Integration: The Catalyst for Digital Transformation
Why data and application integration is the cornerstone for digitally transforming your business

In Pursuit of Digital Transformation

The C-suite wants to digitally transform the business. The use of technology for greater agility, customer centricity, innovation, real-time intelligence and time to value has emerged as an imperative in our fast-paced digital world. Digital transformation is a top strategic initiative for many CEOs, as well as executives in IT, marketing, operations, finance and other areas.

> *"By the end of 2017, two-thirds of the CEOs of Global 2000 enterprises will have digital transformation at the center of their corporate strategy." — IDC[1]*

By now, any business or IT professional who's strategized over what digital transformation can mean for business is familiar with the groundbreaking success of leading digital disruptors. These and other consumer-facing pioneers have transformed how billions of people shop, share, interact, learn and move about:

- Amazon provides a simple, intuitive, highly personalized shopping experience that has made it the world's largest retailer by market value.

- Facebook delivers a rich, immersive and easy-to-use platform that has reshaped how people communicate, across the street and around the globe.

- Google makes it simple to explore and communicate from a laptop or smartphone, with content and ads tailored to individual interests.

- Uber has upended the taxi cab industry with a mobile app that connects passengers with drivers in a transparent and easy model.

These are more than tales of digital transformation. They are fundamentally stories of integration and connectivity. Each of these companies did more than simply build websites and mobile apps. They have mastered data and application integration to transform from startups to digital behemoths.

1: IDC, "IDC FutureScape: Worldwide IT Industry 2016 Predictions — Leading Digital Transformation to Scale," November 2015.

With data integration, they capture and analyze petabytes of data from multiple sources to understand customer behaviors and interests as well as any company on the planet. Data integration lays the foundation to anticipate customer needs, deliver a personalized experience over any device and drive sales and loyalty with targeted marketing.

With application integration, processes are aligned for breakthrough visibility and efficiency. Amazon can display real-time inventory quantities on its website and coordinate sales across consigned inventory and third-party merchants. Uber makes hitching a ride seamless and transparent for both passengers and drivers by integrating its mobile app, passenger and provider databases, payment systems and GPS mapping.

Integration makes digital transformation possible. As IT landscapes morph into new models with new complexity, business and IT executives need to assess the role and importance of integration in their journey to digital transformation.

The Many Flavors of Digital Transformation
Not every company can be an Amazon or an Uber. Not every digital transformation is going to disrupt an industry and make the cover of Forbes or Wired magazine. In many cases, digital transformation occurs incrementally.

> *"Digital transformation is intensifying demands for seamless integration across application and information infrastructures."* — *Gartner*[2]

It could mean saving your employees and partners significant, repeated time by automating a B2B purchasing process. Or it could be improving customer satisfaction by connecting your CRM, order entry and call center systems, so that agents can see a customer's history for faster problem resolution.

It could be equipping supply chain personnel with a mobile app to quickly find goods, identify optimal shipping methods and replenish low stock without relying on emails and phone calls. These incremental improvements add up to transformative gains in your business performance, efficiency and stakeholder engagement.

To digitally transform your business, you have to offer a digitally transformative experience to your employees, customers and partners. Along with technology, this often requires a cultural and organizational evolution towards heightened customer centricity, agility and innovation that is most effectively captained from the C-level.

The CEO, CIO and other executives are ideally positioned to drive alignment across processes and technology to effect a cultural shift, with integration playing an important role. Integration improves collaboration and fluidity across the business to optimize internal processes without the delays and obstacles imposed by archaic systems.

Leading companies are focused on five areas of high business payback with an emphasis on consumerization — making business applications as simple and powerful as their consumer counterparts:

Flexible cloud applications. Cloud applications for HR, customer service, sales operations, marketing and other line-of-business functions are now standard thanks to greater flexibility and lower overhead compared to in-house systems.

Seamless mobile experiences. Companies continue extending business platforms for anywhere, any time access over smartphones and tablets.

Collaborative social engagement. Business seeks enhanced collaboration among employees, partners and customers by making it easier to communicate and share.

2: Gartner, *"Converging Data and Application Integration: A Step Toward Pervasive Integration Using a Hybrid Integration Platform,"* February 18, 2016.

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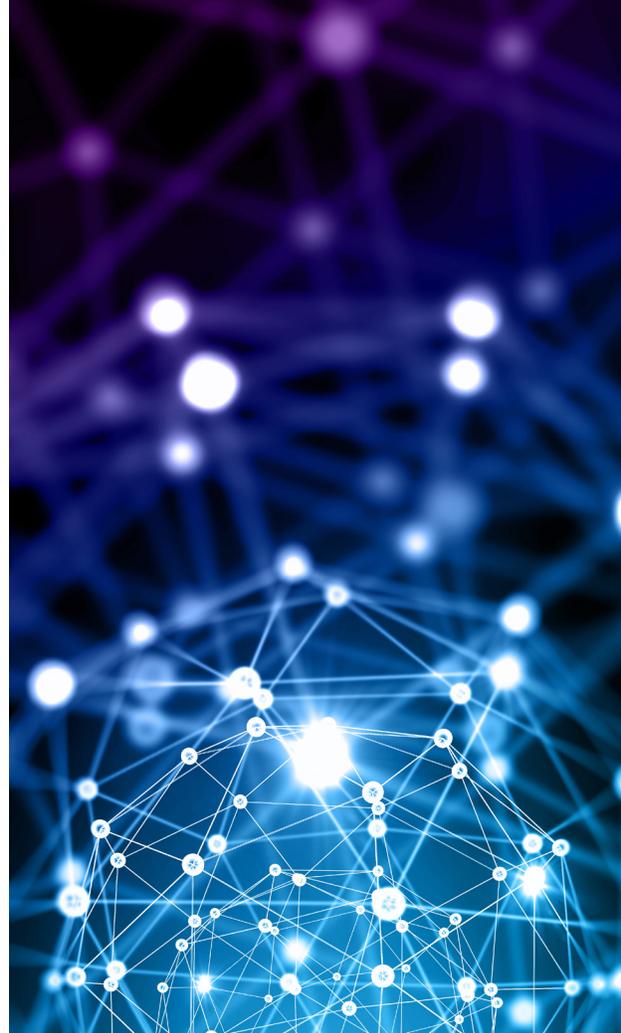
Real-time business analytics. From the C-suite to managerial ranks, on-demand access to real-time information from multiple data sources is essential for analytics tools that enable informed decision-making.

Intelligent IoT data. Information from sensors, wearables and other Internet of Things (IoT) sources can improve operational cost-efficiency, transparency and responsiveness, along with creating new ways to interact with customers.

This shift towards new channels of engagement and advanced data management is prompting large-scale changes in IT landscapes. Companies are swiftly adopting new cloud applications and leveraging new data sources, both internal and external. Hybrid IT, hybrid cloud and "shadow IT" environments have become the norm.

Hybrid IT environments

In hybrid IT, organizations leave legacy on-premises systems of record in place while incorporating more flexible cloud apps for lines of business. Hybrid IT is becoming more prevalent as companies introduce more cloud applications for greater agility and reduced costs while preserving investments in mission-critical on-premises systems.

Hybrid cloud environments

In a hybrid cloud, an enterprise will have multiple clouds in place for lines of business and discrete use cases such as document storage or collaboration. These clouds may be a mix of public clouds (with third-party application hosting) and private clouds (on-premises cloud applications managed by IT). Hybrid clouds are usually a subset of hybrid IT, except for organizations based strictly in the cloud with no on-premises infrastructure.

The hybrid cloud is growing rapidly. For instance, analyst firm IDC forecasts that more than 80 percent of enterprise IT organizations will commit to hybrid cloud architectures by 2017.[3] Researcher MarketsandMarkets predicts worldwide spending on hybrid cloud solutions and services will grow 176 percent over five years, from $33.3 billion in 2016 to $91.7 billion in 2021.[4]

3: IDC, "IDC FutureScape: Worldwide Cloud 2016 Predictions — Mastering the Raw Material of Digital Transformation," November 2015.
4: MarketsandMarkets, "Hybrid Cloud Market Worth $91.74 Billion USD by 2021," April 29, 2016.

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Shadow IT

Complicating matters is huge growth in "shadow IT" — the deployment of cloud apps (typically through software as a service), without IT oversight or control, by lines of business that seek to bypass the time and overhead of IT involvement. A Cisco study found an average of 1,220 shadow IT apps in place at large organizations. That's 13 times more than what IT leaders had estimated, with the number of cloud apps surging 112 percent in 2015, Cisco reported.[5]

Ironically, initiatives aimed at business simplicity are introducing new complexity across IT. Rolling out new cloud applications to meet tactical needs can result in redundant data stores and multiple versions of the truth. Growth in application numbers, along with more mobile, social, IoT, web services and other endpoints, means more application programming interfaces, or APIs, that IT needs to manage.

Yet for business to truly achieve digital transformation, diverse applications and data sources need to connect and integrate.

The Role of Cloud Integration in Digital Transformation

Does your enterprise have a sound integration strategy to support digital transformation? Many organizations do not. The analyst firm Gartner said in a report:

> *"Integration can be a source of competitive differentiation and an enabler for bimodal IT, but most CIOs have yet to recognize that their traditional, established integration strategies cannot cope with digitalization's fast technology innovation and accelerated pace of business. Integration is only a top priority for the most forward-thinking CIOs. Often, it's an afterthought or is perceived as a 'necessary evil.'"[6]*

In some cases, IT departments blithely assume that a complex, on-premises enterprise service bus or multiple, disconnected data integration tools deployed a decade ago can be repurposed for the future. It's a dangerous assumption, as unwieldy legacy integration systems lack the flexibility and agility required for digital transformation.

IT leaders may also favor an ad hoc approach, manually coding point-to-point connectivity as needed. That's also risky, as tactical integration lacks scalability and efficient reusability, and invariably competes with higher-priority IT projects.

A Cloud Approach to Integration

For digital transformation to thrive, integration needs to be as fast and flexible as today's leading cloud applications. That's why cloud-based integration, known as integration platform as a service (iPaaS), has emerged as the solution of choice for forward-thinking enterprises to connect applications, new and old, in any combination — cloud to cloud, cloud to on-premises or on-premises to on-premises (see Figure 1).

In effect, integration exists as a cloud service, much as does a Salesforce CRM system. And like cloud CRM, iPaaS has less overhead and a smaller footprint than traditional on-premises integration systems. iPaaS excels at simplicity and ease of use, translating into faster deployment, less cost and rapid time to value.

In certain integration scenarios, iPaaS platforms are readily implemented by line of business technology teams, without the involvement of an Integration Competency Center or central IT, reducing IT's workload and accelerating payback for the business. The best cloud integration platforms
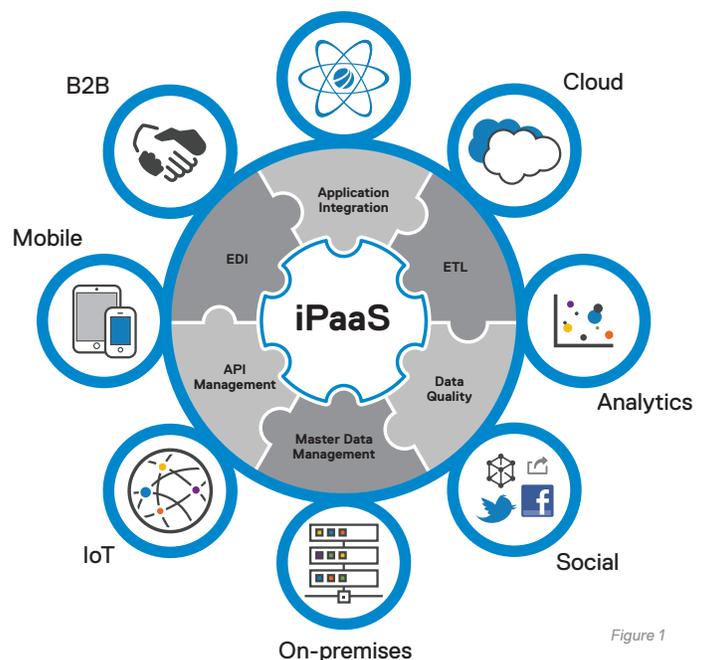

Figure 1

5: Cisco Systems, "Shadow IT Rampant, Pervasive and Explosive!," January 19, 2016.
6: Gartner, "CIO Call to Action: Shake Up Your Integration Strategy to Enable Digital Transformation," November 2015.

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deliver enterprise-grade functionality and open connectivity to address emerging challenges, serving as an important catalyst in digital transformation.

"[Enterprises] need to ease integration with cloud-based solutions, avoid custom code and improve agility while reducing the need for specialized integration skills. iPaaS can address these needs." — Forrester[7]

An Integration-Centric Approach to Digital Transformation

Organizations that make data and application integration a central element of a digital transformation strategy are positioned to outpace competitors that persist with unwieldy, outdated approaches to integration. A flexible and agile integration-centric approach to digital transformation generates bottom-line business impact and competitive differentiation in areas such as:

Greater business agility. When applications are connected and data flows freely, your business can better spot and capitalize on opportunities. You can innovate new engagement models that differentiate your business with customers and partners.

Rapid time to value. The fast-paced digital world punishes high cost and delay. Fast, flexible and future-proof integration based in the cloud is crucial to swiftly unleashing value from your cloud IT investments to maximize business impact.

Customer centricity. Putting the customer at the center of the business requires coordination across diverse back and front-office applications, and the strategic use of multi-source data to deliver a personalized experience.

Data-driven decisions and operations. Rich, real-time data is everywhere. Digital transformation depends on harnessing that information to evolve from guesswork business decisions, and to utilize IoT information for greater operational efficiency.

Freedom to innovate. When IT doesn't need to invest time and money in difficult integration projects, resources are liberated to focus on value-add projects. Lower costs for integration frees funding to pursue high-priority initiatives for digital transformation.

Digital transformation is still in its early days. The coming years will see more innovations and disruptive business models as organizations embrace a digitized global future. Some startups and established players will excel with a brilliant, well-executed idea, while others are "Uberized" — surpassed by a faster, more agile rival. Ensuring your organization's ability to compete in the digital world requires making data and application integration a central part of your transformation strategy.

Business benefits of integration

- Executives have broader, more timely visibility for decision-making
- Managers have real-time data and reporting for budgeting and planning
- Front-line personnel can access data on demand for better customer service
- The IT department spends less time and money maintaining in-house systems
- Partners and customers gain multi-channel and self-service options to engage with your business

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7: Forrester, "The Forrester Wave™: iPaaS for Dynamic Integration, Q3 2016," July 20, 2016.

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About Dell Boomi

Dell Boomi, a business unit of Dell Technologies, provides a multi-purpose iPaaS platform trusted by thousands of companies around the world. The Dell Boomi AtomSphere iPaaS platform simplifies complex environments with a single solution that encompasses:

Data and application integration across any-to-any sources and targets, supported by a scalable, secure, enterprise-grade cloud platform.

Master Data Management (MDM) to reconcile data across multiple applications into a single version of the truth.

API management to create, publish and manage fast-growing numbers of APIs for use across internal and external applications.
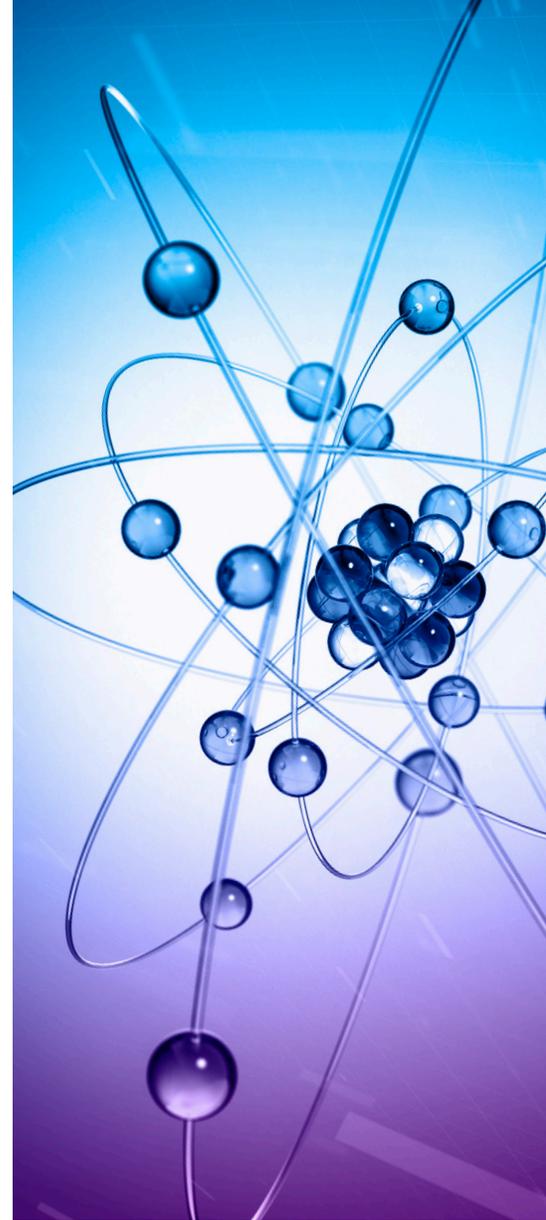
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