

FUELING A GREENER SKY: A COMPREHENSIVE SAF PLATFORM FOR SUSTAINABLE AVIATION





SAF: Paving the Way for a Greener Future in Aviation

As the focus on sustainability intensifies, the aviation industry stands at a critical crossroads, grappling with the challenge of reducing its carbon footprint. Enter **Sustainable Aviation Fuel (SAF)** – a **game-changing innovation derived from renewable sources** like plant oils, waste and agricultural residues. SAF slashes greenhouse gas emissions and promises to revolutionize air travel by making it cleaner and more eco-friendly than traditional jet fuel.

However, as with any innovation, there are challenges, the most important of which is the need for a system to ensure transparency, trust, and compliance in the SAF market.

The SAF market is rapidly developing in terms of regulatory and voluntary

frameworks, alignment to certification, standards and guidelines. SAF production is expected to grow to **449B liters to meet the growing demand for the IATA Fly Net Zero goal by 2050**. With this kind of growth, there is an urgent need for a traceability system of the SAF value chain from feedstock to aviation end customers. This system should address challenges arising from inconsistent, siloed, error-prone, fraudulent, non-verified/non-compliant SAF sustainability data and transactions across its physical supply chain and connecting with SAF claims made by airlines and end consumers.

IATA's **Finance Net Zero Roadmap** estimates an investment of \$5T, or \$178.6B annually from 2023 to 2050, for the industry's transition to net zero by 2050.

All this will entail collaboration at the ecosystem level, which a decentralized platform like blockchain can enable.

A Comprehensive Platform from Infosys

The Infosys platform hosts innovative solutions powered by blockchain technology that ensure the traceability and credibility of SAF transactions and sustainability claims across the value chain. In addition, the platform supports scalability and lowering of market barriers for the participation of smaller stakeholders in the ecosystem.

Infosys SAF platform offers three solutions which address challenges in upstream and downstream areas of the SAF value chain.

1. *SAF Sustainability Accounting* for seamlessly tracking proof of sustainability across various events and meta data via mass balance accounting approach
2. *Sustainable Aviation Fuel Certificate (SAFc) Marketplace* for seamlessly tracking issuance, trading and retirement of SAF certificates
3. *Sustainable Aviation Fuel Credits (downstream)* Tracking for streamlined process for issuance and claiming SAF sustainability benefits against SAF credits

SAF SUSTAINABILITY ACCOUNTING

FARM ▶ PROCESSING PLANT ▶ REFINERY PLANT ▶ BLENDING POINT

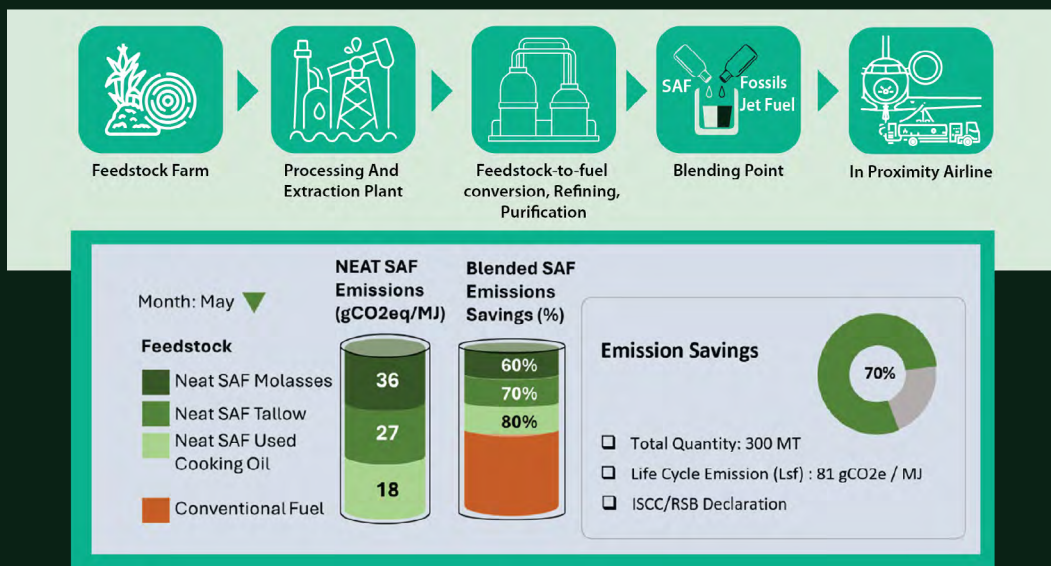
SAF CERTIFICATE MARKETPLACE | SAF CREDITS TRACKING

FUEL SUPPLIER ▶ AIRLINE OPERATOR ▶ CORPORATE / BUSINESS CUSTOMERS

SAF Platform Highlights

1. SAF Sustainability Accounting

The solution facilitates the traceability of co-mingled and continuously processed materials and sustainability attributes across the SAF supply chain from farm to flight.



Mass Balance Accounting

Proof of Sustainability Claims

Compliance To Standards

Challenges:

- Lack of visibility of differentiated streams of material
- Demand for insights and proof of sustainability
- Need to meet certification standards and regulations
- High transaction costs
- Manual. Error-prone excel-based processes
- Lack of traceability in the claims process (Regulatory and Voluntary)

Solution Highlights:

- Track material movement and sustainability attributes of SAF as it moves through the value chain
- Mass Balance Accounting of SAF corresponding to physical flow from farm to blending point
- Track proof of sustainability claims at each stage in the value chain
- Compliance to standards and regulations (ISCC CORSIA, RSB CORSIA)
- Site and product onboarding
- Transparent and auditable reporting
- Configurable rules

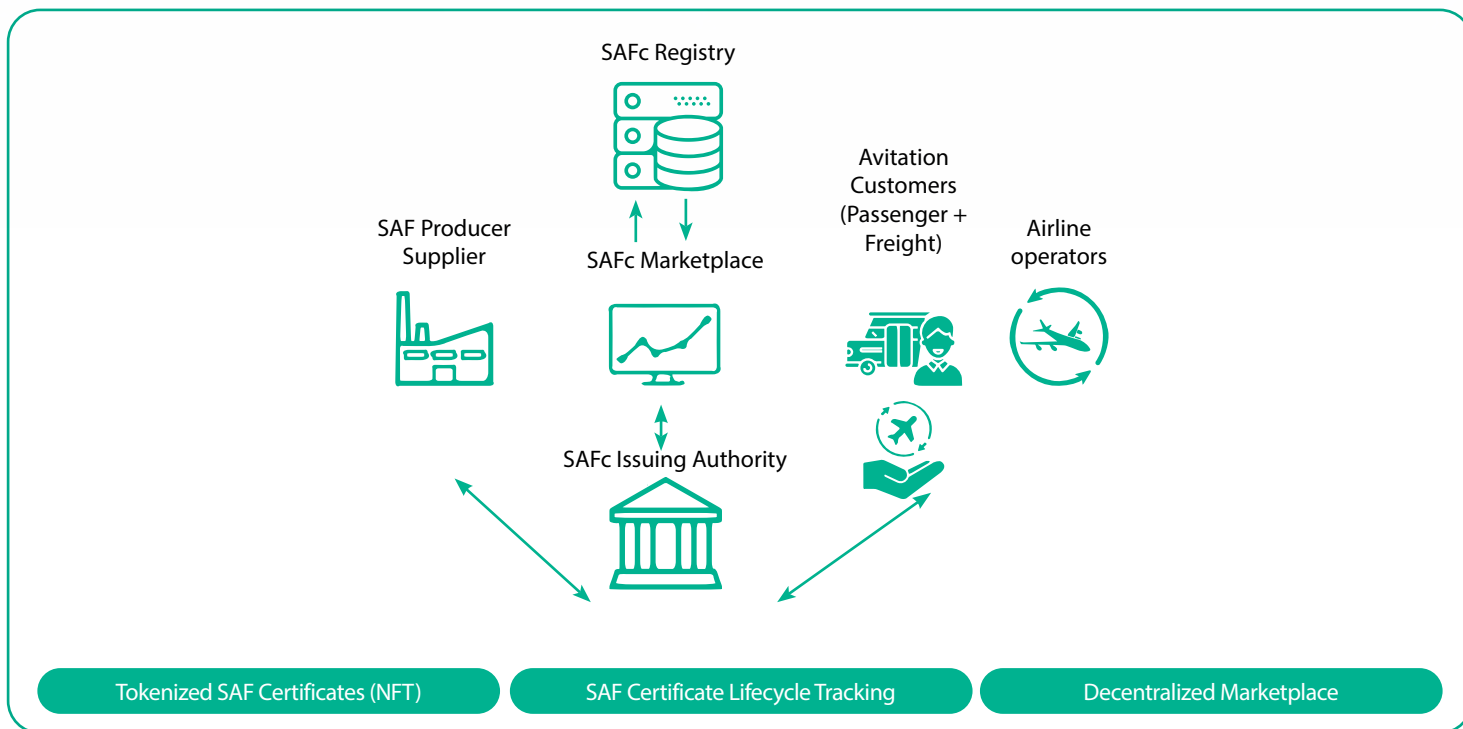
What this solution delivers:

- Real-time movement insight for certified and non-certified materials
- Real-time visibility of SAF sustainability credits
- Trusted proof of sustainability and certification process
- Support for sustainability standards and certification (e.g. ISCC, RSB)
- Data-driven insights for improved decision-making
- Mitigate compliance risks and ensure stakeholder trust



2. SAF Certificate (SAFc) Marketplace

SAFc certificates registry and marketplace with support for different SAF certificate standards allow buyers and sellers of SAF certificates to trade directly with each other.



Challenges:

- Lack of shared SAFc Marketplace and limited number of SAF production sites
- Lack of transparency of the SAF pricing and market demand
- High transaction costs due to Intermediaries
- Regulatory and audit compliance
- Complex paper trails
- Possible double counting of SAFc

Solution Highlights:

- SAFc as NFT Tokens
- Decentralized Marketplace
- SAFc Traceability
- Perpetually Audit Ready

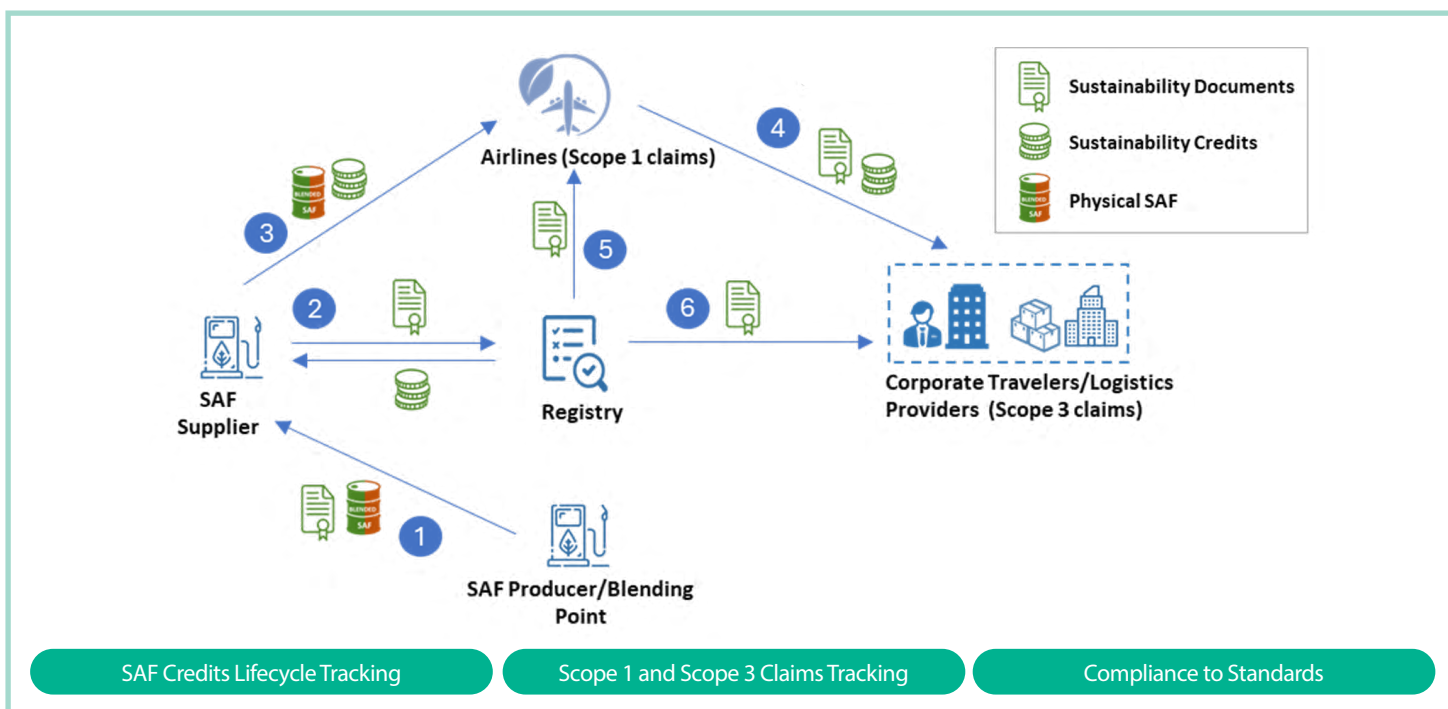
What this solution delivers:

- Data transparency across the shared ledger
- Reduced transactions costs with disintermediation
- Improved process efficiency with real time data sharing across the value chain
- Complete Audit trails of SAFc from the point of issuance to retirement
- SAFc issued as tokens ensures authenticity, security and adherence to standard specifications



3. SAF Credits Tracking for Airlines

This solution fuels department and corporate programs for tracking the issuance, transfer and claiming of SAF credits across the SAF downstream value chain. It is compatible with SAF tax declaration formats and reporting.



Challenges:

- Lack of trust in SAF sustainability certifications
- High transaction costs associated with the issuance, sharing and claiming of SAF sustainability credits
- Manual/paper-based tracking of mandatory and voluntary claims against sustainability credits

Solution Highlights:

- Track Material Movement
- SAF Credits Lifecycle Tracking
- Scope 1 and Scope 3 Claims Tracking
- ISCC Compliance
- Transparent and Auditable Reporting
- Configurable Rules

What this solution delivers:

- A secure and tamper-proof ledger for tracking the lifecycle of SAF sustainability credits
- Automated workflows for SAF credits issuance, transfer and claiming
- Avoids double counting with increased transparency on the SAF credits lifecycle
- Reduced transaction cost with disintermediation

In this way, the comprehensive Infosys SAF platform helps reduce the carbon footprint in the aviation industry.



Role-Based Value Proposition

Here is a view of how the Infosys solutions add value across roles

	Robust Supply Chain Tracking (material and sustainability data)	Integrated and trusted SAF lifecycle emission data	Tamper-proof Certifications	Compliance & Standards (CORSIA, RED)	Reduced Risk of Double Claiming	Credibility of Sustainability Claims	Automation & Improved Process Efficiency	Perpetually Audit ready Regulatory Reporting	Eligible For Government Incentives	Improved Brand Loyalty
Farm	✓	✓	✓	✓		✓	✓	✓	✓	✓
Refinery	✓	✓	✓	✓		✓	✓	✓	✓	✓
Blending Point	✓	✓	✓	✓		✓	✓	✓	✓	✓
SAF Supplier	✓	✓	✓	✓		✓		✓	✓	
Airlines	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Corporate Customers	✓	✓	✓		✓	✓	✓		✓	
Regulatory Authority	✓	✓	✓	✓	✓	✓	✓	✓		

Contact us at TravelPractice@infosys.com to contribute towards a more environmentally friendly and sustainable future.

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