

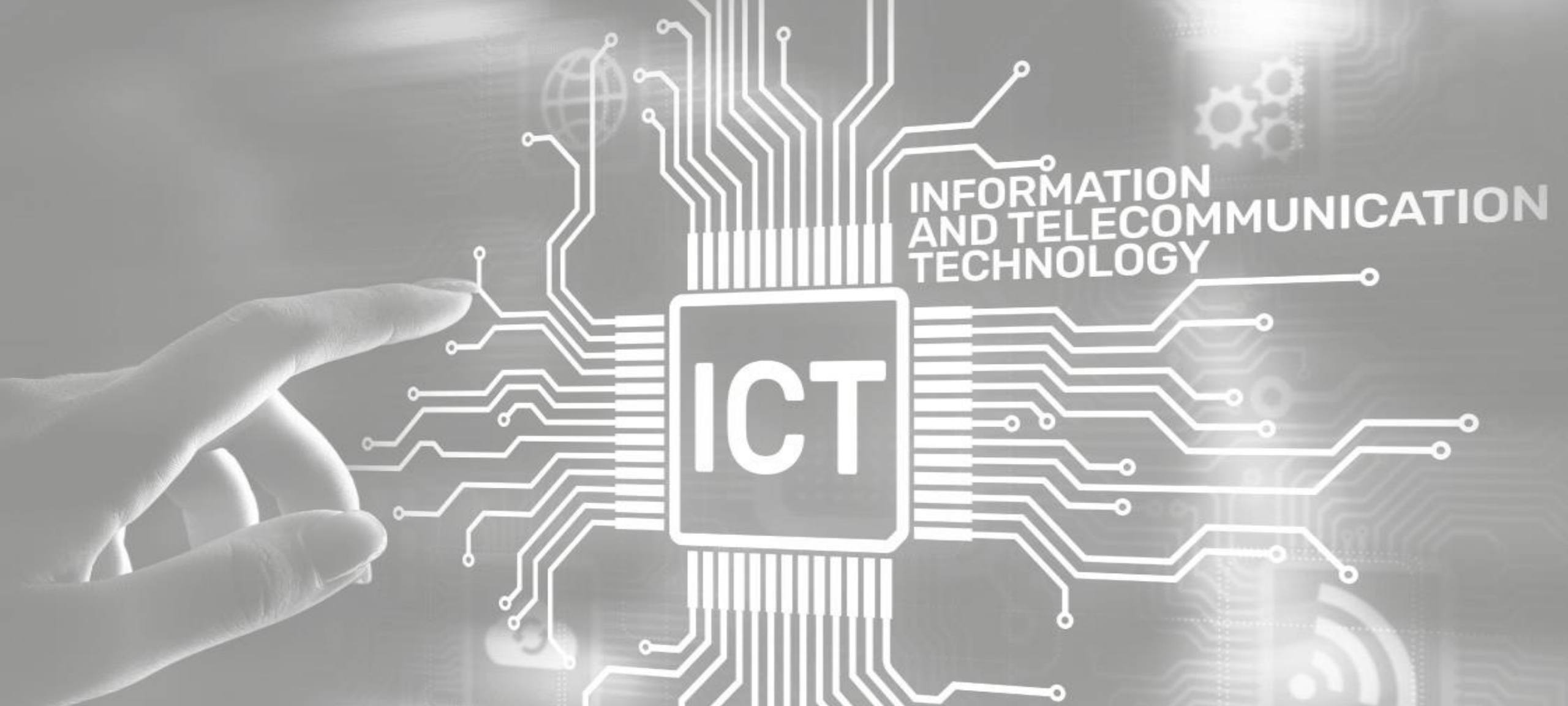


Study: The prospects of the ICT sector in Greece
December 2024

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The current role of the ICT sector

The current role of the ICT sector

The ICT sector plays a pivotal role in enhancing the country's competitiveness and economic growth, with its impact clearly evident in the following areas:



Contribution to the economy

~€13.8 billion - annual turnover of the ICT sector¹



Significant employer

~300,000+ employees in the industry²
~160,000+ ICT specialists in total³



Attracting foreign investment

24% of foreign direct investment in Greece are related to the ICT sector⁴



Promoting innovation

+70% of ICT companies are active in innovation⁵



Exports

4% of the country's exports are contributable to the ICT sector⁶



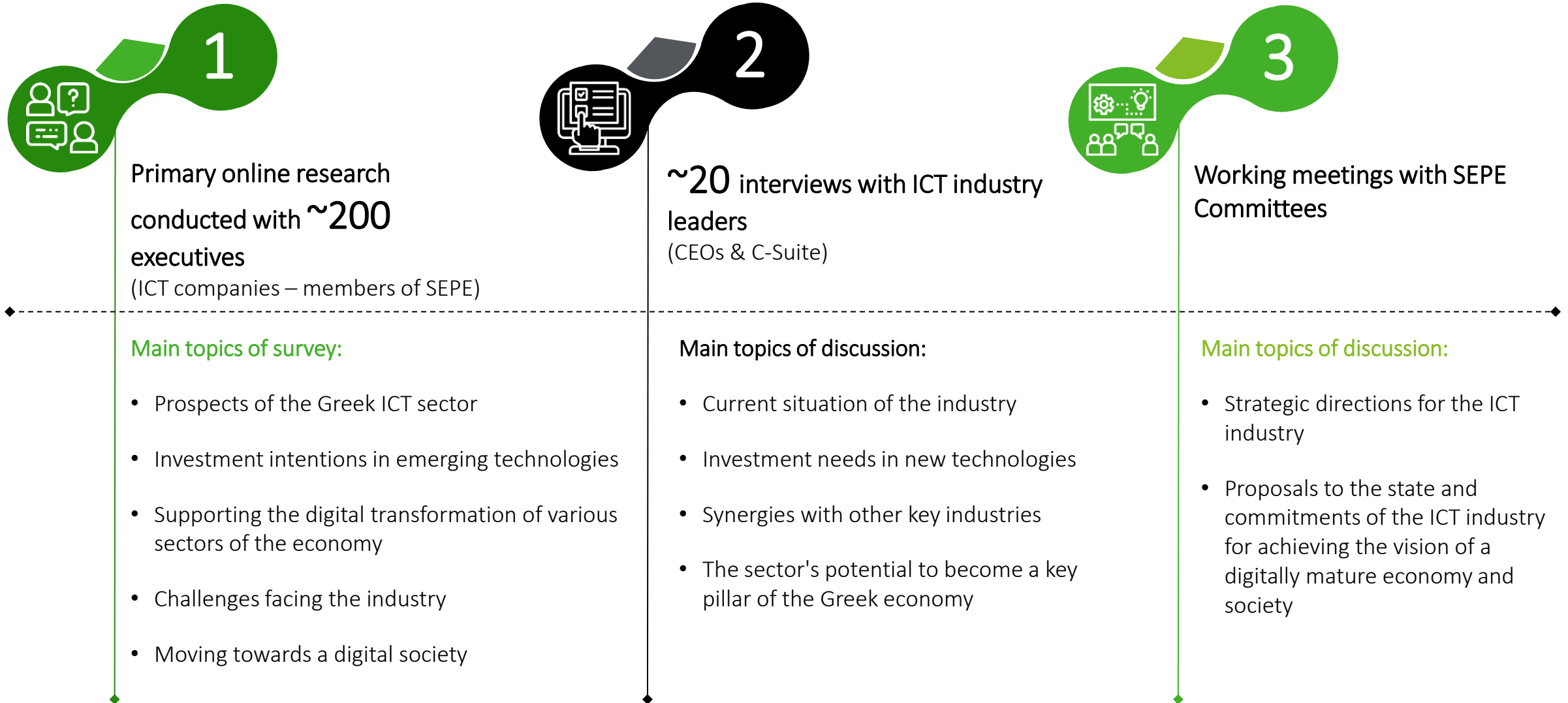
Enhancing public sector efficiency

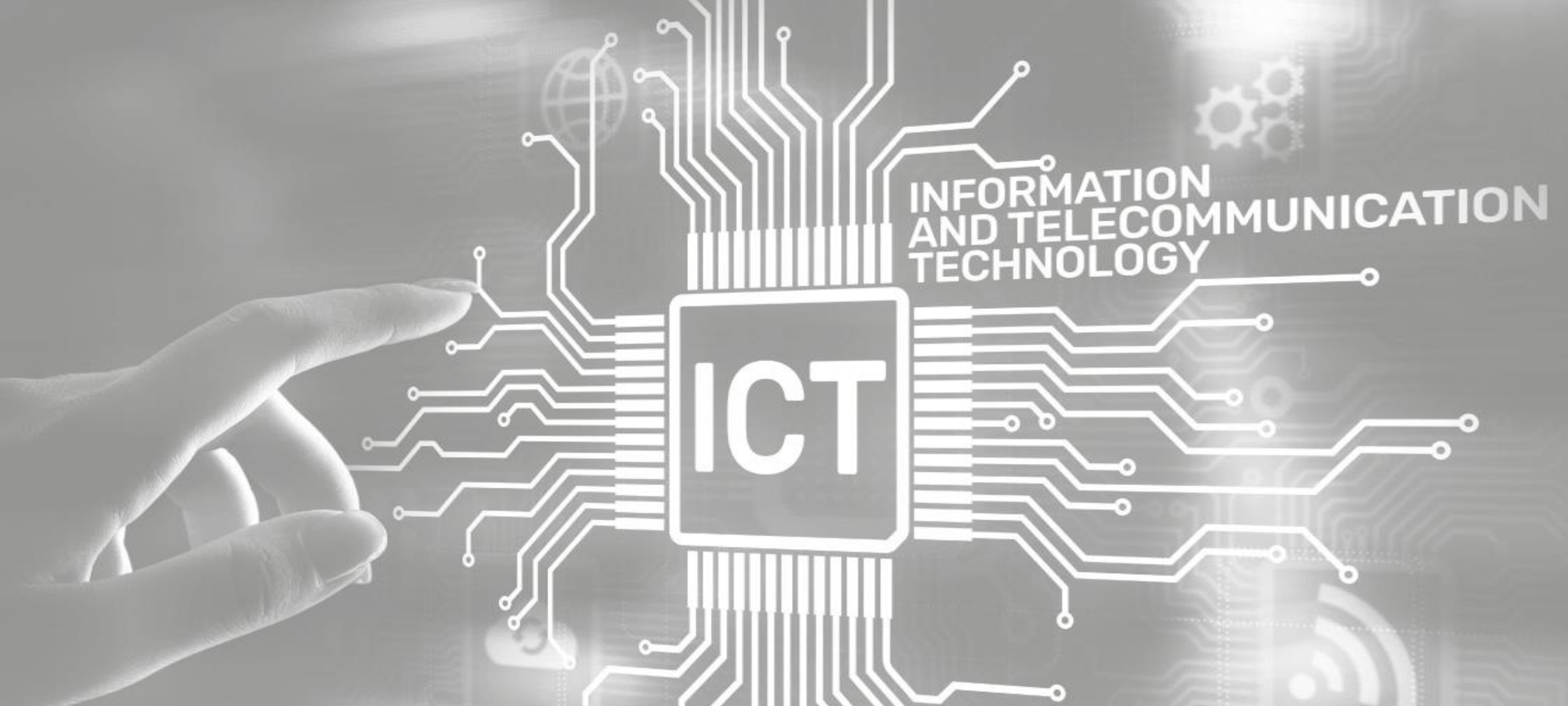
~€3 billion are the estimated benefits of gov.gr and the Ministry of Digital Governance Interoperability Center (KEΔ) in the first 5 years of operation⁷

~€2.5 billion additional revenues for the State from reducing tax evasion as a result of the digitalisation of public administration processes and the development of digital tools⁸

Methodology

To provide a clearer overview of the country's business landscape in the ICT sector and its future prospects, three methods of information-gathering were employed:





Findings from primary the research

Identity of the survey

To emphasize the ICT sector's significant contribution to the overall productivity growth of Greek businesses, a primary research was commissioned by SEPE and conducted with the support of Deloitte



Primary research conducted by SEPE in collaboration with Deloitte, during the period 20.10 - 20.11 of 2024



The aim of the survey was to map the current landscape and future potential of the ICT industry, ensuring its role as a catalyst for the continued development of the Greek economy



The research focuses on **four (4) main axes**:

1

Opportunities

3

Strategic priorities

2

Challenges

4

Prospects



Survey Demographics

The majority of executives who responded to the survey are employed at larger companies within the industry

Participation



~200 executives

Turnover



Number of employees



Businesses with between 1 and 3 employees
~2% of total sample



Businesses with between 4 and 10 employees
~5% of total sample



Enterprises with between 11 and 50 employees
~17% of total sample



Enterprises with between 51 and 99 employees
~7% of total sample



Enterprises with between 100 and 250 employees
~22% of total sample

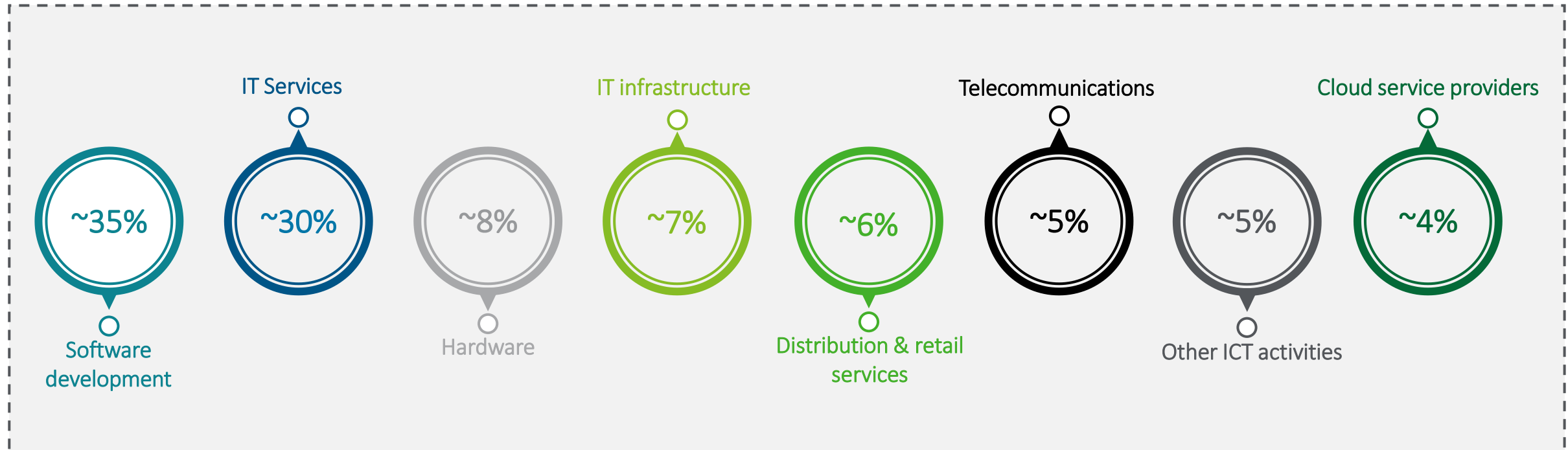


Companies with more than 250 employees
~47% of total sample

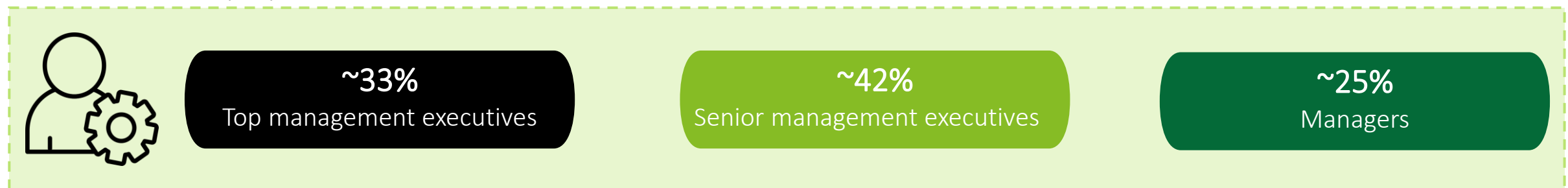
Survey Demographics (continued)

The majority of the sample is comprised of companies primarily focused on software development and IT services, although the full spectrum of ICT services is represented, while the sample covers a wide range of management positions

Organization's main focus in ICT



Role within the company



ICT industry perspective

The majority of the executives in the sample are optimistic about the future of the ICT sector in Greece

What is your outlook on the future of the ICT industry in Greece over the next 5 years?



Recommended Technologies for ICT industry focus

Artificial Intelligence, Cybersecurity and Cloud Computing seem to be a priority for the ICT industry within the next 3 years

What new technologies do you think the ICT industry in Greece should focus on over the next 3 years?

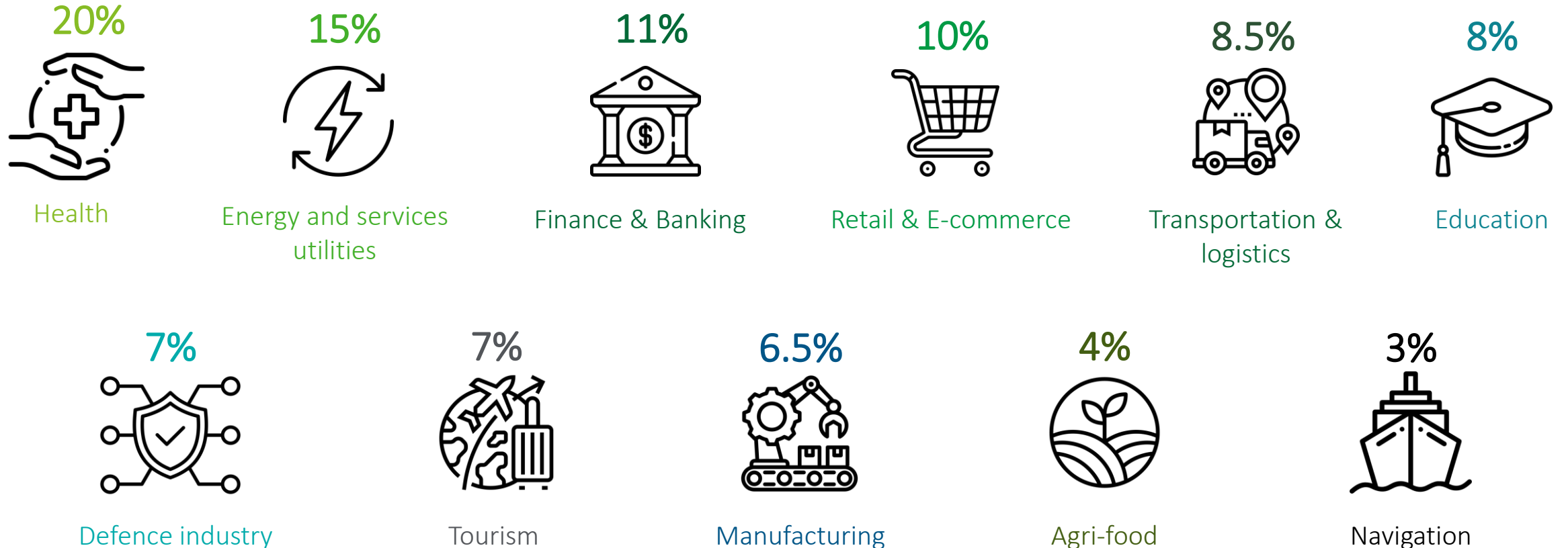


1. Artificial Intelligence (Gen AI/AI/Machine Learning) | **30%**
2. Cybersecurity | **18%**
3. Cloud | **13%**
4. Business / enterprise software solutions | **11%**
5. Big data | **10%**
6. Internet of Things | **6%**
7. Defence technologies | **4%**
8. 5G/6G | **3%**
9. Blockchain Systems | **2%**
10. Quantum computing | **2%**
11. Efforts should not be focused on any particular technology | **1%**

Opportunities & other sectors of the economy

Health, energy, and finance are the sectors where the most significant opportunities to support digital transformation are identified

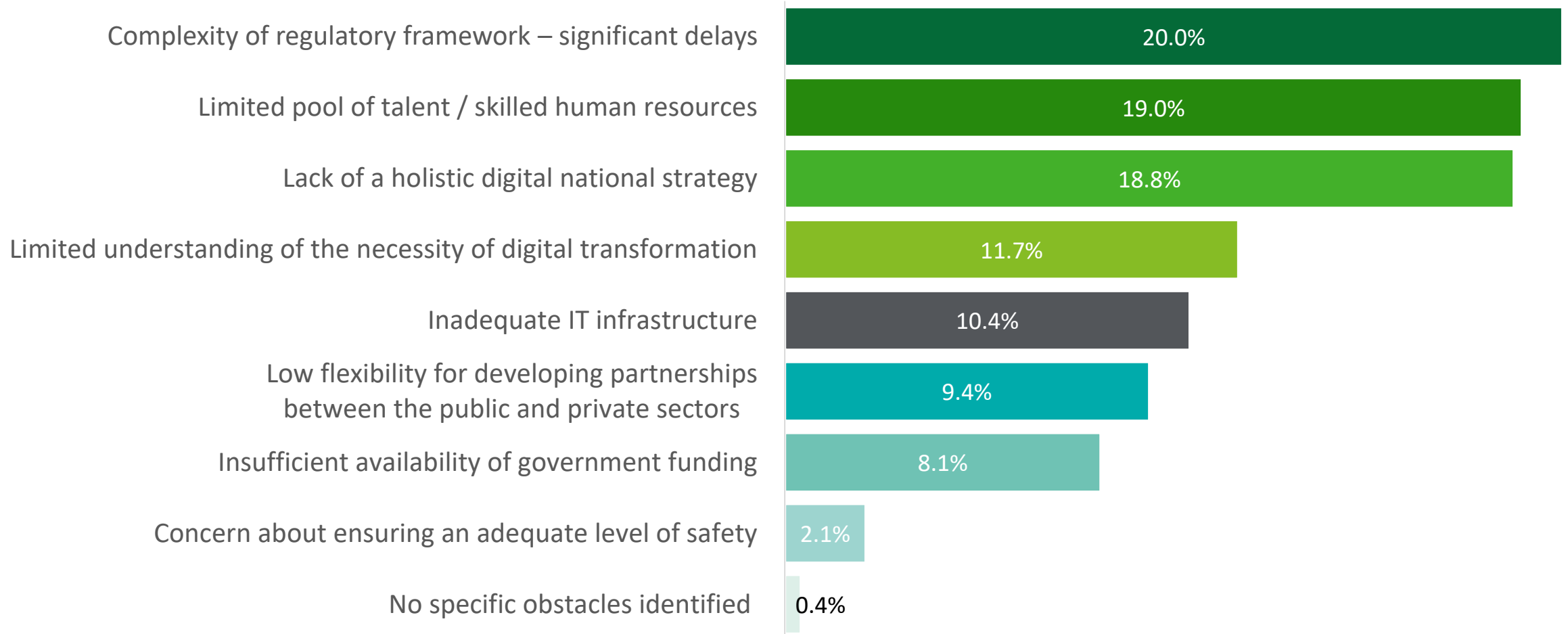
In which other sectors of the economy do you see the most significant opportunities to support digital transformation?



Obstacles & Challenges

The most important challenges faced by the majority of the sampled companies are bureaucracy and the lack of skilled human resources

What are the main challenges that need to be addressed to enable seamless digital transformation in Greece?



Opportunities for development in the ICT Sector

There is cautious optimism regarding the role of AI in the evolution of the ICT industry...

How do you see the role of Artificial Intelligence in the future of the ICT industry in Greece?

- ~21% Artificial intelligence has the potential to revolutionize the ICT industry in Greece, driving innovation and efficiency
- ~56% The adoption of AI will be gradual, with considerable potential to achieve transformative impact
- ~17% The role of AI in the ICT industry in Greece is still uncertain and requires further investigation
- ~6% We have not yet adequately / extensively assessed the role of artificial intelligence in the future of the ICT industry in Greece

Opportunities for development in the ICT Sector

The current level of IT infrastructure in the country is moderately developed

How do you assess the level of IT infrastructure in Greece (e.g., data centers, total computing power, telecommunications networks, broadband)?

~2% Greece's digital infrastructure is robust, adequately supporting and effectively facilitating ICT business activities

~63% There are opportunities to enhance digital infrastructure to better meet the evolving needs of businesses in Greece

~33% The level of digital infrastructure in Greece is insufficient, posing challenges to the operations and growth of the ICT industry

~2% We have not yet adequately / extensively assessed the level of digital infrastructure in Greece

Extroversion

To enhance the international presence of companies in the sector, the importance of developing globally competitive products is highlighted

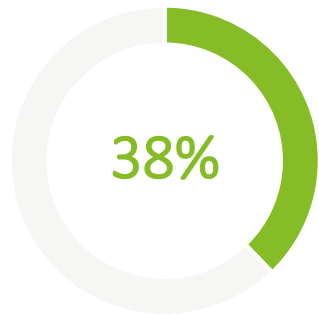
What approach should the ICT industry adopt to expand its presence in international markets?



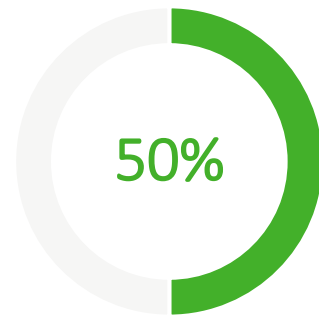
Innovation

Innovation is crucial for the industry's growth, but challenges remain

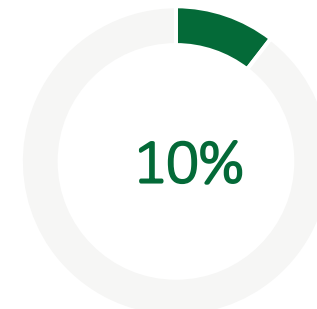
In your view, how important is innovation for the seamless development of the ICT industry in Greece?



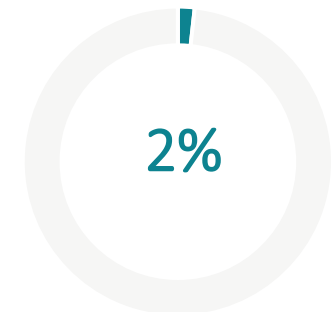
Innovation is crucial for the ICT industry



Innovation plays a particularly important role in the development of the industry, but there are challenges



Innovation is somewhat important for the development of the ICT industry



Innovation does not necessarily need to be a focus area for the development of the ICT industry

Partnerships with start-ups

For most ICT companies, established players in the sector should seek to develop strategic partnerships and new solutions with start-ups

How do you think established ICT companies should collaborate with start-ups?

Through strategic partnerships and joint development projects



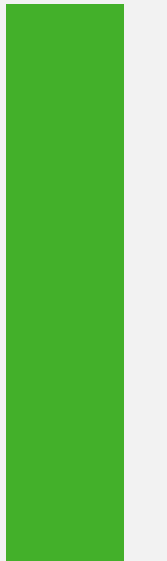
31%



Through co-creation initiatives to develop new solutions together



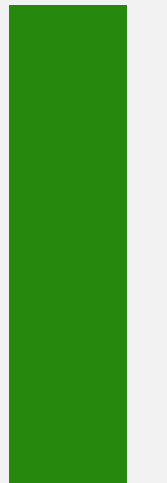
27%



Through direct investment and funding



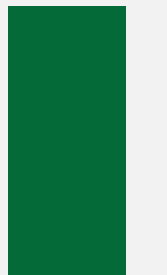
16%



Through acquisitions and integration into the business operations



11%



Providing guidance and support through incubator programs



10%



Enabling the exploitation of intellectual property rights to develop innovative solutions



5%



Support from the State

The provision of incentives, along with the implementation of policies that promote digitalization, must be key priorities for the State in the transition to a "digital-first" society

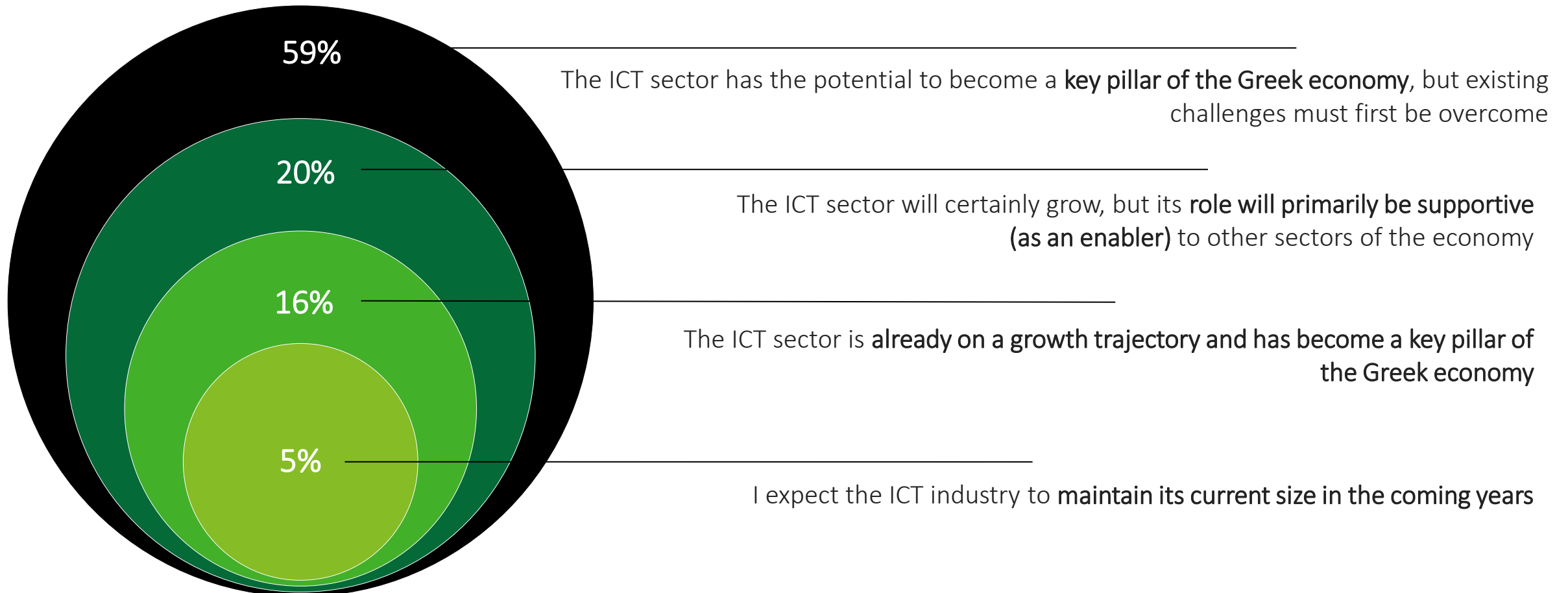
In what ways do you think the Greek state can support the transformation towards a "digital-first" society?

1. Incentivising support for digital innovation and entrepreneurship | **21%**
2. Implement policies that promote digitalisation in both the public and private sectors | **20.8%**
3. Investing in IT infrastructure and broadband connectivity to facilitate the widespread adoption of digital technologies | **15.2%**
4. Classification of essential digital technology infrastructures and services in the fixed and ongoing needs of the Greek state | **14.3%**
5. Streamlining bureaucratic procedures and reducing delays | **11%**
6. Collaborating with educational institutions to enhance training and education in digital skills | **10.2%**
7. Further development of public-private partnerships aimed at facilitating the development and deployment of emerging technologies, as well as fostering a culture of innovation and collaboration | **7.5%**

Dynamics of the ICT industry

It is particularly encouraging that the ICT sector is seen by the majority of industry executives as a potentially key pillar of the Greek economy...

In your estimation, does the ICT sector in Greece have the potential and capability to become one of the main sectors of the Greek economy in the next 5 years?

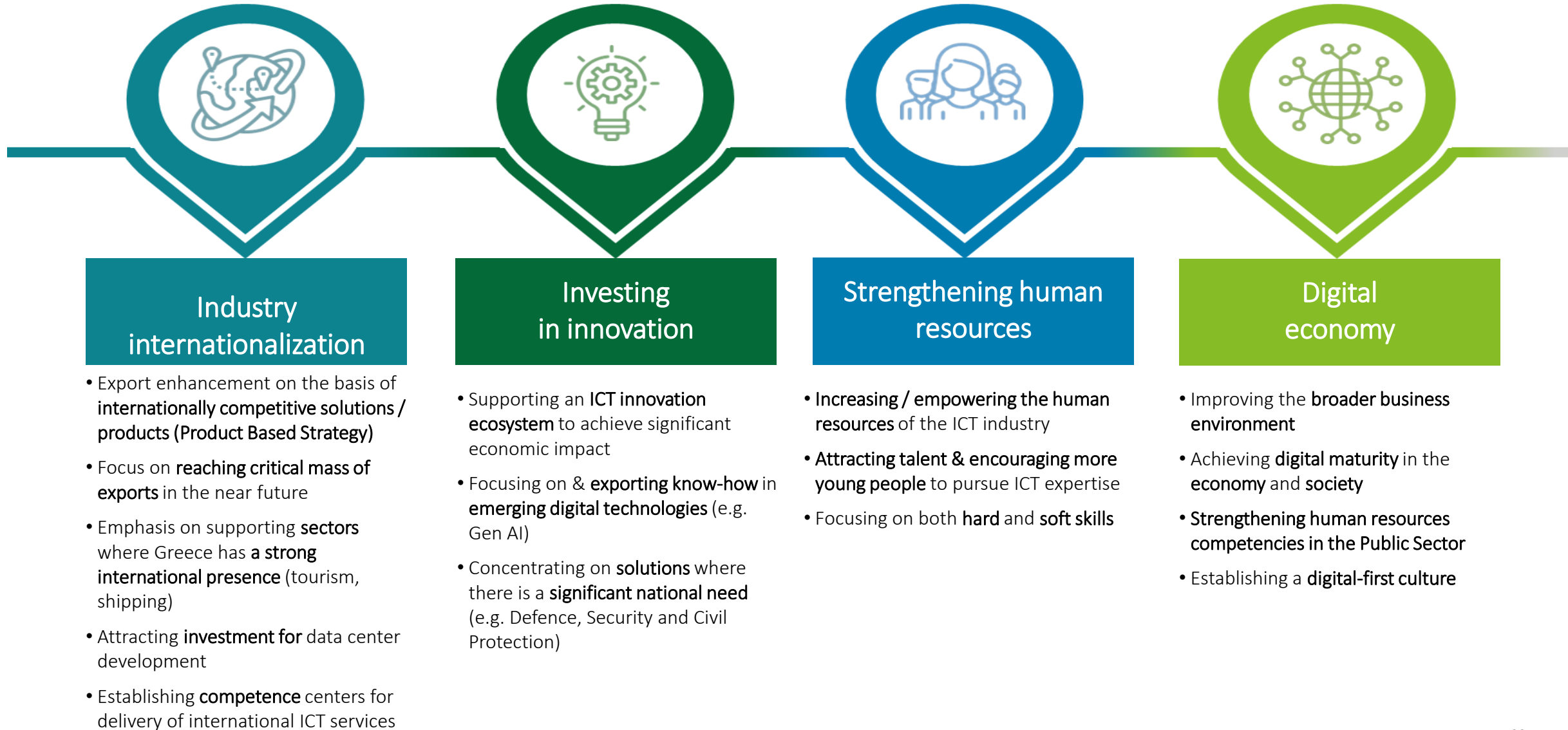




Recommendations for the future of the ICT industry in Greece

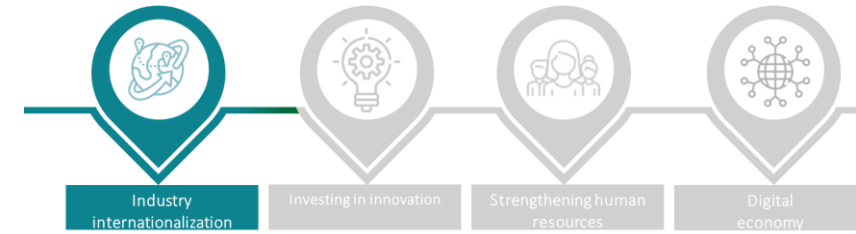
Strategic directions

The Greek ICT industry has several strategic directions it can pursue to foster future growth...



ICT industry internationalisation

The creation of a promotional platform, the organization of an international conference, and trade missions are major priorities



1

platform for **promoting the industry** and **connecting with foreign businesses**

This platform will serve as a central hub for information and cooperation with businesses abroad, showcasing the innovative solutions, achievements, and specialized services of Greek ICT companies. It will also include a matchmaking algorithm to suggest potential collaborations based on criteria such as sector of activity, technological specialization, and investment interest. Additionally, it will provide tools and connectivity options, including online events and information on international funding programs, grants, and innovation competitions

1

annual international conference on Information and Communication Technologies organized in Greece

Inspired by the Web Summit in Lisbon and other similar events, this conference will aim to position Greece as a benchmark in digital technologies, attracting top international speakers, investors, start-ups, research centers, and technology companies

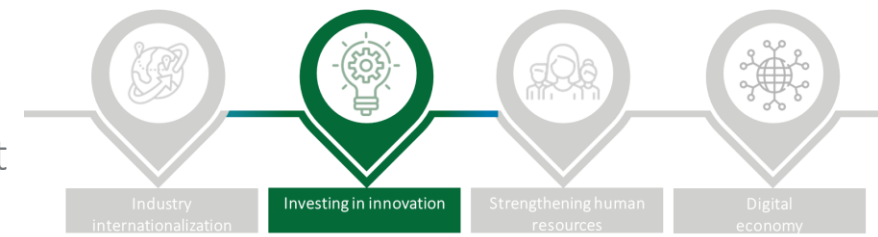
5

annual trade missions focused exclusively on ICT, co-organized with sectoral bodies

These missions will aim to promote Greek technological solutions and innovations in target markets with high demand for ICT, create new business partnerships through B2B meetings with potential partners, customers, and investors, attract international investments in the Greek technology sector, and participate in international ICT exhibitions and conferences

Investing in innovation

To promote innovation, it is recommended to establish a technology park, adopt innovative solutions in public administration, and increase annual innovation investment



1

a new **large-scale technology park** focused on the science of ICT, operational within the next 3 years

The technology park will serve as a hub for innovation and collaboration, attracting research centers, start-ups, technology companies, and educational institutions. Its goal is to create a dynamic digital innovation ecosystem and develop initiatives for conducting applied research

1

adoption of an innovation in Public Administration outside competitive procedures, per Ministry, per year

This approach aims to enable the fastest possible adoption of innovation and the testing of pilot technological applications in the real operational conditions of the Public Administration. Key aspects of the action will include pilot projects and Proof of Concept (PoC), the creation of a new institutional framework that facilitates the immediate establishment of partnerships for pilot innovative solutions, and a focus on areas with high added value, among other initiatives

increase of R&D expenditure per year, in relation to GDP, in order to achieve the target of 3% of GDP over 5-7 years

This approach aligns with European best practices and will help strengthen the country's competitiveness and technological development. For example, setting annual targets for increasing public and private investment in innovation, with clear incremental growth each year, allocating resources to cutting-edge areas such as artificial intelligence, cybersecurity, big data, smart cities, and biotechnology, encouraging public-private partnerships (PPPs), and incentivizing private investment in research and development (R&D) will constitute the necessary actions to enhance innovation in the country

0.2%

Strengthening human resources

To strengthen human resources, it is proposed to enhance higher education in the ICT sector and attract qualified personnel from abroad



1,500

additional graduates per year, through the creation of 30 new ICT-related postgraduate programs

The new programs will focus on cutting-edge areas such as artificial intelligence, cybersecurity, and more, and will be designed in collaboration with businesses and professional associations to ensure that the skills provided align with market needs. Additionally, it is important to establish postgraduate programs in universities and polytechnic schools across various regions of Greece, with the goal of decentralizing education and fostering regional technological ecosystems

1,000

Tech Visas awards annually, aimed at **attracting talent** and **expertise from abroad** to best support the creation of new competence centers

This strategy proposes to expand and enhance the existing framework, with clear procedures and incentives to make the country more attractive to skilled ICT professionals. For example, accelerating and simplifying the tech visa issuance process through digital infrastructure, establishing quantitative targets for issuing tech visas based on annual market needs, and involving organizations such as SEPE to identify the specialties with the highest demand. All of the aforementioned will serve as catalysts for transforming Greece into a hub of technological innovation in the wider Southeast European region

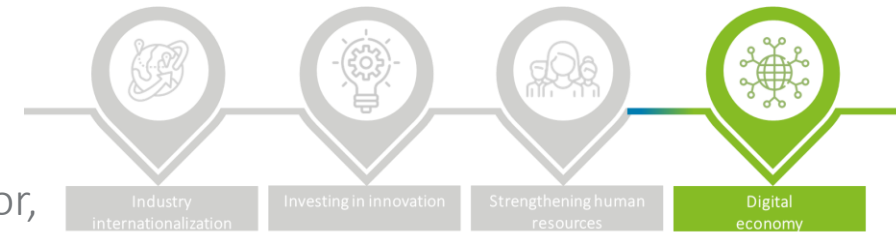
1,000

ICT executives / specialists to be repatriated within 5 years – via **targeted recruitment**, in cooperation with sectoral bodies (e.g. SEPE)

The approach will focus on countries with a significant presence of Greek ICT professionals, such as the UK, Germany, the Netherlands, and the US, and will include the creation of attractive repatriation conditions, such as tax incentives, competitive compensation packages, and other benefits

Digital economy

To strengthen the digital economy, tax relief for investments in cutting-edge technologies, funding for the maintenance of the ICT systems of the Public Sector, and the digitalization of all ICT services would be necessary



100%

tax super-deduction for investments and training activities in selected cutting-edge technologies (e.g. cybersecurity, AI, quantum)

To boost activity in cutting-edge technologies, it is proposed to provide tax breaks or discounts for companies investing in cutting-edge technologies, as well as for companies investing in the education and training of their employees in related sectors. Additionally, tax incentives for start-ups active in these fields should be created

100%

secured funding on an annual basis for the maintenance and expansion needs of Public Administration's ICT systems – treating these costs as fixed and ongoing needs

The costs of maintaining and upgrading ICT systems should not be treated as exceptional or periodic, but as fixed and continuous needs, requiring annual and permanent funding. Developing a strategic plan for the continuous upgrading and development of ICT infrastructure in the public sector, along with establishing mechanisms for monitoring and evaluating the performance of ICT systems, will be crucial to ensure the effective use of funds and the continuous improvement of infrastructure

100%

digitization of all public services and mandatory elimination of paper transactions in entities within the next 5 years

[seamless implementation of the "once-only principle"]

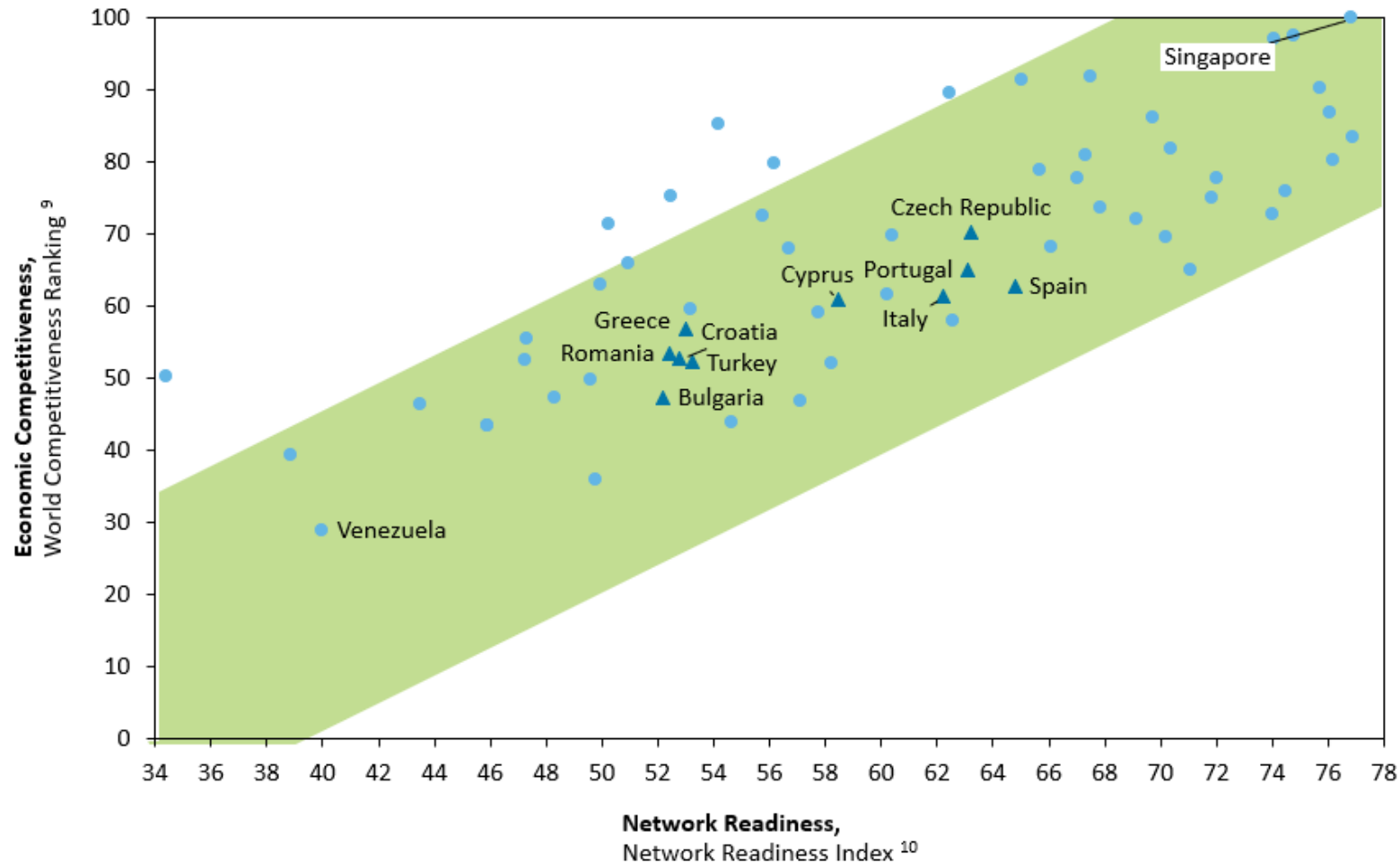
This measure will improve efficiency and reduce bureaucracy, as each public service will be able to obtain the necessary information from a common database (interoperability). This will result in significant time savings for both citizens and the Public Sector



The ICT sector as a catalyst for the Greek economy

The role of the ICT industry in international and European affairs

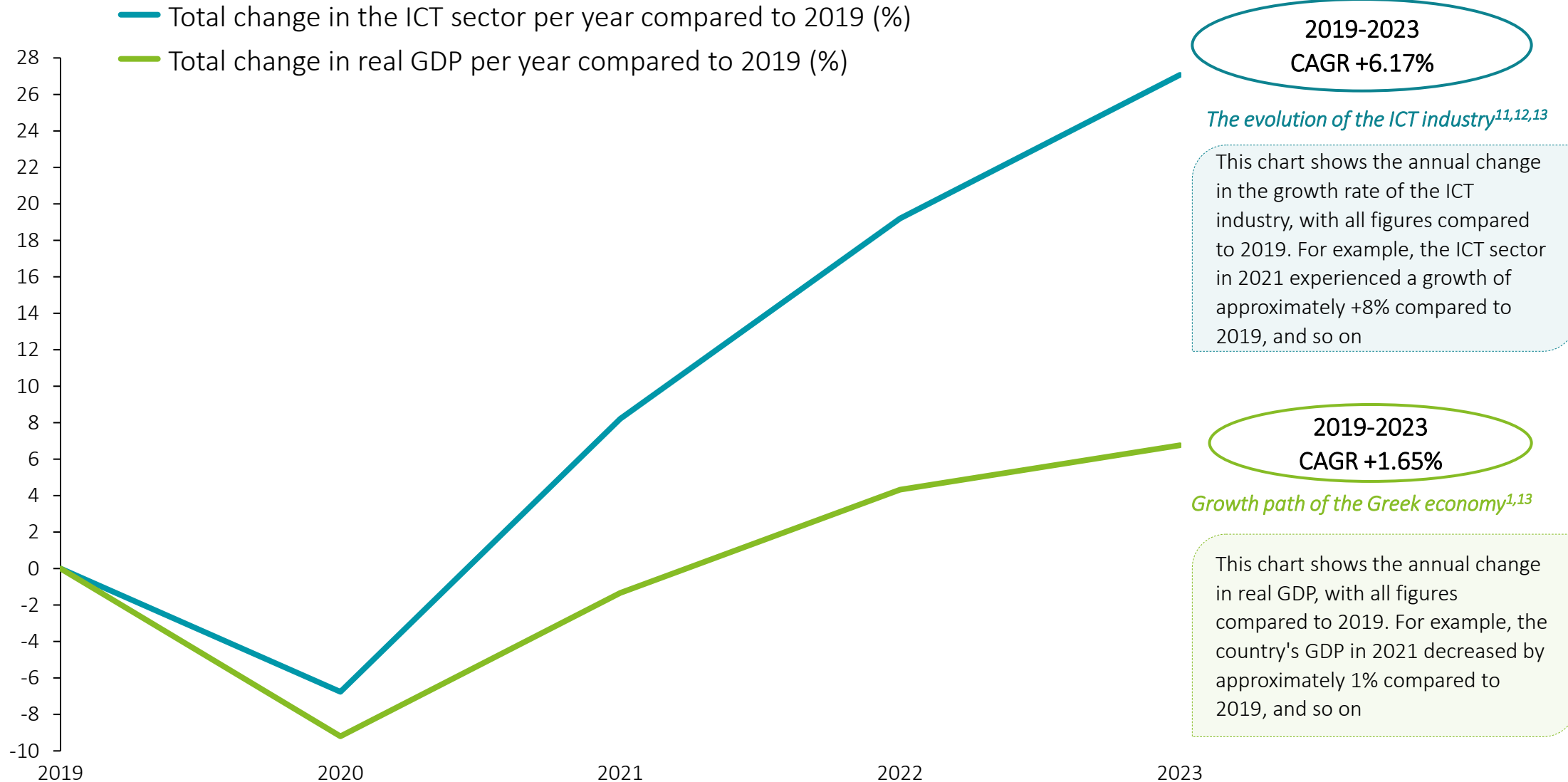
There is a strong positive correlation between the ICT readiness indicator and a country's economic competitiveness



Economic competitiveness is closely linked to digital readiness, as a country's ability to harness digital technologies and infrastructure significantly contributes to productivity, innovation, and, consequently, the growth of its economy

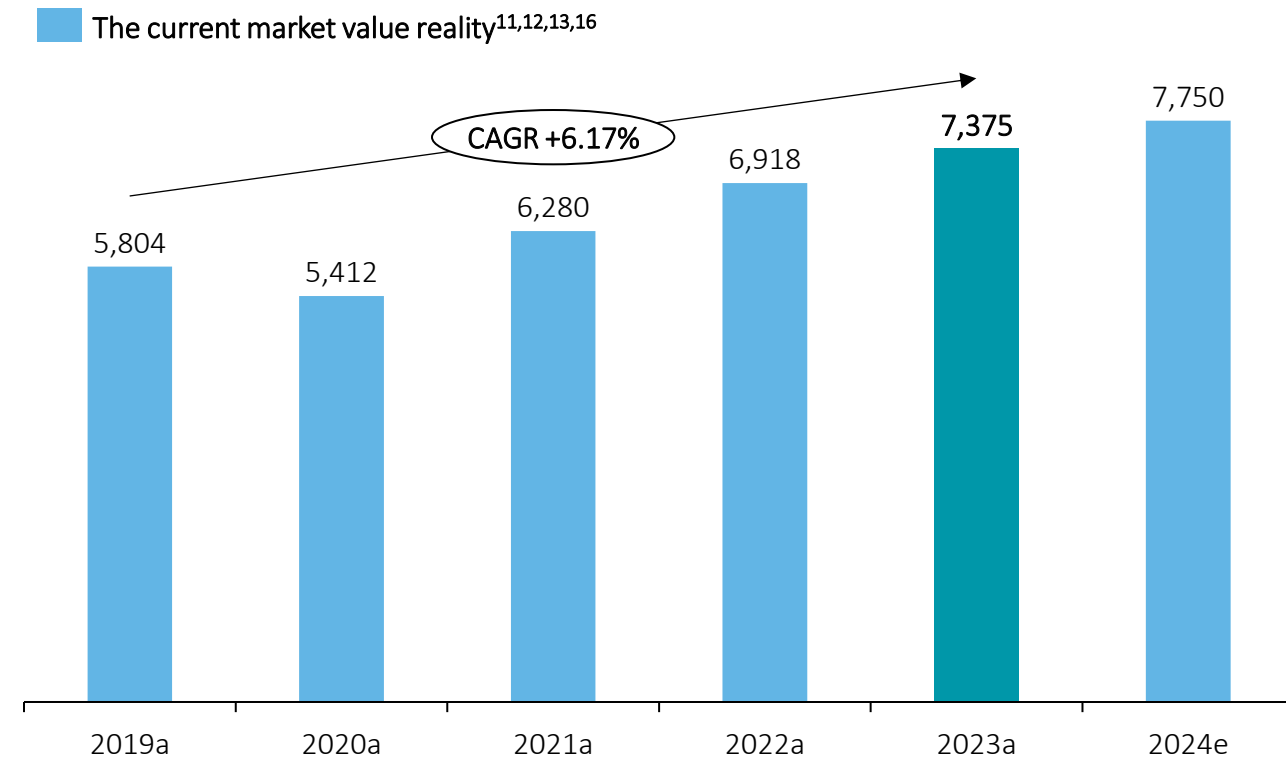
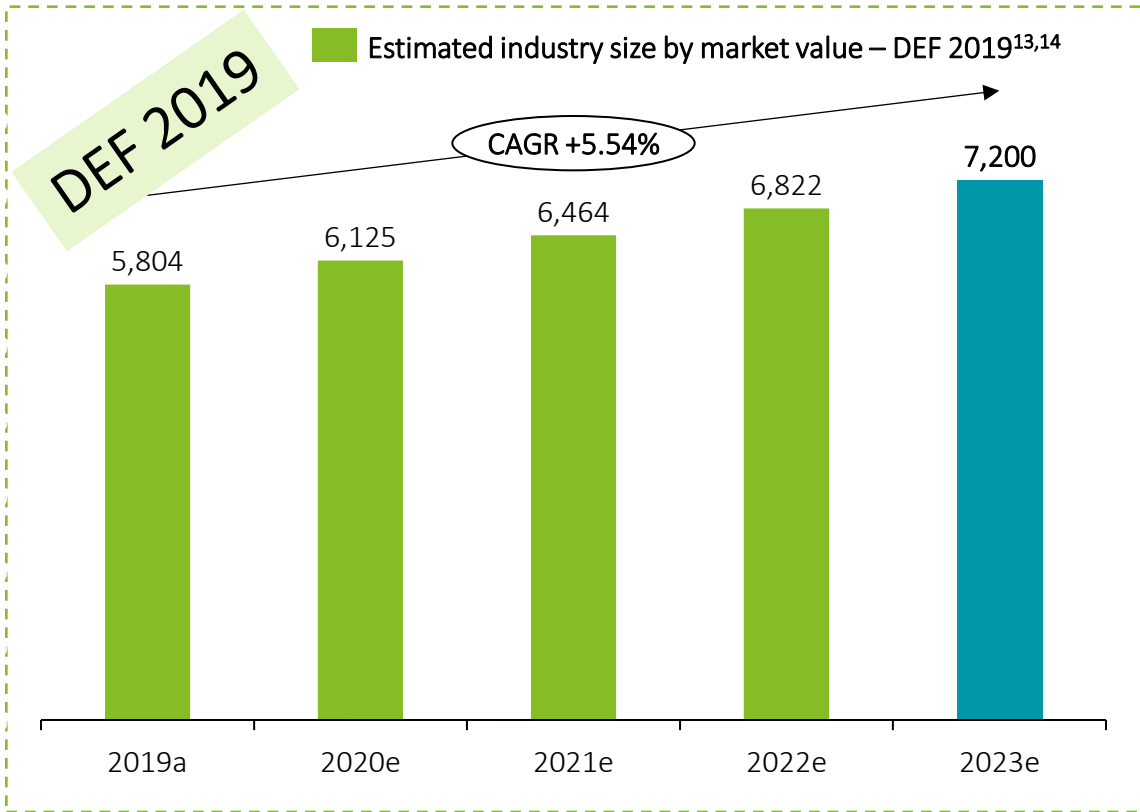
ICT sector growth rate

The growth rate of the ICT sector over the last five years is about four times higher than the growth rate of the Greek economy



Industry size estimation

The industry's growth from 2019 to 2024 exceeded expectations (partly due to the acceleration of digital transformation as a result of Covid-19)...

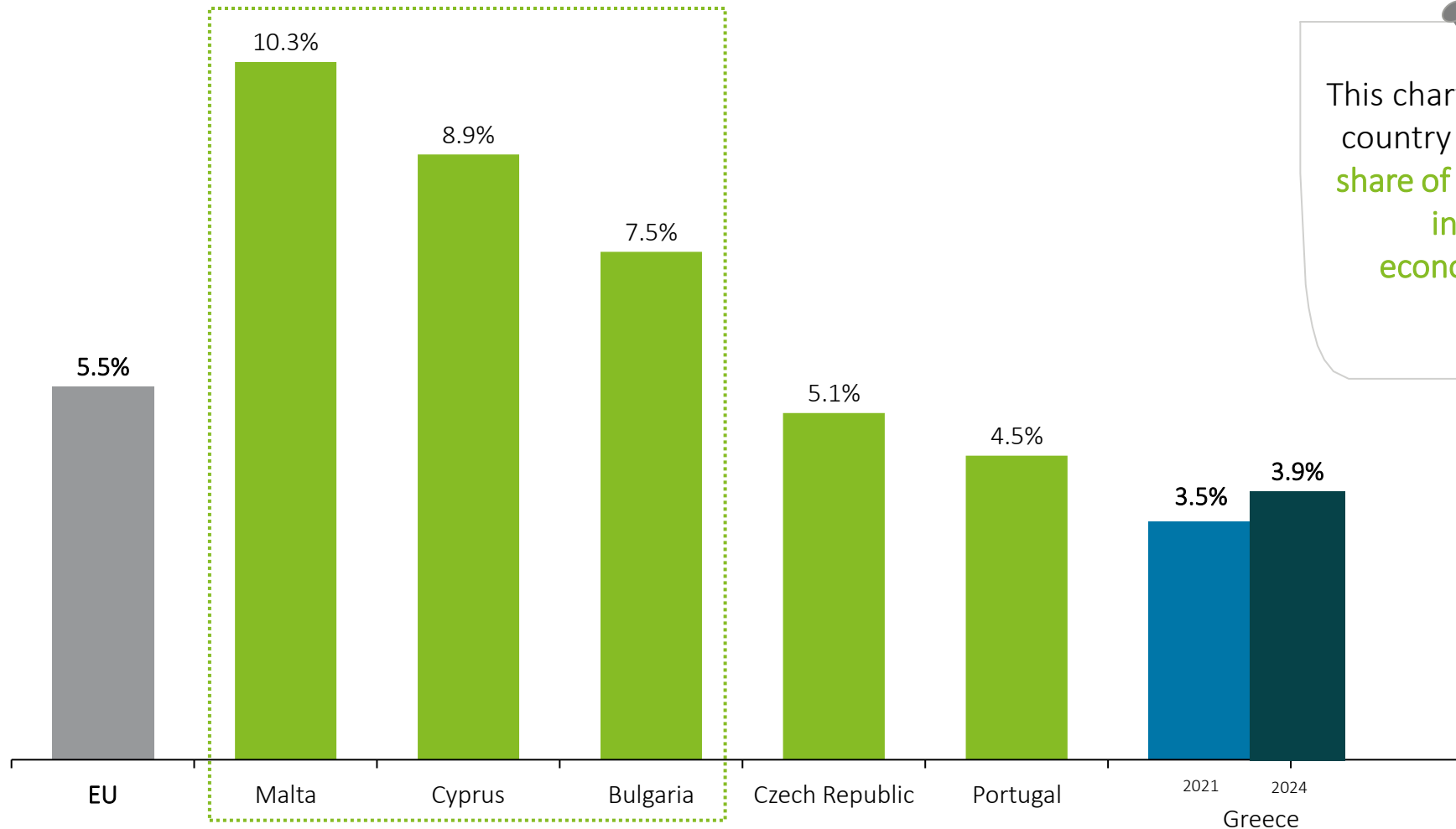


The expectations for the milestone year 2023 as calculated in the SEPE study presented at the Digital Economy Forum (DEF) in 2019 were exceeded: Instead of €7.2bn. the sector is estimated to have reached €7.4 billion.

In addition, the sector's growth trajectory continues in 2024, with an estimated total increase of approximately 34% from 2019, reaching €7.8 billion.

The contribution of the ICT industry to the economy...

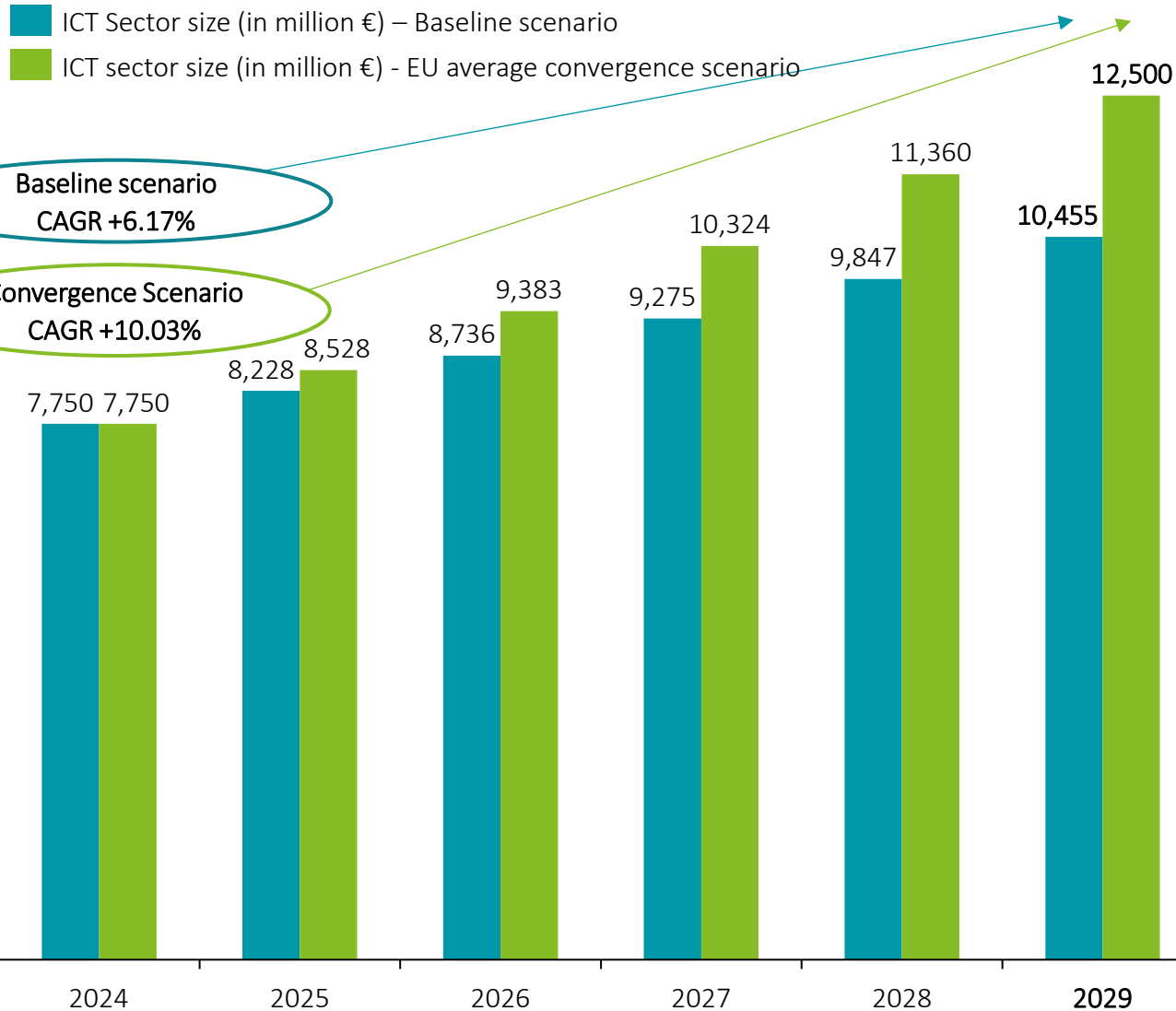
Greece has the opportunity to significantly enhance the contribution of the ICT sector to the broader economy, building on the momentum generated in recent years



This chart shows for each country in question **the share of the ICT industry in the total economy**^{1,12,13,15,16}

Industry size forecasts

The ICT sector is projected to reach historic highs in 2029, with an estimated value of €10.4 billion, contributing approximately 4.6% of national GDP. Under conditions of further convergence with the EU, the sector could reach around €12.5 billion, or 5.5% of GDP



Based on the growth rate of recent years and taking advantage of the opportunities presented, the GDP of the ICT sector is expected to reach historic highs by 2029, namely:

Baseline scenario^{3,10,11,12}:

€10.4 billion ICT sector size by market value (4.6% of national GDP), maintaining a CAGR of 6.17%
 + 35% compared to 2024
 + 80% compared to 2019



Convergence scenario^{12,13,15}:

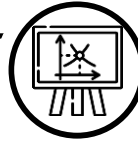
€12.5 billion ICT sector size by market value (5.5% of national GDP), with a potential CAGR of 10.03%

For the preparation of the aforementioned forecasts, the Base Scenario assumes that the growth rate of the sector remains at the same levels as the previous five years, while the Convergence Scenario is based on the growth rate required for the sector to reach the same size (as a percentage of GDP) as the EU average by 2029.

Methodology for assessing the potential impact of the ICT Sector on GDP

To assess the impact of the ICT sector on the Greek economy, several factors were considered, starting with the forecasts for the sector's size until 2029 and accounting for the additional benefits it brings to the economy (indirect, induced, productivity growth, and job creation)

Calculation of direct industry benefits to the economy



Historical ICT sector size data in Greece

A variety of sources (EITO, Eurostat, ELSTAT, international studies, etc.) were used to retrieve data on the size of the ICT sector to date

Industry size forecast through 2029

Based on the data above and as a result of a relevant analysis by the study team, the size of the ICT sector in Greece up to 2029 was estimated

Industry multiplier calculation

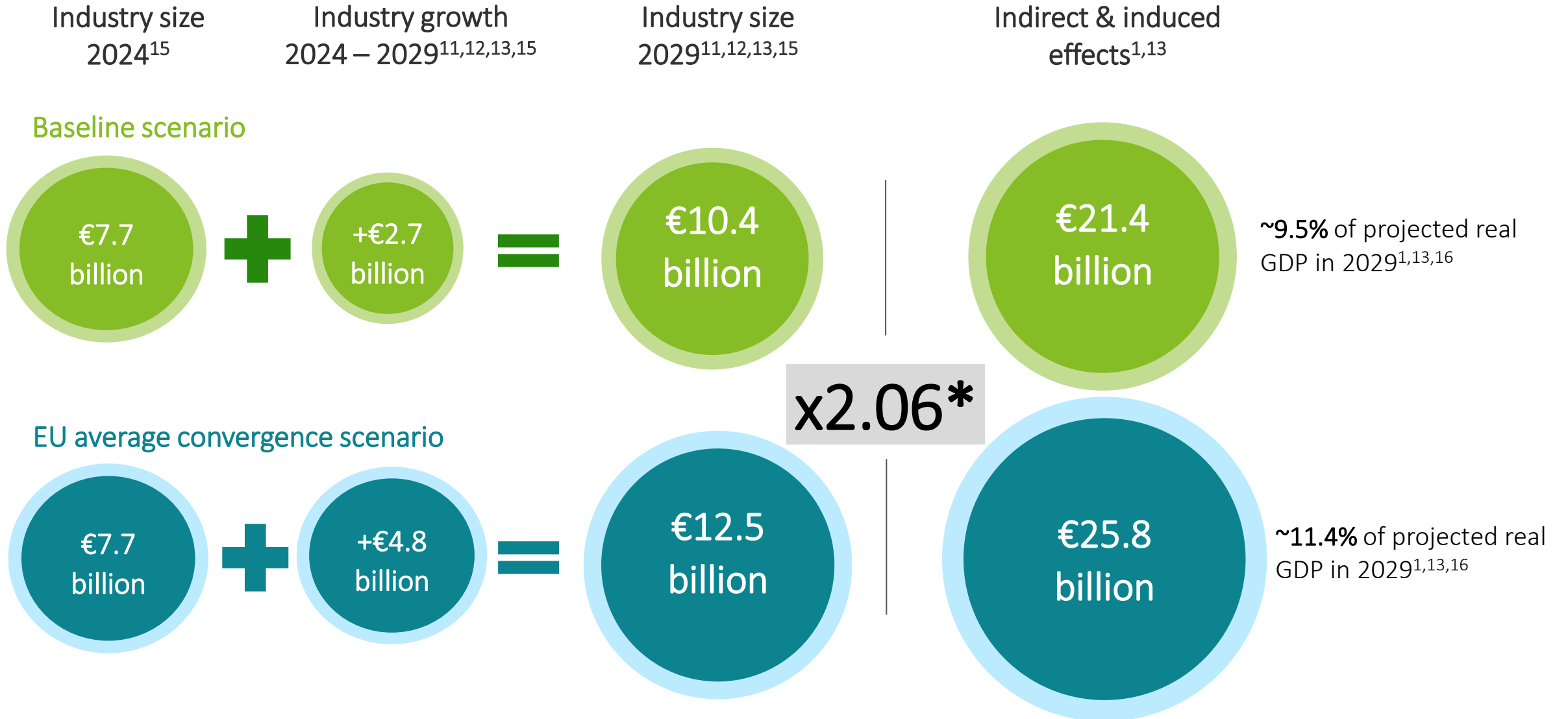


Indirect and induced benefits to the economy sustained as a result of the growth in the size of the ICT industry

Based on the I/O table from ELSTAT and taking into account the NACE 2 codes that make up the ICT sector, the weighted Type II multiplier for ICT sector suppliers was calculated. This multiplier was then used to calculate the above-mentioned benefits of the ICT sector's growth in the broader economy

Assessment of the potential impact of the ICT Sector on GDP

The ICT sector contributes significantly to the Greek economy, as its indirect and inductive effects can reach +€20 billion.



* 2.06 is a weighted multiplier type II of ICT suppliers

The image features a hand on the left side, with the index finger pointing towards a central square chip labeled 'ICT'. The chip is surrounded by a complex network of white circuit lines that radiate outwards. Above the chip, the text 'INFORMATION AND TELECOMMUNICATION TECHNOLOGY' is written in a bold, white, sans-serif font. The background is a light gray with faint, stylized icons of a globe, gears, and a Wi-Fi symbol, suggesting a global and technological context.

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AND TELECOMMUNICATION
TECHNOLOGY**

ICT

Key findings

In conclusion...



The ICT sector is a key component of the Greek economy, making significant contributions to employment, attracting foreign direct investment, enhancing public sector efficiency, and more

There is a proven strong positive correlation between digital maturity and countries' economic competitiveness

Expectations for the landmark year 2023, as calculated in the SEPE study in 2019, were exceeded: Instead of €7.2bn. the sector is estimated to have reached €7.4 billion.

The annual growth rate of the ICT sector over the last five years is estimated to be approximately four times that of the Greek economy (CAGR +6.17% vs. +1.65%)

Around two-thirds of ICT executives believe that the sector has the potential to become a key pillar of the Greek economy, provided that existing challenges are addressed first

The main strategic directions of the ICT sector to be adopted are internationalization, innovation, strengthening of human resources and the transition to a "digital first" society

The ICT sector is projected to reach historic highs in 2029, with an estimated value of €10.4 billion, contributing approximately 4.6% of national GDP

A hand is shown on the left side, pointing towards a central graphic. The graphic features a square chip with the letters 'ICT' inside. From the chip, numerous white circuit lines radiate outwards, resembling a printed circuit board. Above the chip, the text 'INFORMATION AND TELECOMMUNICATION TECHNOLOGY' is written in a bold, sans-serif font. The background is a light gray with faint, larger-scale circuit patterns and icons like a globe and gears.

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Appendix

Authoring team:

Nikos Christodoulou, Partner - Technology and Transformation Leader

Sotiris Batzias, Partner – Strategy & Transactions Advisory

Eri Nika, Principal – Strategy & Transactions Advisory

Nikos Vekris, Senior Manager – Strategy & Transactions Advisory

Stevi Kontogianni, Senior Consultant – Strategy & Transactions Advisory

Sources:

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2	Federation of Hellenic ICT Enterprises (SEPE)
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11	European IT Observatory (EITO), “International ICT market report 2020/ 2021”, 2020, eito-sepe_18threport_12)2020_web .pdf
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15	Mordor Intelligence, “Greece ICT Market Size and Share Analysis - Growth Trends & Forecast (2024 - 2029)”, https://www.mordorintelligence.com/industry-reports/greece-ict-market
16	Economist Intelligence Unit (EIU), GDP projections (Greece)

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