

Key Players and Products in the Enterprise Resource Planning Market

Kailash Chandra Totla

M L V Textile & Engineering College, Bhilwara, India Country
Email - kctotla@gmail.com

Abstract: Enterprise Resource Planning (ERP) structures have developed the support of modern establishments by integrating decision-making activities, business processes, and information flows into a unified platform. Amid of the year 2010 from 2019, the ERP market experienced noteworthy alteration ambitious by mobile technologies, cloud computing, artificial intelligence, analytics and digital transformation initiatives. This retro witnessed strong competition between key vendors like Microsoft, SAP, Infor, Oracle, Epicor, Sage and Workday. Conventional on-premise ERP schemes increasingly progressed toward cloud-based and Software-as-a-Service (SaaS) solutions. This study observes the key ERP vendors and their top products throughout the decade 2010–2019, assesses technological innovations, analyses market tendencies and deliberates the competitive landscape. study focused in what way top ERP providers accepted their products to altering business necessities and in what way cloud ERP arose as the dominant way for enterprise software expansion. The conclusions deliver visions into ERP market development and the strategic placement of key vendors.

Keywords: SAP, ERP, Oracle, Cloud ERP, Microsoft Dynamics, Infor, Epicor, Enterprise Software, Digital Transformation.

1. INTRODUCTION:

The Enterprise Resource Planning (ERP) denotes to combined software structures designed to handle and automate essential business operations like human resource, finance, procurement, manufacturing, management, inventory, customer relationship and supply chain. The ERP systems empower establishments to keep a centralized database and rationalize business procedures across departments.

The period from 2010 to 2019 noticeable a turning point in the evaluation of ERP. Organizations or various establishments progressively demanded scalable, flexible and cloud-based solutions which are capable to supporting global actions and digital business. The ERP vendors replied by presenting mobile applications, cloud platforms, advanced analytics along with the industry-specific answers.

The ERP market throughout this retro was conquered by several chief vendors with Oracle, SAP, Microsoft, Infor and Epicor. The SAP upheld its leadership situation, whereas Microsoft and Oracle prolonged their cloud contributions. Also, Infor reinforced its situation through industry-specific resolutions and Workday arose as a troublesome cloud-native competitor in human capital and financial management. The studies of the ERP market reliably recognized SAP, Microsoft, Oracle and Infor as the top tier-1 ERP providers throughout this period.

2. ERP MARKET OVERVIEW (2010–2019)

The worldwide ERP market cultivated steadily during the decade 2010 to 2019 due to growing request for procedure / process integration and operational competence. Establishments across manufacturing, retail, healthcare, banking, education and government segments invested seriously in the ERP implementations. The key tendencies prompting the ERP market encompassed:

1. Adaptation of the cloud computing
2. The applications of the Mobile ERP.
3. Integration of the Big data analytics.
4. Machine learning adoption with Artificial Intelligence.
5. Specific industry orients solution with ERP.
6. Integration of Internet of Things (IoT) in industries.
7. Key developments in the digital transformation.

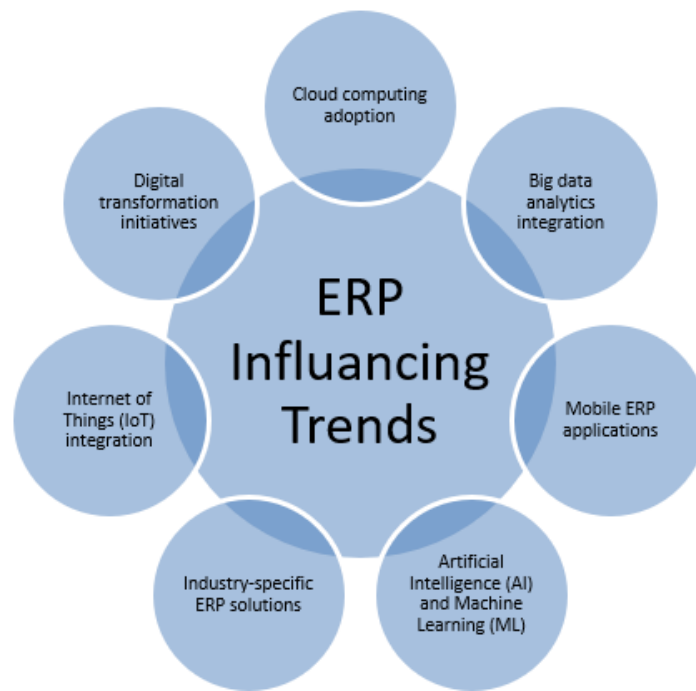


Figure 1: ERP Influencing Factors

The market structure of the information technology consisted of three key segments which are as follows:

- The first segment is denoted as Tier 1 ERP Vendors, this segment comprises Oracle, SAP and Microsoft.
- The second segment is devoted by Tier 2 ERP Vendors, Infor and Epicor.
- The specialized and local ERP vendors providing SMEs and niche businesses.

3. SAP: MARKET LEADER

SAP endured the world's top ERP vendor during 2010–2019. The company upheld a noteworthy segment of the worldwide ERP market and was mainly dominant amongst huge enterprises and multinational industries. The SAP's wide functionality, worldwide reach and robust partner ecosystem paid to its marketplace leadership. Followings are the key products of the SAP.

SAP ERP ECC: The SAP ERP Central Component (ECC) delivers as SAP's initial ERP platform throughout the decade. It comprises integrated modules intended for controlling, material management, Sales and distributions, financial accounting, human capital management and product planning.

SAP Business One: This ERP is designed to serve the medium and small sized enterprises. The SAP Business One provides affordability and easy implementation whereas retaining main ERP activities.

SAP S/4HANA: It introduced in the year 2015, SAP S/4HANA signified a key technological progression. Constructed on the foundation of SAP HANA in-memory database, it delivers:

- Analysis on the Real-time basis.
- Shortened data structures
- Quicker transaction processing
- Improved user experience via SAP Fiori

SAP S/4HANA developed SAP's leadership ERP creation and a foundation of its digital transformation policy.

4. ORACLE ERP SOLUTIONS

The Oracle arose as one of SAP's sturdiest competitors during the decade. Oracle reinforced its ERP portfolio via attainments and cloud novelty. The company's policy was attentive on participating ERP with middleware, databases and business intelligence knowledges.

Oracle E-Business Suite (EBS): The Oracle EBS was extensively utilised between big enterprises and government establishments. The key modules which are included in these products were procurements, financial management, Supply chain, project management and human resource.

Oracle PeopleSoft: The PeopleSoft continued popular amid educational organizations and public-sector establishments.

Oracle JD Edwards: The JD Edwards was mainly robust in constructions, manufacturing, and asset-intensive industries.

Oracle ERP Cloud: The Oracle announced ERP Cloud to resolve rising demand for cloud-enable enterprise applications. The specific features which are supported this ERP were deployment of SaaS, Integrated analytics, Continuous update facilities and mobile accessibility.

Oracle NetSuite: Afterwards getting NetSuite in the year 2016, Oracle reinforced its place in the cloud ERP marketplace, mainly amid mid-sized establishments.

5. MICROSOFT DYNAMICS ERP

Microsoft expanded meaningfully in the ERP marketplace throughout 2010–2019. Its incorporation with the SQL Server, Microsoft Office, Azure and extra enterprise products completed it attractive to establishments already participated with the Microsoft ecosystem. The Microsoft Dynamics expanded market segment due to minor implementation price and ease of utilization.

Microsoft Dynamics AX: this product is designed for the medium and large size enterprises. The key module offered by Dynamics AX were financial management, retail management, manufacturing support and supply chain management.

Microsoft Dynamics NAV: this product target at the small and medium-sized businesses.

Microsoft Dynamics GP: this product is popular amid the organizations necessitating robust financial management activities.

Microsoft Dynamics 365: this product is launched in 2016, the Dynamics 365 united ERP and CRM competences in a cloud-based stage. This product features as AI-powered insights, Azure-based infrastructure, Cloud deployment and Integration with Office 365

6. INFOR ERP SOLUTIONS

The Infor developed one of the wildest growing ERP vendors throughout the decade. Through attainments and industry concentration, Infor reinforced its situation as a top-class ERP provider. Through the year 2019, it was extensively familiar amid the top ERP vendors together with SAP, Microsoft and Oracle.

Infor LN: this ERP focused on the manufacturing industries, with aerospace and industrial apparatus.

Infor M3: Prevalent amid manufacturing, fashion industries and food processing.

Infor CloudSuite: Familiarized cloud-enable ERP competences with industry-specific activities.

Infor Syteline: Considered for the discrete manufacturing establishments.

7. EPICOR ERP

Epicor reputable itself as a robust ERP provider for distribution, manufacturing and retail segments. It assisted medium-sized enterprises looking for specialized ERP working.

Epicor ERP: this product is a comprehensive ERP platform which supports various domain as Manufacturing, Financial management, Distribution and Supply chain services.

Epicor Prophet 21: this product focused on the distribution and wholesale trades.

8. SAGE ERP SOLUTIONS

The ERP Sage maintained a robust attendance among small and medium-sized trades. It is also popular with their remarkable products like Sage X3, Sage 300 and Sage 100. These ERP systems highlighted inventory control, financial management and business process automation. The Sage's affordability and comfort of execution made it widespread amid SMEs.

9. WORKDAY: EMERGING CLOUD COMPETITOR

Workday appeared as a disruptive force throughout the second half of the decade. It is also one of the advance ERP systems of the time.

Workday Human Capital Management (HCM): this product delivers advance HR capabilities with specific segment based on Payroll, Talent management and workforce planning.

Workday Financial Management: this product presented cloud-based financial planning and accounting.

10. TECHNOLOGICAL INNOVATIONS IN ERP (2010–2019)

In the decade of 2010 to 2019 there are lots of new technologies are emerged in the ERP industry with experienced for noteworthy technological progressions.

Cloud ERP: the cloud-based ERP became the utmost significant trend. The key benefit of this technology is it reduced infrastructure price, quicker implementation, scalability and automatic updates. The key vendors like Microsoft, Oracle, Infor, SAP and Workday capitalized profoundly in cloud platforms.

Mobile ERP: Establishments increasingly needed admittance to ERP systems via smartphones and tablets.

Big Data Analytics: The ERP vendors combined progressive reporting and analytics to manage the data-driven decision-making.

Artificial Intelligence: AI capabilities appeared in the direction of the end of the decade, enabling with process automation, predictive analytics and intelligent recommendations.

Internet of Things (IoT): The manufacturing establishments combined IoT gadgets with ERP structures for real-time monitoring and predictive upkeeping.

11. COMPARATIVE ANALYSIS OF KEY ERP VENDORS

Vendor	Major Products	Target Market	Cloud Strategy
SAP	ECC, Business One, S/4HANA	Large Enterprises, SMEs	SAP Cloud Platform
Oracle	EBS, JD Edwards, PeopleSoft, NetSuite	Large Enterprises	Oracle ERP Cloud
Microsoft	Dynamics AX, NAV, GP, Dynamics 365	SMEs and Enterprises	Dynamics 365 Cloud
Infor	LN, M3, <u>CloudSuite</u>	Manufacturing and Industry Verticals	<u>CloudSuite</u>
Epicor	Epicor ERP, Prophet 21	Manufacturing and Distribution	Epicor Cloud
Sage	Sage X3, Sage 300	SMEs	Sage Business Cloud
Workday	HCM, Financial Management	Enterprises	Cloud-Native

12. CONCLUSION

The retro from 2010 to 2019 signified a transformative age for the ERP business. SAP upheld its top position via innovations like S/4HANA, whereas Oracle prolonged its cloud contributions and reinforced its portfolio through attainments. Microsoft arisen as a key competitor with product Dynamics 365, leveraging its wider technology environment. Infor and Epicor positively distinguished themselves through industry-specific resolutions, whereas Workday disrupted conventional ERP models with cloud-native submissions. The decade observed a strong swing from on-premise ERP to cloud-enable ERPs. Establishments progressively line up mobility, scalability, analytics with digital transformation competences. As a consequence, ERP vendors capitalized profoundly in cloud infrastructure, artificial intelligence and advanced analytics. These expansions placed the groundwork for upcoming generation of smart ERP systems that endure to progress.

REFERENCES:

1. Al-Fawaz, K., Al-Salti, Z., & Eldab, T. (2008): Critical Success Factors in ERP Implementation: A Review, European and Mediterranean Conference on Information Systems, EMCIS2008, Dubai
2. Chien, S., & Tsuar, S. (2007). Investigating the success of ERP systems: Case studies in three Taiwanese high-tech industries, *Computers in Industry*, 58:783-793.
3. D. Cooke, L. Gelman, W. J. Peterson, ERP Trends. New York: The Conference Board, 2001, pp. 1-28.
4. D D Pandya and Sanjay Gaur, (2018): Detection of Anomalous value in Data Mining, Kalpa Publications in Engineering, 2, 1-6.
5. Gaur, S., Jain, L., Ojha, G., Choudhary, N. (2019). An ICT Insight of Digitization of Banking in India. In: Peng, SL., Dey, N., Bunde, M. (eds) Computing and Network Sustainability. Lecture Notes in Networks and Systems, vol 75. Springer, Singapore. https://doi.org/10.1007/978-981-13-7150-9_55
6. Gaur, S., Sharma, L., Pandya, D.D. (2019). A Perception of ICT for Social Media Marketing in India. In: Peng, SL., Dey, N., Bunde, M. (eds) Computing and Network Sustainability. Lecture Notes in Networks and Systems, vol 75. Springer, Singapore. https://doi.org/10.1007/978-981-13-7150-9_52

7. Kailash Totla, Manju Mandot and Sanjay Gaur (2016): An Insight of Critical Success Factors for ERP Model, International Journal of Emerging Research in Management & Technology, 5(2), 90-92.
8. Kailash Totla, Manju Mandot and Sanjay Gaur (2016): A Perception of Multi Perspective ERP Model, Journal of Environmental Science, Computer Science and Engineering & Technology, Sec. A; 5(2), 056-062.
9. Ranzhe, J. & Xun, Q. (2007). "A Study on Critical Success Factors in ERP Systems Implementation," Service Systems and Service Management, International Conference, 1(6):9-11.
10. Stephan A. Kronbichler*, Herwig Ostermann and Roland Staudinger (2009), A Review of Critical Success Factors for ERP-Projects, The Open Information Systems Journal, 2009, 3, 14-25.
11. S. Gaur and M.S. Dulawat (2010): A perception of statistical inference in data mining, International Journal of Computer Science and Communication, 1(2), 653-658.
12. Sharma, P., Gaur, S., Dashora, D. (2019). Impact of ICT Support on e-Governances Services. In: Peng, SL., Dey, N., Bundeale, M. (eds) Computing and Network Sustainability. Lecture Notes in Networks and Systems, vol 75. Springer, Singapore. https://doi.org/10.1007/978-981-13-7150-9_22.
13. S. Gaur and D. Soni, "Root-Squire Closest Fit Approach for Handling Anomalous Values in Data Mining," 2018 Second World Conference on Smart Trends in Systems, Security and Sustainability (WorldS4), London, UK, 2018, pp. 292-296, doi: 10.1109/WorldS4.2018.8611613.
14. Kumawat, B., Chaudhary, S., & Gaur, S. (2018). A study of cloud technologies-research issues, challenges, engineering, platforms and applications: A survey. *International Journal of Multimedia, Image Processing and Pattern Recognition [ISSN: 2581-625X (online)]*, 1(1).