

Manufacturing case study



Barry Callebaut leads the way in cocoa sustainability and compliance

Cognizant supports the chocolate manufacturer to build a near-real-time traceability solution that ensures EU Deforestation Regulation compliance and enhances operational excellence.



At a glance

Industry
Manufacturing

Location
Global

Challenge
Deliver a robust, future-ready compliance system to support EUDR compliance for cocoa sourcing and provide insights to drive continuous improvement.

Success Highlights

- Industry-leading EUDR compliance solution delivered in 12 months
- Adaptable, future-proof solution easily extends to cover additional commodities
- Supports Barry Callebaut's position as an industry sustainability leader

The challenge

Barry Callebaut is the world's leading chocolate and cocoa product manufacturer, producing high-quality chocolate and cocoa products for use by chefs, artisan chocolatiers, and food and beverage manufacturers worldwide. Headquartered in Zurich, Switzerland, it operates more than 60 factories and 22 Callebaut Chocolate Academy Centers around the globe and employs more than 13,000 people.

The company sources its raw materials from a vast network of farmers, cooperatives and third-party suppliers. Conscious of the impact of unregulated cocoa farming on the world's forests, it has been an advocate for forest preservation since 2003 and has pledged to be "forest-positive," with 100% certified or verified cocoa and ingredients by 2030.



Complying with the EU Deforestation Regulation

As a sustainability pioneer, Barry Callebaut welcomed the introduction of the European Union Deforestation Regulation (EUDR), which outlaws products linked to deforestation. However, it needed a robust system to demonstrate that every cocoa bean it sources is deforestation-free.

With the relevant data fragmented across multiple systems, Barry Callebaut engaged Cognizant to develop a solution that could trace the source of its cocoa beans down to the individual field level, for both its direct and indirect suppliers.

The goal was to ensure cocoa was grown on land that had not recently been created out of forest. Barry Callebaut also wanted to generate insights that could drive continuous business improvement.

Our approach

We approached the project in multiple phases, from integrating the relevant data to delivering a scalable, future-proofed EUDR compliance monitoring and reporting tool.

Throughout, we worked closely with Barry Callebaut to ensure robust governance across the project lifecycle. Each cycle's lessons learned were immediately applied to subsequent phases, driving continuous improvement.

Highlights of the solution include:

- **EUDR compliance validation:** We introduced querying and analytics capabilities that allow Barry Callebaut to ensure farmers' fields are not linked to deforestation initiatives. We enabled automated validation in SAP®, so Barry Callebaut procurement teams don't need to manually check each supplier and plot for EUDR compliance.
- **Near-real-time analytics:** We pooled direct and indirect supplier data in a Microsoft Azure data lake to streamline analytics and reporting. This bolstered the system's ability to handle large volumes of continually -updated geospatial data in near- real time. We also refined indirect supplier monitoring with a new risk-scoring mechanism.
- **Palm sourcing compliance:** Since palm is also covered under the EUDR, we extended the solution to include palm sourcing compliance. This leverages the same robust GIS and SAP integration as for cocoa, to enable consistent compliance checks across commodities.
- **Compliance dashboards and reporting:** We built dashboards to monitor sustainability metrics for both cocoa and palm. The system can also generate statutory reports and support regulatory audits. We also introduced advanced analytics to optimize supply chain decisions, achieving near-complete coverage of direct and indirect supplier flows.
- **Master data model:** Barry Callebaut stores data about each field as a polygon (area map) in a geospatial database in Microsoft Azure. It includes regularly updated satellite imagery of each plot, allowing Barry Callebaut to ensure the land has not been created out of forest. We built a model that integrates this geospatial data with information about each of the 1.2 million farmers who supply cocoa and palm to Barry Callebaut. This enables the company to validate each farmer and field for EUDR compliance in near real time.



Throughout, our best practices test management and iterative releases de-risked the project. By incrementally rolling out new functionality, the team minimized disruptions while accelerating time to value in areas like polygon registration, duplicate validations and system integrations.

Business outcomes

Thanks to strong project governance and close collaboration between Barry Callebaut and Cognizant, the project was delivered on time, on scope and on cost. The core EUDR compliance solution was delivered in 12 months, ahead of the project deadline.

Significant outcomes to date include:

- **EUDR compliance-readiness:** Barry Callebaut was ready to comply with EUDR in time for the regulation's introduction. All farm and supplier data are captured in a harmonized environment, with robust evidence and due diligence statements ready for regulatory review.
- **Single, reliable source of truth for farm data:** A global master for all farm polygons guarantees consistent, accurate geospatial records. Information from direct and indirect suppliers is pooled in one Azure data lake, allowing near-real-time validation and simplified audit trails.
- **Unprecedented visibility:** Thanks to near-real-time reporting and predictive analytics, Barry Callebaut has gained new insights into supplier performance, risk hotspots and potential improvements. In addition to compliance, these capabilities optimize sourcing decisions, logistics and sustainability initiatives.
- **Readiness to support new commodities:** The solution's adaptable architecture meant it could apply to both cocoa and palm. Barry Callebaut can extend it to other commodities in the future with minimal rework, scaling compliance across its portfolio.
- **Sustainability leadership:** Barry Callebaut's success paves the way for broader transformation in the cocoa sector. The capability to trace and validate farm-level polygons—down to smallholder farmers in remote areas—positions the company at the forefront of sustainable sourcing.



Ready for the next era of responsible chocolate

Barry Callebaut has always been dedicated to delivering sustainable, traceable cocoa and chocolate. Now, with EUDR requirements met and a modern data platform in place, the company is poised to keep innovating—both in environmental stewardship and digital transformation. Cognizant's multiphase, high-velocity approach has led to a compliance ecosystem that not only addresses today's regulatory demands but also creates significant business value for tomorrow's challenges.

1.2 million

farmers' data available for validation

46,500

square kilometers of land monitored

100%

cocoa and palm supplies assessed for compliance

About Barry Callebaut

Headquartered in Zurich and operating globally, Barry Callebaut is the world's leading manufacturer of cocoa and chocolate products. With a mission to make sustainable chocolate the norm, it sources beans from thousands of farmers, driving innovation in taste, quality and responsible business practices. For more information, visit www.barry-callebaut.com.



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