



D8.7 Training material illustrating case-studies on start-ups

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List of Abbreviations

ADP	Aéroports de Paris
ARC	Airport Regions Council
APU	Auxiliary Power Unit
BIM	Building Information Modeling
CEST	Central European Standard Time
CNG	Compressed Natural Gas
GSE	Ground Support Equipment
IPR	Intellectual Property Rights
IP	Intellectual Property
Q&A	Questions and Answers
R&D	Research and Development
REACH	Registration, Evaluation, Authorization, and Restriction of Chemicals
SaaS	Software as a Service
SME	Small and Medium Enterprise
TRL	Technology Readiness Level



1 Executive Summary

D8.7 documents the training materials produced under Task 8.4 to support exploitation and technology transfer of OLGA results. The programme addresses start-ups, SMEs, airports, researchers, public administrations and innovation owners through a three-stage pathway: protect and structure the innovation, move from prototype to product, and develop a viable business model. To better explain the full pathway towards industrialization and technology transfer, the consortium organized a series of three webinars was organized for the audiences mentioned above. Together, they guide participants through the entire process, from the beginning (IPR protection) to the end (building a business model).

The current OLGA Training Platform presents all three modules. As verified on 20 July 2026, the platform displays:

- Entrepreneurial Mindset, IP Capture and Exploitation - 15 steps
- From Prototype to Product - 12 steps
- Business Model Generation - 10 steps

The three corresponding webinars were announced for 16 June 2025, 24 March 2026 and 29 June 2026. The platform therefore provides 37 learning steps across the three modules. The official pages confirm the programme structure, dates, objectives and selected agenda items.

1.1 Key outputs

- Three online webinars covering IP and exploitation, prototype-to-product transfer, and business model generation.
- Three online learning modules on the OLGA Training Platform, comprising 37 steps in total.
- Project case studies used to translate exploitation concepts into airport-relevant examples.
- A public access point intended to preserve the training materials beyond the live sessions.



2 Introduction

OLGA - hOListic & Green Airports - develops and demonstrates measures that support greener airport operations and their wider uptake. Exploitation depends not only on technical results, but also on the ability of innovation owners and potential users to protect, transfer, scale and commercialize those results.

This report documents the training program developed for that purpose. It describes the methodology, the three modules, the OLGA case studies used, the public training platform and the program's contribution to exploitation and technology transfer.

3 Grant Agreement and WP8.4 Context

3.1 Deliverable D8.7 Requirements

D8.7 is a public deliverable of WP8 - Exploitation and Technology Transfer. It is led by ARC - Airport Regions Council and is due in M54. Under Task T8.4, it records training materials and case studies intended to support the exploitation of OLGA results through webinars and online courses.

The deliverable must provide an auditable account of the training content, implementation and access arrangements. It must therefore distinguish verified public facts from internal event and platform data that require primary evidence.

- Document the three training modules and their delivery status.
- Explain the use of OLGA case studies in the learning materials.
- Show how the programme supports IP management, technology transfer, industrialization and business model development.
- Report reaches and engagement using traceable source exports and dated analytics.
- Confirm continued public access to the training materials.



3.2 Link with WP8

The training activity operationalizes WP8 exploitation work by converting project knowledge into practical guidance for innovation owners, potential adopters and intermediaries. It complements exploitation planning by addressing three linked decisions: how a result is protected and structured, how it moves from demonstration to operational use, and how value is created and captured at scale.

3.3 Target Audiences

The program targets start-ups and SMEs, technology owners, airport operators, researchers, public administrations, legal and IP advisers, sustainability managers, business developers and other stakeholders involved in the uptake of sustainable airport solutions. The modules are designed to be useful both to OLGA partners and to external organizations seeking transferable airport innovation practices.

4 Training Methodology

4.1 Training Pathway

Stage	Core question	Module	Expected application
1. Protect and structure	What is the result, who owns it and how can it be protected or exploited?	Entrepreneurial Mindset, IP Capture and Exploitation	Initial exploitation and IP strategy
2. Transfer and scale	What is required to move from a demonstrated solution to an operational product or service?	From Prototype to Product	Industrialization and scale-up pathway
3. Build the model	Who receives value, who pays and what enables replication?	Business Model Generation	Business model and market uptake logic



4.2 Use of OLGA Case Studies

Case studies are used to connect exploitation concepts to actual OLGA innovations. Each case study should be reported using the same minimum fields:

- problem and user need;
- solution and demonstration context;
- maturity and evidence of performance;
- value proposition and target users;
- transfer, industrialization or business model pathway;
- barriers, enabling conditions and replication requirements;
- relevance for SMEs and start-ups.

4.3 Training Formats and Learning Approach

The program combines live online webinars with self-paced online modules. Webinars provide expert input, case-study discussion, Q&A and feedback. The platform extends access beyond the live sessions and allows users to follow the material in a structured sequence. The public course pages display each module title, the number of steps and a Join action for access to the course content.

The learning approach progresses from awareness and diagnosis to application. Expert presentations introduce the concepts, OLGA cases demonstrate operational relevance, and practical exercises support transfer to the participant's own innovation or exploitation context.

5 Overview of the OLGA Training Program

Table 1 consolidates the facts visible on the OLGA website as of 20 July 2026. “Step counts” refer to the number of learning steps or modules displayed on each individual course page on the OLGA website. These counts reflect the structure of the respective online course as presented to users at the time of assessment and were recorded directly from the corresponding course pages. Dates refer to the corresponding official webinar announcements.



Module	Webinar date	Platform steps	Public status	Primary focus
Entrepreneurial Mindset, IP Capture and Exploitation	16 June 2025	15	Published	IP identification, protection and exploitation
From Prototype to Product	24 March 2026	12	Published	Industrialization, certification, scale-up and technology transfer
Business Model Generation	29 June 2026	10	Published	Value creation, CBA/ROI, commercialization and replication

Total public course steps: 37.



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Business Model Generation

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From Prototype to Product

You're a Participant

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Entrepreneurial Mindset, IP Capture and Exploitation

You're a Participant

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Figure 1 - OLGA Training Platform landing page



6 Training Module 1: Start-up Success - Entrepreneurial Mindset, IP Capture and Exploitation

6.1 Module facts

Field	Info
Official course title	Entrepreneurial Mindset, IP Capture and Exploitation
Official webinar title	Webinar on IP Capture and Exploitation: Turning Green Innovation into Impact for Sustainable Airport Solutions
Webinar date	16 June 2025, 14:00 CEST, online
Platform structure	15 steps
Primary audience	Start-ups, SMEs, R&D teams, public administrations, advisers, researchers and sustainability managers

6.2 Objectives and content

The module establishes the exploitation baseline. It addresses how to identify and protect valuable IP in collaborative R&D, select an appropriate IP strategy, connect IP management with market uptake and use EU support tools. It also uses OLGA examples to show how exploitation planning applies to technical and service-based results.

- IP identification and ownership in collaborative projects;
- protection routes, including patents, trade secrets and design rights;
- structured exploitation planning for OLGA results;
- Horizon Results Booster and IP Helpdesk support;
- case studies from air quality services, waste reduction, digital twins and multimodal mobility.



6.3 Published agenda and case studies

Contribution	Speaker and organization	Training relevance
Introduction and closing	Dr. Delia Dimitriu, COMOTI	Program framing and conclusions
Capturing and protecting green innovations	Emir Ganić, Infra Plan Consulting	Methodology for IP strategy in OLGA
Waste reduction and circularity at Malpensa Airport	Giorgia Zanchin, Centrocot S.p.A.	IP and exploitation in a value-chain context
Services for local air quality	Ayce Celikel, ENVISA	Service-based exploitation of environmental results
Digital twins for airport facility management	Irina Stipanović, Infra Plan Consulting	Digital product and operational uptake
Multimodal traffic flow optimization	Sasa Vojvodic, Ericsson Nikola Tesla	Data-driven mobility solution and market use
Building a practical IP strategy	Radu Mirea, COMOTI	Application of IP choices to exploitable results

6.4 Q&A and discussion

The discussion linked intellectual property management to the complete innovation lifecycle rather than treating protection as an activity to be undertaken only after a product has been developed. Participants were guided through the OLGA IP Capture Methodology, including the use of a structured 25-question survey to identify technical results, products, processes and services; determine possible forms of protection; assess Technology Readiness Levels; and clarify intended exploitation routes.

Particular attention was given to the choice of a proportionate protection mechanism. Depending on the nature of the result, this may involve patents, copyright, industrial designs, trademarks, trade secrets, licensing arrangements or a combination of instruments. The discussion also highlighted the importance of clarifying background and foreground IP, ownership of jointly developed results and freedom-to-operate before results are published or demonstrated externally.



The OLGA cases illustrated how these questions differ across innovation types. The Malpensa circularity pilots involve several organisations across a material value chain; the local air-quality platform combines software, data, models and environmental services; the Zagreb digital twin integrates BIM, sensors, drone data and maintenance workflows; and the multimodal mobility platform relies on proprietary analytics applied to anonymised telecommunications and operational data.

The discussion concluded that IP strategy must be linked to an exploitation roadmap specifying whether a result will be used internally, commercialised through a partnership, licensed, incorporated into a service or developed through a new venture. SMEs were also directed to three free EU-supported resources serving different stages of this process: the European IP Helpdesk for awareness and guidance, the Horizon IP Scan for early IP assessment in collaborative projects, and the Horizon Results Booster for business planning and market uptake.

A key conclusion of the webinar was that there is no single IP strategy applicable to all OLGA innovations. The appropriate approach depends on the characteristics of each result, the organisations involved, the degree of joint development and the envisaged exploitation model. Participants were therefore encouraged to use the IP Capture Methodology as a structured decision-making tool and to establish IP and ownership arrangements early enough to avoid constraints at later stages of exploitation. SMEs were also directed to three free EU-supported resources serving different stages of this process: the European IP Helpdesk for awareness and guidance, the Horizon IP Scan for early IP assessment in collaborative projects, and the Horizon Results Booster for business planning and market uptake.

6.5 Evidence of delivery and engagement

Indicator	Value	Evidence source												
Registrations	47	Registration platform export												
Live attendance	36	<table><tr><th>Topic</th><th>ID</th><th>End time</th><th>Participants ①</th><th>Duration (minutes)</th><th>Total participant minutes</th></tr><tr><td>Webinar on IP Capture and Exploitation: Turning Green Innovation into Impact for Sustainable Airport Solutions</td><td>843 4018 6961</td><td>16.06.25 16:11:55</td><td>36</td><td>157</td><td>3394</td></tr></table>	Topic	ID	End time	Participants ①	Duration (minutes)	Total participant minutes	Webinar on IP Capture and Exploitation: Turning Green Innovation into Impact for Sustainable Airport Solutions	843 4018 6961	16.06.25 16:11:55	36	157	3394
Topic	ID	End time	Participants ①	Duration (minutes)	Total participant minutes									
Webinar on IP Capture and Exploitation: Turning Green Innovation into Impact for Sustainable Airport Solutions	843 4018 6961	16.06.25 16:11:55	36	157	3394									
Platform enrolments	9	 Entrepreneurial Mindset, IP Capture and Exploitation 9												

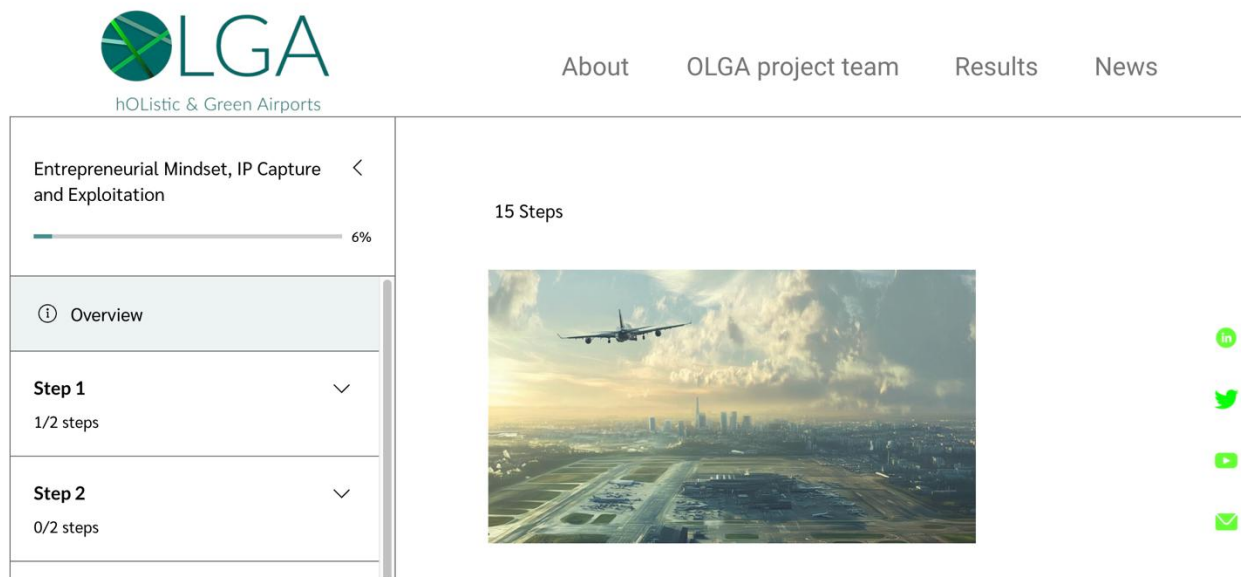


Figure 2 - Module 1 course page

7 Training Module 2: From Prototype to Product

7.1 Module facts

Field	Info
Official course title	From Prototype to Product
Official webinar title	Bridging the Gap: From Prototype to Product Webinar
Webinar date	24 March 2026, 14:00 CEST, online
Platform structure	12 steps
Primary audience	Entrepreneurs, clean-tech start-ups, SME innovators, public administrations, advisers, researchers and sustainability managers



7.2 Objectives and content

The module addresses the transition from a project prototype or demonstration to an operational product or service. The official course description focuses on industrialization barriers, certification requirements and lessons from OLGA demonstrations.

- requirements for crossing the gap from prototype to product;
- certification, verification and compliance as enablers;
- industrialisation challenges and scale-up readiness;
- technology transfer mechanisms and exploitation pathways;
- application of the concepts to OLGA use cases.

7.3 Published agenda and case studies

Contribution	Speaker and organization	Exploitation question addressed
Introduction	Radu Mirea, COMOTI	How the session connects to OLGA exploitation
Green certification guidelines	Victor Robin, Bureau Veritas	What verification and certification are needed for uptake
SaaS platform	Ayce Celikel, Env-isa	How a project-based service can become a scalable offer
Biomethane plant	Florent Huet, ENGIE Lab CRIGEN	What industrialization and infrastructure conditions are required
Electrification of GSE	Rune Pedersen, ITW GSE	How equipment solutions move into airport operations
Cargo waste valorization	Giorgia Zanchin, Centrocot	How a circular solution depends on value-chain coordination



7.4 Q&A and discussion

The discussion focused on the conditions required to move an OLGA result from a technically successful demonstration to a product or service that can be procured, operated and replicated. The introductory presentation described this transition as the “valley of death”: the stage at which a technology is too mature for further research funding but may still be considered too risky for commercial investment. OLGA has identified 17 innovative solutions, some of which have reached TRL 7 and have been validated in operational environments. A stage-gate approach was therefore presented as a way of checking technical performance, certification, user acceptance, investment needs and replication potential before committing to the next development phase.

The discussion demonstrated that the barriers differ according to the type of innovation. For sustainable fuels, credible certification must combine technical compatibility with lifecycle environmental performance. The proposed green-certification approach refers to a greenhouse-gas reduction threshold of at least 65% compared with conventional fuels and to compliance with the Renewable Energy Directive and related sustainability requirements.

For the air-quality SaaS platform, the principal remaining challenge is not the maturity of the underlying dispersion models but access to reliable, standardised airport data and the automation required to transform project-based analyses into an airport-agnostic commercial service. For solar-powered ground support equipment, the discussion covered integration of photovoltaic generation, battery storage and 400 Hz aircraft power, as well as operational restrictions on grid interaction. For the bio-CNG pilot, consistent fuel quality, methane safety, permitting, production cost and local regulatory coordination were identified as decisive industrialisation conditions. In the cargo-waste case, scale-up depends on the availability of sufficient material, end-of-waste status, REACH and product-safety compliance, performance testing and coordination between recyclers, yarn producers and manufacturers.

The overall conclusion was that technical readiness is only one part of product readiness. Successful deployment also requires certification, a viable business case, operational integration, dependable supply and data chains, early engagement with authorities and customers, and a clearly identified organisation responsible for bringing the solution to market.

7.5 Evidence of delivery and engagement

Indicator	Value	Evidence source
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Registrations	37	Registration platform export				
Live attendance	32	Topic	ID	End time	Participants ①	Duration (minutes)
		Bridging the Gap: From Prototype to Product	842 2502 3506	24.03.26 15:43:53	32	154
Platform enrolments	2 due to the recent announcement	 From Prototype to Product 2				



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From Prototype to Product
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Overview

Radu Mirea (COMOTI) – Introduction
0/2 steps

Victor Robin (Bureau Veritas) – Green certificatio
0/2 steps

Rune Pedersen (ITW GSE) – Electrification of GSE
0/2 steps

12 Steps



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Figure 3- Module 2 course page

8 Training Module 3: Business Model Generation



8.1 Module facts

Field	Info
Official course title	Business Model Generation
Official webinar title	Business Model Generation for Sustainable Airport Innovations - Webinar
Webinar date	29 June 2026, 14:00 CEST, online
Platform structure	10 steps
Audience	Airports, SMEs

8.2 Objectives and content

The third module completes the training pathway by moving from technical and IP readiness to value creation and market uptake. The official webinar announcement identifies the following topics:

- Business Model Canvas for airport innovations;
- creating value from sustainability solutions;
- Cost-Benefit Analysis and Return on Investment;
- transition from project results to market uptake;
- commercialization and exploitation strategies;
- replication and scale-up opportunities across European airports.

8.3 Published agenda and case studies

Contribution	Speaker and organization	Exploitation question addressed
Introduction	Radu Mirea, COMOTI	How the session connects to OLGA exploitation



Business Models for Sustainable Airport Innovation	Aurore Charles, ADP	Methodology for Canvas business model
The OLGA Smart Lighting Journey: From Design to Replication	Olivier Rodon, ADP Christophe Marty, INGELUX Dorin Beu, TUCN	Successful replication of an OLGA solution
From Project Results to Market Uptake	Irina Stipanovic, Infra Plan	What is required to reach market with an innovative solution

8.4 Practical application

The module should enable participants to define a value proposition, distinguish users from customers and payers, identify key partners and channels, describe cost and funding logic, and test replication conditions.

8.5 Evidence of delivery and engagement

Indicator	Value	Evidence source												
Registrations	45	Registration platform export												
Live attendance	38	<table><tr><th>Topic</th><th>ID</th><th>End time</th><th>Participants ①</th><th>Duration (minutes)</th><th>Total participant minutes</th></tr><tr><td>Webinar on Business Model Generation</td><td>895 9552 2399</td><td>29.06.26 15:18:34</td><td>38</td><td>114</td><td>2185</td></tr></table>	Topic	ID	End time	Participants ①	Duration (minutes)	Total participant minutes	Webinar on Business Model Generation	895 9552 2399	29.06.26 15:18:34	38	114	2185
Topic	ID	End time	Participants ①	Duration (minutes)	Total participant minutes									
Webinar on Business Model Generation	895 9552 2399	29.06.26 15:18:34	38	114	2185									
Platform enrolments	0 due to the recent announcement	 Business Model Generation 0												





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Section 2 ▾

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Section 3 ▾

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Section 4 ▾

10 Steps



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Figure 4 - Module 3 course page

8.6 Q&A and discussion

For the Smart Innovative Lighting solution, the speakers clarified that daylight-responsive control and tunable white lighting are based on existing technologies and are not, by themselves, the project's core innovation. The distinctive value lies in a compact and adaptable luminaire combining nanotechnology-based optics, improved maintainability, bio-sourced and recyclable materials, and the ability to support several airport applications through a common design. Maintenance and lifecycle cost were considered from the earliest design stages and were tested under operational conditions. The industrial partners may also commercialise the solution, with the agreement of Groupe ADP, for hospitals, offices, commercial buildings and other public infrastructure.

For the Digital Twin Facility Management Platform, the discussion confirmed that the solution was designed as a Software-as-a-Service offer. It can be adapted to other airports where the necessary digital foundations, including BIM models and asset data, are available. Its replication potential also extends to ports, railway infrastructure and multimodal transport hubs.



A recurring discussion point was the importance of collaboration across the entire innovation ecosystem. Architects, engineers, airport operators, maintenance teams, researchers, technology providers and manufacturers all contributed to the design and validation of the demonstrated solutions. The discussion therefore concluded that market uptake depends not only on technical maturity, but also on customer involvement, operational validation, user acceptance, appropriate partnerships and a scalable business model.

9 OLGA Case Studies Used in the Training Materials

The training materials use OLGA examples to connect general exploitation concepts with airport-specific operational, environmental and market conditions. Table 2 consolidates the case studies identified on the published webinar pages and indicates the learning purpose for which each example is used.

OLGA case study	Module	Exploitation learning
Waste reduction and circularity at Malpensa Airport	Module 1	IP and exploitation across a multi-actor value chain
Services for local air quality	Module 1	Service-based exploitation of environmental results
Digital twins for airport facility management	Module 1	Digital product definition and operational uptake
Multimodal traffic flow optimization	Module 1	Data-driven mobility services and market use
SaaS platform	Module 2	Conversion of a project service into a scalable offer
Biomethane plant	Module 2	Industrialization and infrastructure conditions
Electrification of ground support equipment	Module 2	Integration of equipment solutions into airport operations



Cargo waste valorization	Module 2	Circular business logic and value-chain coordination
Business Model Canvas exercise	Module 3	Value proposition, partners, costs, revenues and replication
Innovative terminal lighting	Module 3	Concept, realization and replication

The case studies were selected to represent different categories of exploitable results: physical products, digital platforms, environmental services, industrial processes, circular value chains and business-model tools. Together, they show that exploitation requirements depend on the nature and maturity of the result. They also cover different pathways, including licensing, Software-as-a-Service, industrial manufacturing, internal operational use, multi-partner value chains and cross-sector replication.

9.1 Waste reduction and circularity at Malpensa Airport

The Malpensa case addresses the large and varied waste flows generated by airport terminal and cargo activities. OLGA used the M3P Material Match Making Platform, developed by Centrocot and MultiLAB, to map waste sources, available recycling technologies, potential users of secondary materials and relevant regulatory or certification requirements.

The pilots covered several material pathways. Polyester packing straps were mechanically recycled into textile-grade yarn containing approximately 70% recycled material and meeting the required strength and elasticity standards. Plastic packaging and pallets were separated and extruded into recycled polypropylene granules for injection-moulded products. Wooden pallets were assessed for repair and remanufacturing, while organic waste from terminal restaurants was prepared for anaerobic digestion and biogas production.

This case was selected for Module 1 because circular innovation involves several organisations rather than a single technology owner. It demonstrates the need to define who owns the processing know-how, material data, product designs and resulting commercial outputs. It also shows how IP decisions must be coordinated with waste regulation, end-of-waste requirements, supply agreements and market demand. For SMEs and start-ups, the case identifies opportunities in material analysis, digital matchmaking, recycling services, product development, certification and the coordination of new circular value chains.



9.2 Services for local air quality

The local air-quality case concerns a cloud-based platform for monitoring, modelling and visualising emissions associated with aircraft, ground operations, road traffic and airport energy use. The solution combines dynamic emission inventories, meteorological and geographical information, dispersion modelling, scenario simulation and geospatial dashboards.

Airport users can analyse pollutants such as nitrogen oxides and particulate matter, display concentration heatmaps and compare operational scenarios. Potential applications include assessing the effects of reduced aircraft taxiing, APU substitution, the electrification of ground support equipment or changes to landside traffic. The platform therefore supports environmental reporting as well as proactive operational decision-making.

The case was selected for Module 1 because it illustrates the exploitation of a result composed of several forms of intellectual assets: software, calculation models, databases, interfaces, application programming interfaces and specialist environmental expertise. It raises practical questions concerning ownership of jointly developed modules, access to airport data, protection of algorithms and commercialisation through licences or recurring services. Its modular cloud architecture provides an entry point for SMEs offering modelling, calibration, integration, dashboard development or environmental consulting. The case demonstrates that environmental compliance and commercial value can reinforce one another when technical results are converted into a usable decision-support service.

9.3 Digital twins for airport facility management

The Digital Twin case was demonstrated at Zagreb Airport and combines Building Information Modelling, real-time operational information and airport asset-management processes. Two principal applications were developed. Drone-based inspections provide detailed information on runways, taxiways and other airside infrastructure, while a BIM-based terminal model integrates data from HVAC, lighting, occupancy sensors and asset locations.

The resulting environment offers 3D visualisation, automatic maintenance alerts, energy monitoring, repair scheduling and performance dashboards. It supports a transition from reactive interventions to preventive and predictive maintenance, reducing downtime and improving energy performance and equipment life.



This case was selected because it demonstrates the exploitation implications of a complex digital system integrating software, physical assets, sensor data and operational workflows. The innovation is not a single BIM model but a service architecture that makes heterogeneous information usable for airport facility managers. Relevant exploitation questions include ownership of models and data, interoperability with existing systems, cybersecurity, user acceptance and responsibility for long-term maintenance. The solution can be offered through implementation, integration and Software-as-a-Service models and can be replicated in other airports as well as ports, railway infrastructure, logistics hubs and smart-city environments.

9.4 Multimodal traffic-flow optimisation

The multimodal mobility platform developed by Ericsson Nikola Tesla uses anonymised telecommunications data together with open transport data, airport operational information and weather data to analyse movement to and from airports. Its modular architecture includes a data-ingestion layer, an analytical engine using machine learning, and dashboards presenting mobility heatmaps, modal shares, passenger profiles and demand forecasts.

Five use cases were developed:

- optimisation of public-transport schedules;
- mapping of airport catchment areas;
- identification of potential airline routes;
- passenger profiling;
- and prediction of transport demand.

The approach can help airports reduce congestion and access-related emissions while supporting infrastructure planning, commercial services and discussions with airlines and transport operators.

This case was selected for Module 1 because data-driven services create specific IP and exploitation questions. The platform contains proprietary analytical components, but its operation also depends on third-party datasets, interoperable interfaces and GDPR-compliant processing. The case therefore demonstrates the importance of distinguishing ownership of algorithms from rights to access and use the underlying data. It also illustrates a scalable exploitation pathway: the core platform can be commercialised while SMEs provide local data integration, dashboard customisation, analytics and advisory services. The same architecture may be adapted to cities, ports and other transport hubs.



9.5 Air-quality platform as a scalable SaaS product

The air-quality platform was revisited in Module 2 from a different learning perspective. Whereas Module 1 examined its intellectual assets and service-based exploitation potential, Module 2 examined the steps required to convert a technically validated research platform into a repeatable commercial product.

The platform integrates emission inventories, ICAO-compatible atmospheric-dispersion models, meteorological and terrain data, noise modelling and a user dashboard through standardised interfaces. Case studies at Paris-Charles de Gaulle, Milan, Cluj and Zagreb demonstrated that it can quantify the effects of operational measures. For example, it can compare the air-quality benefits of APU substitution and ground-support-equipment electrification and reveal possible trade-offs between noise reduction and emissions.

The target is an automated, airport-agnostic solution at TRL 8–9 that can be deployed through a licensing or subscription model. The key barrier is the availability, quality and standardisation of airport data rather than the maturity of the scientific models. The case was selected because it clearly demonstrates the difference between a functioning prototype and a scalable product. Automation, intuitive interfaces, data agreements, technical support, co-development with airport users and a repeatable onboarding process are required before commercial scale can be achieved.

9.6 Biomethane plant

The biomethane case converts biogas from a wastewater-treatment plant into bio-CNG for vehicle use. The small-scale pilot comprises preparation of a lime solution, purification of biogas into biomethane, compression and post-treatment, and high-pressure storage and distribution. Its production capacity is approximately 1 kg of CNG per hour, with the resulting fuel intended for buses and required to comply with Romanian natural-gas quality standards.

The case demonstrates a complete circular pathway in which a waste stream becomes a transport fuel. However, it also reveals the difference between technical integration and industrial viability. Variability in the composition of the incoming biogas can affect fuel quality and process stability. Methane safety requires additional equipment and procedures, while purification and compression increase capital and operating costs. Permitting delays and uncertainty concerning local requirements also prevented the pilot from operating as originally planned.



This case was selected for Module 2 because it makes industrialisation barriers highly visible. Scale-up depends on consistent feedstock, certified fuel quality, safe infrastructure, sufficient demand, competitive economics and early engagement with authorities. It also illustrates the importance of local leadership: partners familiar with national regulation and permitting should be involved from the beginning rather than after the technical system has been designed.

9.7 Electrification of ground support equipment

The ground-support-equipment case integrates photovoltaic panels installed on passenger boarding bridges with battery storage and electric ground power units. Its objective is to cover approximately 25% of the 400 Hz power demand of aircraft at the gate with solar energy, reducing the use of conventional electricity and aircraft auxiliary power units.

The system uses a controlled energy loop. Solar electricity is stored in batteries and supplied to aircraft during turnaround operations. The airport grid provides backup power when battery capacity is insufficient. In the demonstrated configuration, batteries are not charged from the grid and surplus solar electricity is not exported to it. This creates a technically controlled system but also limits operational and economic flexibility.

The case was selected for Module 2 because it combines mature components into a new operational product. Development followed a “customer-back innovation” approach in which airport needs, safety requirements, pilot and air-traffic-control glare risks, installation constraints and turnaround procedures influenced the design. The case shows that product readiness depends on system integration and airport acceptance as much as on individual equipment performance. Future commercial development may include grid interaction, charging during low-price periods, use of batteries as backup assets and modular expansion using multiple battery units.

9.8 Cargo-waste valorization

The cargo-waste case focuses specifically on the transition from a circular-economy prototype to industrial production. Packing straps collected in the Malpensa cargo area were cleaned and converted into fibres, yarn and finished textile products such as bags. The resulting yarn contained approximately 70% recycled material and passed the required strength and elasticity tests.

The technical recycling and textile processes are already available at industrial scale. The principal challenge is therefore to build a dependable supply and production chain involving waste holders, recyclers, yarn producers, textile manufacturers and final customers. Sufficient and consistent



quantities of packing straps must be available, and the material must obtain the appropriate end-of-waste status before being used legally as a secondary raw material.

This case was selected for Module 2 because it demonstrates that successful industrialisation extends beyond laboratory performance. Products must comply with REACH, general product-safety rules and relevant chemical requirements. Certifications verifying recycled content and product safety may strengthen market credibility, while durability and usability must be validated through performance testing. The case also illustrates a common commercial challenge for circular products: initial costs may exceed those of virgin materials, requiring production efficiencies, certification, airport procurement commitments or a differentiated sustainability value proposition.

9.9 Business Model Canvas exercise

The Business Model Canvas was used in Module 3 as the common Work Package 8 methodology for assessing whether OLGA innovations can continue creating value after the end of the project. Its nine building blocks allow each result to be examined in terms of value proposition, customer segments, channels, customer relationships, key partners, key activities, key resources, cost structure and revenue streams.

The exercise was selected because technological performance and Technology Readiness Level do not, on their own, demonstrate that a result has a viable exploitation pathway. Innovation owners must identify the user problem, distinguish users from customers and payers, determine who provides the necessary data or infrastructure, estimate implementation and operating costs, and test whether the model can be replicated in other airports.

Applying a common canvas also makes different types of OLGA results easier to compare. A digital platform may generate subscription or service revenue, while an infrastructure solution may depend on procurement, energy savings or lifecycle-cost reductions. A circular solution may require revenue-sharing and supply agreements between several organisations. The exercise therefore translates the lessons of Modules 1 and 2 into explicit market, governance and partnership choices and supports the preparation of exploitation roadmaps beyond the project.

9.10 Smart Innovative Lighting

The Smart Innovative Lighting case presents a complete pathway from design and prototype development to operational deployment and replication. The development process began with an



assessment of airport needs relating to passenger comfort, energy use, maintenance and different architectural environments. Architects, lighting designers, engineers, maintenance specialists and manufacturers then co-developed a compact and adaptable luminaire incorporating nanotechnology-based optics, sustainable materials and improved maintainability.

The solution progressed through requirement definition, technology benchmarking, prototype manufacturing, laboratory validation and on-site maintenance assessment. It was demonstrated at Paris-Charles de Gaulle Airport, deployed operationally at Paris-Orly Airport and subsequently replicated at Cluj Airport. At Cluj, the system includes tannable white lighting that adjusts colour temperature during the day in support of passenger comfort and circadian rhythms.

This case was selected for Module 3 because it shows how a clear value proposition can combine energy efficiency, passenger experience, adaptability and reduced lifecycle maintenance. It also provides evidence of replication from a Lighthouse Airport to a Follower Airport. Its potential market extends beyond aviation to hospitals, offices, public buildings and other transport infrastructure, demonstrating how an airport innovation can achieve wider commercial and environmental impact.



10 Training Platform, Access and Dissemination

10.1 Public platform and access

The OLGA Training Platform provides a single public landing page for the program. As verified on 20 July 2026, it links to three course pages and displays 37 steps in total. Each course page provides a Join action for access to the learning sequence.

10.2 Dissemination and continued availability

The platform extends the value of the live webinars by keeping the learning pathway accessible after each event. Further dissemination will cover the channels used to promote each webinar and course (LinkedIn), the audiences reached and the continuing use of recordings and online modules.

10.3 Website Statistics

10.3.1 Posts and website promotion

Website analytics for the period from 21 July 2025 to 20 July 2026 recorded 166 views of the three OLGA webinar posts. The webinar on IP Capture and Exploitation received 69 views, Bridging the Gap: From Prototype to Product received 52 views, and Business Model Generation received 45 views. The first module generated the highest number of page views, accounting for approximately 42% of the total traffic recorded for the three webinar pages. These figures demonstrate continued online visibility of the training program beyond the live delivery of the webinars.

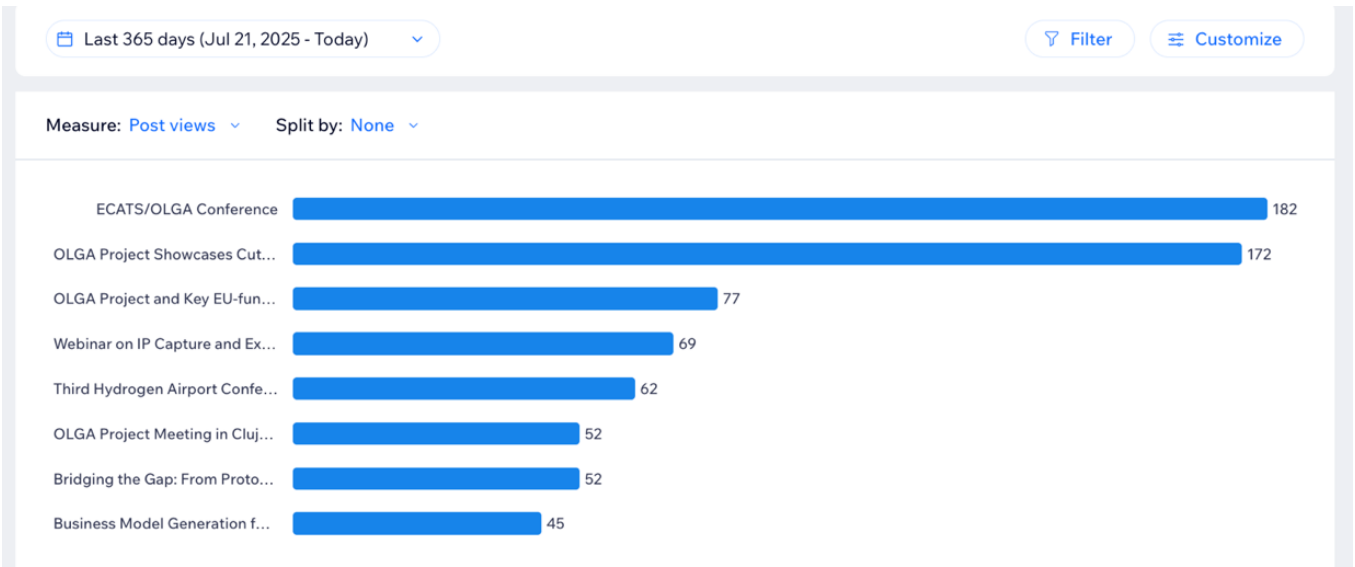


Figure 5 – Posts Statistics

10.3.2 Training pages

Website analytics for the Training page cover the last 365 days, from 28 July 2025 to 27 July 2026. During this period, the Training page recorded:

Indicator	Result
Page views	51
Site sessions	30
Unique visitors	28
Bounce rate	33%
Average session duration 3 min 30 sec	

The page generated approximately 1.7 page views per session and 1.8 page views per unique visitor.

The visitor breakdown was as follows:



Visitor type	Page views	Site sessions	Unique visitors	Share of unique visitors	Bounce rate	Average session duration
New visitors	43	28	26	93%	36%	3 min 18 sec
Returning visitors	8	2	2	7%	0%	5 min 30 sec
Total	51	30	28	100%	33%	3 min 30 sec

Most users accessing the Training page were new visitors: 26 of the 28 unique visitors, or 93%. Two visitors returned to the page after an earlier visit, representing 7% of the recorded audience.

Although the number of returning visitors was small, their engagement was comparatively strong. Returning visitors generated eight page views across two sessions, equivalent to four page views per session, and recorded an average session duration of five minutes and thirty seconds. New visitors generated approximately 1.5 page views per session and spent an average of three minutes and eighteen seconds per session.

The overall bounce rate of 33% indicates that approximately two-thirds of tracked sessions involved continued interaction beyond the initial page entry. The 0% bounce rate recorded for returning visitors should be interpreted cautiously because it is based on only two sessions.

These statistics refer exclusively to the Training page selected in the website analytics filter. They exclude webinar announcement pages, separate Online Programs pages, participant pages and lesson-level content.

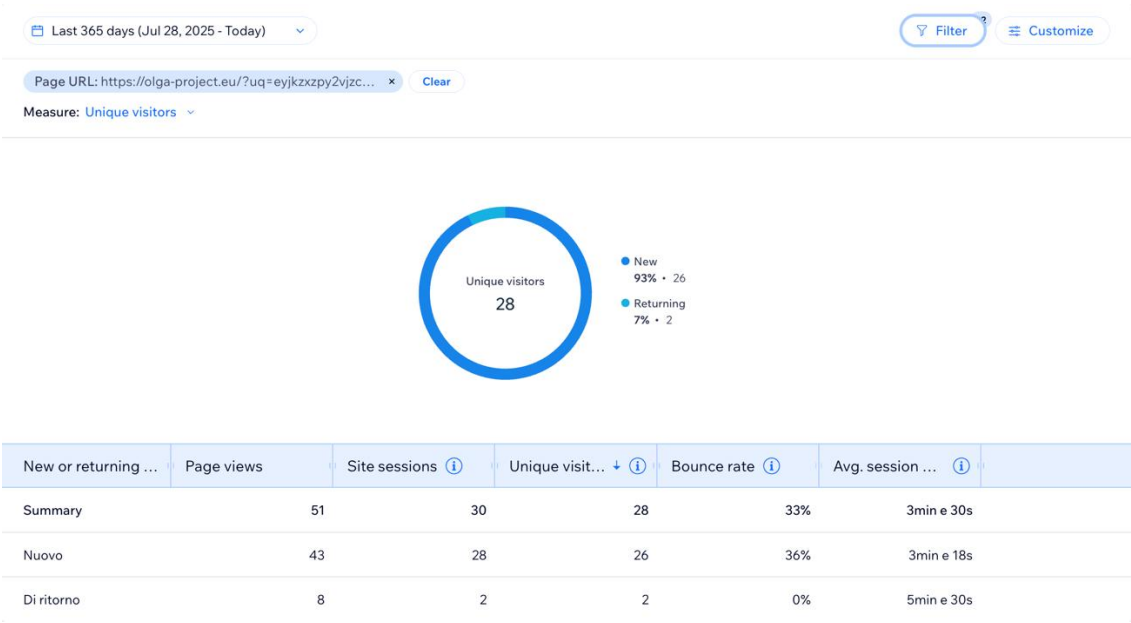


Figure 6 – Visitors Statistics

10.3.3 Geographical reach

The 28 unique visitors originated from eight countries. France represented the largest share of the audience, followed by Belgium, Romania and Croatia.

France and Belgium together accounted for 17 of the 28 unique visitors, representing 60.7% of the recorded audience. Romania and Croatia contributed a further seven visitors, while individual visitors were recorded from Czechia, Georgia, Hungary and Turkey.

At city level, Paris recorded the largest audience with seven unique visitors and eight sessions. Brussels followed with four unique visitors, while Zagreb and an unspecified location in France each recorded three. Cluj-Napoca recorded two unique visitors. Additional visits were recorded from Constanța, Tbilisi, Prague, Beauvais, Kırklareli, Roșu, Antwerp, Budapest and Merksem.

The geographical distribution demonstrates that the Training page reached stakeholders in several European countries and extended beyond the immediate locations of the principal OLGA airport demonstrations.

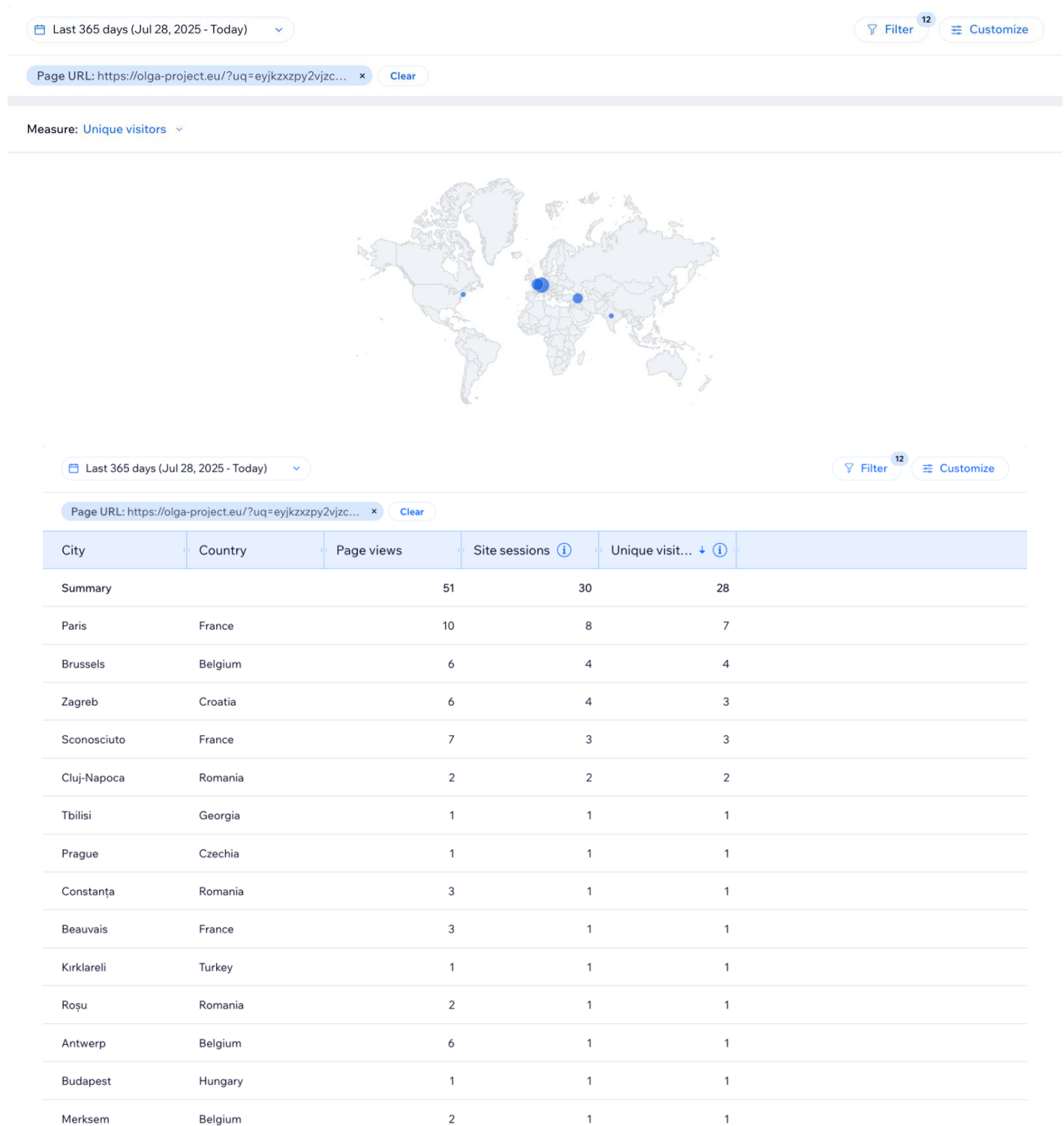


Figure 7 – Geographical reach



11 Contribution to Exploitation and Technology Transfer

The program provides a coherent exploitation pathway rather than three isolated webinars. Its contribution is defined by the decisions that participants should be able to take after completing the modules.

- Module 1 helps innovation owners identify exploitable results, clarify ownership and select proportionate IP and exploitation routes.
- Module 2 links technical maturity to certification, industrialization, operational integration, partnerships and transfer mechanisms.
- Module 3 converts technical results into value propositions, customer and payer logic, cost and revenue structures, and replication pathways.
- OLGA case studies demonstrate how airport context, infrastructure, data, regulation and multi-actor value chains affect exploitation choices.
- Public online access supports continued use by organizations that did not attend the live sessions.

12 Lessons Learned

- Exploitation training is most useful when it begins before project closure, while result owners can still refine ownership, evidence and transfer plans.
- Case studies make abstract IP, industrialization and business model concepts concrete, but every technical and commercial claim must remain traceable to an approved source.
- Technical maturity alone is insufficient. Certification, operational fit, data access, infrastructure, procurement, partnerships and user acceptance can determine whether a result is transferable.
- Airports are not only end users. They can act as co-developers, validators, procurers and replication partners, and those roles should be explicit in exploitation planning.
- Public availability extends training impact only when ownership, maintenance, accessibility, link integrity and retention arrangements are defined.



These lessons should inform any future update of the course content and the design of comparable exploitation training in other airport innovation projects.

13 Conclusions

D8.7 records a complete three-module training sequence supporting exploitation of OLGA results. The public website now shows all three modules, including Business Model Generation, and the corresponding webinar announcements confirm delivery dates from June 2025 to June 2026. The program covers IP and exploitation, prototype-to-product transfer and business model generation, with 37 online learning steps in total.

14 Annex - Source Register

S1. OLGA Training Platform. [Open official source](#) (accessed 20 July 2026).

S2. Course: Entrepreneurial Mindset, IP Capture and Exploitation. [Open official source](#) (accessed 20 July 2026).

S3. Webinar on IP Capture and Exploitation. [Open official source](#) (accessed 20 July 2026).

S4. Course: From Prototype to Product. [Open official source](#) (accessed 20 July 2026).

S5. Bridging the Gap: From Prototype to Product Webinar. [Open official source](#) (accessed 20 July 2026).

S6. Course: Business Model Generation. [Open official source](#) (accessed 20 July 2026).

S7. Business Model Generation for Sustainable Airport Innovations - Webinar. [Open official source](#) (accessed 20 July 2026).