

CASE STUDY

URSSAF Modernizes Its Data Infrastructure with Dremio, Achieving Digital Sovereignty and Cost Savings

At a Glance

The Customer



Challenge

URSSAF, France's social security contributions agency, manages over €600 billion annually across 105 locations. To address rising costs from proprietary software and meet digital sovereignty mandates, URSSAF needed to modernize its legacy infrastructure.

Solution

URSSAF successfully modernized its data infrastructure, the "data fabrique," by implementing Dremio. This strategic shift replaced expensive, proprietary data systems with an open architecture. The transition resulted in significant cost reductions while upholding the high operational standards necessary for France's crucial social security services, ensuring reliable and continued excellence.

Results

- Millions of euros in annual licensing fees were reduced in vendor lock-in costs.
- 1,029+ applications were consolidated onto a unified open data lakehouse platform.
- 2+ million monthly declarations are processed from French employers through modernized data pipelines.
- The organization successfully migrated away from multiple proprietary vendors, including IBM DataStage, Oracle, and Microsoft Power BI.

The Customer

URSSAF, France's national social security contributions collection agency, is vital to funding healthcare, retirement, and social programs. With over 16,000 employees across 105 sites, it manages vast data, processing 2 million monthly employer declarations and serving 212+ million annual website visitors. URSSAF needed to innovate to meet modern service demands while maintaining digital sovereignty and protecting French citizens' sensitive information and national finances.

The Challenge

URSSAF had to modernize while guaranteeing digital sovereignty and protecting national interests. Yet, the organization was increasingly constrained by an ecosystem built around costly proprietary technologies. Its legacy decisional platform depended on IBM DataStage for ETL, Oracle databases for storage, Microsoft Power BI for analytics, SAS for statistical workloads, and numerous other vendor tools—collectively costing millions of euros annually in licensing. This vendor lock-in created structural barriers: high and escalating costs, limited flexibility to modernize, and growing pressure from government mandates to reduce reliance on foreign software. URSSAF also carried substantial technical debt across its COBOL, Microfocus, and Oracle-based applications, making any form of transformation appear nearly impossible. The IT department needed to accelerate digital modernization and strengthen security—without increasing budgets or compromising service continuity for France's social security system.

The Solution

URSSAF modernized its data ecosystem by launching an ambitious initiative to build a unified "data fabrique" based primarily on technologies leveraging open standards. The introduction of Dremio as the platform's core engine provided the organization with a powerful virtualization layer capable of querying Oracle, PostgreSQL, and open file formats directly, removing the need for complex extraction pipelines and dramatically simplifying the architecture. By virtualizing data access rather than physically moving it, URSSAF maintained full connectivity to its legacy systems while steadily transitioning workloads to the new environment.

This shift also unlocked broad self-service analytics across the organization. Teams could access all datasets through a consistent SQL interface using Dremio's UI or other preferred tools, eliminating previous technical

“Dremio was truly the game changer for us. When I first met with the team and asked if it could connect to our Oracle systems, the answer was yes—and it delivered. Dremio became the core engine that allowed us to build our entire data fabric and escape vendor captivity while maintaining our digital sovereignty.”

bottlenecks and enabling uniform business logic through a centralized semantic layer. The new architecture integrated seamlessly with URSSAF's analytical ecosystem—including Jupyter, RStudio, and INSEE's Onyxia—as well as Digidash, the French BI solution selected to replace Power BI and reinforce technological sovereignty.

Today, data from operational systems and emerging open formats flows through a unified data layer, with PostgreSQL supporting new workloads and Apache Iceberg and Parquet ensuring scalable, open storage. Governance and lineage are managed through OpenMetadata, and the entire pipeline is orchestrated via Apache Airflow running on OpenShift and Kubernetes. Working alongside Agineo, URSSAF continues to migrate proprietary SQL into portable, open formats, following a progressive approach that preserves full operational continuity while advancing toward its open, modern data architecture.

Results

The implementation of URSSAF's data fabrique has delivered far-reaching operational and strategic benefits, marking a significant step toward technological independence and long-term efficiency. By standardizing on open technologies and introducing Dremio as the core virtualization engine, the agency has already realized substantial cost reductions. URSSAF exited its SAS licenses and is actively retiring IBM DataStage, Oracle databases, and Microsoft Power BI—recovering millions of euros each year in licensing fees and redirecting public funds toward higher-value services.

This transformation has also enabled URSSAF to meet France's stringent digital sovereignty objectives. By relying on open components and French solutions such as Digidash, the agency now maintains full control over its data ecosystem while ensuring that sensitive information about citizens remains governed under national oversight. The resulting architecture provides the transparency, independence, and compliance expected of a major public institution.

Operationally, the new platform offers unprecedented flexibility. Dremio's virtualization layer allows teams to access data seamlessly across the agency's heterogeneous infrastructure, regardless of its physical location or storage format. This unified approach breaks down long-standing data silos, enabling more fluid collaboration across URSSAF's 16,000 employees and accelerating the delivery of analytical insights.

The modernized environment is also proving instrumental in attracting and retaining technical talent. The shift to open formats, Kubernetes-based orchestration, and cloud-native practices makes URSSAF a more compelling destination for experienced data architects and engineers—an increasingly important advantage for public sector institutions competing in a tight labor market.

Most importantly, the platform gives URSSAF a sustainable path to modernization. Instead of facing the risks of a disruptive “big bang” migration, the agency can now evolve its systems incrementally while maintaining uninterrupted service for France's social security infrastructure. With the data fabrique currently in pre-production and full deployment approaching, URSSAF is well positioned to advance its mission with greater efficiency, sovereignty, and technological independence.

ABOUT DREMIO

Dremio is the intelligent lakehouse platform for the business, serving hundreds of global enterprises, including Maersk, Amazon, Regeneron, NetApp, and S&P Global. Based on open-source technologies like Apache Iceberg and Apache Arrow, Dremio provides an open lakehouse architecture enabling the fastest time to insight and platform flexibility at a fraction of the cost.

Learn more at www.dremio.com.

Dremio and the Narwhal logo are registered trademarks or trademarks of Dremio, Inc. in the United States and other countries. Other brand names mentioned herein are for identification purposes only and may be trademarks of their respective holder(s). © 2025 Dremio, Inc. All rights reserved.