

EBOOK

Empowering Public Sector Missions with Trusted, Secure, and Intelligent Data Delivery

How Denodo Helps Governments to Unlock Data-Driven Transformation





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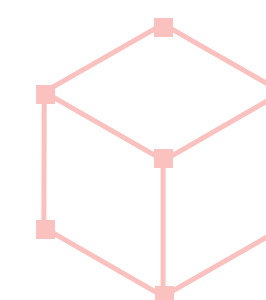


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Introduction: The Changing World of Public Sector Data

Across the world, public sector organizations carry out missions that directly impact the safety, health, and well-being of citizens. Whether safeguarding national security, delivering healthcare, protecting vulnerable communities, or managing urban infrastructure, governments rely on one critical asset: **data**.

While data volumes are exploding, from digital services to Internet of Things (IoT) devices, to citizen interactions, many government agencies still struggle to make sense of it all. Why?

- Despite modern data lakehouses, data remains **siloed across departments**.
- Privacy and security laws make it challenging to move or share data.
- Legacy IT systems are complex to integrate with modern digital platforms.
- Citizens expect fast, personalized services, but agencies often lack unified views of their data.

Meanwhile, cyber attacks are increasing, and new regulations demand stricter controls over how data is accessed and shared.

The reality is that governments need a way to deliver trusted, secure, and intelligent data to the people and systems that require it, without the need for **massive migrations, duplication, or risk**.



THE GLOBAL PUBLIC SECTOR DATA LANDSCAPE

The public sector is undergoing a historic digital transformation:

- Global public sector IT spending exceeded \$675 billion in 2023 and is expected to surpass \$750 billion by 2026.
- Data volumes in government are growing 20–30% per year, driven by digital services, IoT, and regulatory demands.
- Despite significant investments in modern data architectures, such as data lakehouses, many government agencies struggle to connect data in real-time and deliver insights for critical decisions.

Key trends shaping public sector data:

- Data silos remain widespread and are challenging to break down.
- Governments are under pressure to deliver ethical, explainable AI.
- Hybrid and multi-cloud environments complicate data governance.
- Citizens demand digital services that rival those of the private sector in terms of speed and convenience.

This is where Denodo comes in. The Denodo Platform enables government agencies to address these trends without re-engineering their entire IT landscape. The Denodo Platform enables agencies to access disparate data sources across silos in real-time, without needing to consolidate them into a standard system first.



\$675B+

Global public sector IT
spending in 2023

\$750B+

Expected IT spend
by 2026

20–30%

Annual government
data growth



PUBLIC SECTOR IMPERATIVE 1:

TRUSTED DATA COLLABORATION

Mission Critical: Working Together Like Never Before

Across government agencies, a new reality is becoming apparent: no department can succeed in isolation. Whether battling public health crises, coordinating emergency responses, or planning urban infrastructure, modern government is about **teamwork on a massive scale**.



The Wall of Silos

However, collaboration stalls when data remains inaccessible. Legacy systems, privacy regulations, and departmental boundaries often prevent critical information from being shared, leaving agencies operating in the dark. As a result, responses slow down, decisions are hindered, and citizens wait for services that should be seamless and efficient.

When Sharing Isn’t Optional

Imagine health agencies needing data from hospitals, research groups, and social services, but being unable to transfer the information due to privacy laws regulating the physical transfer of data. City planners, for instance, attempt to integrate traffic, environmental, and safety data, only to discover that each piece resides in a different system, governed by strict rules.

Secure data sharing isn’t just “nice to have”—it’s mission-critical. Lives, budgets, and public trust are all at stake.

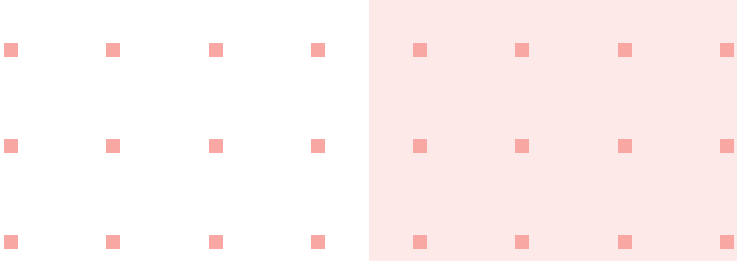
A New Way to Collaborate

Denodo offers an innovative solution. Instead of migrating data from one place to another, the Denodo Platform establishes a logical data layer that creates **real-time connections** between systems, allowing for seamless integration. Data stays secure and governed where it lives, while leaders gain instant, unified views for collaboration.

Policy teams, digital leaders, data scientists, and cross-agency task forces can finally work together with confidence, armed with **trusted, governed data** ready for ethical AI and swift decision-making.

Impact Beyond IT

This is more than just technology. Denodo is helping public sector teams transform from siloed operations into agile, mission-focused collaborators, delivering services that citizens can genuinely rely on.





Public Sector Imperative: Trusted Data Collaboration

Case Study: ISTAT (Italian National Institute of Statistics)

ISTAT, Italy's National Institute of Statistics, faces a monumental task: producing reliable, timely statistics from more than **200 diverse administrative and survey data sources**. The organization's challenge was not simply technical—it was a mission imperative. To deliver vital insights for policymakers, citizens, and the business community, ISTAT needed to unify data from numerous silos, integrate new sources such as web and IoT data, and maintain operational agility under increasing regulatory and privacy constraints.

The Denodo Platform enabled ISTAT to build a **single, virtualized data access layer** that connects all these disparate data sources in real time. Rather than moving or duplicating data, ISTAT can now blend traditional and modern datasets, creating unified views that do not compromise security or compliance.

The impact? Accelerated delivery of statistical insights, reduced costs, and a modernized approach to **trusted data collaboration**. ISTAT's teams can now focus on analysis and insights rather than battling integration challenges. Additionally, the Denodo Platform breaks down silos, enabling cross-agency collaboration without the need for costly data migration.

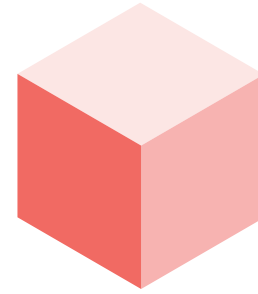


PUBLIC SECTOR IMPERATIVE 2:

SECURE COMPLIANCE AND SAFEGUARDING

Guardians of Trust

For government agencies, data isn't just information—it's a matter of trust, safety, and national security. From defense secrets and citizen identities to financial records and health histories, the stakes could not be higher.



Caught Between Risk and Regulation

The threats continue to grow - sophisticated cyberattacks, ransomware, and state-sponsored intrusions. Meanwhile, laws such as the General Data Protection Regulation (GDPR) and other national data protection rules require strict control over how data is accessed, shared, and stored.

Agencies face an impossible choice: move quickly to innovate or slow everything down to stay safe and compliant. It's a tightrope act that puts security teams and digital leaders under relentless pressure.

Data That Can't Be Moved

Consider tax agencies handling vast amounts of personal and financial data. Health departments safeguard patient records while facilitating research. Justice ministries manage legal proceedings that must remain confidential. These departments require access to data to perform their functions; however, transferring that data into new systems introduces significant risks.

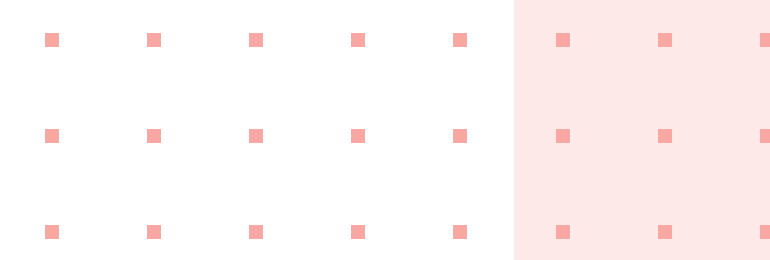
Security Without Compromise

Denodo offers a lifeline. Instead of duplicating sensitive data into new repositories, the Denodo Platform securely connects to data, wherever it resides. Fine-grained access controls, real-time data masking, and detailed audit trails enable agencies to maintain privacy and compliance **without sacrificing agility**.

Security teams finally gain the tools they need to enforce Zero Trust principles, even with legacy systems still in place. Compliance teams gain the transparency to prove they're following the rules. And agencies can continue innovating, confident that they're not putting sensitive data at risk.

Building Digital Trust

In a world where trust defines public service, Denodo helps governments protect the data that citizens count on—and deliver innovation **without compromise**.





Public Sector Imperative: Secure Compliance and Safeguarding

Case Study: Pantex (U.S. Nuclear Security Administration)

Pantex, part of the U.S. Nuclear Security Administration, operates at the heart of national defense, managing the nuclear weapons lifecycle for the U.S. government. Pantex manages highly sensitive data, involving classified operations that require the strictest security and compliance with regulations.

However, operational teams needed faster, more integrated access to critical data for everything from safety checks to manufacturing operations. Traditional methods of moving data into new systems were ruled out due to security risks and compliance barriers.

The Denodo Platform enabled Pantex to access and integrate data across systems without physically relocating or duplicating sensitive information. Fine-grained access controls and governance features kept security airtight while empowering teams with real-time insights.

The result? Improved operational efficiency, better decision-making, and a security posture strong enough for one of the nation's most critical missions. The Pantex story exemplifies the imperative to protect sensitive data and maintain compliance without compromising the ability to act quickly and decisively.

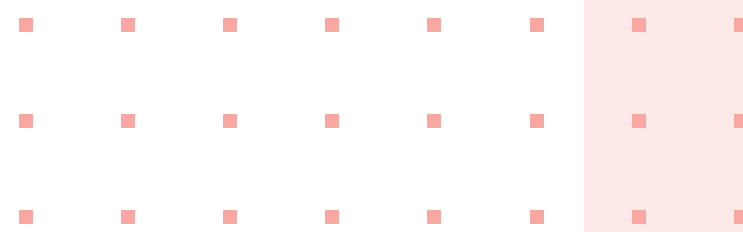
PUBLIC SECTOR IMPERATIVE 3:

INTELLIGENT CITIZEN SERVICES

A New Standard of Service

Citizens today expect the government to work at the same speed—and with the same level of personalization—as the apps on their smartphones. Whether it's booking healthcare appointments, navigating city traffic, or applying for social benefits, people want public services to be **fast, digital, and tailored to their lives.**





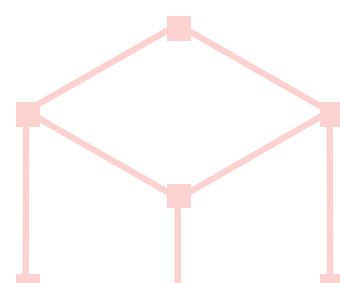
Behind the Curtain: A Tangle of Systems

However, behind most government services lurk countless legacy systems, disconnected databases, and data trapped in silos. Innovative city projects stall because traffic, environmental, and public safety data can't easily communicate. Digital health records remain fragmented across hospitals and clinics. Social services waste precious time repeatedly verifying citizen identities.

Real Lives, Real Frustration

Picture citizens trying to access multiple services, only to repeat their details each time because no unified record exists. Or a city wanting to reduce congestion but unable to analyze real-time data from traffic sensors and public transit systems. Or a justice agency seeking integrated case management but stuck with isolated data across police, courts, and correctional services.

These aren't just technical problems—they're barriers that directly affect citizens' daily lives.



Connecting the Unconnected

Denodo changes the game. By creating a single virtual layer, the Denodo Platform enables governments to connect **legacy systems, cloud applications, and real-time data streams**, without moving data or launching massive, costly migrations.

Departments gain instant insights. Smart cities become a reality, and health, justice, and social services finally deliver joined-up experiences that feel seamless to citizens.

Smart Government, Real Impact

From unified citizen records to predictive analytics for urban planning, Denodo fuels ethical AI and more intelligent decision-making. New roles, such as data product managers and AI ethics officers, emerge to keep insights **trusted and fair**.

Denodo helps governments transition from fragmented, reactive services to intelligent, citizen-first experiences, making data a powerful engine for delivering better public services.



Public Sector Imperative: Intelligent Citizen Services

Case Study: Le Forem (Belgium Employment Services)

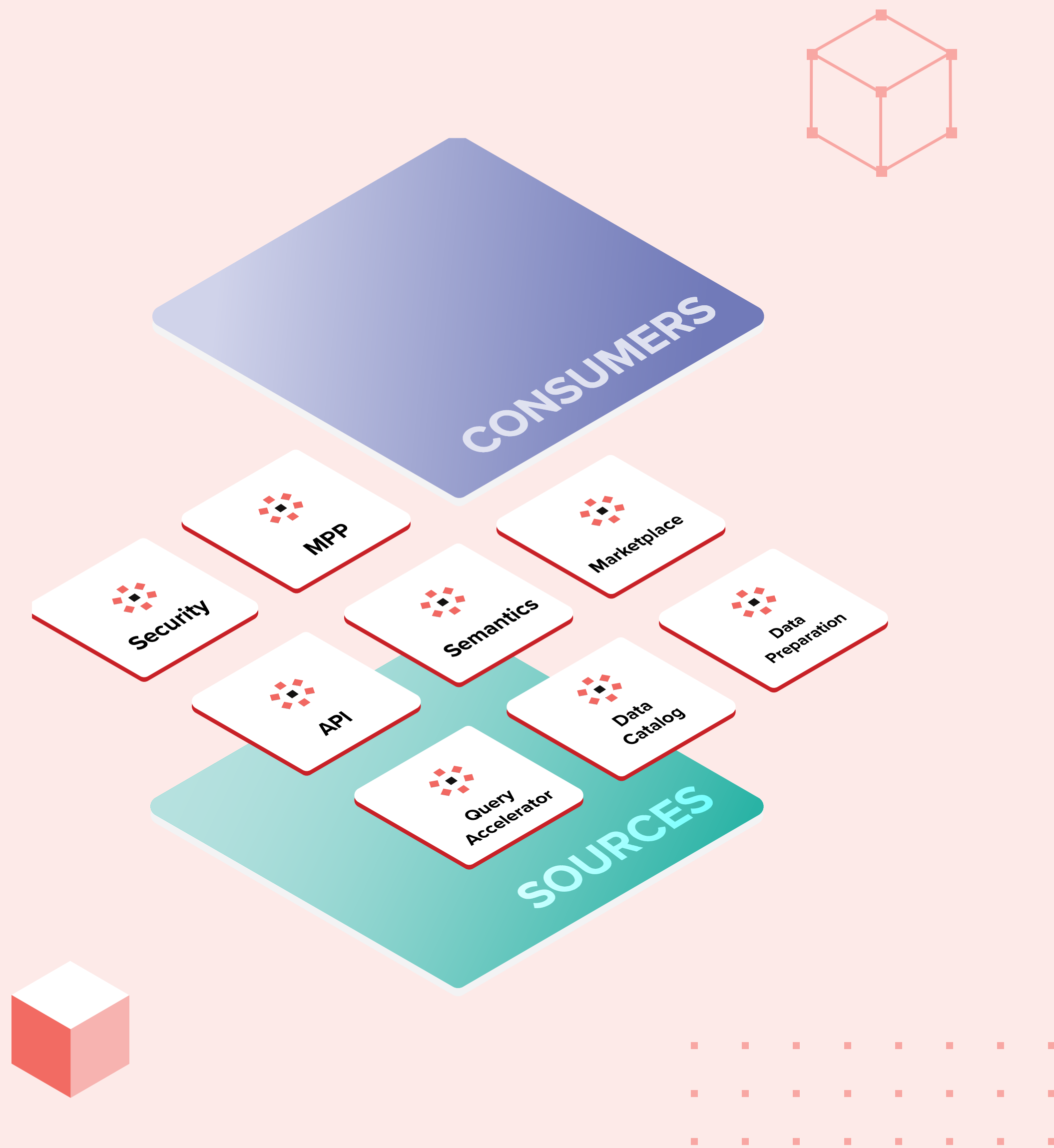
Le Forem, Belgium's Walloon Employment Service, plays a vital role in helping citizens find employment and assisting businesses in connecting with talent. However, like many public sector organizations, Le Forem faced a challenge that is becoming increasingly familiar: fragmented data. Employment records, job seeker data, training resources, and employer information were spread across numerous systems, making it challenging to offer fast, personalized services.

The Denodo Platform enabled Le Forem to implement a virtual data layer that unified these disparate datasets without physically moving them. This approach enabled Le Forem to significantly improve service delivery, providing citizens and employers with faster access to tailored information while maintaining strict data governance and compliance with privacy regulations.

The result? A modern, digital employment service capable of meeting the expectations of citizens in this digital age. Le Forem's success perfectly illustrates the public sector's imperative to deliver **intelligent, citizen-first services** through unified data access and agile analytics.

WHY DENODO FOR THE PUBLIC SECTOR

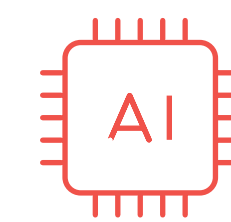




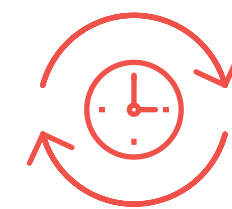
Across all these imperatives, Denodo's unified data platform enables governments to:



Break down silos and share data securely and ethically



Accelerate AI and analytics with trusted, governed data



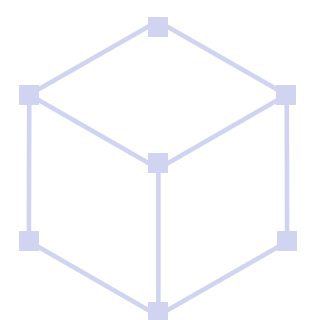
Avoid costly data migrations while delivering real-time insights



Support regulatory compliance and robust security



Deliver better citizen outcomes while optimizing operational costs



In government, data should serve the mission, not the other way around.

Data Ethics

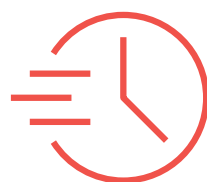
Data is powerful, but with that power comes responsibility. As governments embrace advanced analytics and AI to improve services, ethical principles must guide every step.

Transparency, privacy, fairness, accountability, and trust—these aren’t just buzzwords; they’re the foundation of a functioning democracy. Citizens deserve to know how their data is used and how decisions affecting their lives are made.

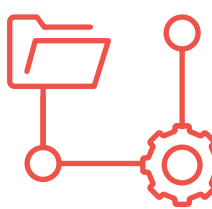
Denodo helps governments uphold these principles by:



Keeping data in place rather than duplicating it into uncontrolled environments



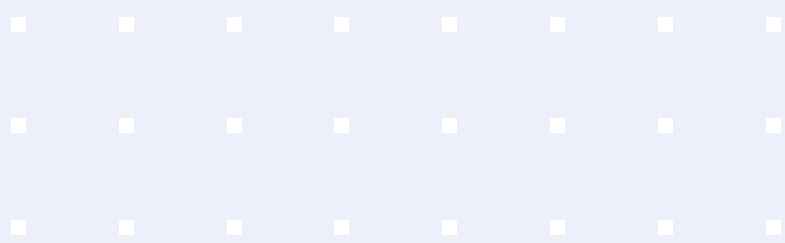
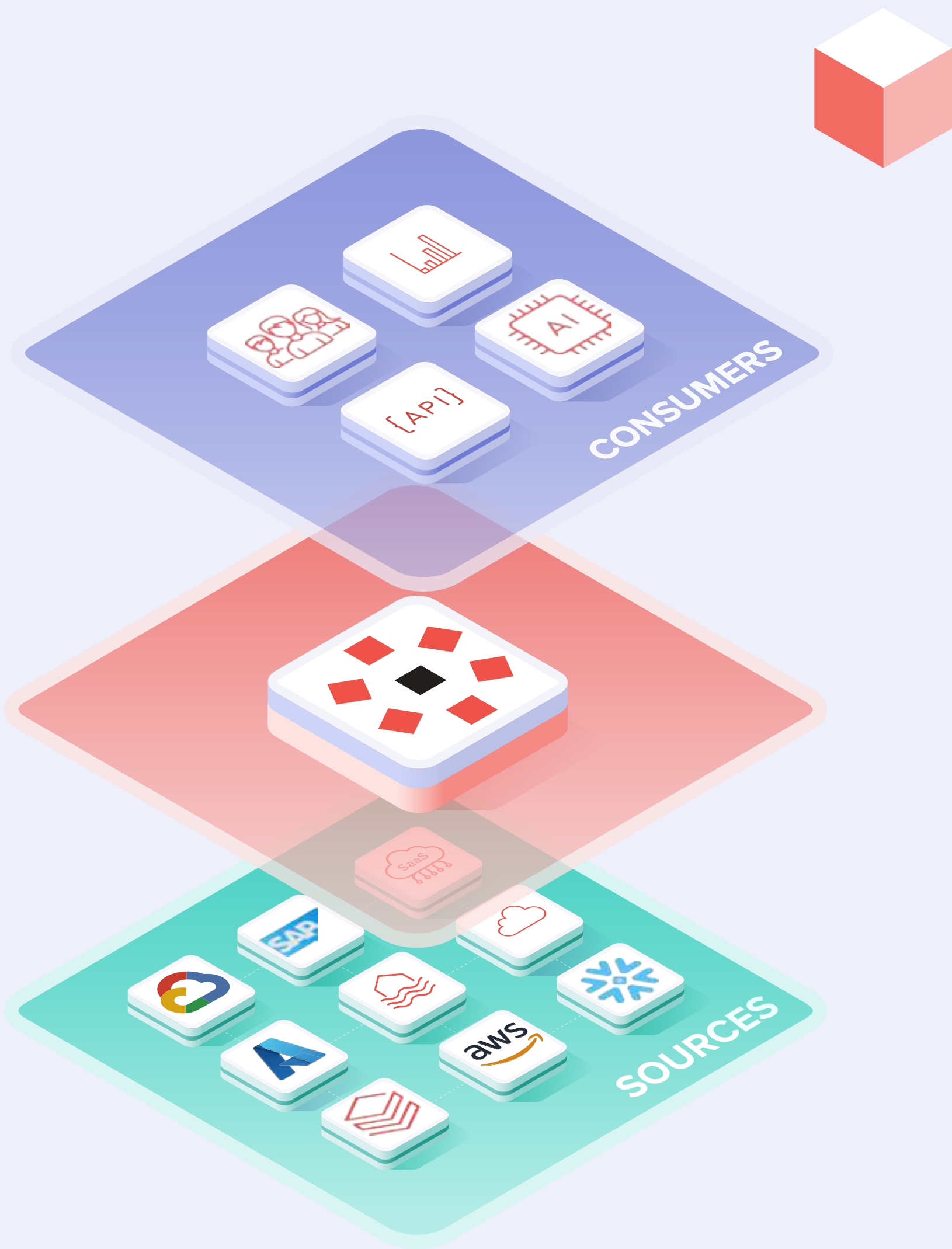
Providing real-time data masking and fine-grained access controls



Enabling clear data lineage so agencies can trace how insights were produced



Supporting explainability in AI initiatives by building insights on trusted, governed data





Ethical, responsible data sharing isn't just a technical problem—it's a mission imperative. And it's transforming how government works, who does the work, and how citizens experience public services.

Responsible AI and the Evolving Public Sector Workforce

The Human Shift in Government

As data becomes the backbone of public service, government workforces are evolving. It's not just about technology—it's about people.

New roles are emerging:

- **Data Product Managers**, curating gold-standard datasets for use across departments
- **Ethics and AI Compliance Officers**, overseeing fairness, bias monitoring, and responsible AI use
- **Citizen Experience Designers**, shaping truly human-centered services

Existing roles are also transforming. IT leaders now focus on orchestrating data access rather than merely maintaining systems. Policy analysts increasingly rely on data-driven insights. Compliance teams work closely with data stewards to keep innovation moving while maintaining compliance.

Denodo empowers this human transformation—simplifying data access, enabling responsible AI, and helping governments build teams ready for a digital future.

Many public sector organizations trust the Denodo Platform to deliver secure, compliant, and real-time data - talk to us to see how we can help accelerate your mission.



CONTACT US

