



The Strategic Balance of Centralized Control and Localized Flexibility in Two-Tier ERP Systems

Dr.A.Shaji George¹, Dr.S.Sagayarajan², Dr.T.Baskar³, A.S.Hovan George⁴

^{1,2,4}Independent Researcher, Chennai, Tamil Nadu, India.

³Professor, Department of Physics, Shree Sathyam College of Engineering and Technology, Sankari Taluk, Salem District, Tamil Nadu, India.

Abstract – Two-tier ERP systems are an increasingly popular technology strategy for large, multinational enterprises. This paper examines how two-tier ERP enables organizations to balance centralized control and coordination at the corporate level with localized flexibility and responsiveness at the division/subsidiary level. The tier 1 ERP system handles core tasks like HR, finance, and IT using highly customized solutions tailored to the large corporate entity's needs, scale, and sophistication. This promotes enterprise-wide process standardization and centralized control. Meanwhile, the tier 2 ERP systems utilized by smaller subsidiaries and regional offices are less resource intensive and more configurable to address localized requirements. Tier 2 gives local divisions more control over their ERP to enable flexibility and responsiveness. This research analyzes the key drivers pushing large multinationals towards two-tier ERP, including managing complexity across global operations, enabling centralized coordination while allowing localization, integrating dispersed IT infrastructures, and controlling implementation costs. The paper explores the unique characteristics and benefits of tier 1 and tier 2 ERP systems in depth, providing concrete examples. Critical considerations for successfully deploying two-tier ERP are also examined, such as integration, change management, and striking the right balance between standardization and localization. The conclusion reached is that two-tier ERP delivers important synergistic benefits for large enterprises through its centralized/decentralized dual structure. The tier 1/tier 2 approach balances the key needs for coordination and control at the center with flexibility at the edges. However, careful planning is required for effective two-tier ERP implementation. The optimal balance between standardization and localization must be struck to fully realize the strategic potential. This research provides important insights for both academic study and real-world application of two-tier ERP systems.

Keywords: Two-Tier ERP, Tier 1 ERP, Tier 2 ERP, Centralization, Standardization, Localization, Flexibility, Integration, Globalization, Multinational.

1. INTRODUCTION

1.1 Brief Background on Two-tier ERP Systems

Enterprise resource planning (ERP) systems have become a critical technology for managing major business functions and integrating operations in large organizations. As companies expand globally, their ERP needs become increasingly complex. This has led many multinational corporations to adopt a two-tier ERP model to balance centralized coordination and control with localized flexibility.

Traditional single-instance ERP systems operate on a "one size fits all" basis, using a single solution across the entire enterprise. While this promotes standardization, it can be limiting for large multinationals spanning



diverse geographical regions and various functional domains. Two-tier architecture emerged to address these challenges. With two tiers, corporations can leverage different ERP solutions at a global and local level.

Tier 1 ERP handles core, common enterprise-wide functions using a highly customized system tailored to the headquarters' needs and strategic objectives. Tier 2 covers subsidiary- or division-specific processes using more lightweight and configurable solutions. The tier 1/tier 2 split enables centralized oversight while allowing localized variations.

Two major ERP vendor categories have emerged to serve each tier. Large "mega-suite" vendors like SAP, Oracle, and Infor tend to dominate the tier 1 corporate level, while smaller niche players specializing in flexibility serve tier 2 divisions. This two-vendor structure complements the two-system architecture.

The tier 1 ERP foundation handles mission-critical back-office functions like finance, accounting, HR, and IT. It consolidates and standardizes key data and processes on an enterprise scale. Tier 1 solutions are highly customized and programmed specifically for each company. The goal is centralized coordination and optimal efficiency.

Meanwhile, tier 2 ERP is deployed at the local or regional level, where the focus is responsiveness and flexibility. Tier 2 systems manage sales, inventory, procurement, and other front-office processes that benefit from localization. Rather than extensive customization, tier 2 leverages configuration and templates.

Two-tier ERP originated to help multinational manufacturers coordinate global operations. It enabled real-time visibility and control over the supply chain across continents. The model provides compliance benefits, as headquarters can ensure subsidiary systems meet financial regulations. Two-tier ERP has expanded beyond manufacturing to various industries as companies globalize.

The two-tier structure aims to deliver the best of both worlds: standardization, control, integration, and lower costs from the center; and localization, flexibility, and autonomy from divisions. However, the decentralized nature of tier 2 does entail some risks around fragmentation. Careful governance and integration is key.

Implementing two-tier ERP requires significant resources and expertise. The two systems must be seamlessly integrated through both technical and process mechanisms. Tier 1 consolidates and standardizes data which must then flow into localized tier 2 systems to enable coordination. This integration is complex and often one of the main challenges of two-tier ERP.

The division of business processes between the two tiers must also be carefully mapped. Certain functions like financial reporting or production planning could be handled at either level. Determining the optimal allocation requires understanding both enterprise-wide and local needs. There is no one-size-fits all split.

Change management is another big challenge when rolling out two-tier ERP. Both business unit leaders and end-users at the local level need to be brought on board and properly trained, since the tier 2 systems will impact their day-to-day work. Senior executives must also be aligned on the rationale and strategic value.

A phased approach is generally best for implementing two-tier ERP. The tier 1 core should be stabilized first before deploying tier 2 systems at satellite divisions. Different regions may be sequenced in waves to manage complexity. A pilot rollout can help test integration and processes.

While two-tier ERP originated with large multinationals, smaller companies are now adopting the model as well. Rather than divisions or subsidiaries, the two tiers may represent headquarters and branch locations. The benefits of centralized oversight and localized flexibility apply to enterprises of various sizes expanding domestically or globally.



The ongoing improvement of cloud ERP solutions is also making two-tier systems more accessible and affordable for organizations of all sizes. Cloud tier 2 products require less on-site infrastructure and staff. Cloud systems also facilitate integration and upgrades between the tiers.

Looking ahead, some future two-tier ERP developments could include: deeper analytical insights by combining tier 1 and 2 data, increased automation and intelligence, and more virtualization of processes between the tiers. However, the fundamental strategic value of balancing enterprise-wide coordination with local flexibility will persist.

In summary, two-tier ERP remains a compelling strategy for global enterprises in a variety of industries. The coordinated deployment of tailored tier 1 and configurable tier 2 solutions enables large organizations to effectively manage scale, diversity, and complexity across critical business functions. However, realizing the full benefits requires careful planning, integration, and change management. When implemented well, two-tier ERP can provide centralized efficiency with distributed flexibility.

1.2 Two-tier ERP Systems Aim to Balance Centralized Control at the Corporate Level With Localized Flexibility at the Division/Subsidiary Level

Enterprise resource planning (ERP) systems have become essential technology infrastructure for large multinational corporations managing complex global operations. As these organizations have grown and expanded into multiple business units, divisions, and geographical regions, their ERP needs have become more demanding and multifaceted. This has led many companies to adopt a two-tier ERP model in order to balance two critical but competing priorities: centralized control over core processes at the headquarters level, and localized flexibility at the subsidiary or division level.

The thesis of this research is that two-tier ERP enables large enterprises to harmonize centralized control and coordination at the corporate tier with decentralized flexibility and autonomy at the local tier. A one-size-fits-all single ERP system often cannot adequately meet the unique needs of a diverse global company. Two-tier ERP provides differentiated capabilities by separating centralized core processes on tier 1 from localized requirements on tier 2.

The tier 1 ERP foundation consolidates and standardizes key data, applications, and processes on an enterprise-wide scale. Tier 1 focuses on financials, HR, IT, and other mission-critical back-office functions that require centralized oversight and control. The tier 1 system is highly customized and optimized specifically for headquarters' operating environment and strategic objectives. Standardization and integration across units is the main goal.

In contrast, tier 2 ERP is deployed at the local subsidiary, plant, regional office or division level. Rather than customization, tier 2 ERP leverages configurations and templates to address specific localized needs in areas like sales, procurement, inventory, and customer service. Tier 2 provides the flexibility and autonomy for business units to meet unique geographical or departmental requirements.

This bifurcated model thus enables optimization at both the enterprise level through tier 1 and at the local level through tier 2. Critical functions needing centralized control and coordination are elevated to tier 1, while processes requiring localization are handled by customizable tier 2 systems. The integrated two-tier architecture provides the best of both consolidation and decentralization.

However, implementing two-tier ERP entails significant complexity and challenges to seamlessly connect the tiers. The division of business processes must be carefully mapped between the two levels based on strategic



priorities. Tier 1 and 2 must deeply integrate yet run on different systems with differentiated capabilities. There are also substantial change management challenges in gaining adoption across units.

This research will analyze the unique technical and business benefits and tradeoffs of two-tier ERP versus single-tier models. Through case studies and industry analysis, it will demonstrate how leading global enterprises leverage two-tier to gain both standardization and localization. It will identify key factors for successfully implementing two-tier ERP to maximize centralized coordination while enabling local flexibility. The conclusion is that two-tier ERP, when strategically targeted and well-executed, can provide enterprises with an optimized technology environment and competitive advantage. This research aims to provide guidance on best practices for balancing control and flexibility with a two-tier ERP approach.

2. TIER 1 ERP CHARACTERISTICS AND BENEFITS

2.1 Handles Core Critical Tasks Like HR, Finance, IT

The tier 1 ERP system serves as the core technological foundation at the headquarters level of a multinational enterprise. Tier 1 ERP consolidates enterprise-wide data, applications, and processes for core business functions that require centralized management, control, and coordination across the global organization. These critical back-office tasks commonly handled by tier 1 ERP include human resources, finance, accounting, supply chain, manufacturing, inventory, and IT systems.

The tier 1 ERP enables standardized delivery of mission-critical processes through deep customization tailored specifically to the company's operating model, strategic goals, and regulatory requirements. This customization provides optimized performance but requires greater upfront investment and ongoing complexity to maintain. Tier 1 ERP implementations often take 12–18 months spanning requirements analysis, custom development, testing, data migration, integration, and global deployment. Ongoing enhancement and support requires sizeable dedicated IT staff.

There are several key characteristics and benefits of tier 1 ERP systems focused on core tasks:

- **Centralized Data and Insights** – Tier 1 ERP consolidates transactional and operational data enterprise-wide, providing executives with visibility across all business units and regions for coordinated decision making and financial reporting.
- **Standardized Global Processes** – Tier 1 ERP enables standardized delivery of core processes like financial close, indirect procurement, HR services, payroll, and supply chain management across the enterprise. This promotes efficiency and compliance.
- **Enterprise-Level Scalability and Performance** – Tier 1 ERP can scale to support transaction volumes and performance demands across a massive global organization with thousands of concurrent users and high data volumes.
- **Comprehensive Audit Trails** – Tier 1 provides detailed audit trails and controls for all changes to centralized financial, HR, IT and other regulated processes to prove compliance and minimize risk.
- **IT Cost Optimization** – Tier 1 ERP rationalizes IT infrastructure and application costs by consolidating core systems enterprise-wide onto a single platform rather than operating disparate systems. IT support needs are also reduced.
- **Business Continuity** – Tier 1 ERP centralizes backup, recovery, and resiliency measures for mission-critical systems. Business continuity capabilities are more robust than smaller, decentralized systems.



- **Advanced Reporting and Analytics** – Tier 1 ERP incorporates sophisticated business intelligence, predictive modeling, forecasting, and enterprise performance management to provide strategic insights not feasible with decentralized data.

In summary, tier 1 ERP delivers substantial value for global enterprises through its centralized, purpose-built functionality, customization, scale, standardization, compliance, cost optimization, and business continuity capabilities for the most critical back-office processes. While the tier 2 ERP systems serve local flexibility, tier 1 ERP remains an indispensable centralized platform for the largest multinational corporations.

2.2 Highly Customized for Large Corporate Entities

A defining characteristic of tier 1 ERP systems is the extensive customization implemented to optimize performance for the specific requirements, operating model, and strategic priorities of the large corporate entity. While tier 2 ERP for divisions and subsidiaries is more pre-configured with templated processes, tier 1 is tailored from the ground up around the organization. There are several drivers for highly customizing tier 1 ERP:

- **Unique Corporate Policies and Procedures** – The business policies, procedures, controls, and processes governing core functions like financial reporting, indirect sourcing, quality management, and HR services are unique for every corporation based on industry, management style, culture, and strategic goals. Tier 1 ERP must align to these unique policies and ways of operating.
- **Specialized Data and Analytics Needs** – The KPIs, management reports, multidimensional data cubes, planning models, and advanced analytics required by headquarters executives go well beyond standard capabilities. Tier 1 ERP is customized to deliver these specialized BI tools and data structures.
- **Regulatory Requirements** – Large multinationals face complex, localized regulatory compliance requirements across global operations related to financial reporting, data security, trade controls, HR practices, and more. Tier 1 ERP integration must enforce compliance through customized controls.
- **M&A Integration** – Acquisitions, divestitures, and reorganizations require constant customization of tier 1 ERP to restructure the chart of accounts, re-map systems, integrate data, and align business processes. Tier 1 must rapidly adapt to shifts in the corporate entity makeup.
- **Legacy Systems Replacement** – Customization is often needed to migrate data and translate functionality from legacy mainframe, ERP, planning, and custom systems that tier 1 is subsuming into an integrated platform. Access to historical data must be preserved.
- **Technology Standards** – Corporate IT standards around security, networking, hardware platforms, and software development methods are embedded directly into the tier 1 system via customization to promote stability, interoperability, and familiarity for IT teams supporting the platform.
- **Scale and Performance** – Customized tier 1 ERP functionality and technical architecture tuning is implemented specifically to support heavy transaction volumes, large datasets, and performance demands driven by the organization's size and complexity.
- **Global Requirements** – Multilingual capabilities, internationalization of applications, regulatory compliance, localized reporting, and integrations with country-specific systems are customized into tier 1 ERP to support global business.



In summary, extensive tier 1 ERP customization is undertaken by large companies to ingrain their unique operating model, strategies, policies, and technical standards into the core system. While costlier, customization reduces business disruption and integrates tier 1 seamlessly. It delivers optimized, tailored performance across mission-critical processes for complex global entities.

2.3 Enables Centralized Control and Standardization

A key benefit provided by tier 1 ERP systems is enabling centralized control over core processes and data along with enterprise-wide standardization. Large multinational corporations have complex structures comprising hundreds of business units, divisions, subsidiaries, global shared services centers, and corporate headquarters. Managing and optimizing operations across this diversity requires balanced centralized control and standardization through tier 1 ERP.

- **Centralized Control** – Tier 1 ERP delivers visibility, monitoring, and control mechanisms from headquarters over all business entities and operations related to finance, HR, procurement, inventory, manufacturing, and other regulated processes. Executives can enforce policies, controls, and procedures enterprise-wide.
- **Financial Consolidation and Reporting** – Tier 1 provides the consolidated financial results, reporting, and drill-down analysis at any level of regional, divisional, or product rollup needed for enterprise planning, month-end close, regulatory reporting, and performance measurement. This enables centralized financial management.
- **Audit and Compliance Monitoring** – Tier 1 ERP monitors transactions across all business units for anomalies indicative of errors or fraud. IT can also continuously audit security, access, segregation of duties, transaction approvals, trade compliance, and financial reporting controls centrally.
- **Master Data Management** – Tier 1 consolidates and governs product information, customer data, supplier data, cost data, GL coding, and other master data domains, synchronizing them across divisions to reduce costs and errors from data redundancies.
- **Global Security Administration** – User access, system credentials, permissions, and cybersecurity policies for core ERP are managed centrally through tier 1, reducing risks of data breaches, unauthorized activities, and compliance gaps.
- **Standardized Processes** – Tier 1 ERP rolls out common, standardized processes for general ledger accounting, financial close, treasury, cash management, accounts payable, T&E, procurement, and HR across all entities to enable process discipline.
- **Optimized Infrastructure** – IT application infrastructure, integration middleware, networking, data centers, disaster recovery, end-user computing, and databases are optimized globally at the tier 1 level vs. fragmented by divisions.
- **Standard Reporting and KPIs** – Tier 1 enables unified financial, operational, and business KPIs and reporting for consistent performance measurement aligned to corporate objectives across all entities.

In summary, tier 1 ERP is critical for huge global companies to institute centralized controls over core areas like financials, data, security, infrastructure, and regulatory compliance while driving enterprise-wide process standardization across subsidiaries. This enables optimally efficient and well-governed operations.



3. TIER 2 ERP CHARACTERISTICS AND BENEFITS

3.1 Handles Regional/Local Tasks Like Sales, Marketing

While Tier 1 ERP focuses on centralized, core back-office functions, Tier 2 ERP systems are deployed at a regional, subsidiary, or divisional level to handle front-office tasks oriented around local operations, customers, and markets. Key functional areas for Tier 2 ERP include sales management, marketing automation, customer service, distribution, inventory management, and manufacturing/production management.

- **Regional Sales Management** – Tier 2 ERP supports management of regional sales teams and operations with capabilities such as account and opportunity management, sales forecasting and pipeline reporting, sales process automation, sales performance analytics, territory management, and sales incentive compensation.
- **Local Marketing Automation** – Tier 2 systems provide marketing automation tailored for regional needs including campaign management, lead nurturing, email marketing, website integration, digital ad management, local events management, and analytics on regional marketing performance.
- **Customer Service** – Tier 2 ERP incorporates customer service functionality aligned to regional customers including case management, knowledge bases, field service management, warranty and contract management, complaint handling, and customer portal/self-service capabilities.
- **Distribution Management** – For companies with regional warehouses and logistics operations, Tier 2 ERP manages distribution including routing, freight, small parcel shipping, warehouse management, packing/shipping, and transportation management systems.
- **Regional Inventory Optimization** – Tier 2 provides localized capabilities to manage parts, materials, and products inventory including demand forecasting, inventory optimization, warehouse transfers, cycle counting, and procurement coordination with regional suppliers.
- **Localized Manufacturing/Production** – For global manufacturers, Tier 2 ERP can manage production schedules, capacity planning, shop floor operations, manufacturing quality, and maintenance processes on a specific plant basis tailored to local requirements.

Tier 2 ERP implementations are also more rapid and flexible compared to Tier 1 rollouts, enabling faster deployment. Local IT teams can readily customize and enhance Tier 2 functionality without major effort or cost. Tier 2 integrations may also connect with third-party SaaS applications popular at certain regional offices.

While Tier 1 ERP handles the mission-critical back-office tasks requiring centralized management, Tier 2 ERP delivers capabilities aligned with each region's unique needs in customer engagement, sales, marketing, distribution, and manufacturing. Tier 2 ERP enables localization and flexibility while Tier 1 drives scale and standardization.

3.2 More Configurable for Flexibility

A key differentiator between tier 1 and tier 2 ERP systems is that tier 2 is designed for flexibility and configurability versus highly customized solutions. Tier 2 allows subsidiaries and business units to tailor the system to address their specific localized requirements within the framework of standard ERP modules. There are various drivers for a configurable tier 2 approach:



- **Faster Implementation** – Tier 2 ERP leverages templates and configurations to activate solutions in weeks or months rather than the lengthy code-driven customizations often required in tier 1 ERP taking a year or longer. Pre-configured tier 2 solutions speed ROI.
- **Real-time Changes** – Configurations to forms, fields, reports, workflows, and interfaces can be adjusted on the fly in tier 2 ERP through user-friendly tools versus needing IT assistance for custom code changes typical in tier 1. This enables real-time responses to changing needs.
- **User-Driven Self-Service** – Tier 2 permits business users to configure certain parts of the system to reduce dependency on IT, allowing them to adapt the system on their own to address evolving requirements. This provides local autonomy.
- **Fit Standard Models** – Tier 2 solutions are designed around industry-specific templates and best practice process models which can be configured to accommodate most subsidiaries. Customization occurs only for highly unique localized needs.
- **Lower Costs** – The pre-defined Tier 2 configurations and templates limit the need for expensive custom software development. Ongoing support costs are also lower with primarily user-driven administration versus specialized IT skills needed for customized tier 1 ERP.
- **Scalable Growth** – Tier 2 solutions allow incremental expansion as needs change via configurable modules. Custom tier 1 ERP requires large upfront fixed investment and is less scalable to changes.
- **Third-Party Integrations** – Tier 2 ERP can be more readily integrated out-of-the-box with third-party niche solutions popular at certain divisions or geographies that fill gaps vs. complex tier 1 custom integrations.
- **Local Control** – Configurable tier 2 systems give regional units more direct control to evolve functionality supporting their changing needs versus the centralized tier 1 governance model limiting responsiveness.

While complex tier 1 ERP requires lengthy optimization for centralized functions, tier 2 is designed for business user configurations, templates, flexibility, and integration ease to enable subsidiaries to tailor their ERP environment. Tier 2 responds to regional diversity while tier 1 promotes enterprise consistency.

3.3 Allows Local Divisions more System Control

A key benefit of Tier 2 ERP systems is empowering regional divisions, business units, and subsidiaries with more control over configuring, managing, and enhancing their local system versus the centralized governance model of Tier 1 ERP. While Tier 1 optimizes for the needs of corporate headquarters and enterprise-wide consistency, Tier 2 provides autonomy to address unique local requirements.

There are several ways Tier 2 ERP enables decentralized local control:

Configuration Authority – Rather than submitting change requests to corporate IT, local divisions can configure certain aspects of Tier 2 like user interfaces, data fields, reports, workflows, analytics, and integrations to align with regional procedures and needs.

Customization Capabilities – Tier 2 enables subsidiaries to customize select areas of the system that require extension beyond base configurations, without the complexity and costs of enterprise-level Tier 1 customization. Local developers can create solutions tailored for that business unit.



Third-Party Integration – Tier 2 ERP provides integration tools and APIs that empower divisions to implement interfaces to third-party niche applications popular in certain regions that fill local capability gaps vs. the corporate mandated technology stack.

Selective Upgrades – Rather than centralized tier 1 ERP upgrades enforced uniformly across the enterprise, Tier 2 systems give local units discretion on when to upgrade or migrate to new versions based on their regional roadmap and resources.

Local Data Ownership – Subsidiaries maintain full control and ownership over local transactional data, analytics, and reporting in the Tier 2 system. Central corporate BI and data governance policies are not imposed.

Hardware/Infrastructure – Regions have authority over Tier 2 infrastructure such as servers, storage, networks, and cloud deployment including selection, management, costs rather than corporate IT dictating all platforms.

Help Documentation – Tier 2 ERP allows divisions to build localized help documentation and end-user support knowledge bases tailored to regional user profiles, processes, and system variations rather than standardized global documentation.

Administration and Support – Tier 2 system administration, user management, security, and day-to-day support is managed by the local divisional IT staff with limited central involvement to align support with regional service levels.

While Tier 1 ERP governance ensures consistency, Tier 2 facilitates decentralization and autonomy. Configurable Tier 2 solutions empower divisions to take ownership of their systems and data, tailor functionality, control upgrades, localized support, and adapt quickly to changing regional requirements.

3.4 Enables Localized Flexibility and Responsiveness

The configurable, customizable, and autonomous nature of Tier 2 ERP systems delivers substantial benefits for global enterprises in localized flexibility and responsiveness. While Tier 1 ERP focuses on optimizing standardized core processes across the entire organization, Tier 2 ERP can adapt rapidly to changing regional market conditions, business needs, and customer requirements.

Tier 2 provides flexibility in several ways:

- Localized configurations adjust user interfaces, data fields, reports, workflows and analytics to match distinct regional business processes and terminology.
- Customizations fill functional gaps, extend capabilities, and integrate unique local systems without waiting on long corporate project timelines.
- Third-party app integration gives access to innovative solutions not available in the global Tier 1 ERP.
- Faster implementation for new divisions and acquisitions spin up regional systems.
- Real-time configuration changes by the business keep pace with market changes.
- Scaling up or down is easier and quicker via modular expansions or contractions.
- Decentralized control allows regions to upgrade/migrate on their own schedule.

This flexibility and agility translates to superior localized responsiveness:



- Regional sales teams can rapidly adjust forecasts, pipeline tracking, account management and campaigns.
- Marketing can quickly launch targeted digital campaigns and events.
- Customer service and support adapts knowledge bases and field services to local needs.
- Local inventory and logistics teams tweak configurations for new suppliers, warehouses, and distribution models.
- Production floors can fine-tune manufacturing, quality and maintenance parameters.
- Subsidiary finance and HR enabling rapid localization of processes, reporting, and data elements.
- Faster rollout of new equipment, technologies, and automation to augment workers.

With configurable Tier 2 ERP, regions are not constrained by centralized corporate change control processes. Local leaders can digitally transform operations through autonomous system adaptations fully optimized for their business environment, rather than settle for one-size-fits-all functionality imposed top-down.

This combination of localized flexibility and responsiveness makes Tier 2 ERP invaluable for global enterprises operating diverse divisions across various geographical regions and industries. While Tier 1 standardizes and consolidates, Tier 2 liberates local innovation and optimization.

4. KEY DRIVERS AND CONSIDERATIONS FOR TWO-TIER MODEL

4.1 Multinational Scale and Complexity

As companies expand globally through organic growth, mergers and acquisitions, the scale and complexity of managing disparate divisions, business units, and subsidiaries across different countries and regions is a major driver for adopting two-tier ERP. Multinational organizations face daunting complexities:

- Hundreds of distinct legal entities and income statements to consolidate for financial reporting.
- Thousands of products and SKUs to manage with suppliers and customers worldwide.
- A myriad of regulatory environments for finance, operations, HR, payroll, and IT systems.
- Scores of ERP and other legacy systems to integrate and standardize.
- Vast data fragmentation across units preventing enterprise insights.
- Major cultural and language barriers to overcome.

With a traditional single ERP system, complexity escalates exponentially because the system must be customized to suit all the unique needs of every division and country. This is costly, time-consuming, and risky. Two-tier ERP isolates the complexity to Tier 1 for global corporate processes while Tier 2 handles regional variability.

Two-tier also avoids the lengthy delays of progressing through full governance processes for every corporate change request from divisions. Tier 2 enables some localization autonomously while Tier 1 focuses on critical centralized needs.

Further drivers from operating scale and complexity include:



- **Financial Consolidation** – Managing thousands of cost centers and profit centers for external reporting and internal management reporting requires Tier 1 standardization.
- **Global Suppliers** – Procuring goods and services across divisions requires centralized vendor master data and procurement automation through Tier 1.
- **Master Data** – Tier 1 provides consistent product, customer, supplier, and finance data models across all entities and systems.
- **Global Security** – Protecting systems and data requires unified security policies and controls enforced through Tier 1.
- **Compliance** – Tier 1 ensures all entities adhere to legal, financial, HR, IT, and operational governance policies to reduce compliance risk.

In summary, as multinational corporations grow into extremely complex global organizations, two-tier ERP provides a strategic technical architecture to allow headquarters to regain control over standardization, integration and compliance while also enabling divisions to operate with localized flexibility. Two-tier ERP structures solutions to directly address the challenges of massive scale and complexity.

4.2 Need for Centralized Control and Coordination

While multinational scale and complexity drive the need for localized flexibility in divisions, headquarters also needs enhanced centralized control and coordination across the global enterprise. Two-tier ERP uniquely meets both these demands simultaneously. Corporate leadership has several important drivers for more centralized control:

- **Financial Control** – Visibility into financial performance and drivers across all regions, divisions and subsidiaries is critical for executives, boards and investors to steer the corporation. Tier 1 ERP provides financial control.
- **Global Efficiency** – Standardizing and optimizing core processes for scale, eliminating redundancy, leveraging shared services and automation requires centralization enabled through Tier 1 ERP.
- **Data Consistency** – Central master data management and data governance across all entities and systems provides integrity required for strategic decisions, planning and compliance.
- **System Integration** – Seamlessly linking disparate systems to enable end-to-end processes requires integration orchestrated through Tier 1 ERP.
- **Operational Control** – Defining and rolling out consistent policies, procedures, controls and metrics for core processes through Tier 1 ERP ensures execution.
- **Compliance Management** – Centrally monitoring all transactions and activities for adherence to financial, legal, HR, IT, and operational regulations is enabled by Tier 1.
- **Corporate Agility** – Rapid enterprise-wide changes to core business processes, technologies, automation and AI requires the configurability of Tier 1 rather than localized limitations.
- **Shared Services** – Tier 1 ERP enables globally consolidated functions such as customer support, finance, HR services and IT to improve efficiency and internal customer experience.



- **Supply Chain** - Centrally optimizing manufacturing, inventory, logistics, procurement and suppliers provides cost and customer benefits enabled by Tier 1.

In summary, while divisions need flexibility, corporate leadership depends on standardized, visible and controlled core processes enabled by Tier 1 ERP to execute business strategy across a complex global enterprise. Tier 1 allows headquarters to steer the organization reliably toward central strategic goals. Two-tier ERP meets both local and central needs simultaneously.

4.3 Desire for Localized Flexibility and Customization

While corporate leadership requires centralized control through Tier 1 ERP, divisions and regional operations also need localized flexibility and customization to optimally run their units. Two-tier ERP provides this flexibility through the Tier 2 systems tailored for each subsidiary or business entity. There are several drivers for more localization:

Regional Differentiation - Each geography and business unit has unique processes, suppliers, customers, partners, and market conditions that require flexibility beyond one-size-fits-all corporate templates.

Local Optimization - Tier 2 ERP allows real-time adaptations to local operations to maximize performance, cost, quality and customer satisfaction based on regional personnel, cultures and requirements.

Time to Market - Local subsidiaries can rapidly deploy new capabilities, products, integrations and technologies through Tier 2 ERP configuration versus corporate project delays, providing competitive advantage.

Stakeholder Alignment - Tier 2 ERP allows alignment to regional executive perspectives, business user needs, IT priorities, customer preferences, and cultural nuances.

Agile Response - Adapting rapidly to local market changes, disruptions, innovations or growth opportunities relies on flexible Tier 2 more than corporate tier 1 rigidity.

Consumer Insights - Local systems provide better insights into regional customer behavior, sentiment, preferences and requirements to enable tailored sales and marketing.

Supply Chain - Adapting procurement, inventory, production, logistics and delivery for local parts availability, routes and costs relies on configurable Tier 2.

Talent Management - Optimizing regional HR systems for local talent acquisition, learning, compensation and culture improves workforce productivity and retention.

UX Personalization - Tailoring Tier 2 self-service, portals, mobile apps and workflows for end users in each business unit and language increases usage and productivity.

While Tier 1 ERP standardizes, Tier 2 ERP liberates subsidiaries to customize systems, processes and data for regional agility, performance and competitiveness. Two-tier ERP provides the best of both consistency and localization.

4.4 IT Infrastructure and Integration Factors

The IT infrastructure, applications and integration challenges of managing ERP across global divisions are major considerations for adopting two-tier ERP architecture. Key IT drivers include:



Legacy System Inconsistencies – Mergers and growth result in a patchwork of legacy systems. Two-tier simplifies by centralizing some systems onto Tier 1 while localizing others on Tier 2.

- Data Fragmentation – Islands of data across units prevent enterprise insights. Tier 1 consolidates data with Tier 2 flexibility for localized analytics.
- Infrastructure Optimization – Tier 1 enables shared IT infrastructure, Tier 2 allows localized infrastructure ownership suited to each region.
- Global Support Model – IT support and development requires centralized Tier 1 teams and localized Tier 2 staff for optimal service quality, costs and skills.
- Cybersecurity – Corporate security policies are enforced centrally through Tier 1 while localized incidents are managed through Tier 2.
- Compliance and Controls – IT compliance like access controls and DR are centralized while regional workflows enable localized compliance processes.
- Enterprise Integration – Tier 1 provides core integrations between global systems while Tier 2 facilitates localized application interfaces.
- Global Standards – Tier 1 enforces systems standards and tools while Tier 2 allows regional variations.
- Cloud Enablement – Tier 1 optimizes hybrid cloud enablement for global systems while Tier 2 offers agility of regional public cloud deployment.
- Scaling Growth – Tier 1 sustainably scales up enterprise infrastructure while Tier 2 scales regional capabilities.

The two-tier model aligns IT delivery to support both centralized corporate systems and distributed localized systems simultaneously. This balances enterprise optimization with regional flexibility.

Other IT considerations include:

- Intentional division of architecture between tiers based on centralization needs.
- Seamless but secure integration between the tiers.
- Unified data and reporting across tiers.
- Common user experience and access across tiers.
- Change management and training for IT support teams.
- Clear policies for IT governance and decision rights between corporate and divisions.
- Financial considerations for cost-sharing and chargebacks between tiers.

In summary, two-tier ERP enables a hybrid centralized/localized IT application and infrastructure environment suited to complex global organizations.

4.5 Costs and Challenges of Implementing Two Systems

Adopting a two-tier ERP model does come with substantial costs and implementation challenges that must be carefully considered. While the two-tier approach provides strategic benefits, it also requires dual efforts for separate Tier 1 and Tier 2 systems along with integration complexities.



Financial Costs:

- Licensing costs for two separate ERP platforms from vendors such as SAP, Oracle, Microsoft and Infor. Volume discounts may apply.
- IT infrastructure including servers, storage, networks, database software, backup systems and cloud subscriptions to support two environments instead of one.
- Custom development, configuration and integration services may be duplicated for both tiers.
- Ongoing operational and support costs including IT staffing to administer two tiers. Additional vendor annual support fees.
- User training and change management programs for two solutions.
- Data center space, power and cooling for any on-premise infrastructure.

Implementation Challenges:

- Developing integration mechanisms between the tiers - APIs, messaging, data movement, single sign-on, end-to-end processes.
- Refining the division of business processes between the two tiers. Some may need to be handled jointly.
- Rollout sequencing, as Tier 1 should be implemented first prior to Tier 2 for dependencies.
- Aligning executive leadership and company culture to two-tier model.
- Managing changes over time as processes evolve between centralized vs decentralized needs.
- Building IT support models to support two tiers - mix of corporate shared services and local resources.
- Acceptance from subsidiaries of some localization limitations imposed by Tier 1.
- Cybersecurity considerations for two systems and moving data.
- Audit and compliance processes must cover two ERP environments.

While the two-tier model optimizes central control and local flexibility, the dual ERP implementation adds costs and integration challenges. This tradeoff requires analysis but typically proves worthwhile for complex global enterprises. Careful planning can mitigate risks and reduce incremental Tier 2 costs.

5. CONCLUSION

5.1 Two-Tier Model Balances Key Needs at Corporate and Local Levels

For global enterprises operating in many divisions across regions and countries, ERP needs become multidimensional. A single centralized ERP system often cannot adequately meet the unique needs of a diverse worldwide organization. But decentralized regional systems lose economies of scale and prevent standardization.

Two-tier ERP architecture provides the ideal modern solution by separating centralized core processes on Tier 1 from localized requirements on Tier 2. This balances the key needs of headquarters and business units.



Tier 1 ERP consolidates mission-critical back-office functions like finance, HR, procurement, supply chain, and IT on an enterprise-wide platform tailored for the headquarters' operating model. Tier 1 focuses on standardization, compliance, control, cost efficiency and global insights.

Tier 2 ERP systems are deployed locally at the division, subsidiary or regional level. They are configured to support sales, marketing, inventory, manufacturing, and customer-facing processes aligned to local requirements. Tier 2 provides flexibility, localization, and responsiveness.

Integrating Tier 1 and Tier 2 ERP creates a modern hybrid environment. Corporate executives get centralized visibility and control through standardized Tier 1 processes. Local leaders retain autonomy to customize Tier 2 and rapidly respond to regional opportunities.

The two-tier model ultimately provides the best of both worlds - global scale and consistency coupled with local agility and ownership. Companies gain integrated data, centralized efficiencies and strategy enablement from Tier 1 as well as localized performance and competitiveness from Tier 2.

However, a sound two-tier deployment requires careful planning and governance. Division of business processes between the tiers should be intentional based on clear criteria. Tier 1 rollout should be sequenced in advance of Tier 2 integration. IT application infrastructure and support teams must align to the two-tier model. Change management and training is key.

But when executed well, two-tier ERP delivers substantial strategic, operational and technological benefits across massive global corporations. It should be considered a leading industry best practice for any enterprise reaching international scale and complexity across multiple divisions and geographical regions. With the two-tier approach, ERP finally adapts to the realities of business units needing both integration and autonomy simultaneously.

5.2 Careful Planning Required for Successful Two-Tier Deployment

The two-tier ERP model provides a proven architecture for global enterprises to balance corporate-wide consolidation and standardization with local flexibility and autonomy across divisions. However, to maximize the benefits and ROI of two-tier ERP, careful planning and execution is required spanning strategy, technology, governance, and change management.

A disciplined two-tier program management approach should guide the initiative with involvement from both corporate and divisional leadership. Key planning steps include:

- Clearly defining business goals, KPIs and success metrics for the two-tier implementation based on needs for centralized efficiency, control and insights balanced with localized performance.
- Conducting a thorough process assessment to thoughtfully determine which functions should be centralized on Tier 1 or decentralized on Tier 2 based on business priorities, not just IT considerations.
- Evaluating Tier 1 solutions to identify the optimal enterprise ERP platform based on functional completeness, configurability, integration, and alignment with corporate technical standards.
- Selecting Tier 2 solutions that integrate seamlessly with Tier 1 but provide user-friendly configuration tools and local extensibility to divisions.
- Building integration mechanisms between Tier 1 and Tier 2 for workflows, data, analytics, single sign-on, and end-to-end processes. API-based integration is recommended.



- Developing a multi-phase implementation roadmap that sequences Tier 1 first with enough time to stabilize it before connecting Tier 2 systems.
- Planning the organizational change management and training programs required for both headquarters and divisional users to adopt the new two-tier processes and systems.
- Creating IT support and operating models spanning both Tier 1 and Tier 2 resources and teams to maintain, enhance, and support the new ERP landscape.
- Instilling strong governance processes for making future changes, enhancements, and process optimizations across the two-tier environment.

Proper planning will help mitigate risks and issues during implementation, including confusion over decision authorities, change resistance, complex integrations, budget overruns, and delays. Supported by project planning and program management disciplines, two-tier ERP can successfully balance control and agility.

With growing global scale and complexity, two-tier ERP has become a strategic imperative. Following structured planning principles will optimize the value for large enterprises. The two-tier model can finally provide centralized efficiency with distributed flexibility when thoughtfully architected and executed.

5.3 Key is Finding Optimal Balance Between Standardization and Flexibility

The promise of two-tier ERP architecture is achieving both global standardization and local flexibility. But realizing this vision depends on finding the optimal balance between centralized Tier 1 processes and decentralized Tier 2 capabilities. There are several guidelines companies should follow:

- Avoid imposing excessive standardization through Tier 1 that stifles local responsiveness. Balance is required. Tier 1 should focus only on essential capabilities requiring global consistency and control.
- Likewise, beware of permitting too much localization through Tier 2 that compromises enterprise synergies. Tier 2 customizations should apply the minimum required to enable regional differences, not maximize them.
- Conduct a methodical process decomposition analysis to deliberately determine which functions belong on Tier 1 versus Tier 2 based on justified criteria, not intuition or IT convenience. Audit this regularly.
- Develop integration mechanisms between the tiers that allow real-time data sharing and hand-offs during end-to-end workflows. Avoid fragmented processes or siloed tiers.
- Have corporate leadership and division leadership align on the business vision, goals and guiding principles for standardization versus localization. This vision should steer all future optimization decisions.
- Create a IT governance model to manage change requests, enhancements, integrations, configurations and policies across the two-tier landscape. Empower both corporate and divisional stakeholders in this process based on defined authorities.
- Take an iterative vs. big bang approach by incrementally piloting and rolling out two-tier capabilities by division or country to gain insights before global scaling. Pace implementation in multiple waves.



- Leverage extensive user acceptance testing in both headquarters and subsidiaries to collect feedback on the right tier balance. Incorporate insights into rebalancing standardization versus flexibility.
- Provide comprehensive training and change management programs tailored to corporate and divisional users to gain adoption of both tiers. Address any confusion over two systems proactively.
- Develop KPIs and metrics that track both centralized consistency and localized performance to ensure two-tier solutions optimize both angles. Quickly resolve any deficiencies.

With deliberate execution, governance and stakeholder involvement, two-tier ERP can deliver the revolutionary benefits of integrated global standardization and decentralized local optimization simultaneously.

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