

Digital Supply Chain

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- **ESA introduction**
- **Digital Supply Chain Announcement of opportunity**
 - Objectives
 - Examples of applications
 - Value of Space
- **WWF – Guest Speaker: Alfred Schumm**
- **ENEL - Guest Speaker: Fulvio Spelta, Giuseppe Leotta**
- **How to apply**
- **Questions & Answers**

EUROPE'S GATEWAY TO SPACE

WHAT

22 Member States, 5000 employees

WHY

Exploration and use of space for exclusively peaceful purposes

WHERE

HQ in Paris, 7 sites across Europe and a spaceport in French Guiana

HOW MUCH

€6.49 billion = €12 per European per year



PURPOSE OF THE EUROPEAN SPACE AGENCY



To provide and promote, for exclusively peaceful purposes, cooperation among European states in **space research** and **technology** and their **space applications**.”



Article 2 of
ESA Convention



The largest space innovation network in the world

The go-to place for great business involving space to improve everyday life.

Supporting European companies including start-ups and SMEs to develop businesses using space technology and data.

Offering funding, business and technical support to help to generate successful business and create jobs.



BUSINESS APPLICATIONS

Using **any space asset(s)** and integrating them with terrestrial assets for the **benefit of life on Earth**



ESA SPACE SOLUTIONS OFFERS



Zero-equity funding (from
€50k to €2M+ per activity)



A personalised ESA
consultant



Technical support and
commercial guidance



Tailored project
management support



Access to our international
network of ESA and partners



Access to our network
of investors



Credibility of the
ESA brand

Invested
€250m

Over
1200 businesses



THEMATIC VARIETY



Safety & Security



Environment & Wildlife



Energy & Utilities



Health & Social Care



Transport & Logistics



Agriculture, Forestry & Fishing

>75% SMEs
>33% Newcomers



Next step... Digital Supply Chain

Digital Supply Chain : Announcement of Opportunity



Services and products for supporting the digital transformation of the traditional supply chains of sensitive goods.

Examples of areas:

- 1.Connected supply chain of sensitive goods
- 2.Predicted demand in the supply chain
- 3.Automation of operations
- 4.Monitor the sensitive goods
- 5.Managing the risks



Second wave of the call open from May 2022



- The pandemic has imposed stresses on all segments of the supply chain systems, particularly challenging for the delivery of sensitive goods, amongst which the pharmaceutical ones have exposed the vulnerability of the supply chain.
- At the core of the challenge is not only organizing the services that carry the sensitive goods, but rather making sure that every part of the supply chain is running, to avoid losses throughout the system and prevent delays that could damage the goods due to unstable temperatures.
- The Supply Chain needs to embrace the digital transformation, take advantage of digital technologies and manage the risks involved.



Digital Supply Chain: Benefits

- **Traceability:** the proliferation of IoT devices that produce real-time data allows for accurate traceability, monitoring and interventions.
- **Sustainability:** the availability of digital data and cloud computing enables the automation of processes and the optimization of resources leading to sustainable solutions.
- **Security:** in coordination with cybersecurity strategies, digital technologies such as blockchain can enable secure data-sharing and hinder tampering along the supply chain.
- **Risk mitigation:** particularly relevant for the insurance companies to significantly mitigate supply chain risks by enabling users to either take actions to prevent disasters or to respond to disruption by activating backup plans.
- **Efficiency of the delivery:** making sure that the goods are delivered on time by an improved collaboration amongst the different actors of the supply chain with the use of digital platforms and data visualization from digital technologies such as augmented reality and digital twin.



Digital Supply Chain : Announcement of Opportunity



The intended Announcement of Opportunities targets the development of services and products for supporting the digital transformation of the traditional supply chains, particularly in relation to sensitive goods transport. Among these, pharmaceuticals goods, vaccines, medical equipment, perishable or dangerous goods, luxury goods which impose specific logistics challenges.

Examples of use cases:

- 1.Connected supply chain of sensitive goods
- 2.Predicted demand in the supply chain
- 3.Automation of operations
- 4.Monitor the sensitive goods
- 5.Managing the risks

Call open planned on 21 February 2022





- **Use case 1 – Connected supply chain of sensitive goods**

AI/ML to predict time of goods in motion and between transport modes keeping the related parties informed. Real-time tracking data to estimate the transportation performance, any delay in the delivery routes across all supply chain actors.



- **Use case 2 – Predicted demand in the supply chain**

IoT combined with predictive analytics and AI/ML can monitor, collect and report information from the environment and reliably predict demand, recognize patterns, anticipate changes and optimize supply chain processes including distribution and warehouse planning.



- **Use case 3 – Automation of operations**

Leveraging space data and digital technologies such as AI, ML, AR/VR and robotics can lower the operational costs of delivering goods and provide more reliable forecasts, analysis of trend data and better services to customers .



- **Use case 4 – Monitor the sensitive goods status**

By receiving real-time location and condition data from sensors on sensitive goods shipments en route, it is possible to continuously run data analytics monitoring sensitive parameters such as temperature and tilt, and other dynamic intelligence to manage and optimize distribution flows.



- **Use case 5 – Managing the risks**

The digital supply chain, in particular of sensitive goods, needs to be able to respond to risks ranging from weather and natural disasters, to theft and counterfeiting, traffic and port congestion. By leveraging space and digital technologies and capabilities, such as sensors, robotics, automation and predictive analytics, the transparency and communications throughout the entire supply chain can increase.



World Wide Fund
for Nature



Alfred Schumm

Director
Innovation, Sciences, Technologies & Solutions
WWF Deutschland

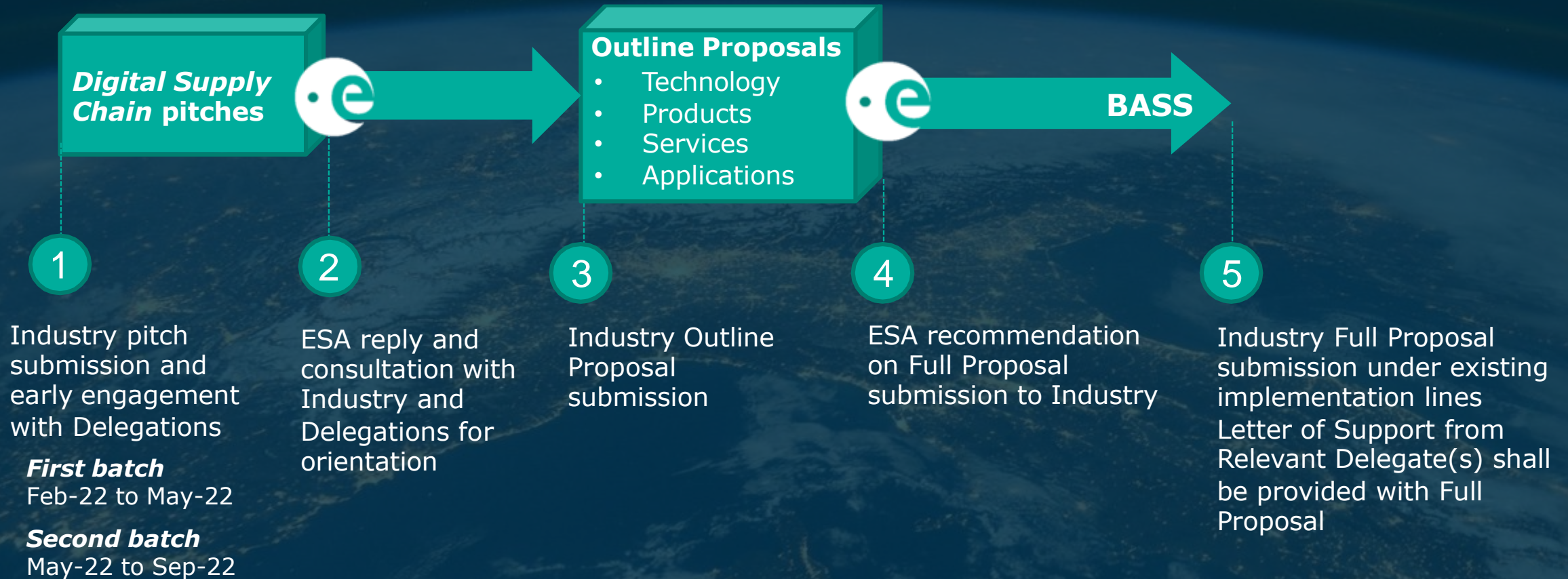
Felipe Costa

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ENEL

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PROCUREMENT APPROACH



Call open planned from May 2022 to September 2022 for pitch submission

<https://business.esa.int/funding/digital supply chain>

Registration (minimum 'light registration') on [ESA-STAR Registration](https://esastar-emr.sso.esa.int) (<https://esastar-emr.sso.esa.int>)

Please note that esa-star allows two levels of entity registration: "Light" and "Full". This allows new users wishing to do business with ESA to carry out their registration in two steps. A "Light" registration will grant access to all esa-star services up to and including proposal submission. The award of ESA contracts requires "Full" registration.

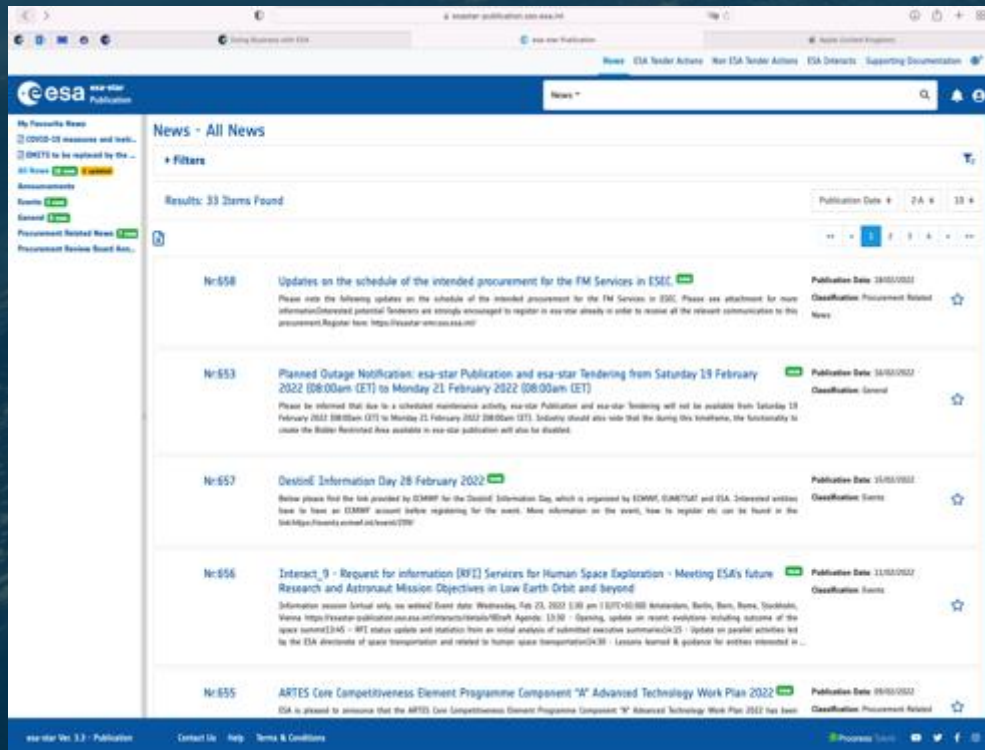


The screenshot shows the ESA-STAR registration interface. At the top, the ESA logo and 'esa-star registration' text are displayed. Below this is a navigation bar with links: '16 Apr 2020', 'ESA Home Page', 'EMITS', 'ESA Industry Portal', 'Contact Us', and 'Help'. On the left side, there is a sidebar menu with links: 'Home', 'New Registration' (highlighted), 'Maintain Entity Information', and 'ESA Entities Directory'. The main content area is titled 'NEW REGISTRATION' and contains a form with the instruction: 'Please select one of the two options:'. Below this instruction are two radio button options: 'A. I am an Entity that has the capacity as "legal entity"' and 'B. I am a Business Unit acting on behalf of a "legal entity", without being entitled to commit on contracts on my own'.

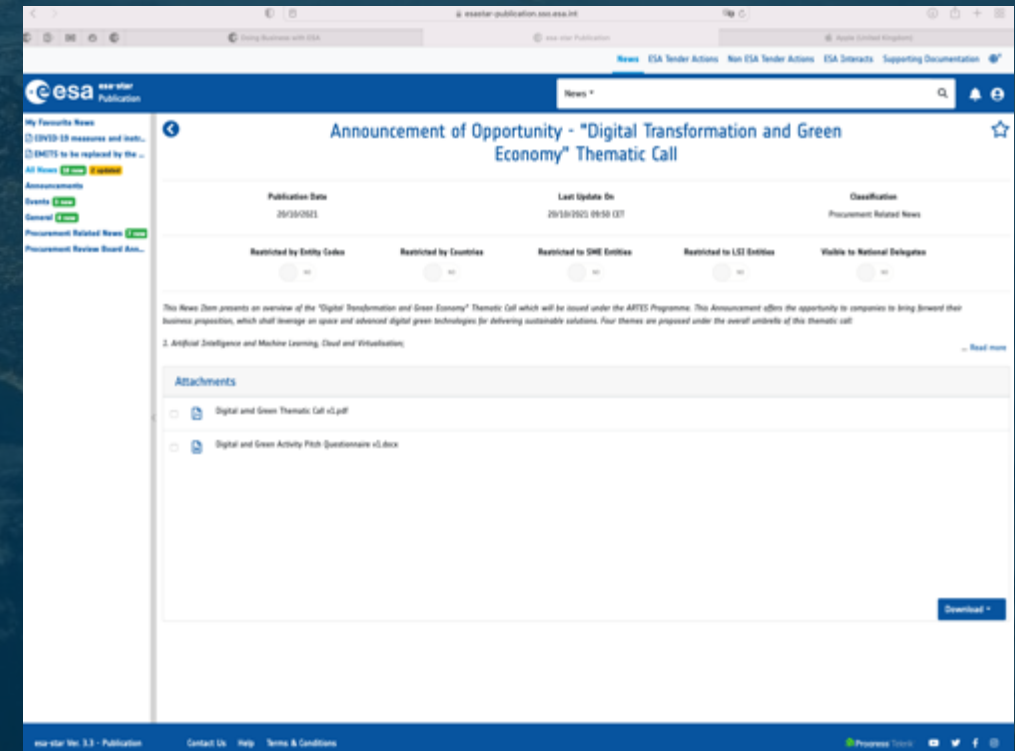
ACCESS TO THE THEMATIC CALL



1. Access the News on ESA-STAR Publication (<https://esastar-publication.sso.esa.int/news/>),
2. Find and click on the Announcement of Opportunity “Digital Supply Chain” Thematic Call. This will give you access to the AO main document and the Pitch questionnaire.



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THANK YOU!

For more information please contact:

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