A Boomi IT and Business Report:
The State of Modernization, Transformation, and Innovation in the Digital Age

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The Path to Greater Organizational Performance in the Digital Age

By Ed Macosky, Senior Vice President of Product, UX, and Solutions, Boomi

Welcome to “The State of Modernization, Transformation, and Innovation in the Digital Age.” The insights in this Boomi report are based on a survey by market research firm Vanson Bourne. We asked business and IT leaders around the world about their efforts and initiatives to bring greater speed, agility, and efficiencies to their organizations.

We took a pulse on the state of digital transformation, and checked the progress of ongoing modernization and innovation initiatives. We looked at the role that both business executives and IT leaders play in driving the change, and their differing perspectives on key factors and technology trends.

We examined what matters most in navigating business transformation, ranging from cultural changes to the use of artificial intelligence and machine learning (AI/ML). We explored the top challenges facing organizations, and what respondents envision for the future of work.

Our survey finds that organizations are achieving far-reaching benefits through modernization, transformation, and innovation – with an improved customer experience being both the top objective and top benefit realized to date. But it also reveals widespread concern that change isn’t happening fast enough, putting competitive position at risk in fast-moving markets.

The study also makes clear that business priorities, drivers of change, and technology needs are converging. Managing those dynamics is a balancing act. Organizations need to choose how to invest resources, overcome challenges, and prioritize initiatives. Business and IT leaders have to align on shared objectives to keep up with demand and meet customer expectations for seamless services and stellar experiences.

Most important is to have the right data strategy. I always say no one is asking for less data slower. Data is key to making the right strategic and operational decisions, so it was somewhat surprising to see that most respondents rely on custom development to bridge their data and applications, while using various tools and techniques to migrate data to the cloud.

Speed and agility are vital to delivering business value and remaining competitive. Yet it seems as if streamlining data delivery and integrations still has a long way to go.

In this report, you’ll get clarity and perspective straight from IT and business leaders and practitioners from across the globe. So sit back and dig in. I’m confident you’ll find insights and practical guidance to help your organization make the most of its modernization, transformation, and innovation initiatives.
Business and IT leaders alike agree on the need for organizations to modernize, transform, and innovate. Those initiatives are imperative to thrive in the digital age. While much progress has been made, organizations continue to face roadblocks such as budget constraints and a shortage of technical talent, all while dealing with legacy technology debt.

To get a read on the current and future state of business evolution, Boomi commissioned the IT research firm Vanson Bourne to survey more than 1,200 business and IT decision makers across 19 countries of North America, Europe, and Asia-Pacific. Respondents represented eight key industries, and companies ranging from 500 to 3,000+ employees.

To lay the groundwork, we defined modernization, transformation, and innovation as follows:

**Modernization** is the process of replacing legacy technologies with newer systems and services to streamline processes and increase efficiency.

**Transformation** is the process of updating and evolving the way that a business interacts with its customers, employees, and partners.

**Innovation** is the process of becoming more data-driven, agile, and flexible by finding ways to harness the potential of data, devices, and evolving customer expectations using emerging technologies.

Thanks to modern technology and proven blueprints, early adopters are forging ahead and already reaping the rewards of modernization and transformation, such as improved customer experiences and streamlined operations. Innovation is what will carry them forward and enable the workforce of the future.

**Executive Summary**

Organizations are reaping the rewards of modernization and transformation, such as improved customer experiences and streamlined operations.
Modernization is the process of replacing legacy technologies with newer systems and services to streamline processes and increase efficiency. Modernization is the most product- and service-driven element of business evolution. Organizations approach modernization in different ways, purchasing new infrastructure either on-premises in the data center, as a cloud-based service, or by leveraging new applications.

The vast majority (94%) of respondent organizations report they’re actively modernizing. In most industries, modernization is in the early stages of being rolled out. But a few sectors stand out as leaders: 38% from life sciences and 37% from finance state that they have actively finished rolling out modernization.

Only a handful of organizations don’t have modernization initiatives in the works, ranging from 3% in finance to 8% in healthcare. Our survey indicates that most organizations clearly see the value of modernization and are actively pursuing it.

Geographically, North America leads the way with 41% of organizations reporting that they have finished actively modernizing. Europe trails all regions, with 38% of organizations in the early stages and 6% not actively modernizing.
Improving the customer experience is the top benefit of modernization, cited by 49% of organizations. Other key benefits include ability to adopt new technologies (46%), reduce operational cost (45%), and streamline processes. Just 1% of organizations with modernization initiatives claim to have realized no benefits. Interestingly, IT decision makers are more likely to perceive benefits of modernization than business decision makers.

Benefits of Modernization

Across industries, the top benefit of an improved customer experience is seen most strongly in insurance (53%), finance (52%), higher education (52%), healthcare (50%), retail (49%), and public sector (47%). Respondents in other sectors also rank the customer experience highly, but are more likely to see other benefits such as adopting new technology and streamlining processes.
Challenges and Barriers to Modernization

Despite modernization progress, the vast majority (95%) of respondents face challenges and barriers in their efforts. Budget is the biggest challenge, cited by 54%, followed by technical knowledge (48%), business processes (40%), and risk to the business (38%).

Across global regions, APAC organizations say that technical knowledge (56%) is one of their biggest challenges, more so than their counterparts in North America (46%) and Europe (43%). APAC is also highest in its concern over budget. While APAC has made significant progress, organizations there appear more likely to struggle finding the expertise and funding they need.

Generally, IT and business decision makers agree on the barriers that their organizations face in modernization. Yet technical knowledge is viewed as a challenge by 53% of IT decision makers, compared to just 43% on the business side. This suggests that business decision makers could be slightly naive about the technical knowledge and experience needed to modernize effectively.

Budget is the dominant challenge for most industries when it comes to modernization, especially in higher education (64%), public sector (61%), and healthcare (56%). It appears that increasing investment could go a long way toward helping organizations achieve their modernization goals.

The good news is that most organizations have plans in place to address their modernization challenges. Nearly six of 10 (57%) are taking a phased approach to modernization, which can ease budget impact. More than half (54%) are retraining existing employees, and 49% are engaging external consultants, both of which can strengthen technical knowledge. Another 47% are hiring new employees to fill talent gaps.


Transformation

Transformation is the process of updating and evolving the way that a business interacts with the customers, employees, and partners. The vast majority (92%) of respondents organizations are currently transforming.

By industries, finance (34%) and life sciences (33%) are most likely to have finished actively transforming. They’re notably ahead of the 28% across all industries to report their transformation initiatives are complete. In contrast, insurance organizations are the least likely (18%) to have completed their transformation, and have the highest proportion (41%) of transformation initiatives still in the early stages.

Geographically, APAC leads the way with transformation, as organizations there are more likely to have finished actively transforming (34%). North America is close behind at 33%. Europe trails in having finished actively transforming at 23%. Across all regions, 28% have completed transformation, 29% are almost finished, and 35% are in the early stages.
Improving the customer experience (54%) is at the forefront of organizational focus when transforming, followed by employee productivity (50%) and business process automation (48%).

**Focus and Benefits of Transformation**

Similar to modernization, organizations are seeing the greatest benefits of transformation in improved customer satisfaction (48%). By industry, improved customer satisfaction is highest in higher education (57%), insurance (56%), retail (52%), public sector (48%), and healthcare (47%). Transformation is also helping organizations adopt new technologies faster (44%) and streamline operations (42%).

**PRIORITY AREAS FOR TRANSFORMATION**

- Customer experience: 54%
- Employee productivity: 50%
- Business process automation: 48%
- Delivery of new services: 44%
- Introduction of new products: 40%
- Software delivery: 37%
- Onboarding partners: 22%

**BENEFITS REALIZED WITH TRANSFORMATION**

- Improved customer satisfaction: 48%
- New technologies adopted faster: 44%
- Operations streamlined: 42%
- Opening pathways to innovation: 35%
- More agile workplace practices: 35%
- Revenue has been boosted: 33%
- Faster time to market for new solutions: 30%
- Increased adoption of new company offerings: 27%
- No Benefits: 2%

In terms of who owns decisions on transformation priorities, almost half (49%) of respondents report those decisions are made at the top level of the organization. That suggests that business leaders, hand in hand with IT leaders, recognize the need for transformation and are leading the change.
Challenges and Barriers to Transformation

Many organizations recognize an urgent need to change and transform. In fact, 52% believe that their organization either needs a “complete, organization-wide change, top to bottom” or that “certain departments need drastic change.” Yet a sizable portion of our respondents say that change in general is a major challenge:

- **39%** believe their organizations are regularly “out-changed” by competitors and industry peers
- **33%** agree their organization “does not cope well with unplanned changes”
- **27%** say their organization “does not execute planned changes well”

Multiple barriers frustrate the path to transformation. Globally, 41% cite insufficient in-house skills as the top challenge to transformation. That indicates a need to invest time and money to retrain personnel, hire new technologists, or bring in consultants to accelerate transformation.

Yet budget is an issue as well: 33% say an unwillingness to spend the required amount is a barrier to transformation. Other top challenges include a lack of immediate tangible returns (31%) and a lack of clear direction and focus (30%).

Insufficient in-house skills is the top challenge in seven of 13 countries in North America and Europe. Organizations in France and Denmark cite employee buy-in, while those in Norway and Finland point to a lack of clear direction and focus. Unwillingness to spend tops the list in Canada and Sweden.

In Asia-Pacific, 65% of respondents cite an unwillingness to spend as the top challenge, while 38% in Australia point to a lack of immediate tangible returns. The other five countries are most concerned with insufficient in-house skills.

### BARRIERS TO TRANSFORMATION, NORTH AMERICA AND EUROPE

- Insufficient in-house skills
- Unwillingness to spend required amount
- Lack of a clear direction/focus of the efforts
- Lack of immediate tangible returns
- Lack of a clear strategy
- Employee buy-in

### BARRIERS TO TRANSFORMATION, APAC

- Insufficient in-house skills
- Unwillingness to spend required amount
- Lack of a clear strategy
- Lack of immediate tangible returns
- Lack of a clear direction/focus of the efforts
- Employee buy-in

### Bar Chart

- **Australia**: 38%
- **New Zealand**: 38%
- **Singapore**: 35%
- **Japan**: 33%
- **Hong Kong**: 33%
- **Indonesia**: 52%
- **Malaysia**: 58%
- **US**: 38%
- **Canada**: 39%
- **UK**: 34%
- **France**: 45%
- **Germany**: 39%
- **Italy**: 35%
- **Netherlands**: 41%
- **Switzerland**: 41%
- **Norway**: 48%
- **Finland**: 43%
- **Sweden**: 37%
- **Denmark**: 46%
When we look at barriers by industry, insufficient in-house skills is uniformly the top challenge, and is especially acute in life sciences and insurance. Unwillingness to spend is of greatest concern in the public sector, higher education, and healthcare.

“Insufficient in-house skills is especially challenging in life sciences, insurance, and finance.”
The majority of organizations that are transforming have invested in approaches and methodologies to help drive transformation. Across all respondents, DevOps/DevSecOps is the leading approach, used at 45% of organizations. Customer journey mapping is a close second, at 44%.

The investment in various approaches and methodologies is not surprising. Our respondents appear to recognize that “every company is a software company,” and if they don’t get software delivery right with quality releases at speed, they will not be competitive.

Yet approaches to transformation vary by geographic region, industry, and role. The top approach by geographic region breaks down as:

- North America: DevOps/DevSecOps (52%)
- Europe: Agile methodology (44%)
- APAC: Customer journey mapping (46%)

With a variety of methodologies, organizations have flexibility to drive transformation.
TRANSFORMATION

APPROACHES TO TRANSFORMATION, BY INDUSTRY
It’s interesting to note how different industries are approaching transformation. DevOps/DevSecOps is the prevailing approach in four of eight industries, yet it’s not widely used at public sector organizations. Higher education sees the highest use of the customer journey approach, which is unsurprising as universities cater to young digital-native students who expect a seamless digital experience. Life sciences is prioritizing an agile methodology in the industry’s quest to be fast and nimble.

APPROACHES TO TRANSFORMATION, BY ROLE
Our survey reveals significant differences between IT and business decision makers in approaches to transformation. In particular, IT decision makers say that DevOps/DevSecOps is the dominant approach (54%) at their organizations, versus business decision makers who put DevOps/DevSecOps at 36%, fourth among approaches. It’s possible that business decision makers don’t fully appreciate the technological investment needed for transformation.
Technology Investments for Transformation

Technology investments play a crucial role in transformation. Among organizations that are transforming, nearly half (48%) are using digital process automation, followed at 45% by platform as a service (PaaS) and at 44% by infrastructure as a service (IaaS).

Another technology investment focus for transformation is a low-code development platform, which helps speed transformation through rapid application and workflow development.

More than half (51%) of organizations not currently using low-code development plan to have a low-code platform in place within the next 12 months. Another 27% say low-code development is a possibility at some point in the future. Just 8% have no plans for low-code development.

Top objectives for low-code development are to accelerate digital transformation and innovation (47%), increase responsiveness to market/external trends (40%), and reduce dependency on hard-to-hire technical skills (38%).

More than 50% of organizations plan to use low-code development to accelerate transformation within the next year.
Innovation

Innovation is the process of becoming more data-driven, agile, and flexible by finding ways to harness the potential of data, devices, and evolving customer expectations using emerging technologies. As with modernization and transformation, the vast majority (93%) of organizations are currently innovating.

Among industries, organizations in retail (39%), life sciences (38%), and finance (37%) report that they finished actively innovating. Those in the early stages of innovation are highest in healthcare, manufacturing, and insurance (each 36%). In the public sector, a notably high 19% report they are not actively innovating.

Geographically, North America leads the way, with 44% of organizations saying they have finished actively innovating, followed by APAC at 36% and Europe at 29%. More than a third (35%) of European organizations are in the early stages of innovation, the highest percentage among global regions.

Organizations are investing in a wide range of technologies as part of innovation initiatives, with big data analytics (41%), AI (37%), security innovation (36%), Internet of Things (IoT, 33%), and integration platform as a service (iPaaS, 32%) high on the list. IoT rated highly in North America, with 45% investing in the technology.

Respondents have high hopes for their innovation initiatives. Top goals include improving the customer experience (55%), gaining competitive advantage (47%), and exploiting new technologies (47%). IT respondents are more likely than business respondents (52% to 42%) to see innovation as an opportunity to exploit new technologies, crucial for keeping up with the rapid pace of change in today’s digital world.

By role, IT decision makers and business decision makers have similar priorities for innovation-related technology investments, but there are some pronounced differences. For example, 47% of IT respondents cited big data analytics as an investment priority, versus 35% of business respondents — a sizable gap of 12 percentage points. On IoT, the disparity is 39% IT and 26% business.
Challenges and Barriers to Innovation

Organizations recognize the urgency to innovate, modernize, and transform. Yet many are struggling to execute quickly enough, and see a risk to their competitive position if they fall short. Our survey found that:

- **55% say their organizations are struggling** to modernize, transform, and innovate quickly enough.
- **51% say their organizations may soon be unable to compete** in their industry if they don’t improve at modernizing, transforming, and innovating.
- **38% say their organization’s senior leadership is ill-equipped** to oversee modernization, transformation, and innovation initiatives.

Challenges with a lack of technical skills and adequate funding are holding some organizations back as they pursue innovation. Similar to transformation, a shortcoming of in-house skills is the top challenge at 38%, followed by spending restrictions or lack of allocated budget at 37%.

Interestingly, more than a quarter (27%) of respondents say that too many initiatives are competing against each other. And 26% point to a lack of vision from business leadership, which should be concerning if responsibility for innovation sits at the top level of the organization.

Top challenges to innovation are split fairly evenly across countries of North America and Europe. Lack of skills dominates in five countries (UK, Italy, Netherlands, Switzerland, and Sweden) while budget is the biggest obstacle in the U.S., France, Germany, and Finland.

In Asia-Pacific, organizations in Australia, New Zealand, Singapore, and Indonesia cite a skills shortage as the top barrier to innovation. Japan, Hong Kong, and Malaysia are high in their concerns over spending restrictions.

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**BARRIERS TO INNOVATION, NORTH AMERICA AND EUROPE**

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<th>Country</th>
<th>Percentage</th>
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<td>US</td>
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<td>Canada</td>
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<td>Sweden</td>
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<td>Denmark</td>
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**BARRIERS TO INNOVATION, APAC**

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<th>Country</th>
<th>Percentage</th>
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<td>Australia</td>
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<td>New Zealand</td>
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<td>Singapore</td>
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<td>Japan</td>
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<td>Hong Kong</td>
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<td>Indonesia</td>
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<td>Malaysia</td>
<td>70%</td>
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Innovation is driven from the top down at most organizations, with the CEO (65%), CIO (58%), and/or department heads (54%) far more likely to be leading it than the workforce as a whole (12%) or junior management (8%). That may change. In three years, 56% of our respondents say that innovation will be everyone’s responsibility, versus 44% who believe that innovation will sit with a dedicated team/senior leadership.

“Instead of today’s top-down model, responsibility for innovation may be more broadly shared across organizations in the near future.”
So what do organizations have to “get right” over the next 12 months to ensure continued success? Technology is by far the top answer, from 59% of respondents. Without an agile technology foundation to rapidly execute on modernization, transformation, and innovation, organizations risk being leapfrogged by more nimble rivals.

Respondents also see people (42%), processes (42%), customer experience (41%), and budgeting (40%) as top priorities to “get right” over the next year.

It’s critical to “get it right,” as many respondents see enormous changes on the longer-term horizon, and some are concerned over the future viability of their roles and organizations. Our survey reveals that:

- 86% say that technology will dramatically change the way their organizations operate over the next 10 years
- 76% say that the way we work is changing, and that organizations must keep up or they will fail
- 40% worry about the necessity of their roles in their organizations moving forward
- 31% say they’re not completely confident their organizations will still be operating in 10 years

“Without an agile technology foundation, organizations risk being leapfrogged by more nimble rivals.”
Essential Technologies for the Future

From a technology perspective, the lion’s share of our respondents (46%) see AI as the standout technology for organizations in the next five years. That’s followed by security innovation (35%), big data analytics (35%), and IoT (28%).

Interestingly, to an earlier question on technology priorities for innovation, respondents put big data analytics atop the list. But looking ahead, it’s clear that AI is top of mind for technology innovators. Plus, many big data analytics projects have been in the works for several years, while AI remains in its early stages.

Making the most of those emerging technologies, and conventional cloud and on-premises for ERP, CRM, HR, and more, requires effective data and application integration. As it is, the lion’s share of organizations (41%) on a global basis continues to rely on custom-coded integrations to connect systems.

That’s changing. Our respondents indicate that integration platform as a service (iPaaS) will soon become the prevailing approach to integration for a majority of organizations around the world, growing from 38% today to reach 41% within 24 months and 43% in 36 months. That increase aligns with research by Ovum and other IT consultancies that finds iPaaS is by far the fastest-growing segment of the integration market.

Interestingly, iPaaS today is the top approach to integration in North America, at 48%, and in APAC, at 43%. Adoption is notably lower in Europe, at 31%, but is expected to reach 40% in 36 months.

iPaaS is also the top choice as organizations adopt the cloud and migrate data to cloud applications. Many organizations (36%) will rely on several methods, but iPaaS is the preferred approach among integration technologies.
iPaaS is also the top choice as organizations adopt the cloud and migrate data to cloud applications. Many organizations (36%) will rely on several methods, but iPaaS is the preferred approach among integration technologies.

**TOP TECHNOLOGIES FOR CLOUD DATA MIGRATION**

- Integration platform as a service (iPaaS): 24%
- Real-time streaming: 15%
- ETL tool (extract, transform, load): 9%
- Traditional middleware: 9%
- To be determined / don’t know: 9%
- A mix of approaches: 36%

More broadly, the vast majority of respondents (94%) expect major changes to unfold across their industries over the next five years. It’s critical that technology, people, and processes can work together for organizations to nimbly adapt and capitalize on new opportunities.

**TOP INDUSTRY CHANGES IN THE NEXT 5 YEARS**

- New products and services will dominate our industry: 40%
- Products and services will significantly diversify: 38%
- Skills of the workforce will completely change: 35%
- Our industry will be much more heavily regulated: 32%
- Overall size of our industry will be larger: 30%
- Our industry will be dominated by smaller, more agile and innovative organizations: 26%
- Larger and more dominant organizations will struggle to keep up: 24%
- Overall size of our industry will be smaller: 19%
- No major changes anticipated: 6%

By specific industries, respondents at organizations in manufacturing (44%), finance (43%), and retail (40%) expect large changes in the form of new products and services. In contrast, those in insurance (44%), life sciences (41%), and public sector (36%) feel that it will be the same products and services, just significantly diversified.

Overall, IT and business decision makers agree with each other about the expected changes in the future. The greatest disparity is on the workforce, for which 37% of business respondents see major changes, compared to 32% of IT respondents. Business decision makers are also more concerned over the necessity of their roles moving forward (43% for business respondents and 37% for IT respondents).

About 40% expect to see new and significantly diversified products and services to emerge in their industries. And more than a third (35%) of respondents anticipate that skills of the workforce will completely change. That’s not surprising given the impact that widespread use of AI and robotics may have on workforces.
1. BUILD A STRATEGY THAT WORKS FOR YOU
There’s no magic formula for thriving in the digital age. Rather, figure out what works best for your organization. You have to be more strategic, and customize your plans to your business objectives and culture. It’s essential to emphasize accelerated time to value over longer-term, moonshot ideas.

2. DON’T JUMP ON THE LATEST TECH TRAIN WITHOUT EVALUATING ROI
Don’t scramble to follow the latest technology trends, forgoing diligent ROI assessments in frantic attempts to modernize. Roughly $1.3 trillion was spent on digital transformation in a recent year, but it’s estimated 70% of those investments went to waste. Moving every application and data set into the cloud or applying serverless computing to every workload isn’t always the best move. Apply lessons learned from previous experiences, and leverage the successes and strengths of your organization.

3. WHenever you can, replace old and brittle technologies
Modernizing from antiquated, inflexible systems is the only way to ensure stability, scalability, and agility. Modernization also reduces your legacy technical debt, liberates funds and resources, and lets you accelerate adoption of modern technologies and practices.

To get going, think big but start small. The opportunities may be boundless, but where do you begin? Look to quick-win, high-value projects as a proving ground for modernization. Successful early projects win buy-in and attention, validate your strategy, and can prompt additional funding. Overall, it will be quite the journey, one project at a time.

5 Recommendations for Success

Quick-win, high-value projects can validate your modernization strategy and prompt additional funding.
4. KNOW YOUR DATA AND HOW TO DEAL WITH IT

You know it — it’s all about data, at greater speed, scale, and depth than ever. As Boomi Chief Product Officer Steve Wood says, “No one is asking for less data slower.”

Global data regulations combined with data silos have organizations scrambling to rethink data management. Make sure you look toward modern data integration strategies and technologies — or risk getting left behind. That’s key to glean more accurate and timely insights, streamlining operations, and improving business outcomes. Two tips in particular:

- **Think efficiency.** Have a strategy that reduces the time and resources required to constantly reroute data to its destination. If you put dollars and resources into edge computing and IoT, updating your data strategy is critical so you don’t risk losing out on the benefits of next-gen technologies.

- **Rely more on metadata than data to provide insights.** Overzealous data analyses have brought many companies face to face with privacy lawsuits from consumers and governments alike, which has led to even stricter data governance laws.

Concerned about making similar mistakes, smart businesses will turn to metadata for insights in 2020, rather than analyzing actual data. Harvesting data attributes — including its movement, volume, and naming conventions — gives you new insights and control around PII (personally identifiable information) and other sensitive data.

Metadata lends itself well to data privacy, and with the correct machine learning and artificial intelligence modeling, can still provide critical information to the C-suite in areas such as lead-generation changes, third-party data access, potential breaches, and more.

5. ACCELERATE CONNECTIVITY: BUILD INTEGRATIONS FASTER AND EASIER WITH LOW-CODE DEVELOPMENT

In any organization, there’s going to be some integration work that requires hand-coding and custom work. But the vast majority of integration work doesn’t. Most data integrations and data transformations can be built with a low-code development environment with a drag-and-drop graphical interface and ready-to-use connectors for popular business applications and data technologies. Using low-code platform accelerates integration development by 5X to 10X.

Research and invest in modern, cloud-native integration technologies. Your business users can quickly get the data connections they need, and you will free your IT department to tackle the really hard, custom, and organization-specific work that requires developers’ time.
Demographics

Boomi commissioned Vanson Bourne to survey more than 1,200 IT and business decision makers from 19 countries across North America, Europe, and Asia Pacific. Respondents represented eight key industries, and companies ranging from 500 to 3,000+ employees.

**RESPONDENT COUNTRY**

<table>
<thead>
<tr>
<th>Country</th>
<th>IT Decision Makers</th>
<th>Business Decision Makers</th>
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**RESPONDENT TYPE**

- CEO/MD: 72
- Member of the C-suite: 61
- VP/department head: 86
- Director: 86
- Associate director: 138
- Manager: 94
- Other: 1

**ORGANIZATION SIZE**

- IT decision makers: 356
- Business decision makers: 518
- 500 - 999 employees: 366
- 1,000 - 2,999 employees: 138
- 3,000 or more employees: 94
- Other: 1

**ORGANIZATION SECTOR**

- Finance: 227
- Manufacturing: 225
- Retail: 183
- Healthcare (private and public): 174
- Public sector: 152
- Higher education: 103
- Insurance: 94
- Life sciences: 82
Appendix

WHAT APPLICATIONS ARE THE TOP PRIORITY FOR YOUR ORGANIZATION TO IMPLEMENT?

- IT apps
- Customer-facing apps
- ERP, CRM, HR, finance systems
- Business-related apps
- Don't know

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>Retail</th>
<th>Higher education</th>
<th>Manufacturing</th>
<th>Healthcare</th>
<th>Life sciences</th>
<th>Finance</th>
<th>Insurance</th>
<th>Public sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer-facing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT apps</td>
<td>60%</td>
<td>64%</td>
<td>57%</td>
<td>60%</td>
<td>56%</td>
<td>62%</td>
<td>60%</td>
<td>62%</td>
<td>60%</td>
</tr>
<tr>
<td>ERP, CRM, HR,</td>
<td>57%</td>
<td>59%</td>
<td>53%</td>
<td>59%</td>
<td>63%</td>
<td>52%</td>
<td>59%</td>
<td>58%</td>
<td>57%</td>
</tr>
<tr>
<td>Finance systems</td>
<td>57%</td>
<td>56%</td>
<td>44%</td>
<td>54%</td>
<td>57%</td>
<td>54%</td>
<td>52%</td>
<td>50%</td>
<td>44%</td>
</tr>
<tr>
<td>Business-related</td>
<td>54%</td>
<td>55%</td>
<td>60%</td>
<td>52%</td>
<td>54%</td>
<td>52%</td>
<td>54%</td>
<td>52%</td>
<td>60%</td>
</tr>
<tr>
<td>Don't know</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
<td>4%</td>
</tr>
</tbody>
</table>

WHICH AREAS OF IT DO YOU FEEL ARE THE WEAKEST IN TERMS OF INTERNAL SKILLS AND EXPERTISE WITHIN YOUR ORGANIZATION?

- Total
- North America
- Europe
- APAC

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>North America</th>
<th>Europe</th>
<th>APAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial intelligence</td>
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<tr>
<td>IT security</td>
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<tr>
<td>Big data analytics</td>
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<tr>
<td>Cloud migration</td>
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<tr>
<td>Blockchain</td>
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<td></td>
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<tr>
<td>Internet of Things</td>
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<tr>
<td>Machine learning</td>
<td></td>
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<tr>
<td>Emerging technologies in general</td>
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<tr>
<td>Application and data integration</td>
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<tr>
<td>Microservices</td>
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<tr>
<td>DevOps/DevSecOps</td>
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<tr>
<td>Containers/container orchestration</td>
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<tr>
<td>No areas of weakness in internal skills and expertise</td>
<td></td>
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</tr>
</tbody>
</table>

HOW WILL YOUR ORGANIZATION’S APPLICATION PORTFOLIO BE DISTRIBUTED BETWEEN ON-PREMISES AND CLOUD IN THE FUTURE?

- Total
- North America
- Europe
- APAC

<table>
<thead>
<tr>
<th>Duration from completion</th>
<th>Total</th>
<th>North America</th>
<th>Europe</th>
<th>APAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 12 months</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cloud (average)</td>
<td></td>
<td></td>
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<tr>
<td>In 12-36 months</td>
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<tr>
<td>Cloud (average)</td>
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<td></td>
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<tr>
<td>In more than 36 months</td>
<td></td>
<td></td>
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<tr>
<td>Cloud (average)</td>
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</tbody>
</table>
Boomi: A Catalyst to Modernize, Transform, and Innovate

Trusted by more than 10,000 organizations, the Boomi Platform provides unified capabilities to help fuel modernization, transformation, and innovation at leading private, public, and nonprofit enterprises around the world:

**INTEGRATION**
Connect applications and data with speed and ease. Break down data silos by integrating data and devices across your hybrid IT landscape.

**MASTER DATA HUB**
Build a centralized hub among applications to ensure your data is synchronized, accurate, and up-to-date. Establish your golden record of data truth.

**API MANAGEMENT**
Centrally create, publish, and manage APIs and web services, extending access across your growing hybrid landscape of applications, platforms, and data.

**FLOW**
Quickly build simple to complex automated workflows that streamline business processes and simplify data collection.

**B2B/EDI MANAGEMENT**
Easily exchange and automatically process information from your business partners through any kind of data network.

**DATA CATALOG AND PREPARATION**
Discover, prepare, and catalog both known and unknown data for improving data management and visibility.

Get Started Today

Contact Boomi experts in your region to explore how our technology can help you create the speed, agility, and competitive advantage your organization needs in our fast-changing digital era.

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