

**EARSC Brief for Members on  
ESA-IPC Resolution to Extend the ESA Mandate**

At the High Level Industry Forum 2014, ESA has been encouraged to pursue an extension of its mandate to include responsibility to support the development of the downstream sector. EARSC provided a paper which was distributed to ESA-IPC delegates in June. Further discussion will take place in the IPC in September and this paper provides some views on more precise steps which ESA can take. EARSC members are encouraged to communicate these views to their national delegates ahead of the September IPC which is expected to prepare and agree a resolution to be placed before Ministers in the December meeting of the ESA Council.

Since its creation, ESA has had a mandate to maintain an industrial policy for the space manufacturing sector. We believe that this mandate should now be extended to cover the downstream sector. As well as helping develop the European services sector this will also provide “pull” for the space manufacturing sector and help sustain long-term investment.

ESA is the appropriate European entity for this role, since other organisations in Europe do not have the same ability to develop an industrial policy which targets investments in the same way as ESA can. Uniquely, ESA can respond to national needs and priorities through the principle of geo-return, and due to its extensive technical capabilities is able to act as a partner to the European industry. Furthermore, the strong strategic interest of governments in space applications gives them a valid and necessary reason to intervene in this market.

In our recent position paper, EARSC made 5 recommendations for action by ESA. This short paper complements the earlier one and provides some views on specific actions to take.

1. *Stimulate the full exploitation of space data and the development of innovative applications, with industry-led initiatives.*

R&D actions in the field of applications need to be prepared with a clear view of the potential market for the products. This leads us to conclude that:

- R&D programmes should be shaped in partnership with industry and projects should be industry-led to ensure commercially exploitable results. To reiterate our previous paper, “industry” here means private sector companies in Europe.
- A new programme needs to be flexible using a mix of instruments such as grants and prizes as well as traditional, fully-funded projects with funding that is progressive as projects and technologies become more mature. For example, grants or prizes could be offered for innovative ideas with increasing amounts available as specific milestones are reached.
- A balance of actions is needed with more having a business focus and where successful ideas are sustained up to the point where they attract paying customers.

2. *Create financial conditions for new initiatives to thrive and prosper.*

The small size of companies in the EO services sector makes it difficult for them to attract significant investments so restricting their development. ESA can help companies by:

- Underwriting risk through commitment to fund R&D projects
- Providing a technical reference and support to venture capital funds
- Enabling dialogue and brokering introductions between venture capital funds and companies seeking finance.

3. *Provide specific support to the transition of proven demonstration concepts into commercial operations.*

There is a funding gap, which is not covered by any of the European organisations, to take the outcomes of R&D projects to the point where they may be sustained by customer funding, i.e. to the point of a viable business model where venture capital funds will invest. ESA can cover this gap by introducing demonstration projects for applications in the same way as is the case for space hardware which will often be flown on a demonstration mission.

- ESA to develop programme instruments to enable 100% funding for demonstration projects until they reach maturity as sustainable business prospects.
- Further discussion is needed on where the limit of such funding should be and what should be the measurable success factors.

4. *Support access of European industry to the global market.*

EARSC supports fully the customer-focused initiatives which have been part of the VAE programme. We have worked closely with ESA to develop good relationships with the oil and gas, insurance and other industry sectors as well as the public International Financial Institutions such as the World Bank and Asian Development Bank.

- Continue the specific EO initiatives through the proposed ESA programme as described in ESA/PB-EO (2014)10.

- With other partners, develop an international programme focused on regional priorities drawing on broad technical competences (e.g. Model on recent US –Africa agreement to develop continent-wide electricity grid).

5. *Create a clear institutional market for EO services in Europe.*

The lack of an “anchor tenant” for EO services in Europe considerably hampers the development of the market and industry to supply it. ESA can help industry by helping create the conditions for a federated demand across Europe. A partnership between ESA and industry working with the European Commission and Member States (i.e. all actors) is needed to overcome this market barrier.

The funding necessary for these actions will be small compared to the budget required to maintain the space capability. Just 3% of the ESA budget would provide the resources to make a large difference to the downstream sector.

With many changes affecting the EO services sector globally, we need to be more reactive to the changing market supply conditions. The recent acquisition of Skybox Imaging by Google, the US government permission for DigitalGlobe to supply imagery with 45cm resolution, the multitude of new, US, commercial, initiatives together with other nations moves to address the sector all mean that the European industry must raise its own game, and concerted action is needed to support it. We look forward to a dialogue on extending the ESA mandate to the downstream EO services sector within a partnership between industry and ESA.