

HCL

Logical data fabric as a path to modernization



Digital Business Services
HCL Technologies

Many mid to large organizations are increasingly turning to the cloud to take advantage of the scalable yet elastic computing and storage resources for which they are adopting data fabric architecture. Gartner has projected that by 2023, organizations utilizing data fabric to dynamically connect, optimize and automate data management process will:

- Reduce time to data delivery by 30%
- Automate manual transformations by 45%
- Reduce dependency on IT specialists by 20%
- Reduce integration costs by 45%

Since 2016, HCL Technologies and Denodo have been partnering to enable companies engage successfully in profound digital transformations that improve agility, streamline cross-channel customer responsiveness, and accelerate time-to-market.

Why HCL Technologies and Denodo?

Digital transformation is not a luxury or trivial; it is a core requirement.

Today's customers are mobile, empowered, eager to increase profitability, and drive revenue growth. Hence they expect fluid, seamless interactions across channels, geographical boundaries, and increased data distribution across siloed data locations. Hence It, therefore, becomes critical for businesses to knit together disparate data sources irrespective of the location (on-premises or multi-cloud environments) and its format. There is now a need to adopt a governance led “data fabric” approach to optimize their business outcomes with digitization at scale.



Enterprises that wish to engage in such transformations will have to overcome numerous challenges, including:



New methods in advanced analytics and machine learning practices that give rise to increasingly complex data requirements.



The evolution of different specialized tools addressing different data management needs impeding organizations in establishing a “single version of the truth.” These new tools include EDWs, data marts, relational databases (RDBMS), data lakes, NoSQL systems, internal and external REST APIs, real-time data feeds including social media feeds, and many more.



Multiple personas now require access to the data: BI analysts, citizen integrators, data scientists, data stewards, IT, and data security professionals. Each have different skills and requirements.



Transitions to the cloud (or to multiple cloud platforms), that creates hybrid ecosystems in which data becomes physically fragmented. IT needs the flexibility to adapt to new architectures while supporting the business with minimal interruption.



Organizations needing to demonstrate higher standards in compliance and governance to fulfill specific legal frameworks (GDPR, CCPA) and external threats.



Securing and governing a hybrid ecosystem that can be complex and error prone.

Data fabric outlines an architecture based on these core ideas:



A common access layer for all data sources and consumers which hides the complexity of the deployment and provides a single logical system for consumption.



Broader governance, documentation, and security features across the board, geared toward providing stronger trust and confidence in the data.



Availability of multiple data integration strategies to be used seamlessly, depending on the use case, for both analytical and operational scenarios.



Automation, leveraging active metadata and AI, to make it significantly easier to develop, operate, and use such a system.



Additional semantics to make data elements (and the relationships and connections between them) easier to consume, operate, and manipulate.

HCL Technologies and Denodo enable companies to overcome each of these challenges to engage in successful digital transformations and achieve their expected benefits and reach success.

What Denodo Brings?

Denodo provides end-to-end data management capabilities (data discovery, data profiling, data integration, dynamic data preparation, data governance (data catalog), metadata management, life cycle management, data protection and data privacy)



Provides logical data fabric layer integrating data across structured and unstructured data sources irrespective of where they reside (on-premise, cloud, hybrid cloud, multi-cloud) with rapid data delivery in multiple formats to data consumers.



Self service data catalog for discovery, data preparation, data lineage and associations



Enables data-distribution-as-a-service (REST, SOAP, GraphQL) and helps customer monetize marketing / non-sensitive data with external / third parties



Provides access to data in real-time & faster on-boarding of new applications



Unified data governance (data catalog-search and browse data)



Data protection (role based, column level and row level) and privacy by design (data masking)

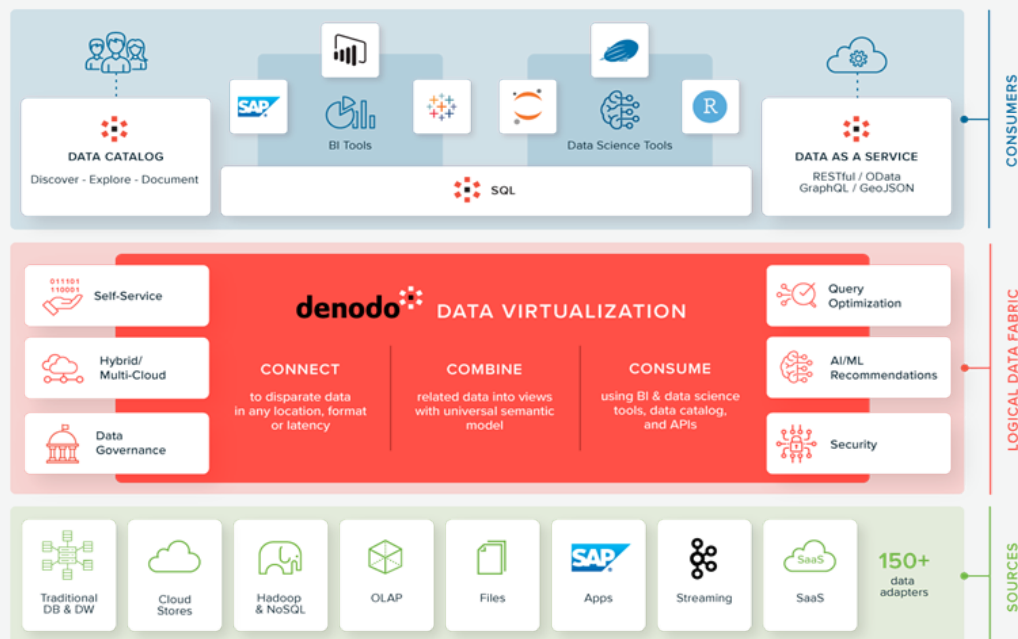


Built-in security, metadata management and auditability



Denodo can help adapt to both data fabric (unify distributed data in a hybrid cloud / multi cloud environment) **and data mesh** (decentralized, distributed approach to enterprise data)





The Denodo Platform / abstraction layer fits between data consumers and the source data layer. It hides the complexity of data sources, joins across sources and transformation logic, and provides all information required by consumers with a unified data layer. The platform technology is based on a “single source of truth” and provides a high-level overview of an organization’s overall data. Even if it contains no data, it provides a real-time view across myriad disparate sources.

With the Denodo Platform, new sources can be added relatively quickly, including emerging data storage architectures such as cloud or big data sources.

What HCL Technologies brings?

HCL Technologies is a next-generation global technology company that helps enterprises to reimagine their businesses for the digital age. HCLTech provides a connected digital experience, drives innovation across enterprises, enables CX transformation, and provides cloud migration and modernization services to clients with a digital consultative approach. The HCLTech team can re-invent the client’s technology stack with an integrated approach that covers people, processes, technology, applications, and data. What makes our process unique is that we are never ideating in a bubble. Digital business architectures, technology platforms and data innovation makes business transformation a reality. HCLTech’s Digital Business services brings its entire gamut of expertise – from consulting to implementation – to ensure that digital journeys can enable an end-to-end IT transformation.

The HCLTech Denodo Center of Excellence has a deep expertise in technical infrastructure, knowledge of latest Denodo platform, and skill to digitize the application landscape. We create end-to-end omnichannel customer experience and successfully elevate the client engagements to the next level across enterprises. HCLTech believes in open communication between business stakeholders and guides companies through every step of their digital transformations, from implementing the right technology the right way, and to managing the necessary cultural changes across the applicable teams. We have our Denodo Lab setup hosted on the cloud for building accelerators and training.

Our competency in solution advancement with data virtualization



70+

Projects Successfully Delivered



250+

DV Professionals



Multi-Domain

Project Expertise



GLOBAL

Partnership & Alliances Ecosystem

Solutions & frameworks

- LDF framework
- Data bots
- Data marketplace
- Regulatory compliance

Awards and Recognitions

denodo

IBM

dremio

TIBCO

Service offerings

- DV (on-premise and cloud)
- DV upgrades /migration
- Unified data security and governance
- DV Consulting / Use case assessment

Experience Highlights

- Logical Data Warehouse
- Logical Data Fabric
- Consumption-based analytics
- Data-as-a-Service
- Self service portal
- Data security & user access control
- Data marketplace (data catalog)
- Data governance
- Data masking on sensitive data

Clients

Financial Services | Lifesciences & Healthcare | Media & Entertainment | Telecom | Retail

300%

Increase in business user productivity

80%

Reduction in development resources

30%

Faster access to data than ETL processes

Our solution accelerators:



LDF framework- Framework (pre-packaged DV objects for diverse sources, data security options, best practices) built to setup a data fabric foundation layer by Integrating data across multiple cloud environments and speed data delivery.

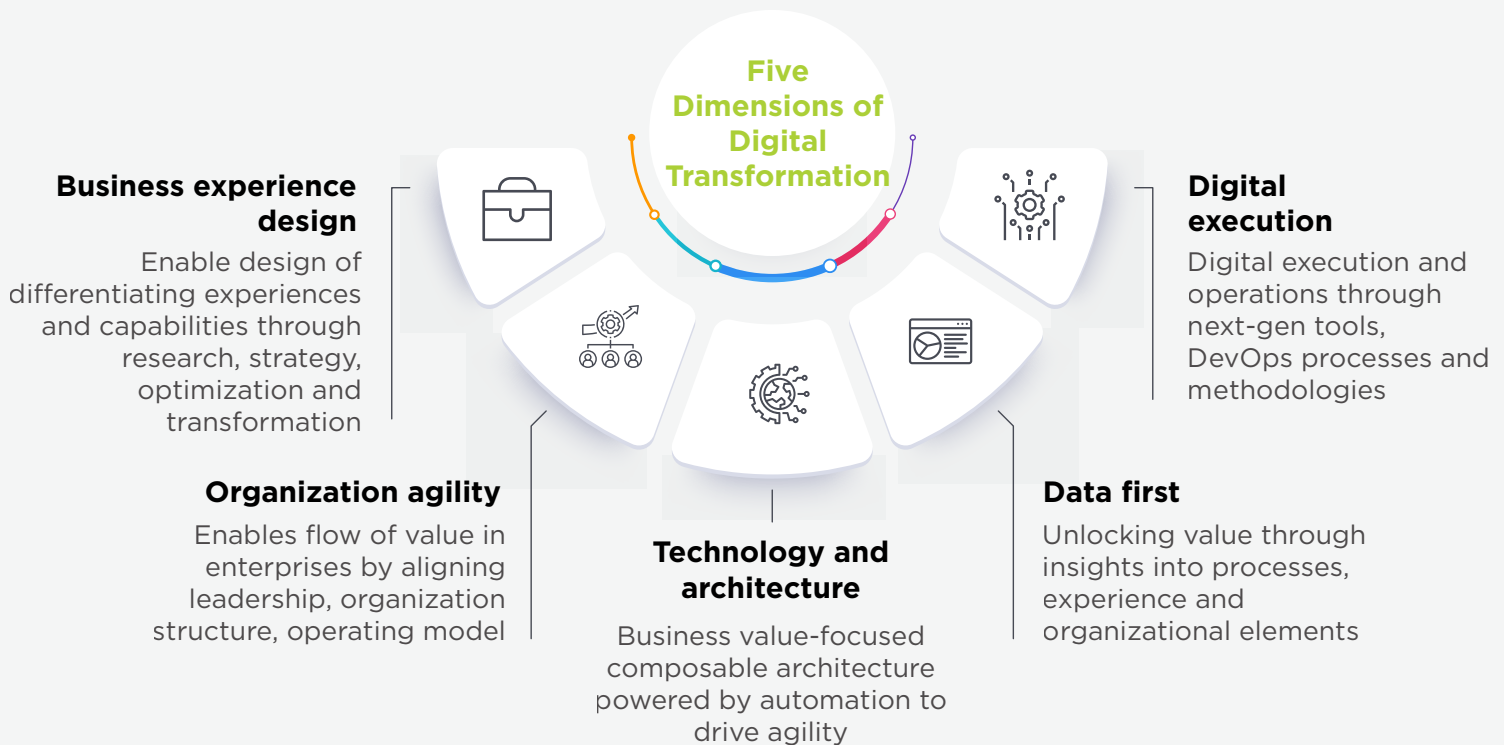


Databots for automated metadata reporting (Usage statistics & query performance statistics)



Data marketplace solutions - Industry based solutions developed for Financial services, life sciences and healthcare, manufacturing, public services, media & entertainment, retail. Includes data model, synthetic data generation, data virtualization, governed self service data catalog.

HCLTech FENIX 2.0 Framework is an industry aligned execution framework that helps organizations rewire their core DNA to realize digital transformation objectives.



HCL Technologies and Denodo can help you become a data-driven enterprise with the following:

- **Cloud migration** without disruption to business (zero downtime) and **modernizing your legacy systems** without replacing or replicating them.
- Designing **logical data fabric** integrating data across structured and unstructured data sources irrespective of where they reside (on-premise, cloud, hybrid cloud, multi-cloud) with rapid data delivery in multiple formats to data consumers.
- **Mergers & acquisition – Data unification**
- Real-time insights
- Providing **Data as a Service** (REST, SOAP, GraphQL) – Data distribution
- Metadata discovery on new applications / databases
- Self-service analytics with data governance – **Data catalog**

Customer snapshots

By leveraging HCL Technologies and Denodo:

- A leading **telecom provider** created a data marketplace, thereby publishing data assets as services which were consumed by internal and external users.
- A **financial services** holding company established a unified data distribution layer (API Services) providing data to anti-money laundering vendors in 9 structured formats (policy/annuity, individual, agent, company, address, deposit-trans, withdrawal-trans, funds-xfer-trans, loan-trans).
- A **Malaysian bank** gained a single view of the customer across diverse systems and customer touchpoints. The bank established a single go-to layer across the enterprise for business and IT teams to access data in real time.
- A **worldwide clothing and accessories retailer** modernized its data infrastructure with data virtualization to gain real-time data access
- A **leading pharmaceutical company** set up a high-availability platform and derived an integrated view of good practice (GxP) compliance data



Please visit: www.hcl.com and
please email us at: digitaltransformation@hcl.com if you have any query

The HCL logo is displayed in a bold, white, sans-serif font.

HCL Technologies (HCL) empowers global enterprises with technology for the next decade today. HCL's Mode 1-2-3 strategy, through its deep-domain industry expertise, customer-centricity and entrepreneurial culture of ideapreneurship™ enables businesses to transform into next-gen enterprises.

HCL offers its services and products through three lines of business - IT and Business Services (ITBS), Engineering and R&D Services (ERS), and Products & Platforms (P&P). ITBS enables global enterprises to transform their businesses through offerings in areas of Applications, Infrastructure, Digital Process Operations, and next generation digital transformation solutions. ERS offers engineering services and solutions in all aspects of product development and platform engineering while under P&P. HCL provides modernized software products to global clients for their technology and industry specific requirements. Through its cutting-edge co-innovation labs, global delivery capabilities, and broad global network, HCL delivers holistic services in various industry verticals, categorized under Financial Services, Manufacturing, Technology & Services, Telecom & Media, Retail & CPG, Life Sciences, and Healthcare and Public Services.

As a leading global technology company, HCL takes pride in its diversity, social responsibility, sustainability, and education initiatives. As of 12 months ending on March 31, 2022, HCL has a consolidated revenue of US \$11.48 billion and its 209,000 ideapreneurs operate out of 52 countries. For more information, visit www.hcltech.com



