



ICAO

ENVIRONMENT

ICAO Secretariat

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# Setting the Scene – Part 2

## Overview of ICAO Global Framework on SAF, LCAF and other Aviation Cleaner Energies



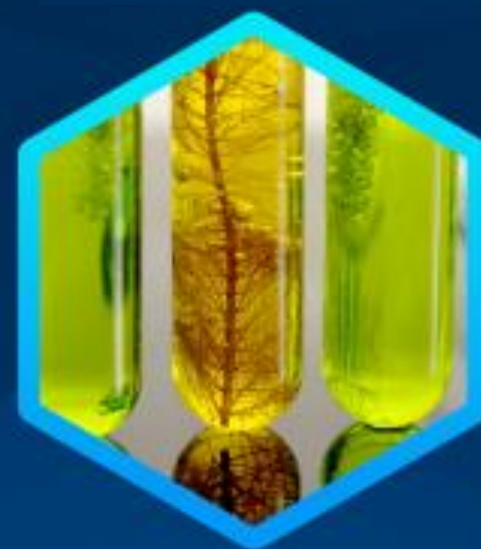


# ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies

## Policy and Planning



## Regulatory Framework



## Implementation Support



## Financing



- Supports global scale up of aviation cleaner energies – Collective Vision to reduce 5% CO<sub>2</sub> by 2030
- Provides clarity, consistency and predictability to all stakeholders on 1) policy and planning, 2) regulatory framework, 3) implementation support, and 4) financing – 4 Building Blocks
- Monitors the implementation progress on emissions reductions and means of implementation
- Aspiring to have cleaner energy production facilities in all regions by CAAF/4 (no later than 2028)
- To update the Vision at CAAF/4 on the basis of market developments

# CAAF/3 Global Framework – 4 Building Blocks

## 1. Policy and Planning

- Global aspirational **Vision** to reduce international aviation CO<sub>2</sub> emissions by **5% by 2030**
- Each State's **special circumstances and respective capabilities**
- **CAAF/4** no later than 2028, with a view to update Vision
- **Collaborative effort** across different stakeholders, and encourage **State policies, action plans and roadmaps**
- Implementation **monitored** and periodically **reviewed**

## 2. Regulatory Framework

- **CORSIA eligibility framework as accepted basis** for SAF, LCAF and other aviation cleaner energies
- Increase the **number of SCS**, additional fuel production **pathways / life-cycle values**
- Parameters for **fuel accounting methodologies**, leveraging on CORSIA MRV system
- **Study of fuel accounting systems** to determine any possible ICAO role

## 3. Implementation Support

- **Robust, targeted and tailored** capacity -building and implementation support
- **Building on ACT-CORSIA and ACT-SAF programmes**
- Facilitate **partnerships**, and exchange of best practices
- Develop **policy toolkit/guidance** and support **State Action Plans**
- Support **feasibility studies, pilot projects**, which may facilitate access to investment
- Support **access to technology**

## 4. Financing

- **Advocacy and outreach** for greater investment in aviation cleaner energy projects, including UN and international financial community
- Welcome and request for **operationalization of ICAO Fininvest Hub** to facilitate better access to public fund / private investment, to respond to Resolution A41-21, para 18. a)
- Expedite work to **consider the establishment of a climate finance initiative or funding mechanism under ICAO**, to respond to A41-21, para 18. b)

# ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG

(Approved by ICAO Council on 17 June 2024, C-DEC 232/6 refers)

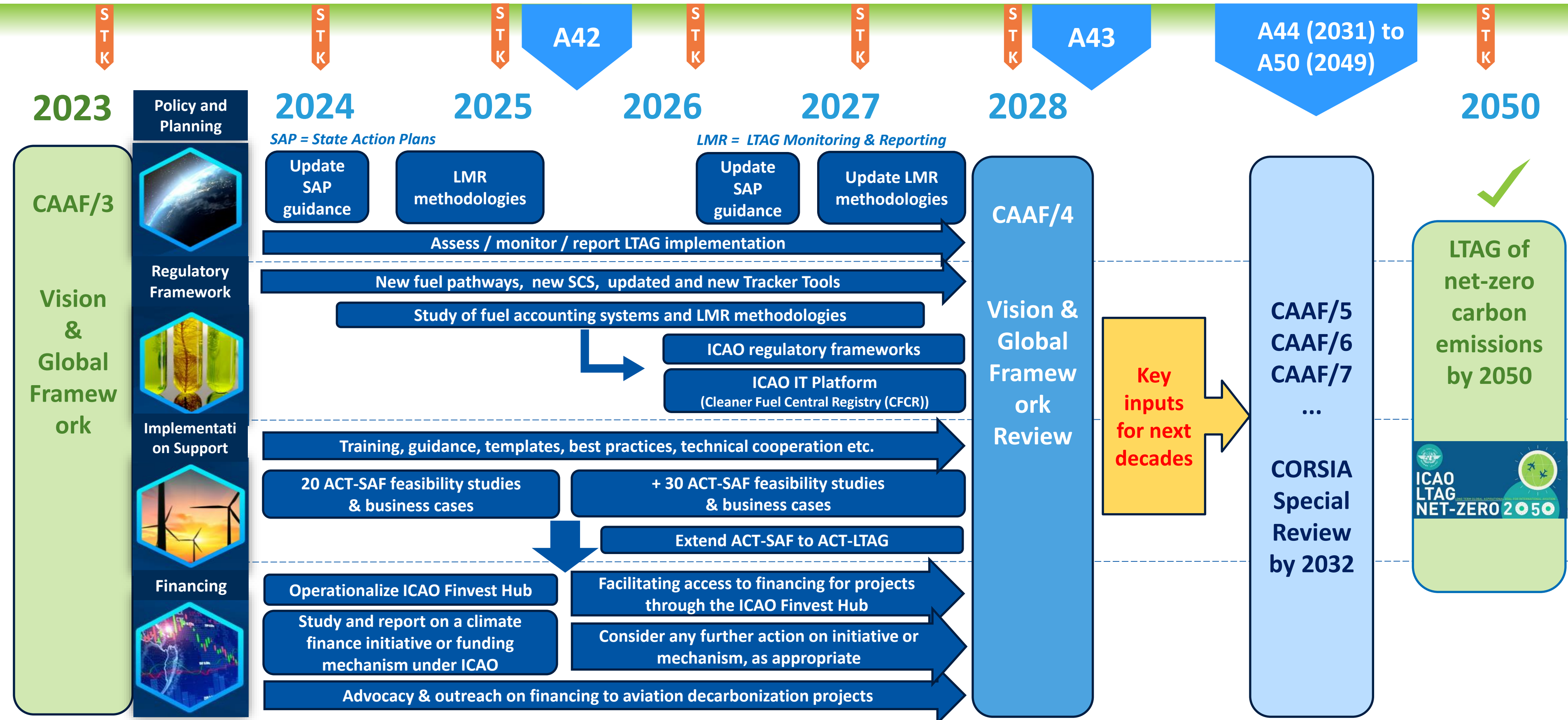
The Council approved the ICAO roadmap for the implementation of the ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies, including the planned actions, roles and responsibilities, timeframe, required resources, and the relationship with related ICAO work, such as the LTAG implementation, leading to the 42nd Session of the Assembly in 2025, and until the convening of CAAF/4 by no later than 2028, on the understanding that:

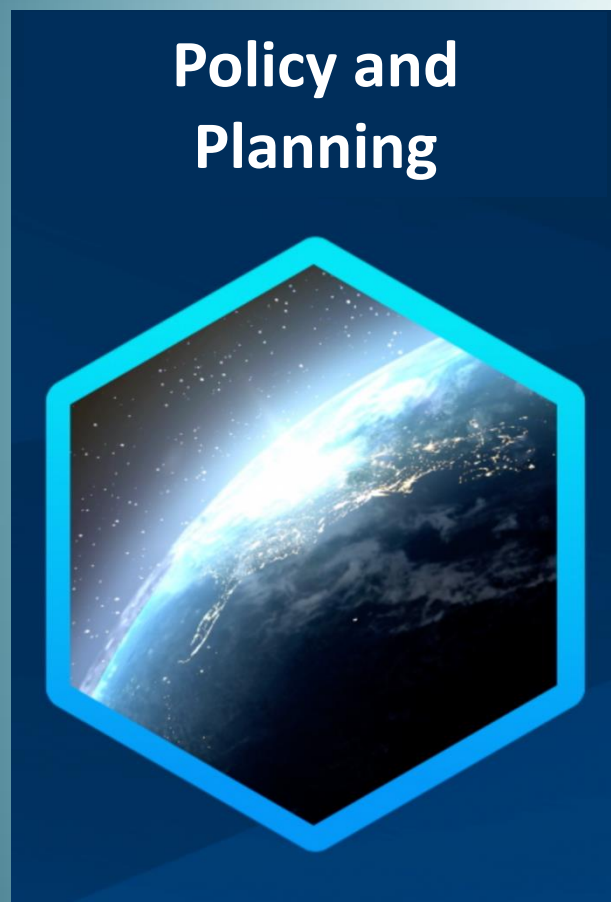
- a) the ICAO roadmap would be a **“living document” to be regularly updated** to reflect the progress of implementation and elaborate on further actions, and this subject would become a recurring item to be reported during subsequent Council sessions, as required
- b) the ICAO roadmap **transparently outlines the additional resources required** to implement the Global Framework and the LTAG, and should be used to **inform resource mobilisation efforts, and subject to the upcoming 2026-2028 Business Plan and Regular Budget discussions**
- c) the implementation of the ICAO roadmap should be **progressed in a balanced manner between the four interdependent Building Blocks**, and should give immediate focus to the need to accelerate the level of capacity building and implementation support, financing and other critical enabling and monitoring elements, so that it may foster swift production and deployment of aviation cleaner energies in all regions
- d) the Secretariat should ensure the **coordination among all relevant Bureaux and ICAO bodies** on cross-cutting issues relating to the implementation of LTAG, and all the elements of the ICAO basket of measures for emissions reductions, under the **“One-ICAO” approach**, with clearly defined roles and responsibilities, such as for undertaking the feasibility studies under ACT-SAF and the operationalization of the Finvest Hub



# ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG

STK = Annual LTAG Stocktaking events





# Building Block 1

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# Policy and Planning



**Collective global aspirational Vision  
to reduce CO2 emissions in international aviation by  
5 % by 2030, through aviation cleaner energy use**



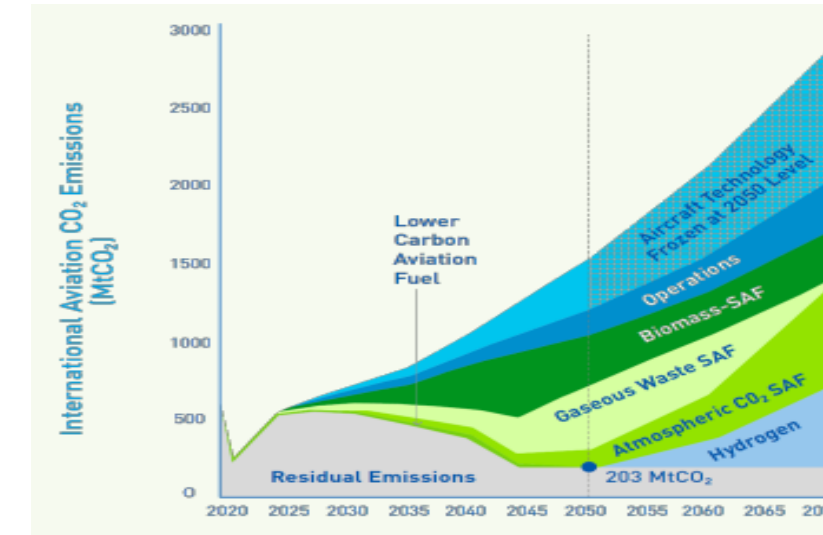
**Each State's special circumstances and respective  
capability will inform its ability to contribute to the Vision**



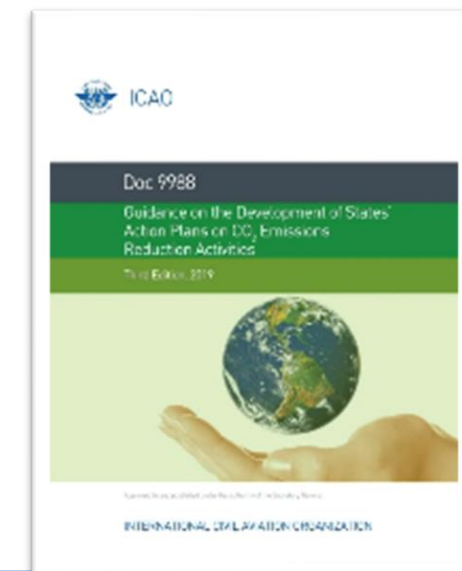
## Planned Actions



- To expand ongoing work for the development of **LTAG monitoring methodologies** by including specific methodologies for **monitoring the achievement of the collective global aspirational Vision and the implementation of the Global Framework**
- To add monitoring of the Global Framework implementation, as part of **annual ICAO LTAG Stocktaking events**, including **monitoring of the implementation support and financing**
- To increase **new and updated State Action Plans**, with focus on SAF, LCAF and other aviation cleaner energies, and gather, compile and analyse the data submitted, aiming to assist in monitoring progress
- **To convene CAAF/4 no later than 2028**, with a view to updating the Vision and the Global Framework



| ICAO WORK ON LONG-TERM ASPIRATIONAL GOAL  |   |   |   |
|---|---|---|---|
| Operations  | Technology  | Fuel  |   |
|   |   | Fuels   | Sources of energy   |
| Air operations<br>Ground operations   | Aircraft technology<br>Air traffic management<br>Airports | Drop-in fuels<br>Biomass SAF<br>Gaseous waste SAF | Wind<br>Solar<br>Nuclear<br>Hydrogen<br>Electricity<br>Renewable energy |
| Identify combined in-sector scenarios of technology, fuels, and operations, and evaluate: |   |   |   |
| Testing    Feasibility    Availability    CO <sub>2</sub> reduction                       |   |   |   |





## *Roles & Responsibilities, Timeframe*



- **CAEP/13 in Feb. 2025**, with the support of the Secretariat, to recommend the LTAG monitoring and reporting (LMR) methodologies, for consideration by the Council and subsequently by the **42nd Session of the Assembly**
- **CAEP** to extend LMR methodologies, including monitoring of all aspects of the Global Framework implementation (e.g. implementation support, financing, geographical cleaner energy distribution, impact on growth) **by end of 2025**
- **By no later than 2028**, CAAF/4 to be prepared and convened for possible updates of the Vision and the Global Framework. **CAEP/14 in early 2028** to update the LMR methodologies as required
- **Secretariat** to support the monitoring of the Global Framework including through **annual ICAO LTAG Stocktaking events**
- **Secretariat** to regularly update the ICAO guidance, and provide continuous assistance for **State Action Plans**, with compilation and analyses of data submitted



- **Annual ICAO LTAG Stocktaking events held since 2019**

- 41st Assembly request to monitor the progress towards the achievement of the LTAG (*A41-21, paragraph 9*)
- CAAF/3 request to monitor the implementation of the ICAO Global Framework (*Global Framework, paragraph 11*)



- **2024 ICAO LTAG Stocktaking**

- **7 - 10 October 2024, ICAO HQ, Montreal**
- Showcasing all aviation in-sector CO2 emission reduction measures, including technologies, operations, fuels, cleaner energies, and financing, in view of monitoring progress towards the achievement of the LTAG
- Following the adoption of the ICAO Global Framework at CAAF/3, this event will focus on SAF, LCAF and other aviation cleaner energies, in view of implementing the Framework



# SAF tracking tools for monitoring progress

## ICAO SAF Tracker tools (click for details)



## ICAO SAF tracking tools to monitor progress and facilitate information exchange



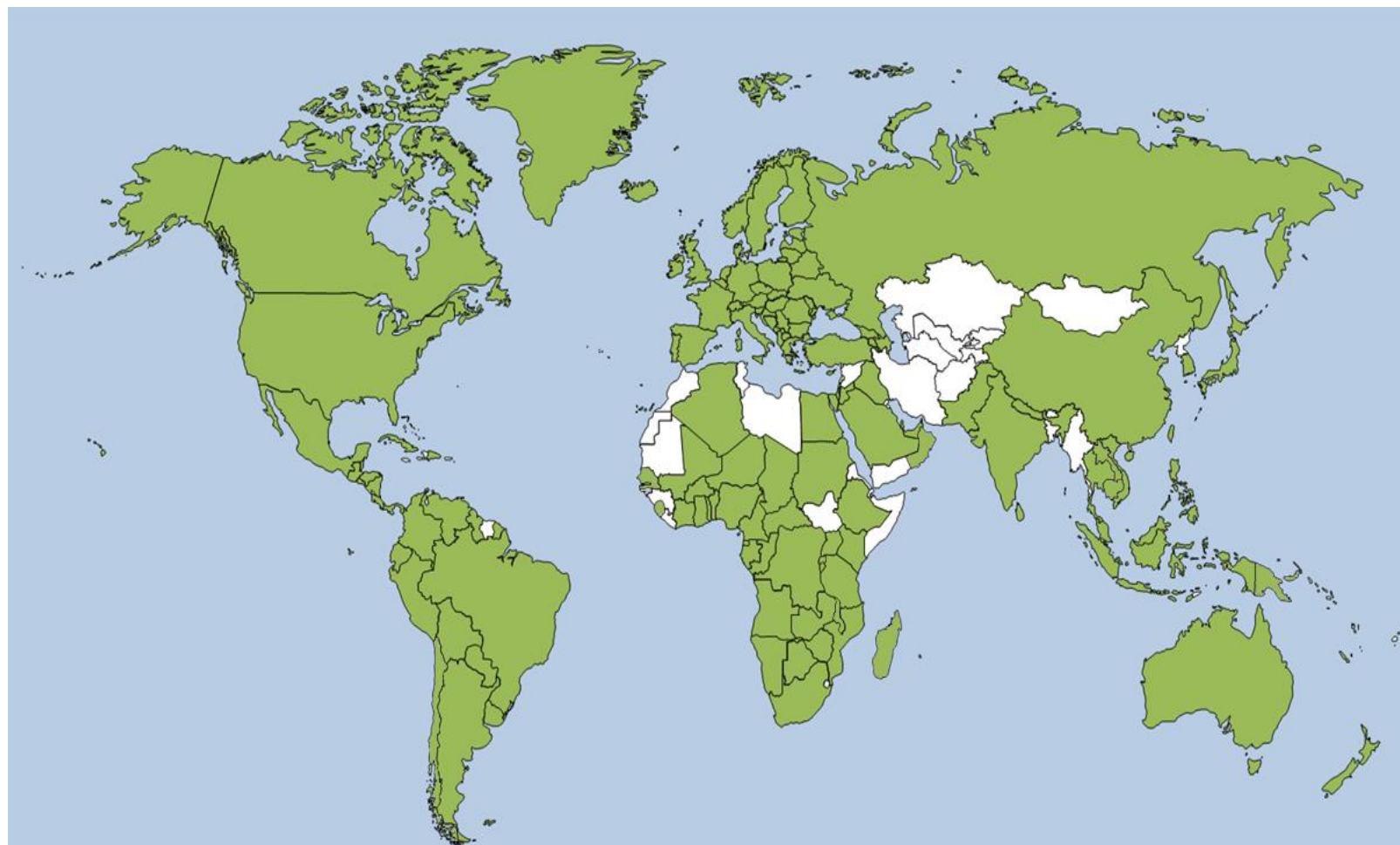
### Latest news (click for details)

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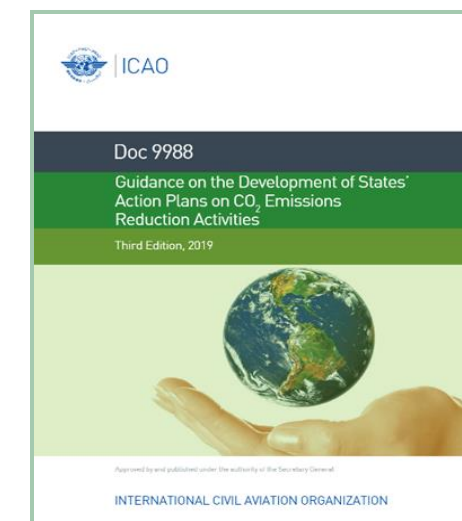
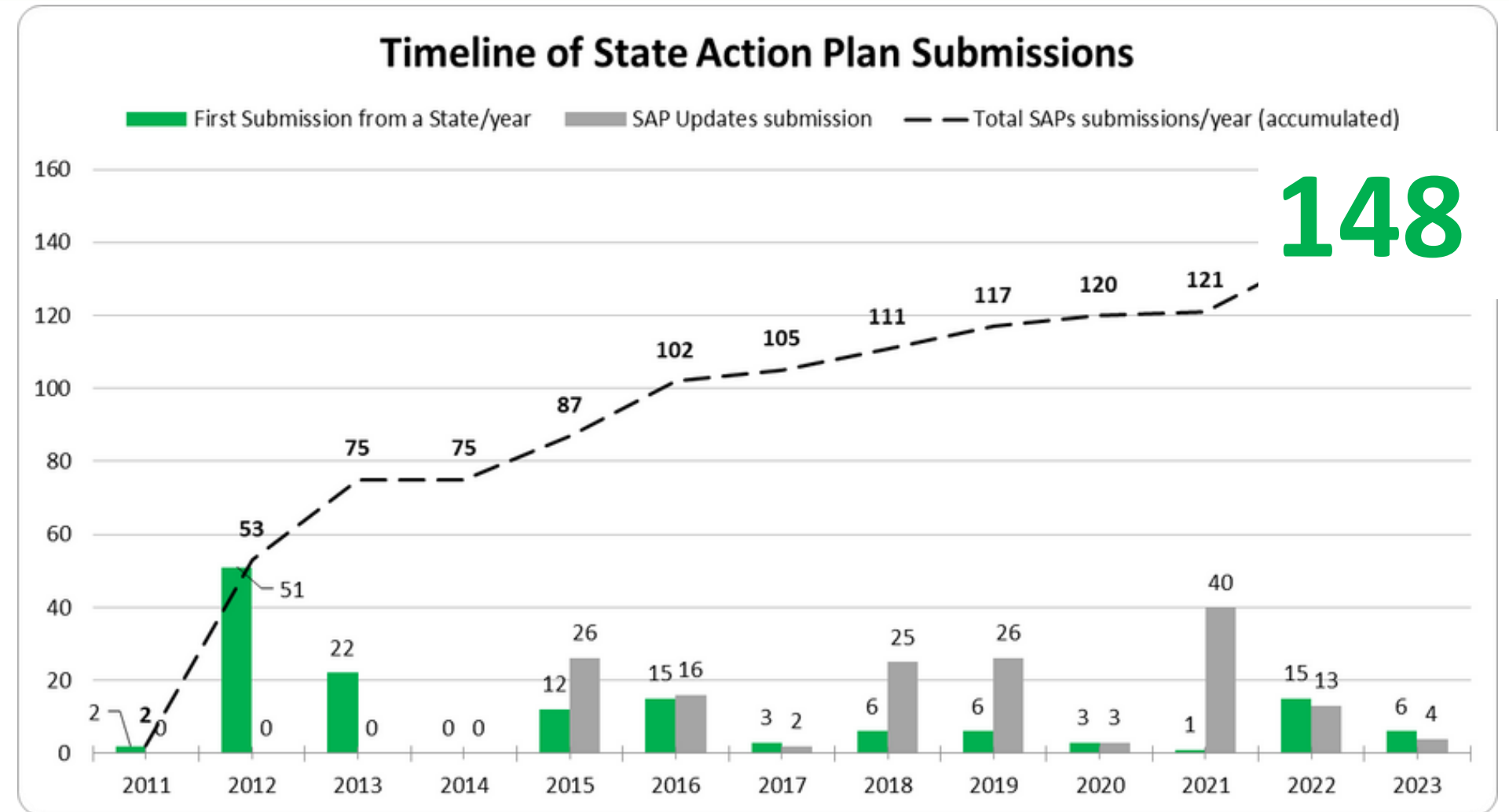
Filter by State

| Date          | Link  |
|---------------|---|
| 15 juil. 2024 | <a href="#">UL and TCD to collaborate on Sustainable Aviation Fuel research study</a>                 |
| 10 juil. 2024 | <a href="#">EASA Establishes SAF Clearinghouse</a>  |
| 3 juil. 2024  | <a href="#">China regulator launches country's first 'green' jet aviation fuel centre</a>             |
| 3 juil. 2024  | <a href="#">OMV Petrom secures raw materials for production of sustainable fuels</a>                  |
| 1 juil. 2024  | <a href="#">KWE and IAG Cargo Agree to Expand Use of Sustainable Aviation Fuel</a>                    |
| 1 juil. 2024  | <a href="#">Korean Air and CEVA Logistics partner on cargo SAF use – Sustainable Aviation Fuel</a>    |
| 26 juin 2024  | <a href="#">MUFG Bank Invests in LanzaJet and its Sustainable Aviation Fuel Production Technology</a> |

**148 States (98.99% of global RTK)**  
have voluntarily submitted State  
Action Plans

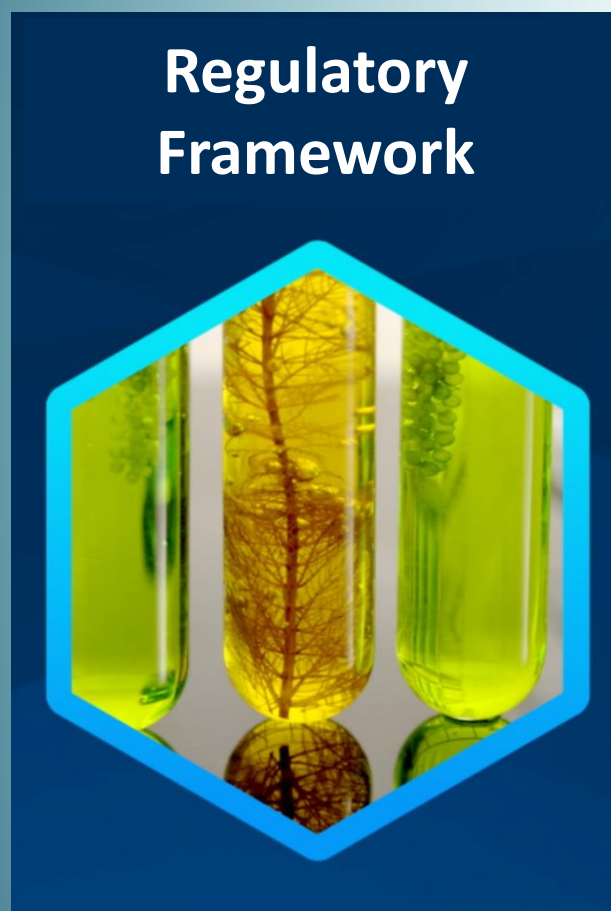


**Need for SAP updates** in light of  
LTAG and Global Framework



**Guidance on the Development of  
States' Action Plan on CO2  
Emissions Reduction Activities  
(Doc 9988)**

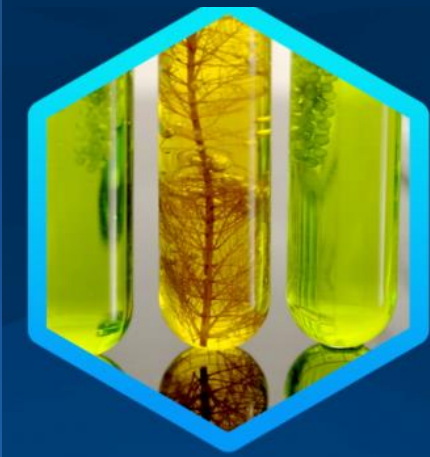
Updated version is now  
available !



# Building Block 2

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# Regulatory Framework

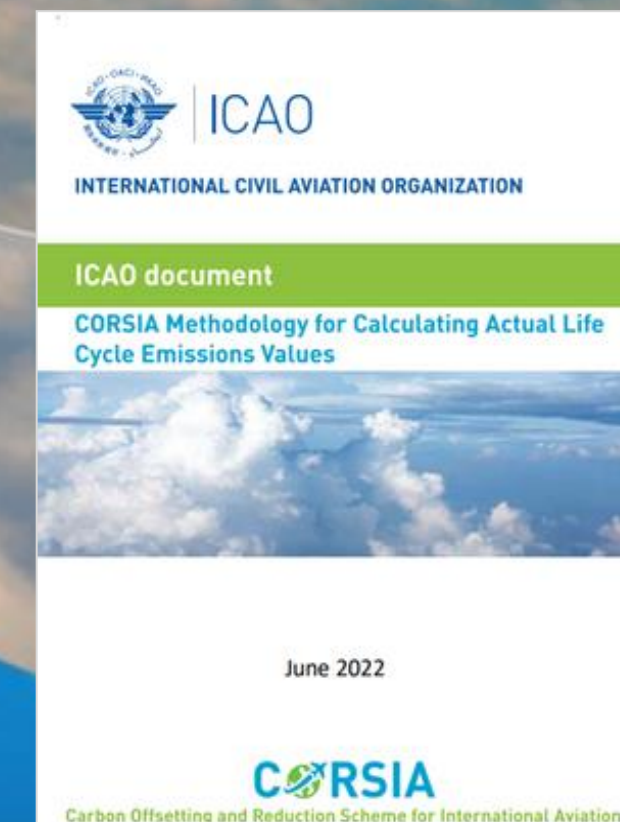


# CORSIA

126 States voluntarily participate in the scheme from its first phase in 2024

CORSIA sustainability criteria, sustainability certification, and life-cycle assessment methodology for SAF and LCAF, as the accepted basis for the eligibility of aviation cleaner energies

- Parameters for fuel accounting & reporting methodologies
- Study on fuel accounting systems / possible ICAO role





## Planned Actions



- To urgently accelerate the analysis and approval of **life cycle values for new fuel sources and pathways** as CORSIA eligible fuels, while ensuring environmental integrity in line with CORSIA requirements
- To urgently accelerate the development and approval of **new Sustainability Certification Schemes (SCS)** on the use of CORSIA eligible fuels in all regions, while ensuring environmental integrity in line with CORSIA requirements
- To undertake a **study of fuel accounting systems for international aviation**, which can help determine **any possible ICAO role**
- To develop and/or update necessary **ICAO regulatory frameworks**, as appropriate, based on the study of fuel accounting systems and the LTAG monitoring and reporting (LMR) methodologies
- To develop a **possible ICAO IT platform** to integrate the monitoring of the Global Framework LTAG implementation, as appropriate



Study on fuel accounting systems

Necessary ICAO regulatory frameworks

Possible ICAO IT platform



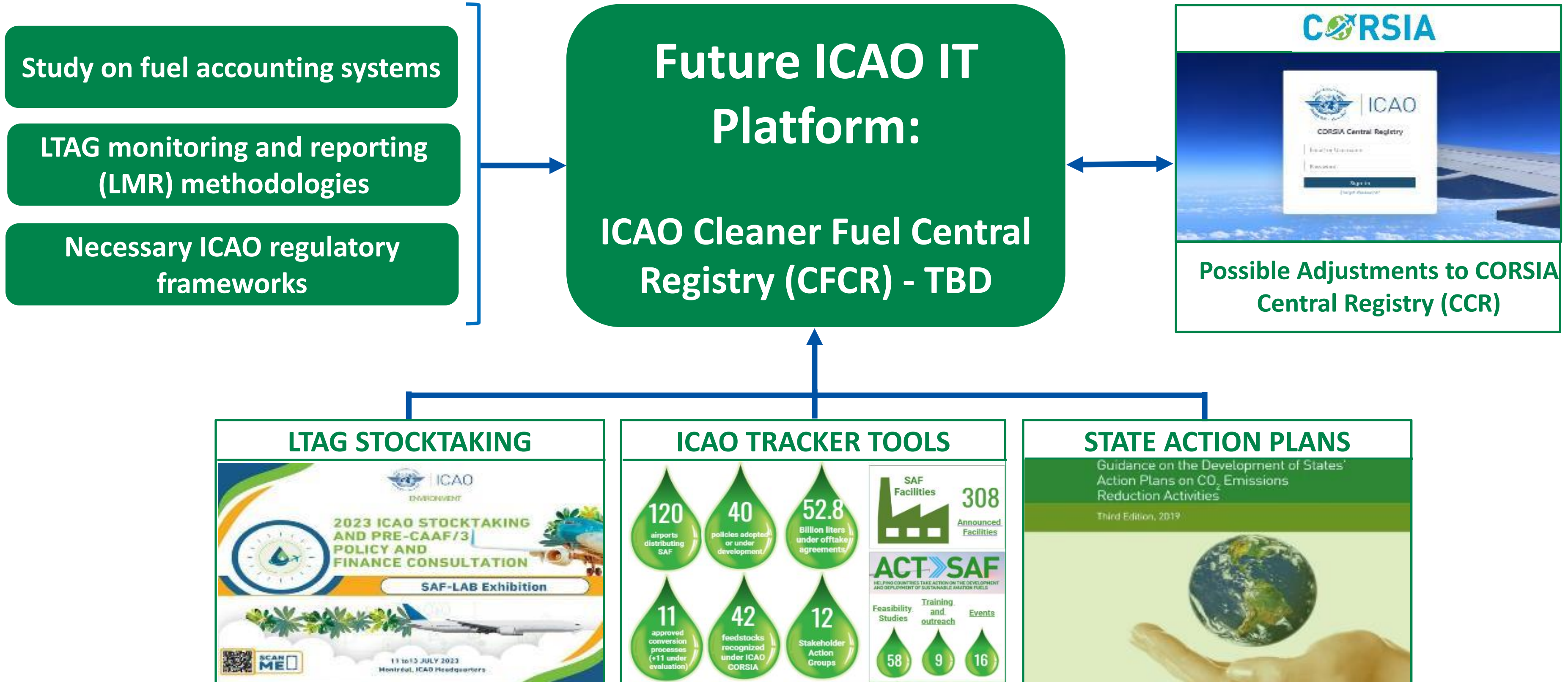
## *Roles & Responsibilities, Timeframe*



- CAEP to urgently increase its technical and neutral work to recommend the **life cycle values for new fuel sources and pathways, and additional SCS, for Council approval**, in support of global production and deployment of SAF, LCAF and other aviation cleaner energies in all regions
- CAEP to **study fuel accounting systems** for international aviation including any possible ICAO role, **in conjunction with consideration of the LMR methodologies, by the end of 2025 and beyond**
- As soon as following the study of fuel accounting systems and the LMR methodologies, CAEP to recommend to the Council **any necessary ICAO regulatory frameworks** developments and/or updates
- Secretariat to enhance continuous support to the Council and CAEP work
- Secretariat to enhance continuous support to gather, compile, analyse and systematically update information, through **existing ICAO Tracker Tools, and development of additional tools** for emerging topics
- As part of its monitoring and implementation work, the Secretariat to consider the potential development of an **ICAO IT platform**, supporting any recommended ICAO regulatory frameworks developments and/or updates, and integrating the monitoring of the Global Framework and LTAG implementation (e.g. ICAO Cleaner Fuel Central Registry: CFCR), as well as possible adjustments to the CORSIA Central Registry (CCR), as appropriate



# ICAO Roadmap BB2 – Regulatory Framework (ENV Tools and Platform)





# Building Block 3

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# Implementation Support



- ACT-SAF Web platform
- ACT-SAF Training Series
- ACT-SAF Template & Guide for Feasibility Studies

# ACT-SAF

**90**  
States

Name of State

- Albania
- Argentina
- Australia
- Austria
- Bahamas
- Bangladesh

States

Acceptance to ... Pending Yes

**63**  
Organizations

Name of Organization

- WORLD TRAVEL & TOURISM COUNCIL
- World Bank
- Wizz Air
- WEF - World Economic Forum
- Verifavia
- United Nations World Food Program Aviation

International Organizations

Acceptance T&C (Blank) Pending Yes

• States and Organizations that expressed intention to actively participate in the ACT-SAF Programme



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# ICAO Roadmap BB3 – Implementation Support (ACT-SAF and ACT-LTAG programmes)



## Planned Actions



- To deliver a **robust, targeted and tailored** capacity-building and implementation support, to promote the development and production of SAF, LCAF and other aviation cleaner energies
- ACT-SAF programme, including **guidance and training, sharing of best practices, feasibility studies and business cases, supporting development of project proposals, and partnerships knowledge sharing and technical cooperation** amongst States, industry and other stakeholders
- To extend ACT-SAF to add other emissions reduction measures (e.g. aircraft technology, operation) as **ACT-LTAG programme**





## Roles & Responsibilities, Timeframe



- Secretariat to update & enhance **training of existing topics** and develop new **training of emerging topics**
- Secretariat to **track and share best practices**, and develop & update **templates** for feasibility studies and business cases
- CAEP to regularly update **ICAO guidance & rules of thumb**.
- Secretariat to promote **knowledge sharing and cooperation** between States and with industry, including on technical skills, manufacturing, processing and equipment.
- **By 2025**, Secretariat to complete **20 ACT-SAF feasibility studies and business cases** in total, with voluntary contributions to ICAO ENV Fund
- **By 2028**, Secretariat to complete **50 ACT-SAF feasibility studies and business cases** in total, with voluntary contributions to ICAO ENV Fund
- Secretariat to extend ACT-SAF into **ACT-LTAG programme** as soon as possible, building upon the ACT-SAF approach/maturity

## 150+ States/Organizations become ACT-SAF partners

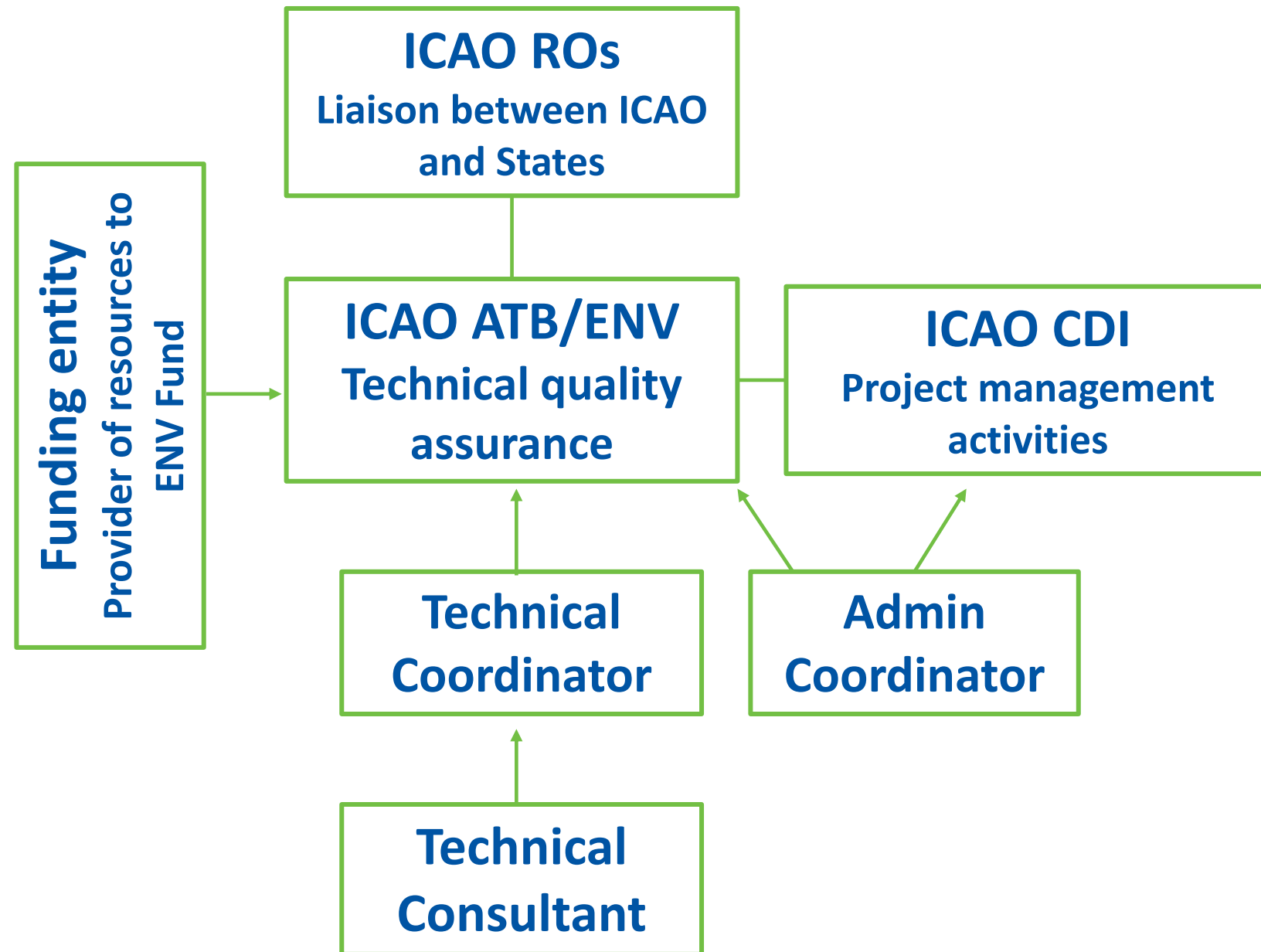


## Scaling up SAF feasibility studies & business cases (2024 - 2026) with contributions to ENV Voluntary Fund

| European Union   | France  | United Kingdom  |
|--|---|---|
| Support 10 SAF feasibility studies for African States and India  | Support 3 SAF feasibility and business cases, focused in African States | Support 3 SAF feasibility and business cases, focused in African States |
| Netherlands  | Austria   | Airbus  |
| Support 3 SAF feasibility studies, for States in various regions | Support SAF feasibility studies (TBD)                                   | Support SAF feasibility studies (TBD)                                   |



## ICAO project management structure for ACT-SAF feasibility studies & business cases



- **ICAO ATB/ENV** to lead the technical quality assurance, including the definitions of the project scope and milestones, and expertise requirements to hire project’s consultants (**Technical Coordinator & Technical Consultant**), overseeing the consultants, with assessment and approval of deliverables.
- **ICAO CDI** to provide the administrative support of the project, including coordination for project management documentation, consultant recruitment, travel arrangements, financial transactions, procurements, etc. in coordination with ENV, LEB, FIN, ADB.
- **ICAO ROs** to act as the main liaison between ICAO and States receiving support, including the support to technical consultants undertaking feasibility studies and business cases in those States.

*“One-ICAO” Approach*





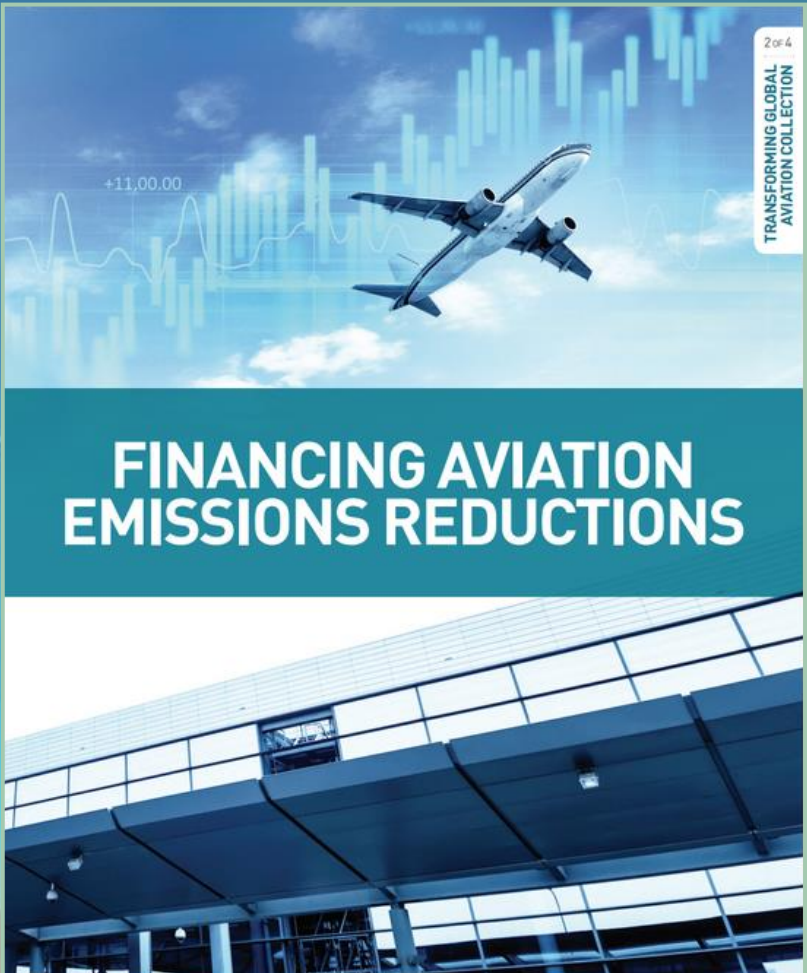
# Building Block 4

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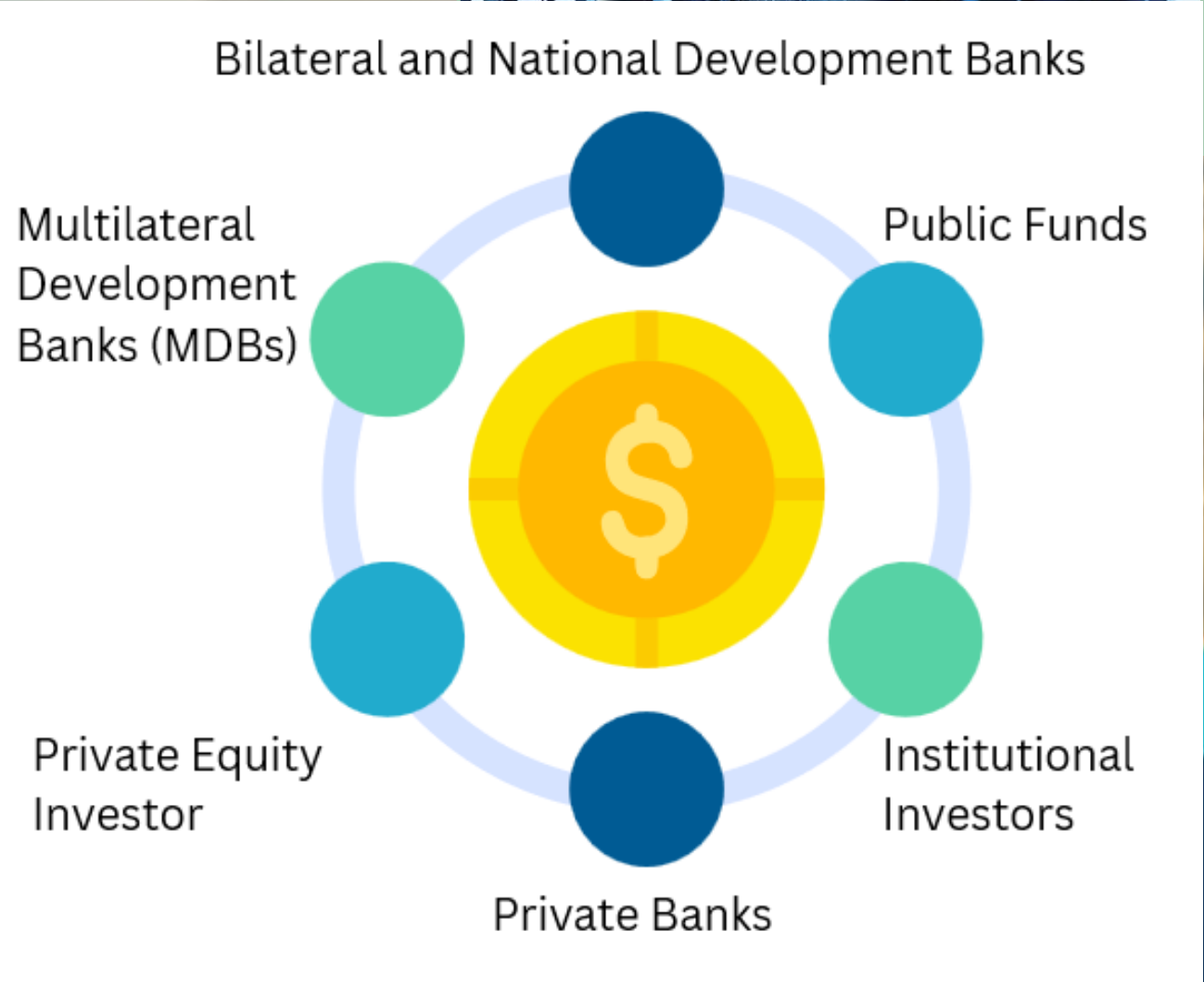
# Financing



# Financing aviation emissions reductions



- Operationalization of ICAO *Fininvest Hub* initiative
- Study to consider the establishment of a climate finance initiative or funding mechanism under ICAO





## Planned Actions



- As part of **advocacy and outreach activities** regarding financing needs towards the achievement of the LTAG, to **enhance engagement and establish networks and structured dialogues with the international finance community and other relevant stakeholders** (Framework paragraph 32 refers) in order to identify and promote financing opportunities for funding projects related to decarbonization, particularly the development and production of SAF, LCAF and other aviation cleaner energies, especially in developing countries
- To develop **specific measures or mechanisms to facilitate better access to financing** (e.g. private investment capacities, as well as funding from financial institutions such as development banks) for developing countries and States having particular needs, in particular the **operationalization of the ICAO Fininvest Hub** (A41-21, para 18. a))
- ICAO and its Member States to initiate a work stream to actively identify, analyze gaps and monitor developments in the UN and across the international financing community (Framework paragraph 42 refers) to identify and aggressively pursue opportunities to increase the allocation or earmarking of public and private capital devoted to aviation decarbonization projects, particularly on SAF, LCAF and other aviation cleaner energies
- To conduct a study through the services of a third-party consultancy, regarding the **consideration of the establishment of a climate finance initiative or funding mechanism under ICAO**, while addressing the possible financial, institutional and legal challenges (A41-21, para 18. b)); support development of a report by the Council to the Assembly; and consider any further action as appropriate





## *Roles & Responsibilities, Timeframe*



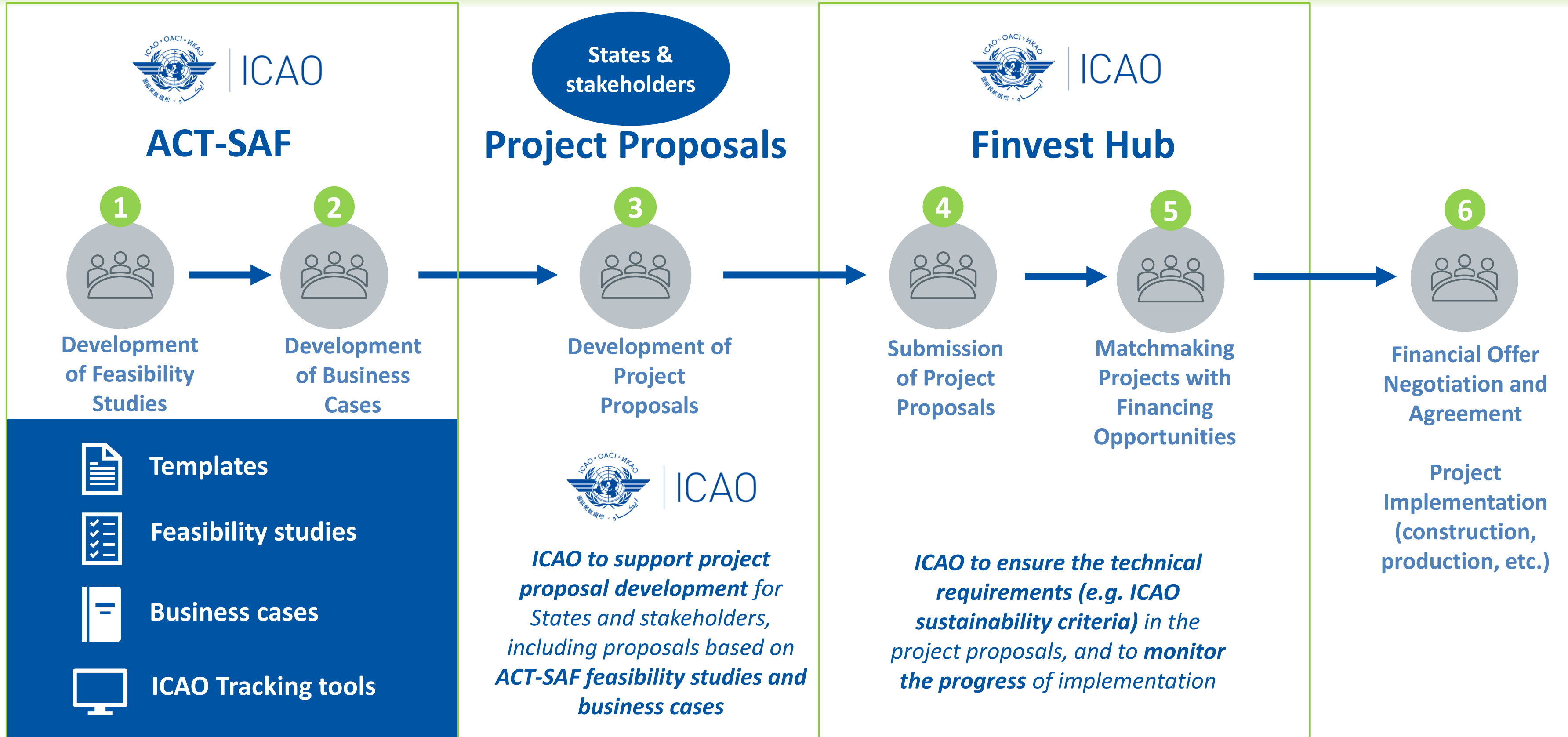
- Secretariat to continue to undertake **advocacy and outreach**, including at the annual LTAG Stocktaking events, and further dialogues for the high-level exchange of views
- **By 2025**, the Secretariat to **operationalize the ICAO Fininvest Hub**, by **recommending to the Council possible options including in-house developments or partnerships** with Financing Platforms of other organizations, to facilitate financial access to aviation decarbonization project proposals, including project proposals developed **based on ACT-SAF feasibility studies and business cases**
- Regarding the consideration of the establishment of a climate finance initiative or funding mechanism under ICAO, **a selected third-party consultancy will deliver a study based on the TORs approved by the Council Small Group:**
  - ✓ Intermediary study (in 3 months from the start of the consultancy) and draft final study to the Small Group **by end of 2024**
  - ✓ Presentation to the Council **by early 2025**, before the final study to be delivered shortly thereafter
  - ✓ Based on the study, the Council will consider and approve its report to the deliberation of the **42nd Session of the Assembly**
  - ✓ Any further action can be considered, as appropriate, **after the Assembly**.



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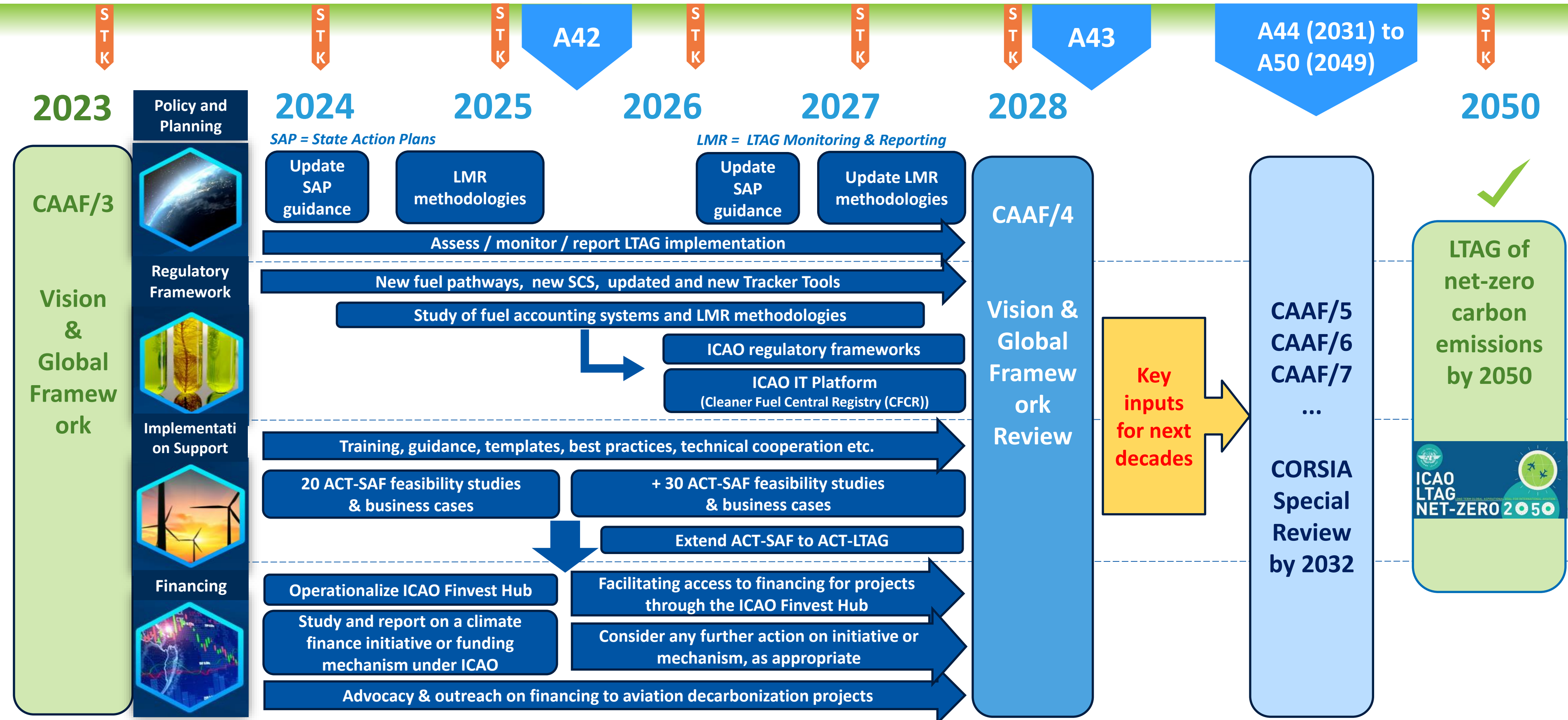
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# ICAO Roadmap BB4 – Financing (Advocacy & Outreach, Fininvest Hub, Study)



# ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG

STK = Annual LTAG Stocktaking events





## Q&A Session

# Thank You

