

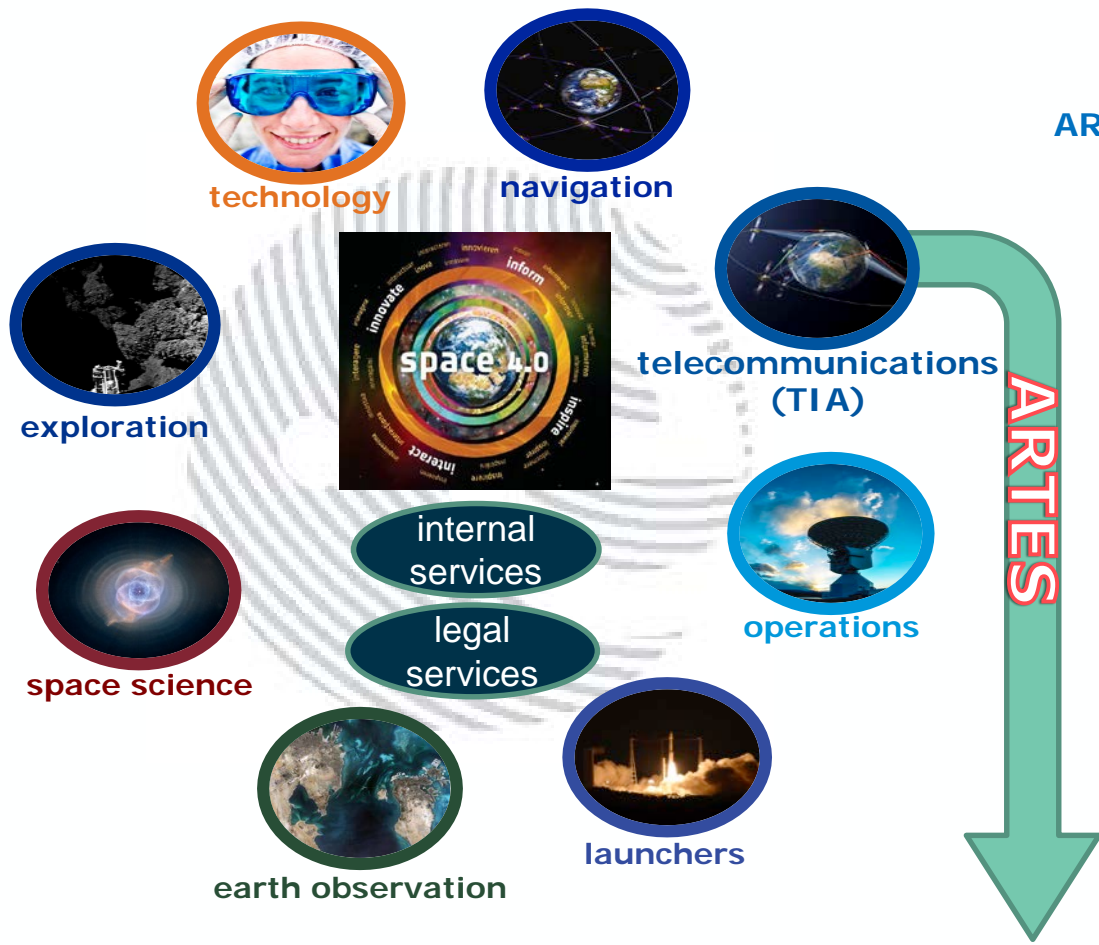
ARTES 4.0 Core Competitiveness: An Overview

ESA - 03 November 2020

ESA unclassified - releasable to the public



ARTES = Advanced Research in Telecommunications Systems



- Support the **competitiveness** of European and Canadian industry on the world market
- Develop the **use of space** for the benefit of European citizens and the economy

Generic Programme Lines (GPLs)

- Future Preparations (FP)
- Core Competitiveness (CC)
- Partnership Projects (PP)
- Business Applications & Space Solutions (BASS)

Strategic Programme Lines (SPLs)

- Optical Communications ScyLight
- 4S – Space Systems for Safety and Security
- Space for 5G

TIA: Telecommunications and Integrated Applications Directorate

A Combination of Strategic and Generic Programme Lines

Strategic Programme Lines
Responding to societal/economic objectives

Space for 5G

Space Systems
for Safety and
Security (4S)

Optical
Communications
- ScyLight

**Total
Subscription
1.57 B€**
(at Space19+)

Direct
access to
Programme
Lines

Generic Programme Lines
Maximum efficiency

Future Preparations

Core
Competitiveness
(ARTES C&G + AT)

Partnership
Projects

Business
Applications
Space Solutions



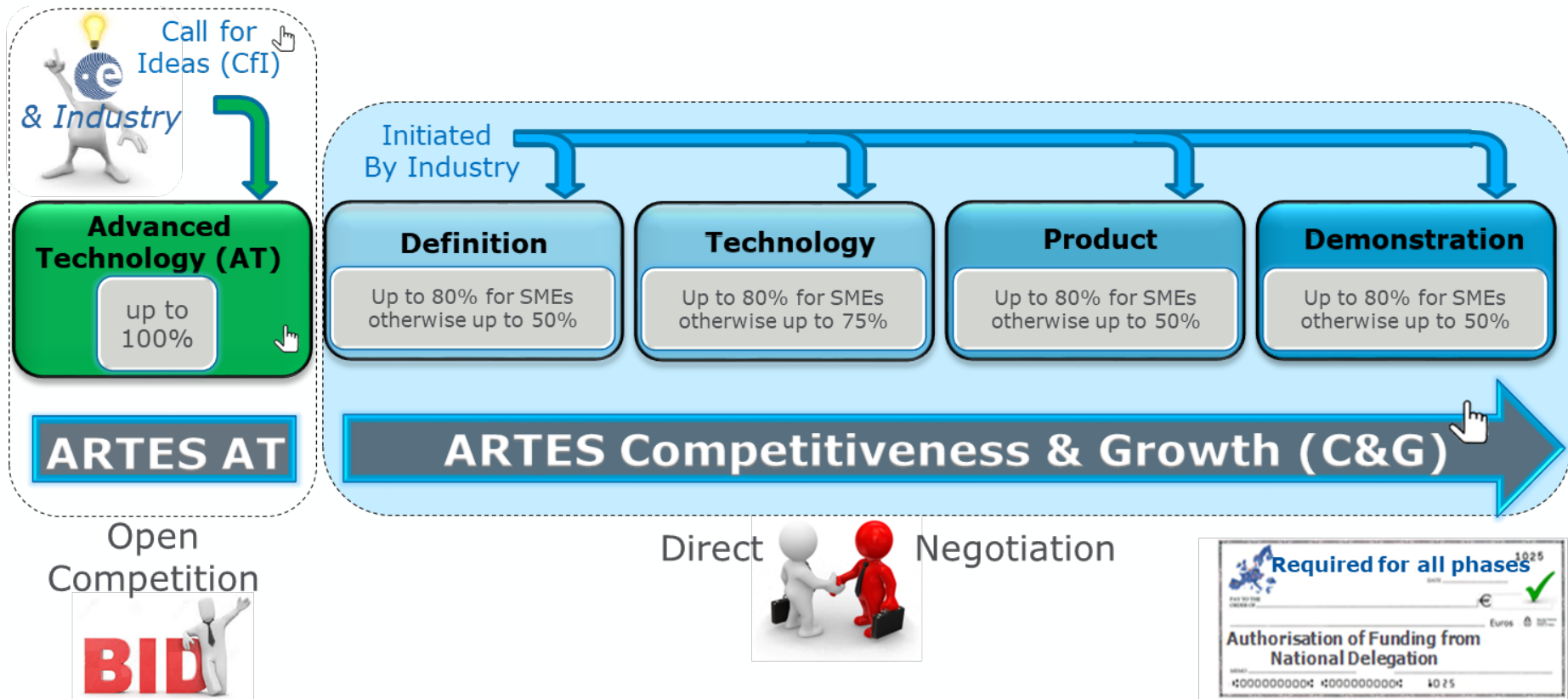
- **National Delegations** contribute funding
AT+BE+CH+CZ+DE+DK+EE+ES+FI+FR+G
B+GR+HU+IE+IT+LU+NL+NO+PL+PT+RO+
SE+CA
- **Industry & institutions** develop technology
and products for the world Satcom market
- **ESA** shares the risks and manages the
contracts and activities
- **Industry** brings the end result to market &
retains Intellectual Property Rights (IPR)
when co-funded

ARTES 4.0 Core Competitiveness (“ARTES CC”):

1. ESA ARTES guides you to the most suitable programmatic tool
2. Makes funding available
3. Facilitates synergies and cooperation among Industry
4. Provides think tank for ideas and opportunities
5. Offers independent assessment and technical expertise
6. Ensures full transparency of the process
7. Guarantees confidentiality and fairness

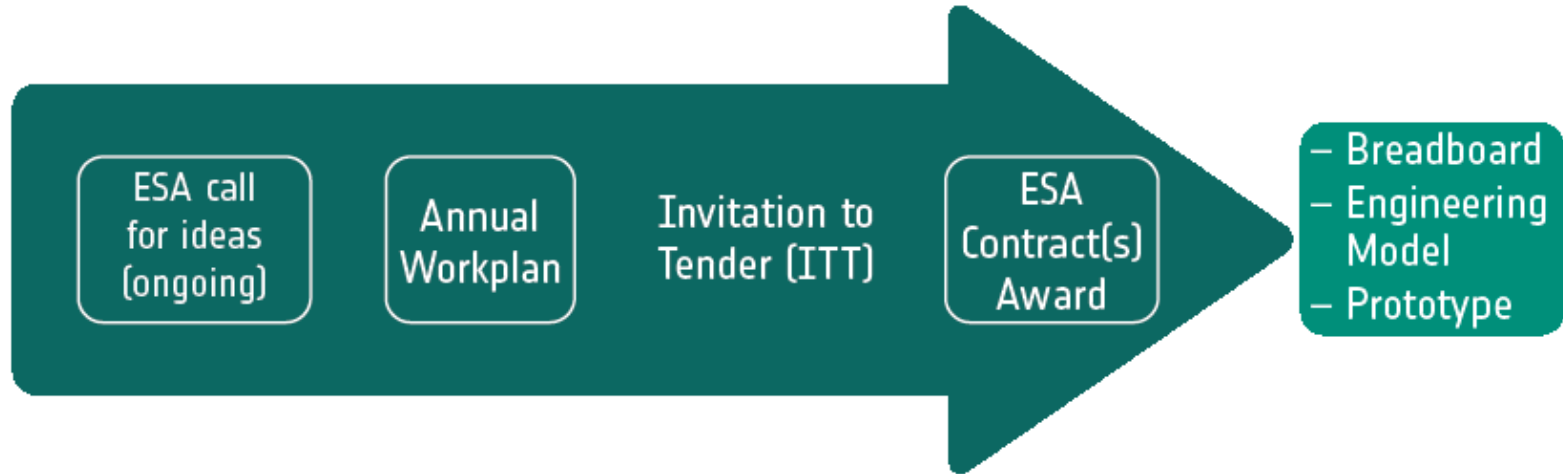


ARTES 4.0 Core Competitiveness



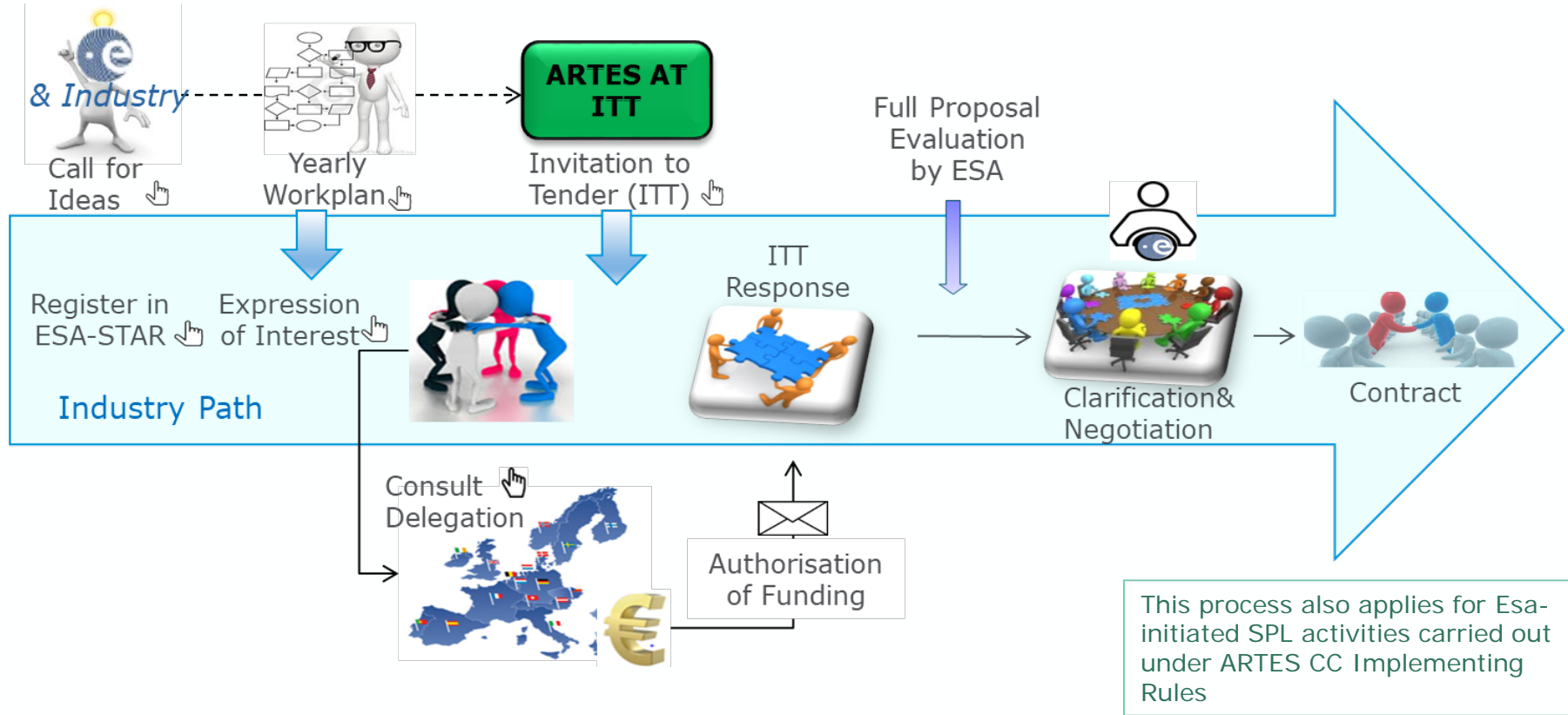
ADVANCED TECHNOLOGY





ARTES AT – up to 100% funded – Open Competition

ARTES Advanced Technology (AT) Process



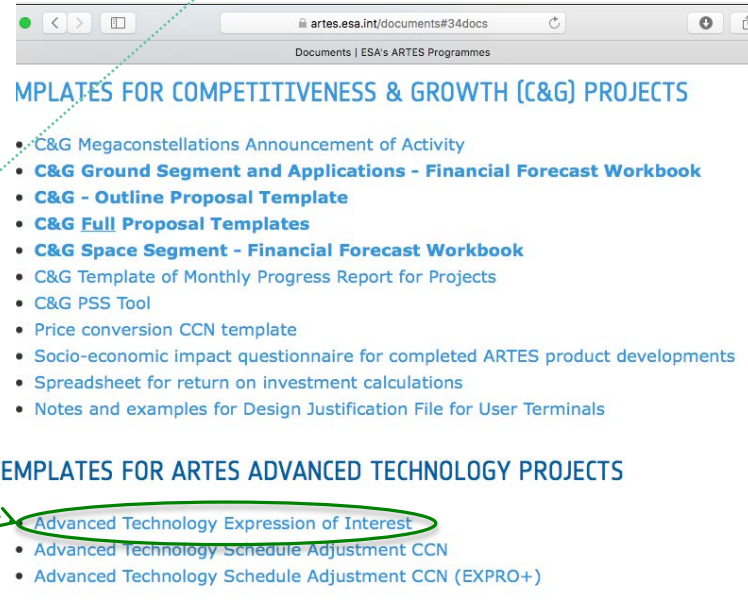
<https://artes.esa.int/advanced-technology>



RELATED CONTENT

- ARTES Advanced Technology - Workplan
- ARTES 4.0 planned activities Summary table (AT, ScyLight, 4S and 5G)
- Documents

Now also includes planned activities from the SPL Work Plans





- Parallel contracts possible

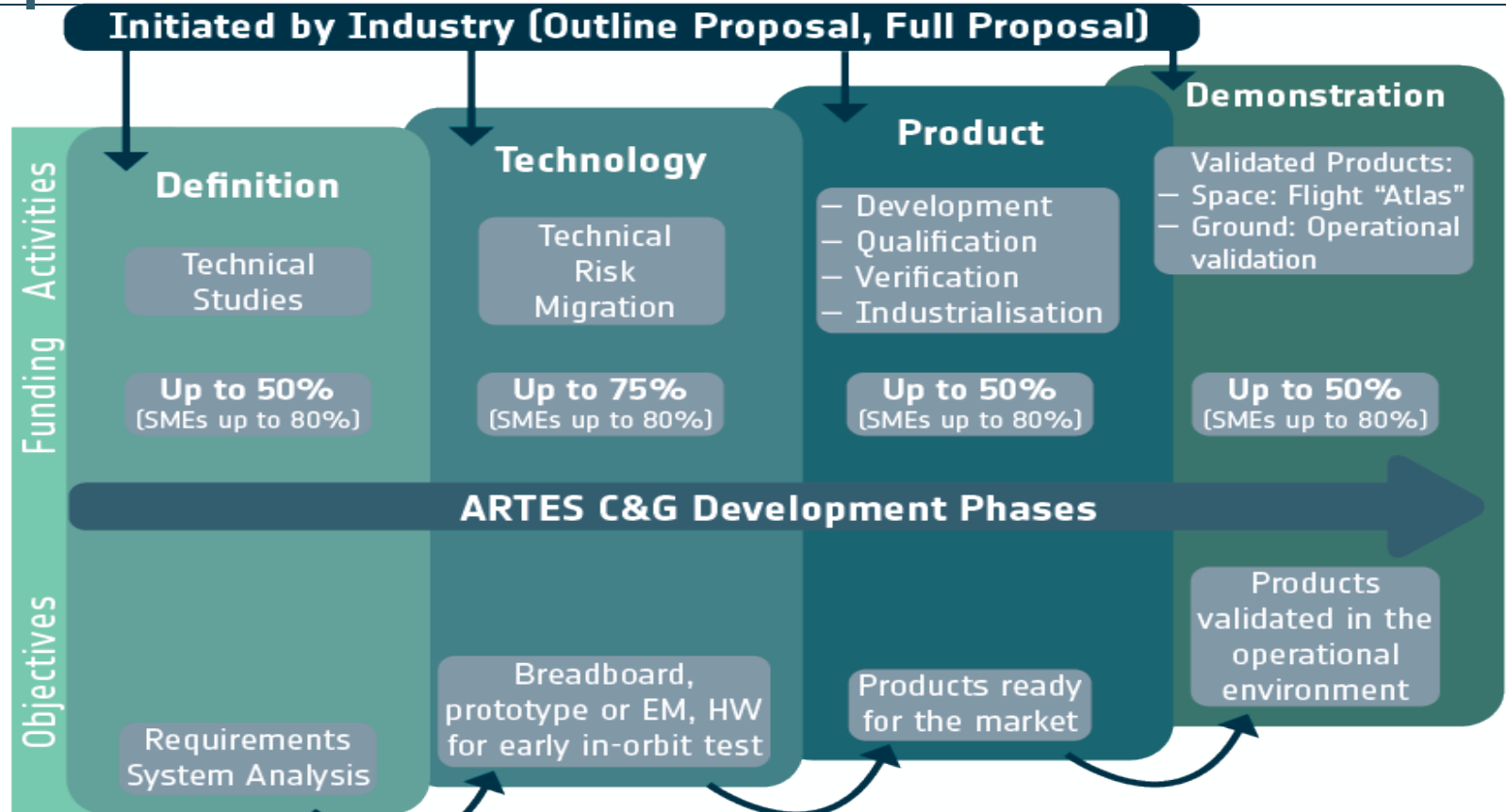
- Early in-orbit test flights
- Activities to support standardisation



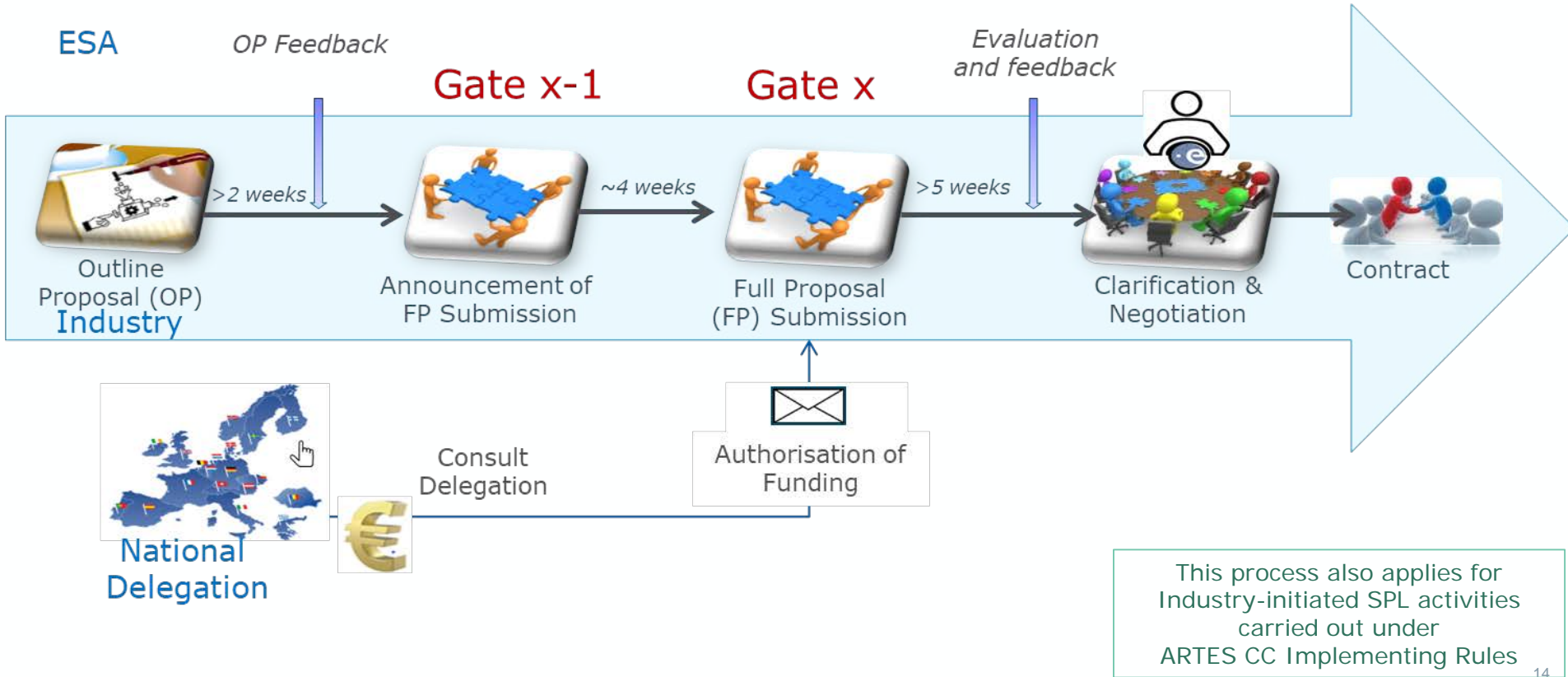
COMPETITIVENESS AND GROWTH



ARTES 4.0 Competitiveness & Growth: Development Phases



ARTES 4.0 Competitiveness & Growth Process



C&G Development Phase		Funding level up to	
	Main goal(s) ↓	Non-SME	SME
Definition Phase	Establish user requirements / spec. and define baseline	50%	80%
Technology Phase	De-risking; tested BB or EM; early in-orbit test	75%	80%
Product Phase	Qualification / industrialisation; (E)QM	50%	80%
Demonstration Phase	Validate the product in its operational environment; PFM	50%	80%

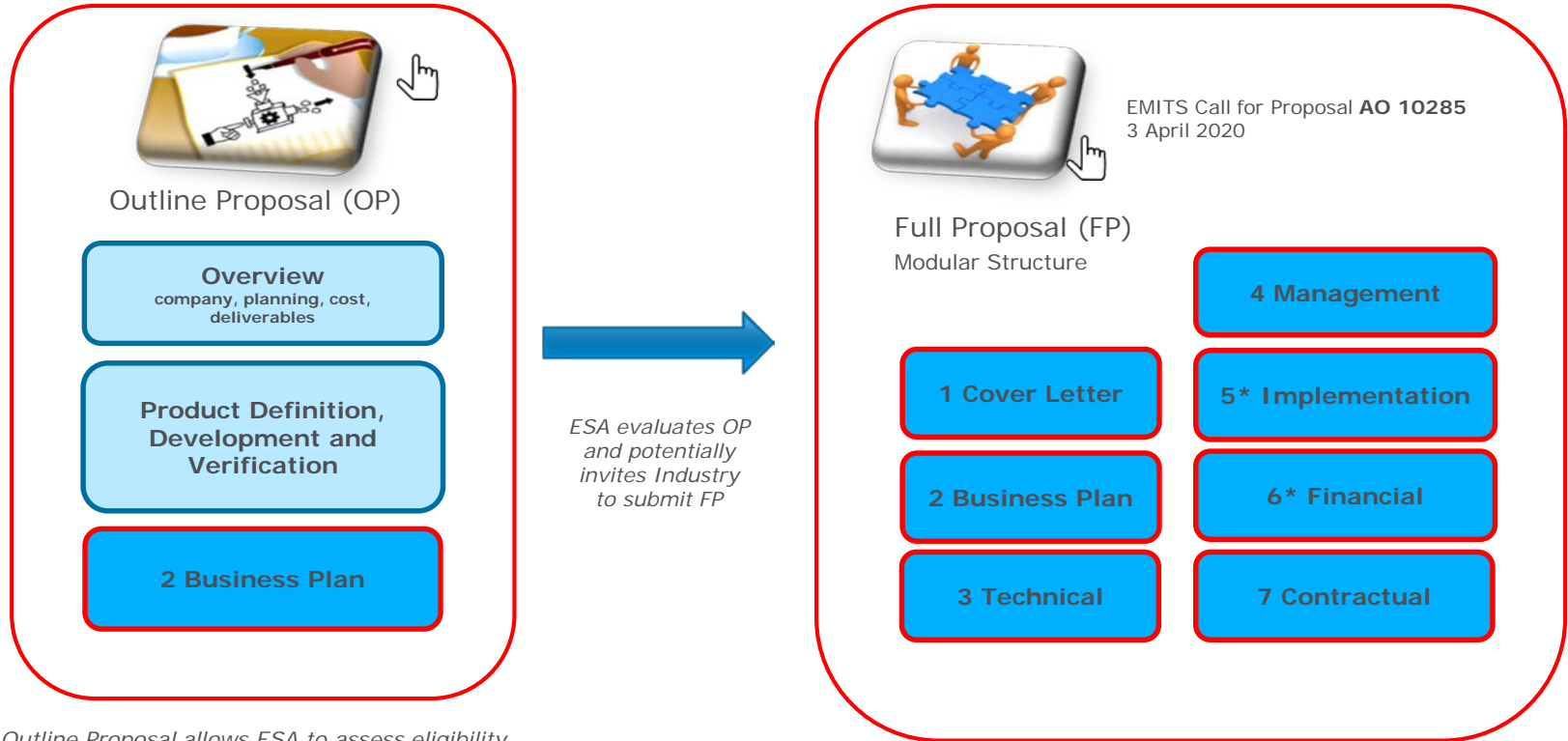
	Maximum Funding Level for Universities or Research Institutes		
ARTES C&G Development Phase	With commercial interest in the product (Non-SME status)	With commercial interest in the product (SME status)	No commercial interest in the product (up to 30% of the total contract cost)
Definition Phase	50%	80%	50%
Technology Phase	75%	80%	100%
Product Phase	50%	80%	50%
Demonstration Phase	50%	80%	50% <small>Allowed since Nov. 2020</small>

ARTES 4.0 C&G Demonstration Phase in Space: Atlas

- **Atlas** is about demonstrating performance of “**flight hardware**” in space within the ARTES 4.0 C&G Demonstration Phase
- **Atlas** supports any flight hardware related to **telecommunications satellites** and **telecoms products** (platform or payload)
- **Atlas** helps the product gain the critical **flight heritage**
- **Atlas** Hardware can be:
 - On any **type of mission** including other ARTES missions
 - On a flight opportunity from anywhere in the **World**
 - within main mission (**Embedded**) or alongside the main mission as hosted technology (**Independent Hosted**) or as a dedicated mission (**Independent Standalone**)

Atlas is a flexible tool to gain flight heritage





Outline Proposal allows ESA to assess eligibility, feasibility and validity of the activity

* Update required for subsequent Phases

Mandatory Templates

Highlights of the Call for Proposals (CfP) for ARTES 4.0 Technology & Product Developments

- **The CfP** encompasses Competitiveness & Growth *and* the Strategic Programme Lines for Technologies and Product development
- **Definition Phase** activities **no longer have a 250k€ funding cap**
- The **Technology Phase** includes **early in-orbit experimentation**
- **ATLAS** is **simplified** allowing either ‘Embedded’ or ‘Independent’ mission types
- **SMEs**: support **up to 80%** for all Development Phases
- **2 Domains**: choose “Space Segment” or “Ground Segment”
- **Electronic proposal submission**: via the electronic “esa-star” tendering tool
- **5-week** ESA response to industry after Full Proposal submission at “Gates” (approximately every 4 weeks)
- The Smart Contract tool enables a **shorter time to contract**
- **Personal data protection terms** are included in Draft Contract



Your success is our success!

Applications



Courtesy of CASA



Courtesy of RDT

**ARTES CC Video:
click to watch**



For more information, please consult:

<https://artes.esa.int>

Note:

To enable hyperlinks included in this handout please register and log-in to:

Login to the ARTES web site: 

EMITS: 

ARTES Core Competitiveness Overview: 

ARTES Core Competitiveness Documents: 

ARTES Call for Ideas: 

ARTES 4.0 Core Competitiveness Contact points

If you want to participate, visit <https://artes.esa.int> or contact us:

ARTES 4.0 CC (AT + C&G):

dietmar.schmitt@esa.int

Contractual matters:

audrey.ferreol@esa.int

ARTES 4.0 C&G Demonstration Phase Atlas:

john.shirlaw@esa.int

Outline Proposals for ARTES 4.0 C&G and
Announcements of Activity are to be sent to:

artes-cg@esa.int

ARTES 4.0 Advanced Technology
Expression of Interest are to be sent to:

artes-at@esa.int



Further Details



The “Smart Contract” tool

To speed up the time to contract signature

A response to different needs:

- Contract template can be adapted to the activity proposed
- Anticipate the text of the final contract at proposal submission
- Facilitate agreement to contract conditions at the time of proposal submission
- Avoids lengthy negotiation but does not exclude them
- Straightforward verification of the compliance to contract conditions

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How does the “Smart Contract” tool work

Tenderer fills in Excel file for Contractor’s part and generates first version of contract

esa_contract_excel_form.xlsx	24/06/2019 12:38 ...	Microsoft Excel W...	69 KB
esa_contract_template_v1.0.2.dotm	24/06/2019 12:38 ...	Microsoft Word M...	336 KB
READ ME ESA contract.txt	24/06/2019 12:38 ...	Text Document	2 KB

→ TO BE FILLED BY THE TENDERER

Contractor full name	AiPiElle
Contractor abbreviated name (if applicable)	IPL
Registered office - Mail address	Spui, 100
Registered office - ZIP code and city	2500 AZ
Registered office - Country	Netherlands
ISO country code	NL
Signing authority name	F. Germes
Signing authority function	Head of Division

and:
AiPiElle
(hereinafter called “the Contractor” or 'IPL'),
whose Registered Office is at:
Spui, 100
2500 AZ
Netherlands

represented by F. Germes, its Head of Division,

ESA fills in the ESA reserved fields in the Excel file and generates final contract version

NB: In case of issues with use of macros, Excel file only is to be delivered to ESA

- Subsequent Development Phases may be introduced via a Contract Change Notice (CCN).
- Subsequent Development Phases may be performed in parallel with existing Development Phase(s).
- The work proposed in a CCN will be assessed for eligibility by ESA in terms of completeness and technical readiness.
- If agreed, the CCN will be signed by both parties, possibly after interactions between the contractor and ESA to improve the proposal.
- ESA's signature is conditional upon receipt of an authorisation of funding from the relevant National Delegation(s).
- The new work cannot start before the CCN is signed by both parties.
- Retrospective CCNs (work already performed without ESA authorisation) is not allowed.

The Notification of Intended Development Phase (NIDP)

- Exceptionally, and with justification, it may be necessary to start work before a CCN to introduce a subsequent Development Phase can be prepared and submitted to ESA.
- In such cases, the Contractor may submit a Notification of Intended Development Phase (NIDP) to ESA.
- ESA will acknowledge receipt of the NIDP.
- If agreed, ESA will sign the NIDP cover form, acknowledging that the proposed work has started at the Contractor's own risk.
- The Contractor will be invited by ESA to submit a CCN.
- The maximum amount of work that can be contractually covered prior to signature of the CCN by both parties is four months, measured from the date of receipt of the NIDP by the Agency.

