

## Digital Transformation within banks: An Innovative Strategy Societe Generale group

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### Abstract:

The study aims to identify digital transformation and its technologies as an innovative strategy for banks due to their importance and the benefits that they have provided in recent years.

The study presents digital strategy and innovations that have been relied on by one of the leading banks worldwide, Societe Generale Group.

The results of the study showed that developing an effective digital strategy and investing in digital technologies play an important role in embracing a beneficial digital transformation for banks. In addition, the study recommends banks allocate resources to invest in digital innovations.

**Keywords:** Digital Transformation, Digital Technologies, Banks, Strategy, Societe Generale Group

**JEL Classification Codes:** G20; O30

## التحول الرقمي داخل البنوك: استراتيجية مبتكرة

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### ملخص:

تهدف الدراسة إلى التعرف على التحول الرقمي وتقنياته كاستراتيجية مبتكرة للبنوك، نظرا لأهمية والفوائد التي قدمتها في السنوات الأخيرة. حيث تعرض الدراسة استراتيجية وابتكارات الرقمية التي اعتمد عليها أحد أهم البنوك الرائدة على مستوى العالم، وهي مجموعة سوسيتيه جنرال. أظهرت نتائج الدراسة أن تطوير استراتيجية رقمية فعالة، والاستثمار في مختلف التقنيات الرقمية يلعبان دورا مهما في تبني التحول الرقمي والاستفادة منه في البنوك، بالإضافة توصي الدراسة البنوك إلى تخصيص الموارد اللازمة للاستثمار في الابتكارات الرقمية.

الكلمات المفتاحية: التحول الرقمي؛ التقنيات الرقمية؛ البنوك؛ استراتيجية؛ مجموعة سوسيتيه جنرال؛

تصنيف JEL : G20 ؛ O30

## 1. INTRODUCTION

In a tech-based world full of networks, channels, webs, the internet, and computers, where financial institutions find themselves in a competitive environment surrounded by new technologies, modern banking systems, and high-maintenance customers, it becomes mandatory for them to adapt in the digital era to ensure their business continuity primarily and then to create value for their stakeholders. Meanwhile, Brick-and-Mortar banks found themselves as well forced to shift towards a digital transformation, especially when e-banking became a trend nowadays. Therefore, shifting to a digital strategy is not only for operational resilience but also for the benefits that it can provide if it is appropriately exploited. Accordingly, banks begin to opt for innovative approaches for building a digital ecosystem, starting with integrating different digital technologies into their core activities, such as artificial intelligence, data analytics, and blockchain, and integrating some channels like platforms, applications, and social media, in advance of allocating budgets for the new IT investments.

In light of this context, the following main question is posed:

**How has Societe Generale leveraged the digital transformation innovations and strategies within the group banks?**

In order to answer on the problem of the study, a principal hypothesis was formulated as follows:

**Societe Generale Group has significantly been able to earn benefits from its digital strategy and the integrated digital technologies that have been adopted.**

The aim of this study is:

- to define each of digital transformation concept, and its technologies;
- to outline its importance in banking sector;
- to identify one of successful banks digital adopter, its procedures to perform a digital strategy and to implement innovative technologies within its core system;
- to investigate the way digital technologies influenced the bank's overall performance.

To achieve the study objectives, a descriptive approach was conducted to explain different theoretical aspects related to digital transformation, followed by an analytical approach as an empirical case study to explore the digital strategies and applications of one of the leading banks internationally.

On the other side, the importance of this study lies in the importance of digital transformation, due to its role in organizations in general, and financial institutions in specific, and more precisely in banks, those latter can benefit from its features, and technologies, if they rely on a digital framework.

The study was structured in three principal titles, the first one deals with conceptual background, then the second one discussed digital transformation within Societe Generale Group, and lastly was for Digital technologies within Societe

Generale Group, the study concludes with the most important key findings, and some recommendations.

## **2. Conceptual background**

### **2.1 Digital transformation and digital technologies**

Digital Transformation has been defined by many, and many has been met in one common point, the importance of digital transformation.

Digital transformation refers to three complementary steps, firstly it arose from IT modernization, then digital optimization, and lastly creating new business model (Gartner Glossary, n.d.). Digital transformation or E-transformation also refers to the process of Improving companies' procedures, by incorporating new technologies in companies' systems, or optimizing old ones. (Glossaire Transformation Numerique, n.d.).

Digital transformation (DT) consists in updating of an organization's business model and culture to adapt with market requirements, where the latter takes into account digital changes in business world, moreover where most organizations rely on technology generally in their strategies. Also, it consists in integrating of "digital technology across all functions of an organization" (Bouabdellah & Bouabdellah, 2022).

Digital transformation is described as a combination of digital technologies applied on the entire organizations' parts. As well it is described as the advantages exploited from digital technologies (Khalfallah & Bendjelloul , 2023, p. 779).

From all of these definitions, digital transformation can be defined as a process that involves radical changes in an organization's business model. A model that uses traditional methods to conduct the usual functions to a model that relies on digital technologies. For the main purpose, achieving short-term and long-term organization objectives, including financial, strategic, and operational goals.

As a result, digital transformation is presently accelerating due to the industry 4.0 revolution, organizations are implementing more and more cutting-edge technologies in their work, because of leverages provided by them, the most frequent DT technologies are these: (مرسي و موساوي، 2023، الصفحات 526-527)

- **Artificial Intelligence:** Artificial intelligence (AI) is the ability of computer systems to simulate human intelligence, to perform tasks that needs human cognitive abilities such as recognizing, memorizing, discovering, thinking, learning, and more, AI works to improve efficiency of different processes in all fields, especially in business and finance.
- **Cloud computing:** Cloud computing refers to a technology that provides services like storage, processing power, and databases, through the internet to cloud provider, cloud computing has many conveniences to finance in specific, like flexibility, security, cost efficiency.
- **Internet Of things:** Internet of things (IoT) refers to smart devices networked with other devices, as a means to exchange data, in finance industry it is used principally for data security and fraud detection.

- **Big Data Analytics:** It's defined as a set of voluminous, various, and velocious Data, analyzed, and examined to make immediate decisions, to identify business insights, and to use it in financial forecasting.
- **Blockchain:** Blockchain is decentralized database or a ledger, that allows network sharing encrypted information with privacy and transparency.
- **Cybersecurity:** Cybersecurity defines the protection of hardware, software, networks with their systems from cyber threats, or even malicious attacks, it is considered as one of organizations' data protection strategies.
- **Robotic Process Automation:** Robotic process automation (RPA) is software robots created to perform human actions by mimicking them, so the tasks accomplish automatically.
- **Enterprise Resource Planning:** Enterprise resource planning (ERP) is a software system that integrates different organizations' businesses as a way to manage their functions.
- **Smartphone Applications and Social Media Platforms:** A smartphone application or an App is a software program that provides online financial services, by just download it onto mobile device, while social media is a network, that is used to share digital interactive contents, the most common platforms used in business are Facebook, YouTube, and Instagram.
- **Other technologies:** Like Robotics, 5G technology, GPS, 3D Printing...and more.

## **2.2 Digital Transformation in Banking sector**

Worldwide banking and investment IT spending was projected to reach 652.1 billion dollars in 2023, which is a considerable investment to implement a digital infrastructure suitable for financial products, services, systems, structures, and strategies (Gupta, 2023).

Besides, the Banking sector is ranked as the third-most digital transformation adopter, after IT technology and media industries. Although only 30 percent of banks have successfully implemented digital strategy, its statistics still testify an increase. The studies predicted global digital banking platform market size growth from 8.2 billion dollars in 2021 to 13.9 billion dollars in 2026 at a CAGR of 11.3%, and by 2024, 2.5 billion individuals will rely on online banking services (Olmstead, 2024).

**Fig.1.** Digital Transformation in Banking



Source: (Olmstead, 2024)

Fig.1. illustrates conducted research according to (Olmstead, 2024), to measure digital maturity in different industries. The study was based on 3 categories. Assets, usage, and labor, each of them divided into factors, in total 9 factors, with digitalization average of 3.025, The study showed that the banking industry has outpaced the digitalization average in each factor, scoring 4.5, which proves that banks are working on digital transformation.

Correspondingly, digital transformation plays an important role in business and finance; it has numerous benefits for stakeholders, whether individuals or organizations. (Eira, 2024) Addressed the top benefits of digital transformation adoption, among them improving operational efficiency, which was classified as the top one with 40%, reducing costs, and increasing revenues. while changing customer expectations and improving quality were between the top three benefits, with 35% and 26%, respectively. As it is illustrated in Fig.2.

Fig.2. Top Digital Transformation benefits statistics



Source: (Eira, 2024)

DT plays a significant role as well for financial institutions in the modern economy, principally in the banking sector, and it has also great benefits for banks, as mentioned: (Osei, Cherkasova, & Oware, 2023, p. 3)

- Enhance the customer experience by providing personalization, which boosts customer acquisition;
- Offer innovative solutions, including streamlined operations through digital technologies;
- Driving efficiently saves time, effort, and costs;
- Income increase;
- Automation that produces adapted and flexible processes.

In addition to: (قرزیز، زیدان، و القطان، 2022، صفحة 379)

- Banking by self for customers;
- Seamless control;
- Making rational decisions and insights by improving risk management;
- High security maintenance, which prevents fraud;
- competition increasement;
- Compliance maintenance.

### **3. Digital transformation within Societe Generale Group**

#### **3.1 About the Societe Generale Group**

For over a century, Societe Generale Group (SocGen) is considered one of European leading financial services groups, and one of major players in the economy, with 25.1 billion Euros Revenues, 2.5 billion Euros group Net Income, 13.1% CET in accordance with IFRS9, and more than 25 million clients internationally, plus 126.000 collaborators, as 2023 financial Results (Document d'enregistrement universel: Rapport Financier Annuel 2023, 2024, pp. 8-10).

Today, Societe Generale has over 117 thousand employees, with 154 nationalities, in 66 countries around the world, it has three complementary divisions, each of them responds to a specific financial need, gives advisory product and services solutions, and secures affairs for the clients, Societe generale group is active from Europe, Africa, middle east to Asia, Australia and Americas, its mainly activities are: (Direction De La Responsabilité Sociale D'Entreprise, 2023, p. 7)

- French Retail Banking: for individuals, businesses, professionals, not profits, and local authorities.
- International Retail Banking Operations, Insurance and Financial Services, plus Specialized Equipment Finance, Vehicle Leasing and Fleet Management Businesses.
- Global Banking and Investor solutions: for corporate and investment banking, securities services, and private banking, the solutions are provided for large corporate, institutional, along with investor clients, management companies, and societe generale private banking clients.

#### **3.2 The group's digital strategy**

Digital transformation and innovation are two of the Societe generale group commitments. After strengthening its financial position, adopting technological solutions comes primarily, the group aims to create value for the group's internal and external business environment, by supporting a long-term digital transformation strategy, due to the benefits of digital technologies, such as customer experience

enhancement, efficiency improvement, and innovative business model. The group targets three essential stages for effective digital solutions achievement, as follows:

The first is to embrace a technological foundation, while at the same time changing the group's culture by deploying digital essence, then the second is to step up, to transform business models, to exploit data and artificial intelligence, and to initiate open banking, and open innovation, and lastly, integrate digital transformation at all levels, including functions (CO-CONSTRUIRE LA BANQUE DU FUTUR AVEC NOS CLIENTS, 2020). Added too fig.3. represents some SG group digital transformation investment key figures.

In that regard, the Societe generale group intends to achieve three distinctive characteristics, which are: (Innovation and Digital, n.d.)

- Accessibility;
- Seamlessness;
- Personalization.

**Fig.3.** Some key figures



**Source:** (Innovation and Digital, n.d.)

### 3.3 Open Innovation, and Open Banking:

In the interest of digital transformation strategy, societe generale has adopted two approaches, open innovation, and open banking.

Open innovation consists in bringing a culture of technology and digital from external experiences into the bank internals, to create a digital ecosystem for bank's space works and to interact with outside players. Societe generale aims through Open innovation basically to accelerate its digital transformation strategy, and then to boost collaborations with fintechs and startups (L'open innovation au coeur de la stratégie digitale de Société Générale: Des relations avec l'écosystème mondial au service des métiers, 2017).

While open banking is a new approach that consists of collaboration with partners to offer innovative solutions instead of traditional services for customers, with the main objective of enhancing their client experience, open banking is considered as



a tool to achieve customer satisfaction. In societe generale two models are counted, realized by the Application Programming Interface API, which allows to expose data with total security and regulatory compliance (Intensifier la relation avec les clients grace à l'open banking, 2019). The two main models are:

**Bank as a Platform:** Or BaaP, it is to provide products, services, and innovative solutions for customers from external partners in platform way, in addition to loans to respond on customers needs, and insurance services.

**Bank as a Service:** BaaS is to make services available to partners, such as fintechs, neobanks, e-commerce players, so they distribute them to their customers, this procedure called business to business to customer “B2B2C”.

#### **4. Digital technologies within Societe Generale group**

##### **4.1 Ventures, Startups, and Fintechs**

Societe Generale has almost 30 ventures in its portfolio, with an investment of approximately 230 million euros in startups and fintechs (Innovation and Digital, n.d.), which includes external startups, internal startups, consortia, venture capital funds, and incubators (CO-CONSTRUIRE LA BANQUE DU FUTUR AVEC NOS CLIENTS, 2020). Besides Societe Generale Forge, a digital asset platform, and Reezocar, a marketplace to sell used cars, which are the most well-known ventures, there are also the following ventures specialized in banking services:

- **BoursoBank:** Boursobank, or previously Boursorama, is SocGen group’s subsidiary, an online pioneer bank, online brokerage, and online financial information. Boursobank had 5.9 million customers at the end of 2023, an increase of 26% since last year, accompanied by an increase in total boursobank outstandings (Document D'enregistrement Universel Rapport Financier Annuel 2023, 2024, p. 21).
- **Shine:** a neobank responsible, was founded in 2018 and integrated in SocGen group in 2020. functioning as a bank as a service, it offers very small enterprises, professionals, and freelancers a full online bank account with an autonomous administrative management co-pilot for day-to-day tasks, for example, accounting and taxes (Shine, the neobank for entrepreneurs, 2021).
- **Treezor:** a fintech, and a leading bank as a service, it was acquired by the group in 2019. Treezor provides for fintechs, or for another financial services companies a set of banking services through an API (Application Programming Interface) platform, as an example Singe Euro Payments Area (SEPA payments), Treezor also provides crowdfunding (Treezor is the behind-the-scenes innovator that makes European fintech possible, 2020).

##### **4.2 Data and Artificial intelligence**

By 2022, Societe Generale had about 340 data and AI projects as a part of its digital adoption strategy; many of the use cases were in the production phase, others were in the testing phase, and some of them had already been launched. SG had expected about 500 million euros in value creation from its digital technologies’ portfolio, where the data and AI tools were in the process of being completed. They have already achieved certain significant figures, added a certain value, The Societe

Generale use cases' have touched approximately all banks' functions, such as management, administration, human resources, accounting and finance, auditing, risk management, commercial, legal, and compliance, and the IT department. They have further touched wherever they are active, either in France, globally, or even online. The table below shows six of the sixteen use cases mentioned in Applying Data and AI, the group's flagship uses cases report. The six offered a great deal of advantages, some of which are: interactivity, support, quality, efficient processes, task automation, personalization, cost reduction, stream assistance, error, and risk prevention, and more, to the benefit of both SG's customers and staff (APPLYING DATA AND AI: OUR FLAGSHIP USE CASES, 2023).

**Table 1.** Data and AI use cases examples

<b>Name</b>	<b>What represents</b>	<b>Business area</b>	<b>Added value</b>	<b>Key figures</b>
<b>Eliott</b>	A callbot; a vocal assistant	Boursorama	Client service Availability for 24/7	4 million client conversations per year
<b>Instant-KYC</b>	The automatic treatment of client documents	SG, Retail Banking in France, Global Banking, and investor solutions	Data quality improvement	Over 500.000 customer files remediation per month
<b>Legal Assistant</b>	The automatic review of legal documents	Global markets, Wholesale Banking, General Secretariat, Global Banking, and investor solutions	Time to market acceleration	300 users
<b>Mosaic</b>	Detection system for different types of fraud	SG, Retail banking in France, Global transaction payment services and SG private banking in France	Client and bank protection	Used within 9 SocGen applications

<b>Ace</b>	A human resources service based on staff skill set data	Human resources	Staff skills visibility, and appropriate profiles identification	25,000 skill sets listed in ACE
<b>Investor Appetite</b>	A prediction model for faster and more accurate advice	Wholesale banking and market activities	Operational efficiency enhancement	200/300 issuers served by investor appetite

Source: (APPLYING DATA AND AI: OUR FLAGSHIP USE CASES, 2023)

### 4.3 Cybersecurity

The technological and digital developments had led to an increase in cybercrimes, consequently, Societe Generale Group had to change its traditional security mode to a cybersecurity strategy to protect its customers, data, and information systems from digital attacks and fraud. SocGen has four strategic points apropos of taking malicious attack countermeasures: the first is protecting customers and operations; the second is strengthening IT infrastructure; the third is testing reaction ability in case of risks; and the last is increasing operational efficiency and cybersecurity human resources, which includes 1300 experts (Innovation and Digital, n.d.). As an example, in France, the official website of Societe Generale France offers security services like how to react if there are any types of threats, gives instructions, and asks virtual assistant SoBot for a solution, for both individuals and professionals. The services cover all types of risk, for instance, quishing, phishing, cyberquatting, and more. The following figure illustrates the website page for the security and fraud instructions (Sécurité bancaire & Fraude, n.d.).

Fig.4. The website page for security instructions



Source : (Sécurité bancaire & Fraude, n.d.)

## **5. RESULTS AND DISCUSSION**

Societe Generale Group has challenged the digital revolution; it was able to establish a successful long-term strategy based on technology and innovation and to create a digital transformation culture mindset inside the group.

The present study demonstrated that Societe Generale Group has significantly been able to earn benefits from its digital strategy and the integrated digital technologies that have been adopted. This is the most key findings of this study:

- Societe Generale Group has successfully embraced digital transformation;
- The bank was able to create a culture of innovation and digital within the group;
- The bank's digital strategy focal point was to integrate digital technologies, and to invest in ventures;
- The bank has modernized information and technology systems;
- The bank has worked on updating IT systems with Application Programming Interfaces;
- The bank has invested in data, artificial intelligence, and cybersecurity;
- The bank has established partnership with fintechs and startups, such as Shine and Treezor;
- The bank has advantageously offered innovative solutions through open banking;
- The bank has developed two fundamental approaches in the context of open banking, which are Bank as a Platform, and Bank as a Service;
- The bank has conquered environmental challenges for growth;
- The bank has improved its operational efficiency, financial services, and risk management;
- The bank was able to provide a seamless, personalized, and secure services for clients;
- The bank was able to enhance a high value-added to their businesses;
- Digital transformation was completely beneficial for Societe Generale Bank.

## **6. CONCLUSION**

In summary, the study determined that digital transformation is considered an innovative strategy for banks by determining its technologies and its benefits and identifying the digital transformation journey of one of the leading banks around the world through presenting its experience. Finally, the study has reached a set of results.

### **Results:**

- Digital transformation is an innovative strategy for banks.
- Digital transformation is a culture.
- Digital transformation works on shifting business models towards a revolutionary model that adds value to banks.
- Embracing digital transformation requires a solid investment.
- Developing an effective strategy to adopt digital technologies is beneficial and has a lot of advantages for banks.
- Digital technologies improve the client experience, provide data-driven solutions, and enhance operational efficiency and security measures.

- Societe Generale Bank has successfully implemented digital transformation and its technologies within the group.

### **Recommendations:**

According to the results of the study, the following suggestions can be highlighted:

- Working on building an IT-based infrastructure is a primordial step to adopting digital transformation and integrating digital technologies inside the bank.
- Creating a culture of innovation and digital within the bank's community is the first challenge for implementing digital transformation.
- Allocating resources efficiently for digital transformation and its technology investments.

### **Research perspectives:**

- Further studies should address the role of digital transformation in improving banks' performance.
- Future research related to the impact of digital transformation on banks' different performances.
- Future works should examine the importance of integrating digital technologies in different aspects of bank systems.

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