

LuxGovSat – the latest Luxembourg Satcom Business

Overview for the BCC

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GOV SAT

LuxGovSat – Secure Government Satellite Communications

>Introduction

>LuxGovSat

- Market position

- Overview

- Next steps

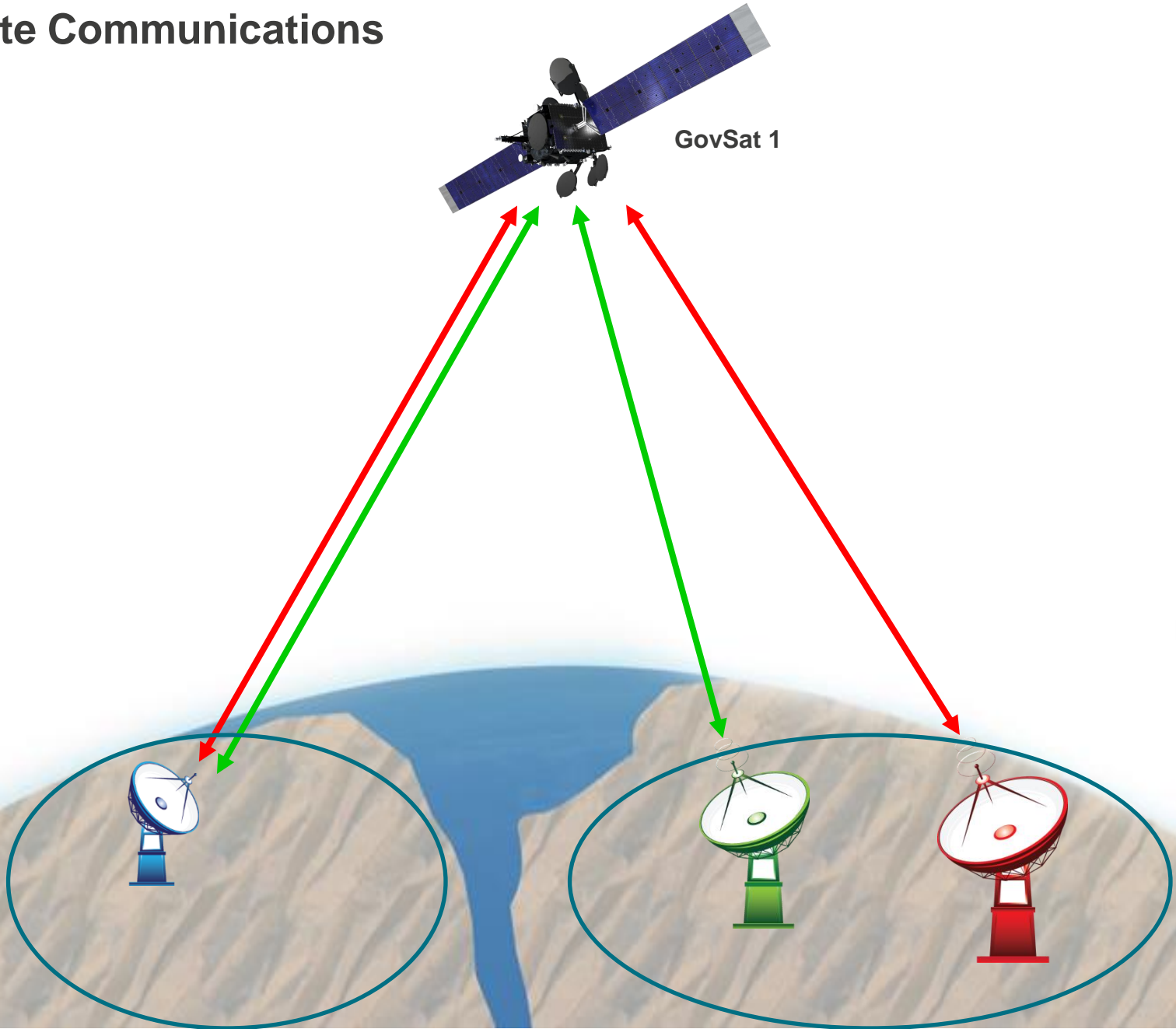
>Questions?



Introduction

GOV
SAT

Satellite Communications



Secured Satcom – Drivers

> *Wide Coverage*

> *Assured access to capacity*

- Spectrum and services

> *Availability in times of stress*

- Non-reliance on in country infrastructure



> *Deliver the critical mission needs*

- Voice, data and video where you need it
- Humanitarian, C2, ISR, Situational Awareness

> *End to end protection of critical information*

Introduction to GovSat

GOV
SAT

INTRODUCTION TO GOVSAT - INFORMATION IS KEY

but it must be available



GOVSAT

Established to provide Secured Governmental Satellite Communications



THE GOVERNMENT
OF THE GRAND DUCHY OF LUXEMBOURG



- **New Governmental Satellite Communications Capability**
- **GovSat-1 launch end 2017**
- **Service operations from 2018 to >2032**
- **Capacity (partially) secured by the Luxembourg Government**
- **Additional capacity available on non-preemptible terms**

Institutional security applications



Defence applications



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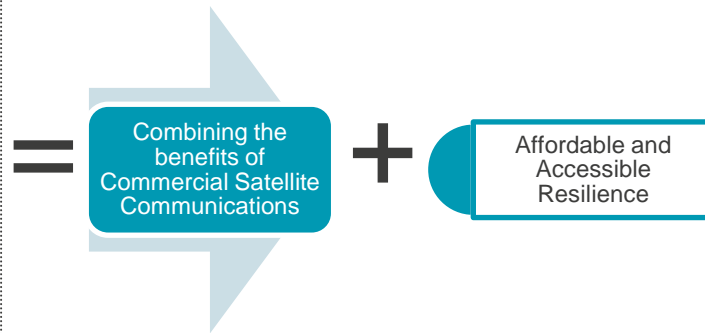
Pioneer in a new tier of Satellite Supply tailored for Governmental use



COMSATCOM			
Reliability	+	+	+
Resilience	+		
Affordability	+	+	+
Accessibility	+	+	+

GOVSAT focus segment

GOVSATCOM			
Reliability	+	+	+
Resilience	+	+	
Affordability	+	+	
Accessibility	+	+	



MILSATCOM			
Reliability	+	+	+
Resilience	+	+	+
Affordability	+		
Accessibility	+		



SECURITY

GOVSAT

Affordable and Accessible SECURITY and RESILIENCE capabilities

Governmental Satellite Communications

Reliability	+	+	+
Resilience	+	+	
Affordability	+	+	
Accessibility	+	+	

Dual Use

- Supporting Defence and Security applications
- Enabling Mobile and Fixed communications

Enhanced resilience capabilities vs. Commercial SatCom

- Anti-jamming
- Encrypted Telemetry and Control
- Military Frequencies

Complementary to dedicated Milsatcom systems

- Technical compatible to national Milsatcom systems

Lower cost vs. dedicated Milsatcom systems

- tailored security and resilience features
- leveraging operational synergies from commercial SatCom

GOVERNMENTAL SATELLITE COMMUNICATIONS

in a European context

2007

EU-ESA space policy (security and defence importance reemphasized in 2010)



2014

Launch of program preparations of the GOVSATCOM initiative



2016

GOVSATCOM is one of the priorities in the European Defence and Action Plan 2016

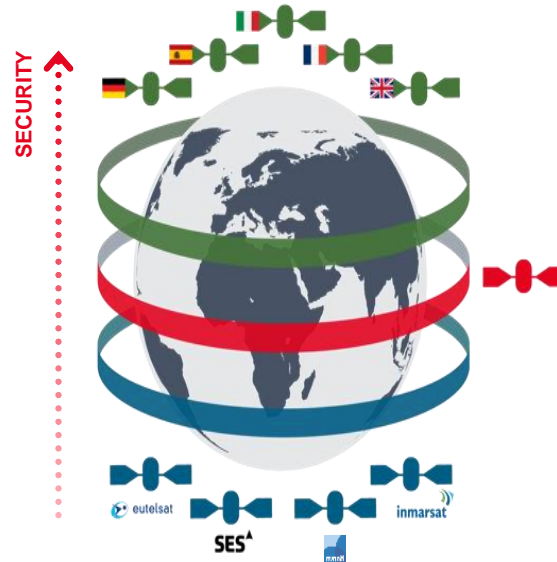


2017

Impact Assessment of EU GOVSATCOM

GOVSATCOM

A new tier of secured satellite supply



GOVSAT-1 PROGRAMME OVERVIEW

Flexible coverage for Headquarters and Theatres of Operations from 21.5°E orbital position

X-Band

- > Frequency band reserved for governments and institution
- > Ideal to establish secure and robust satellite communication links

Global beam

- > Extensive coverage from 50 W to 90 E and 70 N to 70S
- > Ideally positioned to address communications within Europe, Middle East and Africa
- > Enables maritime operations over the Atlantic and Indian oceans

Multiple mission beams

- > High power coverage over key mission areas
- > Ideal to establish critical and secure communications in theaters of operations
- > Fully flexible and steerable



GOVSAT-1 PROGRAMME OVERVIEW

Flexible coverage for Headquarters and Theatres of Operations from 21.5° E orbital position

Military Ka-Band

- > Frequency band reserved for governments and institution
- > Ideal to establish secure communications for high throughput or mobility applications

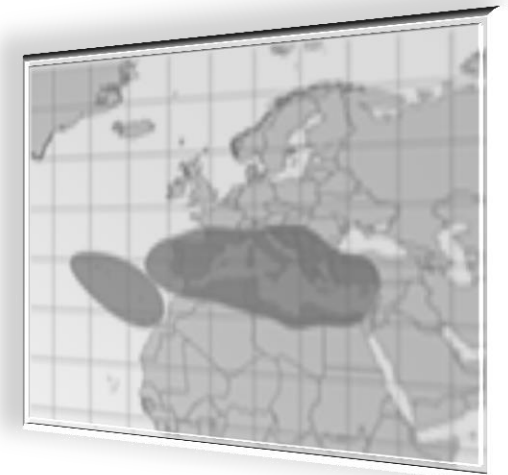
Anchor beam

- > Extensive coverage over Europe, ideal to connect European headquarters to any of the GovSat-1 mission beams
- > The Anchor beam is also ideal to interconnect headquarters or other key institutional or government sites within Europe

Multiple mission beams

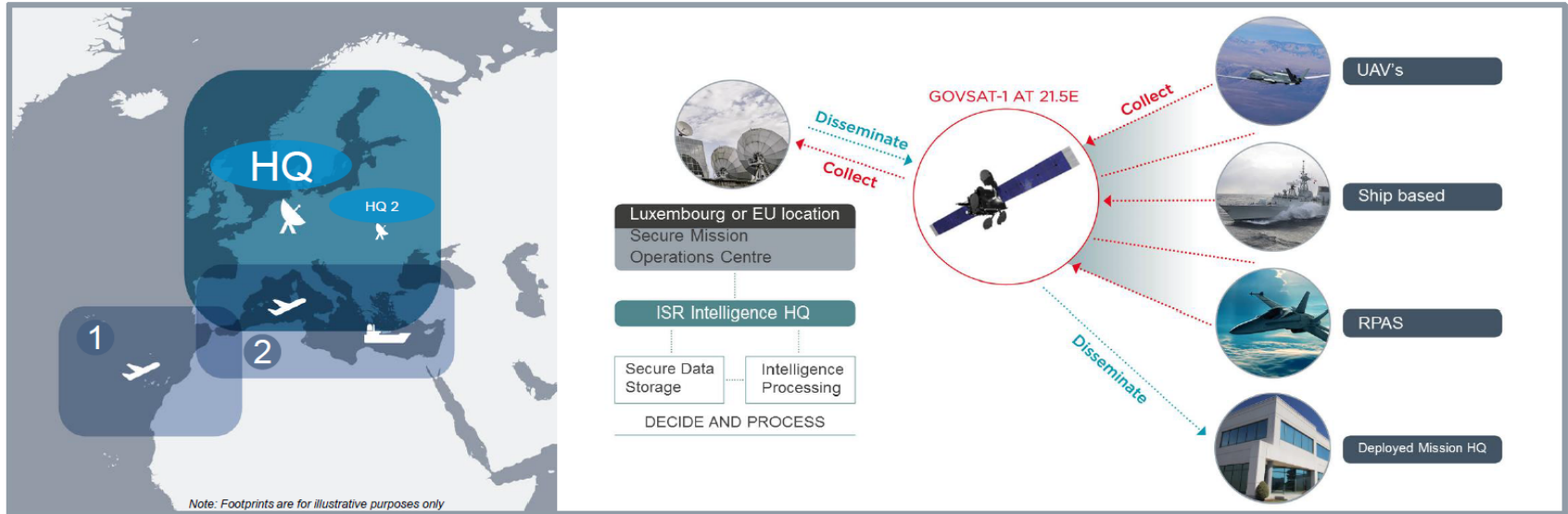
- > High power beams to enable high bandwidth applications over small antennas
- > Ideal for Reconnaissance and Mobility applications
- > Providing high power coverage over the Mediterranean sea

Ka



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Application Use Case 1: Enabling Missions for European Border Surveillance and Control



Typical Mission Area Characteristics

- Military Ka-band Frequency
- High Application Data Rate
- HD video / other payload from/to Remotely Piloted Aircraft Systems (RPAS)

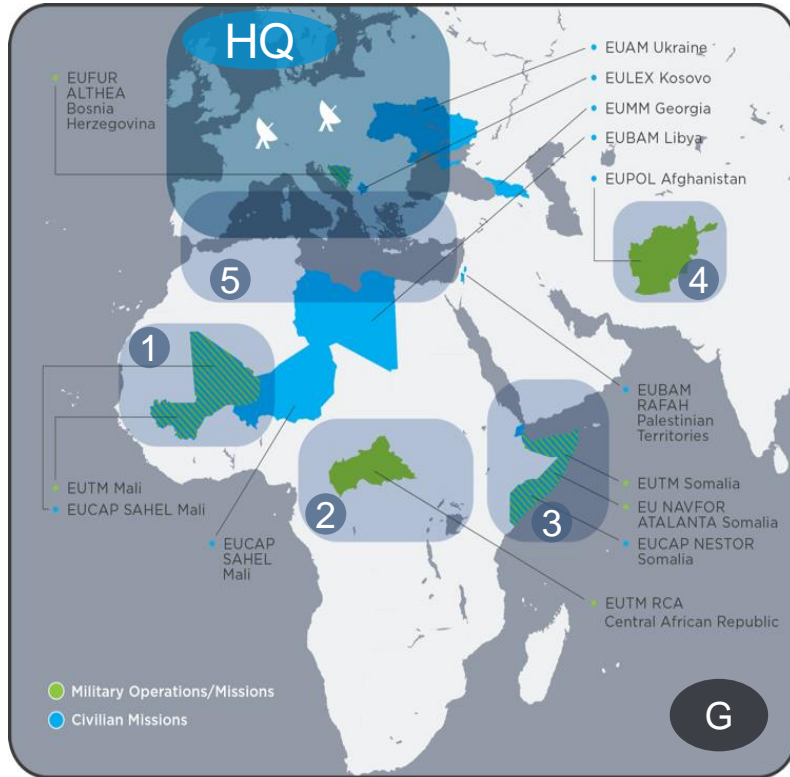
ISR support

- Secure Mission Communications support (Payload operations, Monitoring, Reporting)
- Secure Data Hosting/Storage
- Secure Dissemination of Data

GovSat provides the security, flexibility, performance and coverage to enable communication for ISR applications

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Application Use Case 2: Enabling Missions for European External Action Services



Note: Footprints are for illustrative purposes only
Source: Missions and operations extracted from EEAS (July 2016)

▲ Typical Mission Area Characteristics

- Maritime, Aero and Land applications for COTP, COTM and fixed terminals

HQ Beam

- Coverage for HQ's within Central Europe

Mission Beams

- Theatre coverage (X-band and Mil-Ka) over EEAS areas of operation

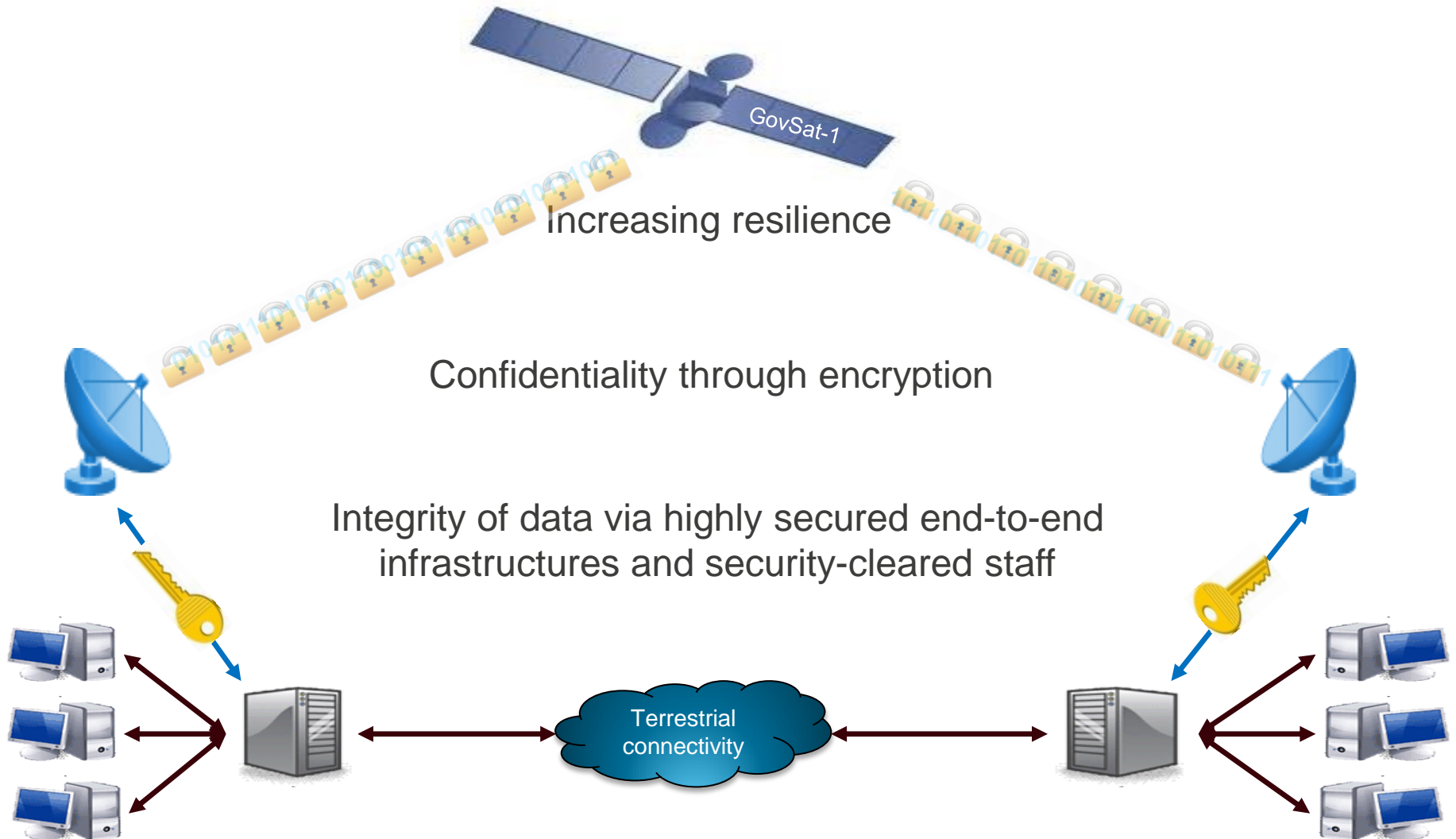
Global Beam

- Full coverage in X-band over visible earth area

GovSat can provide the coverage and flexibility to enable secure and reliable communication for multiple EEAS missions

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Application Use Case 3: Improving Information Security



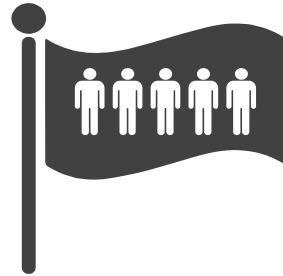
GOVSAT, READY TO SUPPORT SECURED SATCOM NEEDS

■ **A secure Satcom capability for Governments and Institutions**



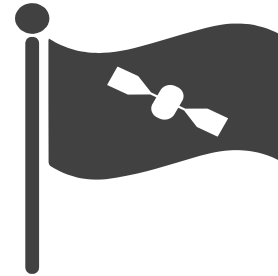
Supporting

The EU GOVSATCOM initiative at an early stage



Addressing

Governmental and Institutional users (NATO, EU, UN and member states)



Enabling

Critical SATCOM solutions and applications in both the defence and security segment



Enhancing

Resilience against Cyber Threats

Any Questions?

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