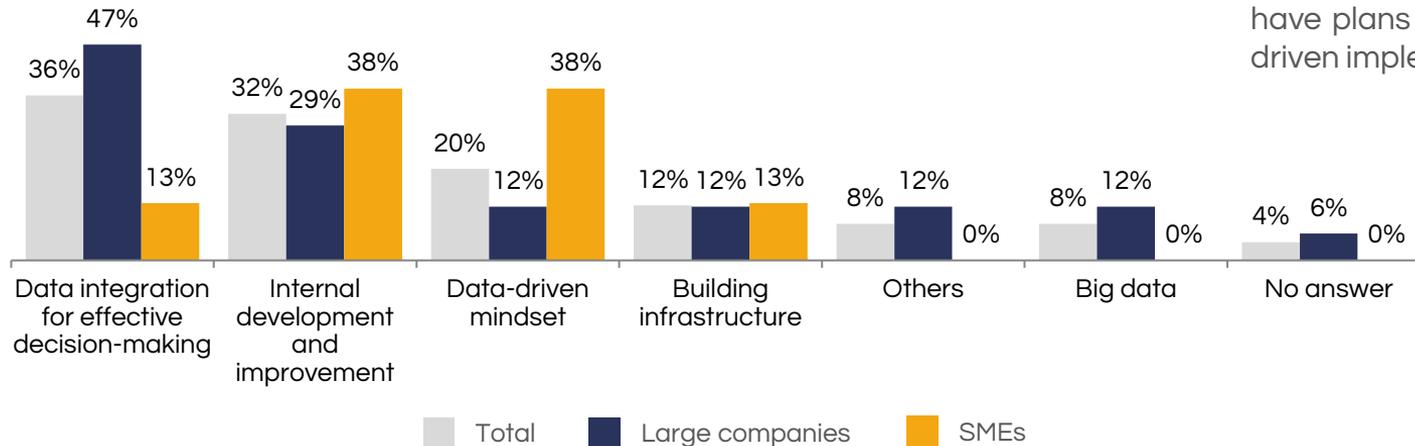
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DATA-DRIVEN AMBITIONS

Almost three out of four of companies already have a plan to improve their data-driven implementation. All companies that score high in 4D have plan for their company, while companies that score low in both are relatively don't have one. Their plan mainly focusses on data-driven decision-making (36%), internal development (32%), and data-driven mindset (20%).

Companies' plan to improve data-driven implementation
base: improve data-driven implementation, n = 25

71% companies already have plans to improve their data-driven implementation.

Legend: Total — Large companies — SMEs

	Total	Large companies	SMEs
Data integration for effective decision-making	36%	47%	13%
Internal development and improvement	32%	29%	38%
Data-driven mindset	20%	12%	38%
Building infrastructure	12%	12%	13%
Others	8%	12%	0%
Big data	8%	12%	0%
No answer	4%	6%	0%

Digital Disruption Readiness Index

COMPLETE   100%

Key Findings   4D Matrix   Data-driven   Digital
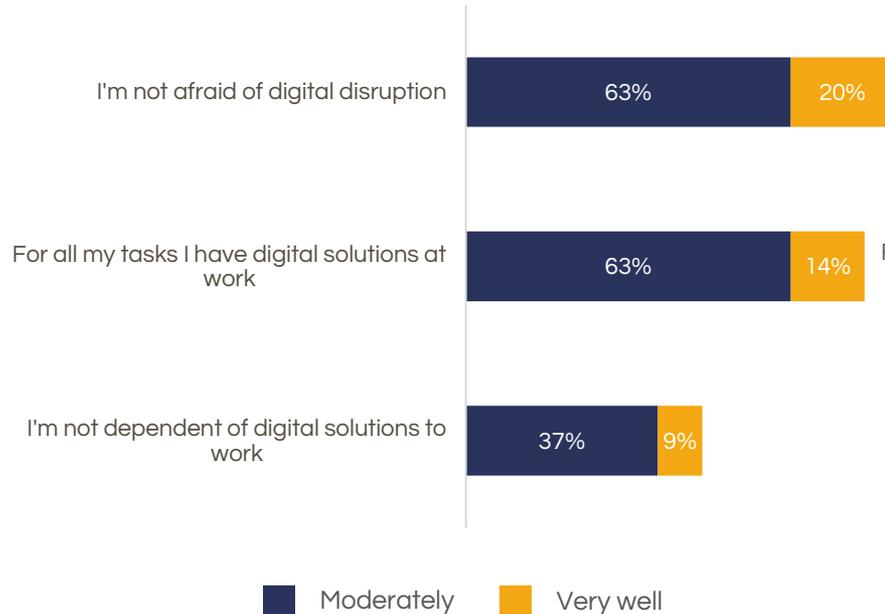   Implementation   Disruption
                                                              Readiness

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DIGITAL TECHNOLOGIES & MARKET DISRUPTION

Most executives and companies don't have any difficulties in using and accessing digital technologies. Companies that score high in digital disruption consider themselves not dependent on digital solutions at work and only slightly afraid of digital disruption.

Personal adoption of digital technologies
base: all, n = 35

	Moderately	Very well
I'm not afraid of digital disruption	63%	20%
For all my tasks I have digital solutions at work	63%	14%
I'm not dependent of digital solutions to work	37%	9%

■ Moderately   ■ Very well

Organization's adoption of digital technologies
base: all, n = 35

	Moderately	Very well
I'm not afraid of digital disruption	57%	17%
For all my tasks I have digital solutions at work	63%	14%
I'm not dependent of digital solutions to work	40%	6%

■ Moderately   ■ Very well
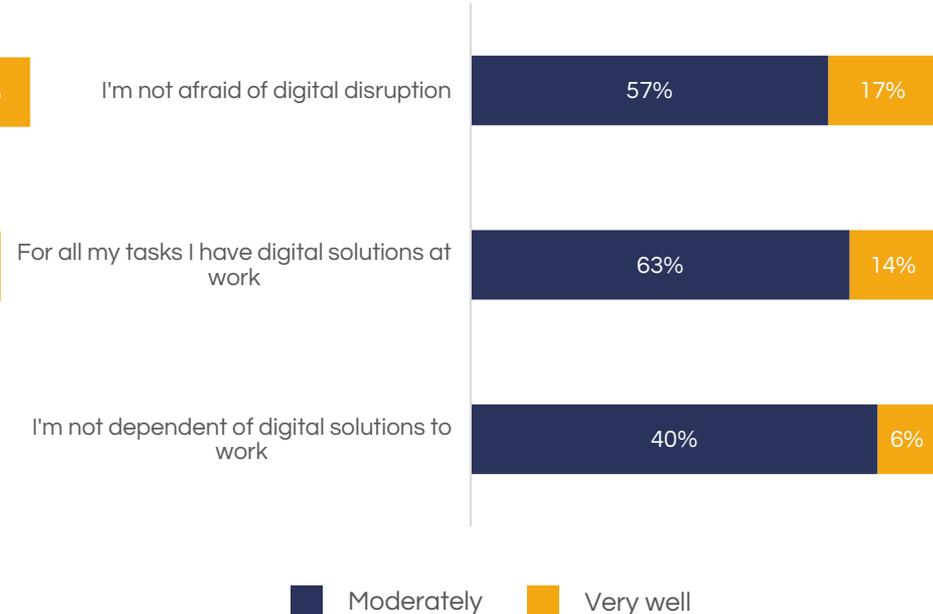
Q15. To what extent do the following statements describe you?
Q16. To what extent do the following statements describe your organization?

DIGITAL TECHNOLOGIES & MARKET DISRUPTION (2)
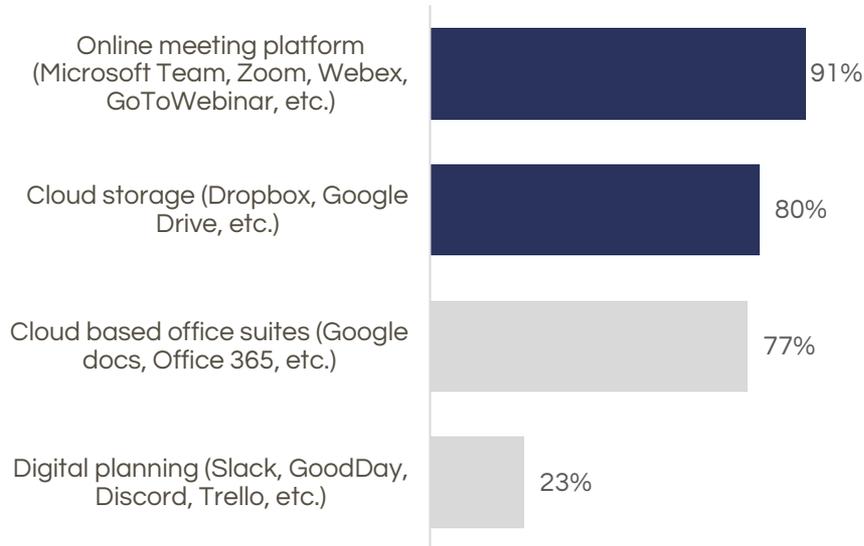
Given Covid19 outbreak, unsurprisingly, online meeting platform is the most used digital solution tools for companies. While for digital visualization tools, Microsoft Excel (94%) is still far ahead with Power BI (40%) and other tools.

Used digital solution tools
base: all, n = 35

Tool	Percentage
Online meeting platform (Microsoft Team, Zoom, Webex, GoToWebinar, etc.)	91%
Cloud storage (Dropbox, Google Drive, etc.)	80%
Cloud based office suites (Google docs, Office 365, etc.)	77%
Digital planning (Slack, GoodDay, Discord, Trello, etc.)	23%

Used digital visualization tools
base: all, n = 35

Tool	Percentage
Microsoft Excel	94%
Power BI	40%
Tableau	29%
Qlikview	14%
Matplotlib	3%
None	3%
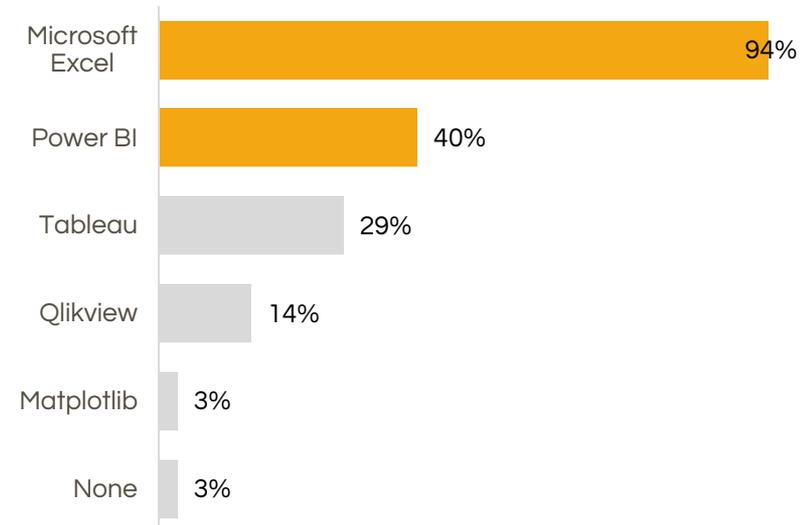
Q17. Which of the following tools does your organization use?
Q18. What data visualization tools does your organization use?

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DIGITAL TECHNOLOGIES & MARKET DISRUPTION (3)

Although collaborative economy and IoT are generally perceived to have the most impact, they're still hardly seen to have a big impact to indu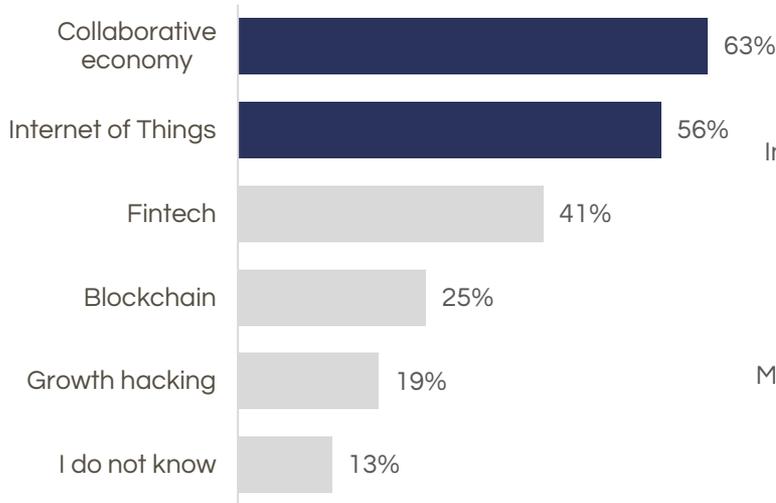stry. These trends disrupt the industry in multiple ways, particularly in creating a more digitalized lifestyle and to a lesser degree improving productivity and business process.

Trends affecting each industry
base: all, n = 35

Trend	%
Collaborative economy	63%
Internet of Things	56%
Fintech	41%
Blockchain	25%
Growth hacking	19%
I do not know	13%

Why it has been disruptive
base: digital phenomena affecting industry, n = 28

Reason	%
Change of ways (digitalization, lifestyle)	39%
Increasing productivity and business process	18%
Increasing competitors	14%
More platform/ channel for consumer	7%
Others	21%
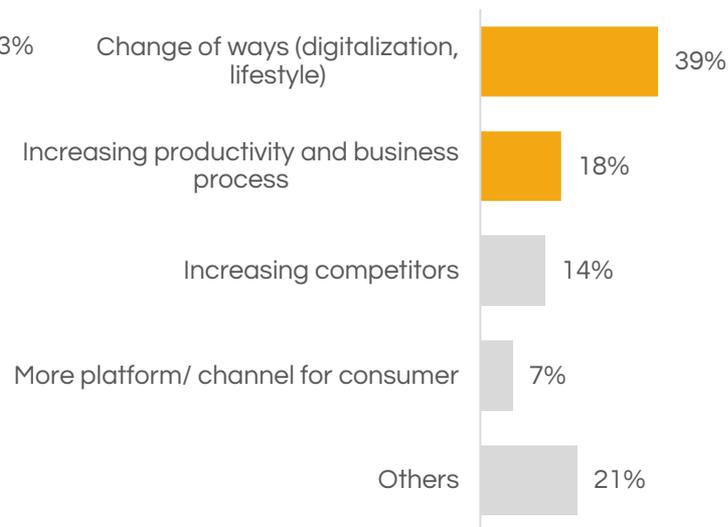
Only **19%** of companies consider these phenomena really disrupting their industry.

Q19a. In your opinion, which of the following trends have a disruptive effect on your industry?
Q19b. Can you describe in your own words why this has been disruptive to your industry?
Q19c. To what extent do you feel the disruptive effects on your industry?

DIGITAL TECHNOLOGIES & MARKET DISRUPTION (4)

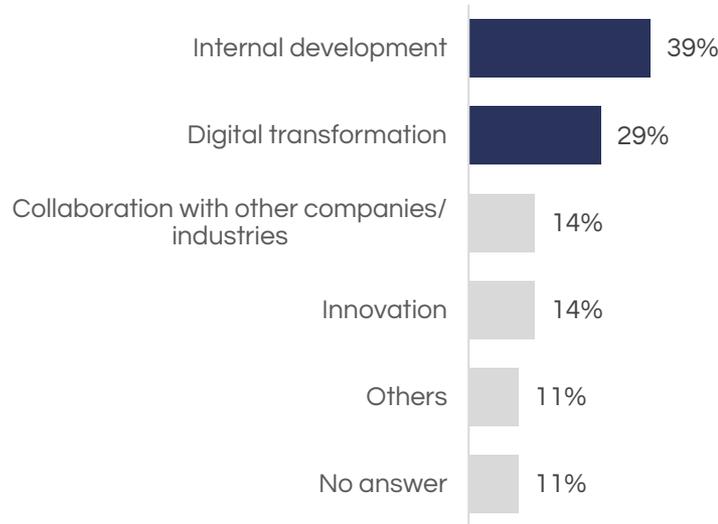In general, executives are confident that their company is not lagging behind other companies in terms of digital technologies. To face the challenges, executives plan to focus on internal development and improve digital transformation within the company.

Companies' plans to keep up with the competition
base: compare to other company, n = 28

Plan	Percentage
Internal development	39%
Digital transformation	29%
Collaboration with other companies/ industries	14%
Innovation	14%
Others	11%
No answer	11%

Most executives are confident with their company when compared to main competitors within the industry.
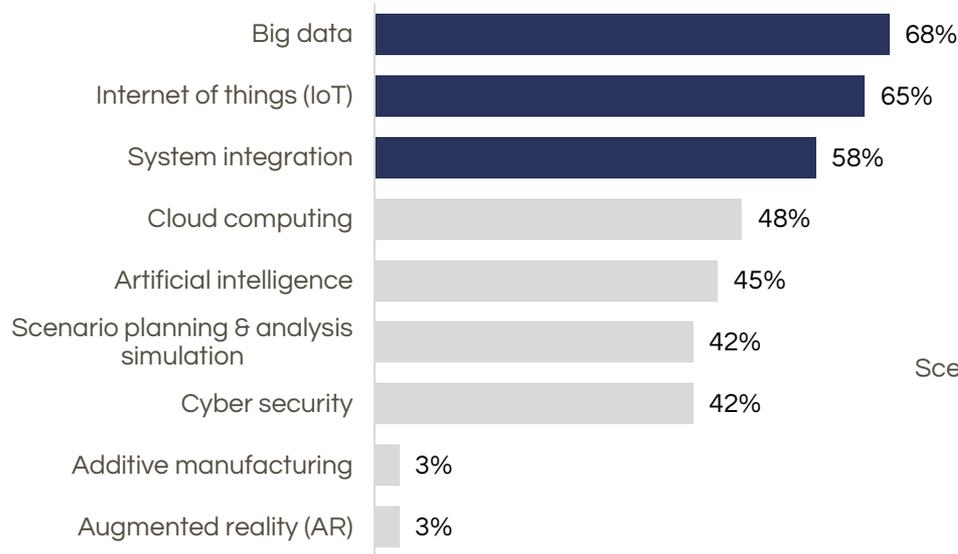
85% consider their company (moderately) good, and

7% are very confident with their company compared to their main competitors.

Q21 How would your organization compare to these top three?
Q22. Can you describe in your own words how does your organization plan to keep up with the competition?

DIGITAL TECHNOLOGIES & MARKET DISRUPTION (5)

Not only the most used, Big data and IoT are also considered the most important facets of Industry 4.0 for both SMEs and Large companies. Companies that score high in data-driven tend to have higher usage of big data, system integration, and internet of things.

Industry 4.0 facets used in the company
base: all, n = 35

Facet	%
Big data	68%
Internet of things (IoT)	65%
System integration	58%
Cloud computing	48%
Artificial intelligence	45%
Scenario planning & analysis simulation	42%
Cyber security	42%
Additive manufacturing	3%
Augmented reality (AR)	3%

Most important Industry 4.0 facets
base: all, n = 35

Facet	%
Internet of things (IoT)	37%
Big data	34%
System integration	11%
Artificial intelligence	9%
Scenario planning & analysis simulation	3%
I do not know	6%

Q23a. Which of the following Industry 4.0 facets does your organization use in running its business?
Q23b. What Industry 4.0 aspect is the most important to your business now?
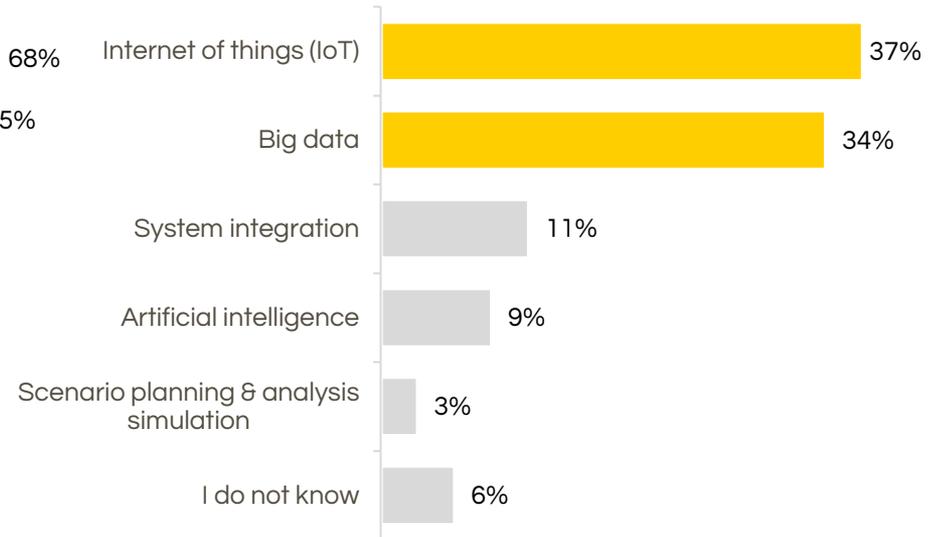
More than 70% of executives perceive efficient cost and responsive customer service as the main benefits of Industry 4.0. Meanwhile, the downside of Industry 4.0 are dominated with issue of data privacy concerns (64%) and increasing digital fraud (45%).

Benefits of Industry 4.0
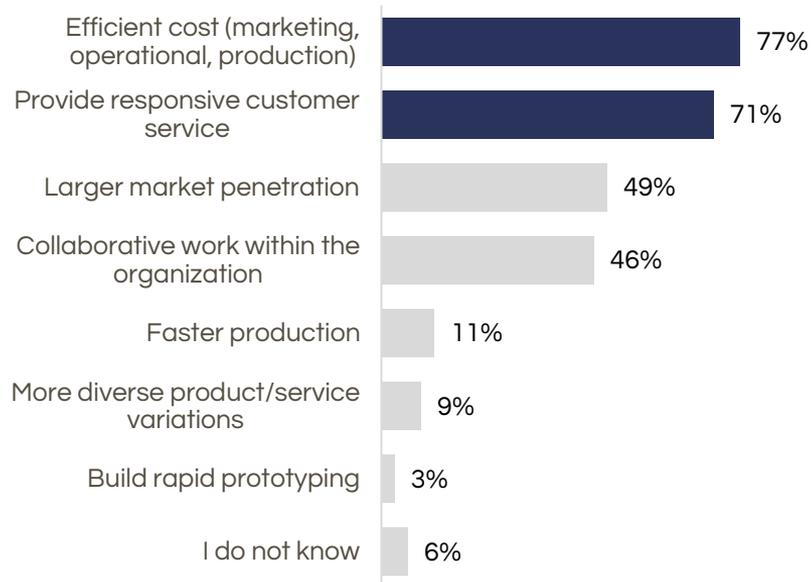*base: all, n = 35*

Category	Value
Efficient cost (marketing, operational, production)	77%
Provide responsive customer service	71%
Larger market penetration	49%
Collaborative work within the organization	46%
Faster production	11%
More diverse product/service variations	9%
Build rapid prototyping	3%
I do not know	6%

Downsides of Industry 4.0
base: all, n = 35

Category	Value
Data privacy concerns	63%
Increasing digital fraud	46%
High and expensive technical standards	34%
More competitors in the market	34%
Increase of hoax and unverified information	31%
Losing job and replaced by machines	20%
No downside	9%
I do not know	3%

Q24. What are the benefits of Industry 4.0 for your business? (max. 3)
Q25. What are the downsides of Industry 4.0 for your business? (max. 3)

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DIGITAL TECHNOLOGIES & MARKET DISRUPTION (7)
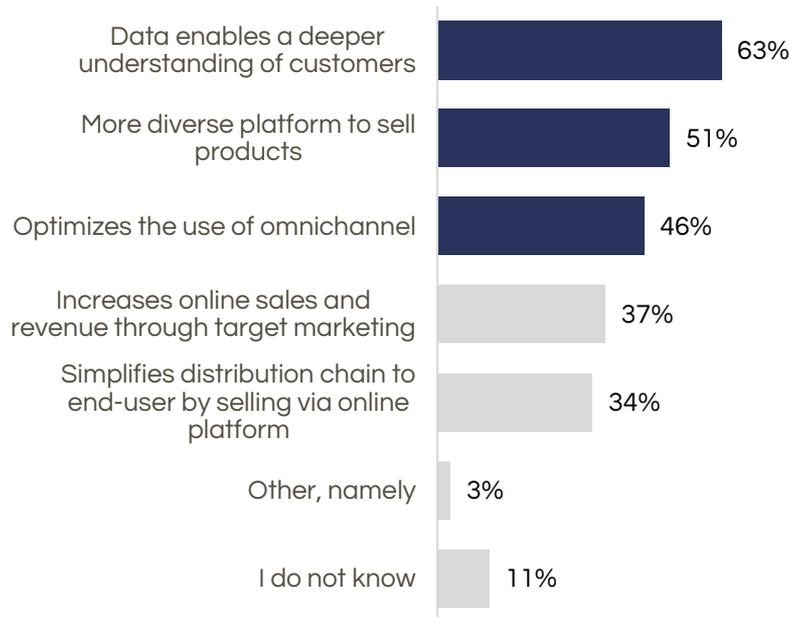
The impact of industry 4.0 to company's marketing strategy is big as it enables a deeper understanding of customers (63%). Especially now that customers spend more time online than ever before (74%).
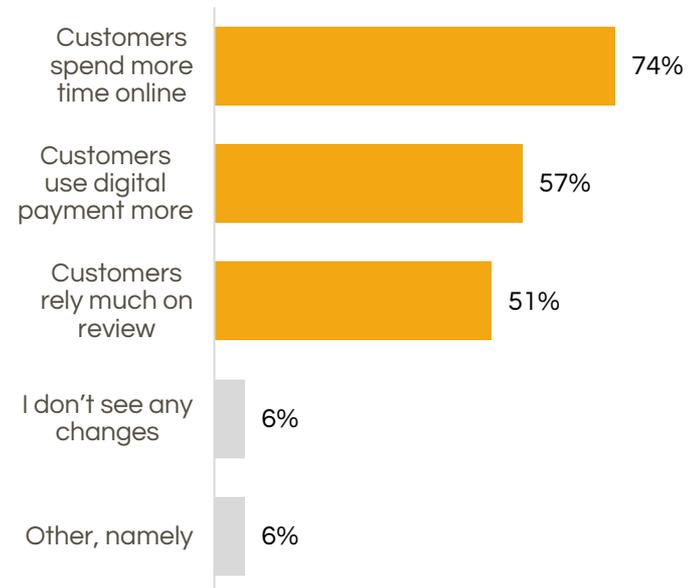
Impact of Industry 4.0 to marketing strategy
base: all, n = 35

Data enables a deeper understanding of customers	63%
More diverse platform to sell products	51%
Optimizes the use of omnichannel	46%
Increases online sales and revenue through target marketing	37%
Simplifies distribution chain to end-user by selling via online platform	34%
Other, namely	3%
I do not know	11%

Shifting of customer behavior
base: all, n = 35

Customers spend more time online	74%
Customers use digital payment more	57%
Customers rely much on review	51%
I don't see any changes	6%
Other, namely	6%

Q26. Which of the following statements describe the impact of Industry 4.0 to your marketing strategy?
Q27. What changes have you seen in the behavior of your customers as a result of digital disruption?

DIGITAL DISRUPTION AMBITIONS

Most companies already have a plan to improve their digital disruption readiness, especially companies that have high score in digital disruption. Digital transformation and technology adaptation, as well as learning and keeping up, are companies' main plans to improve digital disruption readiness.

71% companies already have plans to improve their data-driven implementation.

Companies' plan to improve digital disruption readiness
base: plan to improve digital disruption, n = 25

Category	%
Digital transformation & technology adoptation	44%
Learning & keeping up (innovating, adapting, improving, etc.)	40%
Collaboration within and/or with other company	12%
Others	8%
No answer	4%