

NUCLEUS
RESEARCH

TOP TEN PREDICTIONS FOR 2023

ANALYST

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THE BOTTOM LINE

With another year of uncertainty looming, Nucleus's top 10 predictions for 2023 look to rising and falling trends, particularly concerning shifting priorities. As end-user organizations further discern what parts of their technology stack actually deliver value, vendors are seeking to stay ahead of customer demand to reduce churn rates and secure their customer base ahead of economic instability. CFOs are going to be taking a closer look at their balance sheets next year, and trying to identify the critical applications through the noise of the "nice-to-have's."

EMERGENCE OF INDUSTRY SPECIFIC CRM VENDORS


Increased business expenses driven by economic uncertainty will cause organizations to reassess the value delivered by their current business technology. Customers interviewed over the last year have expressed an increased willingness to explore lesser-known vendors that can provide greater ROI than traditional “leaders.” In most instances, opting for a solution furnished with out-of-box functionality that enables industry-specific capabilities will allow an organization to forgo the time and costs tied to retrofitting its current solution. Nucleus expects industry-specific CRM vendors to continue to grow in importance in 2023 as organizations focus on solutions that provide capabilities tailored to specific use-case requirements.

IIOT OPTIMIZED CYBERSECURITY SOLUTIONS

Industrial Internet of Things (IIoT) is particularly vulnerable to security attacks due to the large number of sensors and devices that are interconnected. If one device is compromised, it can provide a gateway for attackers to gain access to the entire system. As sensor volumes increase, it becomes more difficult to detect and protect against attacks since there are simply too many devices and too much data for traditional security methods to be effective. Cybersecurity solutions that are specifically designed for the IIoT will become essential in order to keep these systems safe, a trend hinted towards with announcements this last year such as Trend Micro's partnership with Pro-face by Schneider Electric (w134 - Pro-face announces partnership with Trend Micro).

PROJECT MANAGEMENT MOVES TOWARDS LOW-COST SOLUTIONS

Nucleus has found more project management vendors offering free versions of their platforms to bolster adoption and capture market share. Over the last year, Nucleus interviewed users of project management platforms and found that most organizations adopt a solution after first deploying a free version to a much smaller team. Additionally, these users tend to trial multiple solutions over several weeks, ensuring that the solution they choose to adopt provides the functionality and capabilities they require. Nucleus also



found that this shift in the buying habits of project management solutions has reduced the amount of contact users have with sales representatives, thereby decreasing a vendor's ability to demonstrate the value of their solution for the customer's specific use case and industry. This stresses the importance of making a good first impression with a software solution, and as such Nucleus believes many vendors will begin offering no-cost versions of their platform to remain competitive in a fast-growing, and evolving market.

WFM EXPANDS FUNCTIONALITY TO OFFER TASK MANAGEMENT

During the past few years, WFM solutions have made great strides in advancing functionality beyond simple scheduling and digital time punching. This has led to a gradual introduction of new capabilities such as the automation of manual tasks, direct messaging, employee self-service, and rules-based scheduling. With standalone task management solutions on the rise, Nucleus has seen a concerted push by many WFM vendors to begin developing and offering integrated task management functionality. WFM vendors have the unique ability to offer task management functionality to create a more holistic work management experience that encompasses mature WFM capabilities. Nucleus expects that many more vendors in the space will either acquire niche task management providers or develop homegrown solutions to continue to expand functionality and compete with first movers.

CHANGING REGULATORY ENVIRONMENTS WILL CREATE PRIORITIZATION OF COMPLIANCE

As sustainability becomes an increasingly important issue for businesses and consumers alike, legislation and regulations around the world are beginning to reflect this concern. In response, many supply chain and ERP solutions are beginning to offer features that help businesses comply with these new regulations. These solutions help organizations to identify and track compliance risks, and to develop and implement policies and procedures to mitigate those risks. In addition, ERP and SCM solutions provide organizations with the ability to monitor and report on their compliance activities, and to make necessary changes in response to changes in the regulatory environment.

INCREASED MARKET CONSOLIDATION

Nucleus predicted that 2022 would be a year of accelerated market consolidation across ERP, HCM, CRM, and SCM. The proliferation of remote work left business users with a myriad of niche tools to serve cross-departmental needs such as improved productivity and collaboration. This led to a subsequent increase in the complexity of technology environments that exacerbates the situation that it sought to remedy. As more organizations push a return to the office, and economic uncertainty looms, organizations are further re-assessing their technology stack across these areas and shedding the costs of standalone point solutions that do not deliver value. Expect increased mergers and acquisitions in 2023, as well-established full-suite players devour niche startups and standalone point solutions to build out functionality in specific areas. As an example, the talent acquisition market has seen rapid growth over the past 18 months as startups look to solve very specific issues in sourcing, hiring, and onboarding. High levels of competition paired with lower customer interest mean that many of these vendors will either be acquired by larger HCM or TA vendors or cease to exist entirely.

DATA LAKEHOUSES BECOME THE CENTER OF ENTERPRISE ANALYTICS

The mass adoption of data science, machine learning, and predictive modeling have changed the way enterprises consume cloud computing, and legacy infrastructures are failing to keep pace with scaling data volumes. Enterprises are also looking to consolidate systems as they modernize their analytics infrastructure to reduce complexity and streamline administrative efforts. As a result, data lakehouse architectures have risen to prominence for their ability to support diverse data applications, including SQL analytics, real-time monitoring, data science, and machine learning, and replace various legacy systems, including data warehouses, data lakes, and specialized systems such as streaming, time-series, graph, and image databases. Looking forward throughout 2023, Nucleus expects data lakehouse architectures to see accelerated adoption as the value of consolidating analytics infrastructure becomes more well-established.

THE NEED FOR TIME-SERIES DATABASES WILL INCREASE


As sensor capabilities and volumes increase with expanded IoT ecosystem adoption, organizations will have an increased opportunity to leverage incoming time-series data. This data can be used to better monitor performance, execute predictive maintenance, and identify trends and patterns that can help them improve efficiency and reduce costs. Traditional databases are not designed to efficiently store and query time-series data and do not support the time-series data types such as timestamps and event types. Organizations will need solutions designed to handle massive volumes of incoming time-series data including pressure, proximity, humidity, temperature, acceleration, location, sound, and vibration data. As such, Nucleus expects increased adoption of databases dedicated to time-series functionality, optimized to handle and scale with incoming data streams.

THE CFO BECOMES YOUR FRIEND

With a looming recession and businesses already tightening their belt, Nucleus has found an increasing number of CFOs that are pressing the pause button on new tech deals. The considerable implementation and onboarding costs tied to a solutions deployment present a challenge, if not a threat, to any organization's working capital. In a downturn, cash is king, and the CFO, especially those within the mid-market and lower, will be scrutinizing all tech contracts with a microscope. Going into 2023, expect the CFO to become a key decision-maker in any technology sourcing decision. Vendors that will fare best are those that can effectively communicate an ROI message to prove the value of their solutions and offer flexibility in pricing and invoicing options.

DEATH OF BEST-OF-BREED, LONG LIVE THE PLATFORM

As the market tightens, the total cost of ownership of enterprise software solutions becomes increasingly pertinent to an organization's technology sourcing decision. Since businesses today require modern technology to maintain a competitive edge, Nucleus has observed a growing number of organizations abandon a best-of-breed approach to their technology




stack and instead seek to consolidate as many applications under the fewest number of vendors possible. This is especially true in the ERP market, where virtually all ERP solutions are being marketed as platforms that offer core financial and operational functionality and extend into industry verticals and other functional departments, such as HR, Sales, and Marketing. This trend will pick up steam in 2023 as organizations prioritize quick deployments that avoid extensive integrations and automation enabled through native connectivity. Expect large vendors, such as SAP, Salesforce, and Oracle to capitalize the most on the platform approach as they already offer a comprehensive ecosystem to cover the entire organization as well as the cash on hand for acquisitions to fill functionality gaps.

IS AI/ML THE CURE TO YOUR SUPPLY CHAIN WOES?

The supply chain world is not returning to “normal”. All organizations had to contend with fluctuations, disruptions, and delays with their customers, internal operations, and trading partners this year. In turn, Nucleus has seen a marked increase in Artificial Intelligence (AI)/Machine Learning (ML) adoption for supply chain planning and execution uses cases across the board, from regional 3PLs to Fortune 500 companies. The success of many early adopters of AI/ML proves the technology is no longer hype. Specifically, AI/ML is helping organizations formulate plans to avoid disruptions, such as stock-outs and fluctuating demand, with dynamic forecasting that continuously ingests a breadth of data signals to self-adjust over time. More advanced use cases include AI decision-making to alleviate and expedite the workload of planners and transportation analysts, where Supply Chain Planning and Execution systems provide fixes to inventory allocation and alternative supplier and route selection automatically.

Risk Management will be a priority for asset-centric organizations in 2023. With volatility in commodity pricing, interest rates, global trade regulations, supply availability, and labor capacity, expect organizations to implement risk management practices from a supply chain perspective. Gone are the days of static modeling, instead operations and logistics teams will leverage ML algorithms to provide best, worst, and most likely scenarios and perform what-if analyses. Corporate head offices will be instituting policies such as stringent approvals on purchases, supplier and distribution selection, and expedited orders. And leading supply chain management solution vendors have already geared AI/ML development to model operational expenses, forecast cash flow, and prescriptive analytics that balances for financial metrics to protect the organization’s cash on hand and profit



margins. Expect the manufacturers, retailers, distributors, and third-party logistics services that leverage the AI-backed predictive and prescriptive insights derived from their supply chain solutions to pull ahead of the competition next year.