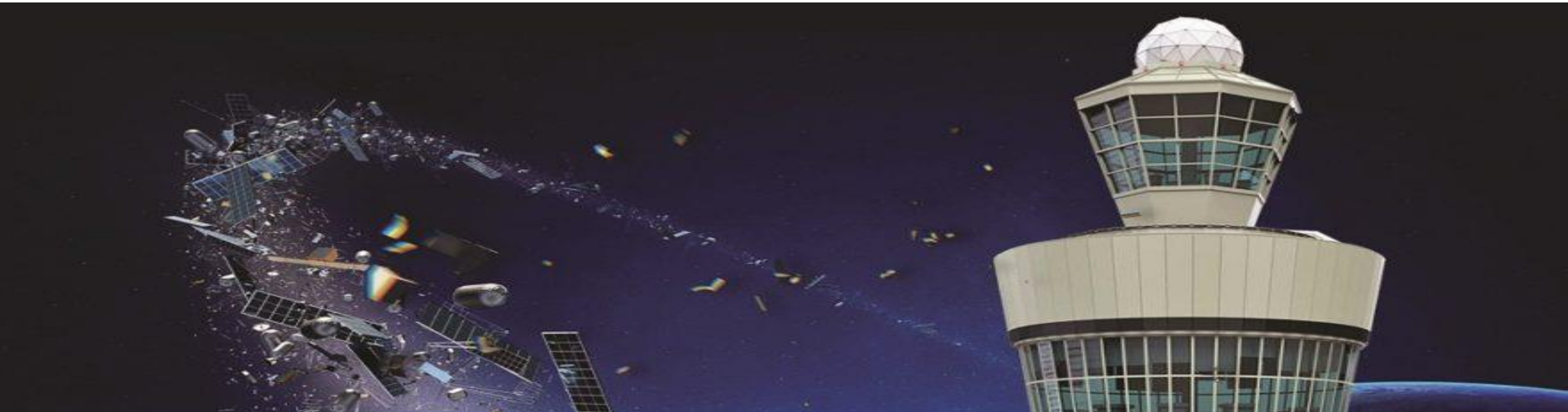
Launch of the European Union Industry and Start-ups Forum on Space Traffic Management (EISF)

26 April 2022

Work together to foster an EU STM eco-system



STRUCTURE OF THE PRESENTATION

- **Introduction**

- **The STM Communication**
- How?
- Why?
- What?

- **The implementation of actions 2, 3 and 4**
- The role of EUSST
- The content of the work

- **The presentations of this morning**
- Results of previous meetings
- Synergies
- Next steps

INTRODUCTION

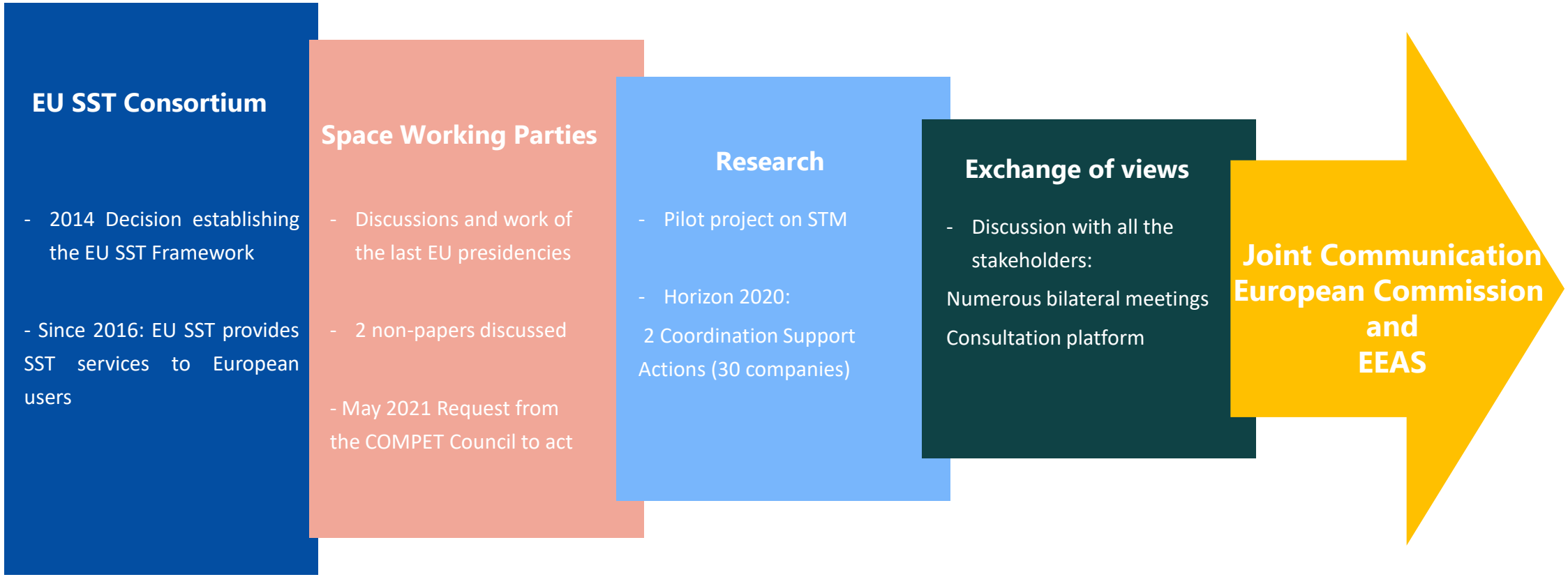
- **Aim of the meeting**
- Launch of the European Union Starts-up and Industry Forum
- Establish a basis for our cooperation

- **Initiate discussions**
- **FIRST** official presentation and “limited” exchanges
- **FIRST** step

- **The implementation of actions 2, 3 and 4 of the STM Communication**
- Establishment of the Forum
- The content of the work

The STM Communication: A joint Communication from the Commission and EEAS

All actors involved



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Compelling need to act

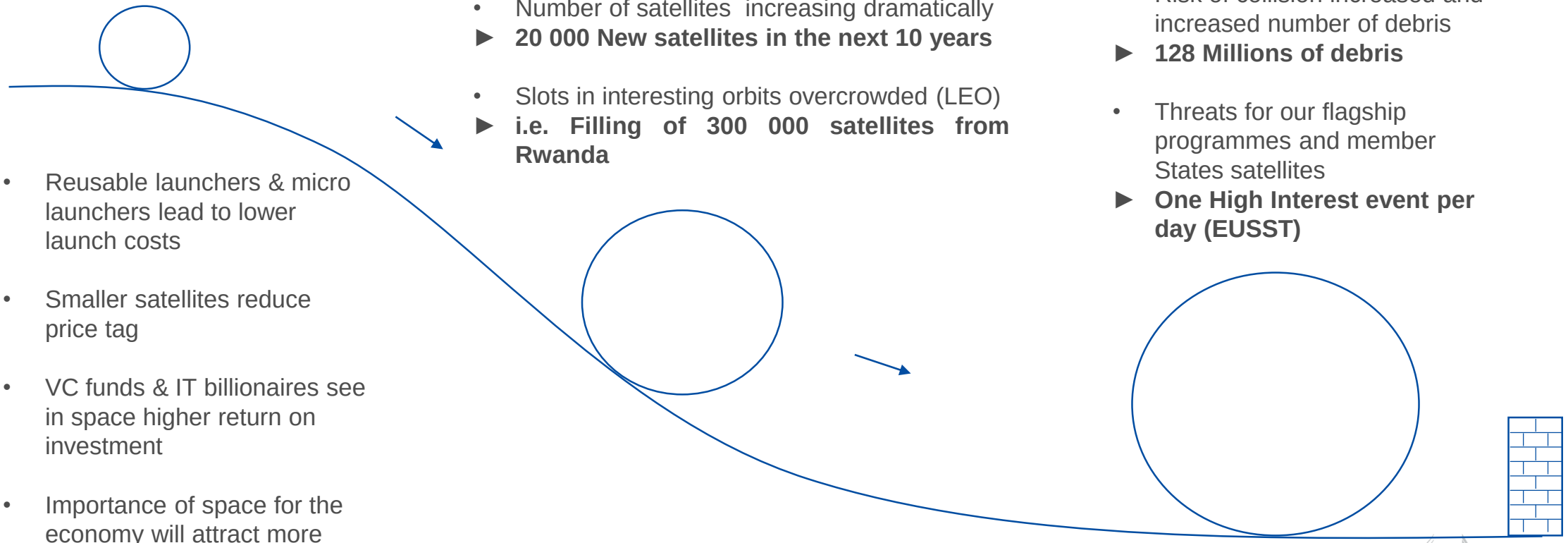
- Reusable launchers & micro launchers lead to lower launch costs
- Smaller satellites reduce price tag
- VC funds & IT billionaires see in space higher return on investment
- Importance of space for the economy will attract more countries in space

- Number of satellites increasing dramatically
► **20 000 New satellites in the next 10 years**

- Slots in interesting orbits overcrowded (LEO)
► **i.e. Filling of 300 000 satellites from Rwanda**

- Risk of collision increased and increased number of debris
► **128 Millions of debris**

- Threats for our flagship programmes and member States satellites
► **One High Interest event per day (EUSST)**



The establishment of an EU approach on STM
4 Pillars

Civil and Military STM requirements

As a primary task, it is necessary to establish the STM requirements for both civil and military stakeholders at EU level.

EU Operational capabilities

The ability to positively impact the debate related to STM is proportional to the operational capacities to monitor objects in space.

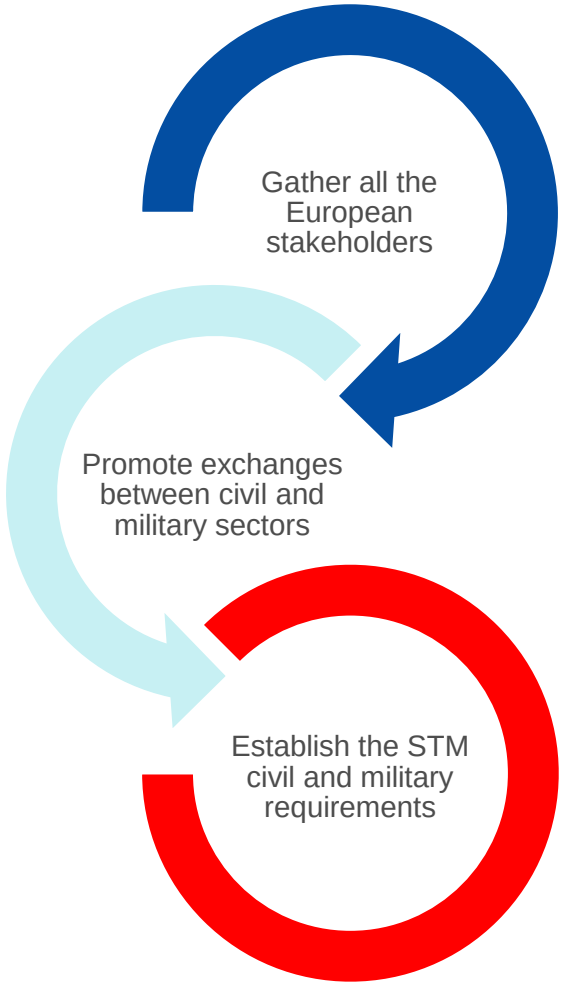
Regulatory aspects

The regulatory side of STM is today mainly the result of a set of partial international and national standards and guidelines.

International aspects

STM activities are by definition global. An EU STM approach should reflect the EU's overall support for multilateralism.

Development of the STM requirements



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Operational capabilities Pillar

EU SST

Improve and expand EU SST services

To perform STM activities, it is necessary to be able to observe space traffic continuously and effectively

- Ensure that EU can detect all objects equal and above 10cm.
- Have a better localisation of the SST assets.
- Promotion of the development of additional services.

Develop new technologies

The development of automatic collision-avoidance services and the use of artificial intelligence and quantum technology should be accelerated.

- Prepare a detailed research plan targeting new technologies.
- Work in close collaboration with the existing fora.

Making the most of the EU industrial ecosystem

It is necessary to ensure that all the potential offered by EU industry, including New Space, is exploited building upon the public services delivered by EU SST.

- Liaise with the EU industry to establish a specific forum on technological and innovation cross-fertilization.
- Make accessible to industry parts of the data sharing platform and parts of the future EU SST catalogue.
- Initiate specific actions in the framework of CASSINI to reap the full innovation potential of start-ups.

Regulatory Pillar

Standards and legislation

Monitoring the development of STM standards and guidelines

The EU should facilitate the development of STM standards and guidelines aiming at ensuring the safe and sustainable use of space.

- Develop new European and international standards;
- Promote selected standards and guidelines at the EU level;
- Create a toolbox to assisting Member States in licensing requests by satellite operators.

Incentivise STM standards and guidelines

In order to foster the use by EU operators of the guidelines and standards recommended at the EU level, incentive measures will be put in place.

- Identify possible incentive measures and a certification mechanism towards the implementation of STM standards and guidelines;
- Establish a certification mechanism and implement incentive measures.

Towards STM Obligation

It is necessary to develop in short term and in the medium term legal obligation at the European level.

- Impose that all satellite operators providing services within the EU should register with a collision avoidance service that offers at least a similar level of performances as the current services offered by EU SST.
- A more comprehensive regulatory approach on STM should be developed, **in consultation with Member States**, to identify relevant areas for legislation while preserving the competitiveness of the EU industry, in line with the respective competences of the EU and its Member States.

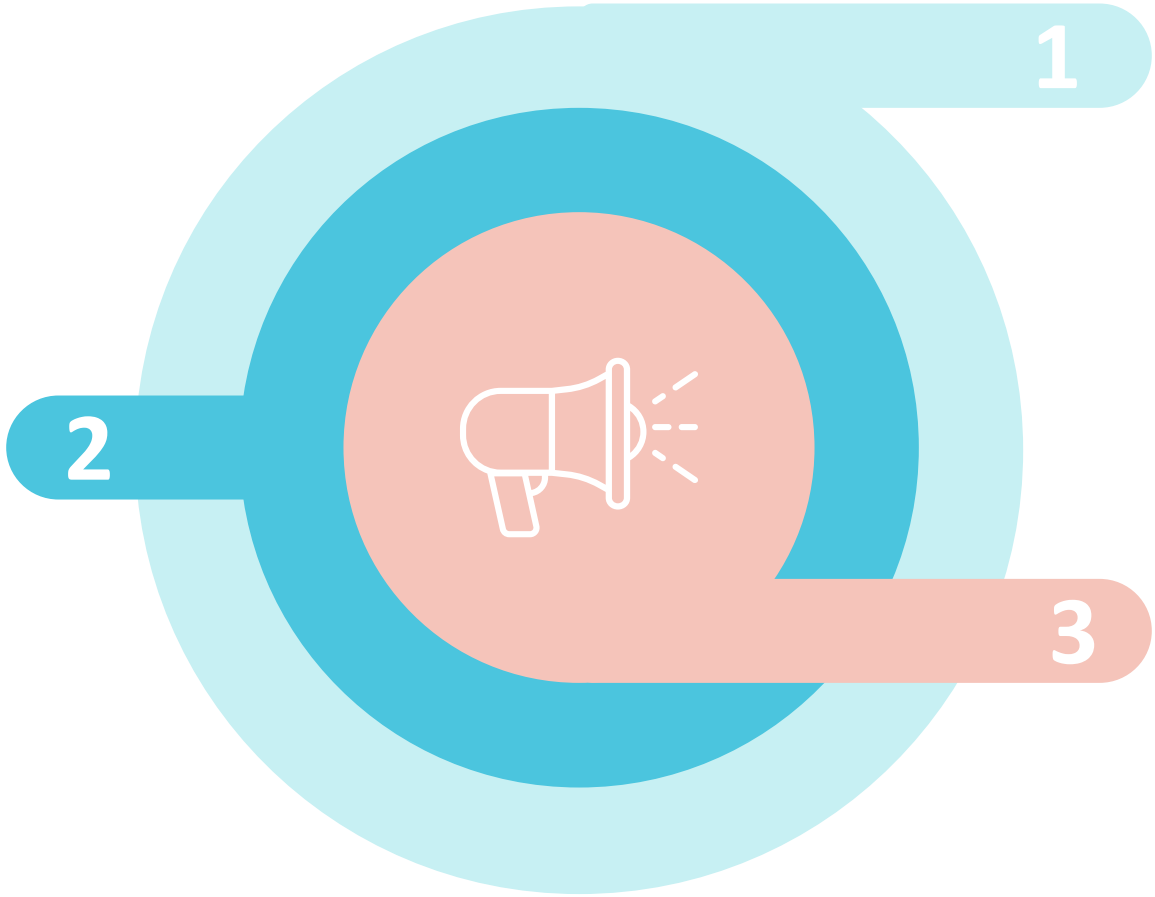
Why : Standards and guidelines

Role and importance of Standards / guidelines

Space industry relies heavily on standards

Number of non-legally binding measures in the field of space

Multiplication of fora and difficulty to follow all the developments.



Need to have a more pro-active participation

Standards and guidelines shall not be considered as a “competition”

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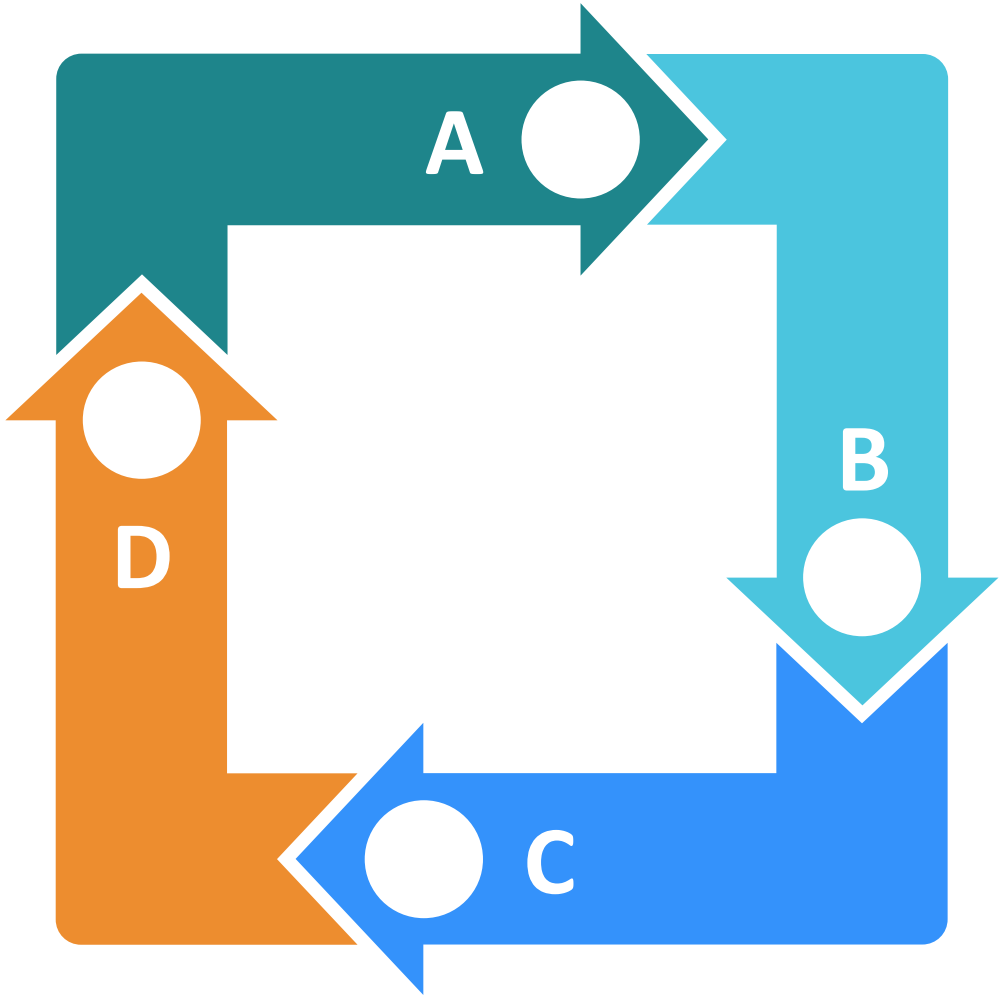
Promotion of guidelines and standards

Selection of standards and guidelines

The selected standards or guidelines will not become compulsory



Certification mechanisms

Systems to ensure that the selected standards / guidelines are effectively followed

Continue reviewing /developing new standards /guidelines

The process will start again in case new developments

Identify possible incentive measures

Incentive measures need to be developed and implemented

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International Pillar

United Nations and bilateral contacts

Promoting a multilateral STM

The EU STM approach aims at contributing to a global STM to be managed at international level.

- Identify or help create specific bodies for STM with a view to implementing concrete STM solutions at global level.
- Participate in the UN Rescue Agreement, in the Liability Convention and in the Registration Convention

Towards regional STM contributions to a global effort

The development of the EU approach on STM within the Union is only the first step of a more general process.

- Promote a regional approach on STM with third countries and relevant regional fora partners in order to prepare the future establishment of a global STM system based on regional contributions.

Discussion with third countries

The EU will pursue an active diplomacy related to STM. Discussions with international partners should focus on civil matters (e.g. operations, standardisations, etc.) but also highlight related security and defense aspects of STM.

- Further engage with the US with a view to ensuring closer cooperation and mutual interoperability on STM related matters,
- Systematically address STM in the space dialogues with third countries.

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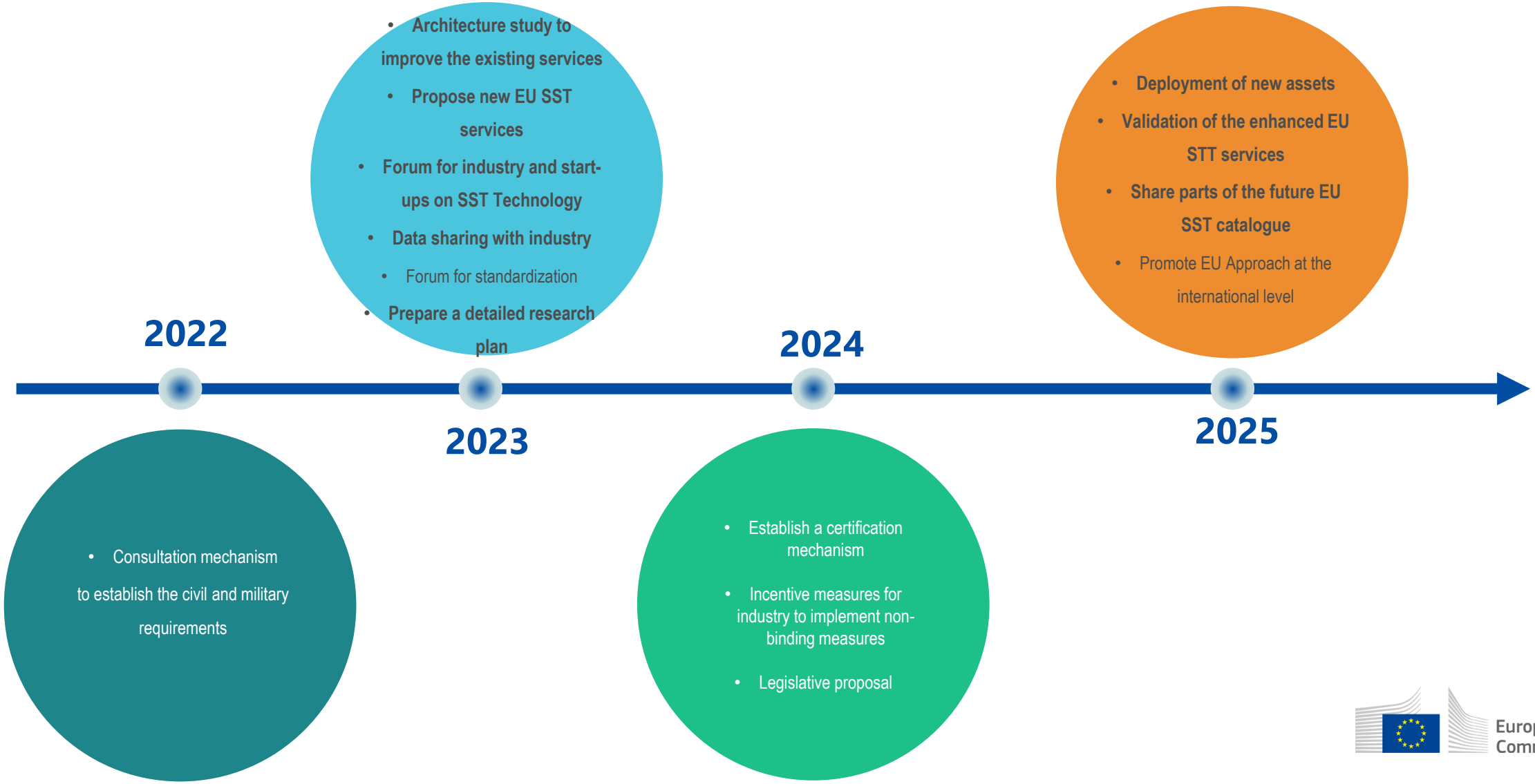
Implementation: clear deadlines



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The actions of the STM Communication

Action 2: The Commission, with the support of the EU SST Partnership, will

a) improve the performance of existing services:

- by mid 2023 (preparation phase) elaborate an architecture analysis of the future STM needs including identification of the necessary resources for a more efficient and performant EU SST system, able to detect all objects above 10cm; and
- by 2025 (implementation phase), start the deployment of additional assets.

b) develop new services:

- by mid-2023, propose new services to address forthcoming challenges raised in STM;
- by 2025, validate the new services that will become operational.

c) foster technology:

- by end of 2023 liaise with the EU industry to establish a specific forum on technological and innovation cross-fertilisation;
- by end of 2023, prepare a detailed research plan targeting new technologies; and
- by end of 2025, assess its implementation process.

The actions of the STM Communication

<u>Action 3:</u> The Commission will initiate specific actions in the framework of CASSINI to reap the full innovation potential of start-ups.

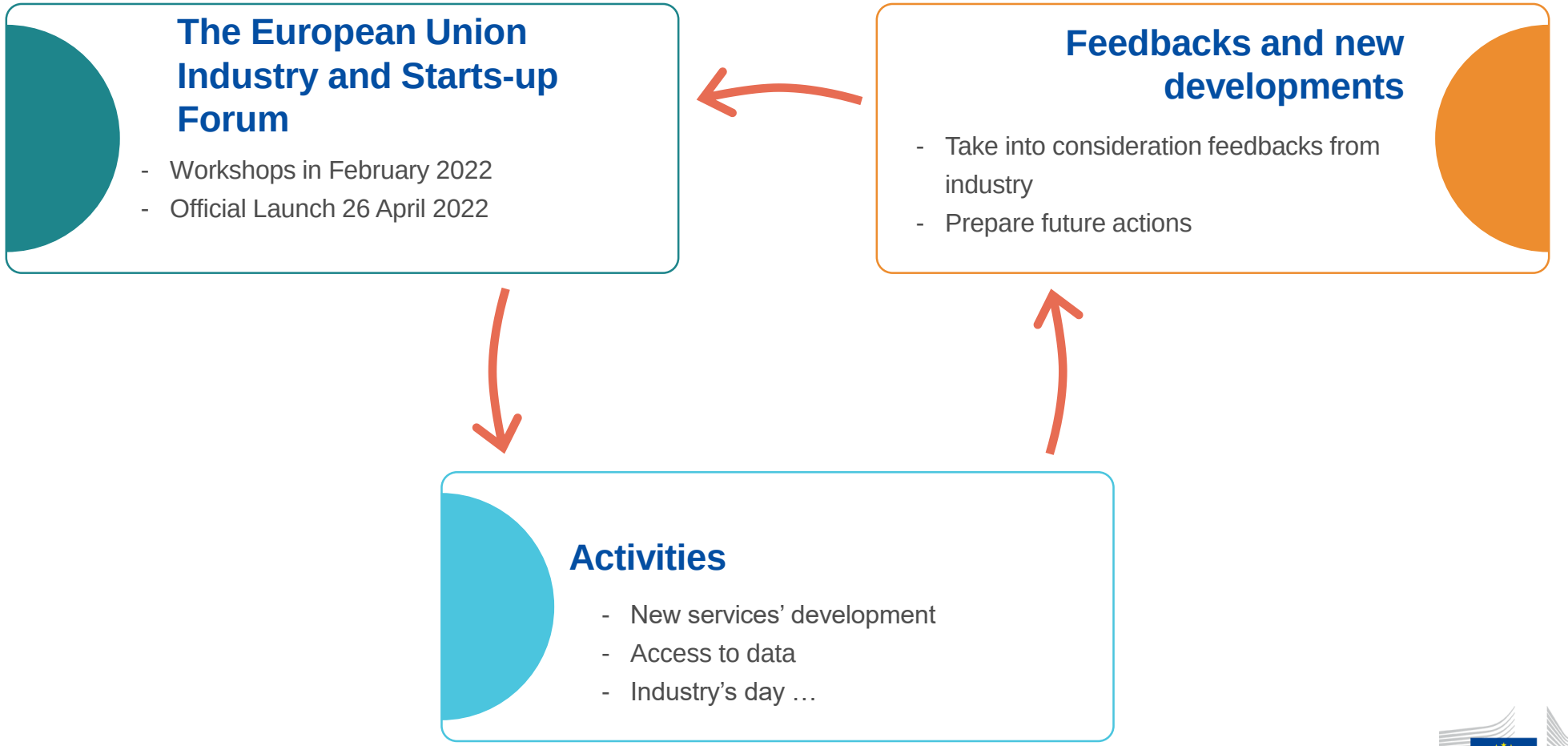
<u>Action 4:</u> The Commission, in coordination with the EU SST Partnership, will make accessible to industry:

- by 2023 parts of the data sharing platform; and

- by 2025 parts of the future EU SST catalogue.

ESTABLISHMENT OF THE EISF

The tool to implement the actions 2, 3 and 4



European Commission

The role of EUSST

- EU Space Surveillance and Tracking (SST) constitutes the **operational pillar** for the EU STM approach.

- The **EU SST Consortium** will be replaced by the **EU SST Partnership** in accordance with the Regulation establishing the Union Space Programme.

- The **role of EUSST will be central** in the implementation of the STM Communication

The role of EUSST

- **According to the space Regulation the <u>public services provided by EU SST</u> are**:

- Re-entry
- Fragmentation
- Collision Avoidance

- **Foster the development of an SST EU eco-system**

- <u>Indirectly</u>: The public services are provided by the EU SST Partnership but with the participation of industry
- <u>Directly</u>: The deployment of other activities

The next presentations

- **Eurospace**
- https://eurospace.org/reaction-of-eurospace-about-the-joint-communication-an-eu-approach-for-stm/

- **First outcomes of the preliminary workshops (EUSST)**
- On February 2022: 2 workshops
- Presentation of the first results

- **Synergies (DG DEFIS)**
- The EDF
- Cassini and In-Orbit Demonstration and Validation (IOD/IOV)

- **Next steps (DG DEFIS)**

Thank you

European Commission
DG DEFIS
Unit B1
Space connectivity, Space Surveillance and Applications
Rodolphe.munoz@ec.europa.eu

European Commission