

Enterprise Service Transformation: Customer Solutions Integrated: A Case Study in the Enterprise Service Transformation

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Abstract:

Many of the old technology firms in the digital economy are shifting their business models as customers' needs are changing and the industry competition is intensifying. Increasing numbers of firms are shifting away from a product-based model comprising of the sale of individual products to a solution-based model comprising of technology, consulting and long term service offerings. The paper examines the use of integrated customer solution strategies by companies when transforming a service based on IBM as a case study. The research will examine the background of transformation at IBM, the shifts in customer requirements, strategic positioning and outcomes of implementation. The findings indicate that IBM has transformed over the years as its strategic changes and restructuring of its business through gradual changes in its strategies have transformed it to become a global leader in the technology and consulting services market. IBM offers individualized end-to-end solutions to enterprise clients worldwide by integrating hybrid cloud infrastructure, cutting-edge artificial intelligence (AI), and business consulting services. The solutions are useful in enhancing customer experience, developing long-term partnerships, and adding value to the business. Nevertheless, there are a few practical difficulties that IBM is still facing in promoting integrated customer solutions, including high implementation cost, challenges on integration of systems and high global competition. To address these issues, this paper indicates that IBM must further enhance technological innovation, create more customer-focused operations, and promote more open and cooperative digital ecosystems.

Keywords: Enterprise Service Transformation, Customer Solutions Integrated, IBM.

1. Introduction

Over the past few years, there has been a rapid increase in the global digital economy. It has transformed the long-standing nature of businesses and the way they compete within the technology industry, where long-established technology companies are being forced to respond to the changing nature of customer needs and an increasing competitive pressures in the technology industry. Previously, a vast majority of technology companies concentrated on product sales. They frequently considered market transactions as a one-time deal depending upon the delivery of tangible products or individual technical products. This model was effective in the initial phase of technological advancement, when the needs of the customers were comparatively simple and competition chiefly relied on the performance and quality of its products.

Yet, with the continued development of the digital technology and the more complex business issues faced by enterprise customers, this traditional product-centre model has lost its competitiveness. Corporate customers today do not desire merely standalone products. They are more and more in need of wholly and wholly made solutions that can address their critical business issues in a more direct manner [1]. This shift in market demand has prompted the world technology sector to shift towards servitization. Servitization refers to value-added product services and comprehensive solutions to the conventional product services in the effort of developing new competitive advantages [2].

Customer-centred business model, which involves integrated customer solutions, alters the logic of traditional product sales. This model involves technology delivery, professional consulting, data analysis and continuous support services to create a whole service system. Its main purpose is to help enterprise customers solve complex and different organizational problems [1]. Compared to one-time transactions, the integrated solution model is more focused on the long-term relationships, continuous generation of values between the firms and the clients, and close interaction with the clients throughout the entire business process [3]. Past research has demonstrated that customer solution strategies can be integrated to enhance customer loyalty, customer stickiness, more stable income through recurring services and competitive advantages that become harder to copy by competitors [1,2].

On this backdrop, IBM can prove handy as an illustration of servitization and integrated solution transformation in the international technology industry [4]. IBM is a company with a long history having over one hundred years of existence and has undergone a series of technological change and strategic adaptation. During the early period of its existence, IBM was primarily a hardware company. It had been a well-known company in the mainframe

computers and personal computers and held a significant place in the traditional hardware technology market [5]. But as the old hardware market was in decline and the digital service business was expanding, IBM was aggressively marketing its strategic transformation. It is transforming into a provider of enterprise integrated solutions on a global scale, hybrid cloud services, and AI-assisted consulting [5]. The changes experienced by IBM reflect the larger trend in the technological sector: companies are shifting towards integrated services and customer-centred operations [4,6].

According to the service transformation of IBM and the research value of integrated customer solutions, this research is based on the three primary issues. Firstly, it looks into the way in which IBM transformed its old business model and acquired the capacity to create and deliver integrated customer solutions. Secondly, it examines how alterations in customer needs inspired IBM to shift its product-centred model to a service-centred model. Thirdly, it explains the key benefits, practical issues and the outcomes of IBM integrated customer solution strategy implementation. Through examining how IBM has transformed over the decades, this paper elaborates on the overall logic and the practical route of the integrated solution strategy at IBM. It also provides valuable and practical lessons to companies all around the world that are attempting to accomplish digital and service transformation in the existing digital economy [7].

2. Company Overview and Strategic Transformation

2.1 Corporate Background

International Business Machines Corporation, or IBM, is a famous multinational technology and consulting corporation, which is headquartered in Armonk, New York, USA [5]. It has a business network in over 170 countries and regions. IBM has developed a comprehensive service and research network across the globe, primarily serving large and medium-sized enterprise clients, government organizations, and institutions in key industries like finance, healthcare, manufacturing and telecommunications [5].

Having over 100 years of technological development and industry experience, IBM has established a good reputation on its technical capability and cross industry expertise. It has also continued to be a key player in the world market of enterprise technology [4,8]. Long-term market operations have helped IBM to acquire rich industry experience as well as a large customer base. These assets have given a significant base to the subsequent transformation of IBM to integrated customer solutions.

2.2 Historical Transformation

The 100 years development and evolution process of IBM can be divided distinctly into three different strategic eras, which are corresponding to different market environments and the core business layouts, and the transformation path can be highly consistent to the evolution of the global technology industry.

The Hardware Era (1911-1990s) is the first stage. In this lengthy history, the core business of IBM was the R & D, manufacturing and sales of hardware equipment. It dominated the world mainframe computer market in the mid-20th century and later entered the personal computer market becoming a symbol of the global hardware technology industry with its leading product technology and complete production chain [4,5]. In this era, IBM's business logic was completely product-centric, and corporate revenue and profits mainly came from one-time hardware product sales, with almost no systematic layout of later services and solutions.

The second era is the Transition Era (1990s-2010s). Influenced by the saturation of the global hardware market, the decrease of profit margins of products and the emergence of competitors, the traditional hardware business of IBM experienced a bottleneck development. At this point, under the oversight of the senior management of the company the strategic transformation, which IBM was initially promoting, began to gain traction, gradually extending its business model to the business of software creation and IT consulting services, and initially adopting a service-oriented business model [4,8]. This transitional transformation made IBM initially get rid of the operational pressure caused by the decline of the hardware business, and accumulated initial experience for the subsequent comprehensive transformation to integrated solutions.

The third phase is the Integrated Solutions Era (2010-present). During this period, IBM continued to drive forward deep strategic restructuring, fully sold off low-margin hardware businesses including personal computers and traditional servers, and focused its core resources on higher value areas such as hybrid cloud infrastructure, artificial intelligence technology development (as represented by the Watson system) and enterprise-level consulting services [5,8]. This significant strategic change was not merely forced by the internal need of the company to transform and upgrade, but also was closely associated with the changes in the external market, such as saturation of the traditional hardware markets, the decline in profits produced by the hardware products as well as the growing global demand to the services of end-to-end digital transformation [4,9].

2.3 Market Positioning

IBM has established a clear and distinct niche in the mar-

ket of technology service providers globally, after enduring its phased strategic transformation. It positions itself as a trusted long-term collaborator in enterprise digital transformation [5,8]. In contrast to the companies that primarily offer single products or generic services, IBM is committed to finding solutions to complex and high-value problems encountered by enterprise customers in the process of digital transformation. Among them are modernizing old IT systems, integrating fragmented data systems, artificial intelligence in business processes, and global operations [5].

IBM does not have to compete head-on in the regular products markets because of its substantial experience within the industry, and the technical capabilities it possesses. Rather, it has concentrated on providing industry specific solutions that are customized to satisfy the various needs of customers within industries [1,2]. This competitive market positioning assists IBM to remain competitive and hold a high standing in the high-end enterprise service market.

2.4 Core Strategy

The fundamental idea of the present strategy of IBM is to develop and provide integrated customer solutions and to establish long-term and stable relationships with customers [5,8]. To achieve this core strategy, IBM has developed a multi-dimensional integrated business system that integrates technology, services and consulting, and its core strategic components mainly include four parts: First, global professional consulting services (IBM Consulting), which provides customers with preliminary demand diagnosis, scheme design and strategic planning services; second, stable and efficient hybrid cloud platforms (IBM Cloud), which provides infrastructure support in the operation of integrated solutions; third, leading AI and data processing technologies (represented by Watson system and Cloud Pak for Data), which empowers the intelligent upgrading of solutions; fourth, complete industry-specific framework systems, which realizes the targeted application of integrated solutions in different industries [5,8]. By means of the extensive integration and joint functionality of these four components, the business model of IBM completely inverts the traditional logic of selling products and provides the delivery of holistic value to the customer instead of the provision of discrete products and/or individual services [1,2].

3. Customer Needs Analysis

3.1 Evolving Expectations

As the global digital economy continues to undergo deeper transformation and the business environment becomes

more and more complex, the fundamentals of demands and expectations of enterprise customers towards the technology services have passed the fundamental shift. The new enterprise customers do not merely seek to achieve the purchase of individual technology products- they are more focused on achieving final business results that solve practical business operational problems with the support of external technical services [1,3]. In the present market scenario, enterprise customers have systematic and clear expectations in the context of integrated solutions, largely including four aspects, namely: first, customized and personalized end-to-end solutions that fits their own business characteristics; second, seamless integration of traditional legacy systems and new digital systems to ensure the stability and continuity of business operations; third, predictable service costs, and sustainable full-cycle ongoing support to avoid operational risks; fourth, agile, and scalable technical services that can adapt to the rapid development and adjustment of their own business [7,9]. The logic of operation of the global technology service market has fundamentally changed as a result of these diversified and systematic demand upgrades, compelling technology firms to revise their strategic layouts to keep pace.

3.2 Digital Transformation Pressures

The current digital wave is bringing unprecedented pressure on the traditional industries to undertake digital transformation and upgrading [7,9]. For most enterprise customers, especially large and medium-sized traditional enterprises, the process of digital transformation is accompanied by multiple realistic difficulties and challenges: first, the serious fragmentation of traditional legacy IT systems, which makes it difficult to realize data interconnection and business collaboration; second, the existence of a large number of data silos inside and outside the enterprise, leading to low efficiency of data resource utilization; third, the serious lack of in-house professional digital technology talents, especially professionals mastering cloud computing and artificial intelligence technologies; fourth. The high cost and operational risks in the process of promoting digital transformation [7,9]. The reality pressures mean that it is challenging to have enterprises to complete digital transformation on their own through their own resources and they have to resort to external professional technology service providers to obtain full-cycle and one-stop integrated solution support [1,3].

3.3 Customer Pain Points

Together with the reality of the actual working situation of the customers of the global enterprise, their core pain points in the process of digital transformation are highly concentrated, which also precisely identifies the practical value of the integrated customer solutions. First, opera-

tional complexity: it is hard to achieve a smooth business connection and data flow between traditional legacy systems and new cloud systems [3,7]. Second, cost pressure: the initial cost of digital transformation is enormous, and the further costs of the system maintenance and the technical update are high, and it brings high operational pressure to the enterprises [3,8]. Third, talent gaps: the lack of professional talents in the world to independently operate and maintain the new digital systems leads to the inability of enterprises to independently manage and maintain new digital systems [7,9]. Fourth, efficiency issues: the traditional technical service model results in a slow implementation of new capabilities and long time-to-market, making it difficult to make enterprises responsive to fast changes in the market [3,8]. The integrated customer solution strategy precisely targets these core pain points, and provides a systematic solution for enterprise customers through integrated technology, consulting and services, which is the fundamental reason for the rapid popularization of this model [1,2].

3.4 Long-term Partnerships Demand

Unlike the classic model of one-time transactional cooperation, the model of customer cooperation in the process of digital transformation is clearly demanded by modern enterprise customers in the form of long-term strategic cooperation [1,3]. Digital transformation is a long-term and continuous process and in this regard, it needs continuous technical support, system enhancement, and strategic change. The integrated customer solution model closely links the development interests of technology service providers and client enterprises, taking the long-term growth and business success of customers as the main goal. It assists in the enhancement of service systems and in the continuous changes of the technical solutions [2,3]. This is not only a win-win situation as it not only allows technology companies to maintain a stable customer base and earn a steady income, but also satisfies the constant demand of the enterprise customers to receive digital assistance.

4. Discussion of the Strategy of Integrated Customer Solutions Strategy of IBM

4.1 Strategy Architecture

IBM has its integrated customer solutions strategy in a well-structured and comprehensive form that forms a standard and repeatable service framework [5,8]. The entire process may be subdivided into four steps which are closely related. The initial one is consulting-based demand assessment. The consulting team at IBM talks to the cus-

tomers a lot, identifies their major issues and digital needs, and formulates an appropriate digital transformation strategy, depending on the real situation of the customer.

The second one is platform integration and infrastructure construction. Depending on the IT systems of the customer, IBM establishes hybrid cloud-based platforms, integrates fragmented data sources, and develops a sustainable and effective technical base. AI and data support is the third step. The solution includes the Watson artificial intelligence system and the tools of data analysis that help the company to support intelligent operations and the data-based decision-making process.

Ongoing operation and improvement are the fourth step. IBM offers full-cycle managed services, ongoing improvement of systems, and professional training to make sure that the solutions are effective in the long-term [5,8]. Moreover, to enhance the breadth and flexibility of its solutions, IBM proactively develops partnerships with the most popular global companies, including AWS, Microsoft, and Salesforce. By these partnerships, IBM increases its services capacities, and fulfills various customer requirements [8,10].

4.2 Strategic Advantages

The strategy of integrated customer solutions of IBM exhibits definite strengths in the global market, which is a significant reason why it has been effectively transformed. First, a powerful ability to customize. IBM can create customized solutions to customers in various industries with various needs, satisfying their specific needs [1,2]. Second, service control of the full process. IBM offers services that cover the entire process, including the analysis of the problem and its solution design, implementation, and the subsequent maintenance. This puts in place one responsible provider in front of customers thereby making it easier to cooperate and lowering the cost of communication [1,3]. Third, consistent revenue base. The integrated solution model brings continuous service and consulting income to IBM. This transforms the old unstable model of revenue based on single product sales and makes revenue more stable [2,3]. Fourth, good customer loyalty. Long term cooperation and quality of services contribute to the fact that IBM has a high level of retention of customers, including large global companies, where the partnership is usually very stable [1,3]. Fifth, obvious competitive advantage. IBM has developed a competitive edge that is hard to replicate by new technology firms or pure consulting firms [4,8].

4.3 Challenges and Limitations

Even though the integrated customer solutions strategy adopted by IBM has delivered good outcomes, it still has a number of feasible challenges and constraints in large-

scale execution.

First, high costs of operation. Huge investment in technology research and development, professional talent team building and global service network drawing, plan, and cost pressure a lot on the daily operation of IBM [3,8]. Second, implementation complexity. The cross-system integration and solution deployment process is highly complex when it comes to large enterprise customers with complex legacy systems, which is easy to lead to project delays and operational risks [3,7]. Third, intense competition in the markets. In the integrated solution market, IBM is fiercely competing with global professional consulting companies like Accenture and McKinsey, and emerging cloud technology giants like Microsoft and Google Cloud, and the competition pressure in the market is growing day by day [10]. Fourth, risks of internal execution. The large-scale strategic transformation is the restructuring of the internal organizational structure, and modernization of employee skills, and here there is internal organizational resistance and skills matching gaps in the implementation process, which influences the effectiveness of strategy promotion [7,8].

4.4 Implementation Outcomes

IBM integrated customer solutions strategy has delivered spectacular structural and operational outcomes, after years of relentless promotion and optimization, and this is testimony to the success of the service transformation strategy [5,8]. In terms of revenue structure, service and solution businesses currently contribute more than 70% of IBM's total global revenue, completely reversing the traditional revenue structure dominated by hardware sales and realizing the successful transformation to service-centric operation [5]. In terms of business development, the business of the hybrid cloud and artificial intelligence solution by IBM exhibits double-digit annual growth, becoming the driving force in the sustainable development of the company [5]. IBM has had long-term stable strategic cooperative relationship with most of the world Fortune 500 enterprises, and has a high customer retention rate, and deeper customer trust [5,8]. Industrial recognition In terms of industry recognition, IBM has long been ranked as a leader in various Gartner Magic Quadrants of enterprise services and cloud solutions, and the strength of its integrated solution has been highly recognized by the global industry [5]. Meanwhile, though, there are still issues that IBM must solve through ongoing strategic optimization such as pressure on profit margin due to high operational costs and difficulty in executing projects due to their complexity [3,8].

5. Strategy Optimization and Future

Prospect

5.1 Strengthen Innovation Capabilities

To sustain its competitive edge in the fast-changing digital marketplace, IBM will need to further speed up the investment and layout of the latest technological innovation with a focus on the research and development and implementation of generative AI, quantum computing and industry-specific technical accelerators [8,9]. On the one hand, the company must invest more in the area of R & D, accelerate the iterative modernization of the basic technologies on which the company is based Watson system and hybrid cloud platform and achieve the continuous improvement of the technical competitiveness of integrated solutions. Conversely, IBM ought to incorporate an agile innovation model, enhance strategic collaboration and technology acquisition with science and technology start-ups around the world, shorten the cycle of new technology transformation and market introduction, and quickly respond to the changing technological need of customers [8,10]. With the ongoing technological innovation, IBM can further solidify its technical barriers in the area of integrated solutions and it will be able to maintain its top position in the industry.

5.2 Deepen Customer-Centricity

Based on the available integrated solutions, IBM should go further and enhance the concept of customer-based operation and enhance the service system as seen by the customer. To begin with, extend the customer feedback system, establish frequent two-way communication channels and gather the customer needs and opinions in the implementation and operation of the solutions. Second, establish customer co-creation labs and special customer success teams, invite customers to participate in the design and improvement of solutions, and actually realise customer-centred value co-creation [1,3]. Third, simplify pricing model and process of deploying integrated solutions to small and medium-sized enterprise customers in the mid-market, extend the coverage of integrated solutions, and move beyond primarily serving large enterprise customers [1,8]. The further enhancement of customer-centred practices can help IBM to reach a higher level of customer satisfaction and loyalty and grow its market share.

5.3 Expand Ecosystem Partnerships

With an increasing number of diverse and complex customer needs, IBM must further extend and enhance its global partnership network to augment completeness and scalability of its integrated solutions [8,10]. First, enhance collaboration with cloud service providers, independent

software vendors (ISVs) and regional system integrators, share resources and complementary capabilities, and co-create a more complete solution system. Second, broaden its core technology platforms, promote third-party applications and partners to build new applications on the IBM platforms, and increase the applications of integrated solutions [8,10].

Third, enhance collaboration with local service providers in new markets, enhance the ability of integrated solutions to provide local services, and improve the ability of different emerging markets to adapt to the emerging business environment and customer needs. By increasing the ecosystems collaboration, IBM will be able to surpass the constraints of its own resources, and address the needs of global customers more swiftly.

5.4 Address Operational Challenges

To address real-life issues like high prices and complicated implementation in promoting integrated solutions, IBM should improve its internal activities and service operations to enhance efficiency and reduce risks [7,8]. To begin with, streamline cross-department service processes, eliminate internal barriers, and enhance the efficiency of solution deployment and implementation.

Second, maximize the amount of automation used in solution deployments and system integration, cut the cost of manual work, reduce the duration of project lifespan, and minimize the risk of project schedule slippage. Third, increase employee training and professional development with an emphasis on developing talent with both technical and consulting skills to meet the needs of integrated solution services [8,9].

By enhancing its internal operational performance, IBM can effectively cut costs, enhance its service performance and further strengthen the competitiveness of its integrated solution strategy.

6. Conclusion

Under the influence of the rapid evolution of the world digital economy, integrated customer solutions have become an essential and crucial direction of companies within the framework of promoting service change and creating long-term competitive advantages. The fact that, as a classic successful case in the world of technology, IBM has transformed into a company that provides enterprise integrated solutions, rather than being a traditional hardware manufacturer, is a clear indication that, through the process of servitization and customer-centred approach, companies can achieve sustainable growth and more stable operations.

Having harmonized the state-of-the-art technology, professional consulting services and long-term customer partnerships, IBM has managed to redefine its corporate value

proposition in the digital world, broken through the bottleneck of the traditional business development, and retained its long-term industry leadership in the global technology service market.

Simultaneously, the study also demonstrates that even in the case of a high-profile company like IBM, there are still some real challenges such as high operational costs, complex system implementation and stiff competition in the global market in the process of promoting integrated customer solutions, which require constant strategic adjustment and adaptive optimization. To other global enterprises that are or are about to carry out digital and service transformation, the successful experience of IBM brings four important lessons: first, to prioritize the realisation of customer business outcomes rather than the sale of individual products, and firmly establish a customer-centric development thinking; second, to develop hybrid comprehensive capabilities that combine technical research and development and professional consulting, and create systematic combined solution service system; third, actively build and expand industrial ecological cooperation, and rely on ecological forces to achieve the large-scale and diversified development of solutions; fourth, adhere to continuous technological and operational innovation to adapt to the rapid changes in the digital market.

This study enriches the academic research literature in the fields of enterprise servitization transformation and integrated customer solutions, and provides practical and feasible guidance and reference paths for enterprises in the technology industry and other traditional industries to promote digital transformation. Meanwhile, this work has its own limitations as well: it does not take any other competing companies to analyze them comparatively, having considered only one case, which is IBM. Future studies can go further to provide a comparative study of IBM and its core counterparts like Microsoft and SAP, explore the differences and benefits of various enterprises integrated

solution strategies, and dig out more diversified success factors and implementation tracks to service transformation.

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