Platform revolution in the database management system industry: Evolution of SAP's business model

Q1) How has the structural attractiveness of the DBMS industry changed over time?

Over time, there have been major changes in the DBMS industry's structural appeal. The industry is characterized by strong barriers to entry because of the high start-up costs and even higher barriers put in place by major players like SAP and Oracle, additionally, the industry is capital-intensive, making it difficult for new entrants, hence the threat of new entrants is minimal.
The market is extremely diverse, and some businesses are creating their own specialties resulting in a serious threat from substitutes. Although there are many customers in the industry, a small number of organizations hold the majority of the market share, and buyer bargaining power is hence minimal. Further reducing customer negotiating power are the high switching costs linked to DBMS products.
Supplier bargaining power is also low as developers are considered suppliers and their switching costs from dominant players are high. Competitive rivalry is high, as few companies dominate the industry, and brand loyalty exists, therefore, it can be concluded that the structural attractiveness of the DBMS industry has changed over time, with high barriers to entry, a low threat of new entrants, low buyer bargaining power, and high competitive rivalry.

Q2a) Based on the changing industry structural forces, how have the critical success factors evolved in the DBMS industry?

The DBMS industry has undergone significant changes in its structural forces over time, and as a result, the critical success factors have evolved accordingly. In the early years of the industry, from the 1960s to the 1970s, the key success factors were related to data integrity, entity, atomicity, and platform antagonism. The IDS of GE was a major player in the market, and its competency was focused on performing well with a high level of transactions.
As the industry evolved, new success factors emerged. From the 1970s to the 1980s, the focus shifted towards efficient ways of arranging database content, faster retrieval of searches, and easily changing the content of databases without modifying pointers. The development of SQL allowed users to insert, update, delete, create, and drop table records. This era also saw the establishment of open standards and common means for evaluating databases and tools.
From the 1990s to 2010, open-source and online managed databases that could handle big data and real-time data entry were treated as success factors. Additionally, services such as software development apps, reports, and visualizations along with the ordinary functions of a database were emerging. Surviving companies sold complex database products at high prices, and there was a surge in demand for Internet database connectors with online transaction processing and analytic processing capabilities.
After 2010, bundling services and interfaces with other related applications became a critical success factor.
In conclusion, the changing industry structural forces have shaped the critical success factors in the DBMS industry. As the industry continues to evolve, it is crucial for companies like SAP and Oracle to adapt their competencies to remain competitive in the market.

Q2b) What changes can be noted in SAP's and Oracle's competencies over time?

SAP and Oracle have both undergone significant changes in their competencies over time in response to changing industry structural forces. In the 1960s and 1970s, when the DBMS industry was still in its early stages, SAP and Oracle focused on developing and refining their basic database management capabilities, such as data integrity, atomicity, and entity, and the relational model. Platform antagonism was also a key competency during this time as companies aimed to increase their user base.

In the 1980s, as open standards emerged, and competition began to intensify SAP and Oracle started to focus on enhancing their database products and tools. SQL, which allowed for more complex queries and data extraction, became an important competency for both companies during this time. SAP focused on developing a comprehensive suite of enterprise resource planning (ERP) software that integrated with its database management system, while Oracle focused on expanding its product offerings through acquisitions.

During the 1990s to 2010s, as big data and real-time data entry became increasingly important, SAP and Oracle shifted their competencies towards developing open-source and online managed databases that could handle large amounts of data. They also began to offer additional services such as software development apps, reports, and visualizations alongside traditional database functions. Both companies continued to invest heavily in research and development to maintain their technological superiority.

After 2010, bundling of services and integration with other related applications became a critical competency for SAP and Oracle. Both companies started to offer more comprehensive solutions that integrated their database management systems with other enterprise software applications. SAP, for example, introduced its HANA database with Fiori graphical interface to improve user experience, while Oracle developed its Oracle Cloud Platform to provide more seamless integration of its database management system with its other cloud-based applications. Performance metrics also became an important competency for both companies, as they focused on delivering high-speed and high-performance database solutions.

Overall, SAP and Oracle have evolved their competencies over time in response to changing industry structural forces, from basic database management capabilities to more comprehensive, integrated solutions that can handle large amounts of data and provide high-speed, high-performance functionality.

Q3) As SAP moved from a pipeline to a platform company, how did its customer value proposition and business model (canvas) change?

As SAP moved from a pipeline to a platform company, its customer value proposition and business model underwent significant changes. In the pipeline business model, SAP primarily focused on selling software licenses and consulting services to customers for on-premises installations. Its value proposition was centered around providing integrated enterprise solutions that streamlined business processes and increased operational efficiency.

However, with the shift towards a platform business model, SAP's customer value proposition expanded beyond just software licenses and consulting services. The platform model enabled SAP to provide a range of cloud-based services and applications to its customers, including analytics, mobile apps, and integration tools. The focus shifted from selling software products to offering a comprehensive suite of solutions that could be customized to meet the specific needs of individual customers.

SAP's business model also changed with the shift to a platform model. In the pipeline model, SAP's revenue stream was primarily generated through one-time sales of software licenses and consulting services. However, in the platform model, SAP's revenue stream became more diversified, with a mix of subscription-based services and transaction-based revenue. This shift allowed SAP to build a more predictable and sustainable revenue stream while also providing more value to customers.
The competition with Oracle also played a significant role in shaping SAP's business model and customer value proposition. With Oracle's emergence as a major player in the enterprise software market, SAP had to adapt its business model to remain competitive. The gap between SAP and Oracle is narrowing, and Oracle is posing a big threat to SAP's leadership position.

Changes in business model:
Pipeline -> Platform
Key activities:
Hardware sales -> Cloud maintenance
Cost Structure:
-> + Cloud and maintenance costs
Channels:
-> + Digital media
Revenue Streams:
Sales, Consulting Revenue -> + Subscription Revenue

Q4) Critically evaluate SAP and Oracle's business model changes using the NICE framework?

The NICE framework, which stands for Novelty, Lock-in, Complements, and Efficiency, can be used to critically evaluate the business model changes of SAP and Oracle.
In terms of novelty, both companies have introduced innovative products and services over time, but SAP has been more focused on platform-based offerings, while Oracle has been focused on expanding its portfolio of complementary products through acquisitions.
Regarding lock-in, both companies have developed strategies to create strong customer loyalty and prevent switching to competitors. SAP has focused on providing a comprehensive suite of integrated solutions and services, while Oracle has used its dominant position in the database market to create lock-in for its other products.
When it comes to complements, both companies have developed ecosystems of complementary products and services around their core offerings. However, SAP's platform approach has enabled a wider range of third-party solutions to integrate and complement its offerings, while Oracle's acquisitions have allowed it to expand its product portfolio and create a more comprehensive suite of complementary products.
Finally, in terms of efficiency, both companies have focused on improving operational efficiency and reducing costs. SAP has achieved this through its platform approach, which allows for greater automation and streamlining of processes, while Oracle has focused on improving the efficiency of its existing products and services through updates and enhancements.
Overall, while both companies have made strategic shifts in their business models, SAP's platform approach has enabled it to better leverage the NICE framework elements of novelty, complements, and efficiency, while Oracle has focused more on lock-in through its dominant position in the database market and its acquisitions. However, the competitive landscape is constantly evolving, and both companies will need to continue to adapt and innovate in order to maintain their positions in the industry.

Q5) What should SAP do?

SAP is facing stiff competition in the DBMS industry, and as a result, it needs to come up with a clear strategy to stay ahead. There are several areas that SAP needs to focus on to maintain its leadership position and drive growth, such areas as vertical strategy or product strategy.

Vertical strategy:

SAP should focus on its existing segments and increase market share while expanding its overall serviceable markets. To achieve this, SAP needs to offer innovative and ahead-of-market offerings to its customers in its existing segments. It can leverage its expertise in ERP and other enterprise applications to offer more integrated and holistic solutions to clients. Additionally, SAP can consider partnerships with other companies to expand its reach into new industries and verticals. By doing so, SAP can deepen its relationship with its existing customers and attract new ones.

Product strategy:

SAP can consolidate its product portfolio and increase modularity to offer broader cross-platform integration, allowing better coordination and scalability for clients. This can be achieved by focusing on developing a strong cloud-based infrastructure, as well as investing in emerging technologies such as AI/ML to improve the functionality and user experience of its software. By offering more modular and scalable solutions, SAP can help clients achieve greater efficiency and flexibility in their operations. Additionally, SAP can consider offering more industry-specific solutions to cater to the unique needs of different industries. By doing so, SAP can differentiate itself from its competitors and strengthen its market position.

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