



LIBERATING ERP DATA

Unleashing the Power of your
Enterprise Data



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In today's business landscape, Enterprise Resource Planning (ERP) systems and other business applications have become integral to organisations of all sizes, serving as the primary system of record for critical business transactions and financial records. However, despite being commonplace, extracting and sharing data from ERP systems can often prove more challenging than it should be. In this article we will explore what drives the need to liberate ERP data, why it can be difficult, and discuss approaches and tools that simplify the process, enabling organisations to unlock the true potential of their data.

PUTTING ERP DATA TO BETTER USE

ERP systems are used by organisations to manage a wide range of business processes including finance, inventory management, production, sales, and purchasing. While many organisations have chosen to maximise the footprint of their core ERP systems and adopted other offerings by their ERP vendor of choice, more and more businesses chose to go down a more heterogeneous approach, complimenting their ERP with a mixture of best-of-breed and custom applications, and using external data platforms for enhanced reporting, and analytics, as well as to leverage advanced data science and intelligent technologies.

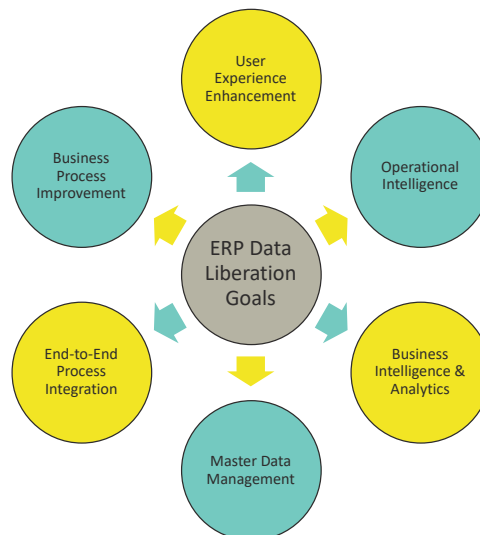


Figure 1. Goals Driving ERP Data Liberation

While these modern application, technology, and data landscapes are architected to improve business performance, they do lead to additional data and integration requirements that need to be addressed, making the liberation of ERP data even more vital to enable:



1. **End-to-End Process Integration:** Seamlessly integrating data between multiple applications is crucial for efficient business processes. Moving data into and out of ERP systems facilitates smooth information flow, enabling enhanced collaboration and streamlined workflows. While many still rely on point-to-point interfaces, middleware, and integration platforms are becoming more of a "go-to" when it comes to end-to-end, application-to-application/application-to-other party integration.
2. **User Experience Enhancement:** Simplifying transaction processing and data entry is essential for a positive user experience. Liberating ERP data allows organisations to leverage user experience applications, creating intuitive interfaces that reduce manual effort and improve productivity. ERP systems are not often known for their elegant user interface (UI), increasingly organisations are choosing to build simplified UIs to improve user experience and deliver company-specific processes.
3. **Master Data Management:** Synchronised and accurate master data is vital for maintaining consistency across systems. Being able to access and integrate data from ERP systems supports seamless master data management, ensuring up-to-date information throughout the organisation.
4. **Operational Intelligence:** Real-time operational intelligence empowers data-driven decision-making. Accessing and analysing ERP data provides valuable insights into day-to-day operations and helps to determine "next best actions" to drive efficiency and growth.
5. **Business Intelligence and Analytics:** Extracting data from ERP systems and moving it to robust reporting and analytics platforms enables organisations to leverage data-driven insights. Advanced analytics tools help uncover trends, identify opportunities, and optimise operations.
6. **Business Process Improvement:** Process mining and discovery tools can utilise log files and analysis of on-screen activities to automatically discover and visualise end-to-end processes; identify bottlenecks, and inefficiencies, suggesting improvement and automation opportunities.

CHALLENGES OF LIBERATING ERP DATA

So, if data from your ERP systems can be so valuable, why can it be difficult to make it available outside of the ERP environment itself, and why do so many organisations resort to basic extracts to spreadsheets to get at the information they need?



Challenge	Problem	Points to Consider
Complex Data Models	ERP systems handle interconnected business processes with intricate data structures.	Extracting raw data at the table level may not be practical. Context and intact business logic are essential to liberate data effectively.
Integration Hurdles	ERP systems often operate in silos, making data integration complex and time-consuming. Mapping and transforming data between systems require significant effort.	While open integration standards, and web services have improved integration, technical expertise is still required.
Technical Expertise	Extracting data from ERP systems demands programming languages, integration tools, and database management knowledge. Non-technical users may struggle with effective data usage.	Low code/no code tools and data integration platforms can reduce the dependency on technical resources.
Limited Access & Permissions	ERP systems enforce security controls, limiting access and permissions based on roles.	Establishing appropriate profiles and adhering to security governance are additional considerations, even for automated integrations.
Data Quality Issues	ERP data may contain missing, incomplete, or inconsistent information, leading to integration errors.	Streamlining data entry and utilising tools for managing data quality reduce these issues.
Commercial & Licensing Challenges	Integrating or extracting ERP data can introduce licensing complexities. Failure to comply can have legal and financial consequences.	Organisations must comply with licensing agreements and consider additional costs for custom APIs or 3 rd Party tools. Understanding licensing implications is crucial for data liberation.

Table 1: Challenges and Considerations



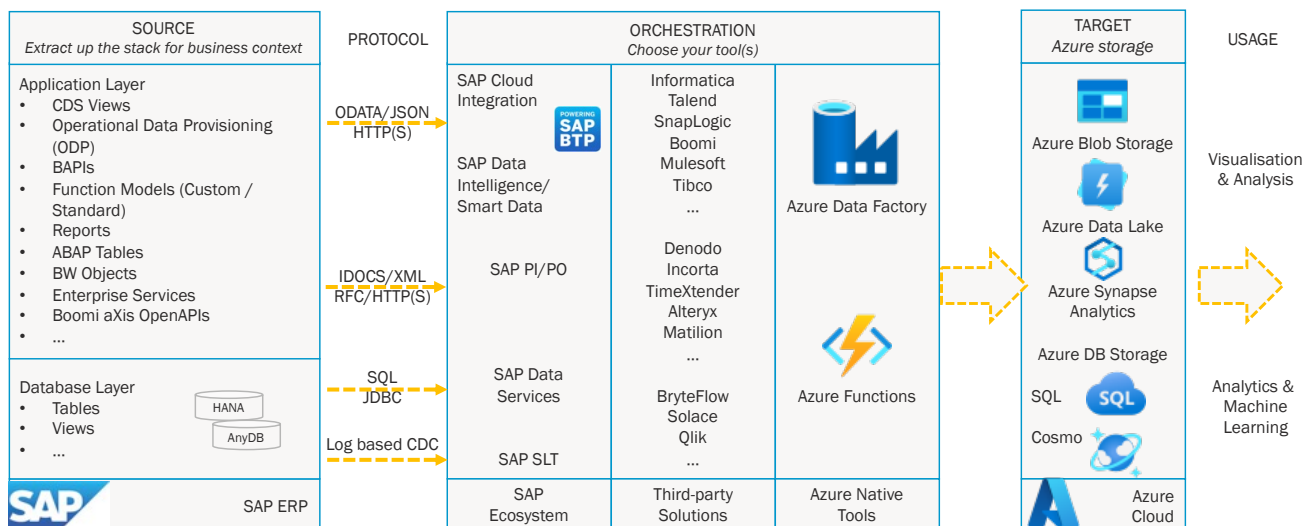
LIBERATING DATA AND NAVIGATING COMPLEXITY

When it comes to overcoming these complexities and gaining better access to your ERP data, there are choices – so many choices it can be a bit daunting. Three principal approaches should be considered: vendor native/proprietary tools, third-party partner tools, or a combination.

Most modern ERP platforms offer both proprietary and open methods to handle integration, providing flexibility and options for organisations based on their specific requirements, preferences, and constraints. The specific integration methods available will vary depending on the product version, deployment model (on-premise or cloud), and individual licensing arrangements. Organisations should choose the data liberation and integration approach that best suits their needs, whether it's leveraging the ERP vendor's proprietary tools, utilising open integration standards, or employing partner solutions.

As an example, let's consider what's available if your ERP system is SAP, you have various other non-SAP applications and you have chosen Azure to be your data platform of choice.

The following diagram illustrates the many options and choices that exist at either end, from the SAP ERP source to an Azure data platform, with the orchestration options depending on the use case. Similar pictures would exist if your choice of cloud data platform was AWS or Google Cloud (GCP).



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Note: many are also adding Snowflake & Databricks into the mix

Figure 2: Options for extracting, integrating & interacting with SAP data with Azure

In addition to considering the use cases, which dictate the integration and orchestration requirements, other influencing factors include:

- Recommended best practice – just because a particular solution choice could work, does not necessarily mean it's a good choice!
- Product compatibility, pre-built connectors, adapters, and pre-built integrations – being able to access pre-built content that removes some of the “heavy lifting” always seems attractive (see caution in next point)
- Source ERP system customisation – if your ERP system has been heavily customised, then the value of pre-built, standard connectors may be diminished;
- Depth of technical expertise – not all methods are equal when it comes to the level of technical expertise required to build and implement data integrations. Some native tools can be technically onerous, and if the organisation lacks experience it may be more desirable to embrace low-code/no-code productivity tools;
- Commercial and financial considerations – many choices will require specific licensing whether that's to access tools/products that the ERP vendor considers as “extra” or for choosing to use 3rd party partner products. In addition, existing licensing arrangements may already include options that would effectively be “zero” cost because the license investment has already been made;
- Familiarity and learning curve – If your organisation or staff are already using particular systems or tools, or have experience from other organisations, there may be advantages of sticking with the familiar, which can ease learning for your team and reduce the learning curve. However, this should not be at the expense of meeting the overarching requirements
- Community and support, - including the availability of training, it's important to have access to active user communities and support networks that can provide assistance, best practices, and resources to help with integration challenges.



VALUE ADDING PARTNERSHIPS

In addition to being able to advise on and deliver solutions using native SAP and Microsoft technologies, Kompozable has forged relationships with several commercial tools vendors to simplify the ERP data liberation process.

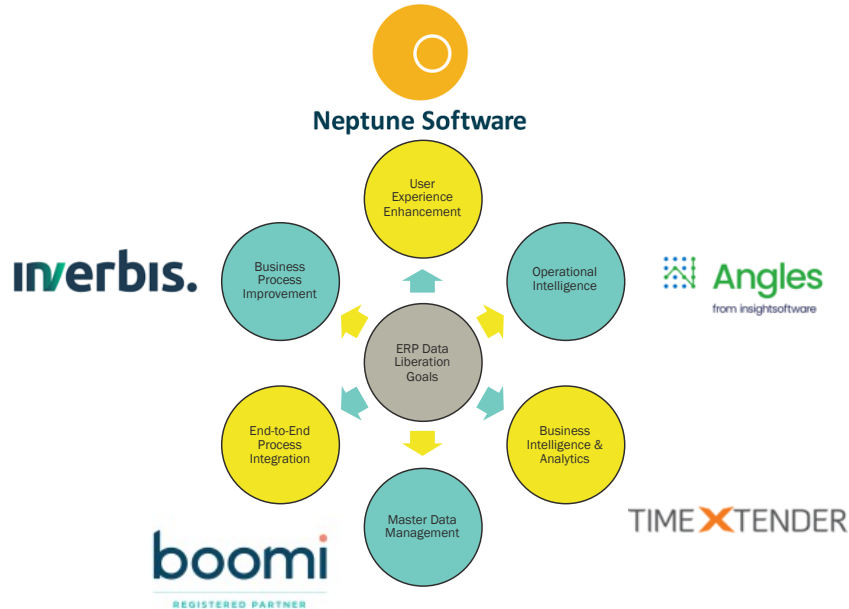






Figure 3: Partners with Tools to help ERP Data Liberation

- **Boomi and Boomi aXis for SAP:** These tools enable organisations to build and consume custom APIs, facilitating seamless integration and data extraction from ERP systems. As an integration platform (iPaaS) Boomi provides full middleware capabilities, with standard connectors to various applications and data technologies, as well as its Master Data Hub for more effective cross-application master data management.
- **Neptune Software:** Offering a powerful platform to build usability and mobile applications on top of SAP and other vendors' applications, Neptune Software streamlines the process of connecting to underlying SAP and other applications' data, while providing the ability to develop mobile and desktop applications that enhance user experience.
- **Insight Software's Angles for SAP:** With a particular focus on Supply Chain, Operations, and Finance, Angles provides operational intelligence capabilities, enabling businesses to transform raw ERP data into actionable insights, driving operational excellence.
- **TimeXtender for Azure Data Pipeline Automation:** By automating the data pipeline on the Azure platform, TimeXtender simplifies the extraction and preparation of ERP data for reporting and analytics, saving time and effort.
- **Inverbis:** Inverbis is a process mining and discovery tool that enhances the liberation of data from ERP systems like SAP. It analyses event logs to uncover process inefficiencies and opportunities for improvement. By incorporating Inverbis into the data liberation process, organisations can optimise their processes and make informed improvement decisions based on actionable insights.



THE BENEFITS OF LIBERATING ERP DATA

Liberating ERP data through whichever choice of tools offers numerous advantages:

	<p>Enhanced Efficiency</p> <ul style="list-style-type: none"> • Streamlining data extraction processes saves time and effort, allowing employees to focus on value-added tasks rather than manual data retrieval
	<p>Improved Decision-Making</p> <ul style="list-style-type: none"> • Access to accurate and timely data empowers organizations to make informed decisions, fostering agility and responsiveness in a dynamic business environment.
	<p>Optimised Operations</p> <ul style="list-style-type: none"> • Leveraging operational intelligence and analytics tools on liberated ERP data enables businesses to take next-best actions, identify bottlenecks, optimize processes, and drive continuous improvement.
	<p>Seamless Integration</p> <ul style="list-style-type: none"> • Extracting data from ERP systems enables seamless integration with other applications, fostering collaboration and enabling end-to-end process automation.

CALL TO ACTION

At Kompozable, we understand the challenges businesses face when it comes to liberating ERP data. We specialise in helping organisations unlock the full potential of their data; to successfully exploit data, integration, automation, and intelligent technologies so they can thrive in the digital economy.

Contact us today or sign up for one of our opportunity discovery workshops to explore how we can help your organisation to harness the power of liberated ERP data.

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