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

2025 Young Professionals Workshop Statement of Work

Sunday September 28th, 2025

Sydney, Australia

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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 a Workshop 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 workshop topics, activities to be executed and the required deliverables.

1.2   Background for the Workshop

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 workshops involving selected Young Professionals and overseen by an appointed organizing committee. The expected output of these workshops are 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 workshop 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 following documents can be consulted by the workshop participants as they contain relevant background information. These documents can be consulted on the 2025 IPMC YP Workshop Delegates Folder.

Reference Documents			
No.	**Title**	**Author**	**Date**
RD1 to RD12	IAF-IPMC Young Professionals Workshop – Workshop Results Report (issues from 2012 to 2024)	Workshop Delegates	2012 - 2024

1.4 WOC Organization

The WOC is the Workshop Organizing Committee, consisting of previous attendees. The WOC 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
WOC	Workshop Organizing Committee
YP	Young Professional (participants - delegates)

2 Objectives of the Workshop

The goal of the IPMC YP Workshop is to gather inputs from Young Professionals in the international space community regarding how to better develop and empower the next generation workforce. 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 Workshop Final Event (at IAC 2025). Results will also be gathered in the IPMC YP Workshop Report and made available online on the IAF website (www.iafastro.org).

2.1   Nomination process and team composition

The Workshop is open to Young Professionals, age 35 and younger, working for IAF-affiliated organizations.
The participation to the Workshop is strictly based on a nomination and selection process. Self-application is not allowed.

Young delegates seeking to enroll in the Workshop 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 2025 IAC and attend the Workshop Final Event and the Congress in-person**.

Upon receiving the recommendation letter complete of all information specified above, the Workshop Organizing Committee (WOC) 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 assigned to one of several teams, each one working on a different topic as presented in this SOW (see section 3).
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. The WOC uses this information to try and assign candidates to topics they are most interested in. However, there is no guarantee that delegates will be assigned to their first or second choice. The **nomination shall be to the Workshop as a whole and shall not be conditional upon the assignment to one specific topic**.

3 Topic Descriptions

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

Please note that, for each topic, the SOW proposes a few bullet points (questions) with ideas to develop the research. These bullet points are there to help Young Professionals steer and focus their work. There is no obligation for Delegates to address each and every bullet point. Each Team can decide which suggestions are of interest to them, which ones they want to disregard, and which ones they want to add based on their own preference, experience and knowledge.

3.1 *Project management and collaboration etiquette in the era of globalization and digitalization*

The space sector has grown into an increasingly globalized community. Cultural differences impact communication and working styles in any project team. Different people have different backgrounds and beliefs impacting anything from how to schedule and conduct meetings to which attitude they keep toward deadlines and punctuality. The role of the project manager, intrinsically a transverse manager, is particularly delicate because it must take into account and navigate their team members' differing attitudes toward hierarchy and authority.

The key assignment to be addressed by delegates in this section is:

> ***How to ensure maximum participation and productivity in teams whose members are from different geographies and cultural backgrounds? Which are the non-negotiable rules of professional etiquette in the global space community? What can project managers do to ensure their behaviors come across as respectful and well-meant, in spite of the unavoidable differences and possible mistakes in cross-cultural collaboration?***

A key success factor for this group is to avoid simply enumerating cultural and behavioral differences, while instead focusing on particular skills and competences that can help project managers be more effective when working with very diverse teams.

The following elements could be considered in the research:
- What are effective ways to build trust and rapport among team members from diverse cultural backgrounds, and are there key differences if they are co-located or working remotely (online)?
- How can project managers tailor their conflict resolution strategies to account for cultural differences in global project teams?
- What strategies can be employed to accommodate different decision-making processes and consensus-building practices across cultures?
- How can project managers adapt their style and techniques to accommodate varying expectations for work-life balance across different cultures?

- How can space professionals ensure that they maintain professional etiquette in digital (written and non-written) communication while working on projects across different cultures and geographies?

- What considerations should be taken into account when using humor or informal language with international team members?

- What role does emotional intelligence play in managing teams, and how can it be developed and applied?

- How can project managers in space projects improve their intercultural soft skills, apart from classical training such as classes and workshops?

- How can project managers ensure that team celebrations and recognitions are culturally inclusive and appropriate in a globalized digital workplace?

- How can space professionals address and respect varying privacy expectations and data sharing norms when collaborating on international projects?

Young professionals researching this topic are welcome to use their own team dynamics as a starting point. In their professional life as well as in this workshop, they may have experienced language barriers and varying levels of English proficiency. They may have seen culturally sensitive ways to work together, as well as totally inappropriate manners towards international colleagues. For sure they had to experiment with balancing formal and informal communication styles across diverse cultures. Delegates are encouraged to consider and discuss their first-hand experience when formulating their recommendations.

The presentation at the workshop should give sound recommendations on how to enhance the role and competencies of project managers with soft skills that cater to increasingly global and culturally diverse teams.

This is a new Topic that has not been researched in previous workshop editions. Anyhow, delegates shall consult reports from previous years to better understand how to shape and convey their recommendations.

3.2   Space organizations balancing innovation and risk

The innovation buzzword has been with us for more than 10 years. In a deep-tech industry like the space field, innovation is often associated with technological advancements and paradigm-shifting solutions. However, it is well accepted that innovation is not necessarily technological and product-oriented in nature. There can be innovative design processes, innovative business arrangements, and innovative management styles, to name just a few. Oftentimes there is a tension between innovation as a source of growth and innovation as a source of risk.

The key assignment to be addressed by delegates in this section is:

How can space organizations – directly or indirectly – promote innovation and make it compatible with sound, rigorous project execution? What balance is sought between innovating and managing risk? Which avenues are in place to foster innovation within core-project activities, especially leveraging fresh ideas by young professionals?

A key success factor for this group is to identify successful practices to foster innovation coming from within space organizations and space programs, in particular understanding in what ways space organizations can better engage with young professionals to inspire and integrate their innovative ideas into ongoing projects.

The following elements could be considered in the research:

- How much of a connection – if any – is there between innovating and solving challenges faced by projects?

- Which are the levers / tools that different space organizations (academia, agencies, industry…) can deploy to encourage innovation as a way to solve challenges encountered within projects?

- How can lessons learned from past projects help bring forward innovative ideas?

- How do space organizations incorporate feedback from astronauts and/or mission operators into the design of innovative projects and solutions?

- How do space organizations prioritize and manage the risks & opportunities associated with innovative solutions emerging in ongoing projects?

- What are the key challenges faced by incumbent well-established space organizations, and how can they overcome these challenges in order to be more innovative?

- What are the key challenges faced by space startups, and how can they overcome these challenges to drive innovation?

- How do space agencies and space companies manage their innovation pipelines, what processes do they use to evaluate and select the best ideas, and how do they measure the success of their innovation initiatives?

Young delegates are very likely familiar with some of the initiatives deployed in space organizations to foster innovation: in-house startups and skunkworks, hackathons and challenges, fablabs and design thinking labs… Sometimes it seems there is a chasm between these "innovation bubbles" and everyday project- and delivery-oriented work. Young professionals are encouraged to reflect on their own work experience and understand if and how this gap can be bridged, and innovation truly embedded in space projects.

The presentation at the Final Event should give sound recommendations on how to reconcile the need to effectively execute projects with the need to leave room for ingenuity and innovation, bridging the gap that oftentimes is found between routine project work and truly creative work.

This is a new Topic that has not been researched in previous workshop editions. Anyhow, delegates shall consult reports from previous years to better understand how to shape and convey their recommendations.

3.3 Project Manager and Project Technical Authority: contributing to project success with different roles, skills and career paths

It is the norm for space projects to be led by two key figures, one – the Project or Program Manager – responsible for the overall execution, and dealing specifically with programmatic issues, and the other – the Project Technical Authority – dealing with the technical scope and all aspects pertaining to design and development. Different organizations have assigned different nomenclatures to these two roles, but basically one retains the administrative authority and the other the technical authority, with the latter reporting to the former. Having the right people in these roles, and having them cooperate productively can make a substantial difference in the success of a project. The IPMC has always considered both sides of the coin as equally important, including both project management and system engineering ("technical disciplines") in its mandate.

The key assignment to be addressed by delegates in this section is:

How do proper interplay and balance between the Project Manager and the Project Technical Authority look like in a successful space project? What are the main differing priorities and sources of conflict between these two roles, and how can they be reconciled? Which competencies or techniques can assist Project Managers and Technical Authorities in working effectively together?

A key success factor for this group is to find real-life examples of how Project Managers and Technical Authorities work together, understand which leverages help them align and perform well versus which pitfalls can hinder progress, and extract lessons learned and recommendations that are applicable to future projects.

The following elements could be considered in the research:

- How do the hard skills required for a Project Technical Authority and for a Project Manager complement each other to ensure project success?

- How does the mindset and approach to problem-solving differ between Project Technical Authorities and Project Managers?

- How can effective communication between a Project Manager and a Project Technical Authority enhance project outcomes?

- Which are the different priorities of Project Managers and Project Technical Authorities that can lead to conflicts and inefficiencies? What are the critical decision-making points where collaboration between a Project Manager and a Project Technical Authority is most crucial for project success?

- What are the emerging technologies or methodologies that can help convergence and effective collaboration between Project Technical Authorities and Project Managers?

- How can a Project Technical Authority influence the project planning and risk management strategies led by a Project Manager, considering their technical expertise?

- How can the roles and career paths of a Project Manager and a Project Technical Authority adapt to the evolving technological landscape and industry trends to maintain project relevance and competitiveness?

- How important is cross-functional experience and exposure to different aspects of project execution for both Project Technical Authorities and Project Managers?

- What are the potential advantages and disadvantages of promoting Project Technical Authorities into Project Management roles, and how can organizations mitigate the challenges associated with these transitions?

- Which hybrid roles are used in space organizations to merge the technical expertise of Project Technical Authorities with the leadership and programmatic expertise of Project Managers? How can organizations maximize the contributions of these hybrid roles for project success?

Young delegates are encouraged to observe closely their senior peers in Project Management and Project Technical Authority roles, and discuss with them about the intricacies and challenges of jointly leading a project to success. Young professionals are also welcome to use their own first-hand experience about transitioning between these two roles, and the outcomes of such career trajectories.

The presentation at the Final Event should give sound recommendations on how to enhance the synergies between Project Managers and Project Technical Authorities, how to properly manage areas of probable conflict and how to leverage soft skills to make the most out of this duality.

This is a new Topic that has not been researched in previous workshop editions. Anyhow, delegates shall consult reports from previous years to better understand how to shape and convey their recommendations.

3.4 Artificial Intelligence in the Project Management Office

Project Management Offices (PMOs) and project teams are often overwhelmed by clerical administrative tasks, which consume significant portions of their valuable time. These tasks include extensive documentation, meticulous data entry, routine reporting, and compliance management. Such responsibilities, while essential for maintaining project accuracy and governance, divert attention from strategic planning and high-impact activities. Consequently, project managers and their teams find themselves mired in paperwork, reducing their capacity to focus on critical project execution and innovation. The administrative burden not only hampers productivity but also leads to frustration and burnout among team members. Streamlining these processes and leveraging automation via the use of Artificial Intelligence (AI) can alleviate this strain, enabling PMOs and project teams to redirect their efforts towards achieving project goals more efficiently and effectively, thereby enhancing overall project performance and success.

The key assignment to be addressed by delegates in this section is:

How can Artificial Intelligence be safely applied to reduce the clerical administrative burden on project teams? Which tasks or processes are more suitable to be automated through use of AI? What changes in skills and competences of PMO personnel would be needed to cope with implementation of Artificial Intelligence in their duties?

A key success factor for this group is to show a good understanding of both the responsibilities of a PMO and the capabilities – current or forecasted – of AI, to provide current examples of early adoption of AI in project management automation, and extrapolate how Artificial Intelligence can play a role in alleviating the workload of repetitive administrative tasks and freeing up time for more creative and strategic activities.

The following elements could be considered in the research:

- What specific PMO tasks can be automated by AI to free up project teams for more strategic activities?
- How can AI-driven tools be integrated into the PMO to enhance project planning and scheduling efficiency?
- How can AI improve the accuracy and timeliness of project reporting and analytics within the PMO?
- How can AI assist in risk management and issue resolution in project management?
- What role can AI play in enhancing communication and collaboration within project teams and stakeholders?
- How can AI-driven insights and data analysis support better decision-making in PMO?
- What are the potential challenges of implementing AI in PMO processes, and how can they be mitigated?
- What ethical considerations should be taken into account when deploying AI in project management?
- How can AI contribute to the continuous improvement of PMO processes and methodologies?
- What skills and knowledge would be needed by future PMO practitioners to effectively utilize AI in PMO functions?

Young professionals are encouraged to reflect upon their own work environment, identifying which tasks are creating excessive repetitive workload, and where they deem their ingenuity and motivation is stifled by the need to carry out routine activities that could lend themselves well to automation. By discussing with their peers and gathering examples from their more senior colleagues, Young Professionals can infer which tasks are the most suitable to be processed via AI tools, and how this could change the work experience in project teams.

The presentation at the Final Event should give sound recommendations on how to use Artificial Intelligence to reduce the burden that clerical tasks have on PMOs and project teams, and on which are the tools, skills and other considerations to be taken into account in a similar transformation journey.

This is a new Topic that has not been researched in previous workshop editions. Anyhow, delegates shall consult reports from previous years to better understand how to shape and convey their recommendations.

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 WOC. 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 WOC.

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 WOC
- 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 adhesion 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.

Depending on the group's requirements, the mentor can be present at each meeting, or regularly attend meetings. This will be up to the mentor and the group to decide.

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 by early December to officially begin the activities. All delegates and members of the WOC 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 WOC expectations. One member of the WOC 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 workshop, 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 WOC and appoint a representative in their place.

The workload of the workshop is estimated at 4 hours per week per person, with peaks just prior to the workshop to ensure timely finalization of the paper and presentation.

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 WOC 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:

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 35 (TBC).
6. Final presentation, redacted according to IAF editorial rules – due week 36 (TBC).

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

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

The three draft deliverables shall be submitted to the WOC only (by sending a message to the official email address ipmc.yp.workshop@gmail.com).

The other three deliverables shall be submitted both to the IAF (via the online portal) and to the WOC (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.

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 early November 2024 for the abstract, and by early June 2025 for paper / presentation.
The WOC 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 Workshop's Google Drive folder.

4.6   Presentation of Results

Each topic group will have a chance to present the results of their work during the Workshop's Final Event, a one-day in-person gathering held in connection with the 76th 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.

4.7   Evaluation by IPMC

The final papers will be consolidated by the WOC into one overall report before the end of 2025.
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.