



International Aeronautical Federation (IAF)
International Project/Programme Management Committee (IPMC)

2027 Young Professionals Leadership Development Programme Statement of Work

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1 Introduction

1.1 Scope

The IAF's International Project/Programme Management Committee (IPMC) strives to support a better inclusion of Young Professionals in the international space industry and the development of the next generation workforce. Every year, the IPMC sponsors the Leadership Development Programme for Young Professionals, with the goal to collect findings and recommendations that can help bridge the generational gap in the workplace and improve the way projects are collectively executed.

This Statement of Work (SOW) describes the Programme topics, activities to be executed and the required deliverables.

1.2 Background for the Leadership Development Programme

Young Professionals throughout the space industry face daily challenges when it comes to making the transition from their student careers to their professional careers, and from starters to experienced professionals and leaders. These challenges arise from either their perceived, or demonstrated, lack of professional work experience as students and continue into the first five to ten years of their careers. Early career professionals are not only faced with the steep learning curves associated with obtaining real-world skills but are also faced with the need to earn the respect of their more experienced colleagues.

In recognition of these challenges, the IPMC member organizations welcome the active participation of early career employees in identifying challenges, opportunities, and new approaches to nurturing a highly motivated and experienced aerospace workforce. These efforts are being pursued through the Programme involving selected Young Professionals and overseen by an appointed organizing committee. The expected output of this Programme is observations, conclusions and recommendations that can be employed by aerospace organizations to ease the transition of Young Professionals into their careers, and to facilitate transfer of know-how to new generations of workforce. The Programme observations and recommendations can also benefit early career employees by helping them navigate and advance in the early stages of their careers.

1.3 Reference Documents

The reports from previous editions can be consulted by the Programme participants as an example of the outcomes. They also contain results and background information that may be relevant for some of the topics assigned in this SOW. These documents can be consulted on the [2026 IPMC YP LDP Delegates Folder](#).

Reference Documents			
No.	Title	Author	Date
RD1 to RD13	IAF-IPMC Young Professionals Leadership Development Programme – Results Report (issues from 2012 to 2026)	Delegates	2012 - 2026

1.4 OC Organization

The OC is the Organizing Committee, consisting of alumni attendees. The OC team can be reached via ipmc.yp.workshop@gmail.com

1.5 Acronyms and Abbreviations

IAC	International Astronautical Congress
IAF	International Astronautical Federation
IPMC	International Project/Programme Management Committee
SOW	Statement of Work
OC	Organizing Committee
YP	Young Professional (participants – delegates - attendees)

2 Objectives of the Leadership Development Programme

The goal of the IPMC YP Leadership Development Programme is to gather inputs from Young Professionals in the international space community regarding how to better develop and empower the next generation workforce and how to collectively improve the way we manage space projects. To achieve this, the cohort of YP Delegates will conduct research aimed at producing thoughtful and well-rounded observations and recommendations on the assigned topics.

The observations and recommendations are mainly meant to address middle and senior managers in aerospace organizations, and most notably those involved with Project and Program Management.

The results from YPs' research will be presented at the Programme Final Event (at IAC 2027). Results will also be gathered in the IPMC YP Report and made available online on the IAF website (www.iafastro.org).

2.1 *Nomination process and team composition*

The Programme is open to Young Professionals, under 35 years, working for IAF-affiliated organizations.

The participation to the Programme is **strictly based on a nomination and selection process**. Self-application is not allowed.

Young delegates seeking to enroll in the Programme should obtain the endorsement of a senior professional in their work organization, i.e. a Nominator. As an example, this person can be the Young Professional's Project Manager, their Director if they work in the industry, or their Principal Investigator or Full Professor if they work in Academia.

Young Professionals shall prepare their own CV and motivation letter.

The Nominator shall send a recommendation letter to ipmc.yp.workshop@gmail.com, **endorsing the Young Professional, attaching the CV and motivation letter**, and providing confirmation that the Young Professional has **at least preliminary authorization to travel to the 2027 IAC and attend the Programme Final Event and the Congress in-person**. Preliminary authorization implies an indication via the recommendation letter that attendance is expected to be supported by the organization.

Upon receiving the recommendation letter complete of all information specified above, the Organizing Committee (OC) will screen the candidate.

Selected candidates will receive a link to an onboarding questionnaire. Filling in this questionnaire within the prescribed deadline is a mandatory step to complete enrollment.

Successful candidates will be added to the chat where they will be able to form a team together with other candidates corresponding to one of the research topics (see section 3). The Organizing Committee will assist candidates in enrolling in one of the available topics if they are unable to complete the enrollment independently.

Each team will be required to submit its proposed composition to ipmc.yp.workshop@gmail.com, together with a brief explanation of how the members' backgrounds, experience and motivations make the team well suited to address the selected topic. The OC will review the proposed teams and may recommend adjustments to ensure an

appropriate balance of relevant expertise and perspectives, as well as diversity in terms of gender, nationality, age and professional background.

During the selection and onboarding process, candidates will be asked to rank topics in order of preference, and clearly state their first and second choice. However, there is no guarantee that delegates will be able to enroll to the team of their first or second choice. The **nomination shall be to the Programme as a whole and shall not be conditional upon the assignment to one specific topic.**

3 Topic Descriptions

For the purposes of the Programme, delegates are enrolled into separate groups, each of which will be responsible for one of the topics hereunder.

Please note that, for each topic, the SOW only provides a general description of the topics. One of the first tasks for the teams will be to come up with a more defined direction for their topic and defend their proposal. Each Team can decide which research questions are of interest to them.

3.1 AI-Enabled Knowledge Management in Space Organizations

Space organizations rely on highly specialized knowledge accumulated over long project lifecycles and distributed among employees, technical documentation, databases, suppliers and external partners. Artificial Intelligence offers new opportunities to retrieve, structure, connect and reuse this knowledge, potentially improving onboarding, lessons-learned processes, decision-making and the transfer of know-how to the next generation workforce. At the same time, its implementation raises important questions related to confidentiality, intellectual property, ITAR/EAR restrictions, cybersecurity, data quality, reliability, source verification and traceability, and the risk of sensitive organizational knowledge and customer data being transferred to external platforms. Some organizations are therefore developing internal models, domain-specific assistants and private computing infrastructure, although the resources and expertise required may be beyond the reach of smaller entities.

The key assignment to be addressed by delegates is:

How can AI be responsibly and effectively integrated into Knowledge Management in space organizations? Which capabilities should be developed at organizational level, which could be shared at national or sector level, and which require common standards or infrastructure?

Delegates are encouraged to investigate the technical, organizational and cultural conditions required for implementation, determine how human accountability can be preserved, and examine how AI-enabled Knowledge Management can help Young Professionals access institutional knowledge, integrate more rapidly into their organizations and contribute effectively to project activities. The research should result in practical recommendations and YPs are invited to touch on issues concerning governance, infrastructure, skills, implementation pathways and methods for measuring the value created by AI-supported Knowledge Management.

The Organizing Committee understands that this particular topic can become very broad quite quickly. Hence, it is suggested to keep the focus specifically on knowledge-management applications rather than general AI adoption in space organizations.

3.2 Managing Risk and Uncertainty in Space Projects

Space projects are executed over long time horizons and involve complex technical dependencies, evolving requirements, multiple technologies, limited production volumes, changing markets and increasingly volatile geopolitical and economic environments. Under

these conditions, risks' probability, potential impact and relationship with other risks may change considerably throughout the project lifecycle. Conventional risk registers and periodic reviews may therefore be insufficient to support decisions when uncertainty is high, information is incomplete or several risks can materialize simultaneously.

The key assignment to be addressed by delegates is:

How can Project and Program Managers identify, evaluate and respond to changing risks and uncertainties before they significantly affect project performance? How should volatility and uncertainty be incorporated into cost estimates, schedules, contingencies, reserves, contractual arrangements and decisions?

Delegates are encouraged to compare different qualitative, quantitative, scenario-based and data-driven approaches; investigate appropriate early-warning indicators and escalation mechanisms; and examine how organizations determine their risk appetite and balance mitigation costs against potential consequences. The research may also consider strategies for avoiding, reducing, transferring or accepting risks, as well as methods for recognizing opportunities that may arise from uncertain conditions. The resulting recommendations should help project leaders make transparent, evidence-based decisions, allocate resources more effectively and strengthen project resilience without introducing unnecessary delay or bureaucracy.

3.3 International collaboration: searching for balance between sovereignty and cooperation

Space capabilities have increasing strategic, economic and security importance, leading many countries to pursue greater sovereignty, technological autonomy and reduced dependence on external actors. At the same time, the complexity and cost of space activities mean that very few countries or organizations can independently maintain all the technologies, infrastructure, expertise, data and supply chains required to implement ambitious space programmes. International collaboration therefore remains essential, but it can create strategic dependencies and expose projects to political change, export restrictions, unequal access to critical capabilities or the withdrawal of a partner.

The key assignment to be addressed by delegates is:

How can countries and space organizations determine which capabilities should remain sovereign, what criteria should be used to identify them, which dependencies are acceptable and manageable, and which areas would benefit most from international cooperation?

Delegates are encouraged to examine how autonomy and cooperation affect project cost, schedule, innovation, resilience, interoperability and access to markets; compare the perspectives of established and emerging space nations; and analyse how workshare, responsibilities, intellectual property, data access and critical technologies can be distributed without undermining trust or project viability. Another interesting question is to consider the impact of commercial space actors and New Space companies, which are increasingly influencing strategic capability decisions traditionally driven by governments and agencies

Particular attention should be given to the role of Project and Program Managers in identifying strategic dependencies, preparing alternative scenarios and creating collaboration models that can withstand changes in national priorities. The resulting recommendations should help organizations pursue meaningful cooperation while retaining appropriate control over critical capabilities.

For Topic 3, this framing deliberately concentrates on strategic capability choices and dependency management, rather than repeating the 2026 topic's focus on the governance structures of multinational programmes.

3.4 Managing Interfaces and Interoperability Across Complex Space Programmes

Modern space missions increasingly operate as systems of systems, connecting spacecraft, launch services, ground infrastructure, software, data platforms, suppliers and organizations that may have been developed under different standards, contractual arrangements and technical assumptions. Even when individual components perform correctly, poorly defined or managed interfaces can lead to integration problems, rework, delays, cost growth and limitations on future cooperation or reuse.

The key assignment to be addressed by delegates is:

How can Project and Program Managers work with systems engineering teams to manage technical, organizational, contractual and data interfaces throughout the complete project lifecycle?

Delegates are encouraged to investigate how responsibilities for interfaces should be assigned, documented and monitored; how changes should be communicated across organizational and contractual boundaries; and how configuration management, interface-control documentation, digital engineering, verification and validation can support successful integration. The research may also examine the trade-offs between standardization and innovation, modularity and optimized performance, and short-term project objectives and long-term ecosystem interoperability. Another focus can be given to how Young Professionals, who frequently work across digital tools, disciplines and organizational boundaries, can help identify disconnected processes and facilitate communication between specialist teams. The resulting recommendations should provide practical approaches for improving interface ownership, managing cross-project dependencies and making interoperability an explicit consideration in project planning and decision-making.

3.5 Constructive Challenge and Decision-Making in Space Projects

Space projects require important decisions to be made under technical uncertainty, schedule pressure and incomplete information, while relevant expertise is often distributed across different disciplines, organizations and levels of seniority. Project outcomes can be negatively affected when concerns are not raised, assumptions cannot be questioned or escalation pathways are unclear. At the same time, challenge that is poorly structured or disconnected from decision-making authority can create conflict, indecision and unnecessary delay.

The key assignment to be addressed by delegates is:

How can space project leaders create an environment in which employees—including Young Professionals—can question assumptions, communicate concerns and challenge decisions constructively, while maintaining clear accountability and timely execution?

Delegates are encouraged to investigate the role of organizational hierarchy, psychological safety, leadership behaviour, independent reviews, escalation mechanisms, pre-mortems, red teams, dissent records and lessons learned from near misses or unsuccessful decisions. The research should compare how different organizations distinguish constructive challenge from resistance or disruption, and examine the responsibilities of both managers and employees in creating productive dialogue. The resulting recommendations should help organizations improve decision quality, detect risks earlier and make better use of knowledge distributed throughout the workforce, while giving Young Professionals realistic and responsible ways to influence project outcomes.

3.6 Expected Impact

The research should move beyond a description of existing problems and produce recommendations that are practical, transferable and proportionate to the benefits they are expected to create. Each team is encouraged to identify the stakeholders responsible for implementation, the required resources and organizational conditions, the principal barriers and trade-offs, and suitable indicators for evaluating results. Depending on the topic, the expected impact may include improved cost and schedule performance, reduced rework and project delays, better risk identification, stronger knowledge retention, faster onboarding, improved workforce engagement and retention, more effective use of resources, or the responsible adoption of new technologies and management practices. Where feasible, delegates should distinguish between direct and indirect benefits, short- and long-term effects, and financial and non-financial value, and should consider how return on investment or other measurable benefits could be assessed. The ultimate objective is to provide middle and senior managers with evidence-based recommendations that can improve both the execution of space projects and the development and empowerment of the next generation workforce.

3.7 Research Proposal Presentation and Review

Following the formation of the teams, each team will be required to develop and present a research proposal. The purpose of this milestone is to ensure that the proposed research is relevant, sufficiently focused, methodologically sound and aligned with the objectives of the Programme before the teams proceed with the main research phase.

During the presentation, each team should explain the background and context of the topic, identify the principal challenges to be addressed and demonstrate the relevance of the proposed research to the space sector and to project, programme or people management. The presentation should clearly define the main research questions and any supporting sub-questions, present the team's initial hypotheses or assumptions, and describe the methodology that will be used to investigate them. Teams should also identify the principal sources of information, stakeholders or organizations they intend to consult / to interview, the expected research outputs and the potential practical value of their work. For the interviews, the

teams are expected to explain participant selection and how confidentiality, consent, and collected information will be handled.

The research proposals will be presented to the OC and mentors. Following each presentation, the team will be expected to answer questions, justify its choices and respond to feedback concerning the scope, feasibility, methodology and expected impact of the proposed research. The review is intended to provide constructive guidance and may result in recommendations to refine the research questions, adjust the scope, strengthen the methodology or clarify the intended outcomes. The teams are expected to incorporate the agreed feedback and confirm/finalize the research scope before starting the data-collection phase.

4 Requirements for Management, Meetings, Deliverables and Reporting

4.1 Management

Each topic group shall have an appointed group leader who will be responsible for overseeing the timely execution of the tasks assigned to that group. The group leader will represent his or her group at all relevant meetings with the OC. At such a time when the group leader cannot attend a meeting, the group leader should appoint an ad hoc representative. The group leader shall be the main point of contact between the group and the OC.

Duties of the group leader include:

- Establishment of a project schedule including major milestones and deliverables
- Scheduling and execution of regular group meetings
- Representation of the group at all relevant meetings of the OC
- Accountability for all group deliverables and their quality

Each group shall have an appointed rapporteur who will be responsible for the compilation and distribution of group minutes of meeting and papers. The rapporteur shall also ensure adherence to IAF typographical and stylistic rules for papers.

The group leader will be in charge of organizing the team as they wish, provided the various tasks will be shared between the team members and all deliverables will be submitted timely.

4.2 Mentor

Each topic group will be assigned a Mentor.

A mentor is an experienced professional who has years of valuable experience, built profound knowledge on the topic, and should be considered as the voice of reason and the group's "reality check".

The mentor is requested to share their insightful knowledge with the Young Professionals; guide them through the topic; highlighting important aspects to be researched, suggest literature reviews, the right questions to ask when interviewing peers, etc. If time permits, the mentor can be invited to review the deliverables before they are submitted.

The cadence of meetings between the mentor and the team shall be agreed among parties at the start of activities. It is important for teams and mentors to meet and discuss at least once per month. Teams are required to initiate the exchange, proposing dates and preparing in advance ideas and questions to facilitate the discussion.

The groups are invited to listen to the mentor and take their input to heart.

The mentor's role is not necessarily to promote their own organization, but to share their inputs to the groups based on their overall experience and acquired knowledge.

4.3 Meetings

A Kick-off Meeting will be held in November to officially begin the activities. All delegates and members of the OC are expected to be in attendance.

Each topic group is required to hold regular meetings (advised is at least weekly during the first few weeks, twice per month during the central months, and again weekly in the weeks leading up to submission deadlines and the Final Event) to ensure project tasks are on schedule and in line with OC expectations. One member of the OC is to be in attendance regularly during these meetings to offer guidance and insight as requested by the group members. However, it is the task of the group leader to define a meeting agenda and moderate the meeting.

All along the entire duration of the Programme, other plenary events will be offered, such as PM training sessions or Expert talks. All delegates are expected to attend these plenary sessions. Those who cannot attend must inform their group leaders. Group leaders who are not able to attend must inform the OC and appoint a representative in their place. Failure to attend at least 2/3 of these plenary sessions will result in termination of participation.

The workload of the Programme is estimated at 4 hours per week per person, with peaks just prior to major milestones and to the Final Event, to ensure timely submission of the paper and presentation, either in their draft or final versions.

Group meeting minutes and actions are expected to be made available on Google Drive.

Group leaders are expected to submit their deliverables in accordance with section 4.4 below.

4.4 Deliverables

Each team shall provide a detailed analysis of their topic, by preparing a reporting paper and a brief presentation. YPs will **submit their work both to the OC and to the official IAF paper selection process** to get an opportunity to publish their results at the IAC.

The following list of deliverables shall apply:

- a. Team Composition submission – due week 49 (2026, TBC).
- b. Research proposal submission – due week 3 (TBC).
 1. Draft paper abstract, redacted according to IAF editorial rules – due week 7 (TBC).
 2. Paper abstract, redacted according to IAF editorial rules – due week 9 (TBC).
 3. Draft paper, including the full and complete outline of the paper – due week 24 (TBC).
 4. Draft presentation, overview of the intended content and format – due week 24 (TBC).
 5. Final paper, redacted according to IAF editorial rules – due week 36 (TBC).
 6. Final presentation, redacted according to IAF editorial rules – due week 37 (TBC).

Dates are TBC because they will be finalized to match exactly the IAF papers submission process.

After abstract submission to the IAF, the team shall continue conducting its work and not pause while waiting for confirmation of outcome, which may occur more than one month later. Regardless of paper selection outcome, the team is anyhow scheduled to present their results at the Final Event, and therefore needs to make good use of all available time.

All material shall be written in line with the IAF published guidelines (see also section 4.5 below).

The team composition (a), the research proposal (b) and the three draft deliverables (n.1, n.3 and n.4) and shall be submitted to the OC only (by sending a message to the official email address ipmc.yp.workshop@gmail.com).

The other three deliverables (n.2, n.5 and n.6) shall be submitted both to the IAF (via the online portal) and to the OC (by sending a message to the official email address ipmc.yp.workshop@gmail.com).

As much detail as possible should be provided in all major deliverables. As a rule, enough detail should be provided in each document such that a reader who was not involved in the research can clearly follow the steps taken by the YPs and understand the results.

For the draft paper (mid-term deadline), it is acceptable to have missing or incomplete results. However, the deliverable should already show a clear document structure, a complete literature review, a description of the selected research methodology, and at least an itemized summary of parts that are still missing, clearly addressing how the team plans to complete the work and which kind of information will fill those gaps. If the team is making use of case studies or interviews, the relevant support material should also be included in the Appendix (e.g. case study details, list of interview questions...). Finally, teams are encouraged to already draft a few outcomes, findings and recommendations that can be drawn from activities conducted so far.

Failure to provide meaningful contribution to the deliverables (i.e. not contributing to the research, not writing any text for the paper or presentation, routinely skipping team meetings) will result in termination of participation.

4.5 Reporting

The delegates are required to write all deliverables as per IAF editorial instructions.

Every year the IAF publishes detailed guidelines to norm the preparation and submission of IAC abstracts, manuscripts and presentations. YPs shall adhere to these guidelines, which include all necessary details on how to prepare and submit the material.

Guidelines will be available on www.iafastro.org, approximately by November 2026 for the abstract, and by June 2027 for paper / presentation.

The OC therefore will communicate these details separately to the delegates.

For information only, the following link provides an example of the usual IAF paper format, showing the detailed style guide for manuscripts. See manuscript sample [HERE](#).

It is mandatory and especially important that the deliverables follow the IAF official style guide, because:

- It avoids exclusion / rejection from the IAC paper submission process.
- All the individual papers from the different groups will also be collated into one final file for the IPMC, therefore a unified structure, format, and referencing style has to be adopted.

It is important that all final deliverables are both submitted to the IAF and uploaded on the Programme's Google Drive folder.

4.6 Publishing and Presentation of Results

Each topic group will have a chance to present the results of their work during the Programme's Final Event, a one-day in-person gathering held in connection with the 78th IAC, which will enable delegates to address and get to interact with senior professionals and field experts.

Teams whose papers have been accepted for publication by the IAF will also have the duty and privilege of presenting their work to the general audience in the proper Technical Session during the IAC.

The final papers will be consolidated by the OC into one overall report before the end of 2027. Once finalized, the overall consolidated report will be distributed to the IPMC members. The final report will also be distributed to all IAF member organizations by publishing on the [IAF website](#), accessible to the general public.