

ESA GOVSATCOM Precursor ESA Secure Satcom for Safety & Security Applications

GOVSATCOM 2019

Luxembourg, 14 February 2019

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ESA Ministerial Council 2016



ESA SPACE19+



ESA GOVSATCOM Precursor – Key Facts



- ESA Ministerial Council 2016
- Single Open Programme
- >170 MEURO (85MEURO ESA co-fund)

- Innovation
 - Commercial, national and PPP Stakeholder
 - Ground Segment/ Pooling & Sharing of existing assets
 - Space Segment of future assets
 - Demonstrations and Service Development

- Federation of 6 PPP Projects (2017-2021)
- 8 European Satellite Operators as PPP Partners (including SES/ LuxGovSat, ADS CIS, Inmarsat/Avanti, Hisdesat (to join QI 2019))
- 8 Participating ESA Member States (BE, ES, IT, LU, NO, PT, RO, UK)



From PPP to Demonstrations and Downstream

- Synergies ARTES Integrated Applications & PACIS Demonstrations
- 1st PACIS User Workshop 8 February 2019
- About 60 participants
- 19 representatives from ESA Downstream Projects
- 5 PACIS Operators
- In coordination with EDA (ESA-EDA Joint Team) including MoD representatives
- ESA MS representatives



ESA GOVSATCOM Precursor – European Coordination



- Institutional Coordination (ESA, EU and national)
 - Advisory Committee on Governmental Secure Satcom
 - Body of ESA & ESA Member States (currently Chair LUX)
 - reporting to ESA Program Board (JCB)
 - EC and EDA as observer
 - ESA-EDA Implementing Arrangement and Joint Team
 - ESA as observer in
 - EDA PT SATCOM
 - EC GOVSATCOM Expert Group
- Industrial Coordination (PACIS industry)
 - PACIS Coordination Group

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ESA Secure Satcom for Safety & Security Applications Introduction



http://www.esa.int/spaceinvideos/Videos/2018/10/Satcom_for_safety_and_security



Telecommunication networks @ heart of digitalized world

Digital Society:

- key enabler for many safety and security applications from space to the benefit of society (e.g. civil protection, humanitarian aid, maritime surveillance, border control)

Digital Economy:

- major increase in cyber-threats potentially entailing systemic risks (e.g. safety of transport, security of energy supply, finance, industrial/environmental hazards, availability of critical infrastructure)

→ Space-based solutions and secure satcom can help to respond to the above opportunities and threats.

ESA Secure Satcom for Safety & Security Applications Towards SPACE19+



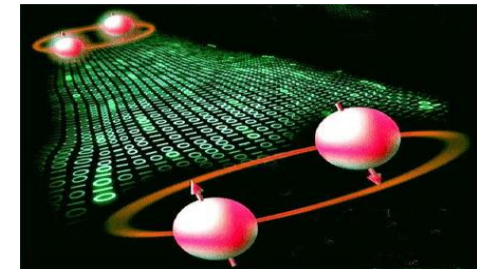
More than a decade of ARTES support to Secure Satcom

- IRIS for EU Single European Sky Air Traffic Management
- EDRS for secure data relay for EU Copernicus
- SAT-AIS for secure maritime transport
- GOVSATCOM Precursor



"4S" as ARTES Strategic Framework

- address the full lifecycle of innovation, from preparatory R&D and product development to infrastructure projects, services and downstream development
- leveraging from industry's business plans
- New challenges and opportunities !



ESA Secure Satcom for Safety & Security Applications

ESA Announcement of industrial Opportunity



- ESA AO issued 1 February 2019
- Covering 2020-2025 timeframe and preparation 2025-2030
- Addressing R&D/Product development/Core Competitiveness, Secure Satcom Projects and GOVSATCOM-related Project, as well as Business Applications

<https://artes.esa.int/news/industrial-opportunity-secure-satcom-safety-and-security>

- ESA Industry AO Workshop on 4 April 2019 hosted by ROSA in Bucharest

4S Theme and activity areas vs. timeframe		Evolution of existing (>2019)	Generation of new (2020-2025)	Preparatory work (2025-2030)
CORE COMPETITIVENESS for 4S (including SkyLight)		e.g. European protected waveform	e.g. SkyLight for institutional QKD	e.g. Technology for NG Secure Satcom
Secure Satcom Projects	IRIS	IRIS for ATM Deployment	e.g. Beyond ATM e.g. Cockpit services	e.g. Digital Sky
	EDRS Global	EDRS-Global Phase C/D/E1	e.g. EDRS for NG Copernicus Sentinels, RPAS	e.g. NG Data Relay
	Institutional QKD	/	Precursor	e.g. Part of NG secure Satcom
	OTHER			
GOVSATCOM-related Projects	Precursor Phase 2	Integration into Pooling & Sharing Hubs; Extension of demonstrations and downstream service developments	e.g. Arctic Precursor	/
	Pooling&Sharing HUB	Phase A/B	Version 1 Hub Implementation	Version 2 Hub Implementation
	Space Component Segment 1	/	New National secure Satcom assets; Security augmented commercial secure satcom assets; IOVIOD	NG Secure Satcom System; Additional space infrastructure
	OTHER			
BUSINESS APPLICATIONS for 4S		e.g. Extension of Precursor PACIS demonstration downstream to create demand pull from civilian user base	e.g. development of new vertical sectors; AI; RPAS/HAPS	
GENERIC			e.g. Cybersecurity	



... looking forward to continued cooperation with industry and national and EU institutions – in coordination with ESA Member States - in preparation of



Thank You