AVIATION WEEK
PROGRAM EXCELLENCE AWARDS

INTELLECTUAL PROPERTY

(This section must be signed)

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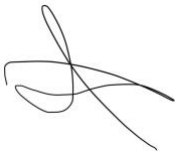
Thank you for participating,

Gregory Hamilton
President
Aviation Week Network

Acknowledged, agreed, and submitted by

Fernando Comenge



Nominee's Signature

Date 04/07/2025

Nominee's Name (please print) Fernando Comenge

Title (please print) Business Strategy, transformation and Supply chain director
Company (please print): Iberia Maintenance _____

NOMINATION FORM

Name of Program: Iberia Maintenance's Sustainable strategy
Name of Program Leader: Fernando Comenge _____

Phone Number:

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_____

☐ Customer Approved

- Date: 04/07/2025
- Customer Contact (name/title/organization/phone): _____

☐ Supplier Approved (if named in this nomination form)

- Date: _____
- Supplier Contact (name/title/organization/phone): _____

PLEASE REFER TO PROGRAM EXCELLENCE DIRECTIONS AS YOU COMPLETE THIS FORM.

SECTION 1: EXECUTIVE SUMMARY

Make the Case for Excellence

Value: 10 points

Use 12 pt. Times Roman typeface.

What is the vision for this program/project? What unique characteristics and properties qualify this program for consideration?

[LIMIT YOUR NARRATIVE TO THIS PAGE.]

The vision of this program is to drive meaningful decarbonization and sustainability across the aviation maintenance sector through innovative, collaborative, and measurable actions. By integrating Sustainable Aviation Fuel (SAF) in engine testing, transitioning to 100% renewable energy, and expanding in-house repair capabilities to reduce Scope 3 emissions, the program demonstrates a holistic approach to reducing carbon footprints while fostering circular economy principles.

What sets this initiative apart is its multi-faceted and collaborative nature. Under Scope 1, the use of SAF in engine test benches not only surpassed initial CO_2 reduction targets (132 tonnes vs. 115 tonnes expected) but also emphasized local sourcing and supplier collaboration to optimize the fuel mix. Scope 2 highlights a dual commitment to energy efficiency (20% reduction by 2025) and renewable energy adoption, including on-site solar generation. Scope 3 innovations, such as in-house part repairs and logistics partnerships for lower emissions, further solidify the program's comprehensive impact.

Additionally, the program's alignment with All4Zero (a first-of-its-kind, cross-industry hub in Spain) amplifies its uniqueness. By uniting leaders like Iberia, Repsol, and others, the project leverages shared expertise to accelerate disruptive technologies for decarbonization. This combination of ambitious targets, verifiable results, and collaborative innovation makes the program a standout candidate for recognition in sustainability and industry transformation.

During the development of this Hub, Iberia, together with other partners, founded PATIO Campus, an open corporate innovation campus established to become the European benchmark and the key connection point between corporations, startups, and innovation ecosystem players. Its primary mission is to foster open innovation and transform business challenges into innovative solutions, focusing on these four key areas: Emerging Technologies, Corporate Innovation, Sustainability & Circularity, and Customer Experience & New Customer Segments. In this regard, we are participating in projects related to waste minimization and proper management, helping to reduce the carbon footprint across the entire value chain, as well as innovation projects focused on the development of new sustainable fuels.

Our program proves that MROs can be catalysts for net-zero aviation: combining SAF, renewable energy, and circular repairs to cut emissions without compromising operational excellence.

DIRECTIONS

- **Do not exceed 10 pages in responding to the following four descriptions**.
    - Allocate these 10 pages as you deem appropriate, but it is important that you respond to all four sections.

- DO NOT REMOVE THE GUIDANCE PROVIDED FOR EACH SECTION.

- Use 12 pt. Times Roman typeface throughout.

- Include graphics and photos if appropriate; do not change margins.

SECTION 2: VALUE CREATION

Value: 15 points

Please respond to the following prompt:

➢ **Clearly define the value of this program/project for the corporation; quantify appropriately**

The vision of this program is to accelerate the decarbonization of the aviation maintentance sector through a multi-dimensional approach that combines technological innovation, cross-industry collaboration, and measurable environmental impact. Unlike isolated initiatives, this project integrates:

-Scope 1: The use of 5% of Sustainable Aviation Fuel (SAF) in engine testing, which exceeded CO_2 reduction targets (132 tonnes vs. 115 expected) through strategic partnerships with local suppliers.

-Scope 2: A 100% renewable energy transition, coupled with a 20% energy consumption reduction by 2025 and on-site solar generation (10-15%).

-Scope 3: Circular economy practices, such as in-house engine part repairs (40% target) and low-emission logistics (20% footprint reduction).

Its uniqueness lies in:

-Collaborative scale: Embedded in All4Zero, Spain's first multi-sector hub (with partners like Repsol, Holcim, and Iberia), leveraging shared R&D for disruptive solutions. Also with PATIO Campus.

-Holistic impact: Addressing emissions across the entire value chain (Scopes 1–3) while fostering circularity.

-Proven results: Quantifiable outcomes (e.g., SAF)

This program is a blueprint for industrial decarbonization, merging ambition with actionable frameworks.

- **Clearly define the value of this program/project to your customer**

This program directly aligns with global aviation sustainability targets, including:

-ICAO's Net Zero by 2050: SAF adoption and energy efficiency are pivotal to the sector's roadmap.

-EU Fit for 55: Exceeds the 10% SAF usage mandate for 2030 in test phases, with potential for scaling.

-Circular Economy Action Plan: In-house repairs and waste reduction mirror EU priorities for resource efficiency.

Specific alignments include:

-SAF: Partners with a local Spanish supplier, reducing lifecycle emissions by 80% vs. fossil fuels (per ICAO metrics).

-IAG roadmap: By 2030, all International Airlines Group OpCos must use at least 10% SAF in their total fuel consumption.

-Renewable Energy: Supports corporate commitments (100% clean energy).

-Innovation: Through IAGi, PATIO Campus and All4Zero, it bridges corporate-startup collaboration to fast-track solutions like waste-to-fuel technologies.

By addressing regulatory, operational, and collaborative gaps, the program sets a replicable standard for the sector.

- **Clearly define the value of this program/project to members of your team; quantify if possible**

The program tracks success through rigorously quantified KPIs, validated by third parties where applicable:

KPI	Target	Achievement (2024)
CO_2 reduction (Scope 1)	115 tonnes/year	132 tonnes (SAF usage)
Energy consumption	20% reduction by 2025	5,6% reduction (vs2024)
Renewable energy	100% coverage	Achieved
In-house repairs	40% of engine parts	33% (2024), on track

Additional qualitative outcomes:

All4Zero Hub: A total of 204 startups have participated in the various open calls, grouped according to the hub's 5 core challenge areas (carbon capture, water resources, renewable hydrogen, SAF & renewable fuels, waste reuse & valorization).

PATIO Campus: The Hub attracted 120+ startups to its challenge program, with 84 qualifying for Phase 1 pitches and 43 advancing to Phase 2. Notably, 25% (31 projects) focused on sustainability solutions.

Supplier engagement: 100% of SAF sourced from EU-certified producers.

These metrics underscore the program's capacity to deliver scalable, auditable impact.

Sustainability Training Programs

- Industrial Waste Management Course (2024): designed for aircraft maintenance personnel, this comprehensive program covers:
  - ✓ Full waste lifecycle management: generation → segregation → storage → transportation → treatment
  - ✓ 1,500+ employees certified to date

- Sustainable Aviation Fuel (SAF) Production Course (2024): developed in collaboration with Universidad Politécnica de Madrid's Industrial Engineering School, the curriculum: provides cross-functional teams with strategic SAF knowledge for operational integration and combines macro-level industry perspectives with technical deep dives:
  - ✓ Production pathways analysis
  - ✓ Feedstock-specific complexity assessment
  - ✓ Technological challenges in scaling mechanisms

➢ **Clearly define the contribution of this program/project to the greater good (society, security, etc.)**

The program redefines innovation through:

1. Cross-sector partnerships

-All4Zero Hub: Unites companies (e.g., Iberia, Repsol) to co-develop technologies like carbon capture for SAF production. We drive the development of decarbonization technologies for the industry by identifying and supporting the validation and scaling of innovative solutions emerging from the innovation ecosystem. The Hub currently includes 4 founding partners, 10 beta partners, 11 collaborators, and 2 institutional allies.

-PATIO Campus: Patio serves as an open corporate innovation hub designed to establish itself as the European reference point and principal nexus between established enterprises, emerging startups, and innovation ecosystem stakeholders. With eight founding partners and the Madrid Regional Government as sponsoring partner, our initiative promotes entrepreneurial ecosystem development through strategic partnership facilitation.

2. Open innovation frameworks

Being part of a group like IAG allows us to actively participate in the IAGi Accelerator, which plays a key role in our digitalization and transformation efforts. IAGi represents our ambition of being at the forefront

of innovation in the aviation industry, leveraging cutting-edge technology and new strategies to enhance our operations and customer experience. Launched in 2016 Hangar 51, and more recently renamed as IAGi, has partnered with over 100 start-ups to discover, test, implement and invest in game-changing technologies in real-world operations.

Every year, IAGi celebrates the Accelerator programme to enable and scale-up start-ups to collaborate with experts from across the airline Group and test their technology under operational conditions. The 2025 edition has focused on artificial intelligence (AI), automation, sustainability, customer-focused platforms, connectivity and next-generation computing technology to streamline operational efficiencies, boost productivity and elevate the customer journey across IAG's operating companies.

3. Policy advocacy

Iberia, together with Moeve (former Cepsa), Iberia Express, Vueling, and BIOCIRC (Spanish Biocircularity Association), presented a 2024 report outlining 16 economic, regulatory, and public-private collaboration measures to boost sustainable aviation fuel (SAF) production and consumption. This alternative fuel reduces aviation's environmental impact through CO_2 emission cuts, positioning Spain as a European leader in this emerging technology and sustainable tourism.

Spain's existing conditions for SAF production represent a major opportunity for the national economy. Consequently, the four entities propose establishing SAF development as a national priority project, positioning Spain as both a European SAF hub and a frontrunner in sustainable tourism and energy transition.

The report "Making Spain Europe's SAF Leader: A Roadmap to Accelerate Air Transport Decarbonization" emphasizes that:

- The new SAF production industry requires a regulatory framework to provide stakeholders with investment certainty in this emerging sector.
- Shared commitment to necessary investments and cost increases is critical, as SAF currently costs 3-5 times more than fossil-based kerosene.
- Developing innovative production technologies and deploying industrial facilities at scale is essential to leverage Spain's domestic feedstock potential.
- While announced HEFA production capacity (the most widely used current technology) could meet 2030 demand, the study notes it would fall far short of 2040 requirements and synthetic e-SAF needs (produced from green hydrogen).

SECTION 3: ORGANIZATIONAL BEST PRACTICES AND TEAM LEADERSHIP

Value: 35 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

- ***15 points:*** **Describe the innovative tools and systems used by your team, how they contributed to performance and why**

At Iberia Maintenance, innovation and efficiency are seamlessly intertwined, driving excellence in every operation and thanks to the Microsoft environment (O365 solutions) we can be up to date in an advanced way, and it allows us to be at the forefront (since we have the necessary partners for their implementations). From O365 solutions like Forms, PowerApps or PowerBI, among others, we can ensure that our teams work with mobility in their day to day. Allowing them to report stoppers, escalate it and visualize the status of its resolutions to RPAs to automatize manual tasks as updates of comments and dates in Purchase Orders to Data & AI solutions to optimize the priorization of works.

- ***10 points:*** **Define the unique practices and process you used to develop, lead and manage people?**

Our focus is to ensure the day-to-day transformation to fulfil our strategic plan goals, placing operational excellence and our commitment to a quality and safety culture at the forefront. Our journey begins with our people. Engaging them and creating ownership is key to success.

On top of that Iberia Maintenance is a few years away from celebrating a century of legacy in the MRO industry (this year we celebrate our 97th anniversary). Throughout these years, the Spanish MRO has continued to operate with the same passion as it did from day one, always placing our people at the heart of our strategy. Iberia Maintenance is a well-known brand that attracts top talent, ensuring that success is driven by the dedication and commitment of every Iberia employee, who consistently exceeds expectations to deliver on-time results while upholding the highest safety and quality standards.

- ***10 points:*** **How did you leverage skills and technologies of your suppliers?**

Strategic Collaborations:

-Co-Developing SAF with Local Suppliers: SAF with >80% lower emissions than conventional jet fuel production through strategic partnerships with local suppliers and investments in startups developing innovative production processes.

-Shared Innovation Contracts: Scope 3 emissions 20% reduction pertaining to Iberia MRO operations, to be implemented by the air logistics provider starting in 2024.

-Open Innovation via All4Zero & PATIO Campus: We believe in open innovation and its power to drive transformative change toward a more sustainable future. We contribute to this evolution by championing industrial decarbonization – a key sector for generating social progress, economic growth, and improved quality of life.

Through collaborations with startups, we identify and scale projects that deliver solutions for our partner network. Our approach focuses on:

- Developing early-stage technologies
- Advancing solutions to higher Technology Readiness Levels (TRLs)

SECTION 4: DEALING WITH PROGRAM COMPLEXITY

(VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY, or VUCA)

Value: 25 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

- ***10 points:*** **Describe UNIQUE areas of VUCA faced by your program and why. (Please avoid the issues surrounding Covid-19 pandemic, which was faced by all programs.)**

Volatility:

-SAF Market Fluctuations: Experienced sudden price swings (up to 40% quarterly) due to competing demand from other industries and geopolitical factors affecting biofuel feedstocks.

-Regulatory Shifts: Evolving EU sustainability certification requirements (ISCC-EU) necessitated mid-project adjustments to SAF blending protocols.

Uncertainty:

-Technology Readiness: Novel SAF blends required unproven engine performance parameters, creating reliability concerns during testing phases.

-Stakeholder Alignment: Coordinating four cross-sector partners (Iberia, Repsol, Holcim, ArcelorMittal) with competing priorities for All4Zero Hub resources.

Complexity:

-Multi-Scope Integration: Simultaneous execution across three emission scopes created interdependencies - e.g., SAF usage (Scope 1) impacted maintenance protocols (Scope 3).

-Circular Economy Bottlenecks: Developing closed-loop systems for aircraft part repairs revealed gaps in Spain's recycling infrastructure for aerospace materials.

Ambiguity:

-Impact Measurement: No established benchmarks for assessing cross-industry decarbonization initiatives, requiring creation of new KPIs.

-Innovation Valuation: Difficulty quantifying ROI for experimental technologies like blockchain-enabled SAF tracking during early implementation.

While many face single-dimension challenges, our program confronted simultaneous VUCA elements across technical, regulatory, and collaborative dimensions - all while pioneering Spain's first multi-sector aviation decarbonization model.

- ***15 points:*** **Explain how your team responded to these challenges. What changes did you make, what were the results?**

Adaptive Solutions Implemented:

- Dynamic SAF Sourcing Framework
  - ✓ Diversified supplier network across multiple regions
  - ✓ Real-time price analysis linked to batch quantities and volumes
  - ✓ Supplier agreements with price stability commitments
  - ✓ Outcome: 28% reduction in cost volatility impact while maintaining 100% supply continuity

- Circular Economy Accelerator
  - ✓ Collaboration with PATIO Campus startups on localized recycling solutions
  - ✓ Direct partnerships with end-processors (eliminating intermediaries to reduce carbon footprint)
  - ✓ Dedicated segregation streams for maximum material circularity
  - ✓ Outcome: 65% composite material reuse rate (vs. industry 35% average)

Program Success Factors:

The program demonstrates that in complex environments, the most effective strategy combines:

- Structured adaptability (flexible frameworks)
- Collaborative resilience (shared risk ownership)

This dual approach not only managed VUCA volatility but leveraged it to outperform conventional decarbonization timelines.

Iberia's Commitment to Sustainable Transition Solutions

- Fleet Modernization
  - ✓ Introduction of Airbus A321XLR aircraft – enhancing long-haul operations with greater sustainability and innovation

- Operational Efficiency
  - ✓ Continuous improvement initiatives to reduce emissions
  - ✓ Current efficiency: 66.50 grCO2/pkm (grams of CO_2 per passenger-kilometer)

- Sustainable Aviation Fuel (SAF) Leadership
  - ✓ $3.5 billion committed by IAG in SAF purchase agreements
  - ✓ 10% SAF usage target by 2030

- Certifications & Training
  - ✓ IATA IEnvA certification for improved environmental performance
  - ✓ 1,500+ employees trained in industrial waste management

- Renewable Energy & Waste Innovation
  - ✓ On-site photovoltaic plant avoiding 13,600 tonnes of CO_2 over its lifespan

- ✓ Zero Cabin Waste program optimizing onboard waste management
- ✓ 100% renewable electricity across Iberia-owned facilities since 2019

- Global Environmental Partnerships
  - ✓ Participation in IAGOS project monitoring Atlantic air quality
  - ✓ Founding member of All4Zero – the first industrial tech hub targeting net-zero emissions by 2050

SECTION 5: METRICS

Value: 15 points
Use 12 pt. Times Roman typeface

Please respond to the following prompts, where predictive metrics indicate items that provide a view of how yesterday's actions and today's actions will affect the future timeline, cost or other requirement.

Provide charts/graphs that illustrate performance to these metrics:

- **What are your predictive metrics?**
  Iberia flight net emissions (tCO2)
  Flight emissions intensity (grCO2/pkm)
  Sustainable aviation fuel consumption (%)
  Noise impact (relative to industry average, reference: 1)
  Air quality (tons of NOx per takeoff/landing)
  Flight waste (t)
  Flight waste (kg/pax)
  Recycling in-flight waste (%)
  Office waste (t)
  Waste generated in aviation maintenance (t)
  Recycle waste generated in aeronautical maintenance (t)
  Percentage of SME suppliers trained in Sustainability of all those we have invited for training

- **How did you perform against these metrics?**

Objectives	KPI	Progress		Commitment			SDG Target to which it contributes
		2023	2024	2025	2030	2050	
Sustainability							
20% net emissions reduction by 2030 and net zero emissions by 2050	Iberia flight net emissions (tCO2)	5.651.476	5.830.184	–	4.540.216	0	SDG3 target 3.9
Improve operational efficiency by 10% by 2025 compared to 2019	Flight emissions intensity (grCO2/pkm)	68,5	66,5	70,89	–	–	SDG3 target 3.9 SDG9 target 9.4 SDG13 target 13.2
Operate with 10% sustainable aviation fuel (SAF) by 2030.	Sustainable aviation fuel consumption (%)	*	0,58 %	–	10 %	–	SDG8 target 8.4 SDG9 target 9.4 SDG12 target 12.2
Reduce noise at each takeoff/landing by an average of 10 % by 2025 compared to 2020.	Noise impact (relative to industry average, reference: 1)	0,96	0,95	0,90	–	–	SDG3 target 3.9 SDG11 target 11.6
Reduce NOx emissions by an average of 10% per takeoff/landing by 2025 compared to 2020.	Air quality (tons of NOx per takeoff/ landing))	8,24	8,52	8,37	–	–	SDG3 target 3.9 SDG11 target 11.6
Reduce in-flight waste by 20% by 2025 compared to 2019	Flight waste (t)	4.110	3.834	4.264	–	–	SDG3 target 3.9 SDG11 target 11.6 SDG12 target 12.4
Reduce in-flight waste/passenger by 20% by 2025 compared to 2019.	Flight waste (kg/pax)	0,19	0,16	0,13	–	–	SDG3 target 3.9 SDG11 target 11.6 SDG12 target 12.4
Recycle 50 % of in-flight waste by 2025	Recycling in-flight waste (%)	54 %	53 %	50 %	–	–	SDG3 target 3.9 ODS11 target 11.6 ODS12 target 12.4
Reduce office waste by 20% by 2030 compared to 2019.	Office waste (t)	24,9	15,9	–	12,7	–	SDG3 target 3.9 SDG11 target 11.6 SDG12 target 12.4
20% reduction of waste generated in aviation maintenance by 2030 compared to 2019	Waste generated in aviation maintenance (t)	1,28	1,33	–	1,83	–	SDG3 target 3.9 SDG11 target 11.6 SDG12 target 12.4
Recycle 60 % of the waste generated in aeronautical maintenance by 2030	Recycle waste generated in aeronautical maintenance (t)	87,54 %	84,85 %	–	60 %	–	SDG3 target 3.9 SDG11 target 11.6 SDG12 target 12.4
Sustainable Supply Chain	Percentage of SME suppliers trained in Sustainability of all those we have invited for training.	****	40 %	15 %			SDG12 target 12.8

➢ **How do your predictive metrics drive action toward program excellence? Please provide examples.**

Predictive metrics enhance oversight of variations and deviations in KPI trends. Certain deviations are more actionable, as demonstrated by:

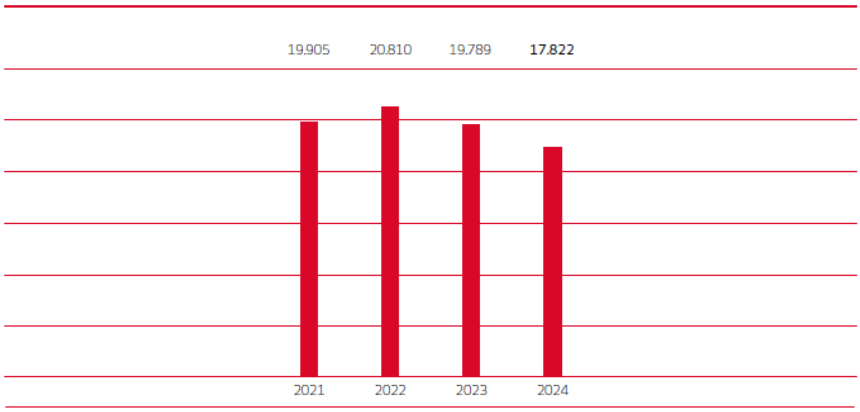
- Waste management (onboard/Iberia Maintenance facilities): Implemented targeted training programs and signage systems to simplify segregation/recycling processes (see attached MRO training materials and signage examples).

<u>Long-Term Strategic Challenges:</u> Other areas like flight emission efficiency and SAF adoption require:

- Multi-year decision-making frameworks
- Systemic strategies rather than quick-fix solutions

Ground Emissions.
— Reach 1.
These emissions result from the use of diesel and natural gas boilers and generators, in addition to emissions produced by diesel, gas, and gasoline vehicles and kerosene. These emissions consist primarily of CO2, but are also included in the CO2 equivalent indicator for other greenhouse gases, such as methane (CH4) and nitrogen oxides (NOx), which impact the air quality of cities and airports, where this activity takes place.

Scope 1 Ground (Tn C02 eq)



Program Optimization Focus: All initiatives align with:

- Continuous program improvement
- Exceeding sustainability targets through ambitious, scalable actions