



DIGITAL TRANS FORMATION IN GREECE 2019

The road to creating agile organizations

ANNUAL REPORT

 FOUNDATION

 Digital

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FOREWORD



We live in an era where everything changes in a very fast pace. But when it comes to large corporations, the pace becomes slower, as the various organizational structures create friction. Two years after our first attempt to map the country's progress in digital transformation, how far have we gone?

This is not an easy question to answer. Progress is hard to measure and -in this case- figures included in business reports and excel spreadsheets do not always tell the whole story. Digital transformation is a process that can take years in order to be implemented across an organization. Seen from this perspective, one can claim that Greek enterprises have taken the first steps and are moving towards the right direction.

Our survey, conducted for the second consecutive year, allows us to draw an optimistic picture, even though there is still much work to be done. When asked about their companies' digital transformation attempts, executives feel positive, although they recognise the challenges and identify the barriers.

What becomes more obvious is that everyone, regardless of seniority level or position, is starting to feel the need to evolve inside their organisations. The threat of automation is still distant for many, but the need to upskill is becoming more pressing.

Digital transformation is now a term often used in the business world. Large organizations are adopting innovation and customer-centricity as large parts of their strategy - and even begin relying on data collection and analysis more heavily than in the past years. The few companies that started gathering data are now leveraging the benefits and becoming the case studies for other companies. Even on a national strategy level, digital transformation is put on the top of the agenda.

Compared with other countries, Greece still has a long distance to cover. But overall, it is encouraging to see that the first steps have been taken and the future is promising - a hope long deserved after years of austerity measures and cutbacks.

When asked about their companies' digital transformation attempts, EXECUTIVES HAVE POSITIVE FEELINGS, ALTHOUGH THEY RECOGNISE THE CHALLENGES AND IDENTIFY THE BARRIERS.

ABOUT

EIT DIGITAL

EIT Digital is a leading European digital innovation and entrepreneurial education organisation driving Europe's digital transformation. Its way of working embodies the future of innovation through a pan-European ecosystem of over 200 top European corporations, SMEs, startups, universities and research institutes, where students, researchers, engineers, business developers and entrepreneurs collaborate in an open innovation setting. This pan-European ecosystem is located in Amsterdam, Berlin, Braga, Budapest, Brussels, Eindhoven, Edinburgh, Helsinki, London, Madrid, Milano, Munich, Nice, Paris, Rennes, Stockholm, Trento, and San Francisco.

As a Knowledge and Innovation Community of the European Institute of Innovation and Technology (eit.europa.eu), EIT Digital invests in strategic areas to accelerate the market uptake and scaling of research-based digital technologies (deep tech) focusing on Europe's strategic, societal challenges: Digital Tech, Digital Cities, Digital Industry, Digital Wellbeing, and Digital Finance. EIT Digital breeds T-shaped entrepreneurial digital talent focused on innovation through a blended Education Strategy that includes a Master School, an Industrial Doctoral School and a Professional School.



www.eitdigital.eu

FOUND.ATION

Found.ation is a leading startup-enabling platform for tech-oriented products & services in SE Europe, a digital transformation accelerator for corporations and a tech education hub.

Found.ation helps brands embrace Digital Transformation by disrupting every sector of their operation, unlocking potentials and resources, setting the foundations for future development and accelerating growth, based on innovation. We connect brands, startups, business leaders and young talent in order to create a successful, future-ready entrepreneurship ecosystem in the tech space and across various industries.

The Found.ation team strongly believes in the interaction between established corporations and startups. One of the key roles of Found.ation is to highlight these opportunities for cooperation between these two polar opposites. It already works with companies and organisations such as Eurobank, Papastratos - PMI, Microsoft and the Municipality of Athens.

In 2016, Found.ation started cooperating with EIT Digital, under the ARISE Europe Programme, with the objective of strengthening the Greek startup ecosystem and enhancing the Digital Transformation of local corporations even further. Through the implementation of common, well-structured initiatives the aim of the collaboration is to initiate discussions and enhance cooperation between small and big companies. This will help both startups expand and grow and corporates adapt and evolve. Currently, the collaboration has been extended to include Cyprus, Romania, Albania and Bulgaria.



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Objective €

METHODOLOGY

This report was prepared by Found.ation in order to provide a valuable scope of the Greek business ecosystem, offer valuable insights and examples on up to date practices, examine the degree to which companies and large organisations have adopted Digital Transformation procedures, and pinpoint the reasons for any delays. The report follows the strategy of selected large organisations that operate in the country and aims at drawing attention to the need for transformation.

Instead of trying to define what Digital Transformation is, the report focuses on key points that summarize the strategies most commonly practiced by industry leaders. A brief review of developments in Europe and the world follow, as well as a short summary of the Greek economic and digital indexes to provide a context of understanding the frame in which Greek companies operate.

The major limitation of this report is access to data, as digital transformation is not easily measurable. Similar reports focused on the region are usually based on quantitative research; mostly questionnaires that are sent to companies. This report is partly based on and refers to their findings but goes beyond that in an attempt to give a good indication of insights and outlooks of the Greek scenery, its needs and perspectives. We have conducted a research of our own, targeting a very specific sample - namely business executives of large companies that operate in Greece. The infographics and data presented in charts on the 'Private Sector' chapter of this report are driven from this research.

WHAT'S NEW?

For the third version of this report about Digital Transformation, Found.ation conducted an updated survey that was completed by industry stakeholders from various Greek and multinational companies that operate in a broad spectrum of sectors. The purpose of the survey was to examine the degree to which companies and large organisations have adopted Digital Transformation, as well as identify the extent of knowledge that individual employees have regarding to Digital Transformation and its practices. Therefore, this updated version offers a better look into the transformation from the employer's point of view, as well as more data to help us understand the situation in the country.

As we do each year, in 2019 we have also selected two companies that operate in Greece - Alpha Bank, one of the four large systemic banks, and L'Oreal, an international pioneer in its sector- whose strategic approach to Digital Transformation can be viewed as interesting case studies.

A statement from the Ministry of Digital Government has been included in the report to provide a scope of what comes next for the Greek business ecosystem, as seen by the new government.



Forming the next business LEADERS



Filippos Zakopoulos
Managing Partner,
Found.ation

On the brink of the 20th century, when the second industrial revolution had kicked in, there were the champions, the followers and the losers. In our history books there are many names recorded. Yet in our memory there's one that prevails: Henry Ford. It's not just the fact that his vision brought the car to the masses, or that he made mass production a reality, or even that his

words made great and memorable quotes. Ford did not invent the automobile, nor the assembly line. But he identified the opportunities, oversaw the challenges and risked to differ. He was a true leader, a change agent and a visionary – the kind of champion that we need now that another industrial era begins.

Within a century, humanity has been going through two more industrial change cycles, first when the computers became powerful, and now, that digital technologies are merging with humans' physical lives. One could go on for pages explaining all the benefits that the fourth Industrial Revolution will bring as well as all the threats and dangers that lurk behind it. Humanity as a whole, evolved and thrived during the previous three revolutions. During the transition though, the success and benefits were not equally distributed to all. Some payed an inevitable cost. The chances are that the next revolution, as well, will benefit humanity in general, but some will pay a transition toll. To be on the winning side, one should focus in moving smart and seeing forward.

For many, Ford's legacy and the publication, in 1911, of Taylor's 'Principles of Scientific Management', started what has been coined "The Management Century". Ford built his company to work like a well-oiled machine based on a strict framework and the principles of management. The business world, during this management century, was focused too much on efficiency. And it was the right thing to do. For most, efficiency in large

scale production and in large scale marketing was largely translated into sales that would in turn attract the best talent. Today, this may not be enough. With machines that can work a million times more efficiently, old management models seem inflexible and outdated, and it may be time to transform again.

Most companies are now facing a paradox. They have a well-trained 21st century customer, with 20th century technology and almost 19th century organization design. To make our businesses more agile, we must become more agile ourselves. As in every industrial revolution, upskilling and reskilling our people as well as setting new organizational framework practices are the key. Companies should adapt and act at a more decentralized level, as if they were made of different entities equally responsible for moving forward.

Due to the information revolution, moving forward is easier than ever. We now have data available at our hands that can be analysed and provide insights. Those insights can be used to not only create better products, but to serve each customer with the service he/she wants and needs. Putting the customer at the center and creating new products based on data analysis and evidence-based decision making is the best way to navigate the new reality and stay competitive. However, to do this, an agile framework is paramount.

As a country, we are facing more challenges because of the nature of our industry, which has been less of a productive one in terms of research, development and creation of products. But even services – a big part of our industry- can benefit from the same practices.

This new age already has its frontliners. They're the ones who made the Google and the Amazon and the Netflix of our time. They're the ones who tore apart the structure of their organizations (as Haier did) and learned to work differently. We have some good examples to look upon. But more than a century later, we still recall Ford's sayings and bring him as an example of a pioneer thinker. It's time we create the new leaders that history needs.



Introduction to DIGITAL TRANSFORMATION

The 21st century is characterized by rapid technological change, volatile markets and globalization. Organizations understand the need for disruption, because the consequences of not following the evolution are already weighing in on them. Decision makers are facing multiple dilemmas. Not only do they need to build new strategies, but they also need to identify the key pillars of their organization that have to be re-assessed and then find the right ways to do this. More often than not, even the most experienced managers are not able to accomplish this on their own. Each and every one in a corporation needs to play a part.

There are three basic pillars that must be re-assessed in every organization – no transformation effort can be successful if one of them is neglected.

that they help companies understand, interact and serve their customers. This is a difficult as well as expensive decision, but in both cases the adoption of a new technology is interlinked with the people that will use it.

People

Employees are a large part of a company's culture. Neither of them can change without the other following. The need to upskill is more urgent than ever as automation poses a real threat that in the near future will totally change how most professionals work and how they are assisted by technology to be successful in their job. A company that helps its people prepare best for the future while on the other hand hiring new people under a new perspective can only offer benefits to both.

Technology

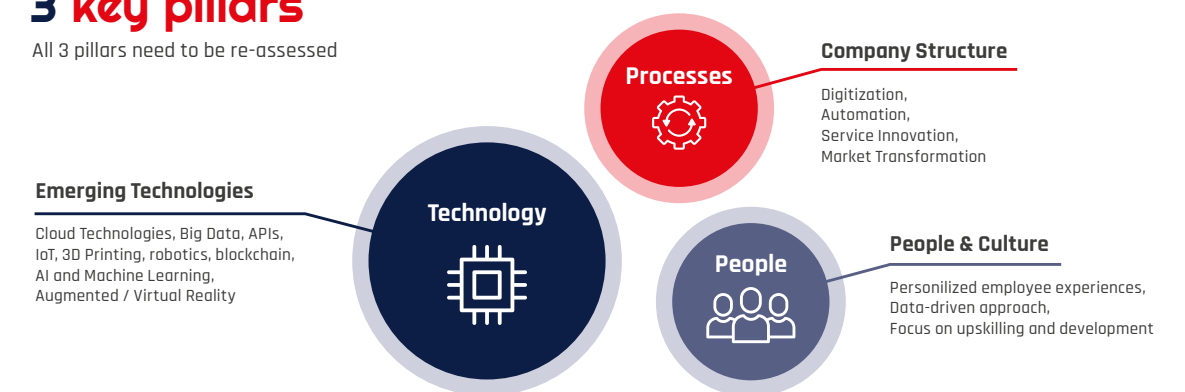
Today we face an abundance of new technologies that can be applied to the business world: artificial intelligence, machine learning, cloud technologies, advanced algorithms that can tame even the largest sets of the big data era – the list of emerging and exciting technologies can be rather long. But the business world does not only need to acquire new technologies as a tool; it is not just about deciding whether a legacy system used can be upgraded or replaced entirely. It should find a way to really adopt these technologies and understand the ways

Processes

The company structure is changing rapidly due to the market needs, trends and technology disruption. The need for restructuring is more urgent than ever. Almost all existing and traditional companies around the world function based on business models and frameworks that were practically developed more than 100 year ago. It is time to reassess whether these structures can successfully serve the new reality.

3 key pillars

All 3 pillars need to be re-assessed



What is organizational agility?

During the last decade, we have seen various business models put to use and we have seen new ones emerge, in order to respond to the new habits of newer generations. All of them proved to be successful when applied on a specific market, addressing to a specific audience. That does not mean they can be applied everywhere - but it does show that agility is one of the most important characteristics of the new era's company.

Let's take a look at some examples. One of the most well-known modern business paradigms is the subscription model, that turns a product into a service. Netflix caused a huge tidal wave when it started disrupting television, the ripples of which we are yet to see in their entirety. Google, Facebook and a few other tech giants, now among the most highly valued companies in the world, are using the "Free model", where the users are offered services for free, but they are becoming the product that the company monetizes from. Then there's the "Access-over-Ownership" model that Airbnb uses, that matches the habits of the Generation Z consumers, who -having been born into an era of digital goods that could be stored online and accessed anytime- seem to be rejecting the idea of ownership and are looking for the thrill of new experiences that can be rented. Then there's the "Ecosystem" model that is mostly identified with Apple, a company that builds interlocking products and services that create habit-forming behaviors and make users not wanting to look elsewhere when it comes to buying a new device.

There are various other business models that can be mentioned, but the point here is that there is not a "one size fits all" solution. Even companies like Amazon, are making use of a plethora of different strategies in order to dominate the market. Amazon uses the Pyramid model, where methods like affiliate marketing still result in increasing sales. But it also applies the Hypermarket model, offering products at cost price in order to penetrate a market and beat competition. It has even followed the Subscription model and created streaming services of its own. So, it's a mix and match approach for some organizations, especially of that size, because success is not the only goal - growth has to be sustainable as well.

Reinventing a business

One name often comes to mind of the people who are most actively seeking for the best practices in digital transformation when thinking about true business disruption at organizational level: Haier. The Chinese home appliances and consumer electronics company inverted the traditional pyramid structure, creating autonomous self-managed operation units that resulted in what the company calls "Zero distance to the customer". In order to create even better experiences for its users, the company is now turned into a platform-based business in order to further encourage its employees to think and act like entrepreneurs.

But while the innovative form of management applied in Haier is an extremely interesting case

study, it is also worth noting that, on its last reincarnation, until it found the right path, the company changed the organization structure 40 times within a period of 5 years. It risked a lot and warned others of the dangers that this aggressive transformation hides. Eventually though, by breaking down the company into smaller teams and by making them flexible manufacturing units, the company is able to continue its history in innovation.

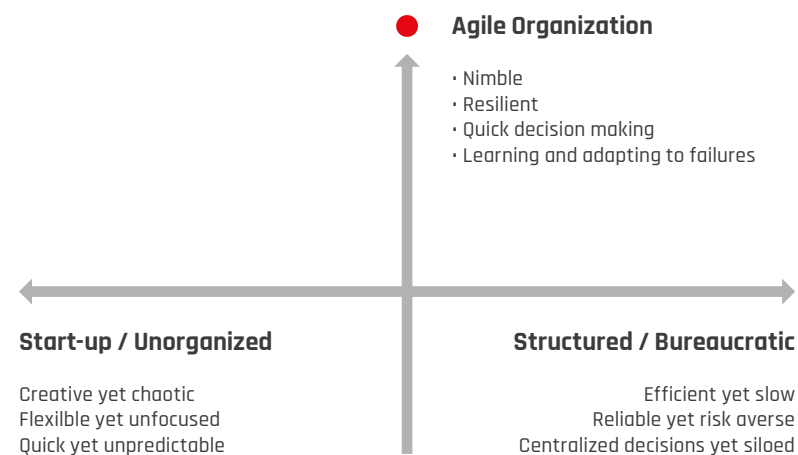
The key characteristics of the agile model

Agile organizations do not have fixed structures with sharp corners any more. The silos are breaking down and the management's position is no longer on the top but in the middle, facilitating and guiding. People and teams are working together in projects no longer barriered by their departments or fielded by their skills. An agile organization lets its talent

flow freely like the electrons inside an atom. Some support mechanisms are in place to assist the flow of ideas and innovation within the teams and to inspire the feel of ownership, intervening where necessary. The leadership provides direction and acts more like a coach than a command authority. Technology remains at the center as an enhancer, flexibility and role mobility is encouraged and employees get an entrepreneurial drive within their organization if they are given the right values.

The main question that emerges is: "How can you make an organization agile, stable and dynamic at the same time?". Companies must design structures, governance arrangements and processes with a relatively unchanging set of core elements - a fixed backbone. At the same time, they must create looser, more dynamic elements that can be adapted quickly to new challenges and opportunities.

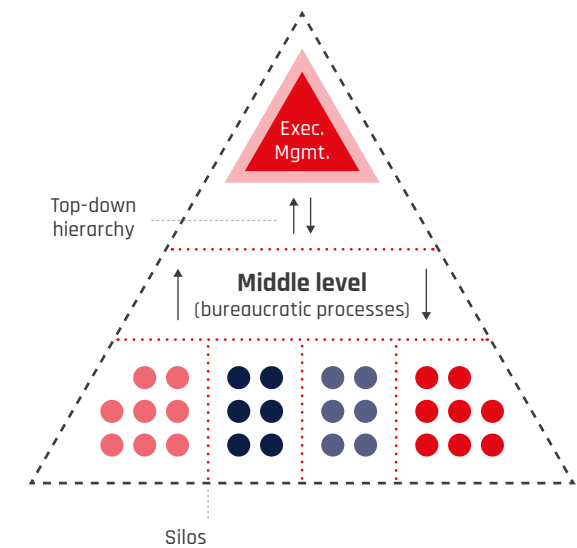
Aiming for agility



Organizations as organisms

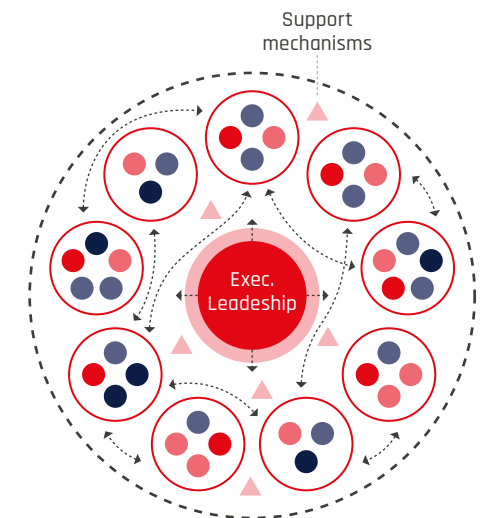
Machine Organizations

- Detailed instructions cascade down the organization
- Efficient in repetitive businesses



Agile Organizations

- Flexibility in changes
- Ownership
- Leadership provides direction



The human capital

A key ingredient for any organization in the cutting edge of innovation are the people who drive it. For this ever changing environment, a different kind of people are required within an organization. Companies organised around efficiency used to hire structured, dedicated, and disciplined people. But today, numerous institutes and educational bodies talk about a new skillset that includes creativity, analytical thinking, active learning with a growth mindset, technology skills, good judgement and decision making. These are often referred to as 'meta-skills', the ones that future workers must develop in order to help their companies be nimble and minimize their own risk of job loss due to automation.

This new type of talent is still very scarce. Our educational systems have not yet adapted to the new reality and this period can be characterized as transitional. Until everyone has the chance to get trained at an earlier stage, companies need to take up this role and help develop their employees themselves.

Identifying these individuals or even teams within the organization becomes critical. It is a constant process that will require its champions, its evangelists and its ambassadors - the people in the right places who ought to be identified and become part of the larger scheme and vision of the organization. To maximize the effectiveness of every transformation recipe, human creativity, business acumen, market intelligence and research insights must be blended in.

A strategy often adopted by large and inert organizations is to hire external consultants to identify problems and propose solutions. Often these solutions may look functional on paper but their application ends up to be a far cry from their design. A different strategy can be to empower internal teams and individuals who will then use their newly acquired skills to continuously generate innovation within the organization. A way to kick start this strategy is to temporarily internalise external talent, collaborating with the employees in a framework that will steadily cultivate a more agile way of working that will continue to function even when this collaboration comes to an end.

Data-driven organizations¹

Change is constant; corporations' digital transformation is a necessity and data can help drive to a competitive edge. In that direction,

companies in various industries of the international market are pursuing data-driven transformation - embedding data collection and analytics throughout their organizations, from sales to marketing, manufacturing, supply chain, management, R&D and so forth. Transitioning from "gut instinct" to data-driven decisions enables firms to identify trends over time, measure performance, discover new solutions and offer better products and services to customers. In fact, vast new data streams are now the guiding force behind new revenue opportunities and the catalyst for dramatic operational makeovers. To make the most out of data-driven decisions, companies first need to build the proper foundation, which includes establishing new processes, onboarding their employees and providing them with tools that will help them gather, clean and analyse a vast amount of data. There is no doubt that big data is paving the way to an analytics-driven future, nevertheless it is what companies will do with that data that determines whether they will win or lose.

A successful data-driven transformation strategy may result in:

a. Creating or retaining a competitive advantage.

Valuable insights can be generated from organizations' data that allow them to serve their customers more effectively. Based on these insights they are able to increase customer acquisition, reduce customer turnover, add value to customer lifecycle or match products and services to customers at the right time, in the right place.

b. Developing better products and services.

In many cases the data collected by companies can help them provide better or even personalised customer experience. This experience may be delivered on a digital platform or in a physical manner. The insurance market is one of the industries that actually bases its customer management system and product development processes almost exclusively on big data analytics, being able to offer highly customized personal or business solutions.

c. Operations' optimization.

Most organisations can improve operational efficiency through observations in their data. Data analysis or advanced analytics can generate actionable insights for informed decision making. Large transportation companies and utilities are starting to make the most of this area.

Reaching this stage requires proper infrastructure and most important, a culture that is driven by the need for data. The cultural change towards a data-driven model would not only facilitate data transformation, but also ensure that organizations have the infrastructure necessary to deliver and take advantage of adequate data. Data-driven culture is cultivated in organizations that train and motivate their employees in order to acquire the right skills and assign them the right roles. In this way, employees develop a data-driven mind-set and an appetite for change that become part of the organization's DNA.

The role of IT: Centralized vs. decentralized

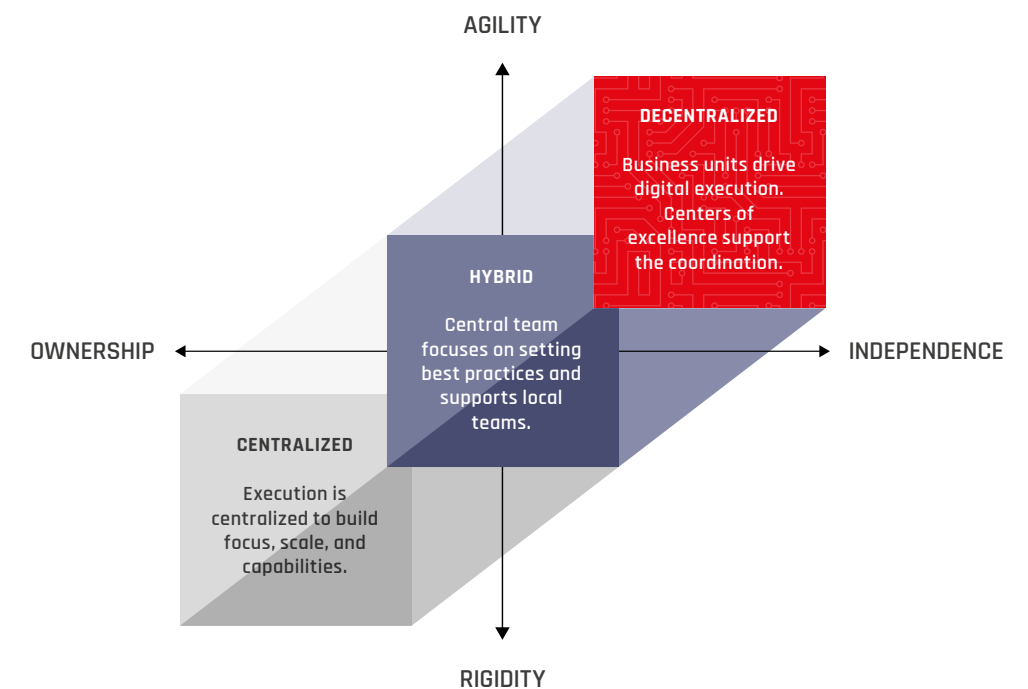
Operating on a centralized technology structure has been a successful norm in businesses for many years. By having systems, roles and tech governance under one department, benefits are gained via reuse, standardization and prioritization throughout the organization. This, however, had some side effects - it often led to agility and performance being stifled and constrained.

Strategies that require intense coordination across departments and focus on the implementation of

heavy digital projects, may be better supported by a centralized IT model. In addition, centralizing probably makes sense for companies with weak expertise on digital technologies.

A decentralized strategy overcomes departmental boundaries, and organizational decision making is distributed across the company. Business units are independent and responsible for their digital activities, yet they receive support from one or more centres of excellence. With this model the different departments find it easier to develop a digital culture and nurture innovation by recruiting team members with strong digital skills. The downside is that digital transformation projects may not have an advocate in the executive suite, putting digital transformation in a disadvantaged position compared to other company priorities.

Under the hybrid approach, an organisation's departments continue to run digital activities, but they work closely with a central IT team on best practices and other forms of support. Digital has support at the top, and the company can maintain a good balance between global consistency and local initiative. Companies that adopt a hybrid approach need to create effective reporting lines and a clear delineation of decision rights and accountability.



1. Excerpt from: Foundation and EIT Digital, "Data-driven Transformation White Paper" <http://thefoundation.gr/data-driven-transformation-white-paper/>

DIGITAL TRANSFORMATION '19

GLOBAL TRENDS

In the mid-September of 2019, the Secretary-general of the United Nations Antonio Guterres, defined what comes next: "There is no doubt: Innovative technologies such as artificial intelligence, 5G and the Internet of Things, can help us achieve the sustainable development goals and improve the lives of all."¹

Before him, Angel Gurría, the Secretary-General of the Organisation for Economic Co-operation and Development, also claimed on the occasion of the OECD report "How's Life in the Digital Age?" in February 2019: "Digital technologies have radically and rapidly changed the way we work, consume and communicate. Ensuring this transformation also

improves our well-being means addressing such issues as digital equality, literacy and security."²

It's not just the technology that facilitates digital transformation. The success comes from customers, employees, culture and continuity; all are at the heart of the technology investment. While budgets are soaring and the list of disruptive technologies on the radar of stakeholders is expanding, customer experience leads digital transformation investments. The employee experience and organizational culture are rising in importance to empower and accelerate change, growth, and innovation.

Existing operations and legacy technology infrastructure pose a risk to companies that can't transform quickly enough to compete against

companies that were "born digital"³. The operational challenges surrounding an integrated digital transformation journey are much more depended on human capital, than on technology itself. As organizations embrace the rapidly changing environments by trying to gear up and align their culture, people, processes and intelligence, resistance to change and digital skills are among the factors that put at stake the success of digital transformation.

Throughout 2019, the percentage of Chief Innovation Officers and Chief Digital Officers that were empowered to drive transformation initiatives in the organization has been increased. Breaking the silos by forming cross-disciplinary formal working groups (51%), as well as informal ones (47%) indicates that the startup culture has just invaded into large companies' operational systems. Such initiatives are the trademark of the innovative culture being built in the businesses⁴.

**What's next for 2020?
5G, data analysis, machine intelligence
and security.**

The main highlight of the new era is 5G. 2020 will be the year of 5G, which seems that can help the world move forward in the process of digitalisation. Great advancements in the fields of smart city, smart vehicle and smart manufacturing are expected to be accelerated due to the proliferation of 5G. This technology evolution will define 2020 touching every industry and transforming our everyday life. Faster connections means a faster world - as far as it concerns devices and software.

Problem solutions and business opportunities are no longer the result of a visionary manager's

instinct anymore. A company that doesn't count on and invest in analytics won't probably survive the competition in the future. Customer data must be collected, processed and converted into valuable insights for any organization in order to remain competitive. It is customer experience that is tied upon a successful digital transformation journey. Even if the design of the right strategy and the turn of raw data into useful insights is not an easy task, the meaning of data is rising as a priority. The age of information has become the age of data that has become the age of personalization⁵. And the data will determine their way: to win or lose.

AI and machine learning are the complementary key factors of the data-driven digital transformation. An investment on data means also an investment to the AI and machine learning. The size of the data is immense and without its assistance, their analysis time would be much longer. Data analysis has become extremely good because of the AI and machine learning algorithms and the easy scale on the cloud.

What is more, Blockchain is expected to rise in 2020, beyond cryptocurrencies and payments, in sectors such as food safety, real estate management etc. along with the Robotic Process Automation (RPA) which is a hot topic regarding such investment. This does not only affect business operations and customers but also the employees who, through RPA, may have the opportunity to get upskilled and increase their value. Data security issues are predicted to be hot in 2020. The EU GDPR establishment along with the privacy scandals from private technological colossus shall lead the companies to get serious about privacy and data security issues.



1. Euronews, "5G and SMEs: the keys to digital transformation at ITU Telecom World in Budapest", <https://www.euronews.com/2019/09/13/5g-and-smes-the-keys-to-digital-transformation-at-itu-telecom-world-in-budapest>
2. Organisation for Economic Co-operation and Development, "Seize the opportunities of digital technology to improve well-being but also address the risks", <https://www.oecd.org/newsroom/seize-the-opportunities-of-digital-technology-to-improve-well-being-but-also-address-the-risks.htm>

3. According to research conducted by North Carolina State University's Enterprise Risk Management Initiative and management consulting firm Protiviti Inc., this risk factor surged to the top spot for 2019, up from 10th place in the 2018 report (source: <https://blogs.wsj.com/riskandcompliance/2018/12/05/businesses-predict-digital-transformation-to-be-biggest-risk-factors-in-2019/>)
4. Insight Technology Trends 2019 Report, https://www.insight.com/en_US/content-and-resources/gated/2019-intelligent-technology-index-ac1175.html
5. Foundation, Data-Driven Transformation White Paper, <http://thefoundation.gr/data-driven-transformation-white-paper/>

DIGITAL TRANSFORMATION IN GREECE: THE COUNTRY'S DIGITAL PROFILE

Greece's position on the Digital Economy and Society Index (DESI)¹ for 2019 has made a slight progress compared to the previous year and the EU average increase, as well. For 2019, the country ranks 26th out of the 28 EU Member States and still belongs to the low-performing cluster of countries along with Romania, Bulgaria, Italy, Poland, Hungary, Cyprus and Slovakia.

Despite the fact that Greece marginally improved its performance regarding its Human Capital and the supply side of digital public services (both DESI dimensions led to the improvement of the score) the country is placed for one more year under the EU average. However, Greeks are still considered to be active users of Internet services with their number growing. A large percentage is keen to engage in a variety of online activities, such as reading news online and using video calls – way ahead of the EU average.

As far as it concerns enterprises, the use of big data is higher than the EU average. On the other hand, the progress in integrating digital technology has been slow.

Connectivity

For third consecutive year, Greece's overall connectivity score places the country at the bottom among the Member States, even though it has been improved in the last couple of years.

In addition, the take-up (74%) is still progressing slowly, due to high prices, even though the country features wide availability of fixed broadband with 96% coverage (EU average - 97%).

The transition to fast broadband connections is again slower than the EU average - even though it has been increased by 4 percentage points. 4G coverage has been increased to 92% -6 more percentage points than 2018 and close to the EU average (94%). However, the mobile broadband take-up (74/100) is still far from the corresponding EU percentage (96/100). The increase of 13 percentage points ranks Greece 26th among the Member States in NGA coverage per household (66%) - far below the EU average of 83%.

Ultrafast broadband coverage and take-up percentages are still below 1% - a fact that indicates the absence of relevant networks. The Superfast Broadband project, designed to support the country's take-up of broadband services with download speeds of at least 100 Mbps, was approved in December 2018. The Ultrafast Broadband project (UFBB), designed to cover most areas of the country that will remain NGA white - is estimated to cover about 2.5 million people at national level.

Despite the fact that Greece's performance places it in the last positions among EU countries, the country is one of the successful Member States in the WiFi4EU first call.

Trikala, Kalamata and Zagradou have already signed memorandums of understanding for the deployment of pilot 5G networks. Moreover, Greece has also signed an agreement with Bulgaria and Serbia to implement a 5G pilot cross-border corridor.

Greece hopes to benefit from addressing delays in implementing the projects, the absorption of the funds allocated, proceedings for antenna permit granting, and promoting 5G development by creating the right conditions for private investment in order to improve its digital competitiveness and status. In addition to this, the timely and correct implementation of regulatory decisions needs to be secured. Greece should take appropriate measures and address the issues concerning the implementation of the European emergency number 112 without further delay.

Human Capital

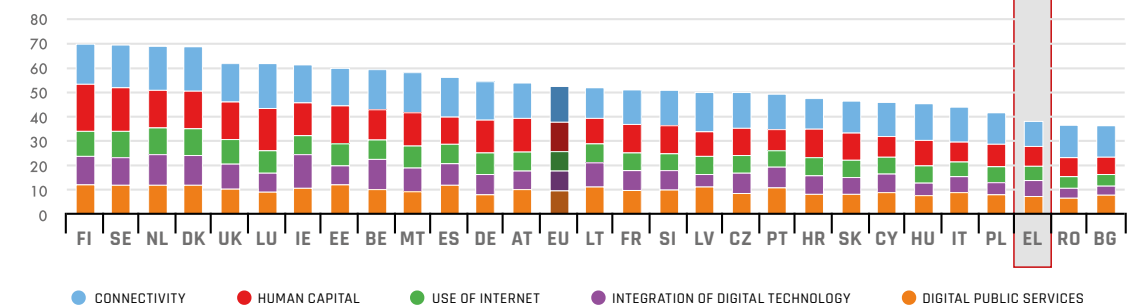
Greece's performance in the human capital dimension may be well below the EU average, but it is making progress.

46 out of 100 Greeks between 16 and 74 years old had at least basic digital skills (57% in the EU) in 2017. In comparison to the EU average, Greece seems to be included among the 10 last Member States in the majority of the categories relevant to the human capital.

Greece, for third consecutive year has the lowest share of ICT specialists in total employment in the EU: 1.6% in 2017, compared with an EU average of 3.7%. What is more, women IT Specialists in Greece seem to share the lowest percentage in the EU (only 0.4%)³ compared with the EU average (1.4%), and it has stagnated over the last three years. Referring to the proportion of ICT graduates in the total pool of graduates (3.2%) means that Greece is performing below the EU average.



Digital Economy and Society Index (DESI) 2019 Ranking



Source: European Commission, DESI 2019

Aiming to upgrade digital skills and competences among the public, Small and Medium Size Enterprises (SMEs) and civil servants several initiatives took place in the context of the Greek National Coalition for Digital Skills. The National Coalition is mostly interested in forging synergies among public and private sector agencies, ICT enterprises, universities, research institutions and other entities. Partners are bound to the aims of the Coalition through pledges, i.e. the commitment to implement vocational training, seminars and, in general, to enhance diffusion of digital skills to all citizens regardless of their level of ICT knowledge. Generally speaking, as Greece aims to achieve its goals in terms of growth opportunities and the digital society and economy, the shortfall of digital skills remains a major obstacle. Increasing Greek ICT specialists and closing the gender gap are very important.

Use of Internet Services

The number of Greeks being active users of Internet services is growing every year. As a result, Greece is slightly above the EU average. Reading news online (87%) and making video calls (61%) rank Greece among the top ten in terms of the above specific online activities. E-transactions with banking institutions via web banking services have also been increased (38%) in 2018 but the percentage still remains way below of EU average of 64%. As for shopping online, it seems to be increased from 45% in 2017 to 49% in 2018. Nevertheless, the percentage of people who never used the Internet is still high (25%), compared to the EU average (11%), ranking Greece to the 27th place.

Integration of Digital Technology

Greece's overall performance in the field of integration of digital technology by businesses remains below par (32.8%), progressing slower than the EU average (41.1%). For third consecutive year the use of electronic information sharing (37%) is

above the EU average of 34%. Social media are used by enterprises as much as on average in the EU (21%). Additionally, the enterprises in Greece are increasingly taking advantage of the opportunities provided by big data: 13% of them report using big data (above the EU average of 12%). However, only 7% use cloud computing; while this represents a 2% increase since last year, it remains below the EU average (18%). At the same time, the total e-commerce turnover of Small and Medium Size Enterprises (SMEs) has been decreased from 6% (2016) to 4% (2018), when on EU the percentage reaches the 10%.

Digital public services

In the Digital public services dimension Greece ranks 27th among EU countries. Despite the fact that the country is well below the EU average, it has made progress; Greece's score rose by 7.4 points in 2018 while the average EU increase was only 5 points over the same period.

Against an EU-wide average of 64% only 36% of internet users in Greece are active users of e-government services. The availability of digital public services for businesses on the other hand, increased significantly with a score of 65 and compares favourably with the increase between 2016 and 2017.

For e-health services, only 10% of Greeks have used health and care services provided online, especially those who live in remote rural areas and islands with the assistance of the private sector.

Greece has established a National Cyber Security Authority at the Ministry of Digital Policy, Telecommunications and Media. The strategy is designed to develop a secure cyberspace for both private and public stakeholders by improving capabilities for protection against cyber-attacks and by developing a strong culture of cybersecurity among the general public and private sector stakeholders.

1. European Commission, The Digital Economy and Society Index 2019, <https://ec.europa.eu/digital-single-market/en/desi>
 2. 33.5 in DESI 2017, 37.4 in DESI 2018, 41.2 in DESI 2019
 3. European Commission, Women in Digital Scoreboard 2019, <https://ec.europa.eu/digital-single-market/en/women-ict>

DIGITAL TRANSFORMATION IN GREECE: THE PUBLIC SECTOR

Taking into consideration that Greece ranks 26th out of the 28 EU Members in the European Commission Digital Economy and Society Index (DESI) 2019¹, the Digital Transformation seems to be one-way street towards economic growth and development. In Digital Public Services, and especially in indicators of the e-government users and the e-health, Greece is among the countries that have the lowest scores.

The digitalization of the public sector had been proclaimed as a crucial element and its detailed goals, as also mentioned in the “Digital Transformation in Greece 2018” report published by Foundation and EIT Digital, were described in the National Digital Strategy (NDS, 2016-2021), set by the previous government.

After the elections of July 2019, the new government set as priority the digital transformation of the state since “it must be at the service of the citizen”². The public administration and its services would be simplified and become digital in order to be able to communicate easily with the public at home or at the workplace; having set the above as the main goals of the state governance, the Ministry of Digital Policy, Telecommunications and Media has been renamed into Ministry of Digital Governance.

The aim of the government is to improve how it provides services in order to meet the needs of their citizens. A potential continuous failure to embrace these expectations could again lead to irrelevance, citizen frustration and eventual disengagement³.

Bringing together for the first time digital policy, e-government, and citizen service, the new public administration unit aims to the provision of

electronic services to citizens and the country’s wider digital transformation. It is a single business-level structure that comes to correct the fragmentation of units and systems affecting the quality and cost of the services provided⁴.

Hoping to embrace the practice of Estonia - a country which is described as “the most advanced digital society in the world”- the former president of Estonia, Toomas Hendrik Ilves, took over as an advisor to the Ministry of Digital Governance, with the aim to draw up Greece’s “digital bible”, the country’s strategy for digital transformation.

The first project is to achieve interoperability of state records, with different ministries able to communicate and share information, in order to provide citizens with quality services and minimize inconvenience for the public⁵. It is underway including initiatives such as the unified identification of citizens in public registers⁶ and the electronic completion of authorizations and declarations, the one way access of existing services found in websites of different Ministries⁷ etc.

The Interoperability Center of the Ministry of Digital Governance (KE.D)⁸ is the key tool so as to implement the digital transformation of the public sector. Aiming to interconnect the public administration electronic services, it provides a unified environment (infrastructure) for the deployment and use of online services, through which operational data is exchanged between the Ministry of Digital Governance and the public authorities. The statistics regarding KE.D are indicative of a growing interest from the citizens: in the 1st Q of 2019, there have been made 1.071.226 visits at the Web Services section while in the 2nd Q this number has been increased to 1.161.713 visits⁹. Even though Greece has made improvements in the e-government sector, it still remains below the EU average¹⁰.

According to the “eGovernment Benchmark 2019”, Greece is at 27% when it comes to the penetration of e-services, while EU average is 57%. In the field of digitization of public services, the country



stands at 51%, while the European average is at 68%. “Greece is characterized by a low level of penetration and a low level of digitization. Therefore, it belongs to countries that do not fully exploit the opportunities offered by ICT.” The improvement and the addition of more services and public organizations, citizens and businesses in the KE.D, however, are expected to lead to a broader use of the platform more and more as they are going to have up-to-date and valid information at their disposal. Rationalizing the processing of information by the individual body is expected to lead to scale economies.

Key risks towards digital transformation are on the top in every country’s case. These risks are the real obstacles the government shall overcome in order to succeed.

Legacy systems risk arises from the use of outdated technologies that may

- no longer be supported by their creators
- require special skills to maintain
- create barriers to integration with new technologies
- require significant spending to maintain

As outdated procurement methods lead governments to maintain legacy systems instead of seeking newer enabling technologies, Greece has to take a significant decision taking into account the skills costs, the risk of losing the ability to support legacy systems and the accumulating technical debt.

Cyber security risk is also a theme regarding legacy systems. The inability to secure and the lack of updates may lead to data breach. When evaluating the overall costs of digital transformation, organizations potentially affected must review the cost of data loss, business disruption, regulatory penalties and other factors.

The human capital is also a huge factor in the digital transformation. Greece still suffers from brain drain as a result of the debt crisis. More than half of the Greek citizens polled¹¹ were in favor of controlling the numbers of emigration out of their countries, rather than immigration into their nations. Emerging talents drive away towards increasingly competitive and digital labour markets as the country fails to keep up to date with digital transformation.

11. Greek Reporter, 'Study Finds Brain Drain is the Biggest Worry of Greeks and Other Europeans', <https://greece.greekreporter.com/2019/04/01/study-finds-brain-drain-is-the-biggest-worry-of-greeks-and-other-europeans/>
12. Press release (in Greek): <https://mindigital.gr/archives/891>
13. PDF available in Greek: http://www.opengov.gr/digitalandbrief/wp-content/uploads/downloads/2016/11/digital_strategy.pdf

BRINGING TOGETHER FOR THE FIRST TIME DIGITAL POLICY, E-GOVERNMENT, AND CITIZEN SERVICE, the new public administration unit aims to the provision of electronic services to citizens and the country’s wider digital transformation.

Flexibility, innovation and rapid technology adoption, along with a modern digital workplace may reduce the risk of losing skilled workers.

One of the main tasks of the Ministry of Digital Governance is to complete the major projects that are needed to change the age¹². One of them, also described in the National Digital Strategy (NDS, 2016-2021)¹³, is the Ultrafast Broadband (UFBB) action. In November 2019, ten companies have expressed their interest in participating in the construction and operation project of key fiber optic network, which will be implemented through a public-private partnership (PPP). It is the largest PPP project in Greece today and one of the largest of its kind in Europe. Having a budget of €700 million, with €300 million coming from public funding, it concerns 2.4 million citizens and businesses, generating more than 810,000 connections of at least 100Mbps. Through this project, millions of citizens and businesses access to speeds that meet modern requirements. It is the key project for the construction and operation of an optical fiber network, to be implemented through a public-private partnership (PPP).

1. European Commission, The Digital Economy and Society Index (DESI), <https://ec.europa.eu/digital-single-market/en/desi>
2. As mentioned in a statement by PM Kyriakos Mitsotakis, <https://www.amna.gr/en/article/377043/PM-Mitsotakis-Digital-transformation-of-the-state-is-a-one-way-street>
3. Public Policy Forum, The Risk of the Digital Status Quo, <https://ppforum.ca/publications/digital-status-quo/>
4. As stated in the Ministry’s mission page (in Greek): <https://mindigital.gr/to-ypourgeio/apostoli>
5. ANA-MPA National News Agency, ‘Pierrakakis: Greece needs to win the digital governance wager’, <https://www.amna.gr/en/article/390376/Pierrakakis-Greece-needs-to-win-the-digital-governance-wager>
6. Press release (in Greek): <https://mindigital.gr/archives/885>
7. Press release (in Greek): <https://mindigital.gr/archives/889>
8. <https://www.gsis.gr/en/ked>
9. General Secretariat for Information Systems, Statistics of the Interoperability Center KED <https://www.gsis.gr/en/public-data/statistics-interoperability-center-ked>
10. <https://ec.europa.eu/digital-single-market/en/news/egovernment-benchmark-2019-trust-government-increasingly-important-people>

A statement from the Ministry of Digital Governance



Kyriakos Pierrakakis
Minister for Development and Investments

It is known that Greece is starting from a rather weak point with regarding digitalization, since it ranks 26th out of the 28 EU member states in the European Commission Digital Economy and Society Index (DESI) 2019. Our primary aim as a government is to compare with the EU average within the next 4 years. In order to achieve this we are executing a comprehensive digital strategy.

Our first move was to create the Ministry of Digital Governance, which in its current form is a completely new entity, directly reporting to the Prime Minister. Our aim is to match the bureaucratic simplification with the digitalisation processes, which run in parallel. Our philosophy is: simplification before digitization; otherwise we risk digitizing byzantine administrative processes.

Therefore, the Ministry has four main goals. The first one is to create a gov.gr website similar to the one the UK has developed. It will streamline and simplify how citizens and businesses find and use government services. In parallel, we are also running a horizontal simplification project called "the life events project". We are currently mapping the life events of our citizens - starting from birth, to obtaining your driving license, going from primary school to high school, to getting married and more. The third pillar has to do with the new digital identity card. Estonia is our role model in this regard. The fourth pillar, is the transition from the 4G to 5G era.

Collectively, these projects have the potential to make Greece leap forward regarding its digital position in comparison to the European average. It follows that the solutions that we need on digital are not technological but rather political—in reality, it's not about adopting new technologies, it is about the political will to make decisions which affect the structure and operational framework of the state.

What we are trying to do right now is to detect what is missing in order to facilitate a complete ecosystem similar to what you can find in Israel or Estonia. We want to create more spin-off companies out of the research conducted in the universities and we want to attract talents. We want to create incentives for foreign direct investments, especially for technological companies to come in, because we believe that these companies could create significant economic spillovers.

In essence, we want to build an economy that innovates. The development of the start-up ecosystem has been one of the biggest success stories that happened over the last 10 years. We believe that we need to change the economic mix of the country, to become more extrovert, to attract foreign direct investments (FDI) and export more products. Digital technologies are a catalyst in this endeavor.

This report plays a pivotal role in helping us and all other stakeholders of Greece's technology community achieve this goal.

Digital Transformation and the Academia: the case of ELTRUN (AUEB)



Prof. Georgios I. Doukidis
ELTRUN lab manager

ELTRUN (www.eltrun.gr) is the E-Business Research Center of the Athens University of Economics and Business (AUEB). With more than 30 researchers and more than 150 national and international successfully completed R&D projects, ranks among the greatest research centers in E-Business across Europe. ELTRUN emphasizes

and invests in the good use of research data, in collaboration with well-known private companies and public organizations.

A long-term research of ELTRUN analyzes the features of 100 big Greek companies that involve in digital transformation initiatives. Companies, in the three dimensional model of digital transformation (customer experience, business process, business model) focus in great measure on the transformation of customer experience and particularly at the first levels of 'understanding the customer and his behavior', on automatization, and the modernization of selling process and upgrade of the customer experience at contact points. As it concerns the business processes, some first organized efforts are being made emphasizing in digitalization -not reorganization- of the processes, supporting -not upgrading- the corporate members' job and in administration through business performance by making use of the original business analytics models. Concerning the transformation of business model, there are only organized efforts by multinational companies inside their international digital expansion which create an integrated environment with their subsidiary companies and their effective supply chain for their big B2B clients. Despite their size and organisational readiness concerning informatics, the particular Greek companies are located at the early stages of digital readiness since only 6 in 10 have a clear digital strategy plan which in some occasions is relative with the business strategy, 1 in 3 have lately plan this strategy (last 2 years), while only 1 in 3 can be considered that already have passed the early stages of digital transformation as presented above.

Lack of specialised human resource with digital skills able to engage in digital transformation projects is an international problem. For example, until 2020 750,000 job positions will need to be covered by people with digital skills, in Europe alone. For that reason, many European countries already implement integrated programmes for development and upgrading the local human resources in order to cover this demand and attract investments in technology. In Greece, unfortunately there isn't any equivalent national action plan. If anything, the problem is much bigger because the relative university departments accept less than 5% of total entrants while market demand for specialised personnel is much bigger. Also, some study courses are out-of-date and do not educate the students in modern system development tools, infrastructure and systems technology. In contrast, Master programme of AUEB's department of management science & technology emphasises in digital transformation with 12 specialised classes on the three knowledge pillars of the subject: good use of digital technologies in business (ERP, CRM, BA etc.), optimal practices for digital transformation in important branches (banks, retail, tourism, industry) and digital transformation programming and management in business.

Unfortunately, Greece ranks lowest in Europe about its digital performance. There are five pillars where Greece must optimize innovation, productivity and competition by applying digital technologies:

- Good use of digital technologies in private sector to increase competition
- Improvement in public sector efficiency by making good use of digital technologies
- Adopting digital technologies and leveraging allied innovative services by citizens/ consumers
- Strong digital technology industry which will support and guide an innovative economy with new fields in innovative business activity
- Connective framework of a policy that supports increase in productivity through digital technologies.

DIGITAL TRANSFORMATION IN GREECE:

THE PRIVATE SECTOR

Greek enterprises have realized that digital transformation is not only about technology, but also acknowledge that it is about the human factor - and how critical its role is. What is needed to be established is a proper groundwork with the aim to make the digital transformation happen. But there is a trap: a company may end up merely moving its problems from one platform to another, from one operational status to another, making the whole process a waste of time and money. Business innovation is a matter of management change and the soft skills of an enterprise.

Surveys regarding digital transformation in the private sector have been conducted in Greece during the last years. One of the most complete took place by ELTRUN, the E-Business Research Center of the Athens University of Economics and Business (AUEB) this year¹, indicating that the companies involved in digital transformation projects have a great extroversive character,

organised digital channels and upgraded IT departments. Companies are also heavily focused on transforming the customer experience and in particular on the first levels of understanding the customer and his behaviour, automation, modernizing the sales process and upgrading the customer experience at contact points. Digital maturity and integrated digital strategy are still in the early stages.

For a second consecutive year, Foundation conducted its own survey. Its target was the Greek high level profile corporate executives with the aim to outline the reality of digital transformation in their organizations and businesses. The survey was sent to and completed by senior professionals employed at large Greek and multinational corporations that have showed interest in the matter. Regarding demographics of the survey, the vast majority of the participants were men (63%) in their mid 30s (35-44 years old) by 43%, that are

part of the managerial staff (62%), with 20 years of corporate experience (on average), and holding a Masters' degree (66%).

Comparing to the previous Foundation's survey, the top 3 reasons why their organizations must embrace digital transformation are still the same: seeking new growth opportunities, changing the way that they operate, understanding and incorporating new technologies. The answers that follow are also related to overcoming financial challenges, reestablishing their position as leaders and their status behind their competitors.

Digital transformation is a tangible reality towards the 4th Industrial Revolution

The executives surveyed, in a vast majority (90%) responded that their company already runs projects that include a digital transformation scope or are part of a broader digital transformation roadmap while a rather low rate of 10% claimed that they do not do anything relative. There is an almost 10% increase on the positive responses since 2018, when we asked executives the same question.

The picture has changed since last year regarding the creation of a department clearly focused on digital innovation. The slight majority (54%) states that their organization has a relative department, and a rather large percentage of 46% has not created such a department.

When they had to name the department responsible for running and monitoring digital transformation projects, the executives' answers were somewhat divided: 36.5% named a department bearing the words "Digital" or "Innovation" in its name, while 30.8% said this role is owned by the CEO, the upper management or a department responsible for business development. A percentage of 21% named IT/Operations as the department responsible for DT projects, while a low 5.8% named other departments such as HR, Marketing and 7.7% responded that there is no specific department running the projects, or this task is divided across various departments within the organization.

Challenges ahead: People are the key

The companies also have to face challenges and overcome obstacles in order to proceed. The number one challenge is the need for new skillsets, while the resistance to change follows. Lack of clear vision for a digital customer journey,

integrating new technologies, ineffective gathering and/or leveraging of data, insufficient budget and lack of executive support and leadership come next. But as it seems from the responses, the above are still not strong enough to make the companies abandon their DT initiatives. What is interesting to see is the year on year change: in 2018, resistance to change was identified as the top barrier to digital transformation, slipping to the second position in 2019, as managers and companies alike are beginning to understand the importance of the need to upskill.

The executives surveyed seem to consider as the most effective tactic to drive their DT journey the change of culture. Educating and training employees comes second so once again the human factor is critical for the success of DT. Data-driven decision making and adoption of new methodologies (e.g. design thinking, agile, etc.) are next, while the use of KPIs in order to access the progress of the DT projects are the last thing the executives think to do.

What is needed to be established is a proper groundwork WITH THE AIM TO MAKE THE DIGITAL TRANSFORMATION HAPPEN.

Three areas, according to the survey, need to change urgently: Business development, products or services and management. However, the areas that are easier to be transformed are marketing and IT business development. Products or Services may come third sharing the same percentage (11%), but it seems like they are considered to be a little bit more difficult to change.

In order to incorporate transformation, every aspect of the business should take part in. When it comes to the mentality of the employees having to face changes, new ways of working, new tools,

1. ELTRUN, Press Announcement, https://eltrun.gr/wp-content/uploads/2019/09/OPA_Digital_Transformation.pdf

the results showed that they are rather supportive (38.8%). According to executives, analytical thinking & innovation, creativity, originality & initiative, active learning & learning strategies are the elements that an employee should have in order to embrace the journey.

Further acknowledging the important role of the human factor in the success of digital transformation projects, the vast majority of the executives responded that their company provides targeted training /development (70.59% vs 25.49%).

In this context and in order to accelerate their efforts, the executives are prominently in favor of cooperating with external partners and consultants, as well as taking up outsourcing process by signing cooperation agreements. Based on the results of the survey, they are likely (42.9%) or very likely (28.6%) to establish partnerships with external experts and professionals that have the proper knowledge in order to step up their digital transformation efforts.

The professional approach of the companies is also reflected by the fact that the majority has hired new staff directly linked to digital transformation. As stated at the survey, they hired new personnel (51%), in order to enhance their efforts. 41.2% stated that they didn't hire and a rather low percentage responded that they not aware of any relative hire. What is more, from the answers given, it is not clear whether the companies have changed the way they recruit new staff with a focus on innovation (equal percentage of 47.1%).

The importance of progress tracking and data collection

How do the companies keep track of their digital process? It seems that they prefer three ways that have a slight difference regarding their percentages. These are milestones, meetings, and KPIs. Just half of the respondents, though, also noted that digital transformation in their organization is data-driven, collecting data partially (depending on the team), using basic methods such as spreadsheets etc. and in a strategic context having various data feeds organized in digital data lakes.

Optimizing internal processes & operations is the goal, as far as the use of the data collected are concerned. Since the customers are at the center, to improve their understanding is the next way of data exploitation. Informing or designing company strategies and managing productivity comes next.

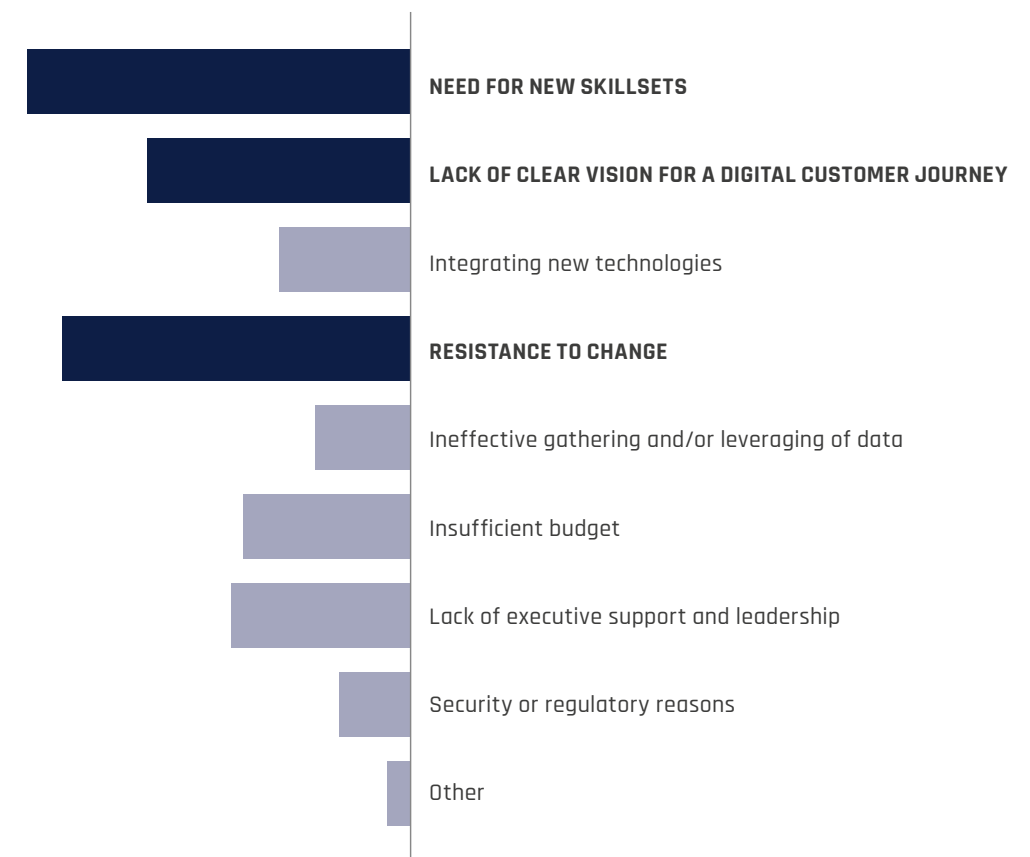
The executives surveyed prove to be deeply aware of the risks a DT journey may have. Taking into account that the responses are gathering almost the same percentage, it is common sense that every potential risk is faced equally. So, their concerns about security (e.g. data loss), legal issues (regulations, GDPR), culture (e.g. demotivation of employees), sustainability (required investments threaten existing business models) and failure (projects may fail to deliver results) are bond with the human factor that is vital for the success of digital transformation.



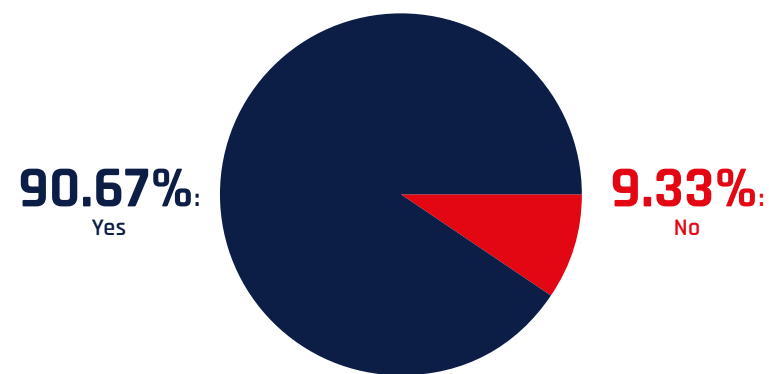
Q: Why is your organisation embracing Digital Transformation?



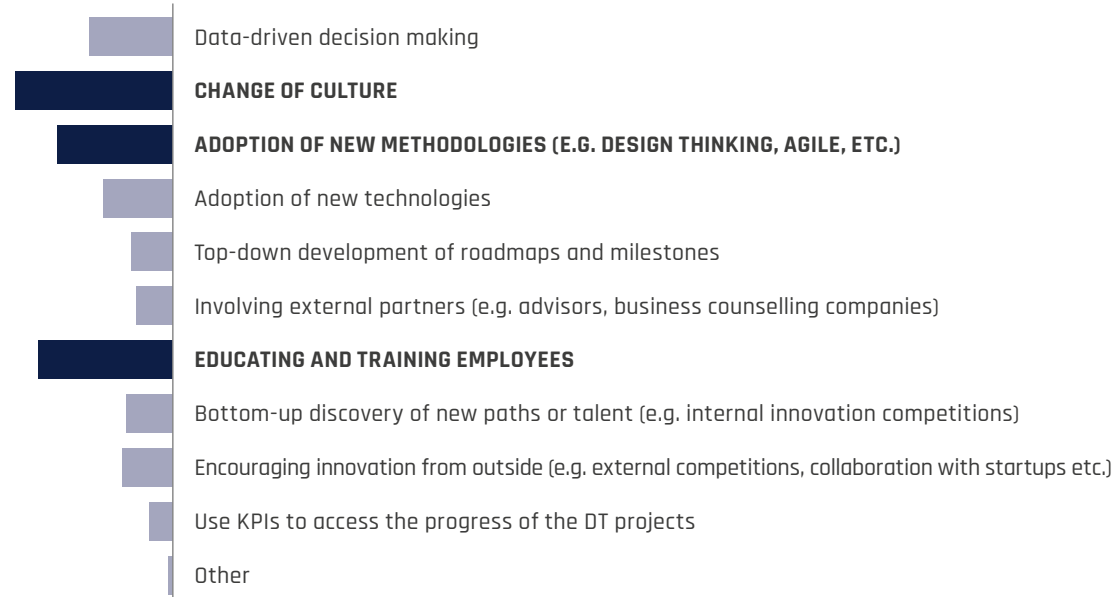
Q: Which are the biggest barriers your organization faces in their digital transformation journey?



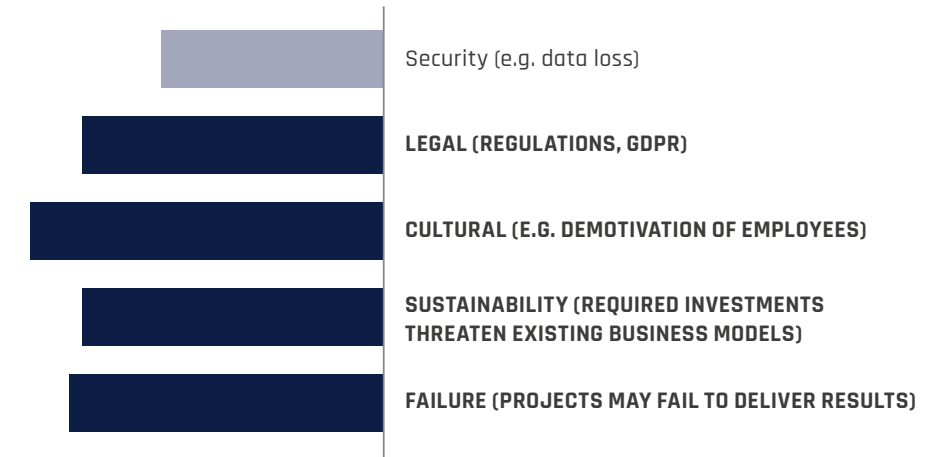
Q: Does your organisation run projects that include a Digital Transformation scope or are part of a broader Digital Transformation roadmap?



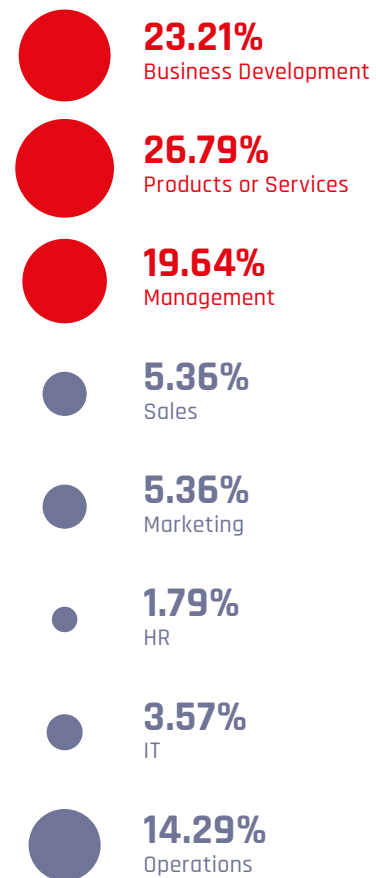
Q: In your opinion what are the most effective tactics to drive your organization's digital transformation journey?



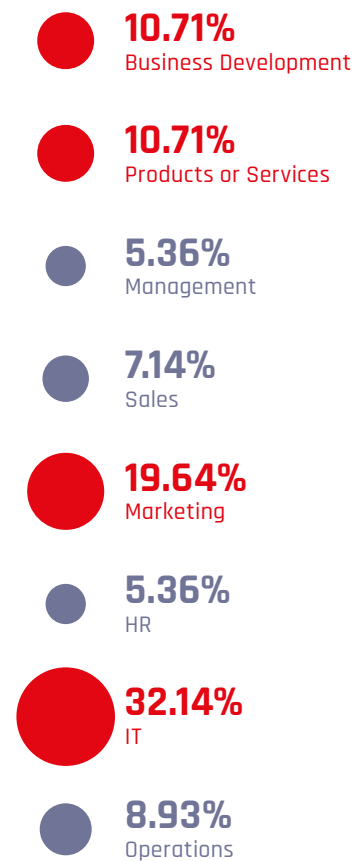
Q: What do you believe are the potential risks that come with Digital Transformation?



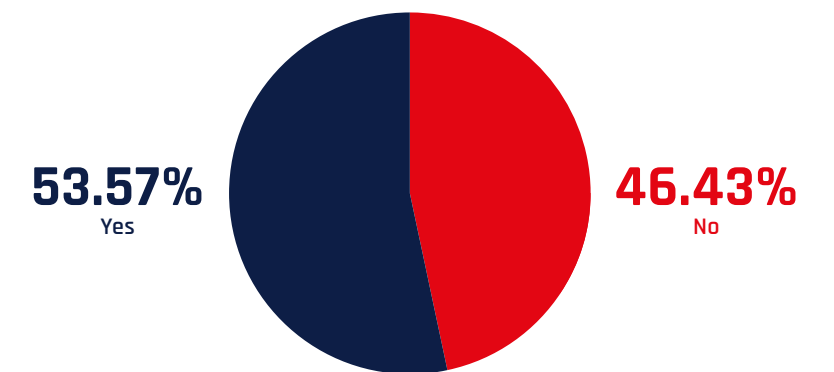
Q: Which area of your business you'd suggest as more urgent to change through Digital Transformation efforts?



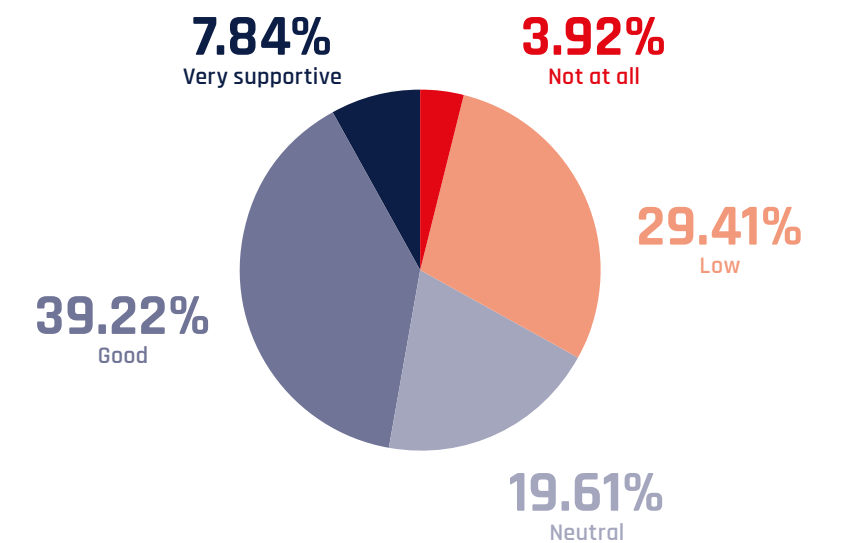
Q: Which area of your business you'd suggest as easier to change through Digital Transformation efforts?



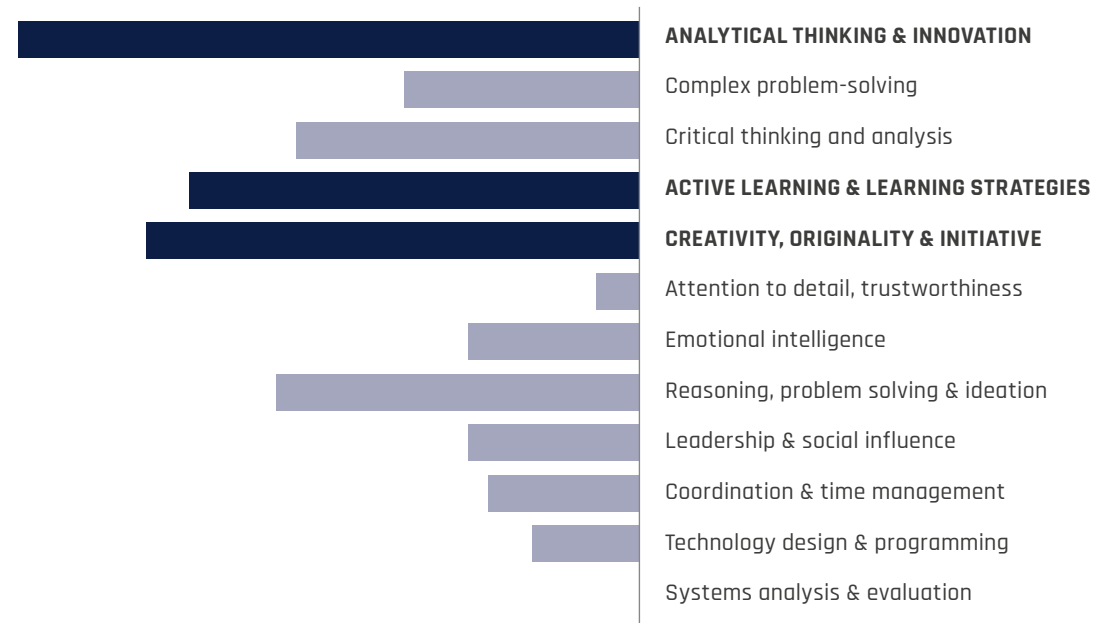
Q: Does your organisation have a department with its main role around Digital Transformation and/or Innovation?



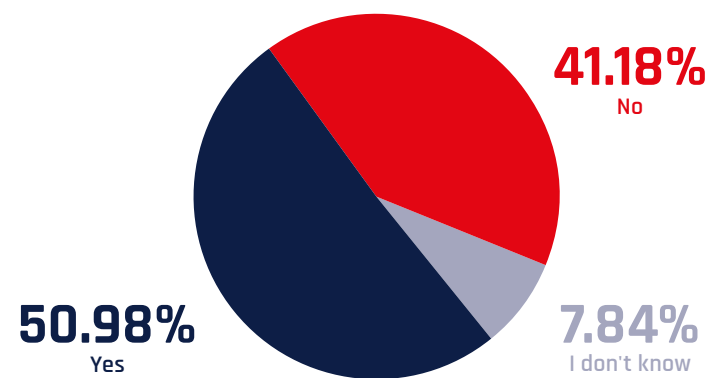
Q: How supportive is the mentality of the employees in your organization, when it comes to changes, new ways of working, new tools, etc.?



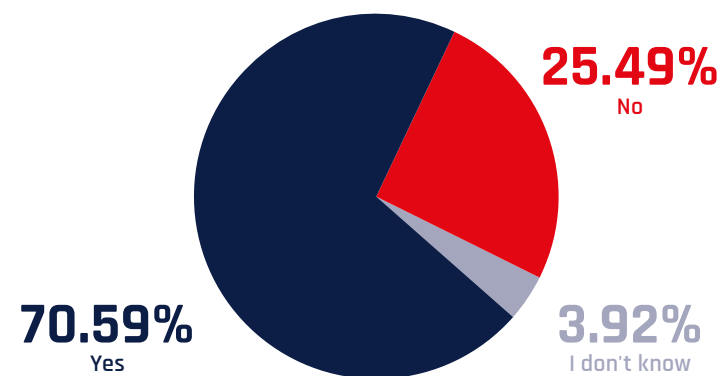
Q: Which of the following skills do employees need to have in order to support an organization's digital transformation journey?



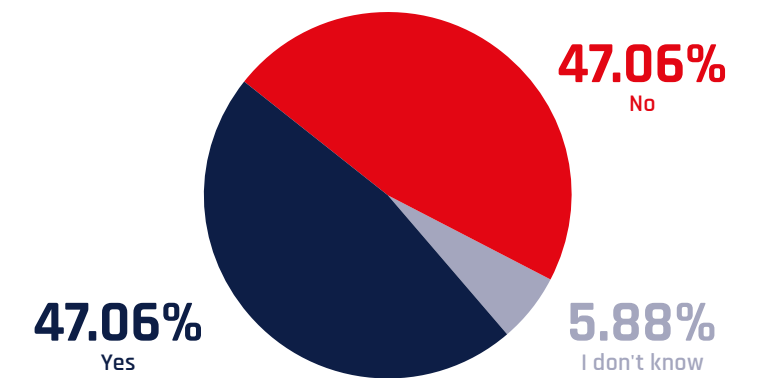
Q: Has the company hired new employees in roles related to innovation and/or Digital Transformation?



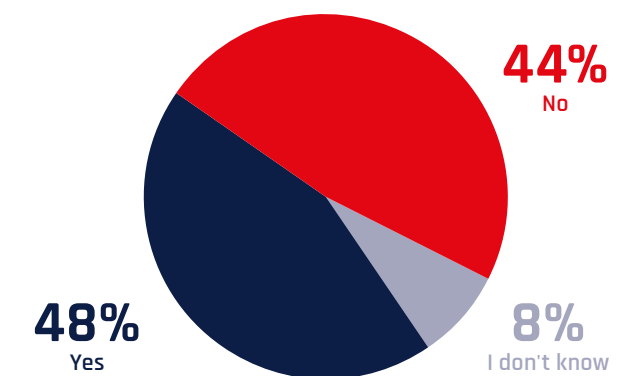
Q: Does your company provide targeted training /development programs to employees as part of a DT scope?



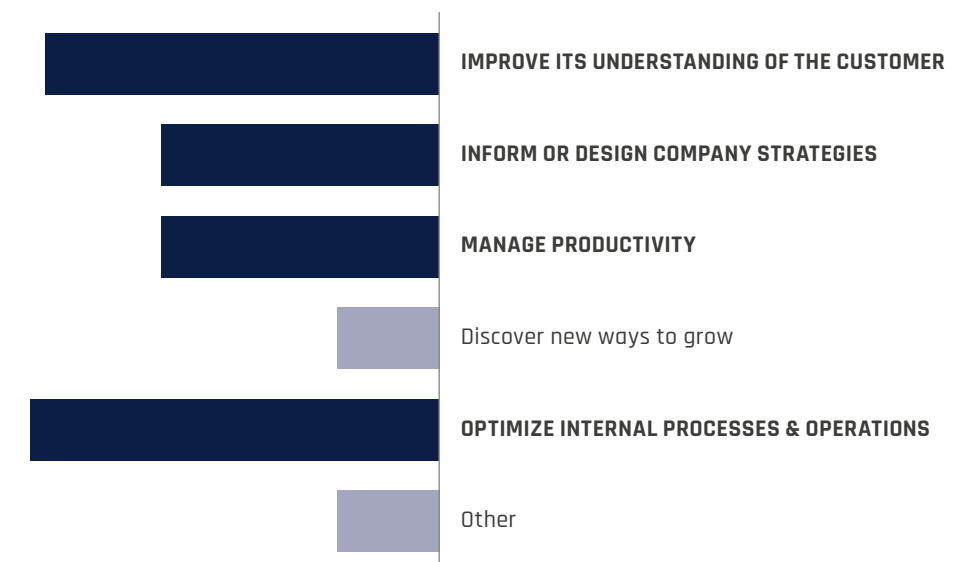
Q: Has the hiring process of your company changed in the context of an innovation-driven strategy? (i.e. are different skills required?)



Q: Do you believe that Digital Transformation in your organization is data-driven?



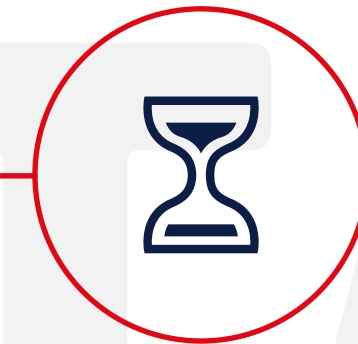
Q: How does your company use the collected data?





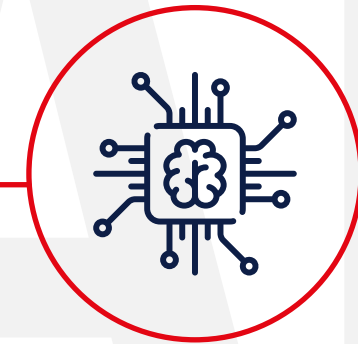
90.4%
of businesses run a project that is part of a DT roadmap...

...but only **53.6%** have a department with its main role around DT/Innovation



On average, the companies have been implementing DT projects for **5 years**

No.1 reason for embracing DT is to **change the way of working**



...and **51%** have already hired new people for DT/innovation roles

70.6% say it's likely to very likely to **cooperate with external experts** in order to enhance efforts towards DT...

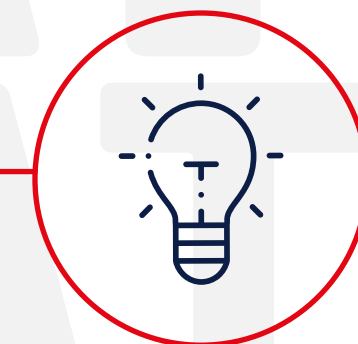


59.3% claim that the most **effective tactic** to drive the organization's DT journey is the **change of culture**

Need for new skillsets is the greater **barrier** but **87.5%** do not intend to **abandon** their DT initiatives because of the barriers



70.6% of the companies invest on their employees providing **targeted training / development programs**



Analytical thinking & Innovative culture are the most important traits when it comes to DT

Products or Services is the business area suggested as most **urgent** to change...



...yet **IT sector** is the **easier** to do so.



48% believe that **digital transformation** in their company is **data-driven**

CASE STUDIES

In order to better understand how private organisations deal with Digital Transformation, we asked some Greek companies to share their views on the topic and explain the steps they had to take to transform.



Damianos Charalampidis

Executive General Manager, Chief Digital Officer & Retail Banking Products, Alpha Bank



Alpha Bank identified early on the opportunities and challenges that the new digital era presented and consequently began elaborating its digital strategy and its corresponding digital transformation programme in 2017. The Bank's digital strategy focuses primarily on

- a. strengthening of its digital image and further improving customer experience,
- b. improving its revenue streams and achieving profitable growth through the introduction of digital value adding services and products as well as the use of advanced analytics and
- c. optimizing its operational effectiveness through simplification, standardization and process automation.

The implementation of its digital transformation strategy includes both operational activities and innovation-focused initiatives, contributing towards a new digital era for Alpha Bank. This is expected to radically change the Bank's business and operational model.

Digital transformation has meant the further strengthening of the Bank's digital channels; the development of the necessary digital infrastructures that needed to be introduced (electronic signatures, digital certificates, WiFi connection at the branch level) as well as the redesign of the customer journeys. This has involved identifying and redefining new business pathways and improving customer experience. In turn, this has meant designing truly digital processes, eliminating branch visits to the extent possible, cumbersome documentation and paperwork, by taking advantage of digital channels and technological advancements. As a first step, the Bank launched the first application in the Greek market to allow digital acquisition and administration of the 'bleep' prepaid card, a card that enjoyed numerous awards.

At the same time, the Bank launched a horizontal transformation project aimed at transferring a significant volume of transactions from branch tellers to digital service channels, contributing to the improvement of the customer service experience, whilst at the same time reducing workload of tellers. A main outcome of the project was to raise awareness and inform clients of the possibilities open to them through the use of digital channels. The project has been implemented in more than 270 branches and alongside the installation of 160 digital Corners it has transferred nearly 50% of teller transactions to digital channels.

Concerning the Payment Services Directive II (PSD II), Alpha Bank has implemented all relevant prerequisites through development of a set of standard APIs, as well as strong customer authentication that offers increased digital transaction security. As well, the Bank will soon be able to exploit all possibilities within PSD II in relation to offering increased value adding services to its customers.

The Bank actively pursues the development of an open innovation ecosystem. Its first digital innovation competition (i3) open exclusively to Bank staff successfully highlighted the great potential for inspiration and innovative thinking within the Bank. It emphasized the importance of creativity for the Bank's continuous improvement and digital transformation journey. At the same time, FinQuest, an innovation competition was introduced aiming to identify innovative solutions related to specific areas of interest, particularly those related to new digital technologies that have been exploited by the wider global fintech and start-up communities. In addition, Alpha

Bank organizes Digitalized, an annual digital transformation event attracting high-level participation of Alpha Bank's own Executives as well as from other well-established organisations.

Alpha Bank invests systematically in technology and innovation, acknowledging that digital transformation is a long process of incremental steps. The Bank is fully committed to future proof its operations in light of technology advancements and ever-changing customer needs in the best possible way.

Alpha Bank invests systematically in technology and innovation, acknowledging that DIGITAL TRANSFORMATION IS A LONG PROCESS OF INCREMENTAL STEPS.



Filira Papakosta
Chief Marketing Officer at L'Oréal Hellas

THE RACE TO DIGITALLY TRANSFORM IS MORE INTENSE THAN EVER.

Digital Transformation has been a major strategic priority for L'Oréal Hellas for the last 10 years. It was driven, as everything we do, by the consumer.

Consumers have changed more in the last 5 years than in the last 30 years combined, empowered by the possibilities offered by digital technologies. They clearly have the power: they feel free to talk about their desires and needs and express their opinion on the products they use; at the same time, they demand trust and transparency and want to be served anytime anywhere. In this new digital world, the interaction of our brands with the consumers had to be transformed.

The first stage of our transformation was to shift our Business Model towards Digital Marketing in order to be at the same place the consumers were. To achieve this, we obviously had to work with our people too.

We recruited digital experts to infuse the digital culture in the organization. At the same time, we worked on the upskilling of our teams to enable them to respond to the new context.

We chose to work with the best agencies and partners in the market to accelerate on the knowledge.

Moreover, we focused on our brands' digital activations: launch of websites and social media accounts, shift to precision advertising, consumer data collection respecting privacy and e-commerce activation working very closely with our main retailers to accompany them in this shift.

Today, we have amazing digital love brands in our portfolio with 5 million visits on our brands websites and 33M views in our brand channels in Youtube. We are very confident on the efficiency of our media; and e-commerce is a growing part of our sales.

We have reached the point where the fundamentals have been set.

Nonetheless, we do not de-prioritize them as we believe that the optimization of the fundamentals is an ongoing process.

Now it's time to go one step further and become the No1 beauty tech company:

1. We are re-inventing the beauty experience by leveraging Augmented Reality and Artificial Intelligence technologies. Last year, the group acquired Modiface, a Canadian company that created AR apps allowing consumers to virtually try-on makeup and color products. ModiFace is playing a pivotal role in L'Oréal's vision to bring makeup and hair color try-on, customized AI-powered diagnostics and real-time beauty consultations to their consumers. In Greece, we are already live for hair color try-on with L'Oréal Professionnel and L'Oréal Paris, for make-up try-on with L'Oréal Paris and we are preparing the launch of two AI based skin diagnostic applications, Vichy SkinConsult AI and La Roche-Posay Effaclar Spotscan.

2. We have taken several steps to embrace the digital transformation at the organization level, across all functions, with our focus being on digitalizing our ways of working:

- a.** Improved connectivity, that has given employees the flexibility to work from home some days
- b.** Launch of Microsoft Teams, an online platform that fosters co-operation and information sharing.
- c.** HR processes digitization, from recruitment to onboarding, upskilling and more.
- d.** Live broadcast for important company presentations, so that all employees can attend them and be informed on the news of the company.

3. Regarding upskilling, in 2019 we launched the CM1, an online test that enabled our people to test their knowledge on Digital strategies and tools. Based on the results, a custom upskilling program

has been set up in order to help the Marketers excel in their new role. All new Marketing candidates need to go through the CM1 as part of the recruitment process.

Marketing aside, digital upskilling modules, such as "New digital tools in the work environment", have been developed for all the organization.

Digitalization and accessibility of learning is a top priority. People have access to a series of Flex Modules to which they can freely enroll based on their needs and availability and to MyLearning, an internal learning portal rich in content like Coursera modules, Ted talks and other trainings.

4. To make the most of this new world, data is key. Turning the data we own into valuable information that allows us to take proper decisions, is the key to success. At the beginning of the year, we launched Digital Cockpit, a data aggregating platform used to monitor our digital footprint and measure the impact of our digital investments.

The race to digitally transform is more intense than ever. At L'Oréal Hellas, we are really excited to part of it and are looking forward to future challenges.

**THE FIRST
STAGE OF OUR
TRANSFORMATION
WAS TO SHIFT OUR
BUSINESS MODEL
TOWARDS DIGITAL
MARKETING
in order to be at
the same place the
consumers were.**



KEY TAKEAWAYS

Digital transformation is becoming a top priority for both the public and the private sector. The will to change has been expressed and the first steps have been taken.

Hoping to embrace the practice of Estonia (described as “the most advanced digital society in the world”) the former president of Estonia, Toomas Hendrik Ilves, took over as an advisor to the Ministry of Digital Governance. The newly renamed Ministry’s top goal is the simplification of public administration and its services.

According to our survey, the vast majority (90%, slightly increased compared with 2018) of executives stated that their company already runs projects that include a digital transformation scope or are part of a broader digital transformation roadmap. Additionally, on average, they have been working on those projects for 5 years. Nevertheless, it is not clear if these are true digital transformation projects or something closer to digitalisation projects.

Increase is also noted on the percentage of companies that have a clear focus on digital innovation (54% in 2019, 49% in 2018). Nevertheless, when asked to name the department responsible for running and monitoring digital transformation projects, the answers were somewhat divided: 36.5% mentioned a department bearing the words “Digital” or “Innovation” in its title, while 30.8% said this role is owned by the CEO, the upper management or a department responsible for business development, and a percentage of 21% named IT/Operations.

In 2018, resistance to change was identified as the top barrier to digital transformation. In 2019, “need for new skillsets takes the top position as managers and companies alike are beginning to understand the importance of the need to upskill. This is also reflected in the fact that the vast majority of companies provides targeted training / development opportunities (70.59%).

Change of culture also plays an important role, as executives identify it as the most effective tactic

to drive their DT journey. Educating and training employees comes second, once again stressing the critical role of the human factor for the success of digital transformation.

SUGGESTIONS

The good use of digital technologies in both the public and the private sectors will help increase productivity and efficiency. A solid framework that can strengthen the digital technology industry, support entrepreneurship and provide incentives for companies of all sizes is a desirable strategy.

Organisations have acknowledged the role of the human factor in making digital transformation happen. In the era of automation and machine intelligence, employees need to upskill and evolve, and cultivate the skills that will help them stay competitive. Their employers must create the right environment for their development, but also a work environment that allows exchanging of ideas and knowledge. Hiring processes should also change to reflect the new corporate needs.

This is an era for ground-breaking changes and bold decisions. Organisations that will not be afraid to adopt new practices and break silos will have better chances of evolving.

Consumers are now more powerful than ever. Nurtured in a technological environment that gives them choices and personalised experiences, they demand of the companies to change, too. Their experience should be at the center.

Data collection and analysis is a powerful tool that will benefit those who will invest in these technologies. Better services, better products, agility and cost savings are only a few of the benefits that come with it.

Digital transformation is an ongoing and long-term process. The fundamentals have been set for the Greek business world. The next step: acceleration.



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Evrystheos 2 (Peiraos 123),
K. Petralona 118 54 Athens, Greece
www.thefoundation.gr