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SOLUTIONS

Harnessing Legacy Data

Making it easier to securely access and share your data

Organizations can derive important value from harnessing legacy data to deliver new services in a timely and efficient way – or by analyzing that data to provide new insights. A significant amount of business value resides in established and stable legacy systems and tools, and by connecting the data from these systems with new transformational approaches, enterprises can effectively leverage their heritage – whether it be to resist the challenge of new industry disruptors, improve customer satisfaction, or increase operational efficiencies.

However, accessing this legacy data is often one of the biggest challenges organizations face. If you're facing this common problem, keep reading for tips on how you can successfully achieve your modernization objectives – with less time and cost.

The Challenges in Dealing With Legacy Data

The term 'legacy data' can mean numerous things to different people within an organization. For some, it means data that is stored in old infrastructure or systems that are reaching end-of-life, impossible to upgrade or migrate. Maybe you've inherited legacy or duplicate systems from past M&A (Mergers and Acquisitions) activity and have no idea what data they contain. Other common characteristics of 'legacy' data systems include:

- no longer receiving support from the supplier
- impossible to update or migrate but are still valuable to the business
- unable to meet current regulatory or security standards
- no longer the most efficient option, in terms of cost and technical fit for the business

From a MarkLogic perspective, our definition of 'legacy data' is information stored in an old or obsolete format or in a system that makes it difficult for users to access or process the data. Your data, however, is still your organization's most important asset and cannot simply be discarded or thrown away.

Direct and Indirect Costs of Integration

Traditional approaches to integrating legacy data silos are massively costly – not only the direct costs of ETL and data integration software, but also the indirect costs of time spent on doing collection and preparation tasks instead of advancing your business:

- Data scientists spend up to 80% of their time doing "data wrangling" – instead of analysis (New York Times)
- Between 60% and 80% of the total cost of a data warehouse project may be taken up by ETL software and processes (TDWI)
- Gartner found that organizations spent more than $3.5B in 2016 on data integration software

Using traditional approaches sacrifices your organization's ability to be agile and competitive, and impacts everyone:

- The business cannot understand why it takes IT so long to develop a 360° view and they are upset because they needed the app delivered last year
- Developers are frustrated trying to explain why the ETL alone will take a year or more, and are also upset because they aren't able to focus on building apps
- The architects are stuck in the middle because they know they need agility but they still need safety, security, and resiliency

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IT and Infrastructure Issues

Enterprises today face the daunting challenge of having to improve or replace their legacy technology systems in order to better serve their citizens, as well as improve efficiency, effectiveness, and data security.

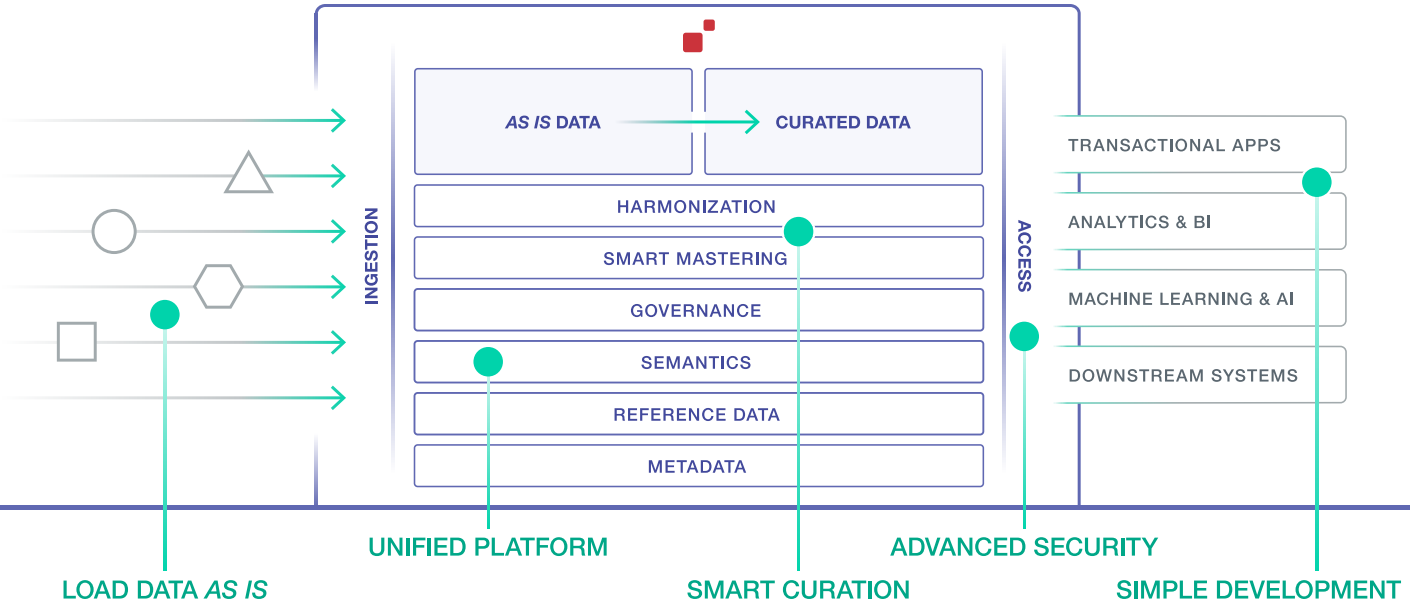
A survey of IT and business decision-makers found that almost nine in ten (89%) of people believe that legacy technology is a barrier to digital transformation, with 46% believing that changes to legacy systems would cause major business disruption, and 40% believing the legacy technology would be cost-prohibitive to replace. At MarkLogic, we believe that the integration of legacy systems is a key consideration for businesses on a digital transformation journey, though it would be a mistake to view legacy as an absolute barrier to it.

To deliver modern applications, systems need to be highly interoperable and easily integrate and manage the large variety and volumes of data stored in these legacy silos. Many organizations are also looking to leverage cloud infrastructure for IT modernization and cost reduction. But it's also not a simple (or realistic) ask to just 'rip and replace' your current systems in order to modernize them and deliver on the digital transformation goal.

Take a Different Approach

Every organization needs a 360° view of their data – be that newly generated data or legacy data. Whether it is a unified view of customers, citizens, patients, financial trades, manufacturing parts, or anything else – every type of organization benefits from having a comprehensive and governed view of their data. But that's not all they need. What businesses are realizing now is that they also need that view to be actionable, and accessible at appropriate levels throughout the enterprise. Your 360° view needs to be up-to-date in real-time – the business cannot wait weeks or months to analyze the data in a warehouse and make decisions.

Taking a "data-first" approach to integration, focusing on what data you have and how you want to use it – instead of on an IT-centric approach of connecting individual legacy systems or spending years trying to develop an all-encompassing data model – is a key shift in achieving success.



The MarkLogic Data Hub is a data platform for simplifying complex data integration

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The Solution: An Operational Data Hub

Data integration is one of the most complex IT challenges to overcome in any project, and the MarkLogic Data Hub Platform simplifies it. MarkLogic removes friction at every step in the process so that organizations can achieve a 360º view faster than ever. Complex and slow ETL? Eliminated. Simple and fast data curation? Implemented. Modern database capabilities? Utilized. Total data integration success? Achieved. With MarkLogic, it only takes days or weeks – not months or years – to integrate data and build secure data services that enable IT to keep pace with the speed of business.

The MarkLogic Data Hub platform enables you to access and operationalize your data to achieve better outcomes faster than ever. It is a real-time, secure and scalable platform that provides a harmonized and governed view of all your ingested data – while ensuring the most stringent levels of data privacy. The Data Hub ensures that organizations can serve their existing digital transformation and modernization needs, as well as supporting future applications, with a trusted source of key information.

With one platform, you can integrate all of your data, power transactional and analytical applications, and curate data for machine learning and AI. The Data Hub works by ingesting data as is from any source, indexing it for immediate query and search, and curating it through a process of enrichment, harmonization, and mastering. The process is agile and secure, powered by the MarkLogic Multi-Model Database.

Fully Automated Cloud Service: MarkLogic Data Hub Service

MarkLogic Data Hub Service allows you to focus on your business and leave database infrastructure and operations to the experts at MarkLogic. This means agile teams can immediately start integrating data and building apps while also reducing infrastructure and business risk.

MarkLogic Data Hub Service is a fully automated cloud service to integrate data from existing or legacy silos. Based on the MarkLogic Data Hub, the service enables agile teams to immediately start integrating and curating data for both operational and analytical use. It provides on-demand capacity, auto-scaling, automated database operations, and proven enterprise data security. Unlike other cloud services, however, it's cost-effective and predictable even as enterprise workloads fluctuate.

Success Stories in Harnessing Legacy Data

Following are a few examples of public and private sector enterprises around the world that have modernized their systems and transformed their businesses using MarkLogic.

The UK Ministry of Housing, Communities and Local Government

The UK Ministry of Housing, Communities and Local Government, a UK Central government department responsible for funding all local government, devolved administrations, and a variety of community and local services, was tasked with the administration of the European Regional Development Fund (ERDF) for England. Most of the funding-related data came from a number of legacy sources which were old and nearing end of support. The data included applications, processing, payment, reporting and analysis – stored in XML format, with some data stored as CSV files or Excel spreadsheets. Prior to MarkLogic, UK government attempted to build a system using relational technology but soon realized they needed to develop a complex relational ETL process and schemas which would be prohibitively expensive to build and maintain. Faced with an immediate launch date, they needed to create an integrated, scalable data solution that would enable them to get up and running quickly. The Ministry now run its eClaims platform on MarkLogic allowing them to have a complete 360° view across all funding data.

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British Broadcasting Company (BBC)

BBC Worldwide is the main commercial arm and a wholly owned subsidiary of the British Broadcasting Corporation (BBC). Its vision is to build the BBC's brands, audiences, commercial returns and reputation across the world. The BBC was the first global media company to embrace using NoSQL for a mission-critical application at scale. For the 2012 Olympics, the BBC moved from a relational database to a new architecture built using MarkLogic and semantics in order to automate the aggregation, publishing, and repurposing of content. BBC's legacy system, based heavily on MySQL and Memcached, showed performance and reliability problems. The legacy system was also hard to maintain, being a large myriad of components all stitched together. With MarkLogic, the new architecture was much simpler and easier to launch and maintain. The application now runs on the AWS cloud, which was easy to deploy and easy to scale. Since then, the BBC has expanded its use of MarkLogic with the iPlayer.

Medicaid Management Information System (MMIS) Modernization

A US state agency wanted to purchase the best healthcare for its citizens at the least possible cost. Their legacy infrastructure relied on siloed systems to determine eligibility, causing challenges in gaining a holistic view of relevant data. After spending two years trying to get it to work with relational technology, they gave up and moved to MarkLogic, which they successfully implemented in 18 months, enrolling millions of US citizens. By modernizing on MarkLogic, the state now integrates disparate data and provides a 360° view of application and client/customer data, reducing time to service.

Aetna – HR Data Hub for 360 View of Employees

Aetna is a large health insurer that provides coverage for over 23 million people through over 1 million providers. Not only does this mean that they process billions of claims every year, but they also have to manage HR data for around 35,000 of their own employees. Following an extensive period of M&A activity, Aetna's IT organization was getting significant pressure from the business to integrate all of their HR data into a central place and have it delivered to downstream systems for other real-time apps and batch analytics. In choosing MarkLogic, Aetna was able to use a flexible data model that they could develop in a more agile manner. It was estimated that using relational technology to do the full ERP replacement, the project would have eaten up 50,000 man-hours, but with MarkLogic, it only took 6,000 hours. And, perhaps the best part, the new system is future-proof, providing Aetna the ability to bring in new data sources and adapt to change.

About MarkLogic

By simplifying data integration, MarkLogic helps organizations gain agility, lower IT costs, and safely share their data. Headquartered in Silicon Valley, MarkLogic has offices throughout the U.S., Europe, Asia, and Australia.

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