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Service Quality Improvement: A digital transformation perspective from selected banks around the world

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Abstract

In the face of accelerating technological advancements and evolving customer expectations, banks worldwide are under immense pressure to transform their operations and improve service quality. This study investigates the role of digital transformation in enhancing service quality through a comparative case analysis of two banks: Hanseatic Bank in Germany and De Volksbank in the Netherlands. Hanseatic Bank emphasizes technology adoption, cloud migration, and open banking integration, while De Volksbank focuses on organizational restructuring and agile, customer-centric operational models. Using qualitative analysis of transformation frameworks such as Atlassian-based digital ecosystems and the Org Topologies model, the paper explores how these approaches improve service delivery, internal efficiency, and responsiveness to market demands.

Furthermore, the research contextualizes these findings within the Vietnamese banking sector, which has demonstrated strong digital ambitions through strategic initiatives such as Decision No. 810/QĐ-NHNN of State Bank of Vietnam in 2021. The study highlights how banks in Vietnam can benefit from a hybrid transformation model that combines technological innovation with organizational agility. The paper concludes by emphasizing the necessity of fostering a digital culture, investing in infrastructure, and rethinking governance models to achieve sustainable service quality improvements in the digital era.

Keywords: Service quality; Digital transformation; Hanseatic Bank; De Volksbank; Open banking; Digital culture

1. Introduction

In the rapidly evolving global financial landscape, the banking industry is under increasing pressure to innovate and transform. Traditional banking models are no longer sufficient to meet the demands of a digitally savvy customer base that expects fast, seamless, and personalized services. At the same time, banks are facing intensified competition from fintech companies, digital-native institutions, and other non-traditional financial service providers that leverage cutting-edge technologies to deliver high-quality services at scale.

Digital transformation is no longer a strategic option but a necessary pathway for banks to survive and thrive in the digital economy. It encompasses the adoption of cloud computing, artificial intelligence (AI), big data analytics, blockchain, and open banking platforms to reimagine operations and enhance service quality. As noted by Gomber et al. (2017), banks that fail to adapt are likely to lose relevance and market share in an increasingly customer-driven environment.

This research is particularly timely and significant given the post-pandemic acceleration of digital adoption across industries. For banks, the COVID-19 crisis acted as a catalyst, accelerating investments in digital infrastructure and

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prompting the redesign of service delivery models. According to the State Bank of Vietnam (2021), over 95% of Vietnamese banks have formulated digital transformation strategies, highlighting a broader regional and global shift toward digital-first banking.

Despite the growing importance of digital transformation, there remains a gap in understanding how different banks approach service quality improvement through technological innovation and organizational restructuring. Existing studies often focus narrowly on technology deployment without considering how digital culture, operating models, and regulatory frameworks interact to shape service outcomes.

By examining two distinct case studies—Hanseatic Bank in Germany and De Volksbank in the Netherlands—this paper seeks to contribute to a deeper understanding of how banks around the world implement digital transformation to enhance service quality. These cases represent two contrasting yet complementary approaches: one focusing on technological integration and cloud migration, and the other on organizational agility and customer journey reengineering.

Given the increasing reliance on digital platforms and the heightened expectations of banking customers, this study is essential for identifying actionable insights that can inform future strategies for banks in both developed and emerging markets, including Vietnam. It also provides valuable implications for policymakers, technology providers, and financial institutions seeking to build resilient, customer-centric, and digitally mature organizations.

2. Literature review

2.1. Digital Transformation in the Global Banking Sector

Digital transformation (DT) has become a pivotal strategy for banks worldwide to enhance service quality, operational efficiency, and customer satisfaction. According to Gomber et al. (2017), DT in banking encompasses the integration of digital technologies into all areas of banking operations, fundamentally changing how banks operate and deliver value to customers. This transformation is driven by the need to meet evolving customer expectations, counter competition from fintech companies, and comply with regulatory requirements.

The adoption of digital technologies enables banks to offer personalized services, streamline processes, and improve decision-making through data analytics. However, successful implementation requires a comprehensive strategy that includes technological upgrades, organizational restructuring, and cultural change (Bharadwaj et al., 2013).

2.2. Digital Transformation in Vietnamese Banking

In Vietnam, the banking sector has witnessed significant digital transformation in recent years. The State Bank of Vietnam's Decision 810/QĐ-NHNN (2021) outlines a roadmap for digital transformation in the banking industry, aiming to enhance customer experience and operational efficiency. Studies indicate that by 2021, 95% of Vietnamese commercial banks had developed and implemented digital transformation strategies (Nguyen & Nguyen, 2025).

The transformation efforts focus on three main areas: digitalizing customer-facing channels, automating internal processes, and developing digital-only banking models (Ha & Nguyen, 2022). For instance, Techcombank has leveraged cloud computing and artificial intelligence to offer seamless digital services, resulting in improved customer engagement and operational performance (Do et al., 2022).

Despite these advancements, challenges persist, including regulatory hurdles, cybersecurity concerns, and the need for skilled human resources (Tuan, 2023). Addressing these issues is crucial for sustaining the momentum of digital transformation in the Vietnamese banking sector.

2.3. Impact of Digital Transformation on Service Quality

Digital transformation significantly influences service quality in banking by enhancing reliability, responsiveness, and customer satisfaction. The ES-QUAL model, developed by Parasuraman et al. (2005), identifies key dimensions of e-service quality, including efficiency, system availability, fulfillment, and privacy. Applying this model, studies in Vietnam have shown that digital banking services have improved transaction speed, accessibility, and user experience (Nguyen et al., 2024).

Moreover, the integration of digital technologies has enabled banks to offer personalized services, leading to increased customer loyalty and competitive advantage (Mbama & Ezepue, 2018). However, ensuring data security and building customer trust remain critical factors in maintaining high service quality in digital banking.

Nowadays, banks are constantly improving their products and services to meet the increasing demands of customers. Faced with fierce competition from financial rivals offering fast and convenient digital solutions (e.g., payments, lending, etc.), banks are having to adapt their services to ensure stable and robust growth.

Based on reference materials and our own synthesis, this paper aims to discuss two banks that have successfully implemented technology and digital transformation through different approaches: Hanseatic Bank (Germany) and De Volksbank (Netherlands).

3. Case of Hanseatic bank

Recently, most banks have shifted from traditional core systems—primarily product-centered—to innovative solutions that are scalable, flexible, and cost-effective. Keeping up with this trend, Hanseatic Bank, a private bank in Germany, is also seeking a data-integrated architecture to quickly bring new services or necessary changes to market, while optimizing end-to-end processes.

Hanseatic Bank is a retail bank headquartered in Hamburg, Germany. Established in 1969, it primarily operates in the consumer credit sector, offering financial products and services to individuals and small businesses.

Hanseatic Bank focuses on several business areas, including:

- **Consumer Credit:** Providing credit products such as credit cards, personal loans, and other individual financial services.
- **Diversified Financial Services:** Hanseatic Bank offers a wide range of financial services including investment products, insurance, and other financial solutions.
- **Small Business Financing:** Supporting the financing needs of small businesses and private enterprises.

Hanseatic Bank has engaged in various digital transformation projects and strategies to enhance customer experience and operational efficiency. This includes upgrading online services, optimizing internal processes, and promoting a digital culture within the organization.

3.1. Pioneering Digital Transformation

The IT department at Hanseatic Bank began searching for a unified solution to enable optimal digital collaboration several years ago. Among the options considered were products offered by Atlassian, a software company headquartered in Sydney, Australia, known for developing tools for project management, collaboration, and software development.

Since 2017, Atlassian Confluence has served as Hanseatic's internal wiki for document integration and sharing. A year later, Atlassian Jira was introduced, initially used by the IT team for task management. Over time, the demand for Jira grew across other departments, such as Marketing, which used Kanban boards to highlight tasks and generate reports. By 2021, all employees at Hanseatic Bank were collaborating through Confluence, and roughly half were actively using Jira.

However, this setup also posed certain operational risks. For instance, if Jira or Confluence experienced downtime or malfunctions, workflows and services across departments could come to a halt, resulting in time and financial losses. Hanseatic Bank recognized this risk early enough and, by 2020, began formulating an organizational strategy to digitize business processes using Atlassian tools. A key feature of this strategy was the "Move to the Cloud" initiative.

3.2. "Atlassian" Cloud

With Hanseatic Bank's cloud strategy, the primary focus is on conserving resources and operating internal infrastructure only when it is truly necessary. Cloud-based products can be acquired at a relatively low cost through the Software as a Service (SaaS) model—a software delivery method in which applications are hosted and provided as services over the internet. Instead of requiring installation and maintenance on users' local machines or servers, SaaS enables users to access applications remotely via a web browser. This approach has also allowed Hanseatic to

significantly reduce the costs associated with patching and maintaining Jira and Confluence, which were previously hosted on the bank's in-house servers.

However, transitioning to a cloud-based model in a banking environment—where all processes and business data are involved—requires overcoming technical hurdles and facing legal compliance challenges. According to the requirements of the German Federal Financial Supervisory Authority (BaFin) and the European Banking Authority (EBA), financial institutions like Hanseatic Bank must supervise their cloud products and services with the same level of oversight as they would with internal operations. This is the only way to ensure compliance and safeguard sensitive data outside the organization. In other words, the bank must determine whether its data is legally permitted to be stored in the cloud.

To carry out this transformation while keeping data secure—and maintaining normal operations during the migration—Hanseatic Bank adopted an open banking API based on WSO2 Open Banking technology.

An Open Banking API can be understood simply as an Application Programming Interface used in the banking sector to share data and functionality among various financial institutions. It enables interaction between banks and third parties such as financial apps, payment services, and other platforms. The main goal of Open Banking APIs is to create an open financial ecosystem where customers have the ability and authority to securely and efficiently share their financial information across services and providers. These APIs help foster a more competitive banking environment while providing users with greater flexibility and control over their financial data.

4. Redesigning a flexible operating structure – a case study of de Volksbank

Also, a notable example of digital transformation in banking operations, De Volksbank, a bank based in the Netherlands, has adopted a different approach to implementing technology and fostering a digital culture compared to Hanseatic Bank. While Hanseatic focuses on synchronization, technology adoption, and transitioning its operational ecosystem into the IoT space, De Volksbank places greater emphasis on transforming the way individual departments operate. Specifically, it integrates IT infrastructure directly into each team, enabling these squads to concentrate on specific tasks or customer segments. This approach is guided by a philosophy of enhancing customer value.

4.1. Org Topologies

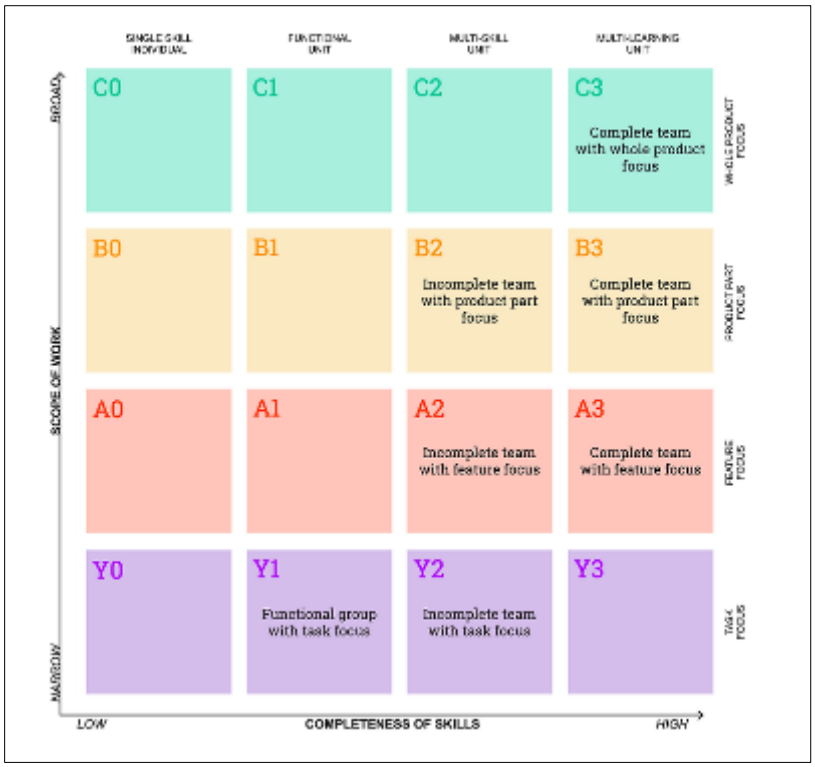
The Org Topologies research and organizational assessment method was applied to clarify the transformation approach of De Volksbank. This method focuses on understanding how the organization functions and interacts internally, aiming to analyze the structure and internal dynamics of the organization. It helps leaders and researchers gain deep insights into the key factors that influence organizational performance and success.

This method typically employs tools such as Org Topology™ Scans to collect data on organizational structure, workflows, relationships, and organizational culture. These data are then used to create Organizational Maps (Org Maps) and conduct Org Topology analyses, which provide concrete recommendations for organizational improvement.

According to the Org Topologies framework, two extremes must be considered when an enterprise or organization seeks to restructure:

- Developing team capability, which emphasizes the completeness of skills within a department/unit/squad to deliver value (such as customer needs or work tasks) quickly and effectively.
- Expanding understanding of the problem space and scope of work, which enhances the organization's ability to adopt a customer-centric approach.

Based on this approach, the Org Topology™ model can be illustrated as follows.



Source: https://www.orgtopologies.com/

Figure 1 Org Topologies Model – Archetypes of Team Structures

According to Org Topology™, the key focus areas typically include the following seven types:

- Y1: Functional teams with a specific focus
- Y2: Component development teams with narrow specializations
- A2: High-potential teams that still face challenges
- A3: Mature and autonomous teams
- B2: Dependent teams tied to business value
- B3: Interdependent teams collaborating on business value
- C3: Fully integrated product development teams

The organizational forms listed above can be simply interpreted as follows:

- Y1: Functional teams with a specific focus
- Y2: Component development teams with narrow specializations

Y1 and Y2 represent easily recognizable and commonly found organizational designs, where work is divided into separate functional departments. However, Y1 and Y2 groups are not truly considered complete teams due to their lack of clear direction and limited scope of work, which remains at the lowest level—task execution.

Such groups are unable to fully meet customer needs because they typically operate in a repetitive, standardized manner based on functional roles, receiving and handing off tasks like an assembly line.

In other words, these groups are not genuine teams, as they rely heavily on external experts to break down requirements into tasks, oversee execution, and later reintegrate the results. This type of structure prevents teams from being self-managing and significantly limits their flexibility.

- A2: High-potential teams that still face challenges
- A3: Mature and autonomous teams

At a higher level, Group A, represented by A2 and A3, is considered to be agile teams, which many organizations strive toward. These teams develop along the horizontal axis (X-axis), with a focus on enhancing technical capabilities, a

direction seen as both valid and important for improving work performance. However, Group A teams still do not fully realize their potential, and therefore exhibit limited adaptability, innovation, and resilience. To achieve true agility, development must also occur along the vertical axis (Y-axis), to ensure the highest level of flexibility.

- B2: Dependent teams tied to business value
- B3: Interdependent teams collaborating on business value

Group B aims to optimize the adaptability of teams in learning and execution. At the mature stage of this organizational form, traditional barriers at the team level are nearly eliminated. There are no walls between "experts" and team members—specialists and staff work side by side. This leads to the formation of a “team of teams” structure, in which multiple teams operate as one and create a collaborative ecosystem.

- C3: Fully integrated product development

At the C3 level, this represents an organizational form where no barriers remain in the value stream. All teams operate as a single unified team, jointly owning the same product and vision. This can be seen more as an aspirational direction rather than an easily achievable end state.

4.2. Operating Model Transformation at De Volksbank

De Volksbank is the fourth-largest bank in the Netherlands, founded two centuries ago from a group of regional savings banks. Today, the bank primarily serves individual consumers, self-employed entrepreneurs, and small and medium-sized enterprises (SMEs), with core operations in payments, savings, and mortgages.

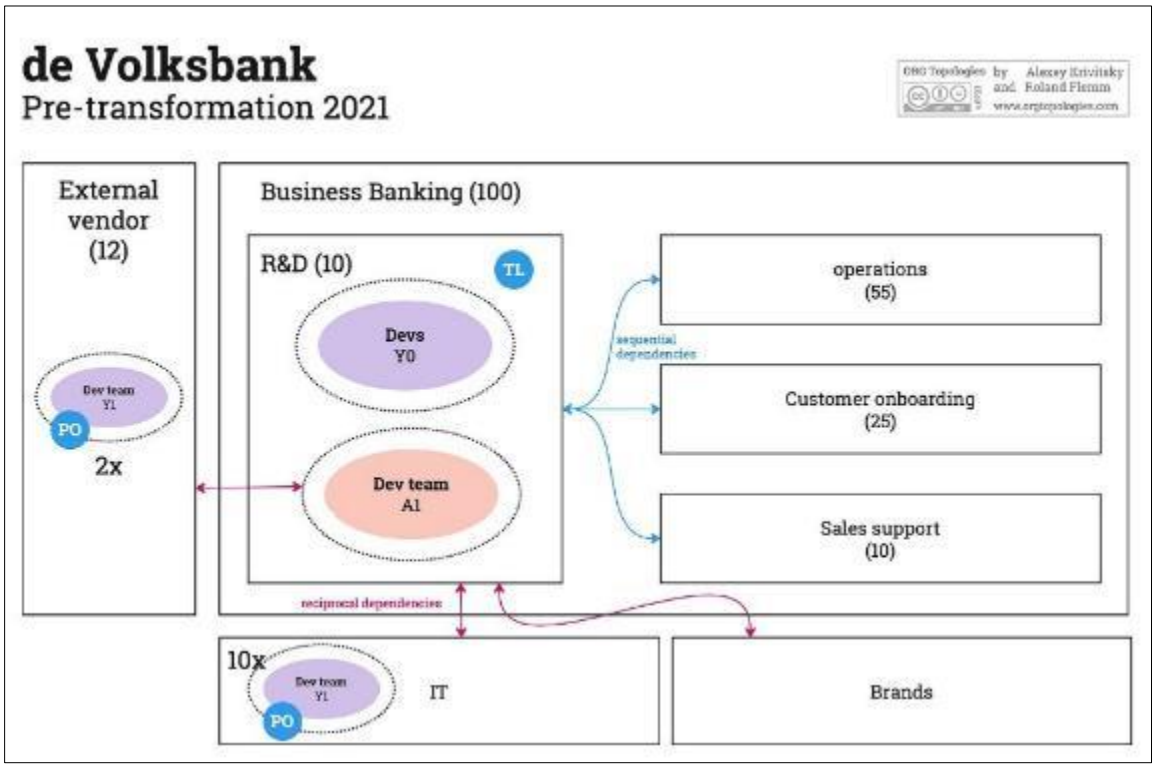
In 2021, De Volksbank launched a new four-year strategic agenda aimed at driving growth by strengthening customer relationships and enhancing social impact. To realize this strategy, the bank initiated a transformation process to implement a flexible and unified way of working through independent customer journey teams with end-to-end accountability. The goal of this new approach is to place the customer at the center and enable teams to operate more effectively, quickly, and efficiently in delivering value.

The transformation impacted the entire bank. In March 2022, approximately 3,000 employees underwent changes in their roles, teams, and/or ways of working. The bank’s operating structure was reorganized into various Hubs, each aligned with areas that directly influence the bank’s profit/loss ratios. Each Hub was designed as an integrated unit, combining business functions, IT, and other relevant operations, with the aim of serving a specific customer segment in a focused manner.

The transformation at De Volksbank can be broken down into key phases:

- Pre-transformation phase
- Pilot phase (2021)
- Full implementation phase (2023)

4.2.1. Pre-transformation Phase – 2021



Source: Roland Flemm (2023)

Figure 2 Levels of Team Autonomy Across Transformation Phases Pre-transformation Phase – 2021

In this phase, the bank's core division—Business Banking—was divided into three smaller units: the **Operations Department**, the **Sales Support Department**, and the **Customer Engagement Department**. Product development and operational improvements across these departments were managed by a separate R&D group, which itself was split into two smaller teams, each with distinct methods and challenges:

- Team 1 – Process Improvement Group (Devs Y0)

This team was primarily responsible for improving the operational processes of the three main functional units within Business Banking. However, working independently on tasks that had not been prioritized by the operational teams, the Devs group lacked the necessary skills to implement changes related to software and configuration within the bank's systems. Their role was limited to identifying changes, delegating tasks to IT teams, and tracking progress. They did not assess the customer value of the improvements they pursued.

Due to this structure, the team operated with very low effectiveness, ranking at the Y0 level (the lowest on the Org Topologies map). The team faced a large backlog and long waiting times, which significantly delayed the rollout of major initiatives—often taking months or even years to implement. Additionally, the focus on IT-related work required prolonged negotiation with multiple stakeholders, further slowing progress.

- Team 2 – New Business Loan Product Development Group (Dev Team A1)

Team 2 collaborated with an external software company to define customer-centric features for the development of a new business loan product. They broke down customer requirements into specific tasks and functioned as analysts for the external developers. According to the Org Topologies framework, this team operated at the A1 level.

Unlike Team 1, Team 2 was not dependent on the bank's internal IT department, but instead relied entirely on an external vendor, with some dependencies on internal business units. Although external dependencies existed, the team demonstrated significantly higher efficiency and faster execution compared to Team 1.

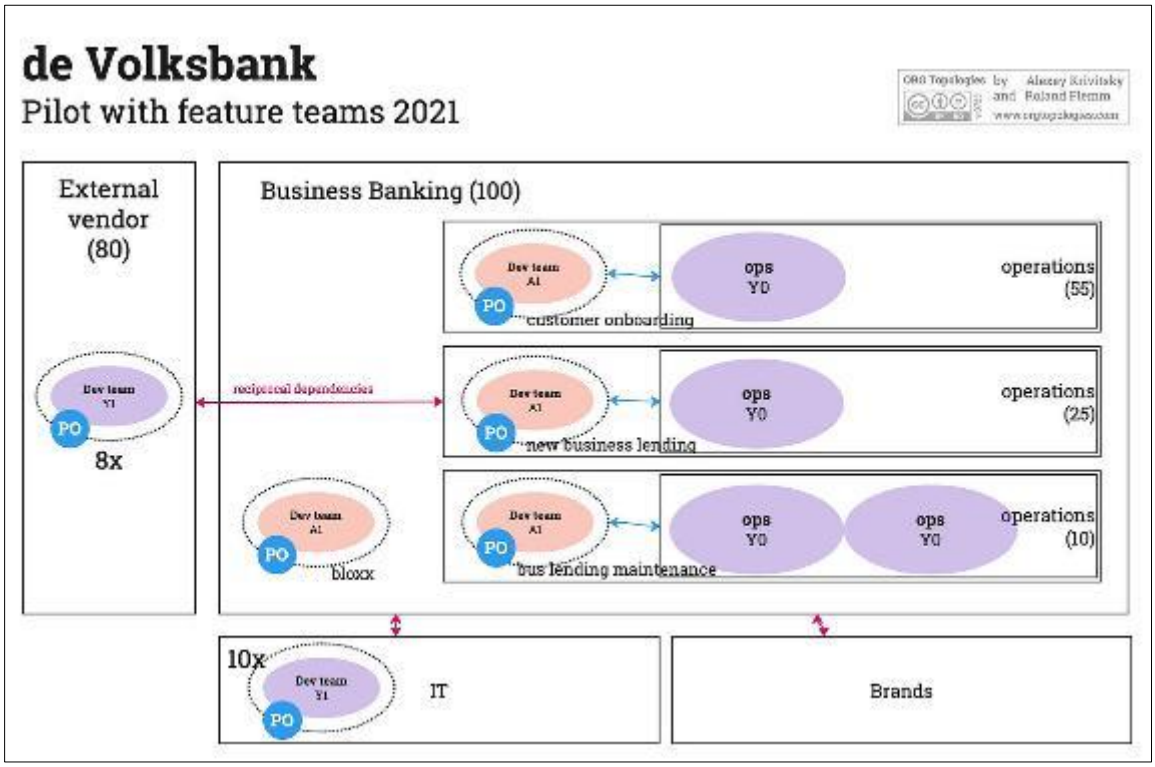
4.2.2. Phase 2: Pilot Phase – 2021

Before rolling out the new organizational model across the entire bank, a newly self-developed model called "dVM" (de Volksbank samenwerkingsModel) was piloted within the Business Banking division. Notably, this transformation initiative was driven by the Business side of the bank, not by the IT department—an uncommon approach in the financial industry, where digital and technological transformation efforts are typically led by technology teams.

Under this model, individuals working in the R&D group were divided into four teams, each focused on the customer journey of a specific target segment. Each new team consisted of one R&D team along with one or more service teams.

- The R&D team concentrated on **product development**,
- while the Service team focused on **daily operations and customer support**.

A tight feedback loop was established between the two, where operational teams acted as key stakeholders, providing valuable insights and feedback from customers. Each R&D team had its own Product Owner (PO) who prioritized work based on customer value.



Source: Roland Flemm (2023)

Figure 3 Levels of Team Autonomy Across Transformation Phases Phase 2: Pilot Phase – 2021

Each R&D team was composed of cross-functional business personnel. These teams were capable of handling the full range of business issues (features) within their domain; however, they lacked technical expertise. This positioned them at the A1 level (analytical teams or “reasoning units”) on the Org Topologies map. Their task lists tended to focus on customer needs rather than service-based tasks.

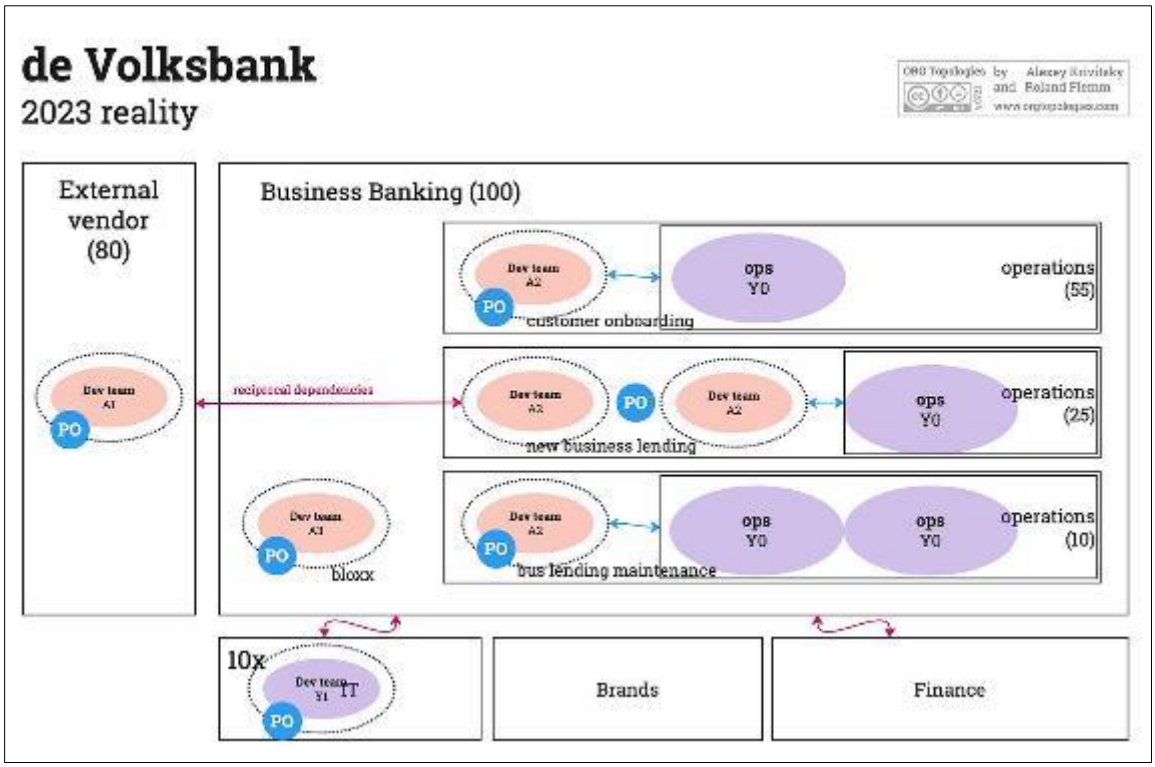
This operating model provided team members with several significant advantages:

- They worked full-time within a stable team.
- Tasks were carried out based on clear criteria for identifying and delivering customer-relevant features.
- The work created high value, as priorities were determined by customer value.

However, a major challenge for these R&D teams was their lack of IT capabilities, as most of the changes they worked on required modifications to IT systems. While some teams could implement non-coding changes, in general, their technical limitations were seen as a critical constraint.

This technical gap, combined with end-to-end responsibility, often led to pressure and frustration. Teams struggled with long cycles to implement the changes they had envisioned. This situation gradually improved as their technical competencies were expanded over time.

4.2.3. Full Implementation Phase – 2023



Source: Roland Flemm (2023)

Figure 4 Levels of Team Autonomy Across Transformation Phases Full Implementation Phase – 2023

Most of the dependencies on IT were successfully resolved. Two out of four R&D teams in the Business Banking division had developed the necessary technical capabilities to operate autonomously. The solution involved integrating developers (technical staff) directly into the teams. Product Owners (POs)—those primarily responsible for managing and developing products—were empowered to decide which features delivered the most value, rather than having these decisions dictated by external stakeholders such as architecture teams through developers.

Within each Value Hub, teams coordinated using OBEYA—an interactive space designed by the bank to share information, make decisions, and promote collaboration. A similar approach was applied to facilitate coordination across different hubs. According to the Head of the Business Banking Hub, the implementation of the dVM model has been very successful in creating strong autonomous teams. The alignment of all teams within the hub using OBEYA was also reported to be highly effective.

All four R&D teams within the Business Banking division achieved autonomy by developing their technical capabilities. Some teams reached A3 level (fully autonomous, end-to-end teams working across the entire customer journey), while most operated at A2 level (incomplete teams working on parts of the customer journey, not fully end-to-end). This represented a significant improvement compared to the pre-transformation state (Y0 level).

However, challenges remained in addressing cross-hub initiatives. Senior management tended to revert to traditional models when handling issues between hubs, rather than trusting the hubs to self-organize. On the one hand, this was due to lack of experience using OBEYA and the persistence of siloed thinking within individual hubs. Hub leadership teams needed to become more aware of the frequent interdependencies between hubs (and teams), as such patterns signal opportunities for organizational design improvements.

5. Conclusion

Digital transformation is fundamentally reshaping the global banking sector, empowering institutions to improve service quality, enhance operational efficiency, and deliver customer-centric experiences. The case studies of Hanseatic Bank and De Volksbank demonstrate how different strategic approaches—whether through cloud adoption, API integration, or agile organizational restructuring—can lead to meaningful improvements in service delivery and internal capabilities.

For Vietnam, these international experiences offer valuable insights. As the country continues its digital economic agenda and implements the national strategy for digital banking (as outlined in Decision 810/QĐ-NHNN, 2021), Vietnamese banks are presented with both opportunities and challenges. On one hand, the rising demand for digital services, widespread mobile adoption, and a youthful, tech-savvy population form a strong foundation for transformation. On the other hand, regulatory compliance, cybersecurity, and digital talent shortages remain key barriers.

The Vietnamese banking sector can benefit by adopting a hybrid model—combining the technological innovation seen in Hanseatic Bank with the organizational agility exemplified by De Volksbank. Specifically, transitioning to cloud-based platforms, investing in open banking APIs, and restructuring internal teams to focus on end-to-end customer journeys are practical steps that banks in Vietnam can begin to take.

Moreover, fostering a digital culture that emphasizes collaboration, innovation, and data-driven decision-making will be essential for long-term success. As customers increasingly expect seamless, personalized services, banks must evolve from being mere financial intermediaries to becoming holistic digital service providers.

In conclusion, digital transformation is not just a technological shift but a strategic imperative. For Vietnamese banks to remain competitive and resilient in the global digital economy, they must accelerate their transformation journeys—guided by global best practices, grounded in local context, and committed to delivering sustainable value for customers and society

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