INTERNATIONAL PLATFORM FOR INSETTING

Case Study

In partnership with:

PETERSON SOLUTIONS

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01. Overview

COMPANIES NAMES	Peterson, Viterra
PROJECT NAME	Ígaris
COMMODITY	Soybeans, with planned expansion to other crops
LOCATION	Argentina, with expansion to Paraguay
TYPE OF INTERVENTION	Regenerative Agriculture

PROJECT PARTNERS ROLES

- **Viterra** serves as the project owner, coordinating overall implementation and providing funding support to participating producers.
- **Agrology** and **Bayer** contribute to data management and are responsible for engaging agricultural producers throughout the project.
- **Puma** conducts emissions calculations in line with recognized international standards, including the GHG Protocol and ISO 14067.
- **Control Union** acts as the independent third-party verifier, ensuring the accuracy and credibility of reported outcomes.
- **Peterson** provides strategic and commercial consulting to support project design and market alignment.

This multi-stakeholder consortium exemplifies that "insetting is always a collaborative effort," as emphasized in the IPI Insetting Guide. By combining complementary expertise in supply chain management, data analytics, and third-party verification, the project establishes a strong framework to support effective action across climate, nature, and social dimensions.

02. Background

The Ígaris project was launched to tackle three key challenges in Argentina's soybean supply chains:

1. Data gap in environmental performance:
The sector lacked large-scale, reliable primary data to assess impacts. "The project's primary objective is to deliver visibility into the environmental footprint of agricultural production in Argentina, using real data instead of default values," explained Peterson. This affected Scope 3 reporting for downstream companies, under-communicated Argentina's sustainability strengths, and complicated compliance with new frameworks like the EU Deforestation Regulation (EUDR).

2. Lack of supply chain traceability:
Without plot-level traceability, companies were unable to connect environmental outcomes to specific products. Ígaris built a system to track environmental and social indicators at farm level, enabling verification across the chain and connection to final deliveries.

3. Untapped potential for market differentiation:
Despite Argentina's advantages- like 94% no-till farming, and non-forested Pampas- there was no way to verify or communicate these features. Ígaris enables their recognition through credible, data-backed reporting.

PROJECT CONTRIBUTION
Ígaris generates large-scale, verifiable data from producers, providing a foundation for trusted sustainability claims and low-carbon soy differentiation. It supports Scope 3 reporting, reduces compliance risks, and builds resilience—turning sustainability into a long-term value driver.

03. Action

IMPLEMENTATION PROCESS

Ígaris was developed to generate large-scale, primary data on the environmental footprint of Argentine soy, enabling credible comparisons with other sourcing regions and supporting international compliance.

As one of the most ambitious carbon footprint initiatives in agriculture, it followed a structured, multi-stakeholder process to define system boundaries, select measurement tools, and align methodologies with global standards.

2022-2023 | Concept development

- Problem identification: Lack of reliable environmental data for agricultural commodities
- Stakeholder alignment: Partnership formation between Viterra, Agrology, Puma, Control Union, and Peterson
- Technology framework: Selection of measurement tools and verification methodologies

2023 | Pilot phase

- Initial measurement: 514,000 hectares assessed
- Data infrastructure development: Creation of digital systems for farm-to-port traceability
- Baseline establishment: Initial carbon footprint measurements

2024 | Scale-up phase

- Expanded coverage: 1,066,583 hectares measured (>5% of Argentina's soybean area)
- Full implementation: Complete assessment framework including social and environmental criteria
- Results verification: Confirmation of 146 kg CO_2e/ton carbon footprint (35% below regional defaults)
- Premium payments: Financial incentives introduced for participating farmers

2025 | Diversification phase (ongoing)

- Geographic expansion: 100,000 hectares in Paraguay
- Crop diversification: 30,000 hectares each of maize, wheat, barley, and sunflower
- Target coverage: 2.2 million hectares (>10% of Argentina's soybean area)
- Enhanced incentives: Expanded farmer premiums and support programs by adding a premium price per sourced ton

OPERATIONAL WORKFLOW

The operational workflow involves five key steps:

1. Producer registration and data collection: Farmers register their plots and provide detailed information about their agricultural practices.

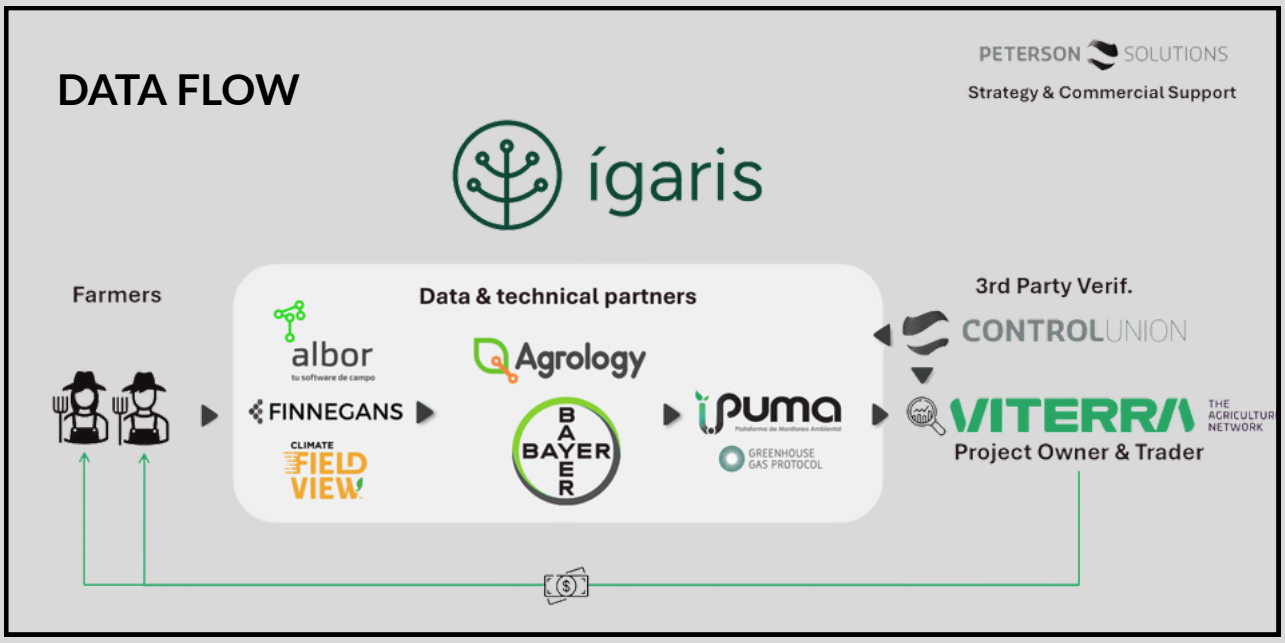
2. Multi-level validation:

- Social & environmental analysis and validation (certifications compliance, labor laws compliance, distance from urban centers/schools, protected biodiversity areas, indigenous communities and others).
- Deforestation analysis and validation (satellite imagery verification back to 2003, EUDR compliance).
- Digital data collection on farming practices (inputs, labor, activities, etc).

3. Carbon footprint calculation: Using Platforma Puma to calculate emissions at the plot level following GHG Protocol and ISO 14067 standards.

4. Third-party verification: Control Union validates calculation accuracy and socio-environmental assessments.

5. Premium payments: Farmers measuring their GHG emissions receive a premium per tonne of grain sold to Viterra.



04. Impacts / KPIs

CLIMATE	• Hectares covered by the project's scope • Hectares with verified carbon footprints • Analysis of Land Use Change Emission • Typologies of crops covered by the project's scope • Average and median GHG emissions per ton of commodity produced (with and without land-use change) • Source of emissions breakdown per ton of commodity produced • Distribution of hectares by emission range (to identify high-emission plots and inform targeted mitigation) • % of deforestation-free areas • 100% of EUDR-compliant areas (eligibility criteria)
NATURE	• Share of project area overlapping with or adjacent to protected ecosystems (e.g. wetlands, biodiversity zones) • % of cover crops adoption by region • % of no-till adoption by region • % of crop rotation adoption by region
PEOPLE	• % of farms that meet/that do not meet social eligibility criteria (e.g. labor law compliance, distance from schools or urban centers, exclusion of indigenous lands, illegal deforestation, etc) • Number of farmers receiving premiums for measuring carbon footprint and selling the physical to Viterra • Number of farmers equipped with digital tools to increase visibility into their sustainability practices and metrics • Delivery of technical support and capacity-building to participating producers • Strengthening of farmer–buyer relationships

SDGs:

05. Progress

CLIMATE	• Measurement coverage expanded from 514,000 ha in 2023 to over 1 million ha in 2024. • Carbon footprint data was verified for approximately 1M hectares, contributing to the creation of baseline data for emissions tracking and reduction from 2026 onward • The median carbon footprint was verified at 146 kg CO_2e/ton, representing a 35% reduction compared to regional defaults without LUC, and up to 97% lower with LUC (ECOINVENT). • A detailed breakdown of emissions sources was conducted, including crop residues, synthetic fertilisers, fossil fuels, seed production, agricultural inputs, and energy use, to support accurate Scope 3 accounting. • A distribution of hectares by emission range was developed to identify high-emission plots and support targeted mitigation strategies. • Over 95% of the audited area was confirmed deforestation-free (since 2003), and 100% met EUDR compliance requirements.
NATURE	• The project excluded environmentally sensitive areas from participation, including protected biodiversity zones and wetlands protected under Law n°23.919. • No-till practices were promoted to reduce emissions and improve soil health, water retention, and erosion control. • Cover crop was supported as a key practice to enhance ecosystem services and biodiversity. • Crop rotation was supported as a core practice to improve biodiversity and soil health.
PEOPLE	• Farms were screened against social eligibility criteria, leading to the exclusion of plots due to: proximity to public schools, proximity to urban centers, indigenous lands. • Premium payments were introduced to reward farmers for verified GHG data submission • Participating farmers were equipped by our technological partners with digital tools for tracking their sustainability metrics • The project strengthened farmer–buyer relationships.

06. Tools

The Ígaris project applies a tailored set of tools to ensure consistent measurement, traceability, and independent verification across the supply chain:

- **Puma platform:** This 2BSvs- and SAI-approved tool is used to calculate field-level greenhouse gas emissions, following the GHG Protocol methodology. Its ability to handle detailed agricultural data makes it central to the project's emissions accounting.

- **Satellite monitoring:** The project utilized Sentinel-2 and Landsat satellite imagery for deforestation validation, enabling reliable monitoring back to 2003. This created an objective verification system independent of farmer-reported data.

- **Viterra traceability system:** This system tracks environmental and social KPIs at the plot level and links the data to final soy products (meal, oil, and subproducts) delivered at port. It ensures continuous traceability from farm to export.

- **ISO 14067:** The project methodology aligns with this standard for carbon footprint calculation (not currently certified as it's a proof of concept)

- **Control Union verification:** Independent third-party verification of GHG calculations, input data and environmental claims.

07. Lessons learned

KEY TAKEAWAYS

Based on the Igaris experience, several approaches are recommended for similar initiatives:

- **Prioritise digital infrastructure from the start:** The initial investment in robust digital systems enabled scalability (from 514,000 to over 1 million hectares) without proportional increases in management complexity (see below for more details).

- **Select partners strategically:** Success relied on a multi-stakeholder approach where each partner brought essential, complementary expertise to solve complex sustainability measurement challenges.

- **Ensure multi-stakeholder value creation:** Delivering specific, quantifiable benefits to each stakeholder group is essential for maintaining engagement and ensuring long-term program viability (see below for more details)

- **Anticipate regulatory developments:** Designing the system to meet emerging requirements (e.g. EUDR) created future-proof infrastructure that delivers immediate value while preparing for evolving compliance demands.

- **Create an added-value product downstream:** Creating a unique, verified low-carbon product allowed Igaris to meet growing market demand for credible sustainability, enabling premium pricing and transforming compliance efforts into a strategic revenue opportunity.

FOCUS: SCALING THROUGH DIGITALISATION

The project's scale was made possible by digitalising supply chain processes based on primary producer data. This allowed carbon footprint measurement at scale and linked field practices to product-level claims. Implementing efficient digital systems for data collection, processing, and verification required overcoming key challenges:

1. **Comprehensive data management**: Manual data processing created inefficiencies that were resolved through automation systems implemented at various stages.
2. **Balancing multiple compliance criteria**: Managing the multiple plots' exclusion criteria required sophisticated data systems.
3. **Ensuring data accuracy and credibility**: Involving Control Union as a third-party verifier was key to building trust, requiring systems designed for external audit and validation.

FOCUS: VALUE PROPOSITION FOR STAKEHOLDERS

Another critical success factor was identifying and delivering clear value to each stakeholder group:

For farmers	For traders (Viterra)	For downstream customers
Premium payments: Direct financial incentives are provided when farmers measure GHG emissions and sell the physical product to Viterra, creating immediate economic benefits for participation and collaboration	**Competitive differentiation:** Offering uniquely verified low-carbon products in a market where sustainability claims can often be generic	**Credible Scope 3 reporting:** Access to primary data for accurate emissions accounting, essential for corporate climate targets
Recognition of sustainable practices: Formal acknowledgment of existing good practices like no-till farming, validating farmers' environmental stewardship	**Regulatory compliance assurance:** Proactive preparation for emerging regulations, reducing business disruption risks	**Regulatory readiness:** Verified compliance with EUDR and preparation for CSRD and other frameworks requirements
Market access security: Ensuring long-term access to premium markets with increasing sustainability requirements	**Enhanced supplier loyalty:** Strengthened relationships with producers through the premium system, improving supply security	**Sustainability storytelling:** Ability to communicate specific, verified sustainability attributes to consumers and investors

Next Steps

Following its initial success, Ígaris will expand in four strategic areas. First, it aims to broaden its geographic and crop scope by 2025—extending into Paraguay, diversifying into maize, wheat, barley, and sunflower, and scaling coverage to over 2 million hectares of soy in Argentina, plus 200,000 hectares of additional crops across both countries. Second, the initiative will pursue ISO 14067 certification and FEFAC compliance to strengthen its standing in international markets. Third, it will widen its measurement framework to include soil organic carbon, biodiversity, and water footprint indicators. Finally, Ígaris will accelerate digital adoption to improve traceability, data quality, and operational efficiency.

Ígaris shows how digital innovation, strong partnerships, and shared value mechanisms can translate sustainability ambitions into measurable outcomes across complex agricultural supply chains.

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