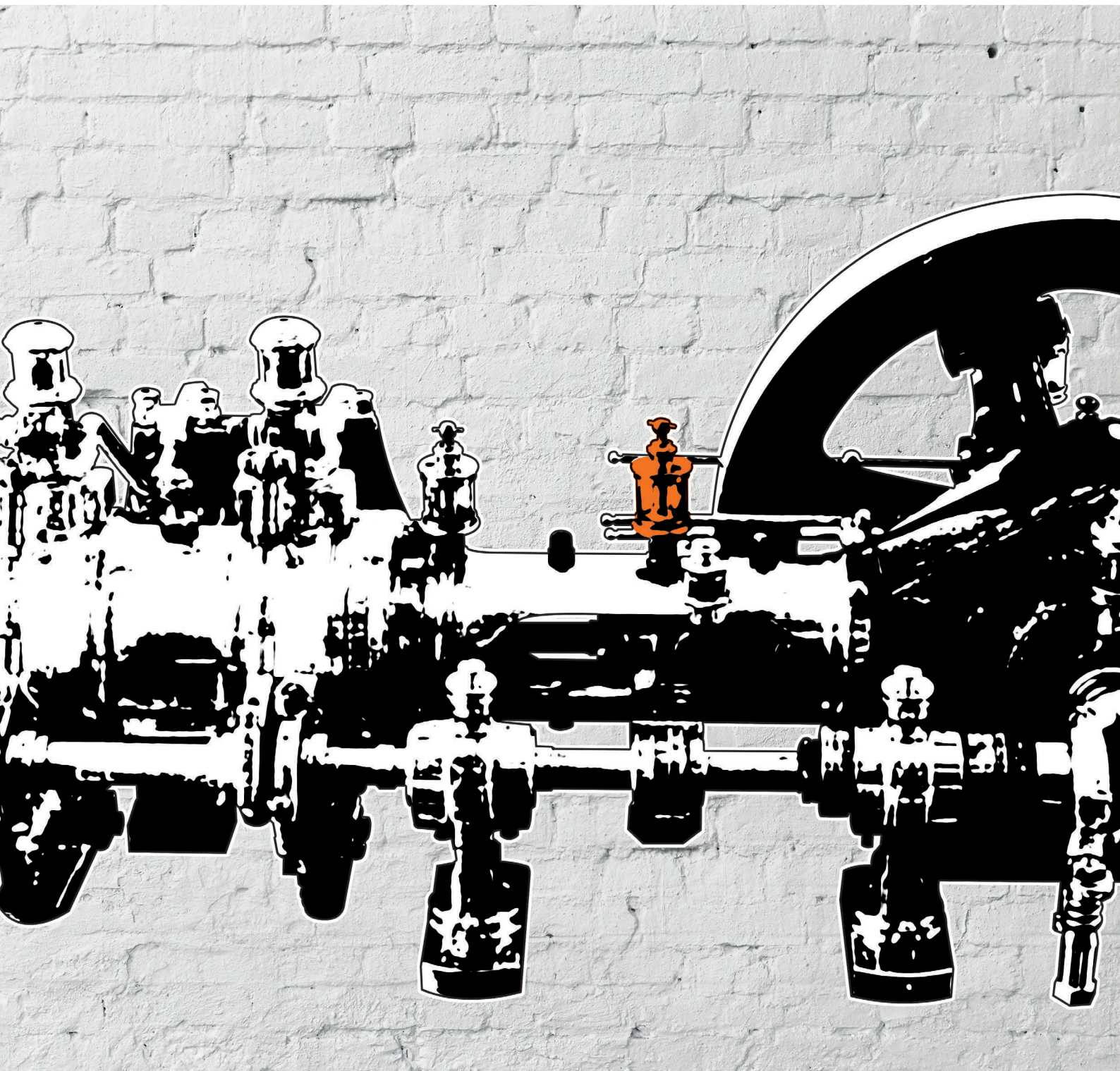


Industrialized and Ready for Digital Transformation?

Why Banks Lack the Agility to Compete





Foreword

Digital transformation of banking is powered by the remarkable development of digital technology and convergent evolution of information, communication, computing, and connectivity technologies. Customers of financial services increasingly embed digital technologies into their everyday life, creating new demands and expectations for banks. Lower entrance barriers are providing new opportunities for the emergence of Fintech products and platforms. Banks who are not well prepared to compete under these changing business conditions will find it difficult to survive.

The subject of this study, involving a survey of over 100 bank executives, is examining the impact of digital transformation on banks. Our results show that designing and executing a digital banking strategy to respond to the force of digital transformation is a top-management priority in banks. Furthermore, our results highlight several important gaps in how well banks are currently prepared to meet new demand associated with digital transformation. Overall, these gaps point to the theme of industrialization of backend processes as a necessary, yet not sufficient, foundation for digital transformation. We offer a framework in this study that helps banks to assess their state of digital transformation readiness and design appropriate actions.

We would like to take this opportunity to extend our gratitude to all the organizations and contributors who have played an important role in the success of this study by completing the questionnaire. We would also like to thank the team, composed of various members of IESE Business School as well as Synpulse Management Consulting, which made this study possible.



A blue handwritten signature of R. Gregory.

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Table of Contents

Executive Summary	8
1. Introduction	11
2. Background and Framework	12
3. Methodology and Sample Description	14
4. The Digital (R)Evolution in the Banking Industry	17
5. Banking Industrialization: Processes and Operations	21
6. Banking Industrialization: Sourcing and Governance	26
7. Banking Industrialization: IT Architecture	30
8. Conclusion	34
Further literature	37
Authors and Publishers	38

Figures and Tables

1 Industrialization framework	12
2 Categorization of identified banks in our sample	14
3 State of digital banking strategy implementation	17
4 Perceived degree of readiness for digital transformation	17
5 Customer channels offered by banks	18
6 Relative importance of customer channels	18
7 Digital banking strategy - goals and objectives	19
8 Documentation status of business process workflow	21
9 Degree of automation of core banking processes	22
10 Degree of automation of supporting processes	22
11 Automation of process and operations - goals and objectives	23
12 State of IT centralization (geographic and functional)	26
13 Experience with outsourcing engagements	27
14 Degree of externalization of core banking processes	28
15 Degree of externalization of supporting processes	28
16 Execution of multisourcing strategy	29
17 Sourcing agility principles	29
18 State of core banking technology platform implementation	30
19 IT best practices implementation status	31
20 IT complexity (heterogeneity and redundancy)	32
21 Targeted role for digital banking	33
22 State of industrialization	34

Executive Summary

- Digital transformation is associated with remarkable changes in digital technology such as powerful information and communication technologies targeted to the end consumer and the emergence of digital infrastructures such as mobile technology platforms.
- In the banking sector, we witness constant changes in the demands of different customer profiles, who view digital technologies as an integral part of their everyday life.
- Digital transformation, originating from outside the realm of industrial-age organizations such as banks, triggers IT transformation and business model redesign in banks.
- Pressure on banks to transform their organizations and foster digital innovation is further increased by a wave of new FinTech entrants who profit from lower entry barriers due to digital transformation.
- A key ingredient for the success of new FinTech players is the combination of highly industrialized operations (i.e., standardized, automated, cost-efficient, reliable, specialized and speedy operations) with customer experience (i.e., experience that is human centered, well designed, personalized, seamless across channels, valuable, affordable and integrated into life).
- Our empirical study involving a survey of senior bank executives covers approximately 40% of the population of Spanish banks and highlights that many banks have planned and, to a large extent, have already begun executing a digital banking strategy.
- However, our study also highlights many gaps between banks' perception of digital transformation readiness on the one hand and, on the other, the reality of a lack of agility and speed in addressing new customer demands that are shaped by digital technologies.
- One digital readiness gap we identified is that, on average, banks still rely heavily on their physical branch network to nurture customer relationships and that the transition to digitalized «omnichannel» banking has not yet occurred in most banks.
- Another identified digital readiness gap in banks is that their historically grown legacy IT architectures are too complex and lack the required agility for digital transformation. While many banks have invested in a core banking platform, they are still rather far from the target of competing with the modern economy's digital platforms.
- Yet another digital readiness gap we identified is that banks' efforts to document, structure and ultimately automate workflows and business processes have not yet gone far enough. Furthermore, they have focused on back-end functions rather than also extending these efforts to customer-facing front-end services.
- Overall, the digital readiness gaps we identified in banks can be categorized into three back-end industrialization areas – i.e., (1) processes and operations, (2) sourcing and governance, and (3) IT architecture – and one front-end digital transformation area – i.e., (4) customer relationships, products and experience.
- In summary, we recommend that banks further industrialize their back-end processes and digitally transform their front-end processes.



1. Introduction

Digital transformation is fundamentally changing our everyday lives and challenging how firms compete. Several interrelated technological developments are jointly responsible for these changes. Remarkable advances in digital technology development and adoption in society yield constant connectivity. As a result, everything and everyone seems to be increasingly connected. Based on this rapidly evolving system of connections across all parts of society, fueled by the smartphone use of nearly everyone nowadays, new kinds of interactions become possible. For example, via digital platforms, people can now interact with other people directly to give and take out loans (also referred to as marketplace or peer-to-peer lending). More than that, connections and interactions give rise to a growing base and diversity of information. As a result, banks are now competing over how to leverage big data using advanced analytics to gain a competitive edge by offering new customer experiences.

These changes in terms of connections, interactions and information are not only leading to changes in banks; they are also fueling a wave of new entrants and so-called FinTech startups. Customers of financial services are now offered such a wide range of services that they have begun comparing more frequently and more critically. Rather than simply trusting their local bank around the corner, today customers of financial services reflect much more upon which type of services they would like to be offered and how. Changing customer behaviors and expectations are in turn putting enormous pressure onto banks to change their business models and their overall approach to innovation. Yet, banks typically lack the agility and speed required to innovate.

Often, customer-facing innovation in banks is inhibited by historically grown systems and established organizational structures. For banks to be able to respond with speed to new market trends shaped by digital technologies, they need to tackle a number of interrelated challenges that point to the overall theme of industrialization. One challenge is the unfavorable ratio of available «change-the-bank» budget vis-à-vis «run-the-bank» obligations. Another challenge is the architectural complexity naturally resulting from legacy systems that have grown, in many cases, over multiple decades. Another challenge is the incapability of providing extremely scalable and innovative digital banking services that would lock in and bind customers to the bank, similar to the way firms such as Apple and Google provide technology devices and services. In short, banks still have many «digital readiness gaps.» The purpose of this study is to explore and identify these gaps.

Overall, we find that the existing resources and competencies of banks are increasingly misaligned with the quickly changing needs and expectations of customers. We identified significant digital readiness gaps in three back-end industrialization areas (processes and operations, sourcing and governance, IT architecture) and the bank's front end (customer relationships, products, experiences). We find that banks are embarking on massive change programs, referred to in this report as digital transformation programs. They do so in order to reinvent their product and service offerings as well as their relationships with customers.

Banks that are industrialized in their back end (processes and operations, sourcing and governance, and IT architecture) are better prepared to successfully execute digital transformation programs that will lead them into the digital age. In a nutshell, banks need to industrialize their back end in order to digitally transform their front end. With this main proposition in mind, we continue in the next section with an overview of the framework that guided our empirical study in the banking sector.

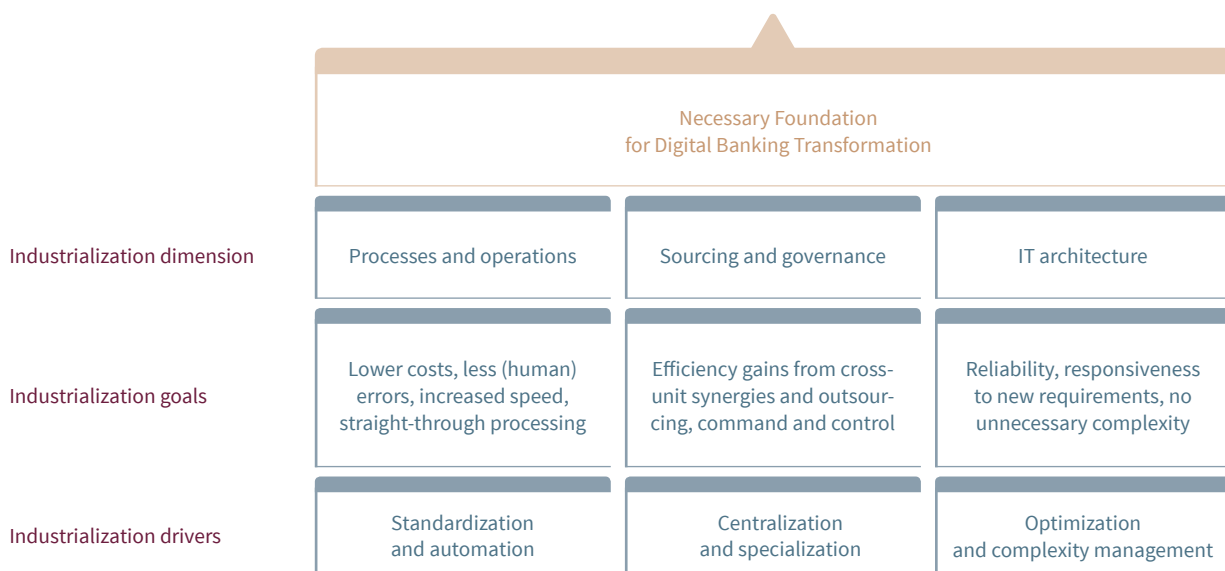
2. Background and Framework

The objective of our empirical study in the banking sector was to systematically assess the state of the industrialization of banks, based upon the key assumption that banking industrialization is a necessary (but not sufficient) condition for customer-centered digital transformation of the bank's front end (customer relationships, products and experiences). To achieve this central objective, we developed a framework that guided our empirical study. The framework proposes three dimensions of banking industrialization (processes and operations, sourcing and governance, IT architecture), which in combination provide the necessary foundation for the digital transformation of a bank's front end and customer-facing processes.

The framework was developed through a combination of knowledge derived through systematic inductive research in collaboration with banks in Europe from 2011 to 2014, knowledge derived from a systematic study of existing academic literature and theories, and insights derived by reflecting and learning from practitioner experiences in working on banking industrialization, both on the part of the authors of this report themselves as well as from documented practitioner reports available online.

The main proposition of the framework in this study is that the industrialization of a bank's back end provides a necessary foundation for digital transformation of the bank's customer-facing front end. In this report, we use the term digital transformation to refer to the changes associated with the application of digital technology in all aspects of human society. Most notably, at present people are nearly constantly connected, both with each other as well as with technologies and machines. In addition, as evidenced by the diffusion of social media and mobile technologies, the nature and context of interactions among people, and between people and technologies, have started to change fundamentally. For example, customers expect interactions with service providers to be possible at any time, anywhere, and using any device. In banking, this is driving the tendency toward «omnichannel banking,» among other things.

To deal effectively with the digital transformation of society and to make this development an integral part of banks' business models and their organizational redesign efforts, we posit in this study that banks simultaneously have to improve their industrialization maturity level. Our framework includes three interrelated and central dimensions for assessing the



state of banking industrialization and digital readiness in a given firm. We identified these dimensions by assessing key drivers of industrialization in service sectors and banking in particular.

The first key driver that we identified in applying the concept of industrialization of banking is standardization and automation with goals such as lowering costs, reducing (human) errors, increasing speed, and straight-through processing. The key areas to which these principles are applied are processes and operations, which we defined as the first industrialization dimension of our framework.

The second key driver that we identified in assessing banking industrialization is centralization and specialization with an eye to goals such as gains in efficiency from cross-unit synergies and outsourcing, as well as command and control. In a bank, these principles are applied to the IT function and the bank's network of business process and IT suppliers, supported by governance mechanisms such as outsourcing contracts. Thus, sourcing and governance constitute the second industrialization dimension of our framework.

The third identified driver for industrialization that we applied to banking is factory optimization and complexity management with an eye on goals such as reliability, responsiveness to new requirements and avoiding unnecessary complexity. As banks run to a large extent on IT, this principle is applied mainly to their IT architecture, which is thus the third industrialization dimension of our framework.

The framework is depicted in  1.

3. Methodology and Sample Description

To assess the state of industrialization in Spanish banks we conducted a survey of executives who supervise the industrialization and digital transformation efforts in their firms. The survey was developed jointly by IESE Business School and the management consulting company Synpulse. The survey questions and its topics were identified following the development of the framework presented in the previous section. A pilot of the questionnaire was tested successfully with help from a top executive at a Spanish retail bank to endorse the consistency and relevance of each question and topic.

The questionnaire was structured into six topic areas related to the digital transformation in the banking industry and banking industrialization. First, general questions about the characteristics of the bank. Second, questions about the nature of the impact of digital transformation in the banking industry. Third, questions about industrialization in the dimension of processes and operations. Fourth, questions about industrialization in the dimension of sourcing and governance. Fifth, questions about industrialization in the dimension of IT architecture. Finally, questions to gather contact information and identify each bank.

Category	Description	Examples
International banks with operations in Spain	Banks that come from foreign countries but are present and operate in the Spanish market.	Deutsche Bank, Credit Suisse, Barclays Bank, Andbank, Novo Banco etc.
Spanish banks with an international presence	Banks founded and present in Spain but with international presence and operations across different countries.	Santander, BBVA, Banco Popular, Banco Sabadell, Self Bank etc.
Local Spanish banks	Spanish banks that are present and operate only in the Spanish market.	Banco Mediolanum, BANKIA, Banco Cooperativo Español etc.
Financial holdings	Groups of companies focused on financial services covering a wide range of customer needs, including insurance, securities trading, retail banking, investment management, etc.	Caixa Holding, EDM Holding etc.
«Cajas»	Savings banks specialized in accepting savings deposits and granting loans.	Caixabank, Caixa Popular, Caja de Ingenieros, ABANCA etc.
Financial advisories	Entities for asset management and advisory services for risk management, analysis and structuring of debt, equities, etc.	InverCaixa Gestión, Sigrun Partners, etc.

In addition to the survey, a maturity model was developed to assess the degree of industrialization for each dimension identified above. Each question within the specific industrialization dimension was transformed into statements. For each bank participating in our survey we evaluated the level of agreement with each statement by applying a point scale of 1 to 4 points, where 1 refers to «does not apply at all» and 4 refers to «fully applies.» The achieved total of points for all banks compared to the possible maximum is regarded as an estimate of the maturity degree (given as a percentage) in each dimension. An integrated overview of the achieved maturity degrees is presented in the conclusion section.


The data was collected from January 29 to March 25, 2015, using two versions of the questionnaire and survey: an online version and a physical version sent by postal mail. We sent the survey to contacts on a long IESE Business School contact list of banking executives and professionals, most of them in Spain. This large-sample survey resulted in 105 useful responses. Of those, 46% of all respondents submitted the survey anonymously and 54% of them provided professional contact information.

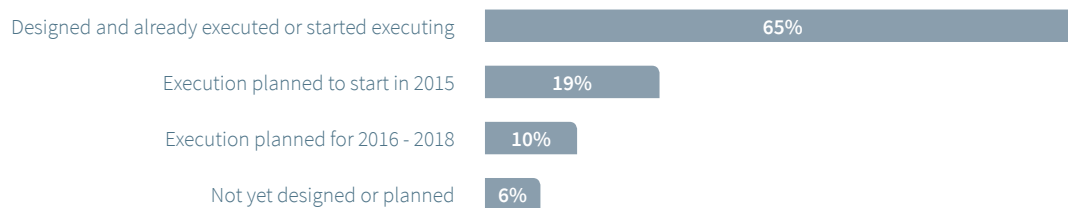
From the known respondents, our final sample consists primarily of consumer retail banks, universal banks and private banks with a presence in Spain (■) 2). In addition, the sample also includes answers from small and specialized banks. Respondents to our survey were mostly top-level executives and executive directors focused on technological innovation and IT. Responses from top-level executives, i.e., CEO, COO and CIO, amounted to 35% of all respondents. The executive directors reporting directly to the C-level constituted 33% of all respondents, while 32% of respondents held management positions mostly in relation to IT, innovation, consultancy or finance.



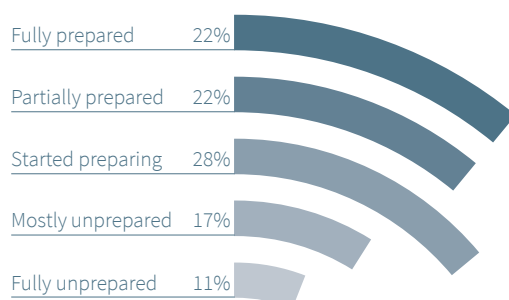
4. The Digital (R)Evolution in the Banking Industry

In light of the digital transformation developments summarized in the introduction to this report, banks need to adopt new strategies to increase their ability to compete against new market entrants. The large majority of banks in our sample had already designed and begun executing a digital banking strategy, highlighting the imminent impact of digital transformation on the banking industry. Merely 6% of all banks in our sample stated that they had not yet designed or even planned a digital banking strategy ( 3).



Although banks are conscious of the upcoming changes in the digital age and the importance of participating, only a minority of the banks in our sample, 22%, consider themselves fully ready and prepared for digital transformation ( 4). Another 22% consider themselves partially prepared, and 28% have started preparing. However, a large percentage, a combined 28% of banks, consider themselves (fully) unprepared.





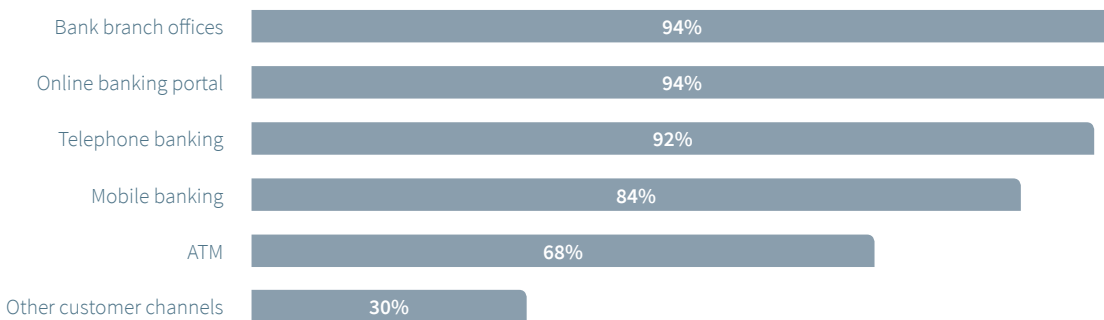
 3: State of digital banking strategy implementation (Source: IESE and Synpulse)



 4: Perceived degree of readiness for digital transformation (Source: IESE and Synpulse)

Contrasting these findings and comparing  3 with  4, it is remarkable that 65% of banks in our sample have already designed and started executing a digital banking strategy, while only 22% of banks consider themselves fully prepared for digital transformation. Stated differently, banks appear to still have many digital readiness gaps, but nevertheless they are very eager to transform and execute a digital banking strategy. One plausible explanation for this key overarching finding is that the digital transformation (of society) is forcing banks to respond quickly, even if their back-end organization currently still lacks the required agility. In fact, modern customers surfing the wave of digital transformation are not willing to «wait» and banks seem to sense the risk that their customers will turn their backs on them.

The big reliance and dependence on vast branch office networks in banking highlights the first identified digital readiness gap. Our findings in  5 show that bank branch offices figured prominently as the most widely used and prevalent customer channel. Bank branch offices were also ranked by our participants as the most important channel for their relationship with customers (see  6). These findings highlight two interrelated issues: first, banks are, to a large extent, still trapped in a traditional mindset that is firmly grounded in the physical world. Second, banks (have to) allocate a large amount of resources to operating a vast network of offices and locations in the physical world, and there is much uncertainty as to what kind of contribution these continuous investments will make, if any, to the bank's digital transformation efforts.



 5: Customer channels offered by banks (Source: IESE and Synpulse)

	Ranking	Customer channels
Most important	1	Bank branch offices
	2	Online banking portal
	3	Mobile banking
	4	Telephone banking
	5	E-Mail
	6	Printed material
Least important	7	Social media

 6: Relative importance of customer channels (Source: IESE and Synpulse)

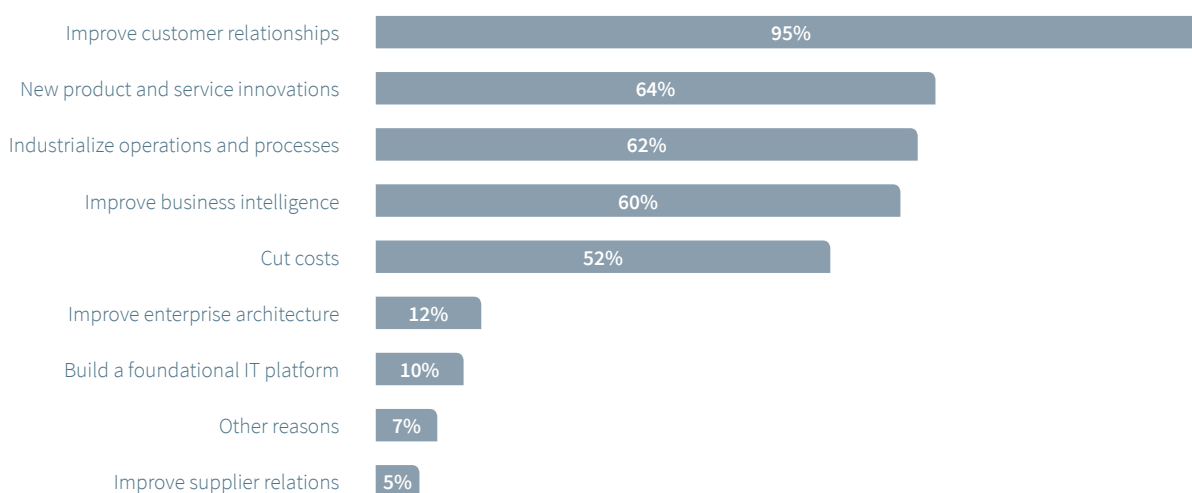
Our findings also illustrate that a bank's website and online portal are considered almost as important as the traditional bank branch offices. Furthermore, as highlighted in the rankings table, mobile apps are viewed by banks as a new customer channel. This highlights the shift by which banks are increasingly seeking to address the needs of modern customers, who expect banking services to be available anytime, anywhere and using any device. However, considering banks' current mobile banking offerings, we find that banks still have a long way to go in order to fully satisfy mobile customers.


Although social media is ranked as the least important customer channel, many of our respondents mentioned its growing importance for banking transactions (e.g., offering banking services). This highlights the increasing exposure of industrial-age banks to the digital environment that is characterized by an increasing number and diversity of connections and interactions between people across traditional boundaries.

These findings are also supported by a large variety of other customer channels that are mentioned by our respondents: multichanneling, agents, virtual offices, personal support services and digital television. This reveals the broadness of installed customer touchpoints, responding both to traditional customer needs and newly emerging digital needs. In other words, banks seem to have recognized the trend of increasing diversity in customer channels (a combination of offline and online) and the need to ensure consistency of information and seamless integration of services across this growing range of channels. Contrasting these findings with our finding that bank branch offices are still «the most important» customer channel, however, points to an important gap.

While banks continue to place a strong emphasis on their physical presence and direct personal relationships with their customers, they also appear to be at least mindful (though not necessarily prepared) of the need to enhance and augment their customer relationships through online channels and new digital touchpoints. This points to a future of banking – in the eyes of the banking executives we surveyed – where complementarities and synergies are pursued between offline and online activities. In the near future, it will be interesting to see how banks are able to overcome the key limitations of the physical world and transition their business models into the digital age.

As highlighted above, the large majority of banks in our sample have already designed and started executing a digital banking strategy, while they simultaneously do not consider themselves to be 100% «ready» and fully prepared for digital transformation. With the aim of understanding the essence of digital banking strategies and banks' digital transformation efforts in greater detail, we asked our respondents about the reasons being their digital banking strategies and their objectives.



The results in  7 show that, by far, the most important reason for a digital banking strategy is to improve customer relationships. This is related to findings about the growing diversity and importance of new online customer touchpoints discussed in the previous section. Thus, our participants have realized that their relationship to customers needs to be «re-invented» based on a strategic selection and use of a blended mix of offline and online touchpoints.

Another important market-oriented reason for digital banking strategy, according to our participants, is to develop new product and service innovations. Such innovations are likely to build on growing insights regarding the need for blending offline and online activities, the increasing range and diversity of customer touchpoints, and the overall need for a seamless «omnichannel» banking experience.

While digital banking strategy focuses to a large extent on market-oriented goals related to customer relationships, customer value creation, and product/service innovation, the banks we surveyed also mentioned several important reasons for digital banking strategy that are associated with process-oriented and IT-centric goals. Over 60% of our respondents mentioned the need to industrialize operations and processes as a focus and foundation for their digital banking strategy. Furthermore, nearly 60% also mentioned the need to improve business intelligence, i.e., how big data is incorporated and leveraged. Finally, more than half of our respondents also highlighted «cutting costs» as an important element of their digital banking strategy.

Overall, these findings highlight an important insight: digital banking strategy simultaneously affects different parts of a bank's business model, including both the customer-facing front end (customer relationships, products, experiences) and the back-end organization (processes and operations; sourcing and governance; IT architecture). In other words, while the impact of changes in digital technology on the customer-facing front end is the primary driver of digital banking strategy, further industrialization of the back end is a necessary foundation.

Achieving the dual set of objectives associated with digital banking strategy – i.e., focused simultaneously on front-end digital transformation and back-end industrialization – requires a great deal of IT investment. Even though we did not test for the correlation between IT budget and digital banking strategy, our data shows that most banks we surveyed (67%) expected their IT budget to increase by at least 10%, and many even estimated more than 20% for the year 2015. A further 15% and 18% expected no change or a reduced IT budget change, respectively.

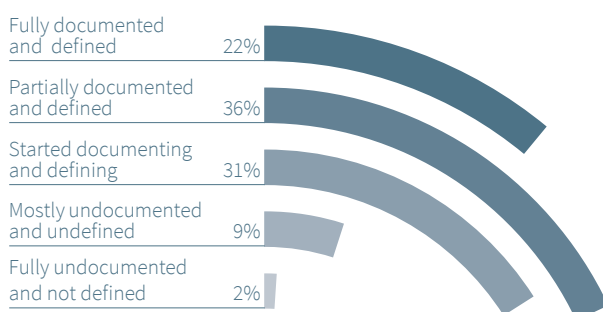
In summary, crafting a strategic response to the force of digital transformation requires a great deal of agility and a very competitive working foundation. This includes industrializing the back end of banks.

5. Banking Industrialization: Processes and Operations

The first dimension of banking industrialization that we examined is processes and operations. At the most basic level, banks seem to be concerned with optimizing the management of their workflows (8). The following figure highlights that 22% of our respondents consider workflows in their firms to be fully documented and defined. Another 36% consider workflows to be at least partially documented and defined. Finally, a minority of respondents we surveyed consider workflows in their firms to be undocumented and undefined.


These findings highlight another digital readiness gap. In particular, the large majority of banks in our sample consider the documentation, structuring and definition of their workflows to be a «work-in-progress» (31% at the very early stage and 36% at a more advanced stage). Thus, in terms of preparing themselves for digital transformation and the gradual shift to digital banking, banks still have a large workflow management gap to close.


Workflow management involves breaking down the planning, control and execution of work according to the specialized expertise and contributions of individual workers and machines. Ultimately, the desired state is for workflows within banks to be largely structured, contributing to business process performance. To support workflow management, banks typically also employ systems and tools. Many of our respondents highlighted the use of specific technologies such as a document management system, a digital signature solution or more general workflow technology. In addition, many respondents also highlighted the role of their core banking platform in supporting workflows and business processes.



8: Documentation status of business process workflows (Source: IESE and Synpulse)

Banks have achieved even higher levels of industrialization maturity when they have been successful at automating their business processes. This involves facilitating the efficient and repeated execution of business processes with as little repeated human intervention and input as possible. Ultimately, automating business processes allows for business scalability and flexibility in response to changing demand, a key requirement for digital business competition. Furthermore, business process automation may also be an important factor in ensuring the consistency and reliability of operations by enabling the ongoing, smooth execution of repeated business activities.

The banks we surveyed have already moved forward, in their opinion, with the automation of their credit card operations, securities operations, payment operations, front office and cashier operations, and accounting processes (core processes,  9). In addition, the banks in our sample also view

themselves as relatively advanced in automating a variety of IT processes (i.e., IT infrastructure and network management, IT output management, IT application management and IT support) as well as marketing campaign management (secondary processes,  10).

The findings reported above highlight an important interrelationship between standardization and structured management of workflows, on the one hand, and the achievement of business process automation, on the other hand. In particular, the processes highlighted above are, in relative terms, easier to structure and standardize, which is shown to be an important precursor for automation.



Most automated core banking processes	Ranking	Least automated core banking processes
Credit card operations	1	Client advisory
Securities operations	2	Investment banking
Payment operations	3	New product management
Front office & cashier operations	4	Portfolio management
Accounting	5	Fund management

 9: Degree of automation of core banking processes (Source: IESE and Synpulse)

Most automated supporting processes	Ranking	Least automated supporting processes
IT infrastructure & network management	1	Legal & compliance
IT output management	2	IT application development
IT application management	3	Human resources
IT support	4	Marketing customer services
Marketing campaign management	5	Marketing customer analytics

 10: Degree of automation of supporting processes (Source: IESE and Synpulse)

Yet, it is also important to emphasize that our findings regarding advances in business process automation are expressed in relative terms (comparing different business processes with each other) and that, in absolute terms, our findings highlight that banks have only partially automated the processes above (70% on average for the most automated business processes), highlighting a further digital readiness gap and further room for improvement.

As our findings also illustrate, the degree of human dependence and input is still particularly and relatively high with regards to client advisory, investment banking, new product management, portfolio management and fund management (core processes,  9), as well as legal and compliance, IT application development, human resources management, marketing customer services and marketing customer analytics (secondary processes,  10). These findings can be explained by the difficulty, in relative terms, of structuring,

standardizing and codifying traditional established processes which involve constantly changing requirements (e.g., client advisory, new product development, IT application development) and complex interactions between banks and external stakeholders (e.g., client advisory, investment banking, legal and compliance).

Overall, these findings highlight that processes contained in the back-end part of banking organizations, with little external influences from the bank's ecosystem and environment, have been the focus of automation efforts to a much larger extent, when compared with the banking front end. This contrasts with the overall high level of automation, including in the front end, which we observe at new FinTech entrants in the banking industry. Furthermore, FinTech players are able to shift seamlessly to customer self-service models with regard to client advisory.

Work is allocated dynamically inside the firm, based on matching skills and capacity with demands



Work allocation considers the inputs from multiple channels simultaneously



Customer self-service is enabled through back-office process automation



Multiple channels are integrated seamlessly




Value-added customer services (e.g., big data analytics, peer-to-peer services and smart financial advisory) are offered



■ Completely agree ■ Agree ■ Disagree ■ Completely disagree

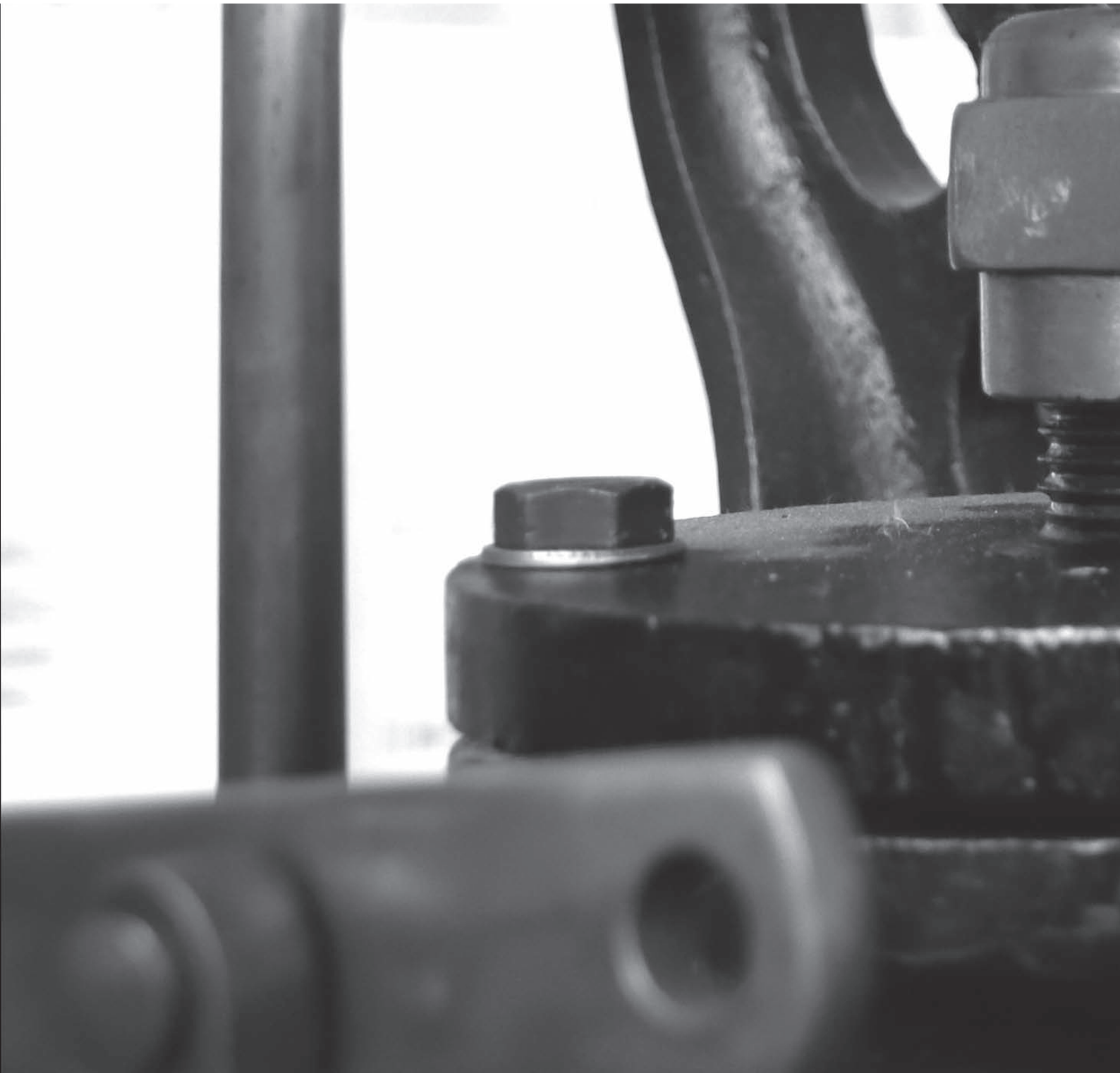
 11: Automation of processes and operations – goals and objectives (Source: IESE and Synpulse)

While the degree of automation differs greatly between individual business processes, the automation objectives show major consistency in regard to the bank's agreement level ( 11). First, a majority of our respondents (71%) generally agreed on the importance of automating processes for the purpose of allocating work dynamically inside the firm, based on matching skills and capacity with demands. Our interpretation of the fact that respondents generally agreed, but did not agree «fully» with the importance of this goal is that achieving full automation in work allocation is not desirable, nor does it pay off in terms of efficiency improvements.

Pointing to another stage of industrialization maturity, the responses from banks with regard to the automation of customer self-service were varied, with approximately half of the banks in our sample agreeing, and the other half disagreeing. This illustrates the fact that different banks are in different stages when it comes to automating customer self-service and facilitating it through the automation of back-office processes. Finally, with regard to certain goals involving automating processes, the consensus of the banks in our sample is that they are relatively less important vis-à-vis other automation goals. This is particularly true for value-added customer services such as big data analytics and peer-to-peer banking services.


Summarizing our core findings in the industrialization dimension of processes and operations, we suggest that banks progress through several stages of maturity. First, they focus on workflow management. Second, they work toward business process automation in highly standardized, structured, repetitive and routine activities. Third, and finally, they leverage business process automation for the enhancement of customer-facing and value-creating processes (e.g., in terms of scalability and reliability), which involves connecting streamlined back-end operations with value-adding activities in the interface between the bank and its external stakeholders, including customers.

Overall, our findings point to a 58% industrialization maturity level of banks in our sample with regard to the first dimension of processes and operations. Thus, there is a lot of room for further improvement in banks when it comes to the application of standardization and automation principles to their processes and operations to achieve industrialization goals such as lower costs, reducing (human) errors, and increasing speed and straight-through processing.



6. Banking Industrialization: Sourcing and Governance

Our study suggests that sourcing and governance is another important dimension of industrialization in banks. At the most basic level of maturity, banks have established a specialized IT function that successfully provides IT services to the business. To be successful with IT service production and delivery, key IT functions are integrated into a specialized unit that serves the needs of various business units simultaneously. Banks that have achieved this stage are typically characterized by the centralization of IT services and the ability to capture cross-business-unit IT synergies, contributing to the overall efficiency of the bank.

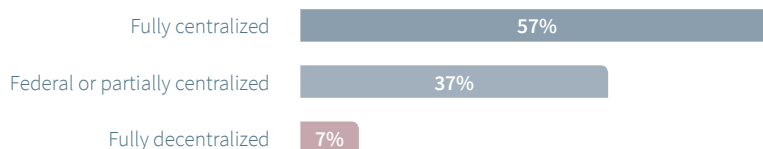
Our findings ( 12) show that most IT departments at the banks in our sample exhibit a relatively high degree of centralization, both in terms of geography and functions. Only a very small minority of our respondents stated that their IT activities are decentralized in terms of geography, and no bank seems to be decentralized in terms of IT functions. This result points out that the banks we surveyed seem already to have advanced in terms of capturing efficiency and synergy gains from centralizing IT functions, which are then offered to multiple business units in parallel.

However, a considerable number of banks in our sample also reported having federal/partially centralized IT department structures. Different explanations may be considered when inter-

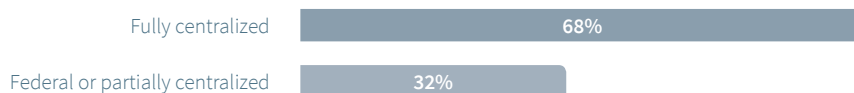
preting this finding. On the one hand, the partial decentralization strategy in banks may be a purposefully designed choice in order to balance efficiency/innovation, standardization/differentiation and stability/agility, respectively. On the other hand, partial decentralization may also be the result of historical evolution and a lack of centralization efforts to ensure efficiency and related gains.

Another indicator that banks have reached a higher level of maturity in the dimension of sourcing and governance is their experience and success with outsourcing engagements. As depicted in  13, most of the banking executives we surveyed fully agreed with the assessment that their firm engages frequently in IT and business process outsourcing deals (50% fully agreed and 44% agreed). The majority of them also agreed (47%) or even fully agreed (34%) that their firms outsource IT activities and business processes to external service providers «without problems.» However, the finding that a considerable number of respondents also disagreed (21%) or even fully disagreed (9%) with the statement that their firm's top management has a positive attitude towards the outsourcing of IT and business process activities highlights that banks still experience difficulties with outsourcing and that opportunities for improvement are still present.

Geographic centralization



Functional centralization



 12: State of IT centralization (geographic and functional) (Source: IESE and Synpulse)

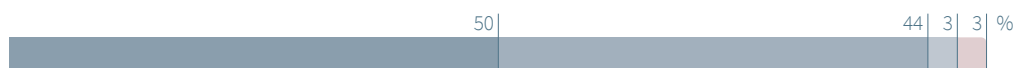
However, an overall high outsourcing success is observed among our respondents, which is also confirmed by the high outsourcing degree for specific IT activities and business processes within the different banks (14 and 15). An overarching pattern from our data analysis shows that the degree of outsourcing is correlated with the degree of automation. In other words, automating business processes and IT activities, on the one hand, and outsourcing them to external suppliers, on the other hand, frequently go together. We explain this finding with the commonality that, to a large extent, both process automation and outsourcing require standardization and modularization as a foundation for success and in order to achieve the desired associated economic benefits.

A variety of core processes (e.g., client advisory, investment banking) and secondary processes (e.g., marketing customer analytics, marketing customer services) were mentioned by our surveyed banking executives as preferable to be kept in-house. Aside from the potential lack of motivation for externalization (i.e., standardization and modularization), another plausible explanation is that these processes are viewed by banks to be «core» and a source of differentiation. This explanation seems particularly relevant for interpreting our findings concerning client advisory and key marketing-related processes that are preferably kept in-house. After all, banks typically give strategic importance to their brand management.

As banks still seem to focus largely on outsourcing as a vehicle for improving the efficiency of business processes and IT activities, it is worth considering the following detailed findings. The large majority of our respondents agreed with the importance of three central managerial strategies in the selection and management of outsourcing suppliers (16). First, the selection and management of outsourcing suppliers should be guided by a strategic short-list of vendors with whom a long-term relationship is maintained. Second, the selection and management of outsourcing suppliers is processed by a systematic engagement in a due diligence vendor-selection process including request-for-proposal and related mechanisms. Third, and finally, the selection and management of outsourcing suppliers should include periodical controls and the performance of outsourcing vendors should be governed to ensure alignment with business objectives.

These findings also point to the importance of the fact that outsourcing specific IT and business processes goes hand in hand with the aim to achieve an optimization of the bank's multiple sourcing engagements. Multisourcing involves the need to take a holistic portfolio view on the various sourcing relationships and projects carried out across different parts of the organization. A multisourcing strategy is typically defined and enforced allowing for the disciplined sourcing of a mix of business and IT services from the optimal set of internal and external providers in the pursuit of business goals. In addition, contracts with multiple vendors are not managed individually but in combination, allowing for the best-of-breed for different sourcing components, whether provided internally or externally.

My firm engages frequently in IT/business processes outsourcing services



My firm outsources IT/business processes activities to external service providers without problem





My firm's top management has a positive attitude toward the outsourcing of IT/business processes activities



■ Completely agree ■ Agree ■ Disagree ■ Completely disagree

13: Experience with outsourcing engagements (Source: IESE and Synpulse)

Banks engaging in multiple sourcing arrangements attain an even higher level of maturity when they achieve agility in responding to fast-changing business requirements and customer needs. This is the overarching finding worth highlighting when considering  17. Compared with the previous findings ( 16), fewer banks from our sample, in relative terms, think that their firms have fully achieved the desired levels of sourcing agility. In fact, only a very small minority of our respondents fully agreed with various statements associated with sourcing agility. Furthermore, even though approximately half of our respondents generally agreed that their firms excel at sourcing agility, we also had a fairly high portion of respondents who disagreed.

Achieving agility in business process sourcing and IT sourcing is important for several reasons. A primary reason is that businesses are faced with unprecedented levels of uncertainty and changes in terms of requirements, driven by fast-changing

customer behaviors and needs. As a result, businesses increasingly expect sourcing decisions to be placed directly into their hands, similar to the notion of contracting cloud services on a «click» basis.

With regard to achieving greater levels of sourcing agility, our survey highlights three elements. First, dependencies on external vendors need to be reduced to a minimum; this is an element where many of our respondents still experience serious difficulties in their banks. Second, contract terms need to be negotiated with external vendors to allow for seamless switching from one vendor to another. Our respondents consider themselves to be slightly more advanced in terms of this element. Third, and finally, advanced technologies should be adopted to offer greater agility, for example in terms of scaling capacity levels up or down – as is the case with cloud-based infrastructure-as-service processes – depending on fluctuating demands.

Most externalized core banking processes	Ranking	Least externalized core banking processes
Credit card operations	1	Client advisory
Securities operations	2	Investment banking
Payment operations	3	Portfolio management
Credit & loan operations	4	New product development
Fund management	5	Risk management

 14: Degree of externalization of core banking processes (Source: IESE and Synpulse)

Most externalized supporting processes	Ranking	Least externalized supporting processes
IT application development	1	Marketing customer analytics
IT output management	2	Marketing customer services
IT application management	3	Marketing campaign management
IT support	4	Human resources
IT infrastructure & network management	5	Legal & compliance

 15: Degree of externalization of supporting processes (Source: IESE and Synpulse)

Summarizing our core findings in the industrialization dimension of sourcing and governance, we suggest that banks proceed through the following stages of maturity. First, they focus on centralization of IT functions within a specialized department to achieve efficiency advantages where possible. Second, they achieve high levels of business process and IT outsourcing in appropriate areas and effectively manage their vendor relationships through a multisourcing strategy. Third, and finally, they move beyond the focus of traditional efficiency targets and align the diversity of their sourcing activities more closely with the business, which requires first and foremost achieving sourcing agility.

Overall, our findings point to a 68% industrialization maturity level among the banks in our sample with regard to the second dimension of sourcing and governance. To a large extent, this is attributed to high outsourcing success on the level of individual projects and relationships, as well as a relatively high degree of centralization in terms of geography and functionality. However, there is much room for further improvement in banks when it comes to optimizing their governance structures and their multisourcing strategy and in terms of achieving sourcing agility.

The selection and management of outsourcing suppliers include periodic controls and govern the performance of outsourcing vendors in alignment with the objectives



The selection and management of outsourcing suppliers are guided by a strategic short list of vendors with whom a long-term relationship is maintained



The selection and management of outsourcing suppliers are processed by a systematical engagement in a due diligence vendor selection process including request for proposals, etc.



■ Completely agree ■ Agree ■ Disagree ■ Completely disagree

16: Execution of multisourcing strategy (Source: IESE and Synpulse)

Negotiating contract terms with external vendors to allow for seamless switching from one vendor to another



Adopting advanced technologies (across different parts of the business, including cloud computing) that provide greater agility



Reducing dependencies on external vendors to a minimum, including the negotiation of short contracts (< 3 years)




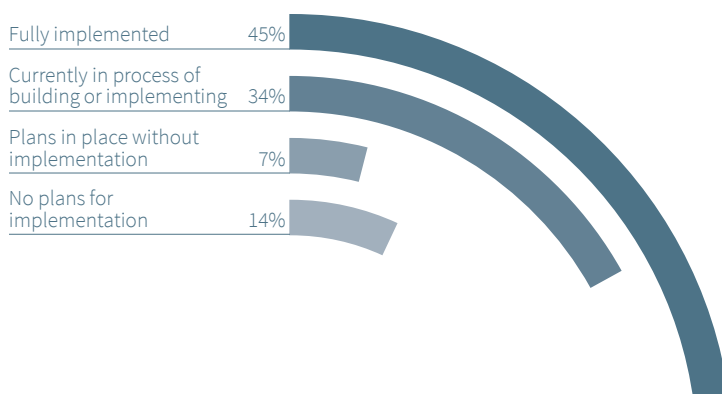
■ Completely agree ■ Agree ■ Disagree ■ Completely disagree

17: Sourcing agility principles (Source: IESE and Synpulse)

7. Banking Industrialization: IT Architecture


Regarding the third pillar of banking industrialization, IT architecture, we find that a basic level of maturity is achieved by banks that have implemented or decided upon a core banking technology platform. A core banking technology platform is important for several reasons. First, it ensures that standard IT processes and tasks are integrated and efficiently coordinated across multiple business divisions. Second, a core banking technology platform provides the business with a stable foundation for the day-to-day operations and for the execution of business transactions that depend on IT. Third, a core banking technology platform is important for a bank to achieve efficient scalability of its IT-dependent operations, be it through organic growth or inorganic growth in the form of mergers and acquisitions.

In terms of maturity, a large number of our respondents (45%) consider their bank's core banking technology platform to be fully implemented ( 18). A further 34% stated that their bank is currently in the process of building or implementing a core banking technology platform. Only a small minority of our respondents were considering plans for such a platform but had not implemented them; even fewer banks had no plans for implementation at all. Despite the relatively high percentage of banks in our sample that reported significant advancements in terms of implementing a core banking platform, these findings contrast with findings reported later in this section that banks still consider their IT architecture to be highly complex. This may be the reason why many banks in our sample are still in the process of implementing a core banking technology platform and why most banks still regard this as a digital readiness gap.



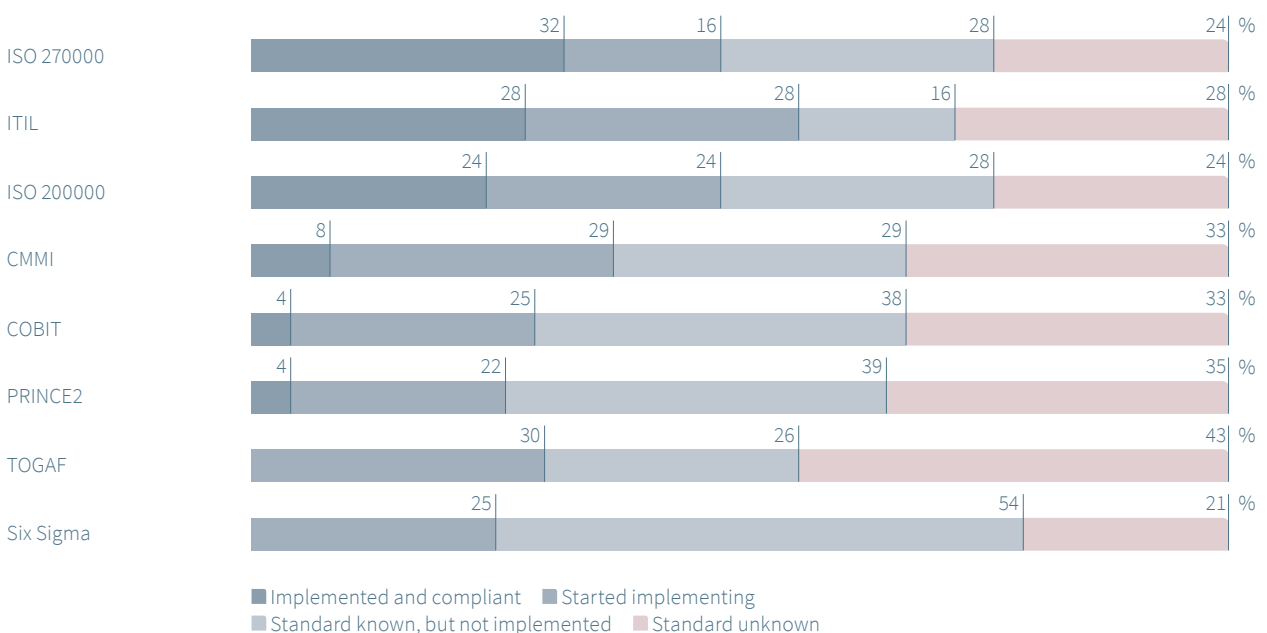
 18: State of core banking technology platform implementation (Source: IESE and Synpulse)

Beyond having a fully operative core banking technology platform, however, another factor to consider in assessing the maturity of industrialization in banks is the extent to which best practices in IT have been implemented. Best practices in IT are typically codified using formal methodologies such as ITIL, project portfolio management (PPM), COBIT, CMMI, and Six Sigma. Banks adopting such standards are able to benefit from the lessons learned by other firms that have engaged in similar IT activities in the past. Because a large range of IT activities show high similarity across firms and, to a large extent, even across industries, the adoption of best practices is critical. IT generally requires specialized expertise, resulting in IT silos, which cover the range of IT needs across different parts of the organization.

As  19 shows, the banks in our sample have fully implemented and are compliant with only a few IT best practices standards. In particular, our respondents stated that their banks are most compliant with ISO norms and ITIL, which is a set of practices for IT service management. Many of the standards mentioned in the survey were unknown to a large portion of our respondents – one third on average. In addition, the standard for lean management and process improvement, i.e., Six Sigma, is known by more than half of our respondents, but not a single bank in our sample seems to have implemented it. Overall, our findings about the state of the adoption of best practices in the banking sector highlight further opportunities for improvement.

Banks that have reached a higher level of maturity in terms of industrializing their IT architecture have been successful at managing IT architectural complexity within the bank. Banks typically have historically grown legacy IT systems that are dispersed across different parts of the organization. As a result many have become very difficult and cumbersome to manage. As such, the bank’s IT architecture is considered by the business to be very inefficient; this is typically manifested in an unfavorable ratio of «change the bank» to «run the bank» IT expenditures, as well as an undesirable cost-income ratio. Complexity in the IT systems environment and the IT architecture expresses itself in a high number of diverse IT system components and interfaces, each of which requires a different set of skills and expertise. In addition, many redundant systems tend to be in place and managers have to deal with a high degree of heterogeneity.

Comparing and contrasting these findings about the relatively high degree of IT architectural complexity facing the banks in our sample with our findings reported earlier – that many banks consider themselves advanced in implementing a core banking technology platform – highlights a tension. In particular, banks need to solve the problem of IT complexity resulting from historically grown IT environments as a necessary foundation for building a fully competitive technology platform, which is a necessity for digital banking. We consider this deficit in IT architecture complexity management and core banking technology platforms to be a major digital readiness gap for banks.



 19: IT best practices implementation status (Source: IESE and Synpulse)

With regard to the complexity of the IT environment, the results show that 37% of our respondents consider their bank's IT architecture to be heterogeneous and 21% even highly heterogeneous. In contrast, 25% consider it to be homogeneous and 17% highly homogeneous (Figure 20). This points to a highly diversified state of IT heterogeneity/homogeneity across the different banks in our sample. Under the assumption that a high degree of IT heterogeneity is associated with more challenges in terms of managing complexity and responding to new requirements at speed, approximately half of the banks in our sample have not yet reached this stage of maturity. Thus, we see significant opportunities for further improvements in terms of reducing IT heterogeneity and reducing IT complexity.

Managing IT complexity in banks is also related to redundancy. We looked at two basic types of redundancy in our study (Figure 20). First, data redundancy, which is related to a lack of systems integration and a difficulty in exchanging data across systems, which are spread out across different parts of the bank. Second, functional redundancy, which is related to the presence of multiple different IT systems in different parts of the bank, which run independently from one another though they address similar functional requirements. Oftentimes, data redundancy and functional redundancy in a bank's IT environment are complicated by different geographical locations. In addition, there are many instances in which IT systems redundancy is the result of historically grown IT architectures in addition to a lack of holistic governance and control.

As shown above, a large majority of our respondents consider data redundancy and functional redundancy in their bank's IT architecture to be a major problem. With regard to functional redundancy, in particular, 26% of our respondents reported it to be very high in their banks. Another 48% considered it to be high. Even though redundancy in terms of data is lower than in terms of functionality, our respondents also assessed data redundancy in their banks to be very high (22%) or high (30%). Overall, these findings highlight many opportunities for further improvement in the banks that participated in our study. Tackling the problem of redundancy is viewed to be an important ingredient for effectively managing IT complexity and for improving the overall efficiency of the bank.

Ultimately, tackling the challenge of managing IT complexity in banks and putting order into the IT architecture is an important foundation for digital banking platform competition, which is imminent in the banking industry. As shown in Figure 21, 30% of our respondents believed their bank will become a leader: setting an industry-wide standard for digital platforms and technology. Another 18% think their banks will step into the role of early follower by developing a niche platform for specific services that are focused on a certain area (e.g., loans). In addition, 33% of respondents categorize their banks as late followers: they may participate in established platforms, such as prevalent mobile technology platforms, by developing and offering specific services. Finally, 19% of our respondents also believe that their banks will be selective adapters: selectively using and adapting existing digital technologies, such as big data solutions from IT providers.

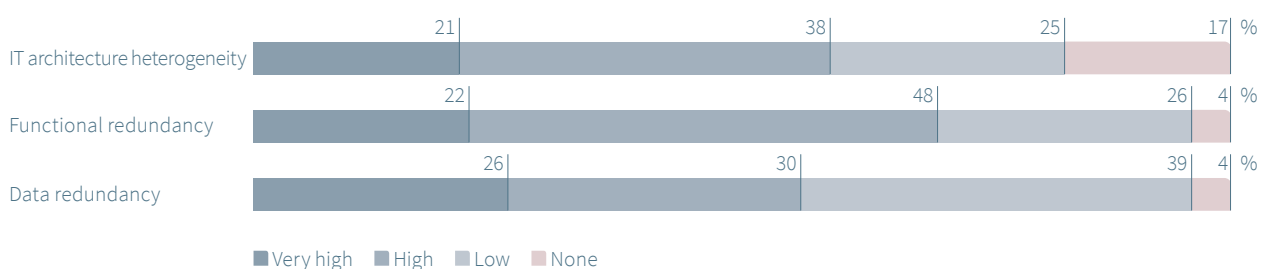


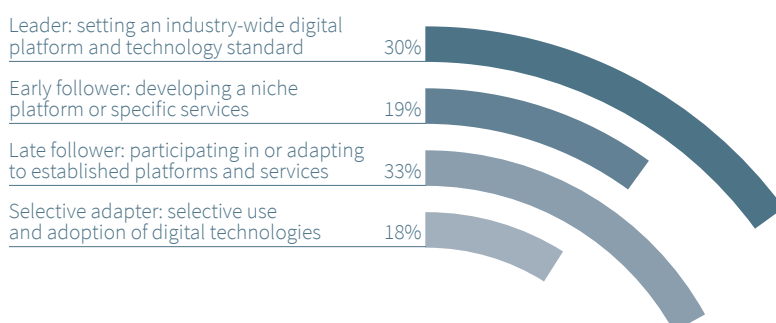
Figure 20: IT complexity (heterogeneity and redundancy) (Source: IESE and Synpulse)

It is worth highlighting our finding that a remarkable 30% of banks in our sample strive to become leaders and to set an industry-wide digital platform and technology standard in the banking industry. This finding points to fierce competition among banks, as nearly everyone in the industry seems to have recognized the big shift toward digital platform competition, which may be one key outcome of digital transformation in the banking industry.

Summarizing our core findings regarding the industrialization dimension of IT architecture, we suggest that banks proceed through the following stages of maturity. First, they have been successful at developing and implementing a core banking platform that integrates a wide range of interconnecting IT systems into a stable operational foundation for the business. Second, they have fully implemented and are compliant with a range of IT best practices standards that ensure certain levels of maturity in performing key activities and functions.

Third, they have been able to solve the problem of historically grown legacy IT environments and the resulting high degrees of IT complexity, which are detrimental to the bank's operational efficiency.

Overall, our findings point to a 60% industrialization maturity level for the banks in our sample with regard to the third dimension of IT architecture. These industrialization achievements are mainly attributed to the advances of banks in our sample in terms of implementing a core banking technology platform and in dealing with IT architectural challenges such as functional redundancy and data redundancy. However, these findings also highlight many opportunities for further improvement, particularly in terms of further consolidating and integrating complex IT architectures that have typically grown over multiple decades.

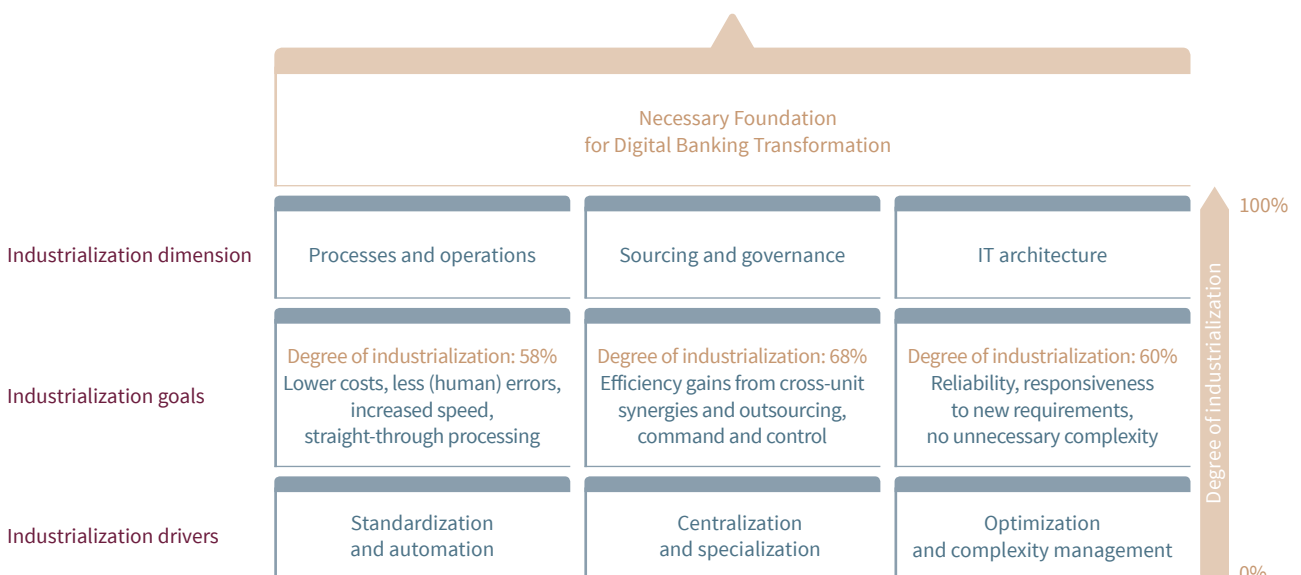


8. Conclusion


We are living in a time of digital transformation, i.e., changes associated with the application of digital technology in all aspects of human society. Digital transformation leads to nearly constant connectivity, new forms of interaction and what we could refer to as an information revolution. Banks are affected by digital transformation in multiple ways: pressure is exerted upon them from employees, customers, partners, regulators and new entrants all at the same time. As this study of digital readiness and the state of banking industrialization shows, banks have identified and recognized digital transformation as a top-level strategic challenge. As this study also shows, however, banks still have to deal with a large number of digital readiness gaps.

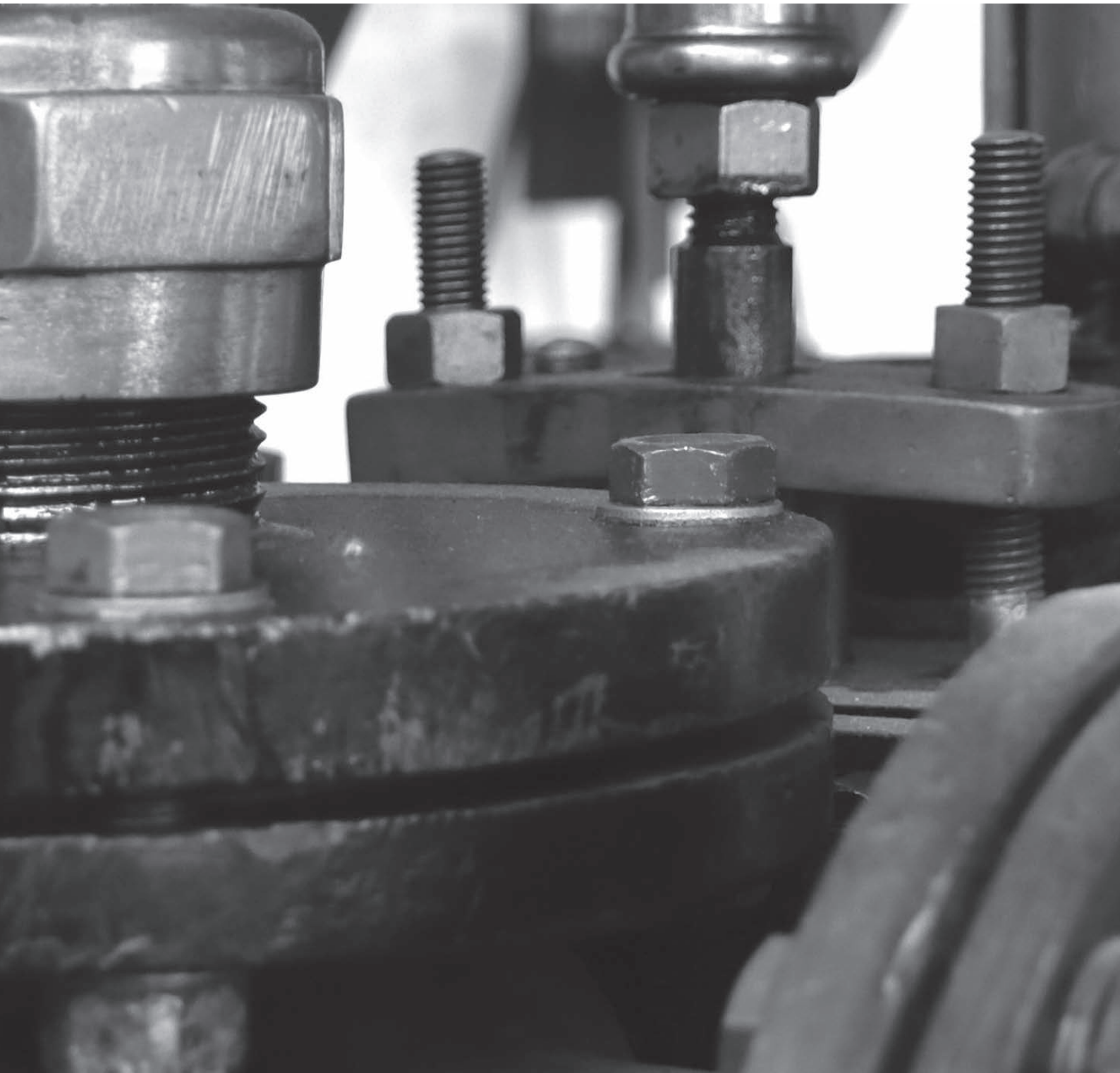
The banking industrialization framework developed in this study sets out three interrelated areas (i.e., processes and operations, sourcing and governance, IT architecture) and associated action items (e.g., working toward further automation of standardized and repetitive tasks in the dimension of processes and operations) to guide banks in their efforts to further industrialize their organizations and thereby create a necessary, yet not sufficient, condition for digital competitiveness.

We suggest that this framework be used as a guiding lens to close a number of the digital readiness gaps we identified in this study. One digital readiness gap we identified is that banks, on average, still rely heavily on their physical bank branch network for nurturing customer relationships and that the transition to digitalized «omnichannel» banking has not yet occurred in most banks. Another identified digital readiness gap in banks is that their historically grown legacy IT architectures are too complex and lack the required agility for digital transformation. While many banks have invested in a core banking platform, they are still rather far away from the target of competing based on digital platforms of the modern economy. Yet another digital readiness gap we identified is that banks' efforts to document, structure and ultimately automate workflows and business processes have not been taken far enough. Furthermore, they have focused on back-end functions rather than also extending these efforts to customer-facing front-end services.



For each dimension of industrialization (processes and operations; sourcing and governance; IT architecture), we assessed the overall degree of maturity of the banks in our sample. This exercise revealed that banks are still struggling with the industrialization of back-end processes and operations, and they are even farther away from industrializing front-end activities. While this is likely going to be a major bottleneck in the transition to digital banking, we also identified important shortcomings with regard to banks' sourcing and governance practices. Implementing multisourcing strategies and achieving sourcing agility is still a major concern for most banks. Finally, banks' historically grown and highly complex IT architecture continues to place a heavy burden on executives who are working on the digital transformation of their firms' business models.

In summary, the key overarching insight of this study is that banks need to further industrialize their back-end processes and digitally transform their front-end processes.  22 summarizes our overall assessment of industrialization maturity level in each of the three identified dimensions. We have found that the degree of industrialization for banks in our sample is as follows: 58% in the dimension of processes and operations; 68% in the dimension of sourcing and governance; and 60% in the dimension of IT architecture. As a result, we suggest that banks still have a long way to go toward industrializing their back end to be able to meet the new set of expectations and demands associated with digital transformation.



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