

3rd WORKSHOP on REACH Regulation and its impact on space sector

On **16th October 2019**

At European Space Agency Headquarters Daumesnil, 52 rue Hillairet, 75012 Paris, France

*REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals)



Marie-Christine CONTINO
Space Transportation Systems Directorate
ESA HQ Daumesnil

Welcome for this 3rd edition.

WHAT HAS HAPPENED SINCE LAST WORKSHOP?

- More substances in REACH candidate list
- Creation of new task forces such as waste directive task force, lead free working group
- The very soon UK exit from EU
- At ESA level, the preparation of new space programmes to be decided at the next ESA council at ministerial level next month.

ESA is one of the few space agencies in the world to combine responsibility in nearly all areas of space activity.



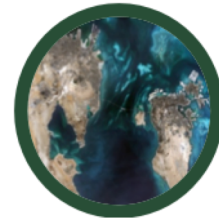
space science



human spaceflight



exploration



earth observation



space transportation



navigation



operations



technology



telecommunications

The European space transportation family

➤ Current

The Ariane and Vega launchers developed by ESA guarantee European autonomous access to space.

Their development and successful exploitation is an example of how space challenges European industry and provides precious expertise.

Ariane is one of the most successful launcher series in the world.

Complemented since 2011 by Vega and Soyuz, they are all launched from Europe's Spaceport in French Guiana.



➤ Under development

- Ariane 6 – modular three-stage launcher with two configurations, using two (A62) or four boosters (A64);
- Vega C – evolution of Vega with increased performance and same launch service cost;
- Common solid rocket motor for Ariane 6 boosters and Vega C first stage;
- New governance for Ariane 6 development and exploitation allocating increased roles and responsibilities to industry;
- Vega C and Ariane 6 maiden flights in 2020.



The Future European space transportation family



➤ Future

ESA and space sector are at the dawn of a new era of space transportation with new in orbit services, new emerging markets, as well as private-public led services, etc.. Where innovation is the key for adaptation to new technologies.

☀ Space rider will be the first European renewable spaceship allowing operational capabilities in Low Earth orbit ,with return to Earth refurbishment for next mission.

☀ ESA is preparing for the next generation of clean space transportation technologies, guaranteeing autonomous European access to space that is affordable and reliable, cost effective while improving competitiveness, such as new propulsion Lox Methane engine, advanced upper stages or reusable systems.

Development:

- To achieve the development of Ariane 6 and Vega-C.
- To continue the development Space Rider, our new reusable spaceship allowing operational capabilities more than 2 months in Low Earth Orbit and return to Earth with a capability of refurbishment for next mission.

Exploitation:

- To carry on the transition phase of Ariane 5 & Vega ramp-down and Ariane 6 & Vega C ramp-up
- To accompany European industry in the first phases of the exploitation of the new vehicles Ariane 6 and Vega-C.
- To modernise Europe's Spaceport in French Guiana.

Future:

- To improve the competitiveness of Ariane 6 and Vega C
- To ultimately prepare beyond 2030 for standardised , low-cost access to space (by developing advanced upper stages, new propulsion, reusable systems) allowing to compete with other space sectors worldwide

- In addition to that, launchers have the specificities of long life exploitation phase of about 30 years, guaranteeing Europe an autonomous and continuous access to space.**

- The main risk is to jeopardise the production phase thus leading to a potential disruption in production and so in autonomous access to space for Europe.** Currently, ramp down of Ariane 5 and Vega and ramp-up of Ariane 6 and Vega C.

ESA participates with its industrial partners in regular discussion platforms to assess and evaluate the impact of new substances on the ban for space sector. It is also a platform to discuss and exchange on industry and agencies research activities on alternatives.

ESA together with national agencies supports its industrial partners in the research of alternatives and innovation in new technologies whenever possible for current ongoing programmes but also to prepare the future.

In November 2019, member states of ESA council will decide on the next space programmes to be developed in the next decade.

- **There is a need to:**
 - ✦ *communicate*
 - ✦ *exchange*
 - ✦ *anticipate*
- **That there is an opportunity to:**
 - ✦ *innovate*

09:30-09:40	Intoduction of 3rd REACH workshop	Marie-Christine Contino	ESA/STS	Space Transportation Development Programmes: ESA Launchers representative for REACH aspects
	REACH regulation in the space sector			
09:40-10:10	REACH obsolescence management in the European space sector, current status and future challenges	Paavo Heiskanen Tim Becker	ESA ReachLaw	REACH Officer Senior Legal Advisor
10:10-10:30	UK Exit from the European Union	Simon Johnson	Defra (UK)	EU Exit Team: Chemicals and Pesticides
10:30-11:00	Article 33 declarations for long duration projects, Waste Framework Directive and the SCIP database	Telmo Vieira (via Webex)	ECHA	European Chemicals Agency
11:00-11:10	Coffee Break			
11:10-11:30	How to live with REACH constraints for the space projects	Christian Durin	CNES	Head of Materials & Processes Department
	REACH regulation implementation management in non-space sector			
11:30-12:00	REACH management at Airbus	Olivier Renaux	Airbus	Airbus Environmental Substances Roadmap Leader
12:00-12:30	REACH in a post Brexit world	Terry Rees-Pedlar	BAE Systems Land UK	Material Support Manager
12:30-13:30	Lunch Break			
	REACH regulation impact on space transportation programmes			
13:30-14:00	Launcher Obsolescence Management- Application on Ariane 6	Corinne Dariol Maud Saint-Amand	ArianeGroup	Arianegroup Obsolescence Project Manager Arianegroup REACH
14:00-14:30	Vega and Space Rider Coping with Regulatory Challenges through New Technologies	Giorgio Tumino	ESA/STS	ESA Vega & Space Rider Programme Manager
	Alternative to REACH regulation: some examples on R&D activities			
14:30-15:00	Towards chrome free protection systems on aircrafts	Joy Roman	Dassault-Aviation	Material Department
15:00-15:30	Development and substitution activities for anticorrosion primers and adhesives	Maxime Olive	Rescoll	IP & Corporate Research Coordinator
15:30-16:00	Ongoing activities on materials substitution in the European Space Agency	Lucia Pigliaru	ESA/ESTEC	Materials Engineer
16:00-16:30	Open discussion and way forward	All		