



ITDBr

Brazil Digital Transformation Index 2023

An overview of how organizations are maturing to embrace digital technologies and create valuable competitive advantages for their businesses.





Introduction

Digital transformation has been debated in the corporate environment for years. Still, until now, organizations did not have a systematized approach to measure the process, continuously track its progress, and understand its impact.

This study presents an exclusive methodology to consolidate the various aspects of digital transformation into a unprecedented and measurable indicator, the Brazil Digital Transformation Index (ITDBr). Such a reference is crucial for monitoring the evolution of the transformation and fostering discussions for companies, government, and society at large.

The approach by PwC Brazil and Fundação Dom Cabral (FDC) is tailored to the multidimensional reality of companies operating in Brazil and industries that are vital to the country.

This publication aims to measure the digital maturity level across ten dimensions within our methodology, highlighting the current state of the business sector and stimulating discussion about a proactive digital transformation agenda. The idea is to foster the systematic advancement of the topic in Brazil, leading companies to actively participate in this evolution.

The ITDBr aims to go beyond what other business confidence indicators propose. It seeks to assist companies in understanding the impact of internal and external factors on their operations and in formulating strategies to deal with challenges and opportunities in economic and competitive environments.

By doing so, we hope to provide more targeted and valuable insights into the context of digital transformation within the business sector.

What is digital transformation?

It is the ongoing journey of companies to integrate digital technologies into their businesses, aiming to meet the priorities of their strategic plans, explore new market opportunities, increase operational efficiency, and test new business models, possibilities of action, or problem-solving.

Digital transformation is fundamentally connected to business challenges, data strategy, and distinctive governance involving technology and innovation. It significantly impacts their operational capacity and the service provided to customers and people.

In this process, organizations can aim to:



Foster and develop **behaviors for an increasingly digital mindset** aligned with the pillars of organizational culture.



Modernize their **technological infrastructure** and **optimize processes** to promote more agile, efficient, and sustainable operations.



Adopt a **culture of innovation and continuous learning**, encouraging collaboration and experimentation.



Develop new competencies for working with advanced tools and technologies, including creating upskilling and reskilling programs for the workforce.



Analyze and use data more strategically to make decisions based on reliable and up-to-date information.



Improve customer experience by offering more personalized products and services and more user-friendly interaction channels.



Develop **new business models**, leveraging opportunities arising from digitization and the convergence of technologies.



Increase **resilience, risk management, and operational security** to ensure data protection and business continuity in the face of cyber threats.

By achieving these goals, companies can strengthen their competitive edge, rapidly adapting to changes and innovating continuously to meet customer expectations and market demands.



“When we began working on the index methodology, it became clear that many organizations still needed to clarify what digital transformation was. Some saw it merely as technology products, which confirms the importance of broadening this discussion in the market. With the ITDBr, we can help organizations understand where they are positioned in this transformation journey and what they need to do to advance.”

Denise Pinheiro

Partner and Leader of Digital Transformation at PwC Brazil



“Many organizations have narrowly associated their digital transformation agenda with only the advancements in modern technology. However, it’s imperative to have a comprehensive understanding of the underlying business challenges, investment readiness, team competencies, and the attributes of the chief digital officer. More fundamentally, it’s about establishing a systematic approach to develop digital processes that are in harmony with executive leadership, customer needs, and the evolving capabilities of the workforce. The formulation of this index by the FDC and PwC aims to provide a nuanced perspective to the Brazilian market, clarifying the true essence of digital transformation beyond the typical market hype.”

Hugo Tadeu

Director of the Innovation and Entrepreneurship Center at Fundação Dom Cabral

About the Brazil Digital Transformation Index

Industries analyzed:



Retail and Consumer



Energy



Health



Information Technology



Financial Services



Automotive



Agribusiness



Manufacturing



Construction and Infrastructure



Consulting and Services

The selection of these industries considers aspects such as economic growth, demand for innovation, technology, and modernization of services throughout the value chain.

Index calculation methodology

1. We gathered data from executives across various organizations using a questionnaire that encompassed the following:
 - Objective questions rated on a scale of 1 to 6, evaluating ten key aspects (refer to pages 6 and 7) of digital maturity in organizations.
 - Open-ended questions aimed at understanding the primary digital transformation initiatives implemented by these organizations over the past five years.

We generated the ITDBr using a scale from 1 to 6 based on the quantitative responses collected during the survey.

2. We conducted a qualitative analysis of the responses to the discursive questions to deeply understand the main digital transformations indicated by the executives for their organizations.
3. We conducted an integrated analysis (crossing quantitative and qualitative data) to interpret the results coherently and comprehensively.

For more details about the methodology, refer to the [appendix](#) of this report.

Data collection and analysis

The data gathered from executives were processed using specialized economic systems, employing the unique methodology from FDC (Forecasting platform). This approach was tailored to conduct an in-depth analysis of each dimension included in the study.

The primary objective of these analyses was to develop specific indexes, enabling a detailed and discerning evaluation of each dimension – which ensured a comprehensive and detailed analysis. This approach was instrumental in generating more accurate insights to understand the current level of digital transformation within the participating organizations.

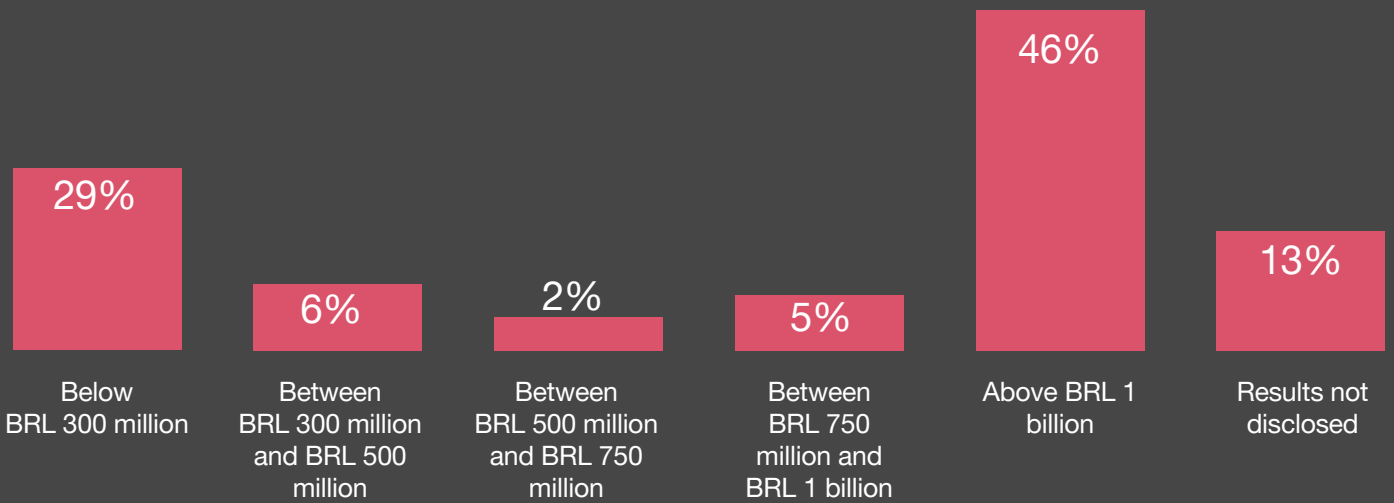
Dimension	Description
Strategy	An effective digital strategy begins with a precise mapping of opportunities and a future vision for both the company and the digital business. This includes creating an initial 100-day plan and a short-, medium-, and long-term strategy, identifying the necessary technologies to realize this digital future vision.
Governance	The success of digital transformation can be achieved by implementing solid governance and management mechanisms. This structure involves creating forums and committees, defining tracking metrics, and initiatives focused on people management, change management, and partnerships.
Digital Processes	The rationale for digital transformation lies in the ability to forge businesses and generate additional revenue based on digital products and services. To achieve this, it's essential to generate value on two fronts: internally, through digitizing business areas and operations and improving efficiency indicators, and externally, by attracting new customers and partners. The organization must develop internal and external processes and solutions to ensure this success.
People and Culture	Promoting a culture oriented towards digital transformation should be a priority. This involves developing leaders capable of connecting business and technology besides creating an online training platform to disseminate knowledge across all organizational levels. The organizational structure should be agile, encouraging experimentation and facilitating collaboration between different industries.
Infrastructure	A solid infrastructure represents the technological foundation of the organization. It integrates essential digital assets for using analytics and artificial intelligence (AI). It involves investing in technologies such as cloud computing and automating and designing digital processes for the organization's information flow. The goal is to continuously improve and innovate, creating value for the customer journey.
Data-Driven Decisions	Organizational approach in which decisions are made based on data and analysis rather than intuitions, perceptions, or personal experiences. An organization with a data-driven culture values and utilizes information and metrics to guide strategies, operations, and performance evaluations.

Technology Strategy	The technology strategy should define the key focus areas for the company's technological architecture, establishing priorities that support the business strategy and aim to facilitate incremental or disruptive movements.
Artificial Intelligence (AI)	Integrating artificial intelligence into various processes, systems, products, and services can significantly enhance the operational and strategic efficiency of the organization.
Digital Customers	Collecting and analyzing customer data from different channels, such as social media, is essential to develop tailored strategies to enhance the customer experience.
Cutting Edge of Technology	Exploring innovations at the cutting edge of technology, including in areas like nanotechnology, blockchain, 3D, robotics, and cloud computing, can revolutionize entire sectors and drive significant advancements, pushing beyond the current boundaries of knowledge.

Survey demographics

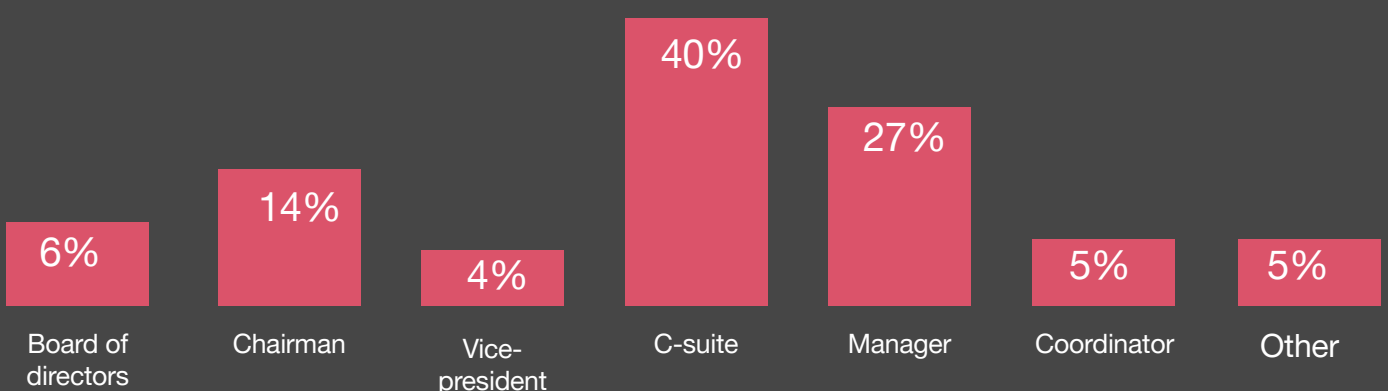
Annual revenue

Almost half of the study respondents have an annual revenue of over BRL 1 billion.



Respondent's job titles

Respondents in the executive management of the participating companies make up 58% of our sample. Another 6% are on the board of directors.



The level of digital transformation maturity is low

The Brazil Digital Transformation Index (ITDBr) average score for the surveyed companies stands at 3.3, marginally above the halfway mark on a scale ranging from 1 to 6. This indicates that the overall maturity level for digital transformation across these companies remains modest.

The financial services industry is leading the way, scoring 4.1, driven by its intense competitive environment and well-established regulatory framework. It's followed by the information technology sector at 3.8, which is integral to this digital evolution. Notably, this inaugural edition consolidates comprehensive analyses from FDC and PwC, setting the stage for more detailed industry-specific insights in the forthcoming study edition.



Average ITDBr by industry



Considering the aggregated analysis and the [methodology adopted](#) in this first edition, the industries (shown on the previous page) presented a result with important tracks to be explored in future publications, individually highlighting three main dimensions:



Financial Services: data-driven decisions, strategy, and digital processes.



Information Technology: technology strategy, digital processes, and data-driven decisions.



Retail and Consumer: digital customers, infrastructure, and digital processes.



Energy: technology strategy, people and culture, and infrastructure.



Automotive: strategy, data-driven decisions, and people and culture.



Construction and Infrastructure: strategy, data-driven decisions, and infrastructure



Consulting and Services: data-driven decisions, digital processes, and technology strategy.



Agribusiness: data-driven decisions, digital processes, and technology strategy.



Manufacturing: infrastructure, data-driven decisions, and strategy.



Health: data-driven decisions, technology strategy, and infrastructure.

More details about the analyzed industries are available on [page 16](#).

Index by dimension

The dimension in which companies are most advanced is that of data-driven decisions. This means they are further ahead in using data and analytics to make decisions rather than relying on intuition, perceptions, or personal experiences.

Data-Driven Decisions	3.9	Strategy	3.7
Digital Processes	3.7	Infrastructure	3.7
Technology Strategy	3.7	People and Culture	3.4
Digital Customers	3.1	Governance	2.9
Artificial Intelligence	2.4	Cutting Edge of Technology	2.3

Key Areas Impacted

- 1^a Commercial, Customer Experience, and Sales
- 2^a Legal
- 3^a Operations
- 4^a Human Resources

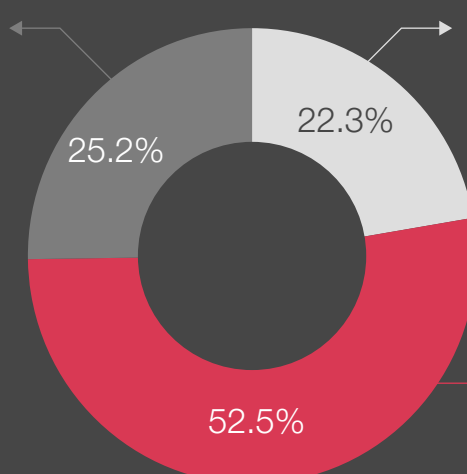
How companies are classified

Most organizations operating in Brazil are selectively adopting digital transformation through small-scale investments.

Q: How is your organization classified?

Optimizers

Digital transformation determines the organization's main investments.
Average ITDBr = 3.6



Visionaries

Investments in digital transformation determine the future of the organization.
Average ITDBr = 4.3

Selective

Small investments in digital transformation
Average ITDBr = 2.7

Smaller companies adopt more specific actions

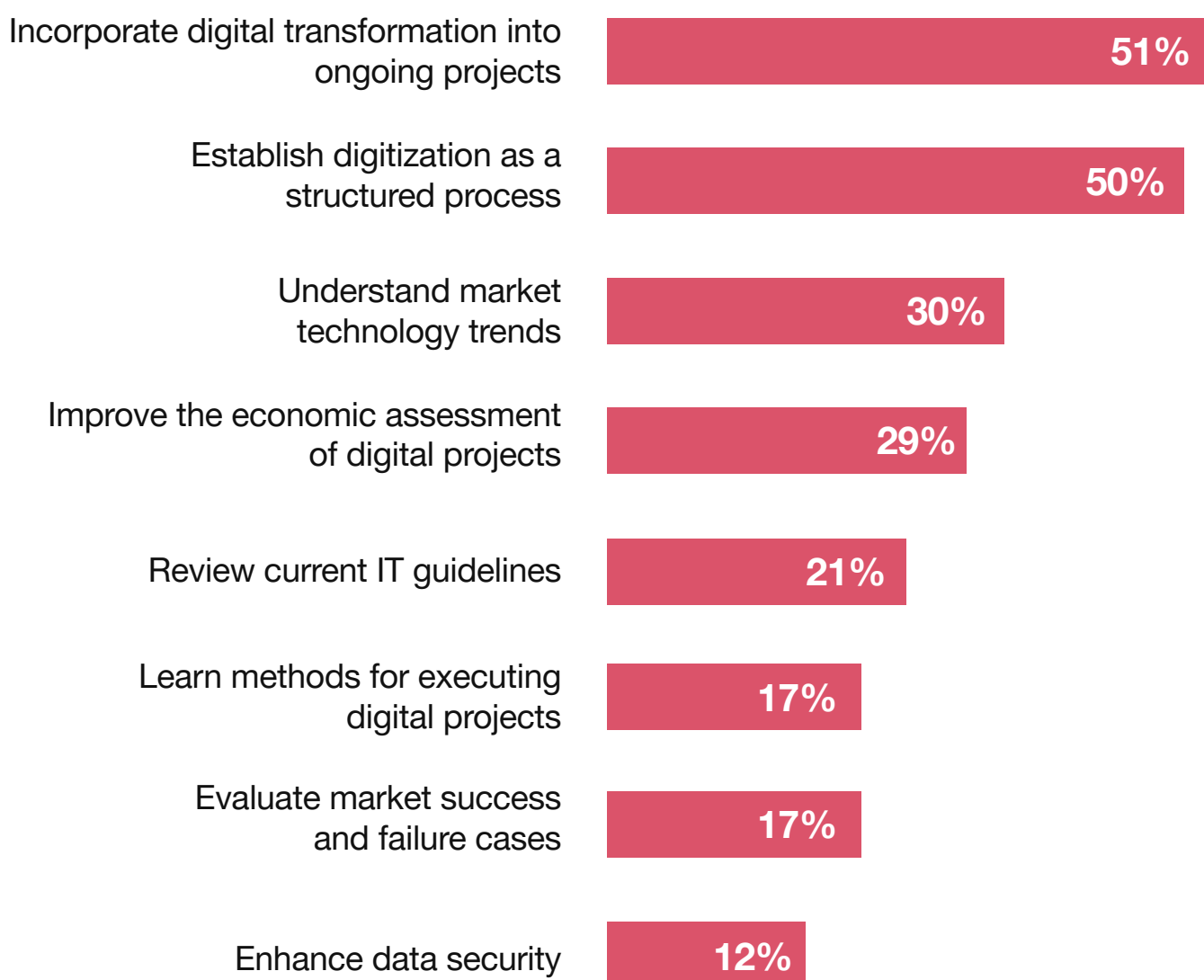
Large companies incorporate the digital transformation agenda more comprehensively into their daily operations. In contrast, smaller ones tend to adopt specific actions and solutions. Regardless of size, all show significant room for improvement in their digitization journey.

- **57%** of companies with revenue below BRL 300 million are selective, with close results between optimizers (**23%**) and visionaries (**20%**).
- Among those with revenue above BRL 1 billion, selective companies also predominate (**53%**). However, optimizers are gaining ground (**32%**), and visionaries remain in the smallest group (**13%**).

What still needs to be addressed?

From the perspective of leaders who participated in the survey, incorporating digital transformation into existing projects and structuring a straightforward digitization process are the key issues organizations must resolve to propel digital transformation.

Q: What would your organization need to structure to boost digital transformation?



Obstacles companies face in the process

Culture represents the main obstacle to progress in the digital transformation agenda. Respondents also pointed out the existence of a **low sense of urgency for developing and hiring digital skills**. Moreover, **the environment for experimentation and agility is rated poorly**. Limited experience in digital projects (28%) and the lack of a business model vision (21%) are other significant issues.

Q: What prevents your organization from implementing digital transformation?





“By all means, the economy is changing rapidly, yet the constant need for businesses to have well-prepared professionals and foster an organizational culture that promotes engagement remains unchanged. In the digital age, the emphasis is on people, as they play a pivotal role in driving business transformation and delivering your strategy. Beyond having skilled professionals, your culture also drives change. Certain cultural traits can inhibit innovation, which is an essential part of digital transformation.”

Camila Cinquetti
Partner at PwC Brazil



Understanding digital transformation

Two-thirds of respondents identified **strategic vision** as the term that most accurately summarizes their perception of digital transformation within organizations. This is closely followed by mentions of **customer-centric technological development**, alongside an emphasis on **analytical modeling** and **process enhancement**.

This result indicates that the digitization process extends beyond the operational level of short-term, routine tasks. Instead, it has a strategic character, is oriented towards the long term, and has overarching goals led by senior management.

Q: Which of the following terms best summarize your understanding of digital transformation in your organization?

Strategic and future vision of the business

67%

Customer-centric technological development

54%

Analytical model and process enhancement

51%

Development of new products/services

38%

Internal technological development

27%

Integration into the startup ecosystem

17%

Research and development

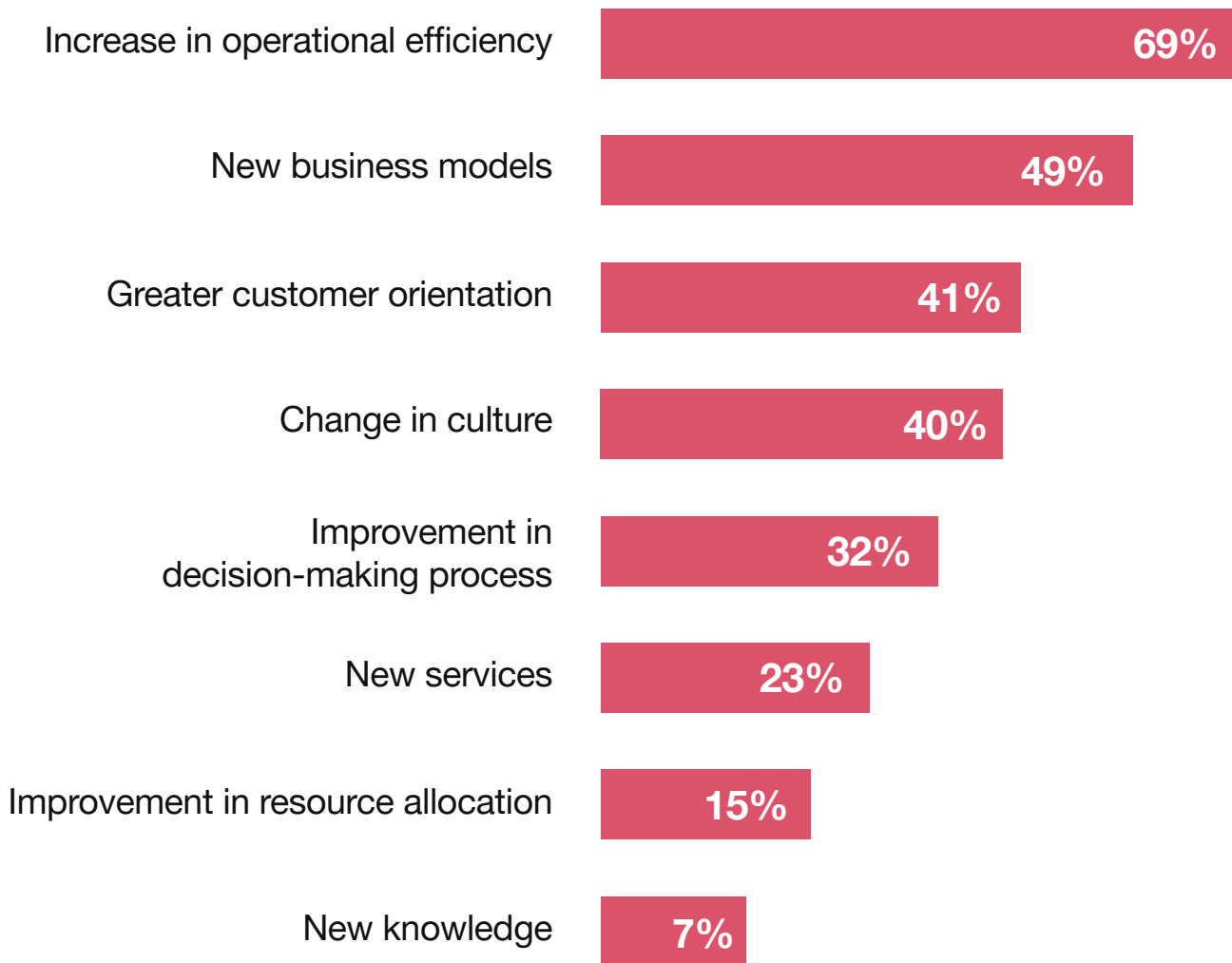
8%

Corporate and investments and venture capital

6%

Expected outcomes – the focus is still on operational efficiency

Q: What impact would digital transformation bring to your organization?



For more than two-thirds of survey participants (**69%**), one expected outcome of implementing digital transformation in the corporate agenda is **increased operational efficiency**, primarily through automation and streamlining operational tasks. This highlights how organizations are still focused on digitization's immediate or short-term impacts rather than on strategic and cultural transformation. These processes take more time but are crucial for competitiveness and business sustainability.

New business models are mentioned by **49%**, who see market expansion from a strategic perspective of the digitization process.

The importance of organizational ambidexterity

The ability of a company to manage and balance exploratory activities (innovation, experimentation, and seeking new opportunities) with optimization activities (enhancing processes, products, and services in search of efficiency) is called organizational ambidexterity.

An ambidextrous organization is efficient in its current operations and, at the same time, capable of innovating and adapting to changes to seize future opportunities.

Data from our study on the understanding of digital transformation and the expected outcomes from this journey indicate an expectation that the process will help develop the competency of organizational ambidexterity with short-term results and long-term competitive gains.

This is underscored by data showing that, while **69%** of participants expect digital transformation to impact operational efficiency immediately, **67%** see this process as part of the company's future vision.

A study on [Digital IQ](#) conducted by PwC Brazil revealed a divergence in priorities between business and IT executives. This disconnect can hinder value creation.

While both are concerned with the survival and efficiency of the company, business leaders aim to change the model of their core business, whereas technology leaders focus on modernization.

However, the Digital IQ study shows that the return on digital investments is higher in companies where these executives are in sync.

Results by industry segment

The **Financial Services** segment is the most advanced in digital transformation, with scores above 4 in seven of the ten dimensions analyzed. Following that, the **IT** sector scored above 4 in five out of the ten dimensions. Still, it showed weak performance in the cutting edge of technology aspect—the exploration of innovations in areas with transformative potential. The **Energy** segment achieved the highest score among all sectors in a specific dimension: 5.1 for technology strategy.

	Financial Services	Information Technology	Retail and Consumer	Energy	Automotive	Construction and Infrastructure	Consulting and Services	Agribusiness	Manufacturing	Health
General ranking	4.1	3.8	3.5	3.4	3.4	3	3	3	2.9	2.8
Strategy	4.5	3.9	4	3.7	4.3	3.6	3.3	3.3	3.4	2.9
Governance	4.2	3.2	3.2	2.5	2.9	2.7	2.4	2.7	2.7	2.2
Digital Processes	4.8	4.4	3.9	3.1	2.9	3.3	3.5	3.3	3.2	3
People and Culture	4.2	4	3.3	4.1	3.9	2.9	3.3	2.9	3.1	3.2
Infrastructure	4.4	4.3	4	3.9	4.1	3.4	3.1	3.4	3.6	3
Data-Driven Decisions	4.8	4.3	3.8	4	4.3	3.6	3.6	4	3.6	4.2
Technology Strategy	4.4	4.5	3.8	5.1	3.7	3.1	3.4	3.4	3.2	3.3
Artificial Intelligence	2.8	3.7	2.2	3	2.9	2.2	2.5	2	1.8	1.5
Digital Customers	3.6	3.5	4.3	2.7	3	3	2.4	2.6	2.7	2.6
Cutting Edge of Technology	3.3	2.5	2.3	2.1	2	2.1	2.1	2.2	2.2	2.5



“To sustain growth and remain relevant in a highly competitive ecosystem with increasing risks, organizations in the Financial Services sector focus their investments primarily on deploying advanced technologies, such as cloud computing, artificial intelligence, process automation, and workforce upskilling. It’s a strategic repositioning that creates value and generates short-term results and long-term competitiveness gains.”

Lindomar Schmoller

Partner and Financial Services Leader at PwC Brazil



Items with the best and worst evaluations in each dimension



3.7 Strategy

5

Importance of the digital transformation strategy in the organization

3.3

Plan of established goals and adoption of agile methods for the execution of the digital transformation strategy



2.9 Governance

3.2

Incentive for open innovation initiatives focused on digital transformation

2.7

Constant assessment of the maturity level for digital transformation



3.7 Digital Processes

3.9

Practices for adopting new digital channels for current customers

3.4

Practices for developing entirely new digital business models



3.4 People and Culture

3.8

Perception of leadership as an influencer for the organization's digital transformation

3.2

People management policies and organizational values encompass digital transformation



3.7 Infrastructure

4.2

Teams dedicated to technological infrastructure projects and data engineering

3.1

Teams dedicated to designing the customer journey and adequate understanding of user experience and interface



3.9 Data-Driven Decisions

4.7

Concern about data, compliance with the LGPD (General Data Protection Law), and mitigation of risks related to digital transformation

3.4

Sense of urgency for the development and hiring of new digital competencies



3.7 Technology Strategy

3.7

Development of strategic alliances to drive digital transformation

3.6

Perception of developing a strategy focused on new technologies and digital business models



2.4 Artificial Intelligence

2.7

Use of AI in strategic projects

2.0

Emphasis on a training program for hardware with a focus on AI projects



3.1 Digital Customers

3.8

Capturing and processing of customer data in business environments

2.4

Existence of gamification projects for capturing and processing customer data



2.3 Cutting Edge of Technology

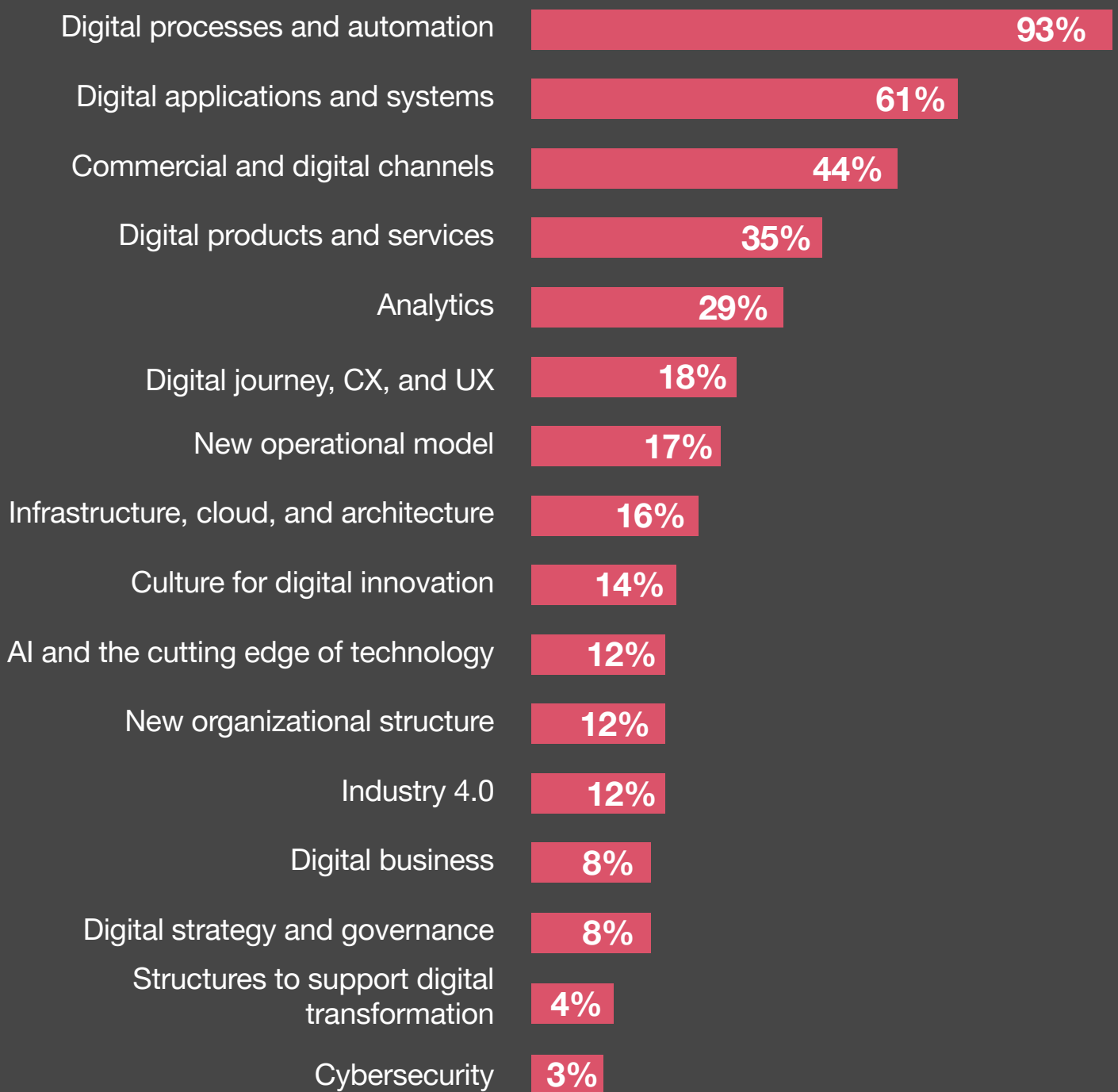
3.7

Ongoing projects for the use of digital contracts

1.7

Ongoing projects for the use of Metaverse technology

Main transformations in organizations over the last five years



The **backoffice** is the primary target of digital transformation in companies. Many highlighted adopting **digital processes and automation (93%)** and **configuring digital applications and systems (61%)**. These changes include the incorporation of RPAs, ERPs, digital tools, and integration between systems.

Transformations are most evident in the legal department, with the adoption of digital signatures and contracts, and in the **commercial, sales, and customer experience (CX)** areas, with the modernization of CRM and the revision of the sales process. To enhance customer orientation in the digital context, **44%** of respondents indicated **creating or improving digital channels**. This includes the development of digital customer service (**22%**) and e-commerce and marketplace (**13%**) platforms.

Less than a third of organizations (29%) highlighted adopting analytics-related initiatives, prioritizing data collection and analysis for strategic decisions and applying business intelligence tools. Moreover, the use of data analytics is higher in the commercial, sales, and CX areas, favoring a data-driven commercial approach, pricing strategies, and analyses focused on customer experience.

However, efforts to enhance omnichannel journeys, supported by digital relationships and transactions, seem not to match the investments in digital channels. Only 18% of participants highlighted initiatives aimed at their customers' digital experiences over the last five years. This reflects a low understanding of how digital technology can enable personalized experiences that drive loyalty and add more value to businesses.



“This dissonance can lead to transformations that do not fully meet customer needs, thereby failing to capture opportunities offered by new forms of interaction, new channels, and innovative technologies. Precise alignment between digital technologies and new customer priorities and behaviors is essential to create personalized experiences at scale, strengthen customer-brand relationships, and capture new business value.”

David Morrell

Partner of Customer Experience & Innovation at PwC Brazil

Advances in **digital infrastructure (16%)** have primarily focused on implementing cloud solutions, followed by updating IT system architectures and constructing data lakes. Organizations highlighted the existence of specialized teams dedicated to technological infrastructure projects and engineering.

Regarding changes in **organizational structure, 12%** of organizations mentioned creating new areas dedicated to digital and innovation or restructuring teams, prioritizing specialists in infrastructure management, cloud solutions, and process automation. Moreover, **17%** of companies emphasized changes in the operation model, incorporating practices such as agile methodologies, remote work, and strategic enhancement of specific departments.

Innovations at the cutting edge of technology are seen as the least relevant in the themes addressed by the survey. Technologies such as virtual/augmented reality, 5G, and blockchain, all with **1%** mention, seem still distant from the daily operations of companies in Brazil.

The sparse applications of these technologies are prevalent in **Industry 4.0 (12%)**. In this realm, the Internet of Things (IoT) is applied by **4%** of companies, especially to improve factory floor layout and expand field connectivity. In comparison, robotics is adopted by **3%**.



Organizations give greater attention to automations and the deployment of digital channels



In digital products and services, most transformations have focused on **enhancing existing products or services (19%)**. These enhancements include the adoption of new functionalities and technologies, such as biometrics, new payment methods, and sensors for contactless operation.

Although on a smaller scale, some companies have launched **new digital products and services (16%)**, such as solution platforms, cloud services, and applications. However, a small portion mentioned the inauguration of **new digital businesses (8%)**, like in the NaaS and SaaS formats.

Organizations in Brazil still show low maturity concerning **artificial intelligence**. Only **10%** have initiatives in this area, including using AI for product development and legal intelligence and applying machine learning in optimizing S&OP (Sales and Operations Planning) processes.

On this topic, [PwC's Fourth Annual AI Business Survey](#) shows that companies achieving good results from using AI adopt a more holistic approach, advancing in three areas simultaneously: business transformation, decision enhancement, and modernization of systems and processes.



“Even though the adoption of digital technologies, such as artificial intelligence, and the creation of new products and services are important aspects of digital transformation, leaders must ensure that all initiatives are connected to the company’s strategy and have proper governance for their execution. Otherwise, these efforts become isolated projects, do not yield the expected results, and lose prominence in executives’ agendas.”

Isadora Faria

Senior Manager of Innovation at PwC Brazil

Focus points

While companies recognize the importance of a digital transformation strategy, they still **do not prioritize the complete business transformation into a fully digital model**. Only **7%** of respondents have indicated comprehensive changes in their strategy, including redesigning the business core and a phased implementation across all areas.

Digital governance maturity is low in organizations: only 1% of respondents mentioned concrete initiatives for implementing digital governance. Furthermore, **few companies incorporate risk management practices (1%)** or conduct regular maturity assessments concerning digital transformation.



“The use of digital technologies requires constant changes and adaptations. Organizations must manage various privacy, security, regulatory compliance, third-party relationships, and intellectual property risks to reap the maximum benefits of digital transformation. Giving visibility to the balance between innovation and risks will contribute to your company gaining trust and competitive advantage.”

Luiz Ponzoni

Partner, Advisory Risk Services at PwC Brazil

Cybersecurity also does not occupy a prominent position in this scenario: only **3%** of respondents reported robust initiatives, such as predictive fraud analysis and data security reinforcement. Although there is a **concern regarding compliance with the General Data Protection Law (LGPD)**, the lack of robust risk management and cybersecurity practices undermines personal data protection.



“As digital connections multiply, they weave increasingly complex webs of new technologies. This makes the processes needed to manage and maintain the entire ecosystem more complicated as well. However, it is necessary to have a strategy that prioritizes the complete transformation of the model to the digital environment and that senior executives are willing to act together.”

Eduardo Batista

Partner, Leader of Cybersecurity
at PwC Brazil

Appendix: Methodology

Quantitative analysis

We applied the Principal Component Analysis (PCA) method without rotation to create the ITDBr. This method was chosen after testing both PCA and Exploratory Factor Analysis (EFA), which are multivariate statistical techniques aimed at reducing many items to fewer variables.

The main difference between the two methods is how they treat an item's variance (variation in data). While EFA considers only the common variance among items, PCA considers both the common and specific variances.

We chose PCA because it seeks to find the linear combinations of variables that maximize variance, using all available variance. This approach helps us understand which linear components are present in the data and how each individual variable contributes to those components.

By using the factor scores from PCA as explanatory variables, we avoid the problem of multicollinearity, facilitating the interpretation of results based on the identified factors. This procedure allows for a detailed and precise analysis, which aids in identifying the dimensions present in the data.

1. We organized the data into a matrix that correlates each company's responses to the proposed questions, thereby improving the understanding and distribution of responses.
2. We identified the factor loadings of each question in its respective dimension using the criterion previously defined. This process generated a factor matrix from the PCA, composed of coefficients (factor loadings) that express the standardized variables in terms of the factors. High values indicate a strong relationship between the variable and the factor. Thus, we determined a factor loading for each question.
3. We established weights for each question based on its correlation within the corresponding dimension. We made use of the following formula to calculate the weights:

$$Weight_i = \frac{Load_i}{\sum Load \text{ of the respective dimension}_j}$$

Where: i = question; j = dimension

4. We created a weight matrix for each question and dimension, leading to the creation of a matrix termed "Base." This matrix associates companies with sectors and their respective dimensions. To construct the "Base," we applied a weighted average of each dimension per company using the formula:

$$\text{Dimension per company} = (\text{weightQ1} * \text{dataQ1C1}) + (\text{weightQ2} * \text{dataQ2C1}) + (\text{weightQ3} * \text{dataQ3C1}) + (\text{weightQ4} * \text{dataQ4C1}) + (\text{weightQ5} * \text{dataQ5C1})$$

Where:

Q1 = question 1; Q2 = question 2; Q3 = question 3; Q4 = question 4; Q5 = question 5

Q1C1 = Question 1, Company 1; Q2C1 = Question 2, Company 1;

Q3C1 = Question 3, Company 1; Q4C1 = Question 4, Company 1; Q5C1 = Question 5, Company

In this way, a dimension index was created for each surveyed company.

5. The "Base" matrix enabled the calculation of a general index for each company based on the arithmetic mean of the dimensions and the generation of a general index per dimension and sector. It also allowed for identifying maximum, minimum, and variation values.

Conceptual framework applied to interpret and categorize data

First-order concepts

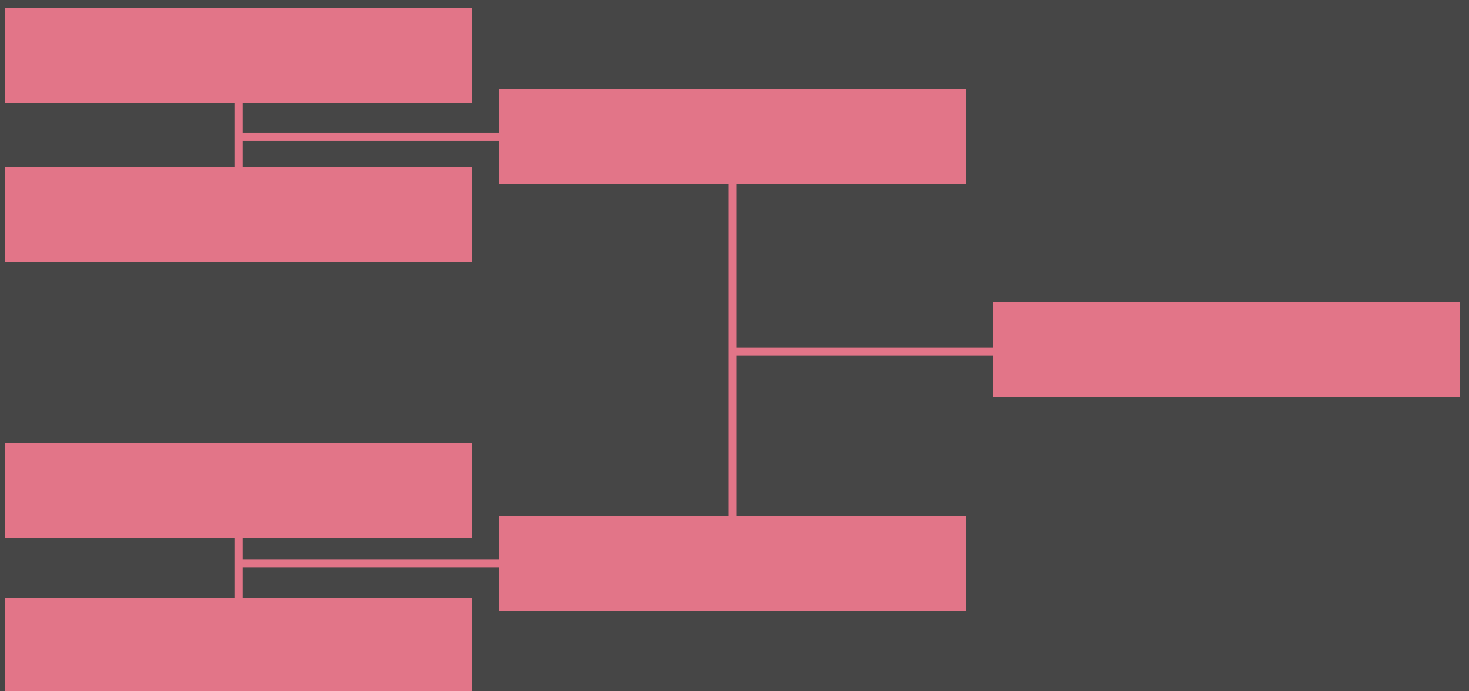
The most basic or descriptive categories that emerge from raw data. These are the initial levels of information categorization. These terms are usually close to the original data and do not require much interpretation or abstraction.

Second-order concepts

Categories that arise from the analysis of first-order terms. They involve an abstraction stage and grouping of the initial categories into broader concepts. Second-order categories provide a higher level of interpretation and organization, allowing for identifying patterns or underlying themes in the data.

Third-order concepts

These are the highest levels of abstraction and interpretation. They emerge from the analysis of second-order terms and represent broad concepts or general themes that connect various second-order categories. Third-order categories represent deeper insights, theories, or more comprehensive understandings of the phenomenon under study.



Questionnaire responses

The terms identified in the collected responses feed into the first-order concepts. Example with terms in bold:

Implementation of a new **ERP**, creation of a robotic **CSB**, automation of **HR processes** and Personnel Evaluation, Implementation of **CRM**.

Contacts

PwC Brazil

We are a network of firms present in 151 territories, with more than 360,000 professionals dedicated to providing quality services in audit and assurance, tax and corporate consulting, business consulting, and transaction advisory.



Denise Pinheiro

Partner, Leader of Digital Transformation
denise.pinheiro@pwc.com



David Morrell

Partner, Leader of Customer Experience
& Innovation
david.morrell@pwc.com



Isadora Faria

Senior Manager of Innovation
isadora.faria@pwc.com



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Fundação Dom Cabral

FDC is a Brazilian business school with almost 50 years of history, ranked among the best in the world and in 7th position in the “Financial Times” 2023 ranking of executive education institutions. The institution welcomed about 46,000 professionals through its doors in 2022.



Hugo Tadeu

Director of the Center for Innovation and Entrepreneurship Postdoctoral fellow at Sauder School of Business, Canada

hugo.tadeu@fdc.org.br



Jersone Tasso

Associate Professor at the Center for Innovation and Entrepreneurship at FDC. Post-Doc from the University of Texas at El Paso, USA.

jersone.associado@fdc.org.br



Rodrigo Penna

Researcher at the Center for Innovation and Entrepreneurship. Master's student in Administration at Fundação Dom Cabral.

inova@fdc.org.br

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