

Proposal for Forming an IAA Study Group

Title of Study:

New space technologies at the service of societal needs

Proposer(s):

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Maria-Gabriella Sarah*

Primary IAA Commission Preference:

Commission 6: Space and Society: Culture and Education

Secondary IAA Commission Interests:

Commissions 3, 4 and 5

Members of Study Team

Chair(s):

Gustavo Medina Tanco, Maria-Gabrielle Sarah

Secretary:

TBD

Other Members:

TBD

Short Description of Scope of Study

Overall Goal:

The goal of the study is to generate an as comprehensive as possible picture of the present state of the art and trends of technologies and spectrum of actors which are and will transform the integration of space into society and businesses.

Spin-in and spin-offs will be considered focusing on derived new applications and socially and geographically distributed users.

The study will gather information from national entities and inter-governmental organizations, industry, research institutions, potential users and society in general. Questionnaires and interviews will be used as a first step, and in a second step the dialog between these actors will also be promoted through seminars and/or workshops in order to generate new synergies and to put forward IAA at the front of the discussion.

Topics to be considered include, but are not restricted to:

I. Technology and applications

- * Applications to address societal needs as described in the scope of the Commission 6
- * Nano and micro space platforms technology,
- * Constellations of micro and nano satellites, applications and operation
- * Space & ground (IoT) – applications integration
- * Analysis of launcher market for small payloads

II. Society

- * International regulations for small satellites and related applications
- * Research and business opportunities
- * Case studies of New Space implementation models in different countries
- * Synergies with other sectors than space
- * Medium and long Integration / penetration in society

III. Education

- * Avenues for incorporating academia and higher education in “New Space” activities
- * International cooperation among businesses, research and education institutions

Intermediate Goals:

To gather information through research and questionnaires which will be used for the elaboration of a preliminary report and to guide further actions towards the final objectives of the report.

Methodology:

We will use three main ways of gathering information:

1. Questionnaires,
2. Personal or group interviews,
3. Workshops applied to governments, industry leaders, researchers, personnel representative of society in general, etc.

The study will be carried out as follows:

1. First stage
 - 1.1. Basic information gathering for initial assessment
 - * Questionnaire to IAA, IAF (individuals, companies and institutions)
 - * Questionnaire to IAU, IEEE, AAAS, Moon Village Assoc. and other science academies and institutions
 - * Questionnaire to Intergovernmental Organizations (e.g., UNOOSA, ESA, UNDP, OECD, FAO, WHO)
 - * Questionnaire to small space agencies which are new comers to the sector
 - 1.2. Analysis of responses in the form of a mid-term partial report
2. Second stage:
 - 2.1. Information gathering through dialog between actors
 - * Industry-industry
 - * Industry-government
 - * Government-industry-society
 - 2.2. Second partial report
3. Data analysis and elaboration of final report

Time Line:

Two years divided as follows:

1. 6 months questionnaires drafting, distributions and collection
2. 6 months analysis of results and mid-term report
3. 6 months interviews and workshops with targeted actors
4. 6 months elaboration of final report

Final Product (Report, Publication, etc.):

Report and Publications (e.g., Acta Astronautica)

Target Community:

- * Society at large
- * Governmental organizations
- * Private sector and Industrial associations
- * Political decision makers

Support Needed:

Expertise from other IAA commissions (e.g., Commissions 3, 4 and 5) and IAF related committees

Potential Sponsors:

To be explored: governments and national institutes, industry, academy

To be returned to the IAA Secretary General Paris

by fax: 33 1 47 23 82 16 or

by email: sgeneral@iaamail.org & office@iaamail.org

Date: **November 23rd, 2021**

Name: **Gustavo Medina Tanco**



(No Signature required if document authenticated).