Crisis and continuity

New ERP strategies to help mitigate geopolitical risk

Experts
on this topic

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Key takeaways

ERP systems need to buffer the intensity of increasing geopolitical shocks.

■ **Global operations need protection from regional conflicts.**

Yet, only 55% of leaders say their organization's ERP solution is configured in a way that will allow them to act quickly in the face of change.

■ **Almost one-third of organizations may not be prepared in the riskiest regions, because . . .**

. . . 31% of enterprises indicate their ERP solution makes it significantly or slightly harder to respond effectively to disruption.

■ **Enterprises agree a few broad adjustments would help.**

A slight majority agree that diversifying their supplier base (53%), increasing business flexibility (52%), and improving supply chain buffers (53%) would be positive potential changes.

Grappling with post-globalization realities

Over the last few years, a continual stream of geopolitical shocks has shaken the world to its core. Disruptive events that were previously unimaginable have happened with alarming regularity.

Collectively, these developments have slowed, stopped, and in some cases reversed efforts to increase globalization and cross-border connectedness. To help ensure business continuity in this volatile environment, business leaders must embrace new enterprise resource planning (ERP) strategies that position their organizations to thrive across a wider range of unpleasant, foreseeable, geopolitical possibilities.

The thrust to become maximally globalized, and thus excessively dependent on partners, suppliers, and customers from all corners of the planet, has become a dangerous liability for some organizations. For example, many companies have closed their operations or stopped doing business in Russia this year due to its conflict with Ukraine. Global organizations were asked to leave Russia within weeks—not months—leaving many scrambling to isolate Russian operations from the rest of the business.

Data is also becoming more isolated, especially critical financial and operational data processes through ERP systems. Information that used to flow relatively unimpeded across borders is increasingly scrutinized, and in some countries, much more tightly regulated. New legislation governing how data can be shared, accessed, and stored is emerging from India, Brazil, the European Union (EU), and China. And some countries are placing specific restrictive controls on businesses, dictating that data processed in-country cannot be stored outside the country's borders.[1]

Heightened geopolitical risks such as these are forcing business leaders to face a future defined by ongoing disruption. Many are rethinking the centralized management strategies that were once assumed and obvious. Now, they must consider how they can protect their global operations from regional conflict. They must be certain the business will continue to function even if armed forces take one of their locations by storm.

Many companies are moving to localized supply chain networks to mitigate this type of regional geopolitical risk. For example, the US Chips Act is working to re-establish regional semiconductor production capacity to protect key industry supply chains that drive the global economy.[2]

New trading models, heightened political sensitivities, and shifting data privacy regulations are just a few of the additional factors forcing organizations to reconsider how—or whether—they operate across some borders.

But the forces of change are neither homogenous nor constant. Rather, they are dynamic and divergent. In this environment, important questions emerge for business leaders: Which threats do they or should they see as most imminent? What considerations should they focus on? How should they respond? And most importantly for our purposes here, how should they restructure their ERP strategies to prepare for both current and future shocks and limit exposure in the riskiest regions? In today's world, enterprise leaders shoulder more responsibility than ever when accounting for the risks associated with geopolitical turbulence. Ignoring them—regardless of reason—is not a viable option.

Crisis and uncertainty call for precise planning, fast reflexes, and better decision-making. And a business's ERP structure influences how quickly it can react. But a large portion of leaders indicate their system falls short of what's needed to succeed.

To learn more about how business leaders expect the future to unfold, the IBM Institute for Business Value (IBV) surveyed 100 ERP-knowledgeable executives across a wide range of industries in August 2022. We asked them to gauge the likelihood of various disruptive events and predict the impact each potential crisis could have on their businesses over the next three years.

Our survey found that leaders broadly agree that a few long-term strategic adjustments would help them prepare for future shocks, including diversifying their supplier base (53%), increasing business flexibility (52%), and improving supply chain buffers (53%) such as inventory, capacity, and lead time.

However, only 55% of leaders say their organization's ERP solution is configured in a way that will allow them to act quickly in the face of change. What's more, 31% indicate their ERP solution makes it significantly or slightly harder to respond effectively to disruption.

The message is clear: Crisis and uncertainty call for precision planning, fast reflexes, and better decision-making. And a business's ERP structure influences how quickly it can react. But a large portion of leaders indicate their system falls short of what's needed to succeed in a time of conflict, crisis, and change. Organizations that see and understand the disconnect between the urgent need for more responsive and resilient ERP structures and the status quo paths their organizations are committed to should course-correct quickly. The writing on the wall appears so clear that this time history may judge the inaction of executives far more harshly that it has in the past.

Geopolitical uncertainty has rendered status-quo ERP thinking irrelevant

The ERP instance strategy or system topology has historically reflected business trading models, so the more global the trade, the more global the instance strategy.

Today, we see companies revising their instance strategies because of geopolitical shifts. For example, many are divesting from Russian operations and carving out their Russian business units. Most of these changes have been made in reaction to political realities that were not anticipated.

And when asked about the future, most leaders see more, not less, disruptive change on the horizon. Planning for increased uncertainty this time is imperative.

Data privacy regulations aimed at protecting both citizens and the state are also requiring companies to revise their instance strategy approach. Companies are responding to these challenges by establishing separate instances to run their local operations, or they are using local accredited software hosted in local data centers or cloud hosted environments (See "Global professional services firm" case study on page 12).

While these shifts are manageable, they can also create new concerns. Our survey uncovered a helpful case in point: Three in four leaders say the geopolitical isolation of a top-20 economy from all others would have a negative impact on their business. This is not unlike the isolation evident in parts of Europe today, as Russia had the world's 11th largest GDP in 2021.[3]

In response, almost half (48%) say they would develop a unified data security strategy across the enterprise while 46% say they would centralize their ERP systems into a smaller number of consolidated instances. A smaller portion of respondents (24%) would head in the opposite direction, opting to separate different operating units into distinct ERP instances.

For some, adding new instances may seem like the obvious way to address data retention policies—but this is not the end of the challenge. Businesses still need their data to drive decision-making; to inform global finance operations, including global consolidation and finance planning and analytics; and to provide supply chain insights. This means leaders need their data to be both protected and accessible—especially when they're operating in a conflict zone.

Executives should therefore review their instance strategies to re-appraise all the options available and confirm they reflect the current and future needs of the business. But there are many pitfalls leaders must avoid as they rethink their ERP structures. Here are five common challenges companies face as they transform their operations to adapt better to change.

Three in four leaders say the geopolitical isolation of a top-20 economy from all others would have a negative impact on their business.

01

Disruption is forcing a rethink of ERP and business strategy.

In response to geopolitical disruption, many companies are transforming their business models and operations. To keep the ERP strategy aligned as disruptive forces influence business strategy, executives should take a business component modelling view of company operations. This should reflect where they do business, how goods will move across the supply chain, how they will drive business and financial accountability for the goals of the organization, and where they will perform core and non-core functions.

There are many options available to companies as they address these challenges. Typically, the net result is the creation of more logical instances, but that isn't always the best choice.

Companies can consider implementing system landscape optimization (SLO) solutions from ERP companies. They can also work with specialist providers to define process carve-outs (selective carve-outs or legal entity carve-outs), or they can find ways to delete company codes so that reorganized enterprise structures reflect new trading and accountability models.

Alternative options are being adopted, such as the use of two-tier ERP approaches. These take advantage of some of the more modern cloud-based ERP solutions, such as S/4HANA Cloud or Business by Design, to deal with specialized needs in countries that are being carved out from global operations.

02

Political conflict is making it harder to provide integrated connectivity.

Geopolitical challenges, such as emerging data sovereignty legislation, are compelling companies to consider security controls aimed at protecting their assets. Many are looking to air-gap operations in "hostile" countries from the rest of the business, treating operations in these countries as third-party trading relationships.

Before any work is initiated, companies should undertake a security assessment looking at all the various aspects of security considerations for ERP. They should work with experts to define the security posture and remediation work necessary to protect the organization's assets.

This remediation work can help companies adopt higher levels of security controls, going well beyond the traditional roles and authorizations often associated with ERP implementations. It can also extend ERP considerations to include a broader set of security activities, such as penetration testing and intrusion detection, to mitigate any unethical actions taking place inside or outside of the organization.

03

Global fissures are further isolating data silos.

The more disaggregated businesses become in response to new business models or threat mitigation strategies, the more instances a business might have. This can increase the need for a single-pane-of-glass view of financial performance and insights. Using targeted ERP solutions, such as SAP Central Finance (cFIN), can both enable compliance reporting and provide the insights the business needs. cFIN is well suited for companies with many instances, especially if they are different product versions or software solutions.

However, the challenge with cFIN is that it's based on extracting or replicating data from the underlying source, which defeats the purpose of restricting data access by country. Hence, some system integrators have developed compliant solutions, such as cFIN "lite," that pull trial balance information only or use data virtualization capabilities that leave the data at rest. These solutions should be adopted as part of the overall revision of the instance strategy to help ensure that the business can record the results of consolidated global operations.

04

Shifting regulations make flexible data structures absolutely essential.

As risks stack up, ERP solutions must be flexible enough to withstand continuous business model shifts, whether these are driven by strategy or demanded by geopolitical challenges.

Many companies are adapting by taking a page from the public sector playbook. Public organizations classify data subject to its value and risk, reflecting the sensitivity and confidentiality of the information. Their rules are designed to manage change, not to maintain the status quo. As private industries embrace these practices, they're putting a premium on data flexibility. They're adopting open standards and shared definitions that make it easier to identify, classify, and report on data quickly, as needs change.

05

Destabilization demands decentralization.

Today, there are ERP solutions that balance the business need for agility and differentiation with the IT need for standardization. Too often in the past, differentiation was built into the ERP core. This was fine at the time, but over the years, many systems have become bottlenecks to change. Therefore, companies need to redistribute what they do in their ERP solution and what they do using other capabilities. This is the generally accepted "clean core" approach.

So, how does this apply to the instance strategy debate?

There have always been parts of each business that are "different." Their local practices are so complex that it would seem illogical to build them into the common backbone. Likewise, process differentiation often abounds across the business. This is how many leaders justify more local systems, with some companies having upward of 100 ERP instances.

Businesses applying a more mature technology capability have the potential to simplify their instances while still staying nimble at the local level (see "Global CPG" case study on page 13). The emergence of business platform capabilities from cloud providers allows leaders to reassess the role of ERP solutions, as well as how they are engineered. Defining key architectural principles lets them rethink how the complexity of this localization rationale can be mitigated with technology.

Forcing ERP structures to keep pace with geopolitical change

In an uncertain geopolitical environment, businesses need ERP structures that support the business strategy rather than constrain it.

Keeping the ERP solution as the common backbone and moving local differentiation toward more cloud-native (custom or standard) applications provides a new basis for assessing both how companies implement ERP solutions and how they can reduce the number of logical systems that are needed.

Many companies are also turning classical or manual processes into digitized operations. Creating a digital twin of a business process, also known as an intelligent workflow, allows them to separate the process from the underlying ERP system.

Leveraging next-gen technologies lets leaders determine how and where to create solutions that can meet the business requirements and create local variations, rules, and solutions as needed. Rather than rendering a monolithic application, they are using ERP standardization, differentiation at the edge, and an adaptive architecture that is unconstrained by classical engineering practice to stay agile in the face of change.

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Global professional services firm finds stable ground through ERP flexibility

When geopolitical conflicts put business continuity at risk, companies must often reassess their global operations. IBM recently partnered with a global professional services firm in this position. The company needed to understand the impact of increasingly restrictive data regulations in Asia and the war in Ukraine on its business.

Leaders were particularly concerned about regulatory pressures related to data access and what these changes meant for the company's global ERP instance strategy. However, not every industry is seen as having the same level of state-assessed data risk. So, IBM's first step was to explore the context and application of the regulations in question.

IBM then worked with the company to define the implications for its instance strategies, ranging from adding more instances to replacing SAP with country-specific applications. The IBM team looked not only through the lens of continuous transactional execution, but also considered how to retain the integrity of the group financials, budgetary planning, and financial analytics.

The ability to highlight the data residency implications, integrate local and global activities, and define the options—including the cost and how the system could be designed and built to facilitate overall business continuity—inspired this company to put its faith in IBM to navigate the emerging geopolitical challenges facing its global operations.

Global CPG company balances complexity and cost efficiency with cloud-native solutions

Many global companies make decisions locally, giving the leaders running the business authority to respond to crisis and change. Highly federated businesses have the flexibility to react quickly, but decentralization also comes with its own costs. IBM recently partnered with a global consumer packaged goods (CPG) company that was struggling with this trade-off.

To enable local management, the company was operating more than 40 ERP systems. However, instance proliferation had resulted in poor global process adoption and increased total cost of ownership (TCO), while also lengthening the time required to implement business model changes or adopt new innovations.

IBM worked with the company to apply the digital twin approach, enabling the separation of process and system, and to determine the right application platform for the right capability. This also enabled the company to differentiate itself with cloud-native applications versus hard-coding in ERP, defining an architecture that caters to both differentiation and continuous adaptability.

Together, IBM and the CPG company are designing and building new ERP solutions for the modern enterprise. They are applying the latest technology to redefine how and where a company executes process activities.

Decision and action points

In a year characterized by crisis and change, global businesses are struggling to mitigate the exposure risk created by political conflicts, resource and labor scarcity, and shifting data privacy regulations.

Rethinking how they structure their ERP solutions allows them to react faster to disruptive events. Here are five steps executives can take to assess their ERP strategy and build a system that boosts responsiveness and resilience across the business.

01 Assess exposure risk, especially in geopolitical hot spots.

Document where sensitive data lives and how it flows across the organization and through the ecosystem. Define the approaches that comply with local regulations while retaining the data integrity needed for fiscal and management reporting. Create proper data security and governance processes that are prioritized according to the level of country risk.

02 Future-proof the business by building flexibility into operations.

Make sure the logical design of the system aligns with the way the business functions. Assess the structure of the business and whether a global or distributed instance strategy is most appropriate. Build in ERP and data security flexibility for country-specific contingencies and regional supply chain shocks.

03 Get business and IT on the same page with scenario planning.

Identify where ERP fits into the business strategy and technology landscape in a range of disruptive scenarios. Determine how flexible and reactive the business needs to be based on its structure, strategy, and footprint. Define three or four potential ERP end-state structures based on the strategic priorities shared across most or all potential outcomes.

04 Learn from the past to pave a better path forward.

Diagnose how past geopolitical events shaped your company's current business strategy, IT investments, and ERP structures. Assess where you want the company to be in five to eight years. Make sure the ERP is structured in a way that supports this vision as the business evolves.

05 Embrace security-first, cloud-native ERP solutions.

Evaluate the current ERP landscape and architecture with an eye toward simplification. Set the scope of the "core" ERP and determine where cloud-native extensions can help localize aspects of resource management for global companies that use a single ERP instance covering potentially problematic regions. Identify where additional security enhancements could help protect critical data and help manage regulatory requirements.

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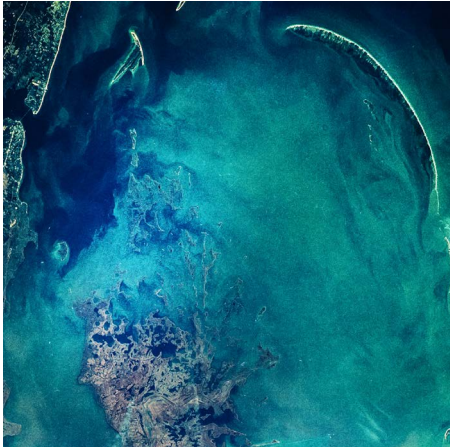
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