



From Data to Decisions: How ERP-Embedded AI/ML Makes Predictive Insights Accessible



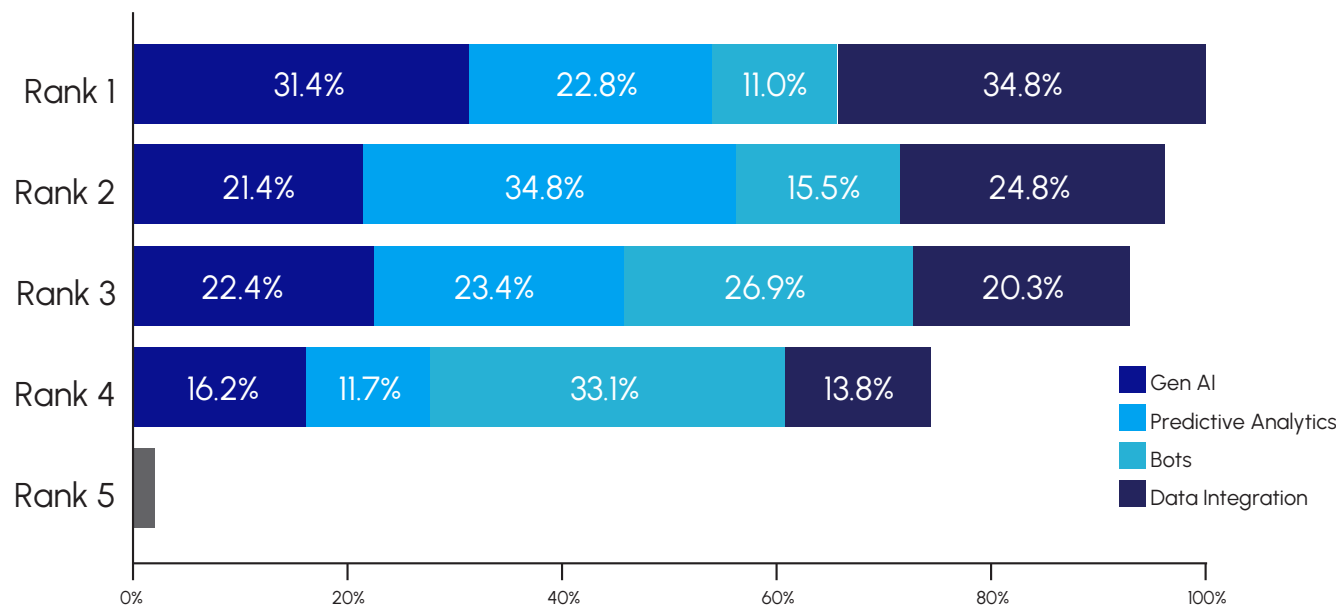
Introduction: Data as the Fuel for Modern Organizations

Today's business environment is constantly and quickly evolving, with an increasing demand from business leaders and other stakeholders for better visibility across all facets of the organization, and a requirement to leverage data across nearly every internal and external business function.

A key factor driving more visibility and accessibility of data is the growing demand for generative AI functionality among nearly every size and type of business, given its potential to help drive more productivity and efficiency across a wide range of use cases, not to mention supporting a better experience for workers and customers alike.

Indeed, based on a Futurum Research survey of IT decision makers conducted in June 2025, generative AI was found to be highly prioritized by IT buyers, particularly among mid-market organizations.

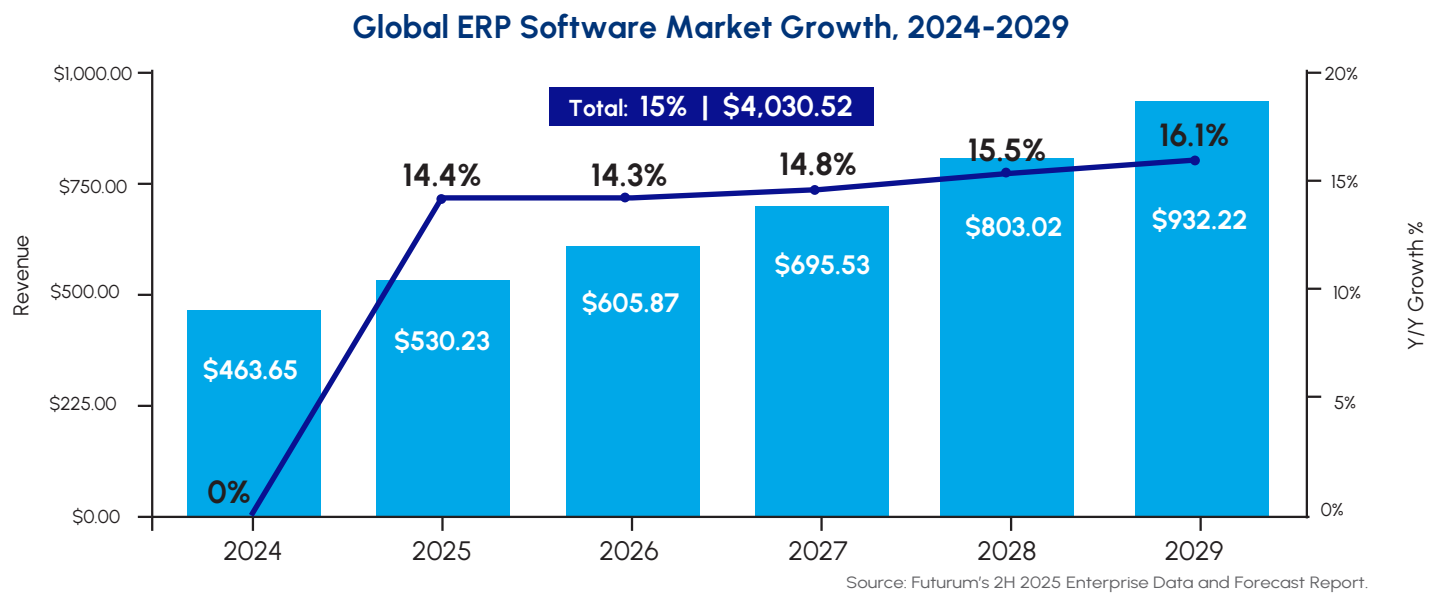
Top Technology Priorities, Small and Mid-Market Organizations (N=298)



Source: Futurum's 2H 2025 Enterprise Software Decision Maker Report, July 2025

That said, complementary technologies, including predictive analytics, automation (through bots), and the ability to efficiently integrate data are also critically important priorities for organizations. This portends a need for a powerful and interconnected ERP that can serve as a single source of truth for the organization that unifies its data across core and critical applications, processes, and workflows.

In fact, the demand for integrated and modern ERP systems has never been stronger, with the market for ERP software projected to reach \$92.3 billion in annual revenue by 2029, reflecting a 15% compound annual growth rate between 2024 and 2029, according to Futurum's 2H 2025 Enterprise Data and Forecast Report.



A modern ERP should be designed to surface insights quickly and facilitate real-time decision-making, instead of simply serving as an organizational system of record. As a nimble, connected platform, a modern, cloud-based ERP allows companies to not only catalog transactions and track historical performance, but also analyze patterns, anticipate trends, and trigger automated responses. By leveraging actionable intelligence, businesses can proactively respond to market fluctuations, optimize resource allocation, and enhance customer engagements. This convergence of data capture and strategic action grants enterprises the agility needed to outperform competitors and adapt to unforeseen disruptions.

There is also significant opportunity for vendors that target mid-market companies. According to Futurum's 2H 2025 Enterprise Software Decision Maker survey of 298 respondents, just 39.6% of respondents from small and mid-market companies indicated they currently are using an ERP system.

Unlike large enterprises with extensive IT infrastructure and dedicated analytics teams, medium-sized distributors and manufacturers often grapple with disparate legacy systems, siloed data sources, and resource constraints, making data aggregation and standardization a formidable task. Inconsistent data formats, manual processes, and limited IT bandwidth can impede the flow of timely insights, delaying critical decisions and obscuring growth opportunities. Overcoming these obstacles necessitates a modern, integrated enterprise resource planning (ERP) platform that unifies data sources, automates data cleansing, and offers intuitive interfaces to bridge the gap between raw information and meaningful analysis.

Decision-makers are now realizing that legacy, on-premise solutions often struggle to keep pace with the need for rapid innovation, due to the lack of flexibility and inability to easily incorporate new features quickly. By contrast, cloud-native ERP platforms can offer end-to-end visibility across finance, operations, supply chain, and customer engagement, all within a single user experience, and can be updated periodically to take advantage of the latest technological innovations.

Moreover, by consolidating disparate functions and new technology such as AI into one cohesive, cloud-based system, organizations can eliminate inter-departmental friction, reduce the total cost of ownership, and accelerate time to value with its technology investment. This confluence of strong buyer demand and enhanced vendor capabilities creates an opportune moment to embed next-generation analytics, AI, and machine learning directly into the core ERP platform.



Data Cleansing and Governance

Centralized data management is the foundation upon which any organization's effort to establish a reliable single source of truth must be built. This unified data source, which consolidates all transactional, operational, or analytical data into an authoritative data repository, ensures that every stakeholder is working utilizing the same up-to-date information. This not only reduces the risk of conflicting analyses but also accelerates decision-making, and will thus enable the use of advanced analytics, machine learning, and other AI techniques.

However, achieving that unified view is rarely straightforward, especially when an organization relies on myriad internal and external data sources. Disparate systems, including CRM platforms, department-specific applications, third-party APIs, and IoT sensors, often capture information in a variety of formats, frequencies, and quality levels. Internal silos can emerge when different departments adopt point solutions without coordination, while external feeds may arrive through unpredictable channels or in proprietary data schemas. Reconciling these inconsistencies demands not only technical effort but also strong cross-functional governance to align on definitions, ownership, and data lifecycle policies.

Data mapping and integration from legacy systems pose further issues. Many enterprises continue to leverage mission critical applications built decades ago, whose data models no longer mirror today's business processes, in an effort to reduce software acquisition costs. However, in order to extract and translate records stored in these systems for use by other applications, it is necessary to reverse-engineer poorly documented schemas, apply transformation logic to reframe codes and hierarchies, and set up automated ingestion pipelines capable of handling both batch and real-time updates.

Middleware solutions, such as enterprise service buses or modern integration platforms as a service (iPaaS), can often play a pivotal role in orchestrating these flows, but successful implementation hinges on close collaboration between IT, data engineering, and the business units that best understand the legacy context.

Once data is ingested, harmonizing and cleansing it across multiple sources is essential to unlock consistent analysis and activation. This involves de-duplicating records, enforcing standardized data formats, and applying business rules to ensure the data can be used by the target application.

Using data quality frameworks—which include profiling, anomaly detection, and feedback loops—can help ensure that issues are caught early and remediated before they propagate downstream.

While these processes require time and labor investments, the rise of visual data tools and no-code data pipelines has made it easier for organizations to connect, store, prepare, and visualize information from both internal systems and external sources. Business users can now drag and drop connectors to CRMs, data warehouses, third-party APIs, and file repositories, mapping fields and defining transformation rules without writing SQL or Python code.

Built-in profiling dashboards can immediately flag schema mismatches or missing values, while live previews allow teams to iterate on cleaning steps with instant feedback. Once the data flows are defined, visual dashboards are automatically updated, providing stakeholders with up-to-the-minute views of key metrics without waiting on IT or data engineering.

Ultimately, clean, integrated datasets not only improve the accuracy of analytics and machine-learning models but also make it easier to operationalize insights in areas such as personalized marketing, dynamic pricing, or automated supply-chain adjustments.

Notably, robust compliance and security are crucial for data governance. Centralized data is vulnerable, necessitating the use of role-based access, encryption, and audit logging. Adherence to regulations such as GDPR, CCPA, and HIPAA, including consent and data retention, mitigates risk and fosters trust, enabling wider data sharing and innovation.

Leveraging AI and ML Within ERP Applications

Once data sources have been cleaned, harmonized, and made accessible, predictive modeling and advanced analytics can serve as a catalyst in elevating both data quality and customer experiences. By analyzing historical transaction records, customer interactions, and behavioral patterns, organizations can identify inconsistencies, outliers, and gaps in their data, enabling targeted cleansing and data-enrichment efforts.

AI and ML models can forecast customer needs, anticipate customer churn risk, predict lifetime value, or suggest next-best actions, based on detailed data. This allows businesses to tailor communications and extend offers in real time. Advanced AI and ML models can also leverage sales order history and customer data to drive intelligent recommendations and cross-sell opportunities. Collaborative filtering and content-based algorithms are capable of analyzing patterns such as frequently paired items, purchase recency, and customer segments to suggest complementary products at the point of sale or via personalized email campaigns.

These systems continuously learn from new transactions, refining their suggestions to reflect shifting trends or seasonal demand. The net result is a continuous cycle of improvement: cleaner, more reliable data fuels better predictions, and those insights drive personalized experiences that deepen loyalty, boost satisfaction, and fuel better insights for follow-on marketing and sales efforts.

Inventory management can also benefit from the use of predictive analytics and ML. By ingesting real-time sales data, supplier lead times, and external demand indicators, such as market trends or weather forecasts, models can forecast stock requirements with greater accuracy than simply using rule-based reorder points. This not only minimizes stockouts and overstock scenarios, freeing up working capital, but can also help planners visualize projected inventory curves and simulate "what-if" scenarios, enabling timely responses to supply chain disruptions or sudden shifts in consumer demand.

Financial planning and analysis (FP&A) functions are also being transformed by AI-driven insights. Instead of relying solely on static spreadsheets, finance teams can deploy predictive models that incorporate transactional data, market indicators, and even social media sentiment to project revenue, cash flow, and expense trends. Natural language interfaces allow non-technical users to query the data conversationally and generate dynamic visualizations in seconds.

These capabilities form an integrated ecosystem in which high-quality, harmonized data feeds AI-powered recommendations, operational forecasts, and financial scenarios. Organizations that invest in predictive analytics, no-code pipelines, and intelligent data governance not only reduce manual overhead and error rates, but also unlock new insights for personalized customer engagement, supply-chain resilience, and strategic decision-making. In an era where data volume and complexity continue to grow, these technologies are no longer optional but essential tools for ensuring competitive differentiation and sustainable growth.



How AI and ML Can Improve Productivity, Efficiency, and CX for Distributors and Manufacturers

Optimizing inventory levels and reducing carrying costs are imperatives for distributors and manufacturers alike. By leveraging demand forecasting algorithms within a modern ERP, organizations can more accurately predict future sales patterns and adjust stock-management parameters accordingly. Just-in-time replenishment strategies, supported by real-time visibility for warehouse and in-transit inventory, can also minimize excess stock while adhering to service-level agreements. Automated reorder points, based on lead times and seasonal variability, can further reduce manual work and errors.

In addition, using machine learning to provide personalized product recommendations can transform a traditional, static, and one-way buying journey into a highly targeted and personalized engagement. Modern ERP systems embedded with machine learning and AI can analyze purchase history, browsing behavior, and market trends to suggest complementary or substitute products at the point of sale. This not only drives more relevant upsells and cross-sells but also builds loyalty by demonstrating a better understanding of customer needs. The net effect is higher average order values, improved customer satisfaction scores, and a more robust competitive position.

Streamlining order processing and fulfillment centers can be achieved through the automation of each step along the journey, from order capture to delivery confirmation. Integrated ERP modules can route orders automatically to the appropriate warehouse or production line based on inventory availability, location, and delivery windows.

Meanwhile, warehouse management systems (WMS) can be connected to an ERP system that optimizes picking routes, batches similar orders, and orchestrates packaging to reduce labor costs and speed throughput. Real-time shipment tracking, communicated directly to customers, enhances transparency and reduces customer service inquiries.

The automation of these processes, along with the generation of data at each step, enables companies to achieve faster cycle times, fewer errors, and a more agile fulfillment operational posture.

Administering Pricing Through Integrated AI

Similarly, optimizing pricing strategies based on market conditions demands tight integration between ERP, CRM, and external data feeds. Dynamic price-optimization engines can ingest competitor price lists, commodity indices, and supply-chain cost inputs to recommend optimal price points that balance margin preservation, revenue growth, and sales opportunities.

Promotional pricing, volume discounts, and contract-specific rates should be managed within one central system, such as the ERP, thereby ensuring consistency across channels. Continuous monitoring of margin performance against targets allows rapid adjustments in response to cost fluctuations or competitive actions. The result is a more responsive pricing process that maximizes profitability without sacrificing customer satisfaction.

Managing Tariffs and International Trade Complexities

In light of the policy changes implemented by the current US administration, active management of tariffs is key to organizations with international operations or supply chains. An ERP with embedded trade compliance modules automates the classification of goods using updated Harmonized System (HS) codes, calculates duties and taxes in real time, and flags potential regulatory issues before shipment.

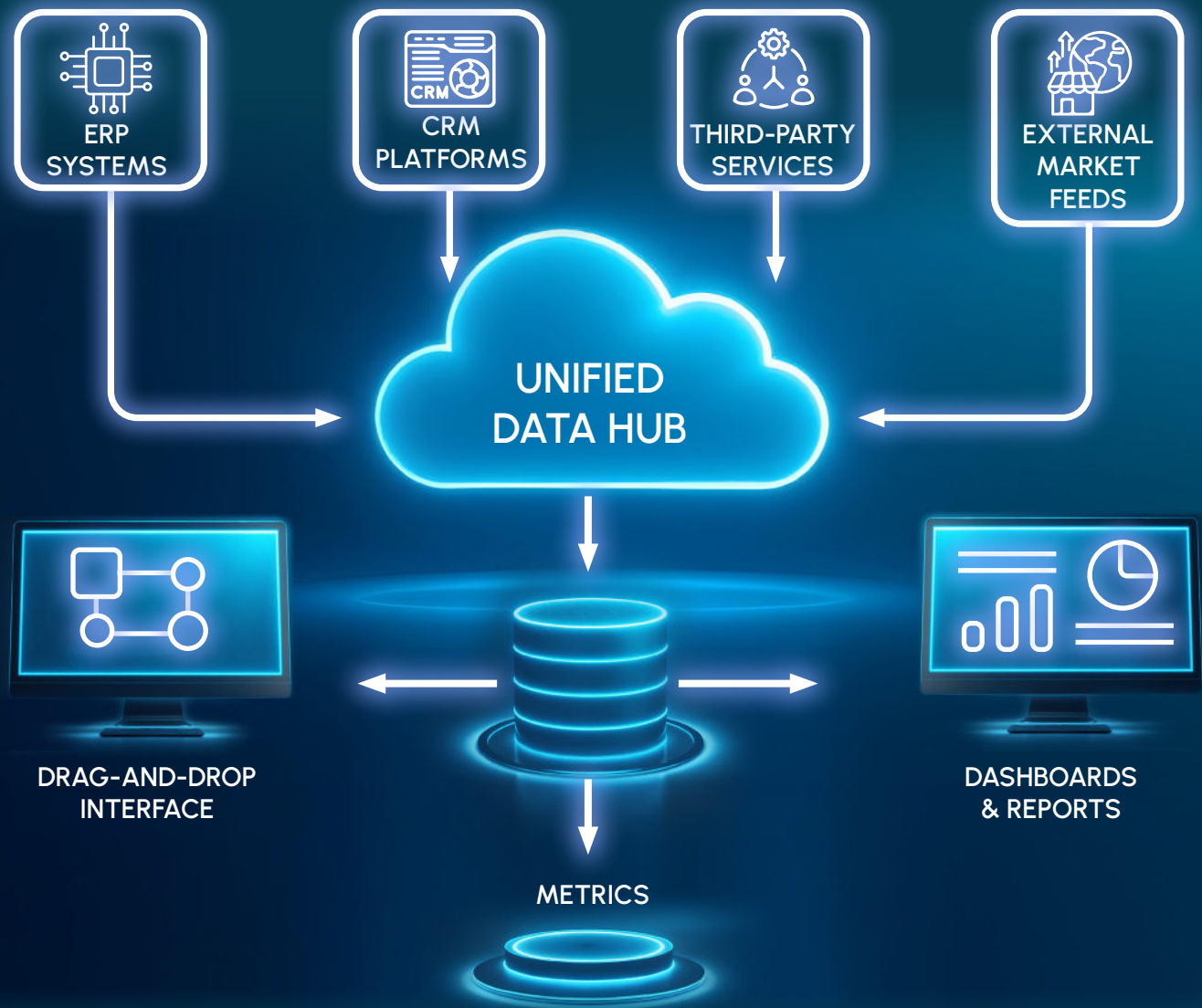
The use of automated documentation generation for commercial invoices, certificates of origin, and bonded-warehouse forms can also reduce administrative burden. This capability not only mitigates risk of fines and delays at customs but also uncovers cost-saving opportunities through duty optimization.

Monitoring and Managing Quality Control Procedures

Quality control and defect prediction can leverage statistical process control (SPC) and machine-learning classification models within an ERP's quality module. Using inspection data, either from in-line sensors or via manual audits, dashboards can be used to monitor and highlight deviations from specification limits.

Predictive analytics can identify patterns correlating raw-material batches, machine settings, or environmental factors with defect rates, which can be used to prompt root-cause investigations. Some ERPs will also provide automated quality-alert workflows that trigger corrective actions and supplier notifications before defective products reach customers. The embedding of these capabilities ensures continuous quality improvement, lowers return and rework costs, and reinforces the reputation for reliability that drives customer loyalty.

Unlocking Value Across the Supply Chain Through Epicor's Grow Data Platform



Bringing internal and external data together into a centralized unified data hub ensures that critical business metrics remain current and reliable for decision-makers. By consolidating data from ERP systems, CRM platforms, third-party services, and external market feeds into one central repository, organizations can eliminate the inconsistencies that arise from siloed reporting. This single source of truth underpins accurate performance monitoring, strategic planning, and operational responsiveness, enabling stakeholders at all levels to trust the numbers driving their decisions.

Epicor's No-Code, Interactive Pipeline Canvas empowers users to visually design, modify, and manage data pipelines without writing any code. Through a drag-and-drop interface, technical and business users can map data flows, apply transformations, and orchestrate integrations between legacy systems and modern applications. Instant previews and pipeline health indicators help teams iterate quickly, ensuring that data moves seamlessly from source to target with minimal IT intervention.

Low- and no-code tools in the Grow platform democratize data preparation by letting both technical specialists and business analysts connect, extract, clean, blend, filter, and store data in preparation for analysis. With pre-built connectors for over 150 platforms—ranging from Salesforce to Google Analytics—and built-in profiling dashboards, users can spot schema mismatches or data quality issues at a glance. These capabilities accelerate project kickoffs and reduce the backlog of requests to central IT, fostering a truly self-service analytics environment.

Grow also has a Custom REST API connector designed for users with technical expertise to seamlessly integrate nearly any data source into the Grow platform. This feature allows a connection to any system or service with an available REST API, pulling in data and warehousing it within Grow. By automating this data import on a schedule, datasets remain up-to-date, providing a continuous flow of information that is vital for real-time analysis and decision-making.

The Custom REST API connector bridges the gap between specialized data sources and the broader, no-code capabilities of Grow. It empowers teams to centralize and manage diverse data streams in one place without needing to rely on separate platforms or manual data entry. This integration not only saves time but also enhances the accuracy and reliability of the insights generated. Ultimately, it allows organizations to make informed decisions faster, leveraging all available data to drive growth and stay ahead in a competitive landscape.

To keep insights fresh, pipelines and reports can be scheduled to run automatically, delivering near-real-time data updates whether you're on the plant floor or in the boardroom. With automated refresh intervals and email-delivery workflows, teams always have the latest dashboards and alerts at their fingertips. This continuous delivery model minimizes stale data risks and ensures that urgent opportunities or anomalies are surfaced quickly.

The Grow BI layer provides a comprehensive set of low-code/no-code dashboards and visualizations that are designed to allow users to explore data on their own terms. End users can slice by parameters, drill into raw

records, or summarize into high-level KPIs via simple clicks, without needing to learn SQL or scripting languages. Interactive filtering and drill-down features make it easy to uncover root causes and monitor trends in real time.

Built on an enterprise-grade architecture, the platform processes large volumes of data through interactive pipelines and visual cues that surface data quality issues before they propagate downstream. This scalable design removes traditional performance bottlenecks, allowing organizations to ingest, transform, and serve terabytes of data without compromise. The resulting data readiness lays the groundwork for high-value AI and advanced analytics initiatives, ensuring that predictive models are trained on the cleanest, most representative datasets.

Security and governance are foundational to the Grow Data Platform. As an SOC II-compliant solution, Grow enforces full data encryption at rest and in transit, alongside advanced, role-based permission levels. Administrators can define fine-grained access controls, audit user activities, and ensure that sensitive information is only visible to authorized stakeholders, meeting both internal policies and external regulatory mandates.

Sharing insights widely is seamless: users can distribute scheduled email deliveries of reports, display dashboards in TV-mode for team visibility, generate public URLs, or post key metrics directly to Slack and Epicor Collaborate. These channels ensure that the right people see the right information at the right time, eliminating communication barriers and embedding data into everyday workflows.

Finally, the Grow Data Platform feeds directly into Epicor Grow AI and Epicor Prism for advanced predictive analytics and natural-language inquiries. With more than 200 industry-specific AI use cases tailored to manufacturing, distribution, and retail workflows, organizations can automate forecasts, receive prescriptive recommendations, and interact with their data conversationally. This seamless integration from data ingestion to AI-driven insight completes the modern data lifecycle, transforming raw information into actionable intelligence at scale.



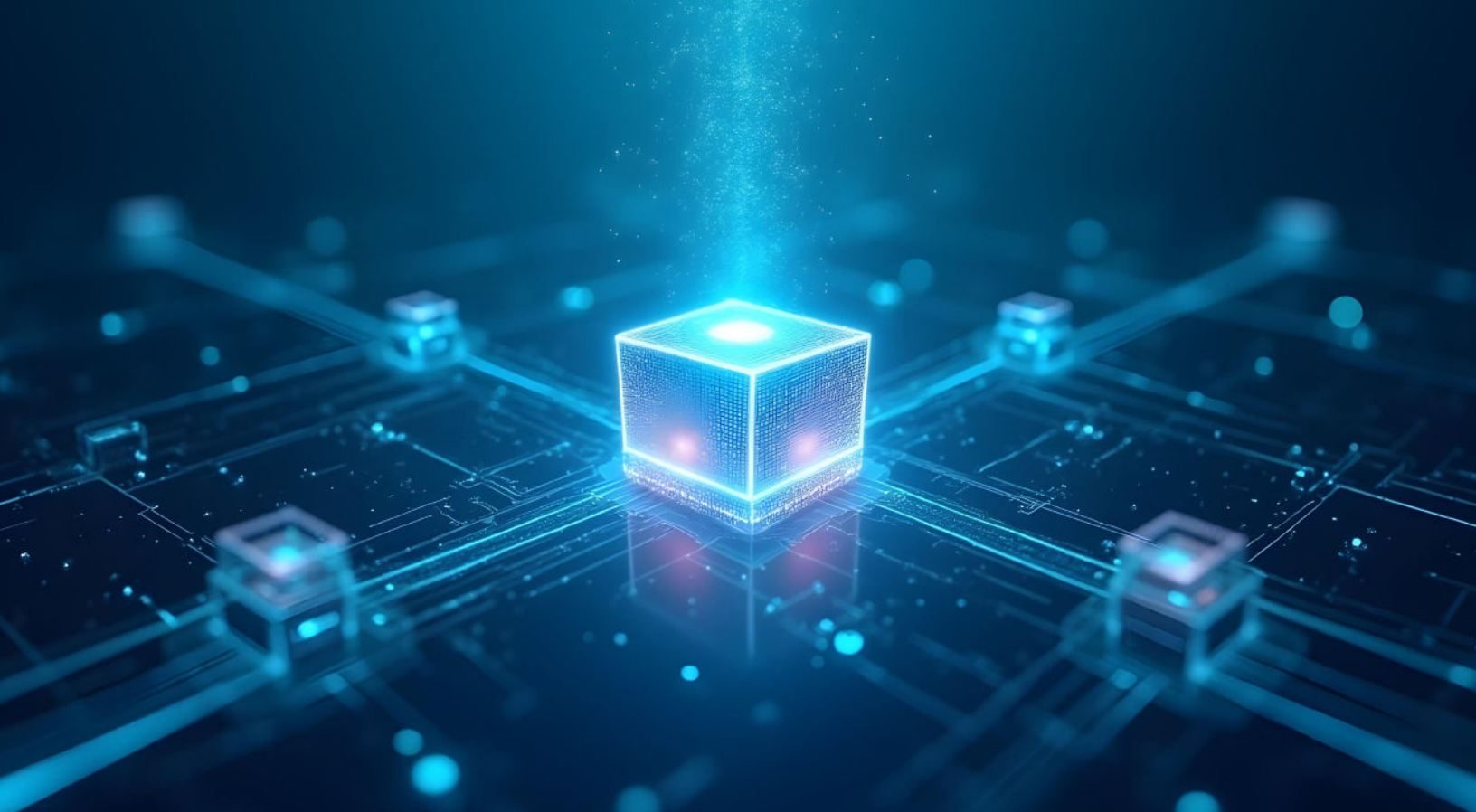
Reducing Time-to-Value Through Targeted Implementation Programs

Ascend with Epicor is a program designed to streamline an organization's journey from on-premises to cloud. Ascend with Epicor combines advanced tooling, best practices, and expert services to guide customers through every stage of their migration. From initial project scoping and automated, secure data conversion to configuration setup and contextual training, Ascend with Epicor is designed to reduce time and cost, enabling customers to modernize while reducing risk.

Ascend for Epicor is currently assisting On-Prem Epicor customers migrate to Epicor Industry Cloud. With help from Prism + Grow AI, it also will help non-Epicor ERP customers migrate from their ERP to Epicor Industry Cloud. In both cases, Prism's embedded AI capabilities will help both sets of customers migrate to Epicor Industry Cloud.

A key challenge is reducing the time and effort to accurately map data from legacy or third-party systems to Epicor. Within Grow Data Platform, Epicor is leveraging AI to bring in data from source tables, and then cast it to destination tables within Grow Data Platform by using Grow AI machine learning techniques, along with Prism AI (leveraging an LLM) to understand the semantic nature of data, label and classify it, and then ensure that it is properly mapped via data landing tables within Epicor Industry Cloud. This can save countless hours of manual work, while reducing variability and human error.

Epicor has also revamped its Analyzer tool with Prism AI capabilities which can be used to quickly assess the functions, alerts, directives, and business flows for the various dashboards and alerts and directives and business flows that have been set up inside of an environment. For example, when a user creates queries inside of an Epicor application, a Prism summary of exactly how it was built will be created, providing greater visibility into the query, how it was written, who has used it, and how it is being used. This can be particularly useful as queries are migrated from older versions of Epicor to the latest versions of Epicor.



Conclusion

Today's modern businesses increasingly require the use of trusted data to inform decisions across finance, supply chain, sales, and operations. That demand is being turbocharged by generative AI, which can support use cases for productivity, personalization, and automation. At the same time, complementary capabilities such as predictive analytics, automation, and robust integration remain critical. Utilized together they point to the need for a modern, connected ERP that functions as a single source of truth and the foundation for driving decisions and actions.

Delivering on that promise requires practical governance of AI models, and the challenging but essential tasks of careful mapping, cleansing, de-duplication, and secure, role-based access to harmonized datasets. Companies seeking to reduce the time-to-value of their AI investments should leverage their ERP vendor's no-code and low-code pipelines and visual tools to help business users to connect sources, profile data, and iterate on transformations without heavy IT intervention, while middleware and iPaaS approaches will help bridge legacy systems to modern cloud infrastructure and applications.

When these elements are combined with embedded AI/ML, organizations can better anticipate trends, automate routine decisions, and improve customer and employee experiences. The result is a powerful, flexible, and future-focused ERP system that can deliver efficiency and productivity improvements at scale, leading to better employee, customer, and partner experiences.

Important Information About This Report

AUTHORS

Keith Kirkpatrick

Research Director, Enterprise Software
& Digital Workflows | The Futurum Group

PUBLISHER

Futurum Research

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CONTACT INFORMATION: The Futurum Group LLC | futurumgroup.com | (833) 722-5337