ICAO Standardization Roadmap User Guide for **Submitting Entity Focal Points**

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This guide is intended to provide specific information about accessing and submitting aviation innovations to the ICAO Standardization Roadmap. The information presented aligns with ICAO's current processes but may be subject to updates and improvements as the Standardization Roadmap develops.

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1. OVERVIEW

This guide provides step-by-step instructions for designated focal points of submitting entities to access the ICAO Standardization Roadmap and submit or update innovation entries. The ICAO Standardization Roadmap is a dynamic planning tool that tracks emerging technologies and supports ICAO's strategic objectives.

2. ELIGIBILITY FOR SUBMISSION

Submissions can be made by:

- ICAO Member States.
- Recognized international organizations.
- Individual innovators/startups via a Member State or organization.

For more on how to submit through an organization or state, see **Appendix A**.

3. NOMINATING A FOCAL POINT

Each submitting entity must designate an official focal point to manage submissions. Please complete the form in **Appendix B** and send it to <u>innovation@icao.int</u>.

4. ACCESSING THE STANDARDIZATION ROADMAP

The ICAO Standardization Roadmap is hosted on the iSTARS4.0 platform, which can be accessed via the link https://istars.icao.int/Sites.

If you are not a user of iSTARS^{4.0}, please follow the process below:



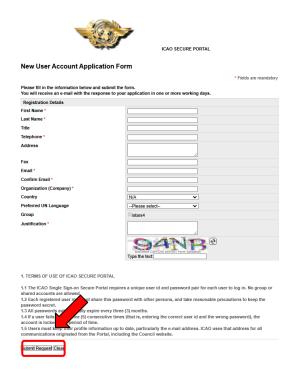


4.1 NON-REGISTERED ICAO PORTAL USERS

Step 1: Go to https://istars.icao.int/Sites and in the top right corner, click on 'Register'.



Step 2: The page will display a form that must be completed before proceeding. Please state your reason for subscribing to the site under 'Justification' (i.e. 'Nominated focal point for [Your State]). Once complete, click on the 'Submit Request'.



Step 3: Once the request has been submitted, ICAO will process the form within 2–3 business days and notify you via email.

4.2 REGISTERED ICAO PORTAL USERS

Step 1: Visit https://portal.icao.int/uma and log in with your ICAO credentials.

Step 2: Click on 'Group Subscribe' in the left-hand pane.



Step 3: Upon clicking 'Group Subscribe', a new page, 'Group Membership Change Request', will load. Navigate to the 'To Subscribe' section and locate 'If you wish to subscribe to a group, please enter the group name:'.

Enter "istars4" in the text box and enter a subscription reason. Then click 'Continue'.

Once you clicked 'Continue', the button 'Submit Changes' will get activated. Click 'Submit Changes'.

Step 4: Once the request has been submitted, ICAO will process the form. Approximately 2-3 business days later, users will receive a confirmation notification at their registered email address once the ICAO portal account has been activated.

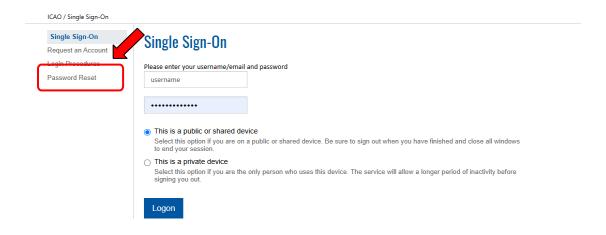


4.3 PASSWORD MANAGEMENT

Please note that for security reasons, all user passwords expire after three (3) months.

To reset your password:

Step 1: Go to https://login.icao.int/my.policy and click on the 'Password reset' link.



Step 3: Enter your e-mail address or user ID.

Step 4: Enter the image verification and click 'Send me a link to reset my password.'

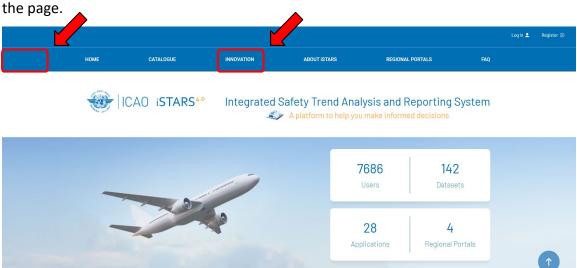
Step 5: Follow the link sent to your registered e-mail address to create a new password.

Important Information:

The most common reason for login issues is an incorrect password. Please ensure you are using the correct password that matches your portal password. Ensure that you can log in to the iSTARS^{4.0} platform with the same password as your ICAO portal account.

5. ACCESSING THE SUBMISSION PAGE OF THE STANDARDIZATION ROADMAP

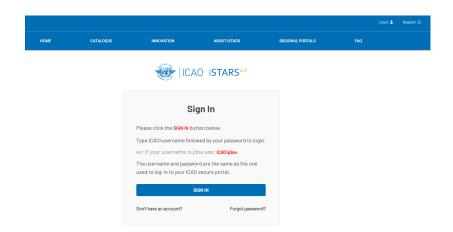
<u>Step 1:</u> Go to https://istars.icao.int/Sites and click on the 'Innovation' tab at the top of the page



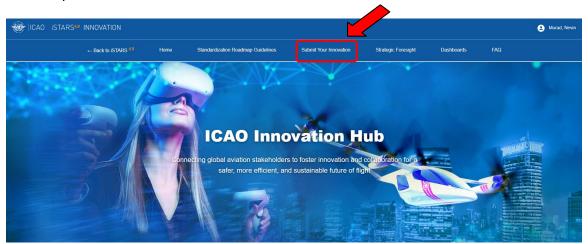
 $\underline{\textbf{Step 2:}} \ \textbf{A new page will open - click on '} \textbf{Log in'} \ \textbf{in the top right corner}.$



Step 3: A new site will open - follow the instructions and then enter your username and password



Step 4: Once the Innovation page has loaded, click on the 'Submit Your Innovation' tab at the top.

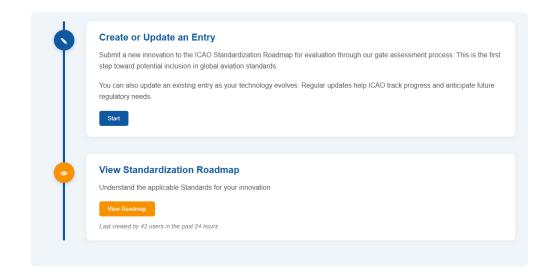




Step 5: A new site will open. To access the submission options, locate the vertical timeline navigation bar in the middle of the screen.

The timeline provides two main functions:

- Create or Update an Entry (top option with a pencil icon)
 - Use this option to submit an innovation to the ICAO Standardization Roadmap.
 - > Select this option to provide new information for one of your previously reviewed innovations in the roadmap.
- View Standardization Roadmap (bottom option with an eye icon)
 - Use this option to understand when the Standards and Recommended Practices (SARPs) needed for your innovations will be completed.



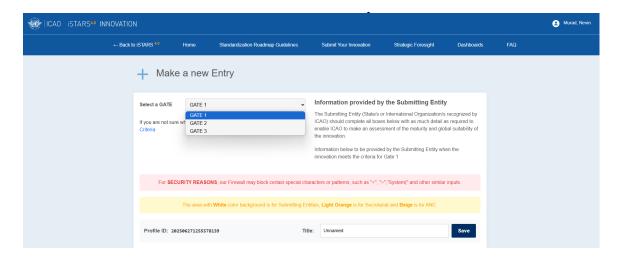


6. SUBMITTING A NEW INNOVATION ENTRY

6.1 STEP 1: BEGIN A NEW SUBMISSION

Click the 'Start' button from 'Create or update an Entry'. You will be prompted to select one of the following GATEs depending on the technical maturity of your innovation:

- GATE 1 For early-stage innovations with sufficient supporting information.
- GATE 2 For innovations with prototypes or validation testing in progress.
- GATE 3 For innovations that are nearing implementation or already in service.



6.2 STEP 2: FILL IN THE GATE FORM

GATE 1 - Early-Stage Evaluation

GATE 1 is the first level of evaluation in ICAO's innovation assessment process. It is intended for early-stage or conceptual innovations that have potential relevance for global aviation, but that are still in development, testing, or early deployment phases.

Submitting to Gate 1 allows ICAO to begin tracking the innovation's maturity, global applicability, and alignment with ICAO's Strategic Objectives, such as safety, security, environmental protection (e.g., LTAG), efficiency, and economic development.

You should select GATE 1 when:

- Your innovation is not yet operational, but it is technically feasible.
- It has a clear concept, use case, or prototype.
- You can demonstrate strategic alignment with ICAO objectives.
- You want ICAO to begin considering future standards or regulatory needs.

Required fields for GATE 1 include:

ID	Item	Description
G1-1	Submitting Entity	Select your ICAO Member State or
		recognized by ICAO organization.
G1-1-1	Submitting Entity Examples	Examples or references illustrating your
		organization's role in the innovation.
G1-2	Innovation Description	Provide a detailed technical and
		operational overview of the innovation.
G1-3	Contribution to ICAO Strategic	Explain how the innovation supports
	Objectives	ICAO's goals, such as LTAG, safety, or
		sustainability.
G1-4	Global Benefits and Suitability	Describe how the innovation could be
		applied globally and what benefits it
		brings.
G1-5	Detailed Technical Information	Provide in-depth details (architecture,
		models, specifications, etc.) about the
		innovation.
G1-6	Expected Timeframe for Entry	Indicate anticipated timelines for
	into Service	operational readiness, testing, and
		certification.
G1-7	Link to Related Work of	Provide links or descriptions of any
	Standard-Making	ongoing or related work by standard-
	Organizations (SMOs)	setting bodies.

Each question allows you to:

- Enter your response when you click on the empty box.
- Attach supporting documents (if needed).
- Click 'Save as Draft' to save progress or 'Submit to ICAO' to finalize your submission.

At the bottom of the form, you will be able to:

- Click 'Save as Draft' to save progress.
- Click 'Submit to ICAO' when you are ready to submit your responses to ICAO. Please note that once submitted, you will not be able to make changes. If you would like to do a major change, please contact us at innovation@icao.int

Security Tip: Avoid using special characters like <, >, or system code in text fields. They may be blocked.

GATE 2 – Advanced-Stage Evaluation

Gate 2 is the second level of evaluation in ICAO's innovation assessment process. It is intended for innovations that have progressed beyond the conceptual stage and now demonstrate a higher level of maturity through validation, pilot trials, or early deployment. These innovations are closer to operational readiness and may require ICAO's deeper evaluation regarding global interoperability and potential standardization.

Submitting to Gate 2 allows ICAO to assess the innovation's readiness for wider deployment, its alignment with existing frameworks, and the potential need for regulatory or standard-making support. You should select Gate 2 when:

- Your innovation has progressed beyond concept or prototype, with real-world testing or limited operational deployment.
- You can demonstrate a higher level of maturity, supported by validation, feedback, or performance data.

Important Note:

If you are entering the assessment process directly at Gate 2, you are still required to provide all information requested under Gate 1. This ensures ICAO has a complete understanding of your innovation's origins, conceptual framework, and alignment with ICAO's Strategic Objectives.

Required fields for GATE 2 include:

ID	Item	Description
G2-1	Gate 1 Required Questions	If you are entering directly at Gate 2, you must still provide or update information from Gate 1. Specifically: •G1-1 – Submitting Entity: Select the ICAO Member State or international organization responsible for the innovation. • G1-2 – Innovation Description: Provide a technical and operational description of your innovation, including how it works and what it solves. • G1-3 – Contribution to ICAO Strategic Objectives: Explain how your innovation supports ICAO's strategic goals, such as LTAG, safety, or efficiency. • G1-4 – Global Benefits and Suitability: Describe how your innovation is applicable globally and how it benefits the aviation community.

G2-1 (cont.)	Gate 1 Required Questions (cont.)	 G1-7 – Link to Work of SMOs: Provide links or details of related work being done by standard-making organizations (e.g., RTCA, EUROCAE). G2-3 – Timeframe for Entry into Service: Indicate when the innovation will be ready for testing, deployment, or certification. G2-4 – Certification/Approval Progress: Provide updates on certification processes or regulatory approvals already underway. G2-7 – Spectrum Impact: Indicate whether your innovation affects aeronautical frequency spectrum and describe the nature of that impact.
G1-1-1	Submitting Entity	Examples or references illustrating your organization's
	Examples	role in the innovation.
G1-2	Innovation	Provide a detailed technical and operational overview
	Description	of the innovation.
G1-3	Contribution to ICAO	Indicate how the innovation contributes to ICAO's
	Strategic Objectives	strategic objectives (e.g., LTAG, safety, sustainability).
		(Ref paragraph 8.2a)
G1-4	Global Benefits and	Describe how the innovation could be applied globally
	Suitability	and what benefits it brings. (Ref paragraph 8.2b)
G1-7	Link to Related Work	Provide a link to relevant work or material by SMOs. If
	of Standard-Making	links cannot be provided, summarize related efforts in
	Organizations (SMOs)	this field.
G2-2	Innovation Validation	Demonstrate that the innovation is stable in design and
	and Testing	is undergoing testing and/or validation. (Ref paragraph
		9.2c) This may include flight tests, bench tests, or
		proof-of-concept trials. Include information aligned
		with maturity definitions from the Global Air Navigation
62.2	T'	Plan (GANP).
G2-3	Timeframe for Entry	Provide the anticipated timeline for entry into service,
	into Service	including operational readiness, testing, and
C2.4	Dungunga Terrend	certification. (Ref paragraph 9.2d)
G2-4	Progress Toward	Detail the progress toward certification or formal
C2 E	Certification/Approval	approval, if applicable. (Ref paragraph 9.2d)
G2-5	High-Level Gap	Provide a high-level gap analysis against ICAO
	Analysis	provisions and/or the Global Plans. (Ref paragraph 9.2d and note) Include any relevant documents as
		attachments. Ensure the analysis reflects the level of
		maturity as per the GANP.
G2-6	Concept of	Provide a brief outline of the Concept of Operations
02 0	Operations	(ConOps), describing how the innovation integrates
	- Operations	1 (2011) by the second his how the inhoration integrates



Each question allows you to:

- Enter your response when you click on the empty box.
- Attach supporting documents (if needed).
- Click 'Save as Draft' to save progress or 'Submit to ICAO' to finalize your submission.

At the bottom of the form, you will be able to:

- Click 'Save as Draft' to save progress.
- Click 'Submit to ICAO' when you are ready to submit your responses to ICAO. Please note that once submitted, you will not be able to make changes. If you would like to do a major change, please get in touch with us at innovation@icao.int

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GATE 3 – Pre-Deployment Evaluation

GATE 3 is the third and final level of evaluation in ICAO's innovation assessment process. It is intended for innovations that are nearing full operational deployment and have already demonstrated success in real-world environments. These innovations are typically in advanced testing, certification, or approval phases, and are ready for broader adoption across the aviation system.

Submitting to Gate 3 enables ICAO to assess the innovation's full maturity, regulatory readiness, and its alignment with global aviation standards and operational frameworks. Innovations at this level are expected to have supporting documentation from trials, approvals, and concept validation. You should select Gate 3 when:

- Your innovation has been successfully tested or demonstrated in an operational environment (e.g., TRL 7 or higher).
- Certification or regulatory approvals are in progress or completed.
- The concept of operations is clearly defined and aligned with ICAO global plans.
- You are ready for ICAO to consider enabling policies, standards, or guidance to support global implementation.



Important Note:

If you are entering the assessment process directly at GATE 3, you must still provide all required information from GATE 1 and GATE 2. This ensures ICAO has a complete understanding of your innovation's progression, technical validation, and alignment with strategic objectives.

Required fields for GATE 3 include:

ID	Item	Description
G3-1	Gate 1 & Gate 2 Required questions	If you are entering directly at Gate 3, you must still provide or update information from Gates 1 and 2. Specifically: • G1-1 – Submitting Entity: Select the ICAO Member State or international organization responsible for the innovation. • G1-2 – Innovation Description: Provide a technical and operational description of your innovation, including how it works and what it solves. • G1-3 – Contribution to ICAO Strategic Objectives: Explain how your innovation supports ICAO's strategic goals, such as LTAG, safety, or efficiency • G1-4 – Global Benefits and Suitability: Describe how your innovation is applicable globally and how it benefits the aviation community. • G1-7 – Link to Work of SMOs: Provide links or details of related work being done by standard-making organizations (e.g., RTCA, EUROCAE). • G2-3 – Timeframe for Entry into Service: Indicate when the innovation will be ready for testing, deployment, or certification. • G2-4 – Certification/Approval Progress: Provide updates on certification processes or regulatory approvals already underway. • G2-7 – Spectrum Impact: Indicate whether your innovation affects aeronautical frequency spectrum and describe the nature of that impact.
G3-2	Operational Implementation	Indicate whether your innovation has already been implemented in a real-world environment (e.g., airport, air traffic management center). Include: • Results or feedback from pilot projects or

ID	Item	Description
G3-3	Gap Analysis vs. ICAO Frameworks	Submit a detailed analysis identifying gaps between your innovation and existing ICAO provisions. This includes: • Gaps with ICAO SARPs or the Global Air Navigation Plan (GANP) • Challenges for global adoption under current rules • Areas requiring new standards or amendments to existing ICAO material
G3-4	Final Concept of Operations (ConOps)	Provide a structured Concept of Operations that describes how the innovation functions in real-world aviation operations. It should include: • Operational roles and responsibilities • User scenarios and expected outcomes • Safety, efficiency, or environmental improvements • Integration with current aviation systems

Each question allows you to:

- Enter your response when you click on the empty box.
- Attach supporting documents (if needed).
- Click 'Save as Draft' to save progress or 'Submit to ICAO' to finalize your submission.

At the bottom of the form, you will be able to:

- Click 'Save as Draft' to save progress.
- Click 'Submit to ICAO' when you are ready to submit your responses to ICAO. Please note that once submitted, you will not be able to make changes. If you would like to do a major change, please get in touch with us at innovation@icao.int

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7. UPDATE A SPECIFIC INNOVATION ENTRY

Click 'Update an Entry' from 'Update a Specific Entry'. You will be brought to a new page where you will be able to see your Submitted Entries Inbox:

- Reviewed Submitted Entries:
 - These are innovations that have completed the full review process by both the Secretariat and the Air Navigation Commission (ANC).
- Reviewing Submitted Entries:
 - These are innovations currently undergoing assessment by either the Secretariat or ANC.

8. FOLLOWING UP AFTER A SUBMISSION

8.1 UNDERSTANDING THE REVIEW PROCESS

After submission, your innovation will be reviewed through these steps:

For Gate 1:

- The ICAO Secretariat performs an initial assessment.
- The Air Navigation Commission (ANC) reviews the assessment and determines if the innovation passes Gate 1.
- The Secretariat informs the submitting entity of the outcome via email.

For Gate 2:

- The ICAO Secretariat adds any interdependence, relevant references to the Global Plans, and data collected regarding similar innovations.
- The ANC designates expert group(s) to evaluate the submission.
- Expert groups review and make recommendations to the ANC.
- The ANC reviews recommendations and determines if the innovation passes Gate 2.
- The Secretariat informs the submitting entity of the outcome via email.



For Gate 3:

- Expert groups assess the innovation update and detailed gap analysis.
- The ANC reviews the submission and recommendations from expert groups.
- The ANC decides whether the innovation passes Gate 3.
- The Secretariat informs the submitting entity of the outcome via email.

8.2 MAINTAINING YOUR SUBMISSION

- Provide timely updates on your innovation's progress.
- Respond promptly to requests for additional information.
- Be prepared to engage with expert groups for clarification or detailed discussions.
- Keep track of your innovation status on the Standardization Roadmap through the iSTARS^{4.0} platform.

9. CONTACT INFORMATION

- For technical support with the iSTARS^{4.0} platform, use the email address: istars@icao.int
- For questions related to the Standardization Roadmap, use the email address: innovation@icao.int



APPENDIX A: INTERNATIONAL AGENCIES RECOGNIZED BY ICAO

Abbreviation	Full Name		
UNDRO	Office of the United Nations Disaster Relief Co-Ordinator		
UNHCR	Office of the United Nations High Commissioner for Refugees		
UNICEF	United Nations Children's Fund		
UNCTAD	United Nations Conference on Trade and Development		
UNDP	United Nations Development Programme		
UNEP	United Nations Environment Programme		
UNITAR	United Nations Institute for Training and Research		
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East		
UNU	United Nations University		
WFP	World Food Programme		
ESCAP	Economic and Social Commission for Asia and the Pacific		
ESCWA	Economic and Social Commission for Western Asia		
ECA	Economic Commission for Africa		
ECE	Economic Commission for Europe		
ECLAC	Economic Commission for Latin America and the Caribbean		
FAO	Food and Agriculture Organization of the United Nations		
IFAD	International Fund for Agricultural Development		
ILO	International Labour Organisation		
IMO	International Maritime Organization		
IMF	International Monetary Fund		
ITU	International Telecommunication Union		
UNESCO	United Nations Educational, Scientific and Cultural Organization		
UNIDO	United Nations Industrial Development Organization		
UPU	Universal Postal Union		
None	World Bank Group		
WHO	World Health Organization		
WIPO	World Intellectual Property Organization		
WMO	World Meteorological Organization		
UNWTO	World Tourism Organization		
AFCAC	African Civil Aviation Commission		
EU	European Union		
EUROCONTROL	European Organisation for the Safety of Air Navigation		
ESA	European Space Agency		
IAEA	International Atomic Energy Agency		
ICPO-INTERPOL	International Criminal Police Organization		
IHO	International Hydrographic Organization		
UNIDROIT	International Institute for the Unification of Private Law		
IAC	Interstate Aviation Committee		
JAA-TO	Joint Aviation Authorities – Training Organisation		

LACAC	Latin American Civil Aviation Commission		
LAS	League of Arab States		
OAS	Organization of American States		
None	Pacific Islands Forum		
PAIGH	Pan American Institute of Geography and History		
SICA	Sistema de la Integración Centroamericana		
WCO	World Customs Organization		
WTO	World Trade Organization		
AU	African Union		
ASECNA	Agency for Air Navigation Safety in Africa and Madagascar		
ACAO	Arab Civil Aviation Organization		
COCESNA	Central American Corporation for Air Navigation Services		
CE	Council of Europe		
ECAC	European Civil Aviation Conference		
International Cospas-			
Sarsat Programme	International Satellite System for Search and Rescue		
OPEC	Organization of the Petroleum Exporting Countries		
BAGAIA	Banjul Accord Group Accident Investigation Agency		
ARINC	Aeronautical Radio Inc.		
AsMA	Aerospace Medical Association		
ACI	Airports Council International		
ATRS	Air Transport Research Society		
AWG	Aviation Working Group		
CANSO	Civil Air Navigation Services Organisation		
EUROCAE	European Organisation for Civil Aviation Equipment		
FSF	Flight Safety Foundation		
GEA	Global Express Association		
IDI	Institute of International Law		
IASI	Inter-American Statistical Institute		
IAASM	International Academy of Aviation and Space Medicine		
FAI	International Aeronautical Federation		
IATA	International Air Transport Association		
IAPSO	International Association for the Physical Sciences of the Ocean		
IABA	International Association of Aircraft Brokers and Agents		
IAIN	International Association of Institutes of Navigation		
IBAC	International Business Aviation Council		
ICC	International Chamber of Commerce		
CIE	International Commission on Illumination		
ICASC	International Committee for Airspace Standards and Calibration		
ICCAIA	International Coordinating Council of Aerospace Industries Associations		
IAOPA	International Council of Aircraft Owner and Pilot Associations		

r	
IFAIMA	International Federation of Aeronautical Information
117(114)7(Management Associations
IFALDA	International Federation of Airline Dispatchers' Associations
IFALPA	International Federation of Air Line Pilots' Associations
IFATCA	International Federation of Air Traffic Controllers' Associations
IFATSEA	International Federation of Air Traffic Safety Electronics Associations
VAI	Vertical Aviation International
IGU	International Geographic Union
ILA	International Law Association
CIRM	International Maritime Radio Committee
ISO	International Organization for Standardization
ISASI	International Society of Air Safety Investigators
ISI	International Statistical Institute
ITF	International Transport Workers' Federation
IUAI	International Union of Aerospace Insurers
IUGG	International Union of Geodesy and Geophysics
UIC International Union of Railways	
RAeS	Royal Aeronautical Society
RTCA	RTCA, Inc.
SITA	Société internationale de télécommunications aéronautiques
TIACA	The International Air Cargo Association
WWACG	World Wide Airport Coordinators Group
ACVFFI	Air Crash Victims' Families' Federation International
SAE	Society of Automotive Engineers (SAE) International
IASO	International Aviation Services Organization
iPADIS	International Partners for Aviation Development, Innovation and Sustainability
ICAS	International Council of the Aeronautical Sciences
IPCSA	International Port Community Systems Association
ALICANTO	International Association of Aviation and Aerospace Education
ATAG	Air Transport Action Group
ASA	Air Transport Action Group Airport Services Association
IFAR	International Forum for Aviation Research
IFAK	international Forum for Aviation Research



APPENDIX B: REGISTRATION FORM FOR SUBMITTING ENTITIES FOCAL POINTS ON HOW TO OBTAIN SUBMITTING AND EDITING RIGHTS TO THE ICAO STANDARDIZATION **ROADMAP**

RESPONSE FORM TO BE COMPLETED AND RETURNED TO ICAO

Subject:	Access t	o the ICAO	Standard	ization Ro	admap
To:					

The Secretary General International Civil Aviation Organization (ICAO) 999 University Street Montréal, Quebec Canada H3C 5H7

Please complete the form below and return it to: innovation@icao.int

FOCAL POINT RESPONSIBLE FOR SUBMITTING OR UPDATING INNOVATION INFORMATION

State or Submitting Entity	
Name(s) of Focal Point(s)	
Title(s) of Focal Point(s)	
Official E-mail Address(es) of Focal	
Point(s)*	
Designated by (Name)	
Title of Designator	
Official E-mail Address of	
Designator*	

- END -

^{*} An official email address is mandatory to be granted access rights.