ALIGHT
SUSTAINABLE AVIATION

Report on the Policy Maker Workshop “Towards smart and sustainable airports 2050”

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Content

1 Executive summary

The ALIGHT Policy Maker Workshop, held in Brussels on May 15, 2025, marked a key milestone in the EU Horizon 2020 ALIGHT project. Designed to advance sustainable aviation, ALIGHT focuses on integrating Sustainable Aviation Fuels (SAF) and smart energy systems into airport operations, with Copenhagen Airport serving as its lighthouse demonstration site. One of the project's long-term objective is to develop a *Bold Vision for Airports in 2050*, guiding the industry toward net-zero emissions through innovative solutions, informed policymaking, and strategic collaboration.

Recognizing that transformative aviation technologies—such as hydrogen and electric aircraft or 100% SAF—will have major implications for airports, ALIGHT has worked to anticipate these shifts and equip policymakers with knowledge to support forward-looking regulatory and investment strategies. As part of this effort, the Policy Maker Workshop was convened to:

- Present major project findings and lessons learned;
- Highlight intersections between technical insights and future policy needs;
- Engage policymakers and stakeholders in dialogue;
- Identify research and innovation gaps, especially those requiring EU-level collaboration.

The event concluded a trilogy of workshops under ALIGHT's Cooperation Work Package. These included the *State of the Art Workshop* (2022), which focused on near-term implementation challenges; the *Bold Vision Workshop* (2024), which explored future trajectories for sustainable aviation; and the *Policy Maker Workshop* (2025), which synthesized insights and positioned them in a policy context.

Workshop Overview

Held at the Airport Regions Council (ARC) in Brussels, the workshop attracted 43 participants, including representatives from the European Parliament, European Commission, CINEA, EUROCONTROL, industry, academia, and NGOs. Attendees also included members from ALIGHT and its sister projects (TULIPS, OLGA, STARGATE), as well as representatives from six European airports.

Content development for the workshop was a joint effort among ALIGHT partners, with a deliberate focus on crafting clear, actionable policy messages rather than technical deep-dives. The agenda included high-level presentations from Copenhagen Airports and Aeroporti di Roma on real-world applications of SAF and energy systems, as well as thematic sessions on SAF, smart energy management, and the *Bold Vision for Airports in 2050*. The workshop concluded with a forward-looking dialogue on key takeaways and recommendations for future action.

Key Insights from Workshop Sessions

The session on airport sustainability emphasized the need to expand the definition of sustainability beyond CO_2, incorporating broader issues like biodiversity, water use, land use, and social equity. Participants called for these aspects to be embedded in EU strategies and funding mechanisms.

On Sustainable Aviation Fuels, the workshop underscored SAF's potential to reduce both CO_2 and non-CO_2 emissions. However, scaling production and use requires harmonized regulations, investment incentives, and cross-sector coordination. The importance of aligning EU regulations (e.g., ReFuelEU) with international frameworks (e.g., ICAO CORSIA) was also discussed.

The session on smart energy systems focused on integrating new energy technologies (e.g., solar, BESS) within airport infrastructures. Challenges included regulatory complexity and long approval timelines. Participants stressed the need for flexible safety standards to accommodate hybrid and electric aircraft, and for leveraging existing industrial standards to avoid unnecessary duplication.

The presentation of the Bold Vision for 2050 introduced a framework based on ten core pillars, from net-zero operations to digitalization. Discussions emphasized that economic viability is a prerequisite for successfully implementing future airport innovations.

Reflections and Forward-Looking Recommendations

Key conclusions from the participants included:

1. **Airport Complexity and Regulation** – Overregulation and complex stakeholder environments hinder innovation. Participants called for simplified, more flexible frameworks.
2. **SAF Deployment and Feasibility** – While essential, SAF deployment faces challenges of cost, scale, and unclear responsibilities. Clear incentives and infrastructure roles are needed. Still, SAF is acknowledged as a key enabler of the transition to decarbonization.
3. **Global Standards and Harmonization of regulation frameworks** – International alignment on standards and regulation is essential to avoid duplication and conflict/inconsistencies between different regions of the world and streamline SAF, energy, and operational systems.
4. **Cross-sector Collaboration** – Strong collaboration among aviation, energy, environment, and air traffic management sectors is necessary. ALIGHT was praised for fostering this.
5. **Infrastructure Readiness** – More support is needed to overcome regulatory bottlenecks and integrate clean energy systems and aircraft into airports.
6. **Targeted, Flexible Projects** – Future projects should balance comprehensiveness with flexibility and may benefit from more focused scopes and adaptive timelines. Such projects should also consider in a significant manner the transition phase to decarbonization, not only the 2050 situation.

7. **Knowledge Sharing** – Sharing best practices between airports was seen as highly beneficial. A centralized repository of lessons learned and tools was recommended.
8. **Economic Incentives** – A clear vision on cost-sharing and incentives is essential, especially as willingness to pay varies across regions.
9. **Airports as Change Agents** – Airports play a pivotal role in sustainability transitions and can act as aggregators of decarbonization efforts across sectors.
10. **Next Steps** – Recommendations included expanding stakeholder outreach, contributing to policy revisions (e.g., Air Services Regulation), and ensuring tools and findings remain accessible and updateable post-project.

2 Introduction

The EU Horizon 2020 project ALIGHT is dedicated to addressing environmental challenges in the aviation industry by implementing and demonstrating innovative solutions focused on Sustainable Aviation Fuel (SAF) deployment and smart energy management at airports. Through demonstrations at its lighthouse airport, Copenhagen, and the development of comprehensive tools, ALIGHT aims to reduce greenhouse gas emissions, align with international environmental targets, and set a vision for sustainable airports of the future. To extend its impact beyond the participating airports and beyond the project's timeframe, ALIGHT includes a dedicated task (Task 8.4) aimed at developing a "Bold Vision for Airports in 2050."

Given the substantial challenges facing the aviation industry in transitioning toward net-zero emissions amid climate change, aviation must embrace new and innovative technologies over the coming decades, including for example hydrogen and electric-powered aircraft or 100% SAF. These transformative technologies are expected to significantly impact airport systems. To ensure that aviation is resilient to future demands, airport leaders, regulators, and other decision-makers must anticipate these shifts with a long-term perspective.

As the ALIGHT project enters its fifth year, the consortium has accumulated valuable experience and insights across both the technical domains (such as Sustainable Aviation Fuel and smart energy systems) and the overarching sustainability framework. Building on these findings, the project has formulated recommendations aimed at informing future policy development. These recommendations are intended to support the broader implementation of ALIGHT's solutions and insights, and to anticipate necessary policy adaptations in response to emerging aviation technologies.

To this end, the ALIGHT Policy Maker Workshop was designed to:

- Present key findings and lessons learned from the project;
- Highlight linkages, potential conflicts, and implications for policy development;
- Foster dialogue specifically with policymakers, as well as with key stakeholders and experts;
- Identify future research and innovation needs, particularly regarding collaboration between research and industry within the scope of EU-funded initiatives.

The outcomes of the workshop will also contribute to formulating the Bold Vision as part of ALIGHT's Task 8.4. It is important to note that the Policy Maker Workshop was the last of three dedicated workshops organized within the ALIGHT project, each with a distinct focus and objective:

- **The ALIGHT "State of the Art Workshop" (June 2022)**
  This workshop concentrated on short-term goals, aiming to address immediate challenges and identify emerging solutions, particularly in the areas of SAF integration and smart energy management at airports.

- **The ALIGHT "Bold Vision Workshop" (October 2024)**
  Focusing on long-term goals, this workshop sought to explore future solutions that could enable climate-neutral aviation. It also aimed to anticipate how these innovations might impact airport systems and to develop strategies for airports to adapt proactively.

- **The ALIGHT "Policy Maker Workshop" (May 2025)**
  This workshop presented key findings from the ALIGHT project and the Bold Vision process to policymakers. The goal was to discuss how large-scale implementation of future aviation and airport solutions could be effectively supported through policy measures.

Together, these workshops form a comprehensive framework under ALIGHT's work package 7 – *Cooperation Activities*, addressing both immediate and long-term challenges while ensuring that insights are translated into actionable strategies supported by policy initiatives.

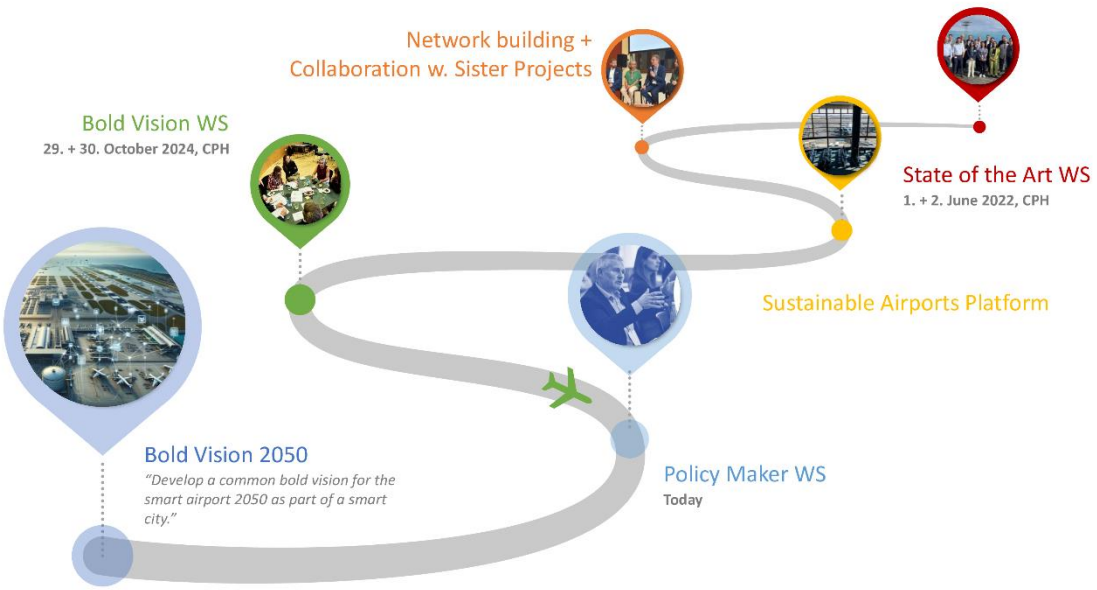

Figure 1 The ALIGHT Work Package 7 journey

3 Organization of the Policy Maker workshop

3.1 Venue

The ALIGHT Policy Maker Workshop “Towards Smart Airports in 2050” was held as an in-person event on May 15th, 2025, with the aim of fostering a robust and open exchange of ideas and findings, encouraging fruitful discussions, and promoting networking among participants. To accommodate travel constraints faced by one presenter, the agenda also included an online presentation.

To ensure open, unbiased contributions and to avoid potential conflicts of interest or overlapping roles among ALIGHT consortium members, the workshop was facilitated by an external moderator with a proven track record in conducting workshops within the EU ecosystem, particularly in Brussels.

The event was hosted at the premises of the Airport Regions Council (ARC), located in the heart of Brussels' European Quarter, just a few blocks from the European Parliament. This strategic location was chosen to enable the participation of EU policymakers and other key stakeholders based in Brussels.

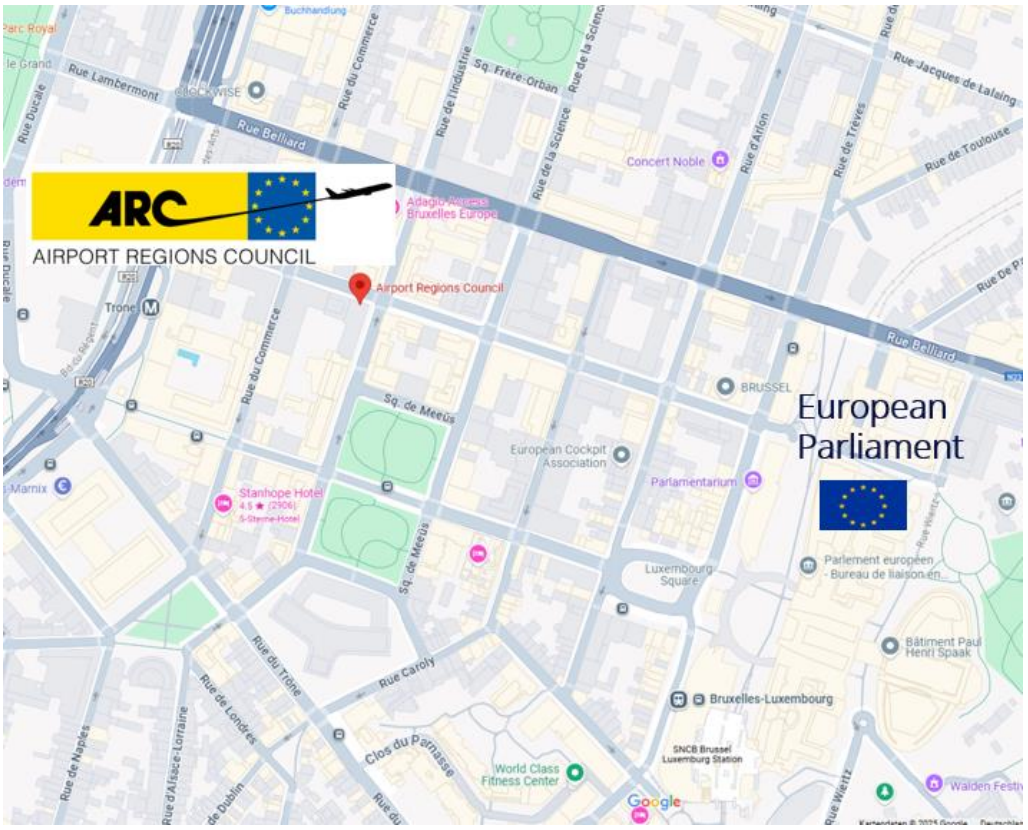

Figure 2 Workshop location in Brussels

3.2 Outreach and Participants Recruitment

The recruitment of relevant participants was a collaborative effort involving the workshop organizers, ALIGHT's Work Package 10 (Communication), and the Airport Regions Council (ARC). Leveraging ARC's strong ties within the European aviation and airport ecosystem, the outreach benefited from direct access to a wide network of key stakeholders.

Three months prior to the event, a coordinated announcement campaign was launched. This included promotional posts on LinkedIn, announcements in the ALIGHT and ARC newsletters, and targeted outreach through the professional networks of all partners. The campaign featured a call for pre-registration, allowing the organizers to gauge interest and plan accordingly for the expected number of attendees.

The workshop aimed to host approximately 40 participants, including members of the consortium, in order to maintain an interactive setting that would foster open dialogue and meaningful exchange. This approach proved effective, with 52 individuals responding to the pre-registration call, expressing strong interest in participating.

Figure 3 Announcement flyer for the workshop

Figure 4 LinkedIn post announcing the workshop

3.3 Participants

Based on the pre-registration, a total of 43 participants attended the workshop. This group included 10 members of the ALIGHT consortium, 7 representatives from the EU Horizon 2020 sister projects *TULIPS, OLGA*, and *STARGATE*, and 26 external participants. The mix of participants was well-balanced enriching the dialogue and fostering valuable discussions and perspectives.

Among the policy-making stakeholders, the workshop welcomed deputies from the European Parliament, representatives from the European Commission, and officials from CINEA and EUROCONTROL. Additional participants represented a diverse range of stakeholder groups, including industry, academia, non-governmental organizations, and consultancy firms specializing in European aviation.

Notably, representatives from six European airports took part in the workshop, contributing valuable operational perspectives to the discussions on findings and recommendations.

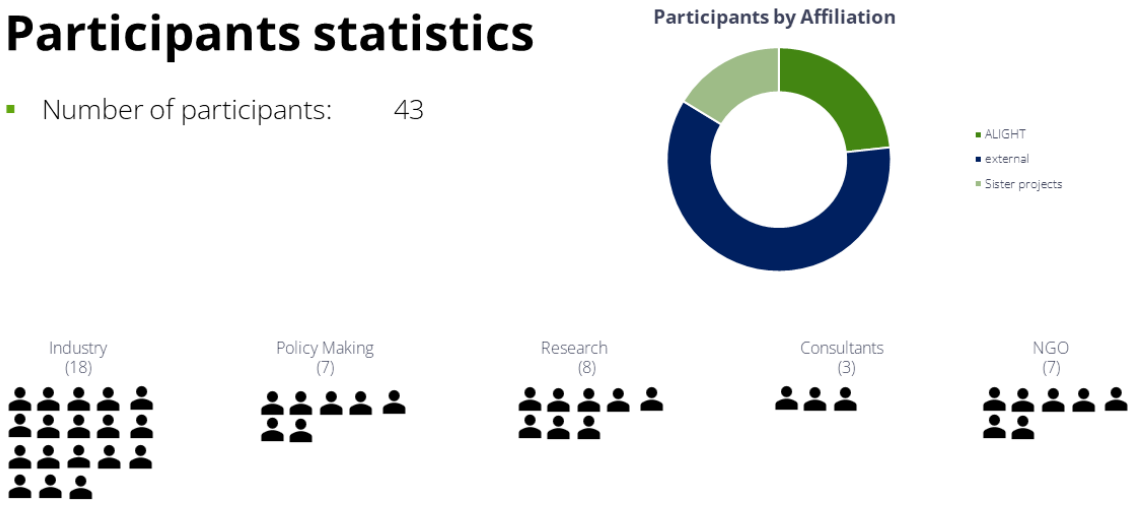

Figure 5 Group picture with the participants

3.4 Workshop content preparation

As the primary objective of the workshop was to present findings and insights from across the entire ALIGHT project, the collection and prioritization of content was undertaken as a joint and collaborative effort among all consortium partners. The process began with a brainstorming session to identify key project topics and to compile high-level lessons learned with particular relevance for policymakers. This initial input provided the foundation for structuring the workshop content, selecting appropriate presenters, and shaping the policy-relevant recommendations.

The content was further refined and detailed through a series of focused online meetings held with the respective workstreams, ensuring that each topic was clearly framed and aligned with the workshop's strategic objectives.

The emphasis was placed on communicating clear, actionable key messages, rather than delving into technical details, in order to support meaningful engagement and dialogue with a policy-oriented audience. This streamlining of content was carried out in close coordination with the external moderator, drawing on his experience in facilitating policy workshops to ensure that the material was both accessible and impactful for the target audience.

Figure 6 Word cloud with relevant key topics from brainstorming

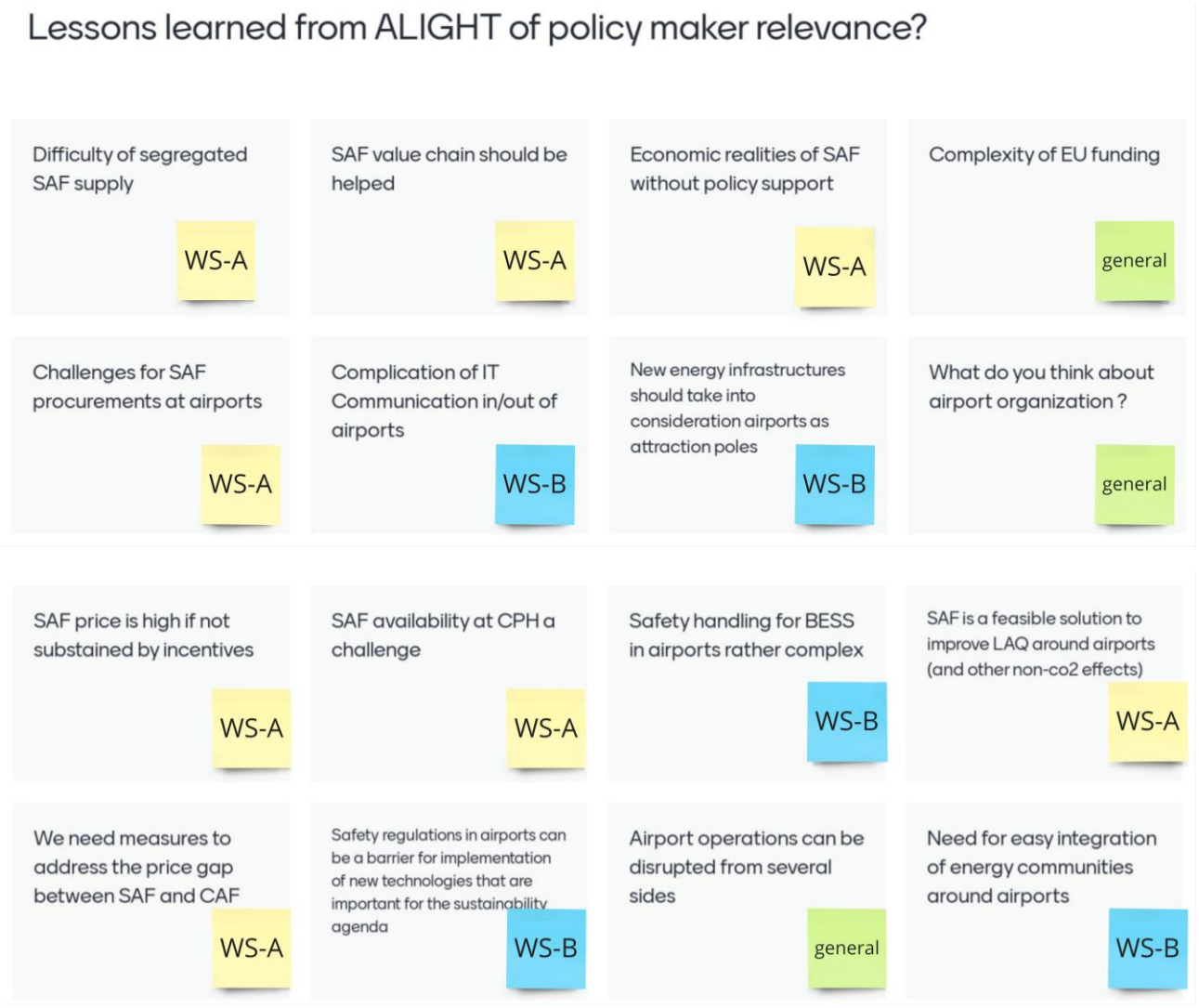

Figure 7 High level collection of lessons learned from ALIGHT

3.5 Workshop structure and program

The structure of the workshop was carefully designed to promote both knowledge sharing and active engagement. It was planned to begin with a series of general presentations introducing the workshop objectives, the ALIGHT project, and the broader policy context. These introductory segments were followed by focused 15-minute presentations aimed at communicating key findings and policy-relevant recommendations from the project.

To ensure that the workshop emphasized interaction rather than one-way information delivery, ample time was allocated for extended reflections and open discussions involving all participants. Different facilitation approaches were identified and anticipated by the moderator in advance, in order to support dynamic and inclusive engagement throughout the sessions.

Airport sustainability was established as the overarching theme, framing two technical sessions on Sustainable Aviation Fuel (SAF) and smart energy management, each based on the

corresponding technical workstreams of the ALIGHT project. A lunch break was incorporated to support informal networking and further dialogue among attendees.

A final thematic session was dedicated to positioning the discussions within the broader framework of the *Bold Vision for Airports in 2050* developed under ALIGHT's WP8. This segment was designed to collect feedback and inputs on the draft vision from a policy-making perspective, helping to refine its direction and relevance.

To conclude the workshop, a forward-looking session was included in which each participant would be invited to share a key takeaway and suggest next steps related to one of the topics discussed.

ALIGHT Policy Maker Workshop:
"Towards Smart and Sustainable Airports in 2050" – 15.05.2025

Time	Session Name	Speaker	Title
09:00 – 09:30	Get together & Coffee		
09:30 – 09:45	Welcome & Introduction	Sergi Alegre Calero, ARC	Welcome Notes by ARC
		Frederic Soudain	Objectives of the Workshop
09:45 – 10:00	Setting the scene	Rafal Rowinski, DG MOVE	Current Policy Context
10:00 – 10:30	The ALIGHT journey	Louise Krohn, CPH	ALIGHT at a Glance
		Louise Krohn, CPH	ALIGHT-Airports: Case studies and real-world applications
		Giampiero Goretti, ADR	
10:30 – 11:15	Airport Sustainability	Amalie Frimand Pedersen, CPH	Findings & recommendations from ALIGHT
		Blanca de Ulibarri, RSB	
11:15 – 12:15	SAF: A key solution to reduce CO2 and non-CO2 emissions of aviation	Martin Porsgaard, NISA	Findings & recommendations from ALIGHT
		Benedict Enderle, DLR	
		Tuan Lam, IATA	
12:15 – 13:00	Lunch & networking break		
13:00 – 14:00	Smart Energy Management at Airports – Innovative solutions and future prospects	Lea Kornbeck Askholm, DTI	Findings & recommendations from ALIGHT
		Thomas Steen Jensen, CPH	
14:00 – 15:00	Pathways towards a Bold Vision for Airports in 2050	Bernard Gindroz, BMGI	
15:00 – 15:30	Next steps Beyond ALIGHT		

Figure 8 Workshop program

4 Summary of the Workshop

The workshop began with a brief welcome note from the host ARC, emphasizing the importance of translating research and innovation project outcomes into policy-relevant insights to maximize their long-term impact.
Following the welcome, the moderator, Frédéric Soudain, outlined the objectives of the workshop. He emphasized that the purpose was not to critique individual work, but rather to provide constructive reflections and feedback in a setting that encouraged open and inclusive dialogue among all participants.
Rafał Rowiński from DG MOVE then provided an overview of the current EU policy landscape related to aviation and airports, setting the scene for the subsequent sessions. His presentation highlighted key legislative developments, including ReFuelEU Aviation.

Figure 9 Rafal Rowinski (DG-MOVE) elaborating on the policy context

As project coordinator, Louise Krohn from Copenhagen Airport presented a high-level introduction to the ALIGHT project, placing the workshop in the broader context of the project's goals and progress. To illustrate the real-world application of ALIGHT's work, Copenhagen Airports and Aeroporti di Roma shared concrete case studies from project demonstrations. These included two measurement campaigns focused on aviation fuels and local air quality, the installation of a battery energy storage system, APU (Auxiliary Power Unit) usage monitoring, and broader initiatives aimed at reducing Scope 3 emissions. These examples laid the groundwork for the observations and policy-oriented recommendations discussed in later sessions.
The session on airport sustainability underscored that sustainability extends beyond carbon dioxide (CO_2) reduction. Topics such as pollution, climate adaptation, land use, and non-CO_2 emissions were also addressed. A central recommendation from this session was to establish sustainability as a strategic foundation for airport and aviation policy. This includes broadening the definition of airport sustainability in EU strategies to incorporate factors such as

biodiversity, non-CO_2 climate impacts, water use, and social inclusion—and ensuring that these elements are reflected in funding criteria, planning frameworks, and regulatory guidance.

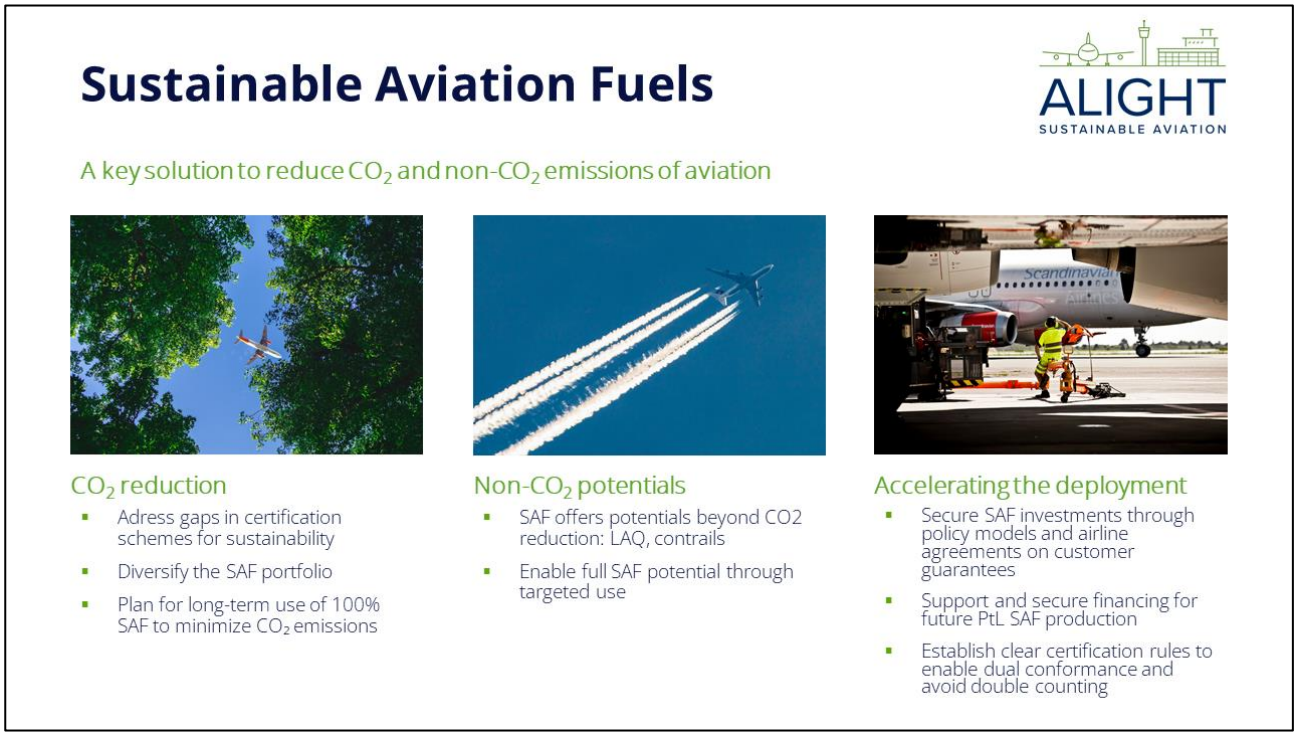

Figure 10 Summary slide from the SAF session

The session on Sustainable Aviation Fuels (SAF) highlighted SAF as a key solution for reducing both CO_2 and non-CO_2 emissions from aviation. While the technology is ready for deployment, scaling up production and use will require substantial policy support to harmonize regulations and secure investment. A presentation by DLR emphasized that SAF's potential to reduce non-CO_2 effects should also be recognized and harnessed, for example through the targeted use of limited SAF volumes in high-impact areas. NISA contributed a set of upstream policy recommendations focused on production and procurement, stressing the urgent need for financial models and cross-sector collaboration to accelerate the development, investment, and manufacturing of eSAF. IATA addressed regulatory challenges, particularly the complications posed by dual compliance requirements under both ReFuelEU Aviation and ICAO CORSIA frameworks. The session on smart energy management focused on strategies to foster innovation at airports, particularly in the context of integrating new energy systems. Participants discussed challenges related to the approval and implementation of technologies such as photovoltaic (PV) systems and battery energy storage systems (BESS) within the airport environment.

Figure 11 Lea Kornbeck (DTI) presenting on smart energy management

A key point highlighted was the need to integrate emerging aircraft types—such as electric and hybrid aircraft—into existing airport energy systems. To support this transition, it was emphasized that future standards should build upon existing frameworks wherever possible. Clear and coherent regulations, industrial standards, and operational guidelines will be essential to ensure safe and efficient integration.

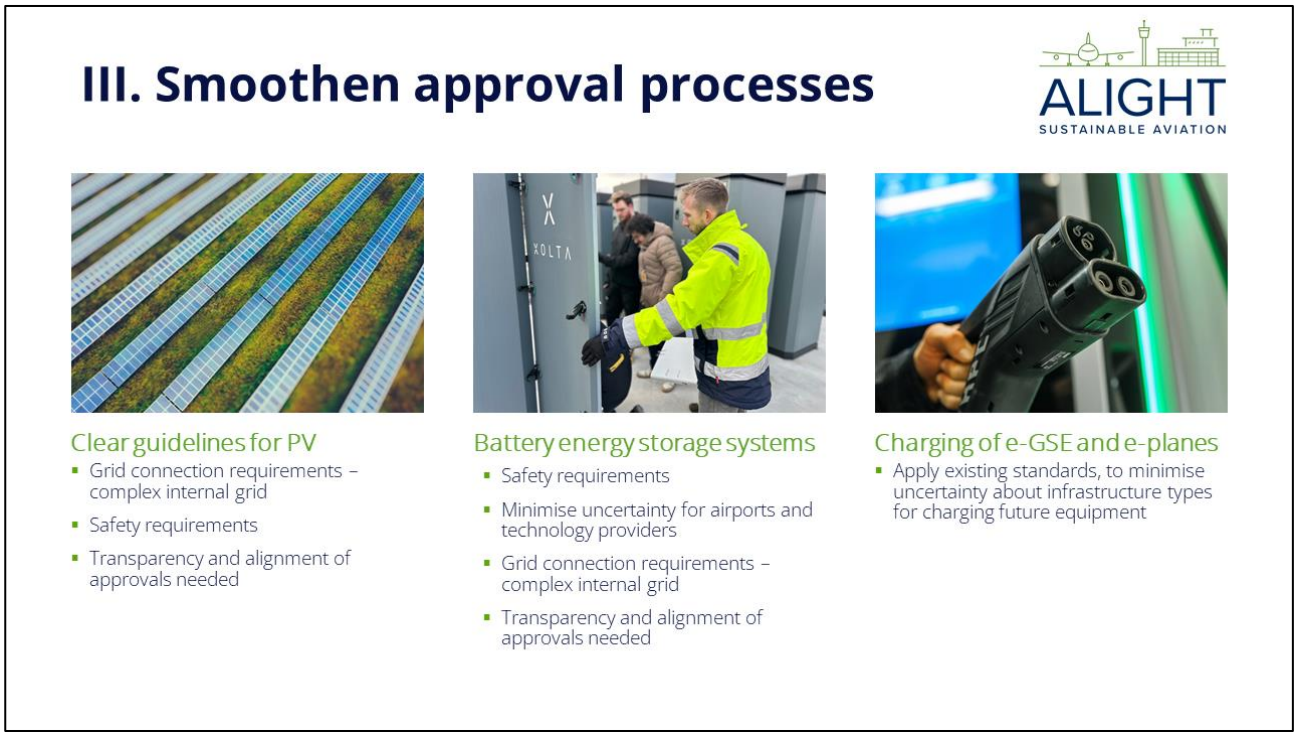

Figure 12 Example key topic from the smart energy management sesssion

In this context, the presentation by CPH and DTI stressed the importance of updating existing safety procedures to accommodate new charging and refueling requirements. Safety frameworks must allow for the coexistence of various aircraft types and propulsion systems, including hybrid configurations, without unnecessarily restricting innovation or operational flexibility.

The final session on the Bold Vision for Airports in 2050 presented the current draft structure of the vision, which is organized around ten core pillars. These include themes such as net-zero emissions, integrated mobility, air traffic management, and digitalization, among others.

During the discussion, participants highlighted the importance of economic viability as a foundational element for the successful implementation of the proposed innovations. Ensuring that future developments are not only technologically and environmentally sound, but also financially sustainable, was identified as a key enabler for long-term impact.

Figure 13 Scenes from the workshop

5 Key recommendations

Observation 1

Limited SAF Availability Remains a Bottleneck Despite Policy & Investment Momentum

- Strong policy and investment momentum around SAF and green airport infrastructure is evident, yet practical fuel access remains limited.
- Airports see SAF as critical to meeting net-zero targets, but supply chain constraints hinder broader implementation.
- New technologies like e-SAF, hydrogen, and electric propulsion are emerging, offering complementary long- and short-haul solutions.

Recommendations

Based on the observation, the following

- Develop a harmonised aviation decarbonisation strategy that aligns long-haul SAF use with short-haul innovation (e.g., hydrogen, electric aircraft), ensuring all propulsion pathways are integrated and supported in forthcoming policy and funding frameworks.
- Accelerate SAF production from multiple pathways by recognising (e-)SAF as a strategic pillar for aviation decarbonisation within forthcoming policy and funding frameworks (e.g., STIP, Clean Industrial Deal, Innovation Fund, Joint Undertaking, Horizon Europe).
- De-risk SAF investments and support early movers across the value chain, e.g. by:
- Market-based mechanisms like Book & Claim
- A government-backed market intermediary to offer long-term purchase contracts
- Bridging mechanisms to help pioneering projects reach financial close
- Public safeguards to mitigate project-on-project and performance risks

Observation 2

Airports impact SAF scale-up indirectly through supporting roles and scope 3 accounting

- Airports are not directly embedded in the SAF value chain, limiting their ability to promote, claim, or benefit from SAF contributions.
- Inconsistent understanding of SAF sustainability, certification, and communication hampers alignment and action.
- Unclear Scope 3 emissions accounting guidance limits airports' ability to credibly attribute SAF use to their decarbonisation efforts, reducing incentives for airport-level SAF adoption and hindering broader scale-up.

Recommendations

Based on the observation, the following

- Enable credible SAF reporting through Scope 3 alignment: Promote alignment between EU sustainability reporting rules (e.g., CSRD) and relevant airport sustainability reporting frameworks (such es GHG Protocol, ACA) and provide guidance to support consistent implementation across member states.
- Fund R&D and capacity-building to raise awareness of how airports enable SAF scale-up in coordination with other actors such as airlines, SAF producers, and corporate buyers. Build on projects like ALIGHT to deliver shared training and communication tools.
- Develop EU-endorsed guidance on how airports can indirectly enable SAF adoption. Create an EU framework outlining how airports can support SAF through infrastructure planning, fueling logistics, and stakeholder coordination.

Observation 3

Airport Sustainability Requires Broader, Integrated Policy Approaches

- Over the course of the project, an understanding emerged that airport sustainability is multi-dimensional, encompassing not only GHG reductions but also SAF availability, non-CO_2 effects, biodiversity, resilience, and social inclusion. Stakeholders must reach a consensus on the scope and definition of sustainability.
- Nine sustainability pillars identified during the Bold Vision Workshop reflect the growing complexity and interconnectedness of airport challenges.
- A siloed approach limits impact, highlighting the need for a more integrated, cross-cutting framework to guide airport sustainability policy and planning.

Recommendations

Based on the observation, the following

- Make sustainability a strategic foundation of airport and aviation policy: Expand the definition of airport sustainability in EU strategies beyond GHG emissions, encompassing e.g., biodiversity, non-CO_2 impacts, water use, and social inclusion and ensure these factors are embedded in funding criteria, planning frameworks, and regulatory guidance.
- Align global and EU sustainability frameworks: Promote the integration of ICAO standards (e.g. CORSIA) with EU-level initiatives, and develop harmonized sustainability indicators that address both environmental and social pillars to ensure consistent, comprehensive implementation across Member States.
- Foster structured cross-sector collaboration: Facilitate joint initiatives involving airports, airlines, SAF producers, and regulators to co-develop and pilot sustainability solutions — with a focus on climate resilience, biodiversity, and equity — supported by EU funding and governance mechanisms.

Observation 4

Sustainable Aviation Fuels

- SAF offer potential beyond the life-cycle CO2 reduction
- High blends of SAF are required to maximize these added values
- Allocating SAF to airports with LAQ issues or high contrail risk could maximize environmental benefits
- Segregated aviation fuel supply creates significant challenges and costs for fueling infrastructure.

Recommendations

Based on the observation, the following

- Allow for a targeted use of SAF in regulations (ReFuelEU flexibility mechanism)
- Investigate the costs and benefits of lowering aromatic limits in conventional fuel through collaborative industry and research projects.
- Enhance Data Collection and Monitoring for non-CO2 emissions of aviation.

Observation 5

Innovation in airports in general

- Concerns about battery energy systems especially on fire safety
- Concerns that existing safety procedures can be a barrier for recharging of electric aircrafts or refuelling of hydrogen or hybrid aircrafts. Concerns that safety requirements for handling different fuel types can limit the opportunities for hybrid aircraft solutions.
- Partnerships are necessary and valuable when working with innovation in airports

Recommendations

Based on the observation, the following

- Support airports with clear rules/standards/procedures to enhance their opportunity to implement batteries and handle them safely and ensures that other airport safety requirements will not be a barrier.
- Ensure that existing safety procedures are updated and do not limit opportunities for recharging/refuelling. Ensure safety guidelines allows for coexistences of different aircraft types/propellants incl. hybrid aircrafts.
- Encourage new international partnerships to support the sustainable transition of airports.

Observation 6

Airport Responsibility

- Electricity demand in airports is expected to increase significantly, which means large investments by the airport and upgrades of up stream public grid will be needed
- Investments in projects related to sustainable development are not necessarily supporting the daily business and operation. Market development is unsure.
- Concerns regarding safety aspects, security, wildlife and bird control on airside areas can limit the use of land

Recommendations

Based on the observation, the following

- Support airport and upstream grid investments and ensure that DSOs and TSOs entities have the freedom to invest
- Support and calls for incentive programs either on EU-level or locally to invest in smart energy
- Ensure that airports are obliged to consider how the land be utilised in the best way to support the green transition, the local environment and/or biodiversity.

Observation 7

Smoothen Approval Processes

- Approval processes for photo voltaic and battery energy storage projects are complex, time consuming and involves many different authorities.
- Battery safety requirements are proprietary and concerns regarding fire risk are high. Also, grid connection requirements are complex and based on national regulation.
- Airports are uncertain on which kind of infrastructure they shall invest in to prepare for future aircraft types. Moreover, there is still a long road until specialized eGSEs are implemented widely in the airport, even though the market is rapidly developing.

Recommendations

Based on the observation, the following

- It is recommended that the EC ensures that this process is transparent and as smooth as possible
- Clear regulations, industrial standards or guidelines are needed.
- It is recommended to be aware of not applying standards that can limit the development and implementation of new types of eGSEs and to apply already existing standards for charging technologies(CCS and M both for eGSE and ePlanes when applicable

6 Participant Reflections and Concluding Remarks

At the end of the workshop, participants were invited to share final remarks, reflections, and questions in response to two guiding questions posed at the outset of the event:

> **A)** *Having listened to all presentations today, what are, according to you, the three main takeaways of the ALIGHT project?*
>
> **B)** *What are your ideas or recommendations for future activities and follow-up to make the best use of ALIGHT project achievements?*

The floor was open to all attendees, and the responses captured a wide range of insights, experiences, and forward-looking suggestions. The following section summarizes the key themes and conclusions that emerged from these final statements.

1. Complexity and Regulation in Airports

Participants expressed surprise at the extent of complexity involved in airport operations, particularly due to safety regulations and the number of stakeholders involved. This complexity makes the decarbonization process especially challenging. Several participants pointed out that airports often face overregulation, which can hinder investment and innovation. There was a shared call for simplification of legal frameworks and more flexible funding mechanisms to support sustainable initiatives at airports.

2. Sustainable Aviation Fuels (SAF): Role, Impact, and Feasibility

There was a strong consensus on the importance of SAF for achieving climate goals, especially in addressing both CO_2 and non-CO_2 emissions. However, concerns were raised about the economic viability and scalability of SAF, and the need for realistic deployment timelines. While some noted that SAF does not currently represent an additional cost for airports, there is still ambiguity around the role of airports in SAF implementation. Participants recommended clearer responsibility assignments and incentives to support SAF production and uptake.

3. Standards and Harmonization of Regulation Frameworks

A recurring theme was the need for robust, widely accepted standards—both within Europe and globally. The development of international standards is seen as essential for aligning efforts across different regulatory environments and stakeholders. Participants stressed the importance of not duplicating efforts and building on existing standards and frameworks, particularly for integrated mobility, energy systems, and safety procedures. This also includes the need for harmonised regulatory frameworks around main regions of the world.

4. Cross-sector and Cross-stakeholder Collaboration

The workshop highlighted the critical value of collaboration among sectors, especially between the aviation industry, energy providers, environmental stakeholders, and air traffic management (ATM). ALIGHT was praised for effectively modeling this approach and engaging with other lighthouse projects. Several participants suggested that this cooperation should be

institutionalized, possibly through a dedicated agency or alliance to sustain momentum and knowledge sharing beyond the project's lifecycle.

5. Infrastructure and Grid Integration

Infrastructure development, particularly for clean energy and hydrogen, remains a major challenge. Participants discussed political and technical issues such as grid congestion and the difficulty of planning for long-term energy needs. It was noted that while there are many green technology providers and innovative solutions, excessive regulatory hurdles often delay implementation. Easing administrative frameworks and facilitating public-private partnerships were recommended as key enablers for green infrastructure.

6. Project Design and Scope

While ALIGHT's comprehensive approach was appreciated, several participants emphasized the need for greater focus in future projects. Projects that are smaller in scope and less complex—ideally involving fewer partners—could be more manageable and impactful. Participants also recommended incorporating flexibility into long-term R&D projects to ensure they can adapt to new developments and maintain relevance, thereby maximizing their real-world impact.

7. Knowledge Sharing and Best Practices

Participants valued the opportunity to exchange experiences and best practices between airports and emphasized the importance of continuing this exchange. There was agreement that building on existing knowledge and avoiding redundancy, particularly regarding safety standards and sustainable infrastructure, would save resources and accelerate implementation. The creation of a central, neutral platform or repository to store and disseminate best practices was recommended.

8. Incentives and Economic Considerations

Economic concerns were prominent, particularly around the prioritization of limited resources and the willingness of industry actors to invest in sustainability. Participants noted that while Europe might be more willing to pay for sustainable measures, this is not universally true. There is a need for a clear vision on cost distribution and incentives to ensure long-term commitment from all stakeholders, both within and outside Europe.

9. Role of Airports in Sustainability

Airports were recognized as key actors in sustainability transitions, due to their unique position at the intersection of aviation operations, local communities, and energy systems. Participants highlighted that airports can act as aggregators of sustainability efforts, coordinating among different industries and levels of government. Their influence on Scope 3 emissions, energy sourcing, and community impacts makes them essential players in the decarbonization of aviation.

10. Recommendations for Future Steps

Several forward-looking recommendations were made. These included continuing to engage stakeholders outside of current project consortia, submitting evidence to inform upcoming policy revisions (such as the Air Services Regulation), and maintaining the momentum of current

projects by creating updateable, living documents. Participants also suggested that future workshops focus more deeply on specific pillars or topics, and that practical tools developed in the projects should be made accessible for implementation by other actors.

Figure 14 Impressions from the final discussion round