



# DIGITAL ECONOMY SURVEY REPORT

2022



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# EXECUTIVE SUMMARY

The COVID-19 pandemic has accelerated the process of digital transformation and added urgency for governments and businesses to respond. A key challenge is how to govern and harness the surge in digital data for the global good.

This inquiry conducted by the European Chamber of Commerce (Singapore) surveyed respondents from locally-operational European organisations and other EuroCham member organisations with activities in the digital sector. The survey sought to assess the initiatives, strategies and opinions to gain a better understanding of the perceptions of digitalisation in the respondents' businesses.

The report highlights the organisations' recognition of digital trends in Singapore, and exposes some of the key challenges that they encounter while operating. Opportunities are also clearly identified in this report.

The intention of this survey is to raise awareness in the digitalisation of businesses to advocate for a Digital Economy Agreement (DEA) between the EU and the Singapore government, while keeping in mind consumer trends.

An added concern is the increased need to fill the digital talent gap along with the awareness that many sustainability goals may only be met through innovations. However, organisations are experiencing difficulties as there is still room for further support through regulations which aid an organisation's process of digital transformation.

When it comes to digital transformation in Singapore, almost all respondents indicated a need for more government regulatory cohesive ecosystem to create clarity in the new digital business world.

# INTRODUCTION

The COVID-19 pandemic has accelerated the process of digital transformation and added urgency for governments and businesses to respond. A key challenge is how to govern and harness the surge in digital data for the global good.

The European Chamber of Commerce in Singapore has embraced the programme "Digital Economy" for the year 2022 and highlights the multidimensional aspect of data, and how the use of IoT has implications not just for trade and economic development, but also for human rights, peace and security. It also has an angle on how frontier technologies such as IoT, big data, robotic automation and artificial intelligence (AI) can empower digital transformation. Furthermore, it also explores how the handling of data may greatly affect our ability to achieve the United Nation's Sustainable Development Goals (SDGs).

Digitalisation has and will continue to transform business models and trade. This has opened up unparalleled opportunities and choices for businesses and consumers. In December 2021, the EU and Singapore agreed to strengthen bilateral partnership on digital trade with a view to advance towards a comprehensive EU-Singapore digital partnership. The members of the EuroCham Digital Economy Committee are mindful of the importance of identifying the relevant digital trade elements for such an agreement.

The programme comprises a series of activities covering four main areas of focus:

- Data-Driven economy, including Big data, AI, Industry 4.0 and Data Governance
- Hyper-connectivity via enabling internet of things (IoT), and cloud and IoT security
- Digital talent gap, bridging the digital skills gap in the ASEAN region
- Digital for sustainability and the use of technology in everyday business and applications to improve the environment

In conducting this survey, EuroCham has the ambition of highlighting the perceptions regarding the digital economy of Singapore - its areas of excellence and weakness, the initiatives in place and their challenges, and opportunities for growth.

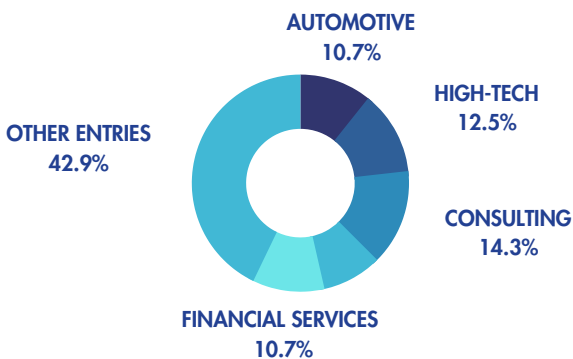
All respondents have our deep appreciation and gratitude for their valuable contributions and inputs in this survey. We cannot neglect to mention the openness and transparency of the respondents of this survey, made up of 56 highly relevant respondents who have shared their views with us and identified potential challenges for the future.

Alongside this initiative, EuroCham is also the organiser of a series of sharing sessions - known as the "Best Practice Sharing Sessions". This is another opportunity for our members to highlight their digital economy practices and to start a dialogue between private entities, non-profits, government, and academia. Only by involving all existing actors we are able to tackle the enormous challenge that we face.

# RESPONDENT DEMOGRAPHICS

## INDUSTRY BREAKDOWN

56 respondents from various organisations responded to the survey indicating their awareness of the digital transformation occurring in their company.

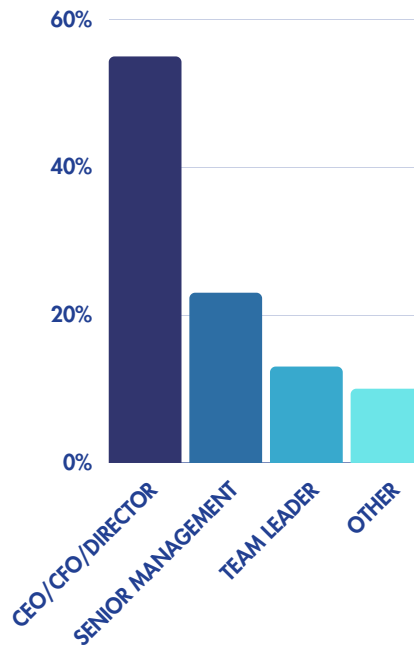


As shown, 14% of the respondents are specialised in consulting, 13% in high tech industry and approximately 30% are specialised in other industries. However, 34% of the responses can be categorised under "other entries", which shows at first glance that digitalisation runs through all sectors and cannot be attributed to a single industry.

Moreover, the ratio of respondents from various sizes of companies was fairly well-distributed. This provides a meaningful cross-section presence of digitisation in all kinds of organisations.

## POSITION IN THE COMPANY

A large proportion of the respondents are in management positions. For example, 55% are CEO/CFO or directors and 23% are in senior management. As a result, the survey is based on perspectives that understand the companies in an all-encompassing way and evaluate digitalisation from a higher position.



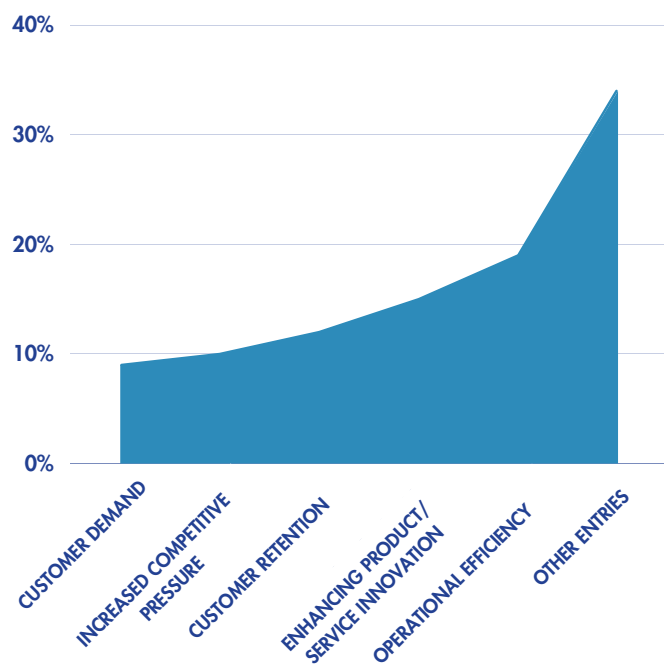
Additionally, it is very interesting to see that team leaders are well presented among the respondents. They usually have insights in new digitalised solutions for a more efficient team management, monitoring and execution of the final team task. The category "other" includes various positions of executive staff, HR personnel, marketing managers etc. Once again it is shown that digitalisation involves all areas of daily business.

# DRIVERS OF DIGITALISATION

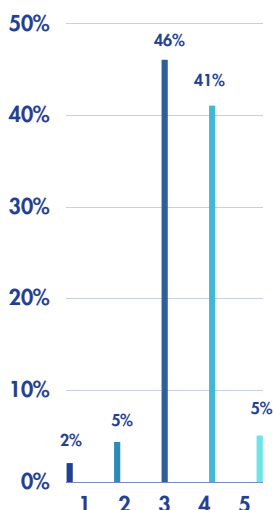
## What are the main drivers of digital transformation in your organisation?

The diagram opposite shows that consumer operational efficiency and enhanced product/service innovation are major drivers of digitisation. Though, in most businesses all areas are interwoven.

It explains why most of the answers (80 in total), can be found under "other entries".



## How would you best describe the digital maturity of your organisation?



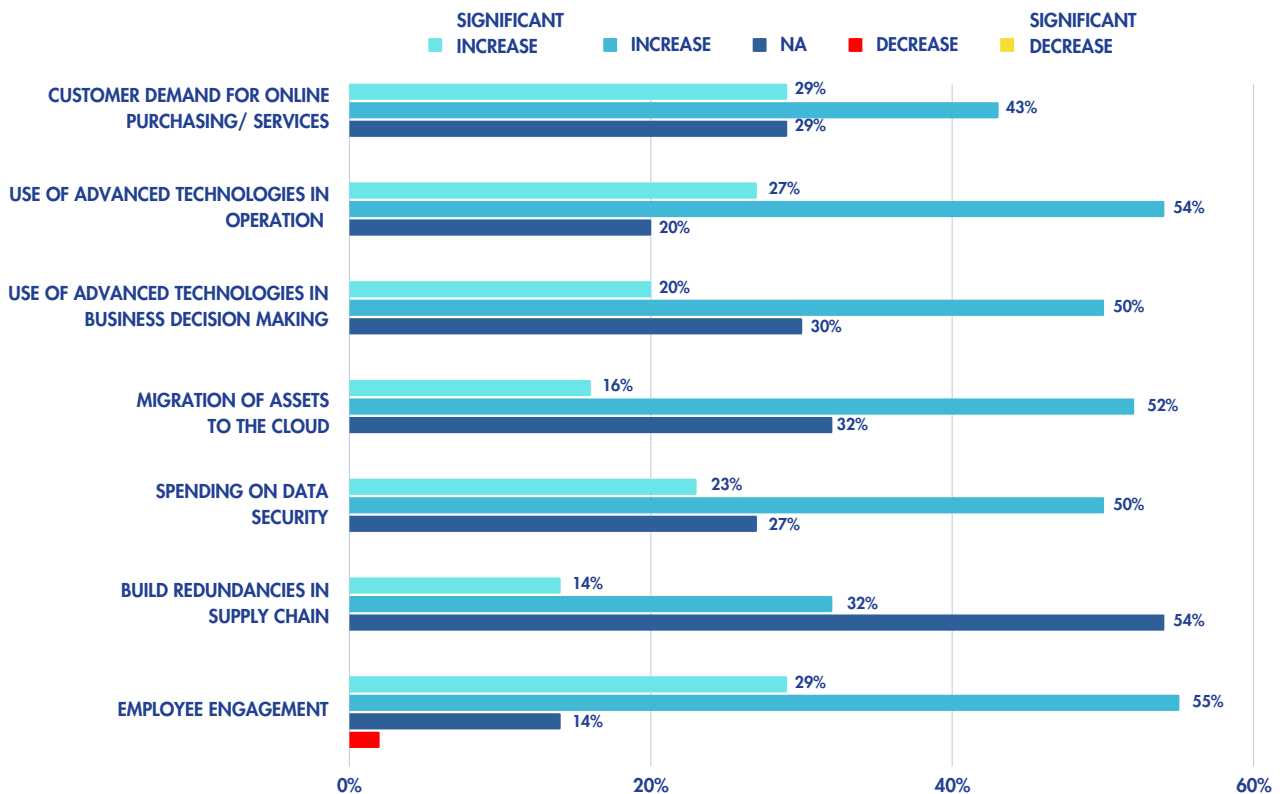
Since digitisation is not a state but a process, each organisation is at an individual stage. In order to illustrate this graphically and to understand how digitisation has already progressed, the respondents were asked to rank the progress of the described process between 1 and 5. 1 is the lowest level of digitisation and 5 the highest.

It becomes clear that the diagram resembles a normal distribution. The fewest companies are at the top or bottom end and most companies are in the middle of the path to digitalisation. About 85% are on the 3rd and 4th level. However, the majority of the respondents are of the opinion that the path to digitalisation is still a work of progress in their company.

# COVID-19 AS AN ACCELERATOR OF DIGITALISATION

## To what extent has the COVID-19 crisis accelerated the digital transformation in your organisation in each of the following categories?

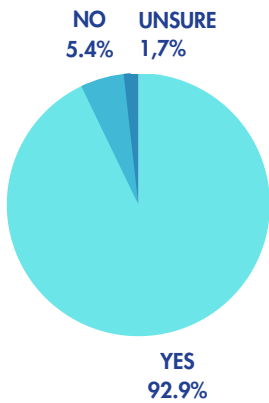
The diagram below visualise the impact of the pandemic on the digital transformation in different business fields. For each field no significant decrease was recorded. A significant/increase was indicated by the majority of the respondents in fields like use of advanced technologies in operation, mitigation of assets to the cloud and employee engagement.



The only category that shows an exceptional development is "build redundancies in supply chain". More than 50% of respondents think that this categorie did not change due to the pandemic.

# COVID-19 AS AN ACCELERATOR OF DIGITALISATION

## Do you think that these digital shifts will remain after the pandemic ends? (part I)

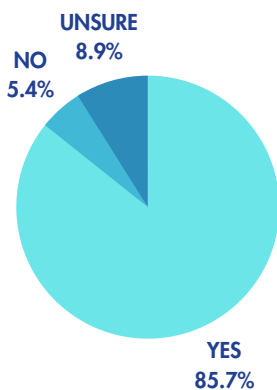
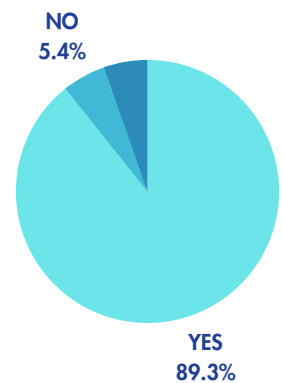


### CUSTOMER DEMAND FOR ONLINE PURCHASING/SERVICE

Due to the pandemic, online trade increased exorbitantly, as a large part of the population had to be in quarantine and many shops had to remain closed. This development was of course partly very convenient, as the product was delivered to the doorstep. 93% of respondents believe that this trend will not go back.

### USE OF ADVANCED TECHNOLOGIES IN OPERATIONS

The pandemic has changed most of the businesses's digital transformation. According to the survey, 89% believe that the use of advanced technologies in operations will remain post-pandemic.

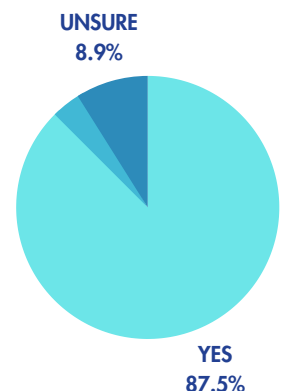


### USE OF ADVANCED TECHNOLOGIES IN BUSINESS DECISION MAKING

Digital transformation means many businesses now have enough data for advanced analytics to inform smarter, more efficient decision making. Accordingly, 85.7% of the respondents assume that the use of technology in business decision making will stick post-pandemic.

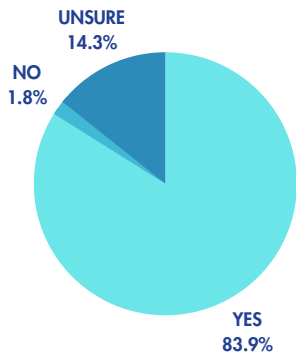
### MIGRATION OF ASSETS TO THE CLOUD

Cloud adoption was already expanding for several years and has been accelerated by the pandemic. But as a post-pandemic world begins to take shape, could new trends in cloud usage beginning to take shape? 87.5% of the responses in the survey agreed that migration of assets to the cloud will endure after the Covid-19 crisis.



# COVID-19 AS AN ACCELERATOR OF DIGITALISATION

## Do you think that these digital shifts will remain after the pandemic ends? (part II)

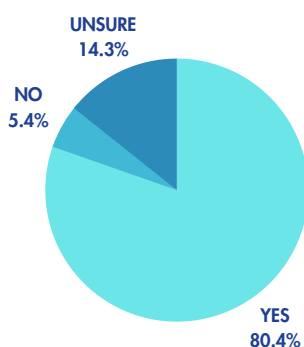
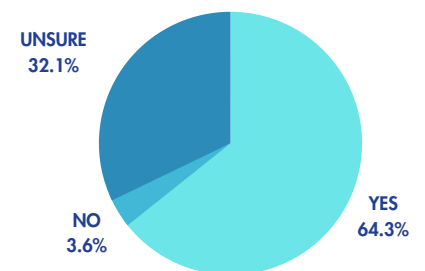


### SPENDING ON DATA SECURITY

The amount of data generated is growing exponentially and it is becoming more and more fundamental to business processes. But it also means that data is becoming more and more precious and should be protected like a secret recipe. In the survey 83.9% of the respondents think that after the pandemic the spending on data security will remain high.

### BUILD REDUNDANCIES IN SUPPLY CHAIN

The survey showed that the majority of the respondents do not expect an increase in 'building redundancies in the supply chain' due to digital transformation. At the same time, the respondents are convinced that 'building redundancies in the supply chain' will be maintained after the pandemic crisis.



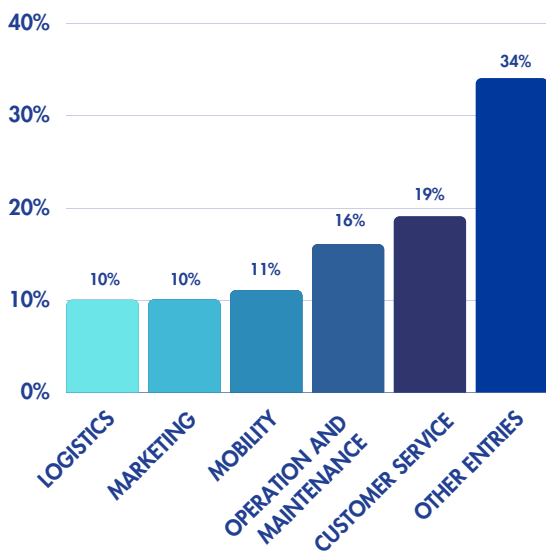
### EMPLOYEE ENGAGEMENT

Also the 'employee engagement' will stick post-pandemic according to 80.4% of all respondents. However, it must be mentioned that about 20% are either uncertain about the potential continuation of this development or are of the opposite opinion of the majority.

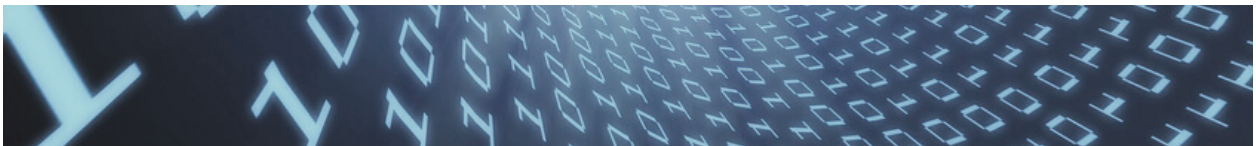


# DIGITAL TRANSFORMATION IN BUSINESSES

## Which business areas in your organisation are being impacted the most by the digital transformation initiatives?

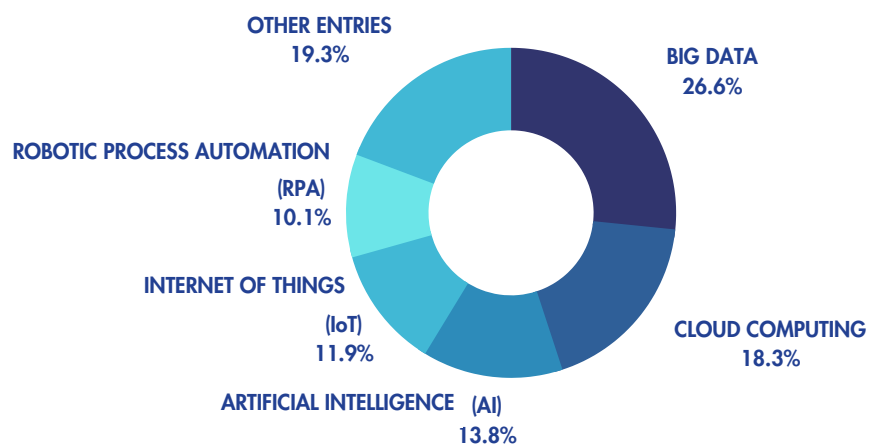


This diagram reveals the impact of digital transformation in different areas of the businesses. It shows once more that not only the classic, largest departments are affected, but also many uncategorised fields. Nevertheless, it should be noted that the departments that operate close to the customer have a greater impact. This is probably due to the fact that digitalisation (also through covid-19 crisis) has very much infected the population. This has suddenly increased the demand for digital external processes.



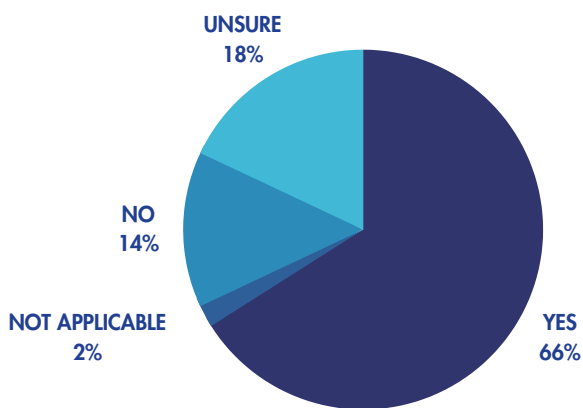
## Which advanced technologies has had/are having a significant impact on your business?

The technologies that have most influenced the organisations is 'big data'. 26.6% of the respondents indicated 'big data' as most impactful, followed by 'cloud computing'. 'Robotic process automation' however, resulted as least impactful.



# DIGITAL TRANSFORMATION AND SUSTAINABILITY

## Are the digital transformation initiatives linked to your organisation's sustainability goals?



The survey also was an opportunity to delve even deeper into the link between digitalisation and sustainability goals. We asked the respondents if the higher goals, such as the ESG goals of a company, are achieved through digital transformation?

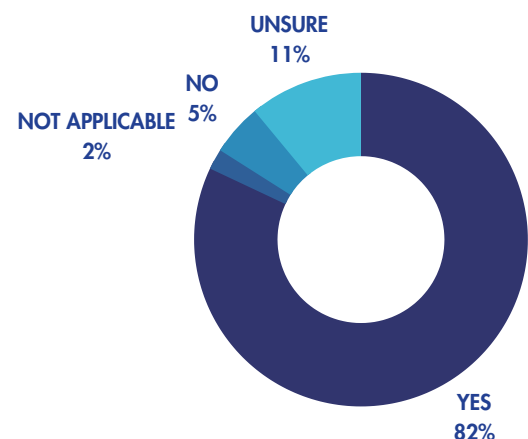
66% of the respondents confirmed that digital transformation initiatives are linked to their sustainability goals.



## Do you think that an interlink between digital transformation and the drive towards sustainability can support the environmental goals of your organisation?

The impact of sustainability goals on the image, revenue and performance of a company is known and the sustainable path to the overarching company goal can motivate employees. But can the digital transformation in combination with the drive towards sustainability support the environmental goals of organisations ?

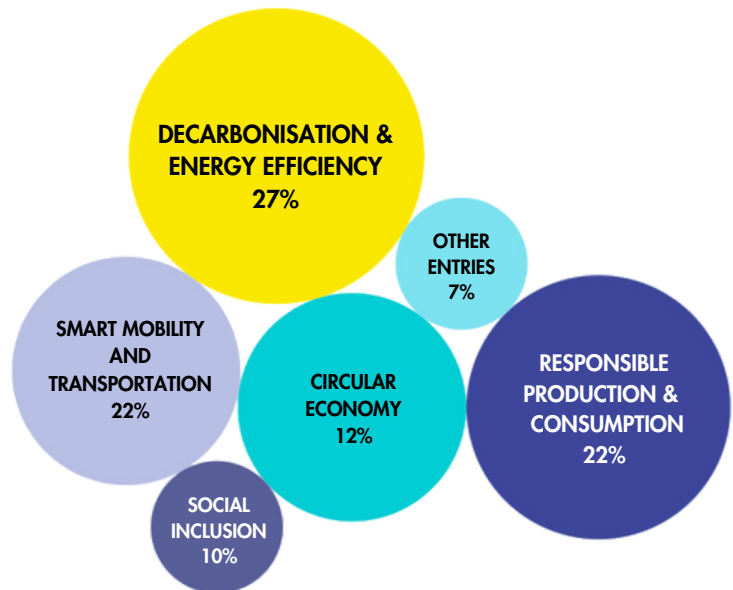
For 82% of the respondents the answer is clearly yes.



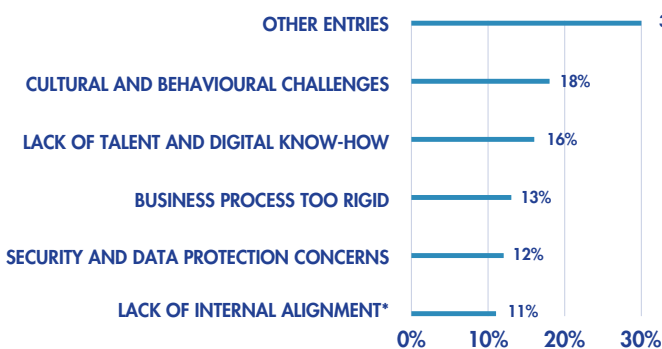
# BARRIERS OF DIGITALISATION

## Looking at the sustainability initiatives in your organisation through a digital lens, which components of sustainability would be benefited the most by digital transformation?

The sustainability components that benefit most from the digital transformation is decarbonisation and energy efficiency with 27%, followed by smart mobility and responsible production and consumption. 'social inclusion' turned out the category that benefitted the least by the digital transformation.



## What are the most significant barriers to meeting the digital priorities of your organisation?



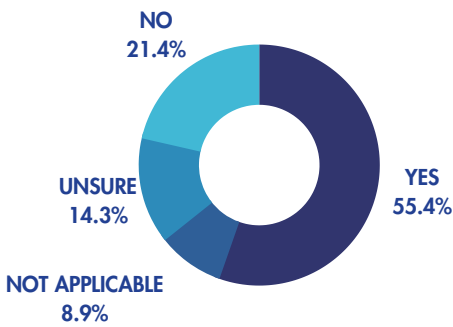
Most businesses today understand the importance of digital transformation. Yet, change doesn't come easy, and many professionals who are eager to step into the digital age don't know what path to take to get there or how to overcome those bumps in the road that they'll inevitably encounter along the way.

The survey shows that the human component is the biggest barrier. Culture, lack of know-how and trained talent are the largest categories of constraints.

• Digital vs traditional business model

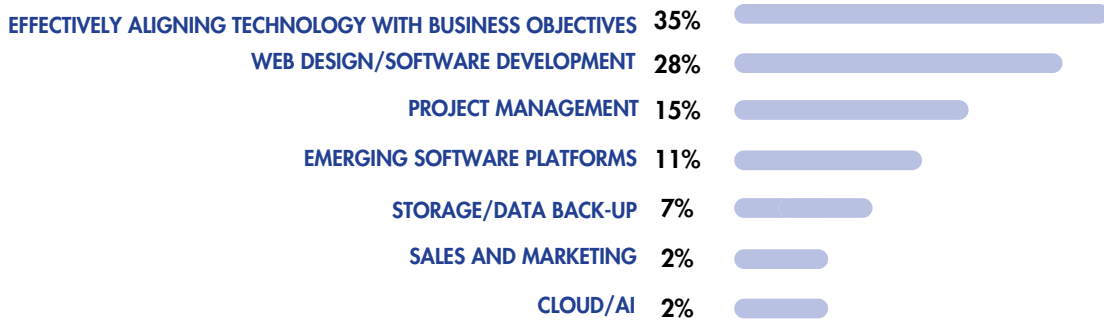
# THE TECH SKILLS GAP

## Is your organisation in Singapore challenged by the tech skills gap/shortage?



As already known, the digitalisation is coming like an exponential wave over all industries but digital training and education is not reaching the industry as fast as it is needed. 55% of all respondents confirmed that their organisation is challenged by the existing tech skills gap/shortage.

## If yes, what are the most prominent tech skills gap concerns in your organisation?



Alignment between an entity's strategic business objectives and its information systems has recently received many research attention. According to this survey the most prominent tech skills gap is 'effectively aligning technology with business objectives' with 35% of the responses.



The government and the universities are trying to improve skills by providing education and training programs that meet the demand.

Working with universities to design courses fitting our needs.

Looking for talent at an international level.

Through training, recruiting and retention programs.

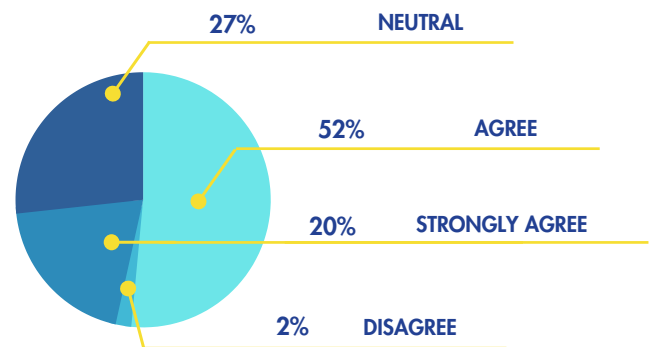


**If yes, how is the tech skills gap/shortage being addressed in your organisation?**

# DIGITALISATION, INTERNATIONAL TRADE AND A DEA

## Regulatory fragmentation in the digital sphere is a significant barrier to international trade.

The digital trade and information technologies that characterize today's society provide countries around the globe with access to markets that were previously considered unreachable. International trade system should be up to date so that we can exploit new opportunities and address challenges of the present world. As the survey shows that regulatory fragmentation is a significant barrier to international trade, it confirms that there is a need to reform the rules that govern trade, and this should be done in an inclusive manner.



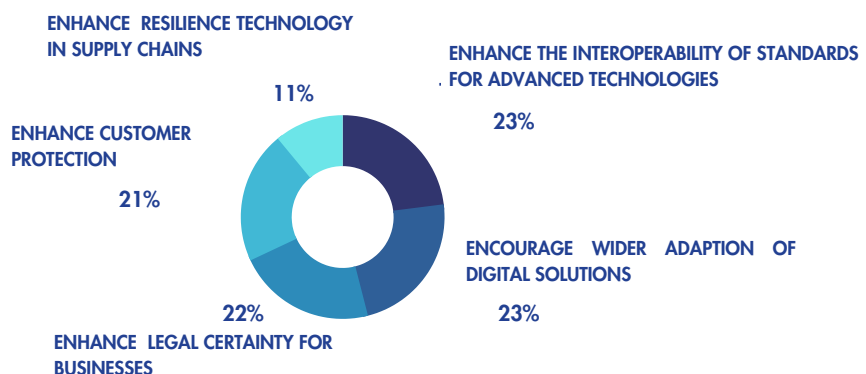
## A DEA (Digital Economy Agreement) between the EU and Singapore will facilitate better access to the digital economy by aligning digital trade rules, and make it easier for businesses to reach new customers.

The survey featured that 3/4 of the respondents are in favour of a DEA between the EU and Singapore being helpful in this case of the digital economy.



## In your opinion, in what fields could a DEA contribute the most?

Respondents indicated that they see a DEA as very helpful in a variety of fields. It ranges from standards in advanced technology, to wider adaptation of digital solutions, customer protection and legal certainty in business, to resiliency technology in supply chain.



# INTERNATIONAL TRADE AND A DIGITAL ECONOMY AGREEMENT

## In your opinion, which elements should be covered in a DEA between the EU and Singapore in order of importance?

Participants ranked the given options in order of their importance. It is clear that business and trade facilitation was ranked most important by majority of the respondents, indicating the necessity of it being covered in a DEA. Respondents have also chosen data concerns, and business consumer trust as two key elements that should be addressed in a DEA. However, elements that were not as important were dispute settlement which was ranked least important by majority of respondents, followed by data inclusion and transparency respectively.

**MOST  
IMPORTANT**

**BUSINESS AND TRADE FACILITATION**

**DATA CONCERNS**

**BUSINESS AND CONSUMER TRUST**

**TREATMENT OF DIGITAL PRODUCTS**

**CONSUMER DATA PROTECTION**

**STANDARDS FOR EMERGING  
TRENDS & TECHNOLOGIES**

**TRANSPARENCY**

**DATA INCLUSION**

**DISPUTE SETTLEMENT**

**LEAST  
IMPORTANT**



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