

RISE with SAP and Cloud Based ERP Modernization for Saudi Public and Private Sector Transformation

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Abstract: This review examines how RISE with SAP and cloud based ERP modernization can support Saudi public and private sector transformation under Vision 2030. The study responds to a practical gap: many Saudi organizations need faster, compliant and less disruptive migration from fragmented legacy ERP landscapes to clean core, cloud enabled, analytics ready enterprise platforms. Using an integrative review design, publications, policy documents, vendor methodology notes and industry evidence from 2020 to 2025 were synthesized through four themes: strategic alignment, cloud ERP architecture, implementation governance and transformation value. The review finds that RISE with SAP is not only a technical hosting route but a business transformation bundle combining SAP S/4HANA Cloud, process discovery, migration services, business technology platform integration and continuous innovation governance. In Saudi Arabia, its value is strongest when migration is aligned with Cloud First policy, data residency requirements, ZATCA e-invoicing, public financial transparency, localization and private sector competitiveness. The paper proposes a Saudi cloud ERP modernization framework that links assessment, selective migration, clean core design, integration, data governance, cybersecurity and post go-live value realization. It also identifies barriers, including custom code debt, skills shortages, stakeholder resistance, cost uncertainty and regulatory risk. The study contributes a context specific review model for decision makers planning ERP modernization in government, energy, manufacturing, services, healthcare and finance. It concludes that RISE with SAP can accelerate institutional agility only when combined with disciplined change management, measurable benefits governance and Saudi specific compliance architecture.

Keywords: RISE with SAP, SAP S/4HANA Cloud, Cloud ERP Modernization, Saudi Vision 2030, Digital Transformation, Public Sector, Private Sector, Clean Core, Enterprise Architecture, ERP Governance.

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1. INTRODUCTION

Saudi Arabia is transforming its economic and administrative operating model through Vision 2030, the National Transformation Program and a strong digital government agenda. Public agencies are expected to deliver transparent services, faster

procurement, integrated financial control and citizen centric processes, while private companies are expected to compete through productivity, localization, data driven management and resilient supply chains. These ambitions require enterprise systems that can connect finance, procurement,

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human capital, assets, logistics, manufacturing and service delivery in near real time. Legacy ERP environments, however, often contain heavy customization, aging infrastructure, isolated reporting tools and manual controls. Such environments restrict agility because each regulatory change, business model change or integration request becomes slow, expensive and risky (Rawat, 2023; Mohamed, 2023).

Cloud based ERP modernization has therefore become a strategic requirement rather than a back office technology upgrade. SAP S/4HANA Cloud and RISE with SAP are central to this debate because SAP is widely used across large enterprises, utilities, manufacturing groups, oil and gas operators, hospitals, banks and government linked organizations. RISE with SAP packages cloud ERP, transformation methodology, technical migration support, business process intelligence and access to the SAP Business Technology Platform. SAP describes the offer as a value driven business transformation path supported by proven methodology, tool chains and expert guidance (SAP, 2025a). For Saudi organizations, this proposition is attractive because it offers a route from customized on premise ERP to standardized, secure, scalable and continuously updated cloud ERP.

The modernization challenge is not purely technical. ERP is embedded in organizational authority, procurement approvals, budget control, work planning, compliance evidence and performance reporting. A failed migration can disrupt payroll, purchasing, invoicing, production or citizen services. Conversely, a well governed cloud ERP program can unify master data, reduce reconciliation, improve regulatory compliance and provide leaders with live operating visibility. The Saudi context makes this especially important because digital transformation must also respect local cloud policy, personal data protection, cybersecurity controls, Arabic user needs and national targets for digital government maturity (MCIT, 2020; SDAIA, 2024; World Bank, 2024).

This review paper develops a Saudi specific synthesis of RISE with SAP and cloud based ERP modernization. Unlike technical migration guides, the paper focuses on how cloud ERP modernization enables institutional transformation across public and private sectors. The study is structured in the style of an applied review paper, following the reference model provided by the attached Springer style paper, which uses a clear sequence of introduction, literature review, methodology, results, discussion and conclusion. The aim is to provide a defensible academic narrative suitable for Scopus,

Web of Science, Elsevier, Springer or Emerald aligned submission standards.

2. AIM AND OBJECTIVES OF THE STUDY

The aim of this study is to review and conceptualize how RISE with SAP and cloud based ERP modernization can enable Saudi public and private sector transformation under Vision 2030.

The objectives are: first, to synthesize recent literature and policy evidence on cloud ERP modernization, SAP S/4HANA Cloud and RISE with SAP from 2020 to 2025; second, to identify the main transformation drivers in Saudi Arabia, including digital government, compliance, data driven decision making, localization and competitiveness; third, to compare public sector and private sector modernization requirements; fourth, to propose a Saudi cloud ERP modernization framework that connects strategy, architecture, migration, governance and value realization; and fifth, to identify risks and success factors for decision makers implementing RISE with SAP in complex Saudi organizational environments.

The study addresses the following review question: How can RISE with SAP and cloud based ERP modernization support Saudi public and private sector transformation while controlling implementation risk, compliance exposure and organizational disruption?

3. LITERATURE REVIEW

ERP modernization is commonly described as the renewal of legacy enterprise systems to support digital transformation, integration, scalability, analytics and user experience. Traditional ERP projects focused on internal process integration, but modern ERP increasingly functions as an enterprise digital core that feeds analytics, automation, artificial intelligence, procurement networks and customer platforms (Rawat, 2023; Deloitte, 2025). The shift is visible in cloud ERP research, where the major benefits include lower infrastructure burden, faster updates, process standardization, improved accessibility, real time information and reduced dependence on local data centers. At the same time, studies warn that cloud ERP adoption creates concerns over data security, vendor lock in, migration complexity and organizational readiness (Mohamed, 2023; Alshirah *et al.*, 2023).

Digital transformation literature emphasizes that technology alone does not create transformation. Transformation occurs when digital platforms alter processes, capabilities, decision rights and value creation logic. Systematic reviews of digital transformation show recurring themes such as

strategic alignment, organizational culture, data capabilities, leadership and continuous innovation (Egodawele *et al.*, 2022; Petropoulou *et al.*, 2024). For ERP programs, these findings mean that the migration from ECC or heavily customized on premise ERP to SAP S/4HANA Cloud must be linked with process redesign, role redesign and benefit management. Otherwise, cloud migration may simply reproduce old inefficiencies on a new infrastructure.

RISE with SAP is positioned as a business transformation as a service model. Its components typically include SAP S/4HANA Cloud private or public edition, business process intelligence, SAP Business Technology Platform credits, technical migration services, application lifecycle capabilities and standardized methodology. The RISE methodology supports new implementation, system conversion and selective data transition, allowing organizations to choose between a clean implementation, a conversion of existing systems or a hybrid migration path (SAP, 2025a; SAP, 2025b). This is particularly relevant for Saudi enterprises that have long running SAP landscapes with sector specific customizations, historical data requirements and local compliance extensions.

The clean core concept is a major theme in current SAP modernization. Clean core means keeping the ERP digital core as standardized as possible while moving differentiating extensions to side by side platforms, APIs or workflow services. The approach supports faster upgrades, lower technical debt and easier adoption of artificial intelligence, analytics and automation. Deloitte (2025) argues that cloud ERP, standardization and clean core practices are changing implementation economics by reducing customization dependency. However, clean core requires governance discipline. Saudi organizations that have built custom workflows for approvals, Arabic documents, ZATCA requirements or sector reporting must decide which customizations are true differentiators and which can be replaced by standard best practices.

Saudi Arabia provides a distinct policy environment for cloud ERP modernization. The Cloud First Policy promotes migration from traditional IT solutions to cloud based models, especially for public entities (MCIT, 2020). The World Bank (2024) notes that Saudi digital government initiatives aim to raise cloud adoption in government entities and strengthen institutional cloud governance. Personal data protection rules, cybersecurity controls and

sector regulations add further requirements for ERP architecture, especially when systems manage employee information, supplier records, financial postings and citizen related transactions (SDAIA, 2024; NCA, 2020). Therefore, ERP modernization must address hosting, data residency, access control, audit logging, identity management and integration security.

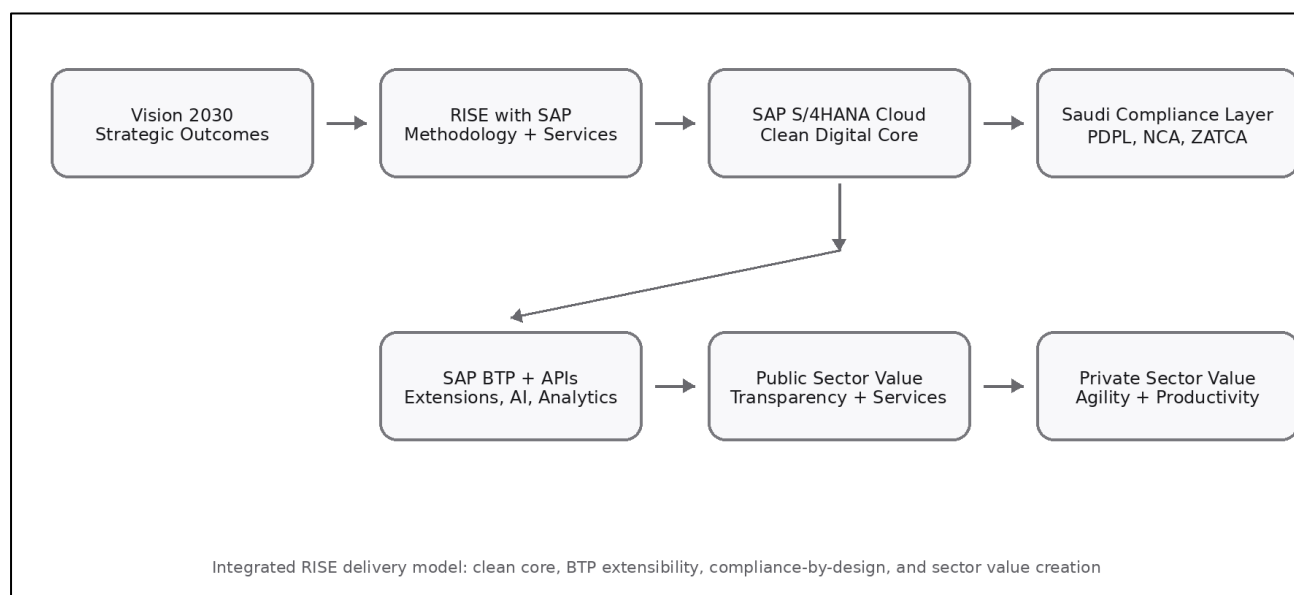
In the public sector, ERP modernization supports budget discipline, procurement transparency, asset lifecycle management, human capital planning and evidence based policy execution. Public agencies need standardized processes, reliable master data and transparent reporting because financial and operational decisions are subject to audit and public accountability. Cloud ERP can also support shared services across ministries, authorities and government owned companies if governance models are carefully defined. However, public agencies may face rigid procurement rules, legacy integrations and higher sensitivity to service continuity.

In the private sector, the drivers are more competitive. Manufacturers require integrated planning, quality control, materials management and cost visibility. Energy and utilities organizations require asset performance integration, maintenance planning, project systems and supply chain resilience. Retail, logistics and service companies need faster financial close, omnichannel integration and customer responsive operations. Banks and healthcare providers need compliance, cybersecurity and data quality. For these sectors, RISE with SAP can reduce infrastructure constraints and improve agility, but only when transformation teams define value cases such as faster month end close, lower inventory variance, improved supplier performance, automated controls and better executive dashboards.

The literature also highlights barriers. ERP modernization programs can fail because of unclear scope, underestimated data cleansing, resistance to standardized processes, insufficient training, weak executive sponsorship and poor integration planning (Mohamed, 2023; Wan, 2025). Cloud ERP adds specific barriers: service level dependency, cloud cybersecurity assurance, licensing complexity and uncertainty about long term operating costs. In Saudi Arabia, additional issues include bilingual change management, local tax and e-invoicing integration, Saudization reporting, local hosting preferences and the need to align with national digital strategies.

Table 1: Thematic Synthesis of Literature on Cloud ERP Modernization

Theme	Main Evidence	Saudi Relevance	Implementation Implication
Strategic alignment	Cloud ERP succeeds when linked to transformation outcomes, leadership and process redesign.	Supports Vision 2030, digital government and private sector productivity.	Build a benefits map before migration.
Architecture and clean core	Standardized cloud ERP reduces technical debt and improves upgrade readiness.	Relevant for organizations with long customized SAP landscapes.	Move extensions to APIs and platform services.
Governance and change	ERP outcomes depend on sponsorship, training, data ownership and user adoption.	Bilingual change management and public accountability are critical.	Create process owner councils and value offices.
Compliance and security	Cloud ERP requires data protection, identity, audit and cybersecurity controls.	PDPL, NCA, ZATCA and cloud policy shape ERP design.	Design controls during architecture, not after go-live.

**Figure 1: Saudi cloud ERP modernization architecture linking Vision 2030, RISE with SAP, clean core design, compliance and sector value**

4. METHODOLOGY

This paper adopts an integrative review methodology. An integrative review is suitable because the topic combines academic research, technology methodology, policy documents and industry evidence. The review covered materials published between 2020 and 2025 to meet the study requirement for recent citations and to reflect the rapid evolution of cloud ERP, RISE with SAP and Saudi digital policy.

The review process followed five stages. First, the scope was defined around RISE with SAP, SAP S/4HANA Cloud, cloud ERP modernization and Saudi public private transformation. Second, search terms were developed, including cloud ERP, ERP modernization, SAP S/4HANA Cloud, RISE with SAP, digital transformation, clean core, Saudi Cloud First, Vision 2030 and public sector cloud adoption. Third, sources were screened for relevance, recency and credibility. Academic articles, systematic reviews,

policy documents, official SAP methodology pages, World Bank reports, OECD reports and professional research papers were prioritized. Fourth, the selected materials were coded into four themes: strategic transformation drivers, technical architecture, implementation governance and value realization. Fifth, the findings were synthesized into a conceptual framework for Saudi organizations.

The review does not claim statistical meta analysis because ERP modernization evidence is heterogeneous and includes case studies, conceptual papers, vendor documents and policy reports. Instead, the study uses narrative synthesis supported by thematic coding. This approach is consistent with review studies that examine complex socio technical transformation where quantitative comparability is limited. To improve rigor, the paper applies clear inclusion criteria: publication date from 2020 to 2025, relevance to cloud ERP or digital transformation, relevance to Saudi policy or public

private modernization, and usefulness for implementation decision making. Exclusion criteria included outdated ERP papers, purely promotional material without methodological relevance and sources unrelated to enterprise systems.

The attached reference paper was used as a structural model because it demonstrates a practical applied research format with abstract, introduction, literature review, phased methodology, results, discussion, commercialization or implementation orientation and conclusion. This paper adapts that structure to a review paper rather than a prototype validation paper. The result is a Saudi focused modernization framework rather than a software product prototype.

5. RESULTS AND DISCUSSION

The synthesis shows that RISE with SAP can be understood through four transformation layers. The first layer is strategic alignment. Saudi organizations should begin by linking ERP modernization to Vision 2030 outcomes such as service efficiency, non oil growth, private sector productivity, transparent public finance, local content and institutional resilience. Without this alignment, ERP migration becomes an IT replacement project rather than a transformation program. In practice, alignment means building a benefits map that connects ERP capabilities to measurable outcomes: shorter procurement cycle time, faster financial close, higher data quality, reduced manual approvals, better inventory visibility and improved compliance evidence.

The second layer is the cloud ERP architecture. SAP S/4HANA Cloud provides a standardized digital core for finance, procurement, sales, manufacturing, logistics, asset management and human capital integration. RISE with SAP adds migration services, process intelligence and platform services that can help organizations move from customized landscapes to a cleaner and more modular architecture. In Saudi organizations, the architecture should include identity federation, role based access, Arabic enabled user interfaces, secure integration APIs, data residency assessment, backup strategy, cybersecurity monitoring and ZATCA compliant invoicing interfaces. Figure 1 illustrates this architecture as a layered cloud ERP modernization model.

The third layer is implementation governance. RISE with SAP programs should not be managed only as software deployment projects. They require steering committees, process owners, enterprise architects, cybersecurity officers, data owners and change leaders. Governance must decide the migration path. A greenfield implementation is

useful when organizations want major process redesign and can retire old customization. A brownfield conversion is useful when continuity and historical configuration are important. Selective data transition is useful when organizations need a balanced approach, retaining selected history while adopting a cleaner target design. The right path depends on process maturity, regulatory obligations, data quality and business disruption tolerance.

The fourth layer is value realization. Many ERP programs measure success at go live, but cloud ERP value appears after stabilization, adoption and continuous improvement. RISE with SAP supports continuous innovation because cloud releases, process analytics and platform extensions can be activated after migration. Saudi organizations should therefore maintain a post go live value office that tracks benefits for at least twelve to twenty four months. Relevant indicators include financial close duration, purchase order cycle time, percentage of automated controls, supplier master data quality, system availability, user adoption, reporting latency, inventory variance, compliance exceptions and number of custom core objects retired.

Table 1 summarizes the reviewed literature themes. The strongest consensus is that cloud ERP modernization improves agility when combined with process standardization and leadership commitment. The weakest area is Saudi specific empirical evidence on RISE with SAP outcomes, which remains limited. This gap creates a research opportunity for future case studies in ministries, utilities, manufacturing groups and service companies.

Public sector transformation through RISE with SAP should prioritize transparency, shared services and compliance. A ministry or authority may use cloud ERP to standardize budgeting, procurement, contract management and asset records across departments. Standard workflows reduce informal approvals and improve auditability. Real time dashboards can help executives compare budget consumption, procurement bottlenecks and project status. However, public sector modernization must be cautious about data classification, continuity planning and integration with national platforms. The Cloud First Policy encourages cloud adoption, but each entity still needs a risk based hosting decision and a clear service level agreement.

Private sector transformation should prioritize competitiveness and operational speed. In manufacturing, cloud ERP can connect demand planning, procurement, production and costing, reducing stock imbalances and improving margin visibility. In energy and utilities, SAP modernization can connect maintenance, projects, assets and supply

chains. In retail and services, it can support faster product launches, integrated customer data and automated finance. For family owned or diversified Saudi groups, RISE with SAP can create a common template across subsidiaries while allowing limited local extensions. This supports governance without eliminating business flexibility.

The review also identifies a set of barriers that must be managed early. Custom code debt is often the largest technical obstacle because organizations have embedded old habits inside ERP modifications. Data migration is another challenge because vendor, material, asset, employee and customer records may contain duplicates, missing fields or inconsistent Arabic and English naming. Change resistance can arise when staff fear loss of control or job relevance. Licensing and operating cost questions can delay executive approval. Cybersecurity teams may also require evidence that cloud controls satisfy national and sector requirements.

Table 2 proposes a Saudi RISE with SAP adoption framework. The framework begins with readiness assessment and ends with continuous innovation. Each phase includes expected actions, governance outputs and risk controls. The framework is designed for both public and private sector organizations, but each organization should adjust depth according to size, criticality and regulatory exposure.

Figure 2 presents a roadmap view of ERP modernization. The curve shows that business value is usually limited during assessment and migration, increases after stabilization and becomes substantial when analytics, automation and process optimization

are embedded. This is important for executives because it prevents unrealistic expectations. The go live date is not the finish line; it is the point at which the organization gains the platform needed to start continuous improvement.

A Saudi specific success model should therefore include eight principles. First, treat RISE with SAP as a transformation program, not a hosting contract. Second, define a clean core policy before design begins. Third, classify data and integrations according to Saudi regulatory requirements. Fourth, build a bilingual change management program. Fifth, assign process owners who can approve standardization decisions. Sixth, cleanse master data before migration rather than after go live. Seventh, design integration through APIs and platform services rather than direct core modifications. Eighth, maintain a value office after go live to capture benefits and guide continuous innovation.

The discussion suggests that RISE with SAP can contribute to Vision 2030 by strengthening institutional capability. Public agencies can improve transparency and service reliability. Private enterprises can improve productivity, resilience and regional competitiveness. Cloud ERP also supports the growth of local digital ecosystems because implementation requires Saudi consultants, cybersecurity specialists, data engineers, cloud architects and business process experts. However, the benefits depend on disciplined governance. Organizations that migrate without process redesign may carry old inefficiencies into the cloud. Organizations that standardize without user engagement may face adoption failure. Balanced execution is therefore essential.

Table 2: Saudi RISE with SAP Adoption Framework

Phase	Key Activities	Governance Output	Risk Control
Discover	Business case, readiness review, process mining, stakeholder mapping.	Transformation charter and benefit baseline.	Avoid unclear scope and unrealistic value claims.
Design	Target architecture, clean core rules, data model, integration plan.	Approved solution blueprint.	Control custom code and compliance exposure.
Migrate	Configuration, testing, data cleansing, security validation, cutover.	Migration release plan.	Reduce disruption through phased waves.
Stabilize	Hypercare, defect resolution, adoption support, interface monitoring.	Operational acceptance report.	Protect payroll, procurement and finance continuity.
Innovate	Analytics, automation, AI use cases, periodic process optimization.	Value realization dashboard.	Prevent go live from becoming the endpoint.

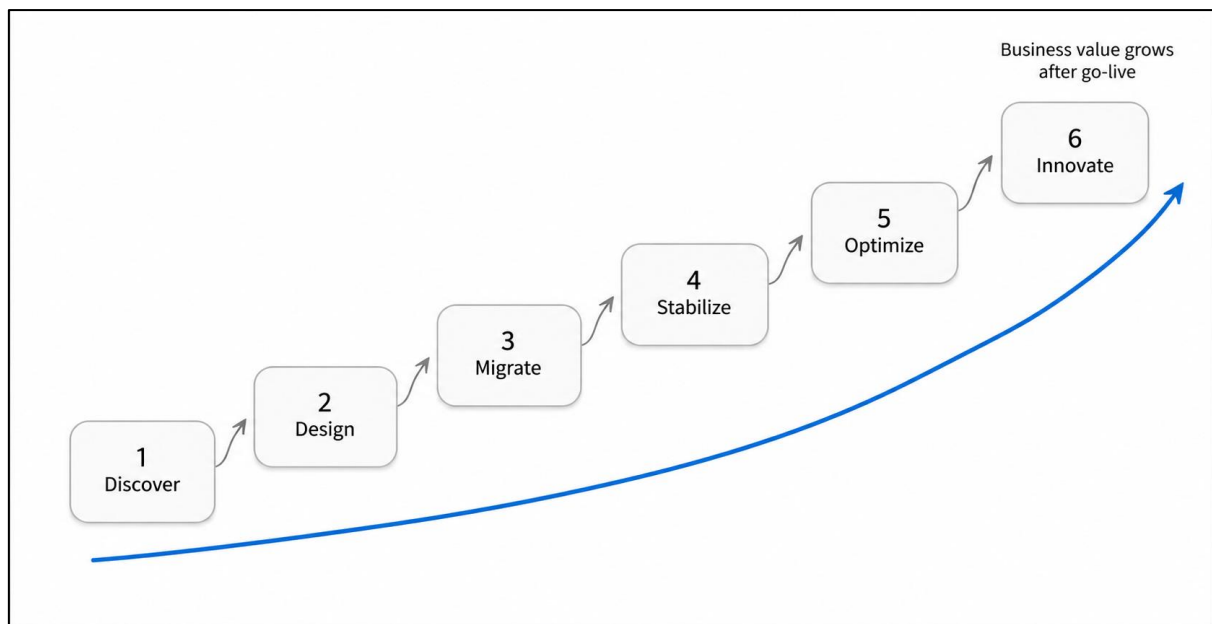


Figure 2: RISE with SAP roadmap and value realization curve showing that benefits mature after stabilization and continuous optimization

6. Proposed Saudi Cloud ERP Modernization Framework

The proposed framework has six phases. Phase one is strategic discovery. Leaders define the transformation case, target benefits, regulatory constraints and sector specific priorities. Phase two is process and system assessment. Teams use process mining, interviews, custom code analysis and data profiling to understand the current landscape. Phase three is target architecture design. Decisions are made on public or private cloud edition, integration pattern, identity model, reporting architecture, extension strategy and clean core rules.

Phase four is migration and implementation. Organizations execute greenfield, brownfield or selective transition using agile waves. Each wave should combine configuration, data cleansing, integration testing, security validation and user acceptance. Phase five is stabilization. Hypercare teams resolve defects, support users, monitor interfaces and validate compliance evidence. Phase six is continuous innovation. Organizations activate analytics, automation, AI assisted processes and periodic improvement cycles. The framework is intentionally iterative because cloud ERP value grows through repeated optimization rather than one time deployment.

For Saudi public entities, the framework should be linked with digital government maturity, procurement governance, budget transparency and local cloud controls. For private organizations, it should be linked with growth, cost efficiency, supply chain resilience, customer experience and financial

control. For both sectors, success requires executive ownership and cross functional accountability.

7. Implications for Practice

Decision makers should begin with a realistic business case. The strongest cases quantify pain points such as slow closing, duplicated data entry, manual approvals, delayed procurement, unreliable inventory, weak project visibility and high infrastructure cost. These pain points should be converted into measurable benefit targets. Implementation partners should then be evaluated not only by technical certification but by sector knowledge, Saudi compliance experience, Arabic documentation capability and post go live support capacity.

Chief information officers should use RISE with SAP to rationalize the technology landscape. Instead of connecting cloud ERP to uncontrolled legacy applications, they should define an integration catalog, retire redundant systems and use SAP Business Technology Platform or equivalent middleware for extensions. Chief financial officers should insist on data quality and control automation because cloud ERP cannot deliver reliable analytics if master data remains weak. Human resource leaders should manage skills transition because ERP modernization changes daily work, approval authority and reporting behavior.

Policy makers and ecosystem leaders can support ERP modernization by encouraging common standards for cloud security, data exchange, local talent development and public sector reference architectures. Universities and training providers can

develop programs in SAP cloud ERP, enterprise architecture, data governance and process analytics. This would support Vision 2030 by building local capability rather than relying only on imported consultants.

8. Limitations and Future Research

This review is limited by the availability of public evidence on RISE with SAP projects in Saudi Arabia. Many ERP modernization programs are confidential because they involve financial controls, cybersecurity and competitive processes. Therefore, the paper synthesizes academic, policy and professional evidence rather than presenting a single empirical case study. Future research should conduct interviews with Saudi ERP program leaders, compare public and private sector implementation outcomes, measure post go live value realization and examine how clean core governance affects long term upgrade performance.

Future studies should also investigate the relationship between cloud ERP and artificial intelligence readiness. As SAP and other ERP vendors embed AI assistants into migration, finance, procurement and supply chain processes, organizations with cleaner data and standardized processes may gain stronger AI benefits. Saudi Arabia is investing heavily in data and AI capability, so the connection between ERP modernization and national AI readiness is an important research agenda for 2025 and beyond.

9. CONCLUSION

RISE with SAP and cloud based ERP modernization offer a practical route for Saudi public and private sector transformation. The review shows that the value of cloud ERP is not limited to infrastructure modernization. Its deeper contribution lies in creating a standardized, secure and analytics ready digital core that can support transparent governance, faster service delivery, competitive operations and continuous innovation. In the Saudi context, this aligns directly with Vision 2030, Cloud First policy, digital government maturity and private sector growth.

The paper proposed a Saudi cloud ERP modernization framework that connects strategic discovery, current state assessment, target architecture, migration, stabilization and continuous innovation. It also highlighted the need for clean core governance, data quality, cybersecurity, bilingual change management and benefit tracking. For public agencies, RISE with SAP can support accountable finance, procurement transparency and shared services. For private enterprises, it can improve productivity, decision speed, supply chain resilience and scalability.

The central conclusion is that RISE with SAP should be treated as a business transformation platform, not a technical migration package. Organizations that combine SAP S/4HANA Cloud with disciplined process redesign, Saudi specific compliance architecture and post go live value governance are more likely to achieve sustainable transformation. Organizations that simply move legacy complexity to the cloud may miss the opportunity. Therefore, the future of cloud ERP in Saudi Arabia depends on leadership, governance and capability building as much as technology.

For implementation leaders, the most practical recommendation is to separate the program into capability releases rather than a single technology event. Release one should secure the foundation: standard chart of accounts, supplier and material governance, identity management, integration inventory, data retention rules and cybersecurity sign off. Release two should improve the processes that users experience every day, such as purchase requisitions, approvals, invoice matching, project cost capture, maintenance planning, travel claims and management reporting. Release three should introduce advanced value, including embedded analytics, predictive exception handling, intelligent workflow, automated reconciliations and executive dashboards. This sequencing protects operational continuity while demonstrating visible progress to sponsors. It also allows Saudi organizations to train super users gradually and develop internal ownership before more complex automation is introduced. The same logic applies to both public and private sectors. A government entity may prioritize budget control and audit trails, while a manufacturer may prioritize planning accuracy and inventory turnover. Yet both need governed data, clean integrations and accountable process owners. The main lesson from the review is therefore not that cloud ERP is automatically superior, but that cloud ERP creates an environment in which disciplined organizations can improve faster. RISE with SAP supplies the platform, methodology and migration services; leadership supplies priorities, decisions and adoption discipline. When these elements are combined, modernization can reduce institutional fragmentation, support local compliance and create a digital core ready for AI, automation and future regulatory change.

The framework also highlights how modernization should be evaluated after go live. A Saudi entity should not rely only on technical indicators such as uptime or ticket closure. It should measure whether the new ERP core has changed institutional behavior. Useful measures include the percentage of purchase orders created from approved contracts, reduction in manual journal

entries, number of reconciliations automated, completeness of supplier bank data, percentage of reports drawn from governed data models, cycle time for employee services, and time required to introduce a new regulatory field or approval rule. These measures show whether the cloud core is becoming a source of managerial confidence. They also help boards and government leaders justify continuing investment in platform skills, process mining, data quality, and innovation. Over time, this evidence can support a national knowledge base of Saudi ERP modernization cases, allowing ministries, state owned enterprises and private groups to learn from each other instead of repeating the same migration mistakes. Such learning would convert individual implementations into a broader capability for economic transformation.

Another implication concerns partner governance. Many organizations depend on systems integrators, hyperscalers and application support providers, but accountability must remain with the business. Contracts should define knowledge transfer, documentation quality, data ownership, security responsibilities, release management and benefit tracking. This prevents modernization knowledge from leaving the organization after consultants exit. It also strengthens local Saudi capability, which is consistent with Vision 2030 objectives for talent development and domestic digital industry growth.

The final priority is patience: sustainable ERP value emerges through repeated governance cycles, not through a single cutover weekend or ceremonial go-live announcement. It must be measured and reinforced.

REFERENCES

- Alshirah, M., Lutfi, A., Alshira'h, A. F., Saad, M., Ibrahim, N., & Mohammed, F. (2023). Influences of the environmental factors on the intention to adopt cloud based ERP systems. *Business Process Management Journal*, 29(3), 653-678.
- Alshubiri, F. (2022). Digital transformation and financial performance in emerging economies: Evidence from GCC firms. *Technology in Society*, 70, 102024.
- Deloitte. (2025). The Future of ERP: Clean core, cloud and AI-enabled enterprise transformation. Deloitte Insights.
- Digital Government Authority. (2023). Digital Government Policy and standards for government entities. Riyadh: DGA.
- Egodawe, M., Sedera, D., & Bui, V. (2022). A systematic review of digital transformation literature and an overarching model for future research. *arXiv preprint arXiv:2212.03867*.
- European Commission. (2021). Digital Economy and Society Index 2021: Digital public services and enterprise transformation. Brussels: European Commission.
- Fatimah, F. (2025). The influence of cloud-based enterprise resource planning systems on accounting information effectiveness: A literature review. *International Journal of Economics, Finance and Entrepreneurship*, 5(1), 1-15.
- Gartner. (2024). Market guide for cloud ERP transformation services. Stamford, CT: Gartner Research.
- International Data Corporation. (2024). Worldwide cloud ERP and enterprise applications forecast 2024-2028. Framingham: IDC.
- Kamble, S. S., Gunasekaran, A., & Arha, H. (2020). Understanding blockchain technology adoption in supply chains. *International Journal of Production Research*, 58(7), 2230-2243.
- Kingdom of Saudi Arabia. (2023). Vision 2030 Annual Report 2023. Riyadh: Vision 2030.
- Ministry of Communications and Information Technology. (2020). Cloud First Policy in the Kingdom of Saudi Arabia. Riyadh: MCIT.
- Mohamed, M. H. H. (2023). Review of research on benefits and challenges of cloud ERP systems. Theseus University of Applied Sciences.
- National Cybersecurity Authority. (2020). Cloud Cybersecurity Controls. Riyadh: NCA.
- OECD. (2021). The Digital Transformation of SMEs. Paris: OECD Publishing.
- Petropoulou, A., Fragidis, G., & Paschaloudis, D. (2024). Digital transformation in SMEs: Pre- and post-COVID-19 era. *Sustainability*, 16(23), 10536.
- PwC. (2024). SAP S/4HANA Cloud Public Edition: Implementation phases and business transformation. Amsterdam: PricewaterhouseCoopers.
- Rawat, C. (2023). Role of ERP modernization in digital transformation: PeopleSoft insight. *International Journal of Computer Trends and Technology*, 71(2), 63-70.
- SAP. (2025a). RISE with SAP: Business transformation and cloud ERP modernization. Walldorf: SAP SE.
- SAP. (2025b). RISE with SAP Methodology: Accelerating innovation with SAP Activate. Walldorf: SAP SE.
- SAP. (2025c). SAP Cloud ERP Private package to accelerate transformation. SAP News Center.
- SAP. (2024). SAP Business Technology Platform: Integration, data and extension strategy for intelligent enterprises. Walldorf: SAP SE.

- Saudi Data and AI Authority. (2024). Personal Data Protection Law Implementing Regulations. Riyadh: SDAIA.
- Singh, R. K., Nayak, S., & Tiwari, M. K. (2022). Blockchain and AI integration in supply chains: A framework for digital transformation. *Computers & Industrial Engineering*, 165, 107961.
- United Nations. (2022). E-Government Survey 2022: The Future of Digital Government. New York: United Nations.
- United Nations. (2024). E-Government Survey 2024: Accelerating digital transformation for sustainable development. New York: United Nations.
- Wan, Y. (2025). Key success factors and performance impact of ERP implementation in digital transformation. *Proceedings of the ACM International Conference on Management Engineering*, 57-66.
- World Bank. (2024). Digital Government Strategy and Practices from the Kingdom of Saudi Arabia. Washington, DC: World Bank.
- Zhang, X., Xu, Y., & Ma, L. (2022). Cloud ERP adoption: Technology, organization and environment perspectives. *Information Systems Frontiers*, 24(5), 1501-1518.
- Zhu, K., Dong, S., Xu, S. X., & Kraemer, K. L. (2020). Innovation diffusion in global contexts: Determinants of post-adoption digital assimilation. *Information Systems Research*, 31(2), 450-471.