

A first approach towards the definition of a R&D Agenda and Roadmap for CEiiA's Space Engineering area

Why is NewSpace important?

What are the Opportunities and the Way Forward?

CEiiA, 24th of July 2017

CONTEXT

"While there is no internationally accepted technical definition of "NewSpace", principally, the ethos of the movement has been to challenge the traditional ways of space exploration that are widely considered as too expensive, time-consuming, and lacking in room for inventive risk-taking."

by Narayan Prasad Nagendra, in Space India 2.0,

"Traditional Space and NewSpace Industry in India: Current Outlook and Perspectives for the Future", Feb. 2017

CEiiA is a Portuguese Centre of Engineering and Product Development that designs, implements and operates innovative products and systems, alongside with its partners, for high-tech industries, such as, the aeronautics, automotive, urban mobility, oceans and space ones. CEiiA's Vision is to establish Portugal as a reference within these industries, particularly in the development of technologies, products and systems, conceived, industrialized and operated from Portugal.

Within this highly innovative ecosystem, CEiiA's Space Engineering area arises as one of the most recent working areas of CEiiA. Hence, it is with the goal of gathering information on the trends and opportunities which are currently rising in the Space field, that this working session is being organized to serve as an input to the definition of an R&D Agenda and Technology Roadmap for CEiiA's Space Engineering area.

This working session will help summarize the challenges arising from the so-called NewSpace, supporting the identification of related R&D topics, scientific domains and technological fields which may, altogether, help define CEiiA's R&D Agenda, as well as a Technological Roadmap for a period of 3+3 years.

To encourage a multidisciplinary discussion, national and international experts on the field are gathered in an attempt to present, discuss and ultimately build up a joint vision for the development and materialization of the NewSpace. As a result of this fruitful working session CEiiA will reinforce its strategy within the space arena, hoping to promote and support national and international endeavors within this field.

AGENDA

24th of July (Morning)

09.00h – Opening Ceremony

- José Rui Felizardo (CEO) / Helena Silva (CTO) – *Welcome*
- Tiago Rebelo – *Setting the stage*

09.20h – Plenary Session 1 – NewSpace: a Worldwide opportunity

- In-Seuck Jeung – *SNUSAT-1 and SNUSAT-2: CubeSats Development and Operation*
- Klaus Schilling – *Design and Operation of Pico-Satellites: the UWE family*
- Narayan Prasad – *Why is NewSpace important for India?*
- Dries Agten – *Electronics enabling NewSpace applications*
- César Coelho – *How will space software look like in 20 years from now?*

11.00h – *Coffee break*

11.10h – Plenary Session 1 – NewSpace: a Worldwide opportunity

- Ivan Sinkarenko – *Open Source Software for NewSpace Applications*
- Ishan Basyal – *Trends and Future of Satellite Communication Services*
- Victor Casado – *Launchers for (Small) Satellites: Development, Production and Testing*
- Veronica La Regina – *Space 4.0: Space Exploration Perspective*

12.30h – Round Table 1 – NewSpace: a Worldwide opportunity

- Moderator: Tiago Rebelo

13.15h – *Lunch Break*

24th of July (Afternoon)

14.00h – Plenary Session 2 – NewSpace: challenges and opportunities for Portugal

- Anna Guerman – *Trends and perspectives on the future of space exploration*
- António Lopes – *Upcoming Challenges and Opportunities for Earth Observation satellite data*
- João Janeiro – *Remote Sensing for Operational Oceanography: CIMA case studies and future needs*
- Orfeu Bertolami – *Study on small satellites for oceanography*
- Joana Mendonça – *Additive Manufacturing for Space: Challenges and Opportunities*

15.40h – *Coffee break*

15.50h – Plenary Session 2 – NewSpace: challenges and opportunities for Portugal

- Alberto de Pedro – *Trends and opportunities for next-gen space flight & ground equipment*
- Nuno Ávila – *ATLAS: A collaborative space mission for wide oceanic areas monitoring*
- Ricardo Mendes / Francisco Cunha – *INFANTE: A satellite for maritime and communication applications*
- Tiago Pardal – *Small launchers: a path towards development*
- Luis Serina / Emir Sirage – *Portugal's Space Context: Past, Present and Future*

17.30h – Round Table 2 - NewSpace: challenges and opportunities for Portugal

- Moderator: Narayan Prasad

18.15h – Closing Session

- Tiago Rebelo – *Wrap up and Conclusions*

18.30h – *Goodbye Port Wine*