RESEARCH NOTE

Document O270
December 2014

# TOP TEN PREDICTIONS FOR 2015

NUCLEUS RESEARCH

## THE BOTTOM LINE

Nucleus's top 10 predictions for 2015 take into account the impacts of cloud, changing development cadences, more intelligent software, and mobile adoption on the enterprise IT landscape. Increased transparency and the ability of every business user to increase their influence and impact on IT priorities will shape changes in the way vendors interact with their clients beyond the sale. These trends will impact the core application pillars that support the management of people, customers, production, and financial management.

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## CUSTOM CODE IS DEAD; LONG LIVE DEVELOPERS

While custom code will continue to exist, rationalization efforts on existing code and the dramatic reduction of new projects involving custom code will reduce the time and cost associated with supporting custom code over the next three years by at least 20 percent.

Ten years ago, most packaged application deployments involved a significant amount of custom coding and customization to meet organizational needs – or required customers to settle for workarounds and less-than-ideal support for business demand. However, as applications have become more mature and vendors have delivered more functionality, less customization is needed. At the same time, the evolution of cloud applications that are configured instead of customized has raised awareness of the benefits of limiting customization and custom code on both an initial and ongoing basis. Using toolkits, wizards, and configurators instead of coding accelerates time to value, increases predictability, and reduces risk associated with projects. On an ongoing basis, less custom code means fewer support requirements. It also means customers can more easily take advantage of upgrades or make changes to the application, maximizing application value over time.

At the same time, configurable applications and toolsets, the rise of user knowledge of basic software constructs driven by consumer applications, and the availability of trial apps and sandboxes are putting development capabilities into the hands of (almost) any user.

New technology initiatives that used to be the domain of IT can now be piloted, driven, and evolved by business users with rudimentary understanding of how software works (Nucleus Research *o191 – Understanding the marketing technologist*, August 2014). Moving forward, this means that vendors will have to appeal to a broader set of prospects with different roles and responsibilities, and that freemium and trial applications available at little or no cost via the cloud will generate a new source of lead (as IBM, recently, has done with Watson). These leads will need more and different types of nurturing in the sales cycle, and are more likely to be influenced by educational content and other communities of users – driving reengineering of many vendors' traditional sales and marketing funnels.

## THE REAL MOVE TO MOBILE

As effective mobile access has become table stakes for applications across the four pillars of business – people, accounting, production, and customers – mobile devices will overtake personal computers as the primary access point for enterprise applications. Savvy IT departments will focus on building and delivering application libraries where business users can select and install their business applications of choice, or face the risk of users doing it on their own. When business users can use vendor toolkits and wizards to spin up their own mobile applications, IT will become even more marginalized if it doesn't lead the way.

Going mobile for more than read-only access is requiring new thinking about access rights, security authorizations, and the blur between personal and company devices as well, driving spending on mobile device management.

Mobile has already impacted many applications and job roles, but we'll see an increasing impact of mobile on workforce management as companies adopt and understand the benefits of using employees' mobile devices to understand when and where they're working. Many employees, particularly those who are relatively new to the workforce, will be willing to sacrifice mobile sovereignty to save personal time punching in and out and negotiating schedules. Although timeclocks will not disappear tomorrow, the adoption of mobile devices as the primary interface to HR and timekeeping applications will mean fewer than one in three new hourly employees will punch in by the end of 2016 — because their phones will do it for them.

## EVERYTHING GETS COMMODITIZED

As vendors in human capital management (HCM), customer relationship management (CRM), enterprise resource planning (ERP), and other areas bring capabilities such as enterprise content management (ECM) and analytics into their core application offerings, they bring data and content in context to help users do their jobs more effectively

(Nucleus Research *n133 – Salesforce announces Salesforce Files*, September 2013). This move puts standalone vendors at a crossroads: simple integration with enterprise applications, which has been the play for the past two decades, is not enough. Standalone ECM and analytics vendors will have to increase not just their investment in areas like vertical solutions and usability (such as mobile) but thought leadership in how their applications deliver enough incremental value on their own to justify the cost of deploying and supporting them. Content management vendors that have been happy supporting long-time customers with 7-figure maintenance contracts are likely to be hit hardest in the short term.

Commoditization is happening at the application level but also at the CPU level. In the on-premise world, failing servers are replaced, not rejuvenated. In the cloud world, areas like content storage are already facing significant pricing pressures (Nucleus *Research o253 – Is it time to drop Box*, November 2014), and that will continue, leaving commodity vendors without clear incremental value little opportunity.

## VERTICALIZATION FOR ALL

Customers are increasingly demanding both vertical and microvertical capabilities in their vendors' offerings to accelerate time to value and increase the predictability of projects. A far cry from the PowerPointware marketing strategies of yore, competitive offerings today must provide real code, configurability, blueprints and reference guides, and a community of peer references that can serve not just as points in the decision process, but a community of collaboration for sharing best practices. Verticalization is not new, but a few harbingers for a new level of investment include Infor's push for microverticals in its new cloud applications, investments of analytics vendors in prebuilt industry solutions (Nucleus Research *o129 – IBM announces Predictive Customer Intelligence*, June 2014), and the rise of Salesforce.com's industry solutions group and industry partner ecosystem. Although the most visible verticalization investments will be in CRM and ERP, standalone analytics vendors will get in the game as well to differentiate what they provide beyond core (increasingly commoditized) functionality.

## E-COMMERCE BLOWS UP; ENCRYPTION GOES UP

Nucleus has been prescribing broader adoption of cloud e-commerce solutions for nearly a decade because of the lower cost, greater flexibility, and support for inherent spikiness that cloud applications deliver (Nucleus Research *f97 – The last Christmas*, September 2005). However, many companies have been slow to move their e-commerce footprints to the cloud, for both political reasons (IT built it and wants to keep it) and gravity (it's a lot of data and processes to migrate) – to their peril. Nucleus expects we'll see at least one and perhaps a number of high-profile security breaches in early 2015 that will raise questions about security and reliability of in-house applications to the C level. Given the

brand impact and other repercussions associated with a security failure, and the increased likelihood of even the best IT departments falling victim, we expect demand for new e-commerce cloud projects to be a rising priority on 2015 schedules and budgets.

Security concerns, coupled with a healthy skepticism about who's accessing and sharing personal data will also drive broader demand for encryption of data, both by individuals and companies that seek to thwart security and confidentiality risks. We expect cloud application vendors will be increasingly expected to provide field-level encryption options that can be turned on at the customers' discretion, and a rise in personal encryption adoption in areas such as e-mail communications.

## SMARTER SOFTWARE

Last year, we predicted that the pressures to innovate on the basis of usability and productivity would drive successful vendors to rethink their application development priorities and align their UI efforts with Dark Cockpit principles (Nucleus *Research n167 – Enterprise software must adopt the principles of Dark Cockpit*, November 2013). This year has seen increasing incorporation of machine learning and natural language processing (NLP) capabilities into applications to better meet those goals. In 2015, we'll see further adoption and use of those capabilities to support the management and triaging of new volumes and sources of data, more transparent integration of machine learning and NLP into enterprise applications to drive faster, more intelligent user actions, and a spate of new applications and vendors with innovations in smarter software. Although many of these will appear on the enterprise IT shopping list, they will also surface in business applications for individuals and groups of users that will be rapid to adopt "personal assistant"-like applications that have a measurable impact on their personal productivity.

## IOT SEPARATES THE MEN FROM THE BOYS

The past two years have seen increasing hype around the Internet of things (IoT) and its ability to deliver everything from smarter refrigerators to interactive shopping assistants. For those who can remember Michael Dell's promise of the smart fridge in the 1990s, it may seem like just more futuristic shiny object nonsense. However, the investments leading vendors have made in database design and data mapping, interconnectivity, and blueprints and roadmaps for projects in customer care, operational management, marketing, and other areas will accelerate the delivery of real IoT projects with measurable returns in 2015. Those that are marketing, instead of implementing, IoT with their customers or continuing to treat deployments as lengthy coding and consulting projects will fall behind those that are delivering real projects with payback measured in a matter of months.

## HR: ARCHITECTURES DIVIDE THE HAVES AND HAVE NOTS

Rapid acquisition and development in the human resources, workforce management, payroll, and other HR-related spaces have been driven by the desire of many vendors to provide a one-stop shop for all employee-management related technologies, and some are quickly approaching that goal. However, those that have focused on marketing their "complete" solutions while cobbling together acquisitions under the hood will face increasing struggles that they will pass on to their customers. HCM is a melting pot: Just as many cultures must melt into each other and act as one, to form a nation, so, too, must the many discrete elements of HCM. For organizations to have the HCM-related business intelligence they need, all that data must melt together and act as one — to yield one source of truth about the workforce. However, it cannot when data sets from acquired technologies struggle to integrate and communicate with those in vendors' native products. Customers experiencing data latency, backward-looking instead of predictive reporting, and less-than-agile applications will face greater risk and higher costs in managing their labor pool. They will also face competitive challenges as those that have chosen more modern integrated applications can rapidly adopt and take advantage of new innovations and capabilities in areas such as NLP and machine learning.

## SUPPLY CHAIN: MORE FOCUS ON DEMAND SIGNALS, USABILITY

Much of the changes in supply chain thinking are being driven by the fear of Amazon: to compete with Amazon, retailers must find ways to economically ship products from their stores to fill online orders and deliver the product to the customer on the same day of the order. This also requires supply chains to be more demand-signal driven. Most inventory optimization (IO) tools still rely on sales orders as the trigger for inventory replenishment. As companies seek to master demand marked by high volatility inherent in a global, digital economy, they will need to incorporate demand sensing into their calculations for inventory holdings. We expect more vendors to release IO tools that can capture demand signals directly.

Many supply chain applications have been historically used for examination of the supply chain to solve a problem at a point in time, such as the launch of a new product, a merger or acquisition, or rising transportation costs. However, as changing markets and volatile customer demand have a greater impact on margins, companies will need to regularly reexamine their supply chain configurations to remain competitive, and will need to employ internal staff – not specialized external consultants – to do so. This means supply chain design vendors will have to make their tools more intuitive and provide users with more prescriptive guidance and reference models (and peer insights) on how to use them.

## APPLE'S FALLING STAR

The past year saw Apple take a number of hits, from the loss of Steve Jobs to Samsung litigation to a poorly-handled security breach. Although one or all of those challenges might not have worried died-in-the-wool Apple evangelists, they signal the decline of a brand that has fallen into the bad habits of a "traditional" technology vendor: overpriced products, new releases without compelling reasons to upgrades, and forced proprietary formats that limit customers' rights to use the digital content (in this case, iTunes files that they've paid for). These missteps, coupled with increasing competition in the tablet space (yes, while it took Microsoft a few tries, it came up with a compelling tablet in the Surface that can be both laptop and tablet at a fraction of the price of a Macbook), mean that without some real changes in direction Apple will face declining fortunes in 2015 and years to come.