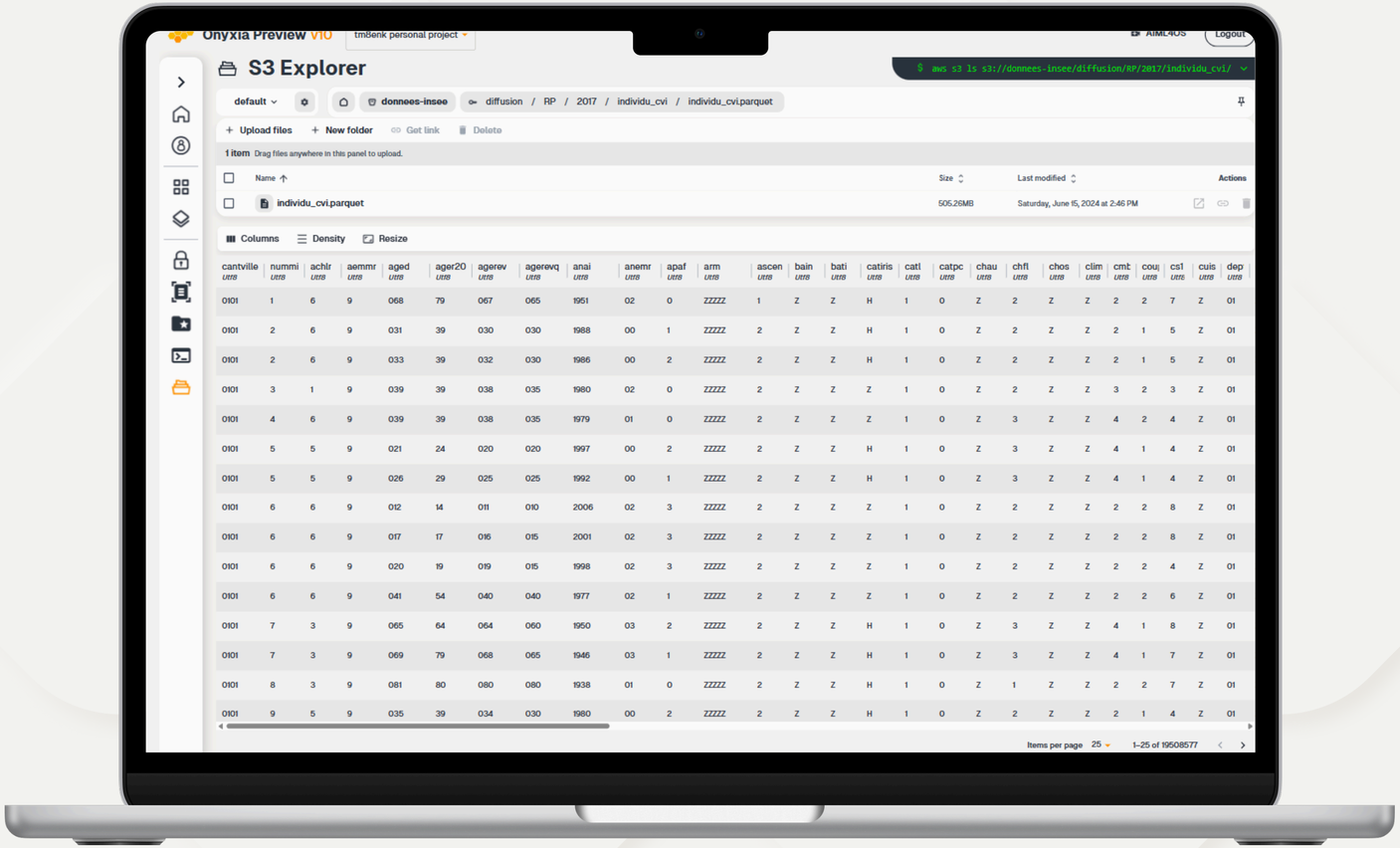
Onyxia

March 2026



How Statistical Offices move to cloud native technology

Who we are

Architect skills



Trygve Tatsuya Falch

Chief Architect
SSB - Statistics Norway



Frédéric Comte

Head of Innovation
Insee - Statistics France

National Statistical Offices (NSOs)

National Statistical Offices are public institutions responsible for producing official statistics about a country’s population, economy, and society.

Our mission is to collect, process, and analyze data to provide reliable and impartial statistics that support public decision-making, research, and democratic debate.

In a world where society, economies, and technologies evolve increasingly fast, we must continuously adapt our methods and tools to produce timely, high-quality statistics.

NSOs operate under strict principles of statistical independence, data confidentiality, and methodological rigor, ensuring that statistics remain trustworthy and comparable across time and between countries.

The institutional bottleneck

Why protecting systems often slows experimentation

Ticket culture

VMs, databases, and access often require tickets and waiting. That turns simple needs into delays of days or weeks.

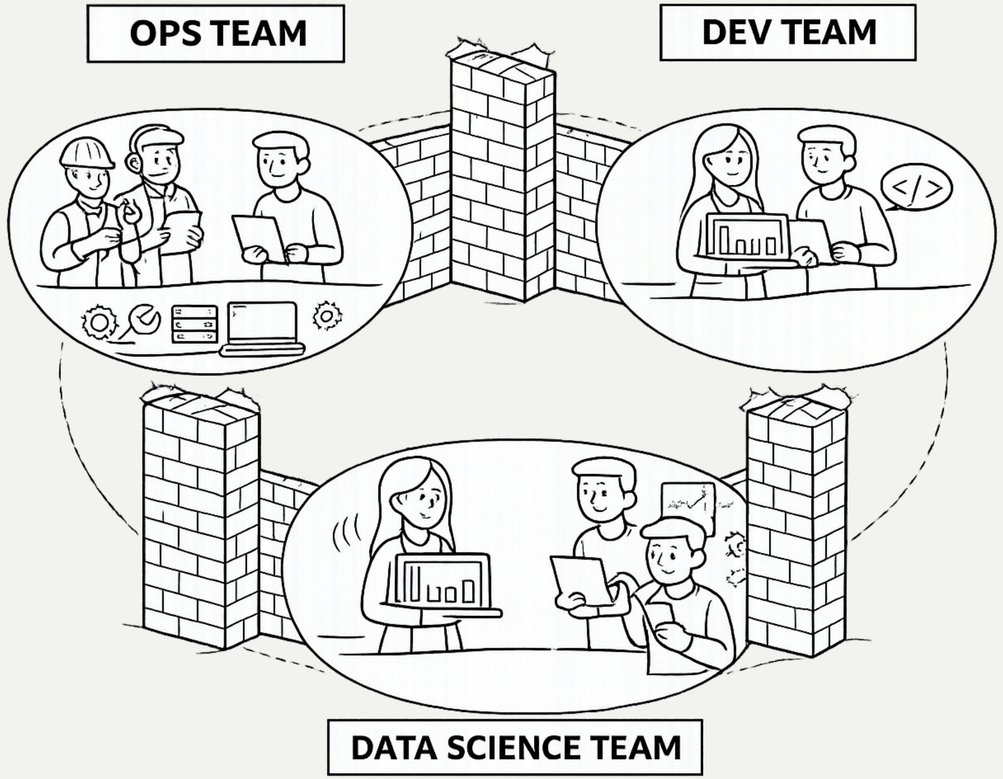
IT as gatekeeper

Security, compliance, and stability are centralized in IT. That protects systems, but creates friction for experimentation.

Result

Innovation stops feeling like flow and starts feeling like process. Iteration slows down, and exploration becomes expensive.

Welcome to the NSOs Wall Tour



Datascience team in business unit create new kind of wall



The First Wall

The move to cloud (native)

We modernized the core by moving to Kubernetes and cloud-native infrastructure. But better infrastructure did not give us a better developer experience, and by trying to build too much ourselves, we were already creating new legacy. NAIS — the open-source developer platform built and maintained by NAV — offered a more mature alternative. Adopting it also reflected a broader principle: public agencies can move faster by building on shared capabilities rather than reinventing everything themselves.

In NSOs, data scientists are the real developers just without the title.

The second wall

Internal ~~Developer~~ Data scientist Platform

A fast-evolving ecosystem

From one tool that fit everything to managing coexistence at scale.

Datascientist are not real developpers

They are even further from operations. They work inside business unit.

Datascientist work on real datasets

Data science and analytics in NSOs happens on sensitive data .

Code are often executed only once

Data science code is often designed for exploration or single-use analysis

Our datalab recipe

CNCF under the hood

01 Containers

02 Object storage

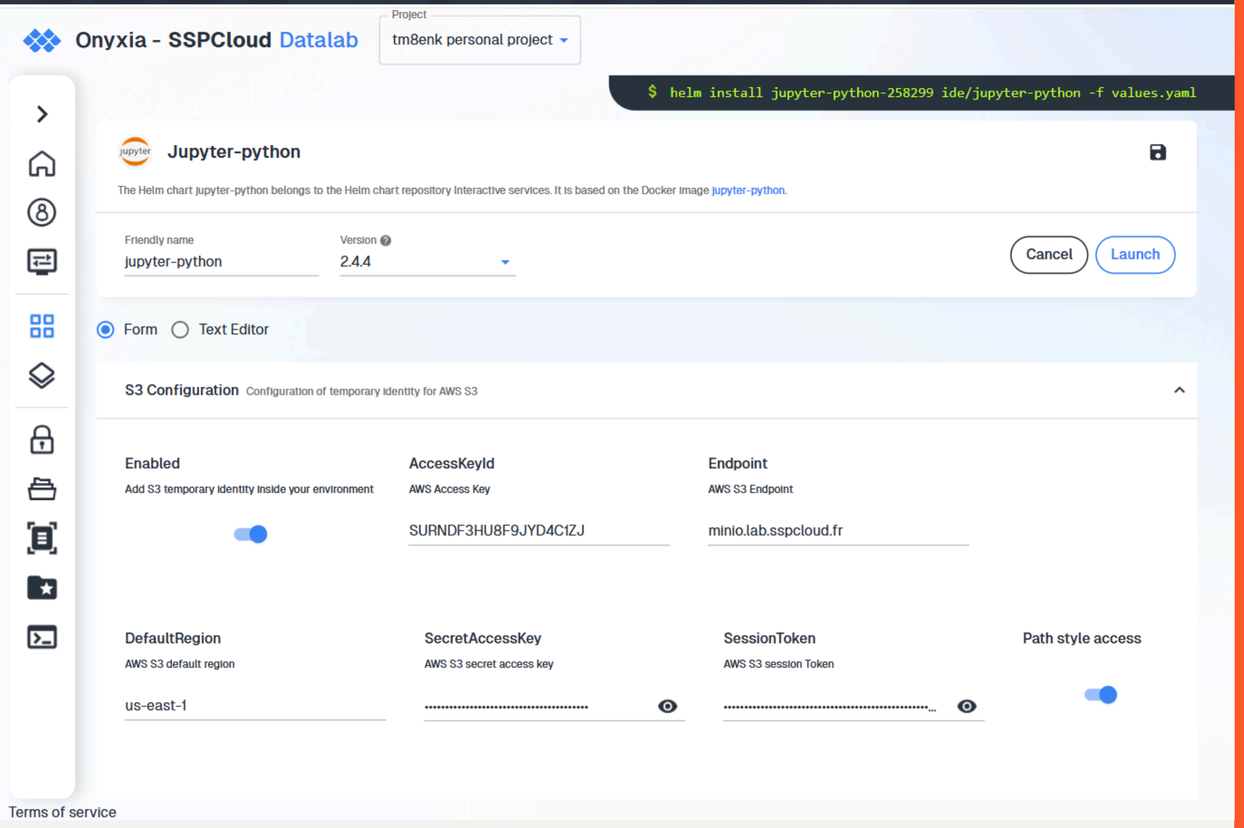
03 Secret management

04 Open table format

As the stack grew complex, UX became the real challenge.

Guidance over new abstraction

Onyxia is only our UX



SPA — connected to cloud native resources server

OIDC — as the Unified Access Layer
ex : S3 assumeRoleWithWebIdentity

Helm — as a standard packaging system. Use of values.schema.json to build forms

Discovery — Use of helm lookup function

S3 browser — Our users need an S3 UI

Data viewer — DuckDB Wasm power data preview for file on S3 or Iceberg datawarehouse

An UI that focus on transparency and reversibility. We want our user to

IT builds the platform. Statisticians lead the science. Together, we scale the impact of both.

