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ODIN: How CAF Turned Data Management into a Driver of Institutional Transformation

The ODIN program enabled CAF to make a qualitative leap in its data maturity through a modern architecture, standardized processes, and a strong data culture—laying the foundation for its next phase of digital transformation.

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Key Results

Data Lake operational in three months

Data community with more than 230 members (30% of the organization)

89% data quality coverage across ingested sources

99.3% of incidents resolved

19 data domains implemented

Nine analytics solutions in production

32% reduction in technology costs under a FinOps strategy

Executive Summary

CAF undertook an institutional transformation process that positioned data at the core of its decision-making. ODIN served as the vehicle that translated this vision into a sustainable and measurable capability.

In 2023, the Development Bank of Latin America and the Caribbean (CAF), together with NTT DATA, embarked on an ambitious data-driven digital transformation journey focused on elevating institutional data maturity. The ODIN program marked the beginning of a new institutional phase: moving from fragmented, manual, and disconnected processes to an integrated, reliable, and strategic approach to information management.

At the outset, a data maturity assessment was conducted across four core pillars: business value, data governance, platforms, and data culture.

The initial findings revealed a low level of maturity, characterized by information silos and accumulated technical debt resulting from historically unmet needs. This diagnosis made it possible to clearly identify structural challenges and to direct the first actions of the ODIN program toward building a solid foundation for sustainable transformation.

Based on these four dimensions, a clear data strategy was defined and translated into an ambitious roadmap designed to drive organizational transformation—from a basic level of reactive analytics to an advanced stage in which processes are standardized and deployed across the organization, both in day-to-day operations and in new initiatives. All of this was achieved within a two-year timeframe.

More than a technology project, ODIN represented the creation of a critical institutional capability to support CAF's continued growth and transformation. Progress did not rely on a single technology, but rather on the application of a comprehensive methodological framework, guided by a clear strategy and translated into tactical actions that delivered early, tangible results.

A key highlight was the development of a scalable, governed cloud platform focused on high-value use cases for the core business, combined with sustained efforts in data literacy and culture. This combination ensured that each step of the roadmap delivered measurable value—consolidating reliable data that optimizes processes, reduces risk, and strengthens institutional efficiency.

Looking ahead, ODIN lays the groundwork for CAF's next phase of digital transformation, ensuring the organization can sustain its growth trajectory in the coming years with decisions backed by high-quality information.

The results speak for themselves:

- **A production-ready Data Lake delivered in three months.**
- **89% quality coverage across ingested data sources.**
- **99.3% of incidents resolved.**
- **19 active data domains with nearly 5,000 intrinsic and business data quality rules implemented**
- **Nine enterprise analytics solutions in production**
- **A data community of 230 members across 60 organizational units**

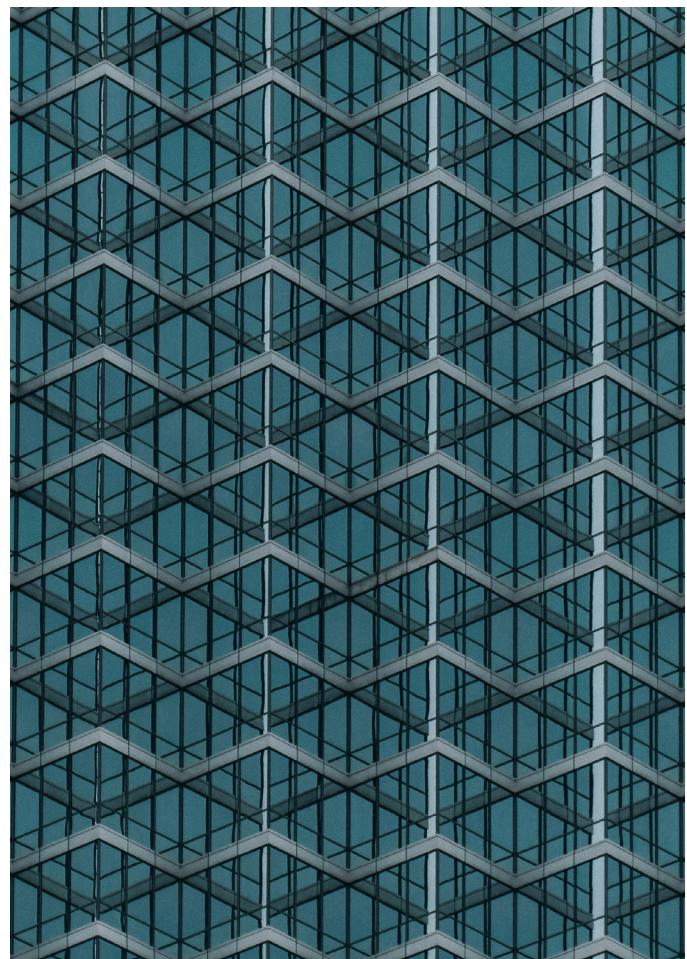
All of this was achieved under a FinOps strategy that generated a 32% reduction in technology costs while simultaneously expanding platform capabilities.

CAF's ODIN data management and governance program consolidated a model in which data evolved from a fragmented element into a reliable strategic asset. Most importantly, it drove a cultural shift: data ceased to be viewed as a purely technical resource and became an institutional asset that supports decision-making, efficiency, and trust.

The Starting Point: Understanding the Challenge

The multilateral banking sector faces demanding internal and external reporting requirements, heterogeneous risk frameworks, and legacy technology platforms that increase operational complexity. In this context, the assessment conducted by NTT DATA identified CAF's initial maturity level as primary—characterized by heavy reliance on manual processes, persistent functional silos, and the absence of a shared language to describe data and metrics.

The consequences were clear: slower operations, extended closing cycles, and greater difficulty ensuring consistency and traceability of critical information required for institutional management and regulatory compliance.



The Path to Transformation: Building the ODIN Program

ODIN was launched in March 2024 as a comprehensive program combining strategy, technology, and culture. It was designed with a clear purpose: to build a single source of truth through a trusted institutional platform; establish data management rules and processes; break down silos; and define a domain-oriented technology architecture supported by standardized development, deployment, and operationalization processes for data products—enabling sustained and scalable adoption across all business areas.

Rather than pursuing large-scale technology rollouts, the approach was progressive: build a solid cloud architecture, activate high-impact use cases, and develop the capabilities required to sustain long-term adoption.

Comparative Positioning

In a sector where adoption processes and regulatory frameworks often slow the launch of transformational programs and delay early results, CAF's data transformation demonstrated an implementation speed above the industry average.

Delivering the Data Lake in just three months not only exceeded benchmark timelines, but also proved that a well-designed data platform can accelerate value delivery without compromising control. This was reinforced by achieving 89% data quality coverage, demonstrating that data quality assurance acts as a catalyst and unifying force from the outset—shifting the data paradigm from corrective effort to strategic asset.

During execution, the program generated a 32% reduction in the technology budget through FinOps initiatives, reflecting a high level of financial maturity and proving that cloud efficiency can be achieved in parallel with capability expansion.

Results extended beyond the technical domain. The deployment of nine analytics solutions in production, along with active participation from more than 230 members in CAF's data and advanced analytics community, confirms that the transformation was both technological and cultural.

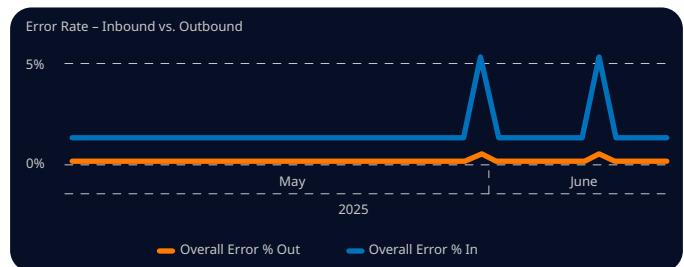
The ODIN Formula: Governance, Platform, Quality, Analytics, and Data Literacy

1. Platforms, Information Model, Metadata, and Security: From Simple to Complex

The Microsoft Azure-based Data Lake, structured under the Medallion architecture, enabled data to be organized from source to consumption with full traceability. This institutional architecture unified information by domains, with defined ownership and quality standards—strengthening transparency and security.

Metadata management, structured under the BIAN (Banking Industry Architecture Network) standard and supported by glossaries and catalogs, aligned definitions across the organization. In addition, the implementation of prioritized quality rules and a Data Quality Score enabled continuous monitoring and rapid remediation, ensuring operational reliability.

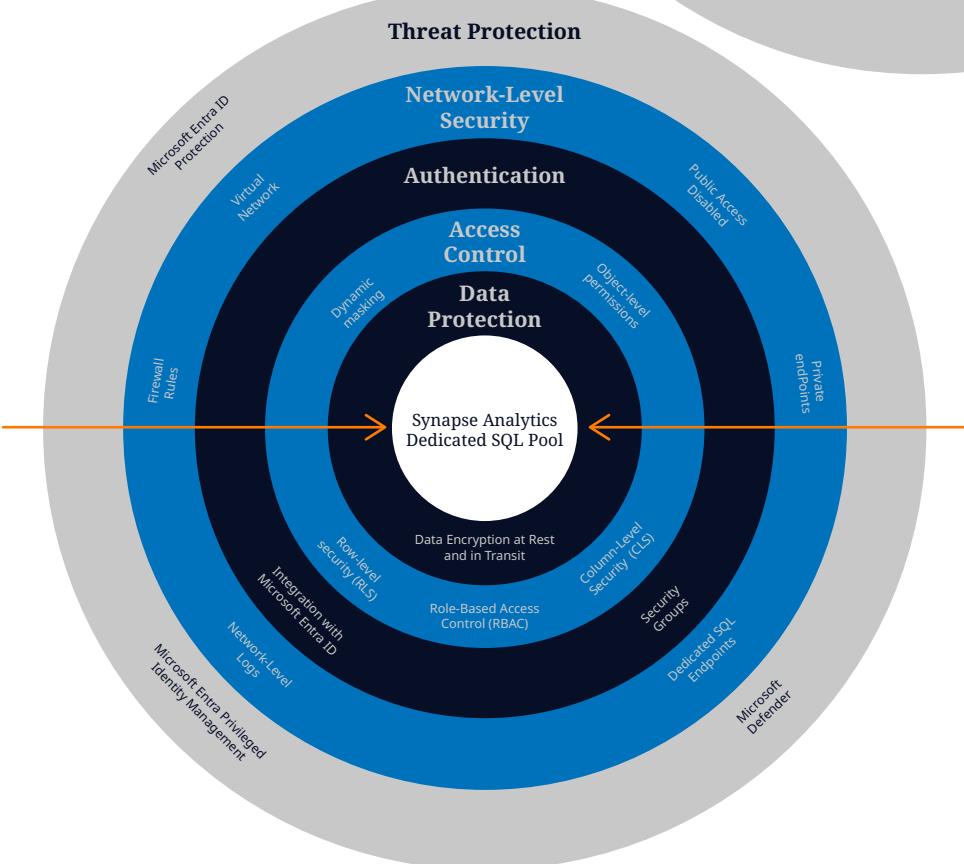
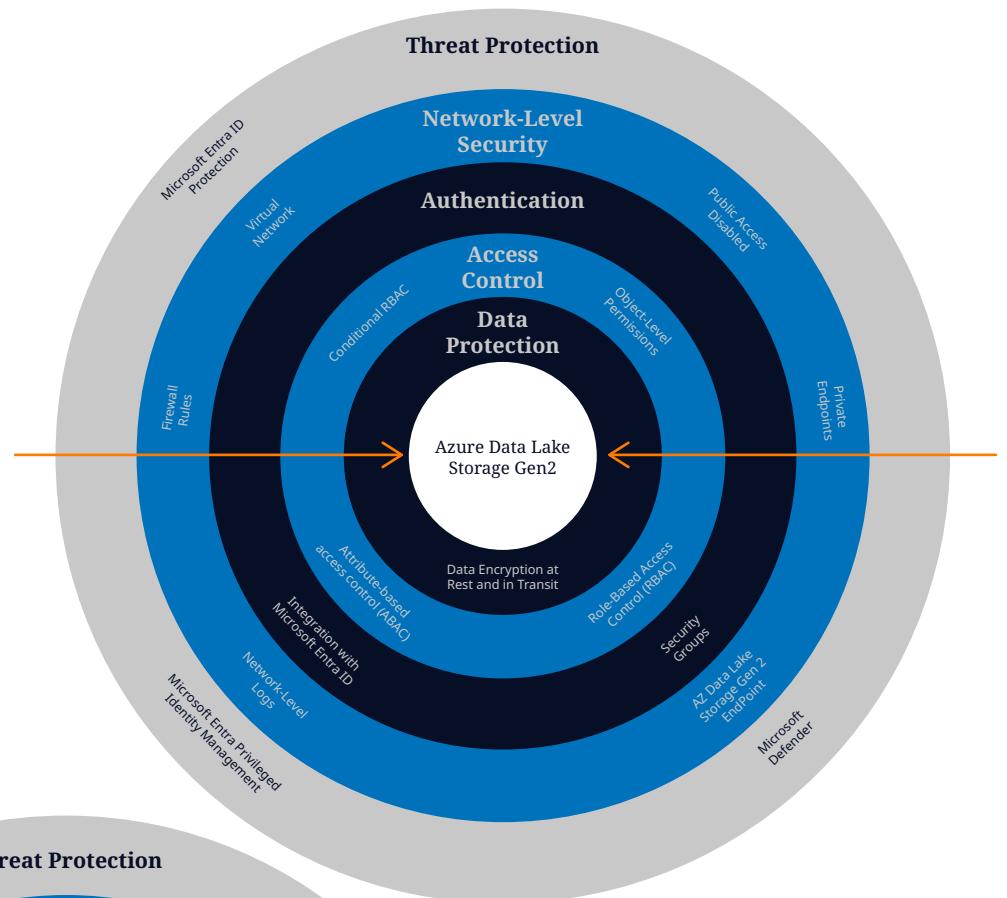
This approach has achieved broad data quality coverage across institutional data, significantly reducing manual correction efforts and mitigating errors at the source. As a result, business areas now access reliable, traceable information for critical control, planning, and risk management processes, as well as for cross-functional initiatives such as learning communities and KPI-driven management.



Data Quality - Illustrative image for reference purposes only, does not represent the exact or current solution of the organization.

ODIN's Azure Data Lake Gen2 and Dedicated SQL Pool are built on five security layers:

1. Threat Protection
2. Network-Level Security
3. Authentication
4. Access Control
5. Data Protection



Security - Image is for illustrative purposes only and does not represent the exact or current solution of the organization.

2. Analytics and Data Science

The analytics practice was structured under the CRISP-DM framework, leveraging short development cycles and agile principles to respond quickly to business priorities. Initial developments focused on critical areas such as operations control, risk management, and financial processes, where key indicators and dashboards were deployed on the Gold layer of the Data Lake.

3. Data Literacy: More Than 230 People Engaged

Over the past 24 months, the data literacy program expanded significantly—from 18 participants to more than 230 actively engaged individuals. This growth was driven by a strategy centered on continuous training, communities of practice, and a network of domain-level champions aimed at strengthening analytical capabilities across the organization.

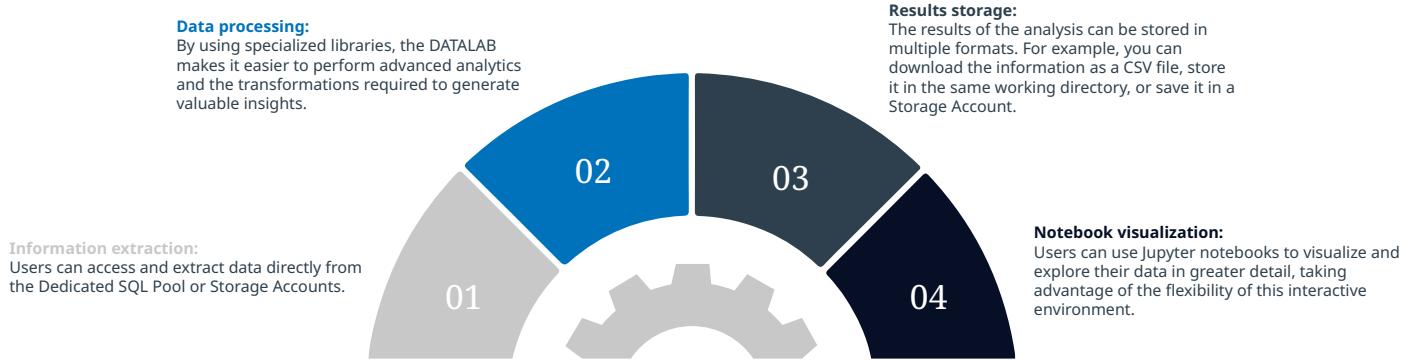
Adoption has been measured through indicators such as community participation, technical certifications, and cross-functional collaboration—evidence of a cultural shift in how data is perceived as a shared asset. This approach has fostered more cohesive, evidence-based decision-making powered by the ODIN platform.

Career development paths were also defined for analysts, architects, and data scientists, consolidating a structured technical and strategic growth model. As a result, the program has become one of CAF's most active communities of practice, generating institutional value and promoting a sustainable data culture.

Versión 01 | DATALAB

It is designed as a flexible environment that allows users to perform advanced data analysis on a temporary and customized basis.

The workflow consists of the following steps:



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In a highly specialized area such as Risk Management, the implementation of ODIN was essential in catalyzing analytical transformation. The new infrastructure not only enabled agile development of key indicators and dashboards, but also provided the integration and processing capabilities required to tackle highly complex initiatives such as Expected Credit Loss modeling and Capital Consumption calculations. ODIN thus consolidates analytics as a key technological enabler for sophisticated solutions with high institutional impact.

Leandro Burastero, Principal Executive, Corporate Risk Management, CAF

A Value-Driven Journey

1. The Strategic Value of Data for CAF: From Vision to Execution

The Data Lake initiative at CAF was not an isolated technology exercise, but a program designed to support a clear organizational vision: a reliable, integrated single source of truth. Under this premise, the most critical areas where a data strategy could make a difference were identified—financial management, operational efficiency, risk mitigation, and strategic decision-making.

2. Strategic Portfolio Optimization

The Data Lake enabled a comprehensive view of the portfolio across its entire lifecycle—from planning and programming through execution and closing. This capability improved portfolio visibility and enabled systematic use of data to support decision-making at every stage, leading to more efficient resource allocation and opening the door to advanced analytics such as more accurate financial scenario projections and early identification of risks and opportunities.

3. Operational Governance

Data governance has reduced operational risk and strengthened institutional practices for responsible data consumption and use. With governed, traceable data, CAF can anticipate incidents, respond to audits and regulatory requirements with evidence, and securely share information with external entities.

4. Data-Driven Cultural Transformation

The true value emerged when data stopped being viewed as a technical input and became part of the business's everyday language. Through storytelling initiatives, communication capsules, and communities of practice, a data culture was established that supports strategic decision-making and strengthens organizational cohesion.

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The ODIN project has not only broken down existing data silos at CAF; it has created a data culture and a community of practice within the organization that drives harmonized, efficient, and impact-oriented data use. Without a doubt, this is a success story.

Gianpiero Leoncini,
Executive Vice President, CAF

Key Organizational Drivers: How ODIN Supports CAF's Business Transformation and Expansion

1. The Data Journey

The path toward a truly data-driven organization does not start with technology, but with the ability to align organizational strategy with a clear, measurable data roadmap. The guiding principle is simple: start small, but start.

3. Phased Data Migration

Data migration to the new platform is executed in prioritized waves aligned with business needs and organized by key data domains. Each wave delivers a minimum viable scope that ensures tangible results and enables orderly scaling.

2. Infrastructure Assessment

An assessment of the existing technology platform is conducted to identify current capabilities and define the target architecture that supports business objectives and ensures scalability.

4. Data Quality as the Backbone of Governance

Standard quality rules and validations are implemented, data is classified by domain and cataloged through metadata artifacts, and ownership is clearly defined—turning data governance into a concrete, measurable, and visible practice.

5. Data Products as a Strategic Lever

ODIN consolidates a model in which data moves beyond operational input to become a source of strategic knowledge. Instead of focusing on reports, the program promotes the creation of data products that encapsulate value, context, and analytics in each delivery. Through this approach, CAF moves from operating with information to leading with knowledge—ensuring that every strategic decision is supported by reliable, consistent, and governed data.

At its core, ODIN turns data into a lever for institutional transformation: without quality data, there can be no quality strategy.

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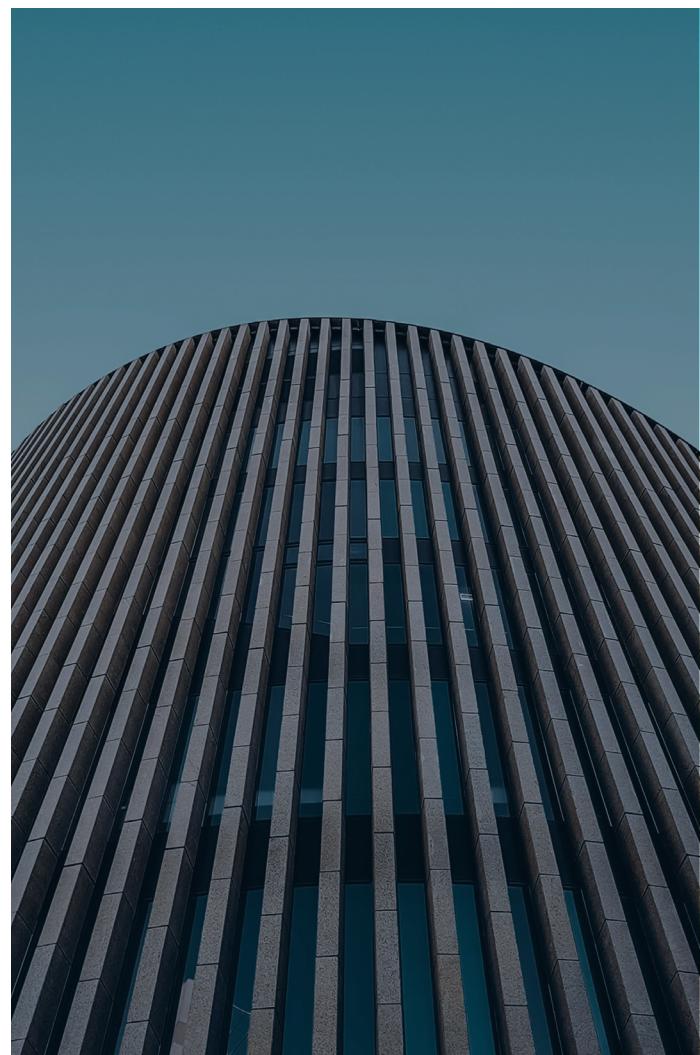
ODIN represents far more than a technology platform. It proves that governed data management can transform how a multilateral institution operates, decides, and projects itself. CAF moved from fragmentation to integration, from scattered data to actionable knowledge. Our experience shows that the right combination of strategy, technology, and culture turns data management into a driver of resilience, transparency, and trust across the region.

Marco Antonio Segura,
Chief Data & Analytics Officer (CDAO), CAF

Sustaining and deepening this success will depend as much on organizational factors as on technical ones. Continued executive sponsorship, change management, and active communication will remain essential to maintaining cultural momentum and institutional commitment.

Adoption and value metrics will enable impact monitoring and evidence-based scaling, while agile frameworks (DevOps, DataOps, MLOps) will continue to act as accelerators—turning strategy into tangible outcomes.

With a solid, governed data foundation now in place, CAF is ready to take the next step: integrating advanced Artificial Intelligence and Generative AI processes into the data value chain. This evolution will move the organization from traditional analytics toward a data ecosystem where automation, continuous learning, and knowledge generation become core elements of decision-making.



About CAF

CAF – Development Bank of Latin America and the Caribbean – is a multilateral financial institution that promotes sustainable development and regional integration. Operating in more than 20 countries with assets exceeding USD 50 billion, CAF finances projects that drive economic growth, social inclusion, and environmental sustainability. Headquartered in Caracas, with offices across Latin America and Europe, CAF works with both the public and private sectors to strengthen institutional capacity and foster innovation throughout the region.

Authors

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