DIGITAL MATURITY STUDY **2022**
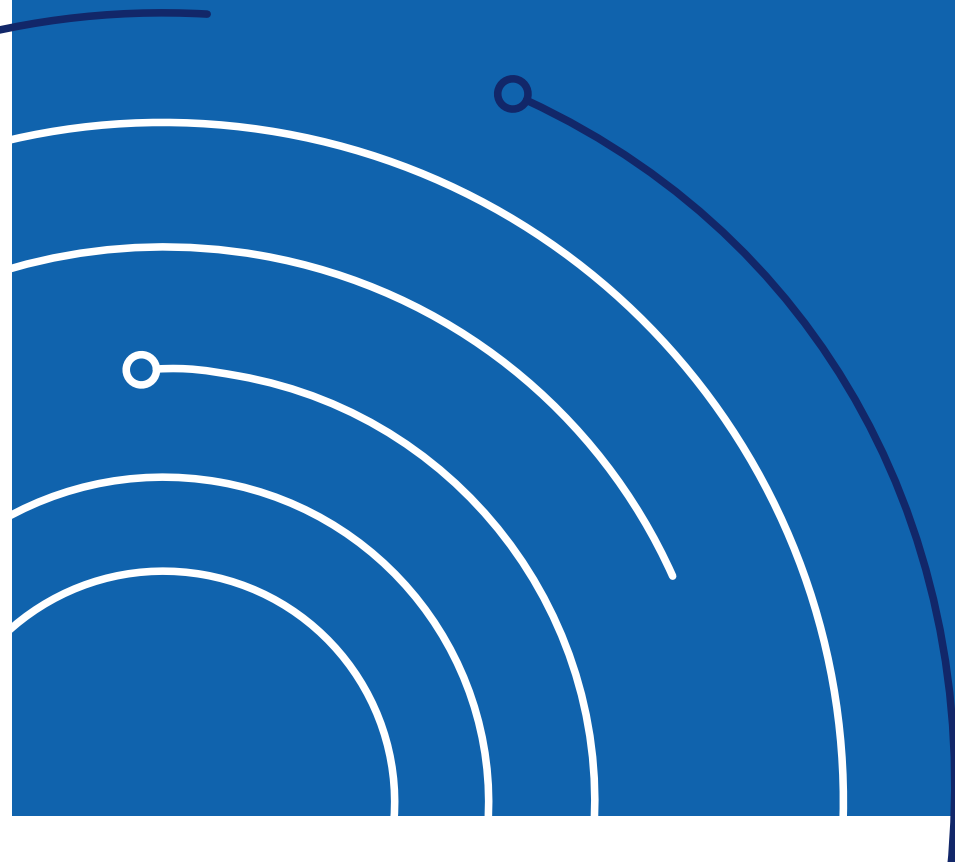
Release April 2023

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Introduction

Dear Readers,

We take great pleasure in presenting to you here the second edition of the Detecon Digital Maturity Study — The 2022 Edition. Despite (or perhaps because of) the many economic and political challenges that confronted the global community in 2022, we observed once again significant progress in the digitalization of our clients' operations and on markets around the world.

Our analyses of more than sixty assessments based on the Digital Maturity Model recently co-developed by Detecon and TMForum reveal the major trends of 2022 that we would like to share with you here.

Once you have taken a good look at the figures at the beginning of the study, we hope you will also enjoy the reading insights from our experts relating specifically to the each of the six dimension Consumer, Strategy, Technology, Operation, Organization & Culture, and Data that has been made available in the second half of this paper.

As our study confirms, the world is becoming digital. There may be disagreement about the speed of progress (and indeed, the transformation is probably not advancing as quickly as some trendsetters initially presumed), but the direction and the momentum of the digitalization process cannot be denied … and it will only accelerate as new technologies, innovations, and concepts such as artificial intelligence, hyperconnectivity, metaverse, sustainability, and others continue to appear on the stage.

We hope you find our study helpful and productive, and we would be happy to receive your feedback or additional questions.

As we are even now making our preparations for the 2023 edition, we would be delighted to include your company as well in our DMM assessment that will appear next year.

Sincerely,

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Senior Manager/
Leader of Digital Maturity at Detecon

More information on Digital Maturity:

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Abbreviations:

MENA: Middle-East North Africa
CASA: Central Africa, South Africa
DMM: Digital Maturity Model
Telco: Telecommunications Operator
**AI:** Artificial Intelligence
OpCo: Operational Company

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Major changes in the DMM results in 2022

While there were variances in magnitude, Detecon has determined that digital maturity levels in all dimensions improved across the board in 2022 over 2021. The dimensions posting the most significant improvement were Data, and Organization and Culture.

The average score for **Data** rose from 2.57 in 2021 to 2.81, the consequence of a growing number of companies implementing data warehousing or data lake solutions throughout their organizations as a means of fostering data-driven decision-making and added value. Nevertheless, the overall score of Data is the second-lowest of all the dimensions. One possible contributory factor to this phenomenon identified by Detecon arises from the lengthy time periods required for the implementation of data governance and organization-wide data warehouses, a circumstance that is presumably not facilitated by the accompanying changes in mindset required of the people using
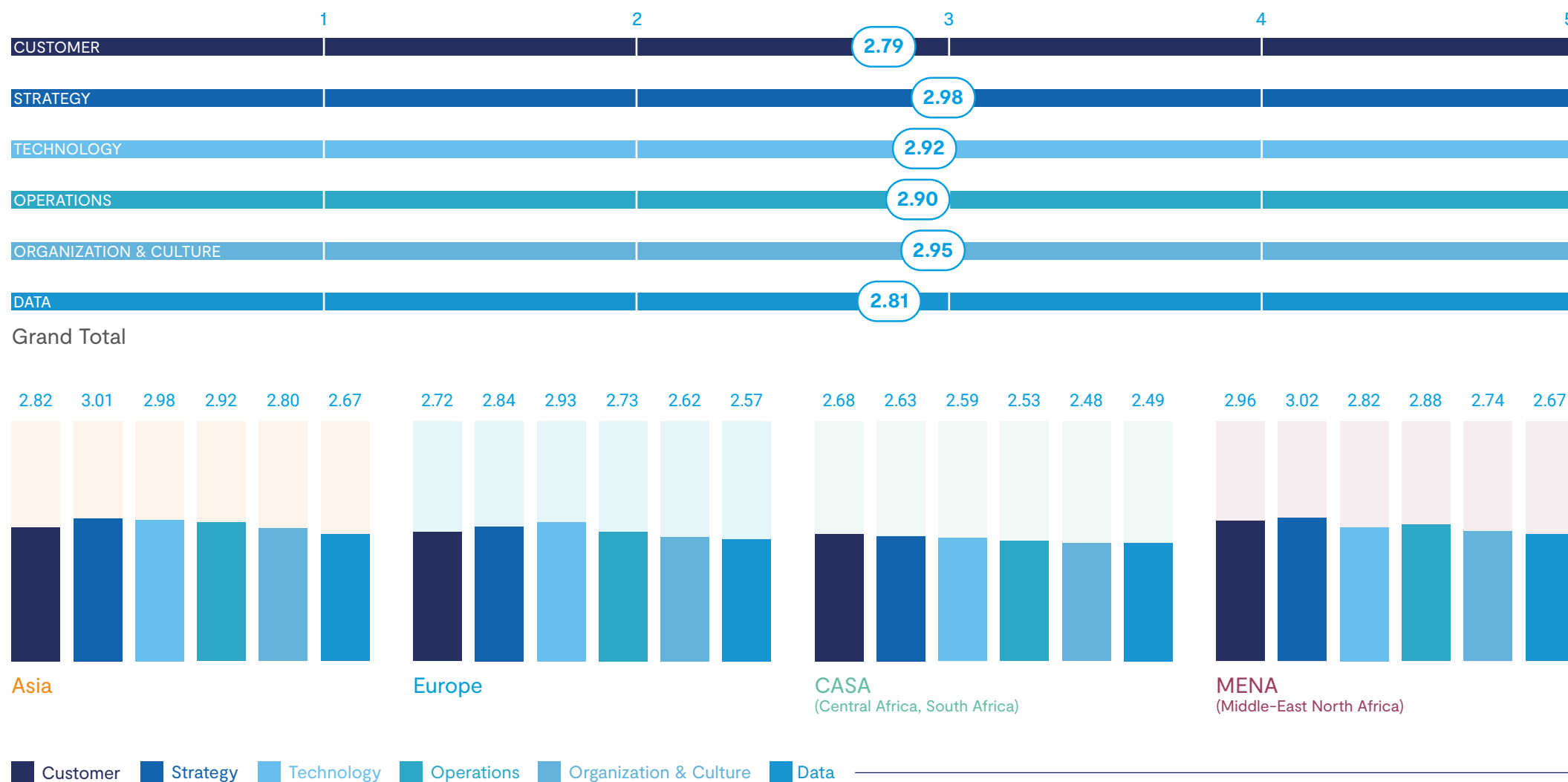
Figure 1: Average score per dimension 2021 vs. 2022
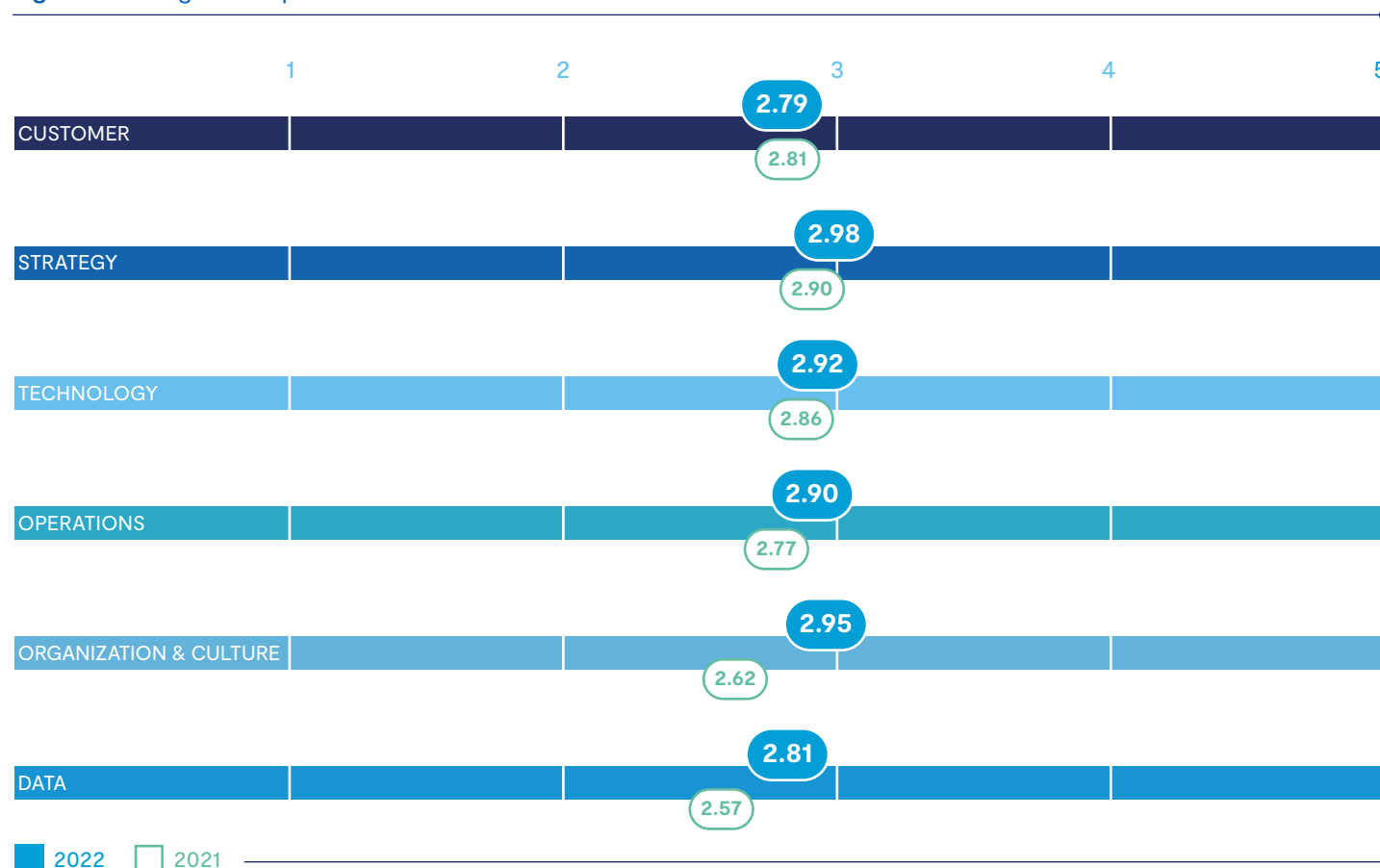
the data. The average score in the **Organization and Culture** dimension increased from 2.62 in 2021 to 2.95 in 2022, overtaking Customer, Technology, Operations, and Data to become the dimension with the second-highest score. This rise is testimony to the shift in focus to talent and skills management brought about by keen global competition for the acquisition in the future of skilled employees such as cloud architects and DevOps engineers.
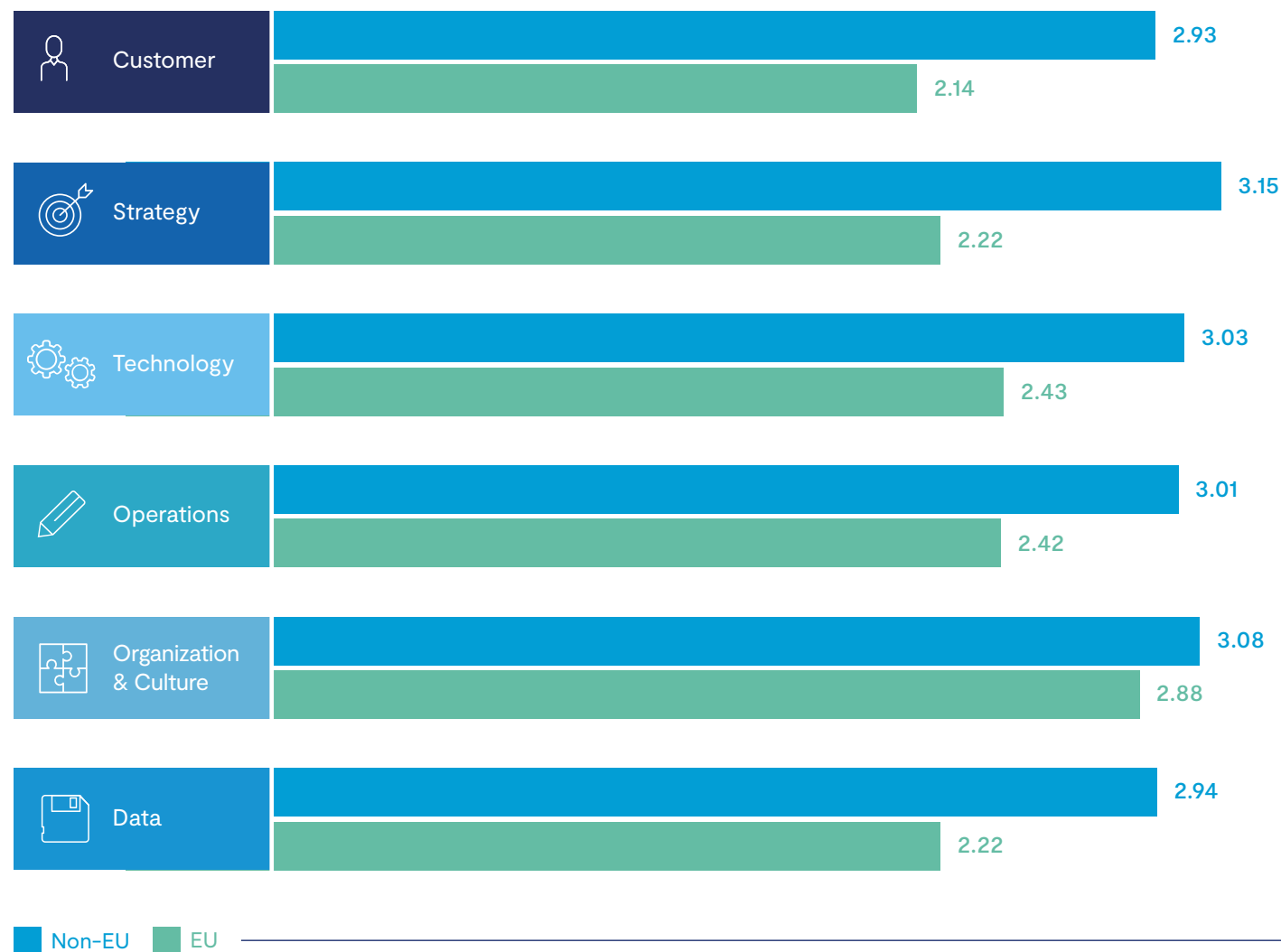
Figure 2: 2022 average score per dimension – regional analysis

	1	2	3	4	5
CUSTOMER			2.79		
STRATEGY			2.98		
TECHNOLOGY			2.92		
OPERATIONS			2.90		
ORGANIZATION & CULTURE			2.95		
DATA			2.81		

Grand Total

Asia						Europe						CASA (Central Africa, South Africa)						MENA (Middle-East North Africa)					
2.82	3.01	2.98	2.92	2.80	2.67	2.72	2.84	2.93	2.73	2.62	2.57	2.68	2.63	2.59	2.53	2.48	2.49	2.96	3.02	2.82	2.88	2.74	2.67

■ Customer ■ Strategy ■ Technology ■ Operations ■ Organization & Culture ■ Data

When we combine the data from 2021 and 2022, we find that **Asian operators** have been the leaders in Technology, Operations, and Organization and Culture over the past two years, while MENA operators excel in the dimensions of Customer, Data, and Strategy. European operators, while performing robustly in each of the dimensions, are nevertheless never the leaders in any of them; operations in CASA continue to improve over the course of their digitalization journey.

We noted that in this past year European operators posted a lower average score in each dimension in comparison with non-EU operators — on average, 0.6 to 1 point lower, especially in the dimensions of Customer, Data and Strategy.

Figure 3: 2022 average score EU vs. Non-EU

	Non-EU	EU
Customer	2.93	2.14
Strategy	3.15	2.22
Technology	3.03	2.43
Operations	3.01	2.42
Organization & Culture	3.08	2.88
Data	2.94	2.22

Dimension 1: Customer

Over the last two to three years — in no small part a consequence of the COVID-19 pandemic — we have noted a significant shift of the digital environment in which organizations and their customers interact. In general, we believe that the latest trends of 2022 that will impact digital maturity of the Customer dimension will fall into four categories:

AI

AI has finally achieved a major breakthrough. ChatGPT (highly predictive, groundbreaking, more than the average chatbot) offers a glimpse of what upheavals the advances in ID technology might trigger in tomorrow's interaction with customers. The utilization of AI can raise the level of an organization's digital maturity, especially as it enables companies to make effective use of data for the generation of customer insights. New solutions for the self-customization of products and services and proactive customer care have even now been developed, and their numbers will only continue to increase in 2023. Understanding customers' needs and preferences will become more important than ever as the demand for tailored solutions rather than mass products grows. AI will enable organizations to consider actively the customer's voice generating a 360-degree view of the customer with a single source of truth for each element of customer information.

Social Media

TikTok became the new trendsetter in 2022, dictating the standard for enriched content in social media despite heightened concerns of users about the utilization and security of their data. Social media are a channel for more comprehensive social interaction with and among customers, a factor that cements brand loyalty. We also expect social media to solidify further customer trust in brand promise.

A new (digital) normal

A new (digital) normal evolved during the COVID-19 pandemic. The scope of digitalization has broadened, and more and more customer touchpoints are now digital. Many organizations have devoted major efforts to digital realization, and now, even assuming that COVID-19 will continue to recede into the background, it appears that a large number of them will chose to implement more hybrid solutions rather than return to what was previously normal. In consequence, we now see a new normal that is more digital, more hybrid across all customers segments (such as age or socio-economic groups), and focusing more intensely on apps. The concentration on the app experience observed in 2022 will evolve into the super app-style experiences that will be the subject of
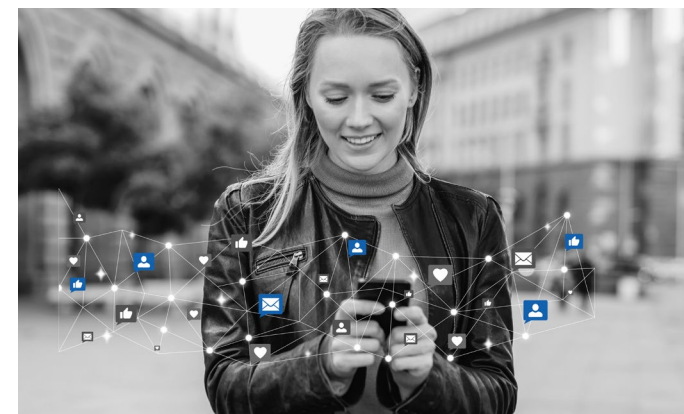
organizations' further efforts in 2023. Digital maturity in securing customer insights will be leveraged further as the conduct of customer interactions across digital channels becomes more and more common.

Immersive experience (metaverse, AR/VR)

Despite huge investments in immersive and cognitive use cases, the promised benefits and meaningful customer interactions remain in the embryonic stage and have yet to be verified as truly achievable. We noted a sluggish start, untested premises, and the placing of risky bets, especially for marketplaces and enterprise segments, along with a meltdown of cryptocurrencies. We expect little change in this respect.

Dimension 2:
Strategy

The results of the study released in 2021 revealed an expected increase in three core topics: 1) connectivity, 2) digital agility, and 3) the relevance of data for future business success. The observations from our projects, our discussions with clients, and recent conclusions from DMM assessments indicate that the expectations of 2021 are in line with the needs and goals currently seen on the market.

Interest in the topic of **connectivity** and its various aspects has increased. Technical connectivity is one such area. Companies are seeking to enhance the connectivity among their products, services, and devices, both within the enterprise itself and in the products and services offered to their customers. Turning this desire into reality demands extensive data communications and shines a spotlight on telecommunications companies as the essential partners to all industries for hardware, network infrastructure, and data services. A second point is that the expanded connectivity does not remain restricted to the technical level; it generates demand for extensive cooperation and strategic collaboration among companies if they wish to create a unique offering to customers. The situation often prompts a move toward the development of business ecosystems, whether they are of a transaction-centric or product/solution-centric nature. This demand for connectivity clearly represents a development in the direction of a hyperconnected world, a trend we expect to play out further in 2023 and later years.

Companies' interest in **digital agility** is split into two different directions. To begin with, there is a strong movement toward data-driven digitalized strategies calling for the definition of the business and strategic factors necessary to become data-driven. This translates into opportunities for data-driven growth and improvement. Moreover, there is a growing demand for agile strategies. Since the only certainty in our world is continuous change, the ability to adapt to change and to respond to new information is crucial for long-term success. Iterative development, testing, and the integration of improvements have frequently proved to be effective methods over the years and will remain critical elements in 2023. They enable companies to maneuver more flexibly and to reduce response times while simultaneously pursuing a clear digital strategy extending to the next horizon.

When the movement toward data-driven digitized strategies and the growing volume of data interchange in a hyperconnected world are considered, the relevance of data for future business success is obvious. The collection of data and the acquisition of the rights to their further processing are essential assets for companies in the modern business world. The analysis of data as appropriate to their intended use supports decision-making while improving the user journey and (at the same time) the company's internal processes. Ultimately, these factors are reflected in a company's overall success. Companies that maintain close ties to end customers and understand their needs and desires are in a position to create long-lasting customer relationships and reap the expected benefit of strong sales of products and services oriented to the long term. We saw the growing relevance of data in 2022, and their significance will remain high and even rise in 2023.

The evaluation of our experience and of the trends we observed in 2022 indicates that markets will develop in the direction of a hyperconnected world, and the consequence will be the ever-greater necessity for organizations to be (digitally) agile and to master appropriate and comprehensive tools for data analysis and usage. There is no question that organizations will have no choice but to incorporate data-driven practices and strategies into their road maps in 2023.

3

Dimension 3: Technology

There can be no doubt that the cloudification trend observed to date will continue to manifest itself in 2023. As businesses adopt the cloud for the improvement of their agility, scalability, and cost efficiency, the expectation for growth of cloud computing will rise to new heights as well in 2023. Here are some of the key trends that may well be seen in this year:

1 The continued growth of multicloud and hybrid cloud environments.

We see today's organizations seeking greater flexibility and control in their cloud deployments with the resultant more widespread use of multicloud and hybrid cloud architectures. By doing so, they can combine the strengths of various cloud platforms and on-premises systems to create a customized, scalable, and secure IT infrastructure.

2 Increased focus on cloud security and compliance.

As more sensitive data and workloads are moved to the cloud, security and compliance will become even more significant for organizations. In 2023 and the following years, we will see a rise in the use of the use of cloud-native security tools and services and the adoption of industry-specific compliance standards and best practices.

3 Expansion of edge computing and IoT.

The growth of the Internet of Things (IoT) and the need for real-time data processing will drive the popularity of edge computing. It will involve moving compute and storage resources closer to the network edge to secure faster and more efficient data processing and analysis.

4 The emergence of serverless computing.

Serverless computing allowing organizations to run their applications without dedicated servers will become highly favored in 2023. This approach can help businesses to reduce costs, improve scalability, and to focus on building and deploying their applications and increasing customer value rather than managing infrastructure.

5 Green IT and sustainability.

As concerns about the environmental impact of technology continue to grow in 2022, we will see an increased focus on green IT and sustainability in the cloud computing industry. This may involve the adoption of renewable energy sources for data centers, the use of energy-efficient hardware and software, and the implementation of sustainable practices throughout the cloud computing lifecycle.

In conclusion, it appears that 2023 will be an exciting year for technology and cloud computing as there are many new developments and innovations on the horizon. Anyone working in the technology field should monitor these and other trends carefully and stay prepared to adapt and innovate as the industry grows and develops.

Dimension 4: Operations

What did we see change the most in 2022?

While 2022 marked the start of the "new normal," it also sharply reminded us of the need for business processes. The discussions of their management became significantly more urgent for a variety of reasons.

1 | It is a prerequisite for ongoing transformation programs.

Many organizations struggled to continue or to launch scheduled transformations in 2019 and 2020. They are now attempting to leverage BPM for the management of transformational changes at the operation level. Mapping of the transformation assures transparency of the change.

2 | It gives impetus to the implementation of future working methods.

Recent years have seen many changes in where and how we work. New opportunities relating to working remotely are reflected in the changes to existing processes. Our primary experience in 2022 revolved around such topics as agile software development, increased reliance on process mining for process improvement and automation, paperless working, and the use of processes in business management that altered companies' operations and procedures.

3 | It is an essential tool for documenting the operational changes that occurred during the COVID-19 lockdowns.

In the last two years, we have seen the evolution (or devolution) of processes that were loosely managed during the COVID-19 pandemic. Many of the efforts to document and gain control of these activities were renewed in 2022.

What do we expect in 2023?

The trends identified during 2022 will continue to stabilize and deliver more tangible results in 2023. We also expect an increase in automation for the closure of classic fulfillment-assurance loops from the leveraging of the available AI/ML capabilities, the use of process mining as a tool for the identification of process gaps and standardization opportunities, more in-depth engagement of customers in self-care channels, and the minimization of manual steps in process-related KPI reporting to drive process improvements. It should also be noted that these trends will start to bear fruit within a time horizon of two to three years.

Dimension 5:
Organization & Culture

Digital transformation programs are recognized as involving more than simply using the latest technology to transform processes; they are also intended to empower people to lead change by employing the right technology. While this statement is seemingly straightforward, its practical application is far more complex because transformation programs require the interaction of people, machines, and business processes in a collaborative effort. One of the primary reasons for the tendency of many programs to fail is the lack of attention to people's agendas. The goal of any transformation strategy must be to ensure that the workforce is committed, supports the change, and has been provided with the capabilities and skills necessary to operate new processes.

An examination of digital transformation reveals that companies — and not only those in the telco industry — have striven to master digital transformation by focusing on the use of smart digitalization and the leveraging of innovation for new business models as ways to increase the efficiency of their core business. Such actions, however, are feasible solely when bright minds are behind the initiatives. Skillful staffing assures success program management and the achievement of important metrics such as return on digital investment, revenues from digital services, enhanced customer experience, and operational improvement. Ultimately, it is imperative for ICT companies to consider carefully organizational and cultural aspects when designing any transformation program.

During the analysis of current DMM data from 2021, especially in **Organization and Culture**, it was noteworthy that CST businesses posted the lowest scores in this dimension in comparison with others (Customer, Strategy, Operations, and Technology). It is obvious that many companies are still struggling to create an environment in which every employee is committed, has been given the right skills, and is willing to generate business value. The year 2022 came to an end with all the hustle and bustle common in the business world, and the same hurdles remain in place across various sectors. Companies should focus on building an efficient and positive corporate culture. Although every business has its own approach to cultural and organizational topics, there are nevertheless certain key aspects that should be taken into consideration for

maximization of organizational and cultural elements. For instance, there might be a sharper focus on employee experience and commitment, flexible scheduling and mobile working opportunities for employees, meaningful benefits packages, and clear opportunities for development..

If it is not yet the case, these strategic people topics should be included and prioritized on the management agenda as soon as possible. Addressing these issues positively reflects organizational values and culture. Company values guide the thoughts and actions of people within an organization in everything they do and may even inspire them to surpass expectations. To be sure, many other aspects can define the organizational values in a company, but the company values are certainly building blocks for a strong organizational culture. Project leaders must also take organizational values into account and consider the various ways they can be approached during the conduct of transformation projects.

One example can be seen in a project conducted for a European telco. The values and cultural aspects were carefully considered during the design of the mission, vision, and goals and the selection of the project methodology (agile or waterfall). The project lead often had to interact with various cultural aspects while driving the project — management of tasks and priorities, dealing with conflicts, drawing up communication plans, etc. As they were planning the project, the team mapped cultural aspects within the company and assessed how these elements might become obstacles during the performance of the project. This initial exercise was rather simple, but nevertheless highly effective, in collecting cultural insights from various stakeholders and their own perceptions.

Companies wanting to stay competitive must find a way to incorporate elements for the improvement of their organization and culture and give heed to the aforementioned trend. The labor market will remain volatile in 2023; the Great Resignation[1] will continue, as will the War for Talents. Leaders should also bear in mind that healthy company culture and organization are based on what works for the staff, not on slavishly following the dictates of the market. Although trends and innovations should certainly be reviewed, what works for one organization may not necessarily be good for another, so constant review is demanded to ensure that the organization and culture continue to perform at a high level in tandem with high employee commitment.

Dimension 6:
Data

Develop data quality that generates value

Rapid technological advancements, heightened levels of data literacy, and the recognized value of data are transforming the digital environment and corporate culture by improving human-machine interaction and accelerating the decision-making process.

Data are becoming more and more valuable, and businesses are sharpening their focus on the use of data as a means of operating more efficiently, gaining competitive advantages, raising productivity, and making better, evidence-based decisions. Tapping this potential for a company requires a well-thought-out data management strategy so that the data, technologies, people, and processes perform as a single unit. This is why DMM regards data as a key enabler of digital transformation and classifies them as a separate dimension.

One of the main objectives of this dimension is to ensure that an organization has effective systems and processes for the collection, transfer, storage, and processing of data in place. If quality is not suitable for the intended purpose, the company will not only miss out on opportunities, but will waste its resources.

In 2022, we noted the following challenges that can prevent organizations from securing data quality of high value.

Data silos

When data are isolated and segmented across various business units, tools, and platforms, it may prove difficult to mine them for insights and realize their true value. Siloed data are typically stored in standalone systems and are often incompatible with other systems for data. There is a lack of redundancy-free data and uniformity, making data integration more complex. In addition, data orchestration can become very costly.

Legacy systems

Outdated computer software and/or hardware that is still in use is more often than not inefficient, unstable, and incompatible with new technologies; any integration is also complex. Over the years, these systems have become integral to the companies' operations. Although the organizations are aware of the situation, they are averse to making any changes and seek to keep the ship afloat, even though it is facing a series of problems. As is generally well known, legacy systems prevent companies for gaining deep data insights, responding faster to market changes, and processing data in real time, with the inevitable consequences of missed opportunities, customer churn, and lost profit.

Data strategy

Understanding and leveraging the value of its data assets demand of a company that it articulate a long-term vision with clear goals and measurable business objectives. Uncertainty and ambiguity in the definition of strategic KPIs can result in data inconsistency.

There are various possible ideas for addressing these issues. First and foremost, organizations could consider technologies and strategies that would permit the amalgamation of data from multiple sources and systems into a visible and transparent big picture. Next, it is critical to install fit-for-purpose systems that offer scalability, flexibility, better security, reduced complexity, and optimized performance.

We believe that data will be the primary force driving the wave of digital transformation that will sweep through almost every industry in 2023 and later. We expect real-time data, artificial business intelligence, data democratization, and cloud computing to be the key trends that will impact the way we use data when addressing business challenges in 2023.

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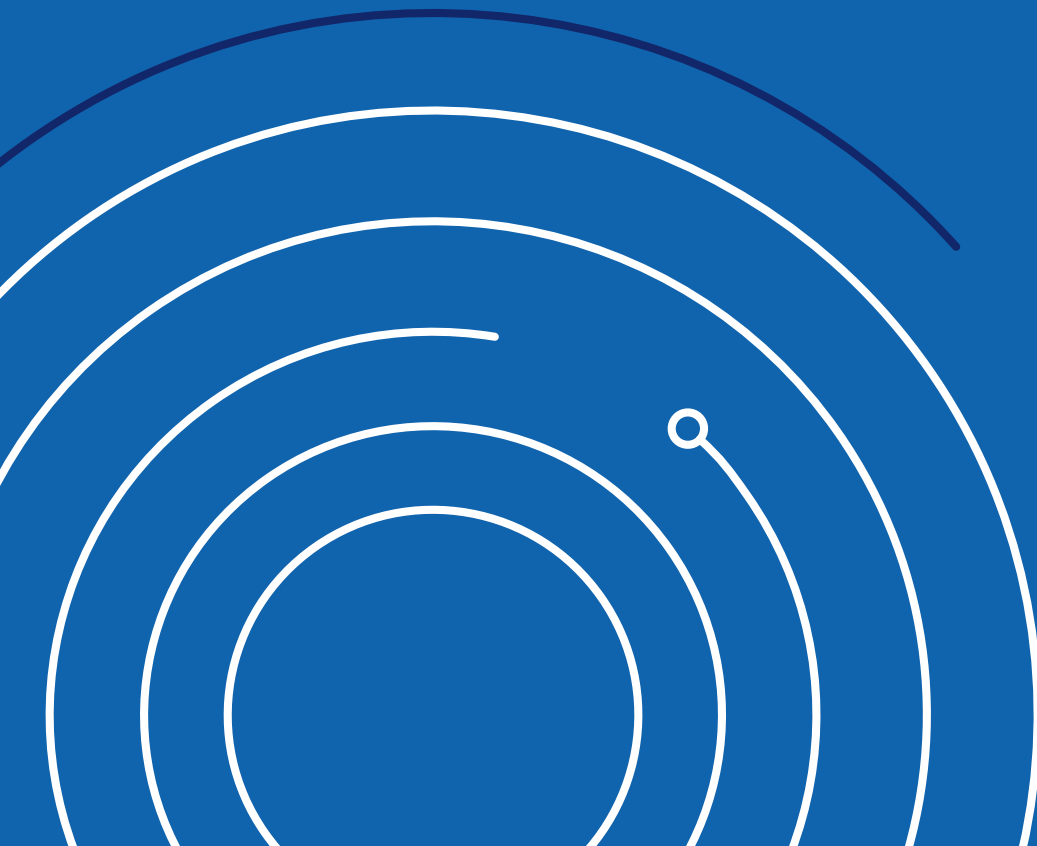
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