Re-Imagine iPaaS for a Data-Driven Digital Transformation World
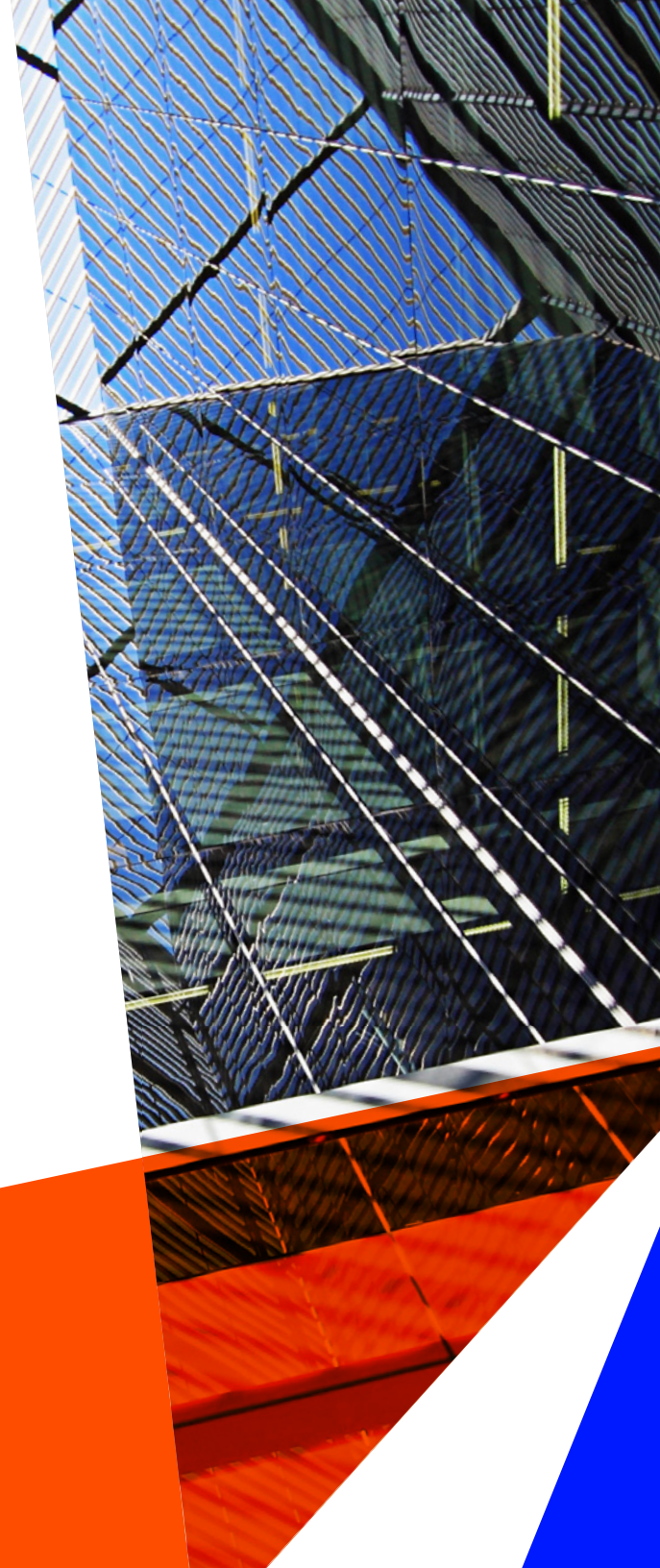
Why new business challenges require new thinking

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Data Is the Currency of Your Digital Transformation

Introduction

We are experiencing a time where data-driven digital transformation impacts every business. This means new and innovative business models, driven by a strong focus on data. Organizations leverage internal and external data to anticipate customer needs, provide better service, deliver better patient healthcare outcomes, and disrupt existing markets with business models—like personalized medicine, ride-sharing, digital media, all-digital banks, and much more.

After all, data is the currency of your digital transformations.

Consider these facts:

– By 2025, there will be 163 trillion gigabytes of data in the digital universe. That is 10 times all the data generated in 2016.[1]

– The amount of analyzed data that is "touched" by cognitive systems will grow by a factor of 100 to 1.4ZB in 2025.[2]

– 61% of workloads will run in the cloud by 2018.[3]

It's clear—in this new, data-driven world, the "old ways of doing things" will not be agile enough and will not scale enough to meet next-generation business requirements.

A modern, data-centric way of thinking is required. And the benefits will include loyal customers, better customer experiences, and greater revenue growth from highly differentiated and personalized experiences for customers.
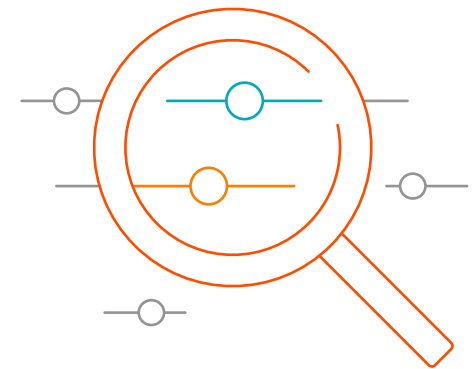
Instead of just selling commercial real estate, this business has turned itself into a **strategic partner** for its customers.
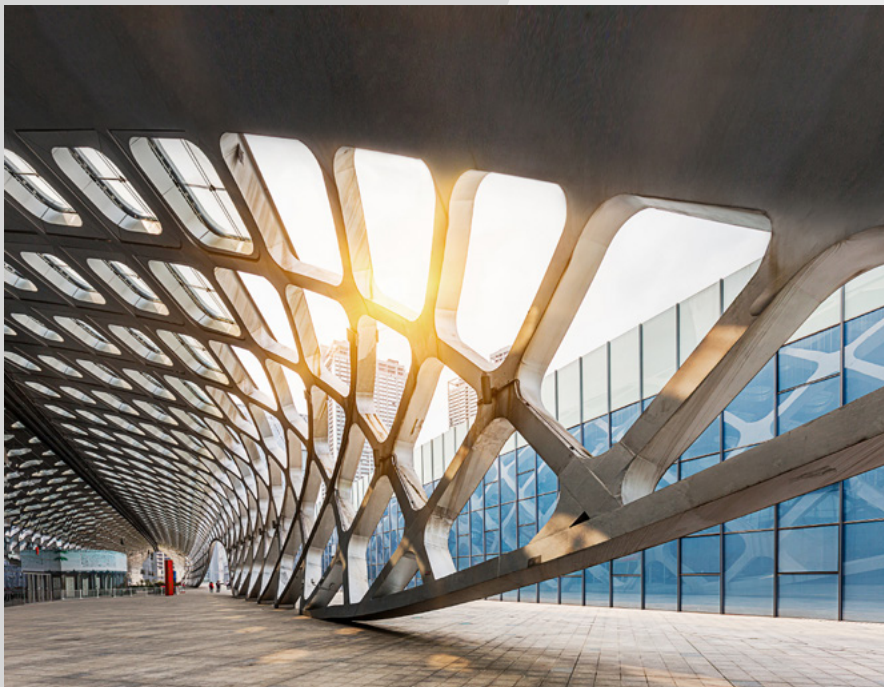
Digital Transformation Story: JLL

JLL (formerly Jones Lang LaSalle) is a world leader in the commercial real estate business. If you think about it, commercial real estate is a business with minimal market differentiation. But, JLL set out to change all that. Instead of just selling commercial real estate, this business has turned itself into a strategic partner for its customers.

How? By leveraging analytics and vast amounts of data, including large bodies of external data, internal customer data, sensor data, and more. Ultimately, delivering an array of services that will be hard for competitors to match. These services include: building selection, management, security, power, HVAC, design, and managing a portfolio of properties.

The additional level of service that JLL provides enables the business to have a completely different, and more strategic discussion with its customers.

JLL

Part One

"Cloud-First" Does Not Mean Data-Last

Cloud Is Inevitable

It's all about speed. Your business cannot wait one or two quarters for a new system to be provisioned. They need to show business results now. Speed means faster time-to-value-delivery, faster delivery of trusted data, and faster positive business outcomes.

A recent study by KPMG found the following:

– 60% of CEOs see **disruption** as an opportunity

– CEOs feel the need for **speed** is essential

– 49% of CEOS are concerned about the **integrity** of data driving their decisions.[4]

Cloud is an essential part of meeting the business requirement for speed. With cloud, you can stand up a new system in hours rather than quarters. Plus, there are significant additional benefits that come with cloud:

– Flexibility

– Scalability

– Cost (Pay-as-you-go and Opex, not Capex)

– Agility

What has really changed for cloud in the past year is "cloud at scale." We are at a point where the cloud infrastructure is ready to handle the most demanding big data and enterprise-class challenges.

In addition, it's increasingly easy to "just try out" something new in the cloud without any pressure or obligation. It's easy to see if something new fits your needs.

All these are compelling reasons why cloud should be an important part of your digital transformation strategy.

Land O'Lakes is leveraging cloud data and master data management to integrate CRM and other cloud sources to create a **360-degree view** of its customers.

A Speed Story: Land O'Lakes

Land O'Lakes is an over $13 billion agricultural cooperative that is actively using data and analytics to transform their business. The business includes the Purina animal feed product line and the Winfield wholesale seed business.

Land O'Lakes decided to take a cloud-first approach for its next-generation analytics initiatives. It is using cloud data integration to integrate satellite imaging with soil sample data to better advise its growers on the best way to grow crops for optimal output. In this way, it is optimizing profitability while providing unique value to its cooperative growers.

On the customer side, Land O'Lakes is leveraging cloud data and master data management to integrate CRM and other cloud sources to create a 360-degree view of its customers. With this understanding, Land O'Lakes is better able to relate data from many different sources and systems to gain a more complete understanding of its customers and to be a better strategic partner for them.

In both of these transformative examples, Land O'Lakes is leveraging a cloud data management solution and analytics to provide higher value and to drive better business results.

LAND O'LAKES, INC.

"Cloud-First" Does Not Mean Data-Last

A significant number of cloud developers think the lessons learned about data management over the years don't apply in the cloud. Nothing could be further from the truth.

– CEOs are concerned about the integrity of data behind decisions, as mentioned earlier in the KPMG study.

– Regulatory requirements such as General Data Protection Regulation (GDPR) apply just as much to cloud as on-premises. Everyone's data must be protected at all times.

– The business models and analytic insights are only as good as the data they are built upon.

The fundamental truths of good data management still apply.

Carbonite has taken a **cloud-first approach** to accelerating sales, marketing, and services decision-making.

A Cloud-First Story: Carbonite

Carbonite provides online data backup and recovery software for businesses and consumers. Its challenge was how to scale the company for high growth while still maintaining business agility and the ability to leverage data as a shared resource across the organization. Carbonite has taken a cloud-first approach to accelerating sales, marketing, and services decision-making.

Its cloud focus allowed Carbonite to manage a three-fold increase in Salesforce.com data, while at the same time, accelerating its decision-making and delivering exceptional customer support. It is also using cloud B2B capabilities to dramatically speed up partner onboarding.

CARBONITE

Thinking Data-First

Over time, systems will come and go. But, the one thing that will give you a significant and sustainable competitive advantage over your competitors is your data. It's time to have a talk with your enterprise architect.

Here are some subjects to discuss:

— Your organization's data must be a shared resource, discoverable and available to all.

— Your business analysts must be able to self-serve data.

— Avoid the trap of data perfection. For innovation, fast data might be more important than perfect data. Perfect data may be required for your most critical business decisions and processes, not all decisions and processes.

— Your data management platform must be agnostic of change to data, systems, and processes. It must be "plug and play" and modular to adapt to changing technologies.

— Your developers must be abstracted from technology changes as well. New technologies must not mean that existing data management "code" needs to be re-created.

Your data management architecture is the foundation that your organization's analytical and operational systems will run on. It's time well-spent to plan out an architecture that will deliver the data you need, at the quality and speed you need it, regardless of data, systems, and process changes.

Part Two

Re-Imagining Data Management

Re-Imagining Data Management

For the past six years or more, data management in the cloud has been defined by Integration Platform-as-a-Service (iPaaS).

This consisted of four capabilities: Cloud Data Integration, Cloud Application and Process Integration, API Management, and Connectivity. The approach was positive because it combined two popular integration patterns: Data Integration (or ETL) and API-based integration, typically leveraging representational state transfer (REST) APIs. Users were enabled to pick the right tool to meet their current requirements.

That was a decent start, but it provides a very limited view given the new challenges of cloud data management.

Cloud Data
Integration

Cloud
Application
and Process
Integration

**Current
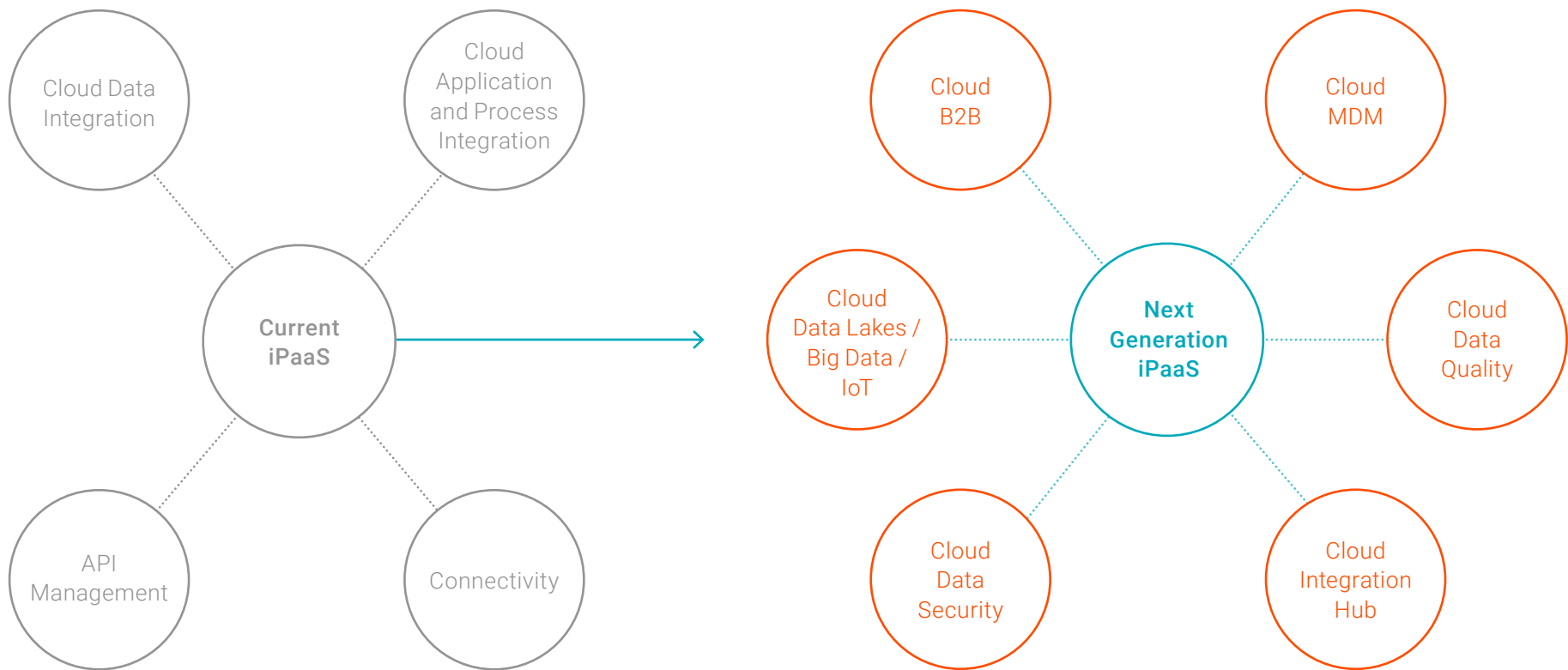iPaaS**

API
Management

Connectivity
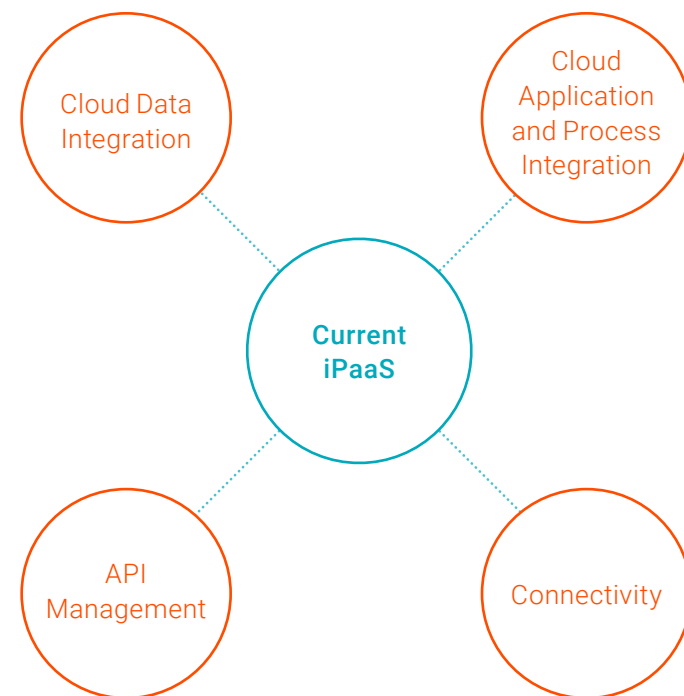
Re-Imagining Data Management

What is required now is a next-generation iPaaS that can address the new and emerging cloud use cases. The following should be considered the additional critical capabilities of a next-generation iPaaS:

— **Partner Data Management (B2B)**—for exchanging data and electronic messages with business partners.

— **Cloud Integration Hub**—to streamline the data integration architecture, by replacing it with a simple publish and subscribe architecture. In this architecture, data sources only publish data once for all subscribers. Subscribers receive the data in the format and timeframe they require.

— **Cloud Data Quality**—to profile data, discover data quality issues and to build and run data quality rules to correct issue on an ongoing basis. This ensures the delivery of trusted data for decisions and key business processes.

— **Cloud Master Data Management**—to provide a 360-degree view of data about key business entities (such as customer, supplier, partner) from multiple internal and external data source systems.

— **Cloud Data Security**—to quickly identify sensitive data and protect it to comply with regulations and data security policies.

— **Cloud Data Lakes / Big Data / Internet of Things (IoT)**—to enable cloud management of very large data sets, often with unknown or no data structure. This is commonly used to combine very large data sets from external sources with internal data to derive new insights and understanding about the business and to drive decisions.

Re-Imagining Data Management

Cloud Data Integration

Cloud Application and Process Integration

Current iPaaS

API Management

Connectivity

Cloud B2B

Cloud MDM

Cloud Data Lakes / Big Data / IoT

Next Generation iPaaS

Cloud Data Quality

Cloud Data Security

Cloud Integration Hub

Re-Imagining Data Management

Digital transformation requires a cloud-based data management solution that offers these services and connects to and manages any data—on-premises or in multiple clouds. Businesses should consider a data management platform that is:

– Bigger: scales to support huge data volumes

– Faster: supports business speed and agility

– Better: solves new data integration needs

– Sleeker: adapts to new data, new systems, new use cases, new users

Emerging Cloud Use Cases
Common examples of new use cases driving the need for a next-generation iPaaS include:

– Multi-cloud integration, applications

– Multi-cloud integration, analytics

– Data governance for multi-cloud environments

– New cloud advanced data warehouse

– Data lakes in the cloud that augment cloud data warehouses

– Cloud-driven business data self-service

What to Look for in a Next-Generation iPaaS

You can't expect old-age data management technologies to solve new age problems. You should be looking for a cloud-ready, next-generation, data management solution that includes:

- **A next-generation advanced iPaaS approach.** Don't expect hand-coding, Enterprise Application Integration (EAI), Enterprise Service Bus (ESB), or Extract, Transfer and Load (ETL) to handle the new use cases required to compete on data. It is going to take new data management capabilities.

- **An end-to-end data management solution.** Wherever you start with using the data management capabilities of a next-gen iPaaS, you should know that you can easily add new functionality with minimal to no disruption to productivity.

- **A re-imagined user experience.** A next-gen iPaaS won't just be a collection of products thrown in a box. It must provide an advanced, consistent, and highly-productive user experience that enables users to use all the capabilities of a next-gen iPaaS to solve their data management problem.

- **Enabling new types of users to engage in data management.** A next-gen iPaaS should empower new types of users to actively engage in data management with a role-appropriate user experience. Some examples of new users include: business analysts, data scientists, data stewards, and citizen-integrators.

- **Scale.** Data volumes are doubling yearly and data complexity is increasing rapidly as well. Your data management solution must scale to the volume and complexity of today and five years from now.
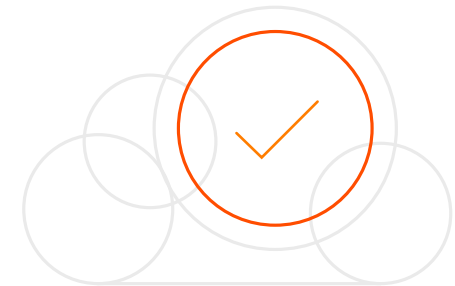
What to Look for in a Next-Generation iPaaS

– **Artificial Intelligence (AI) and Machine Learning.** AI and Machine Learning must be baked into your next-gen iPaaS, so that all of your data management professionals and business users get the benefits of AI: accelerated productivity, intelligent recommendations, and automation of common data management tasks. Your AI should be powered by business, technical, operational, and usage metadata collected from across your entire environment.

   Common examples of AI accelerating productivity include:

   • The data catalog recommending similar data sets that might be useful based on the type of project a user is doing.

   • The next-gen iPaaS using data similarity to enable automatic tagging of data based on past patterns, integration of data based on past patterns of similar data, and application of data quality rules based on rules applied to similar data.

   • The next-gen iPaaS should automatically detect and manage the onboarding of new, unstructured data.

   • It should recognize key data domains (such as name, phone number, address) and entities (such as a purchase order or healthcare record).

– **Microservices Architecture**. This is a key way to ensure the complete consistency of the user experience across the "cloud of clouds." By making all common functionality in the cloud of clouds, a microservice (think security, search, asset management, etc.), you can ensure that all these functions look, feel, and act the exact same way because they are all based on the same, shared microservices.

– **Integrated Catalog.** Virtually every data management project starts with finding out what data is available. A catalog should enable business and technical users to discover and explore all the data available across the entire organization, quickly and easily.

Saving Lives with a Data Story: Genomic Health Inc.

Genomic Health realized that the organization was in a position where it could save lives by delivering a personalized healthcare treatment **three days faster.**

Genomic Health Inc. is in the business of cancer research and personalized treatments. The healthcare organization had a variety of internal systems that ran its business, and decided to add Salesforce.com because of its cloud benefits and ability to scale quickly. Regardless, when Genomic Health started to accelerate business, it found a significant problem with data locked up in silos—preventing the organization from discovering, accessing, and sharing data.

Genomic Health realized that the organization was in a position where it could save lives by delivering a personalized healthcare treatment three days faster. And, that is exactly what Genomic Health accomplished.

The healthcare organization put aside hand-coding and less scalable approaches to coding, and standardized on a next-generation data management system that accelerated productivity and helped it to manage a 360-degree view of its patients with data from across many systems, cloud and on-premises.

The result? Genomic Health delivers data to the right place faster, generates critical insights faster, and ultimately saves lives.

genomic Health
LIFE. CHANGING.

Conclusion

Change Is the Only Constant

Conclusion

The only constant is change. Business requirements will evolve rapidly, data volume and complexity will grow, and technology will continue to change. You need an approach to data management that is modern, modular, and flexible enough to help your organization to adapt and lead no matter the changes in the market.

Your organization must manage data on-premises, in the cloud, and big data anywhere. You must also help your entire organization's workforce to use data as a competitive advantage.

It's time to think about a data management architecture based on a next-gen iPaaS.

Further Reading

For more information and seven best practices for managing a hybrid environment see: TDWI Checklist Report, Data Management Best Practices for Cloud and Hybrid Architectures by Philip Russom.
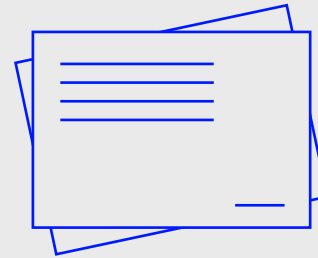
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Sources

1. **IDC White Paper.** [Data Age 2025: The Evolution of Data to Life-Critical. March 2017.](#)

2. **Ibid**.

3. **451 Research.** [Enterprise IT Executives Expect 60% of Workloads Will Run in the Cloud by 2018.](#) [September 1, 2016](#)

4. **KPMG.** [U.S. CEO Outlook 2017: Disrupt and Grow. June 13, 2017](#)

5. **Gartner Press Release.** [Gartner Says By 2020, a Corporate "No-Cloud" Policy Will Be as Rare as a "No-Internet" Policy is Today. June 22, 2016.](#)