



**NUCLEUS**  
RESEARCH

# NUCLEUS TOP TEN PREDICTIONS FOR 2022

## ANALYST

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## THE BOTTOM LINE

The pandemic persists, and Nucleus's top 10 predictions for this year look pretty accurate. Planning for market disruptions ate disproportionate budgets in 2021 without much success. Even though vendors claimed to invest vast sums into planning capabilities, we are facing a supply chain meltdown in almost all verticals. It seems that vendors had a plan but did not take into consideration the longer-term issues created by a global medical crisis. Continuity of remote work, supply-chain breakdowns, increased business failures, and a spike in security disasters impacted 2021 revenues and impelled mass migration to cloud services. The prevalence of cloud deployments is helping organizations drive automation, kill off point solutions, and drive a further increase in demand for managed security.

## **INCREASING AUTOMATION AT ALL LEVELS OF BUSINESS**

Since its conception, AI technology has promised to free human workers from tedious, repetitive tasks in their workday. While it's hit some bumps and taken detours along the way, this promise is becoming closer to reality each month. One of the main challenges regarding AI and its feasibility in the enterprise is its need for massive amounts of relevant, accurately formatted data to train a model to perform a specific task. Many businesses don't collect and prepare data at the scale needed for value-add AI in nontrivial tasks. This challenge persists today for unique and specialized applications. Still, many of the most common business applications such as forecasting, automating operations in a database, detecting spam and fraud, and supplying insights on a graph or chart, can be readily implemented at most businesses. This has been made even easier with AI-based services offered by technology vendors, which spare developer organizations from building and optimizing models and focusing solely on the requisite data. Going forward, more generalizable workflow automation capabilities and solutions will roll out, and more customers will begin leveraging the capability at scale. Large-scale platform vendors like Salesforce, Microsoft, Oracle, and AWS heavily invest in RPA (robotic process automation) and workflow automation technologies. Additionally, low-code application development platforms are looking to augment their offerings with RPA capabilities to enable more complex end-to-end automation tasks.

## **DEMAND FOR MANAGED SECURITY WILL SKYROCKET**

As we entered an era of remote work, we can see a drastic change in work styles and behaviors. Employees started using work devices for personal use or personal devices for work activities and logging in from public networks, such as Starbucks Wi-Fi, creating new cyber security vulnerabilities.

Businesses could not scale IT operations with the surge of remote workers, which resulted in a substantial increase in cyber security attacks. Hackers are taking advantage of misconfigured cloud security measures to gain access to sensitive information, and worse, using complex attacks to infect shadow copies. Phishing attempts are increasingly targeting remote workers by email, text, and third-party applications. To mitigate some of the new risks, organizations can promote more cyber security awareness and provide monitored work laptops and work phones to employees, eliminating only a few attack vectors.



Nucleus predicts organizations will have to outsource security measures and rely more on managed cyber security vendors that provide extensive network monitoring capabilities, such as end-point detection and response (EDR) and flexible firewalls. We expect cyber security vendors to implement a dynamic security approach that redefines security perimeters and improves network segmentation. Vendors will have to include next-generation cloud monitoring and EDR capabilities, such as AI that analyzes users' behavior and accurately identifies new threats based on a user's log-in time, location, and download patterns.

## **CONSOLIDATION AND DEATH OF POINT SOLUTIONS**

Consolidation across the enterprise application market spells death for the small standalone point solution. Nucleus has observed organizations of all sizes seek out comprehensive solution platforms to address business operations and drive their digital transformation initiatives. Platform-as-a-Service (PaaS), compared to a standalone point-solution, has the added benefits of micro-services, ease of integration, enhanced security, data centralization, and cost-savings when deployed at scale. With buying behaviors favoring comprehensive suites, vendors are adopting the PaaS go-to-market strategy. Most approach this through M&A, absorbing the customers of acquired companies while integrating the technology into the flagship platform to support a broader customer base. Point-solutions outside the core classes of ERP, HCM, CRM, and SCM will be prime acquisition candidates for larger vendors offering those listed solutions. Specifically, low-code development tools, RPA, BPM, embedded analytics, and middleware vendors that help extend and complement any platform can expect a deluge of offers as the solution giants jockey to be the one platform to rule them all.

## **DBMA LEADS THE WAY**

In-database analytics processing and query engines Database Management Systems (DBMS) have become a backbone of cloud technology, with many SaaS and PaaS products requiring high levels of data connectivity to achieve proposed value. As organizations look to harvest maximal value from their collected data, they often experience limitations with their relational database systems, such as latency in query processing and stale analytics. Database management vendors are competing to provide the fastest processing with specialized acceleration engines and in-database analytical processing to combat these

inefficiencies. These innovations bring mixed workload databases to the forefront and disrupt the traditional dynamic of databases optimized for online transactional processing (OLTP) and optimized for online analytical processing (OLAP). Although Snowflake was the first mover in mixed workload databases featuring native OLAP alongside OLTP, many established DBMS vendors have recently entered the space. These vendors include Oracle with Exadata X9M for the Oracle Database and the HeatWave query engine for the Oracle MySQL database, and IBM with the on-chip Telum Integrated AI Accelerator for in-situ analysis of transactional processing. As we progress into 2022, DBMS vendors will focus competitive efforts on the speed of mixed workloads processing, with those who fall behind likely seeing increased customer churn and reduced market share.

## **OMNICHANNEL TECHNOLOGIES CONTINUE TO SHOW MASSIVE GROWTH**

The Covid-19 pandemic forced businesses to rethink their digital strategies and prioritize system resiliency, agility, and the ability to connect with customers via nonphysical channels. This push coincides with the existing industry trend toward the consolidation of business applications on unified platforms to enable benefits to scalability, ease-of-access, and integration for more accurate and sophisticated analytics. As a result, the move to generate visibility to each channel and enable a unified communication strategy has never been more essential. Companies need to understand all business and field technologies across traditional channels such as phone, text, email, and modern channels like social media and online chat. Salesforce's expensive acquisition of Slack, a business communication tool, and its subsequent push to integrate Slack to the Salesforce platform, enabling a "headquarters for business strategy," demonstrate this trend of businesses prioritizing digital communication channels. Companies like RingCentral, Zoom, and OnSip that merge enterprise communications with VoIP and phone offerings are well-positioned to succeed and will likely continue to evolve their platforms to encompass additional communication channels in support of customers' omnichannel communication strategies.

## **IMPLEMENTATION COST REDUCTION**

SaaS has become the product of choice for both buyers and solution providers, and we have seen vendors move away from service revenue in favor of the much more dependable and desired recurring subscription revenue. Nucleus sees vendors ramping up competition around their solutions and platforms, affecting the total cost of ownership (TCO). Initiatives

such as Rise with SAP and Oracle's pay-as-you-go cloud pricing are already popular methods of incentivizing users to migrate to the cloud. Nucleus recommends that users explore their options in the coming year to negotiate upfront costs to any SaaS or PaaS deployment. Specifically, buyers can expect vendors to be more amenable to discounting or even writing off implementation costs to attract prospective clients.

## **HOTDESKING/REAL ESTATE**

Our top ten predictions for 2021 stated that we expected reduction in square footage to less than half of then-current requirements, which has come with its own challenges as the hybrid work structure gains traction. As more employees look to escape the confines of their home office for some face time, employers must optimize the little space they haven't purged. The Workforce Scheduling market is not new, big, or sexy but has the opportunity to grow significantly in 2021. HCM and WFM vendors with existing scheduling functionality are uniquely positioned to enter and dominate the space. Organizations that purged the entirety of their office spaces will increase the demand for collaborative spaces for employees and may reignite the commercial real estate market.

## **TAX PROBLEMS**

Remote work has created costly and complex administrative burdens for SMBs. Uncle Sam can't tell the difference between where you live and where you earn your wages, meaning that an employer in Georgia can be responsible for out-of-pocket expenses for the employer contribution to the Massachusetts Paid Family Medical Leave Act (PFMLA). Companies with a single physical location may find themselves having a taxable presence in four or five different states, all because of the necessity of remote hiring. The recent reaction to a new Colorado law that requires employers to disclose the expected salary of open roles ultimately led to the barring of Colorado-based applicants among many companies. We expect this to be a growing trend, and employers will begin to be more discerning when sourcing employees based on tax or other employment laws that are too risky to take on when hiring remotely.

## **TALENT MANAGEMENT/IDENTIFYING TOP PERFORMERS**

A lack of willing talent is causing some organizations to invest less in whom they can bring on and more in engaging, retaining, and developing employees they already have. That is not to say that talent acquisition is not still a critical business area, but it is an unstable one. Organizations spent the second half of 2020 preparing for a flood of applicants that never came. This, along with higher than anticipated resignation rates, will force employers to focus more on retaining existing employees and being less desperate to find additional staff. Internal talent markets and tools that identify and bridge gaps in employee competencies are gaining more traction in talent management deployments, a trend that will continue into 2022.

## **THE FALL OF COOKIES: THE NEXT GENERATION OF MARTECH**

While the demise of cookies seems like an altruistic move by Google, it will drastically reshape the advertising industry in 2022 and beyond. By removing third-party cookies from the highly used Chrome internet browser, Google increases the barriers to entry within the advertising space as cookies often functioned as a shortcut to personalized ad targeting. Now organizations require built-out user profiles with embedded behavioral analytics to achieve the same level of targeted advertising offered by third-party cookies. This process is easy for big advertising platforms like Google and Facebook as they have an expansive user base with individual profiles to track user behavior across all applications within the network. To remain competitive, many SMBs without financial resources will look to MarTech providers to achieve a comparable level of targeted advertising, filling the void left by cookies.