



PUOLUSTUS- JA  
ILMAILUTEOLLISUUS PIA RY

# Space services supporting comprehensive security

Juha-Matti Liukkonen

PIA space industry group vice chair,

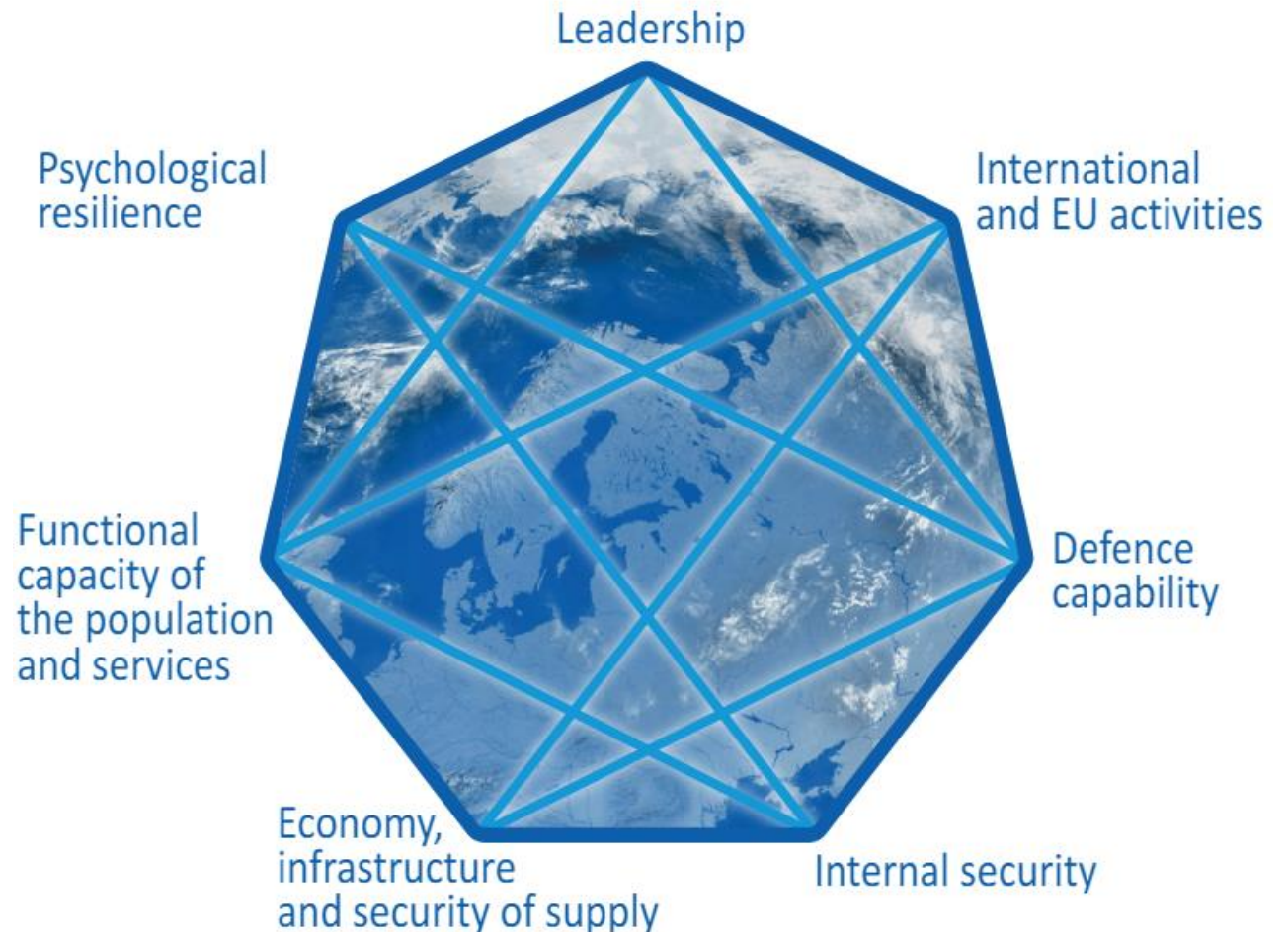
Reaktor Defence & Security

---

# Comprehensive security

Comprehensive security is the Finnish cooperation-based preparedness model, in which the vital functions of society are jointly managed by the authorities, business operators, organisations and citizens.

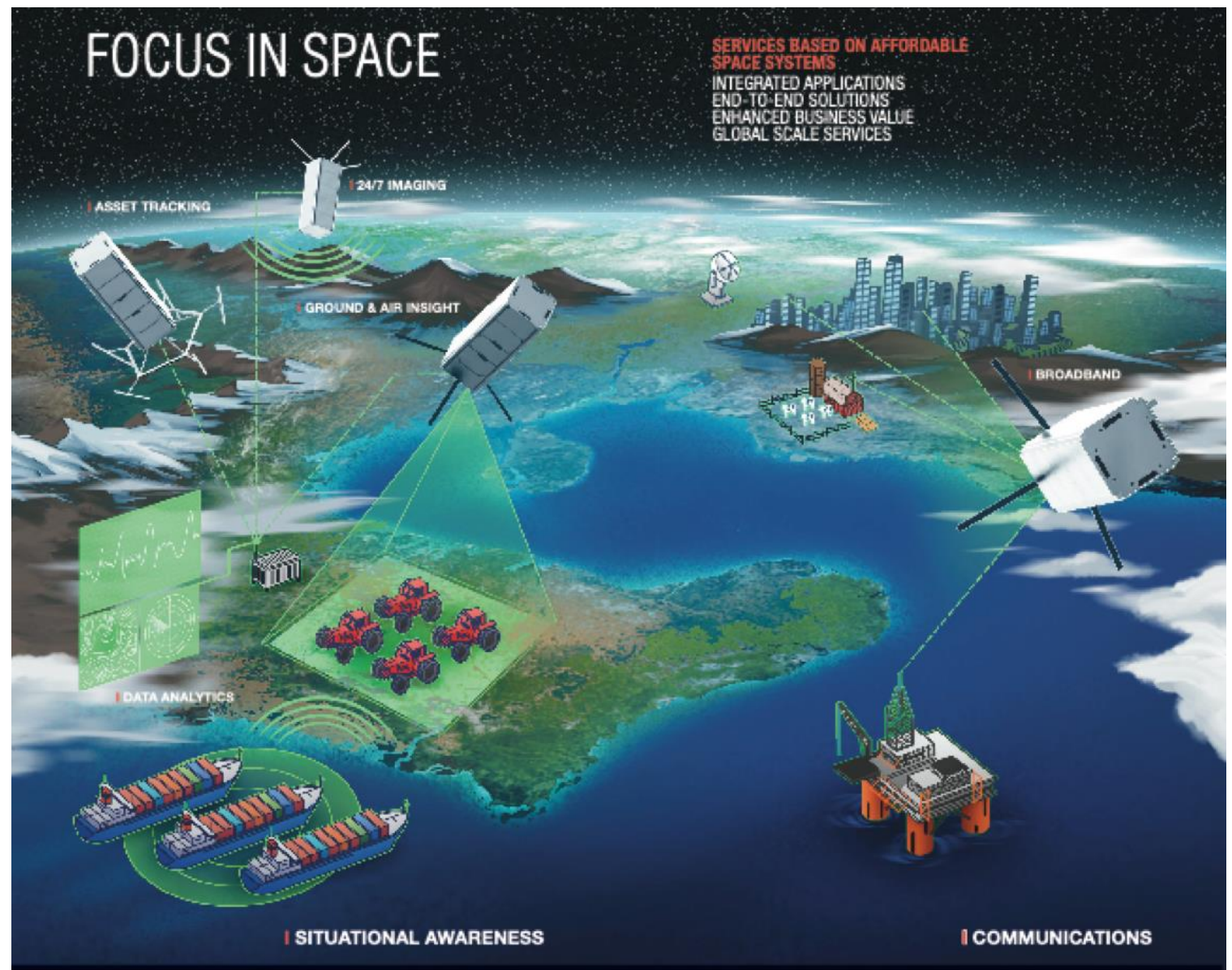
## THE FUNCTIONS VITAL FOR SOCIETY



Source: Security strategy for society, 2017

# Space services as civilian infrastructure

- Measurements
- Insights
- Maps
- Navigation
- Communications
- Global coverage
- Industrial co-operation



# SPACE / CYBER / AIR / LAND / SEA



Photos by Forsvaret and NATO's MARCOM and AIRCOM

Source: Multi-Domain Operations in NATO - Explained - NATO's ACT

DS Space Force unveils highly anticipated commercial strategy


defensescoop.com/2024/04/10/space-force-commercial-strategy/

DEFENSESCOOP Topics Events Podcasts Videos DefenseScoop 50 SUBSCRIBE

# Space Force unveils highly anticipated commercial strategy, seeking to employ 'hybrid' architectures

The document indicates that the military branch is looking for a range of "goods, services, and activities that support and integrate into a multifaceted hybrid space architecture."

BY MIKAYLA EASLEY • APRIL 10, 2024



## More Like This

Rocket Lab, True Anomaly win contracts for US military's Victus Haze project  
BY JON HARPER

SDA exploring new waveforms for future tranches of data transport satellites  
BY MIKAYLA EASLEY

Chandra Donelson to serve as acting Air Force chief data and AI officer  
BY JON HARPER

## Top Stories

1 Starlink terminals give Navy 'game-changing' flexibility

Source: Defensescoop.com

# Space services as defence infrastructure

- More specific needs
- Time critical
- Security requirements
- Increasing dual-use of commercial services

**FOCUS IN SPACE**

**AFFORDABLE OWN SYSTEMS BASED ON SMALL SATELLITES**  
YOUR DATA  
YOUR SPECIFICATIONS  
YOUR CONTROL  
TRUSTED COMMUNICATIONS

**FIND  
FIX  
TRACK  
TARGET  
ENGAGE  
ASSESS**

**SIGINT**  
**RADAR**  
**VISUAL**  
**RELAY**

**SITUATIONAL AWARENESS**  
**COMMUNICATIONS**

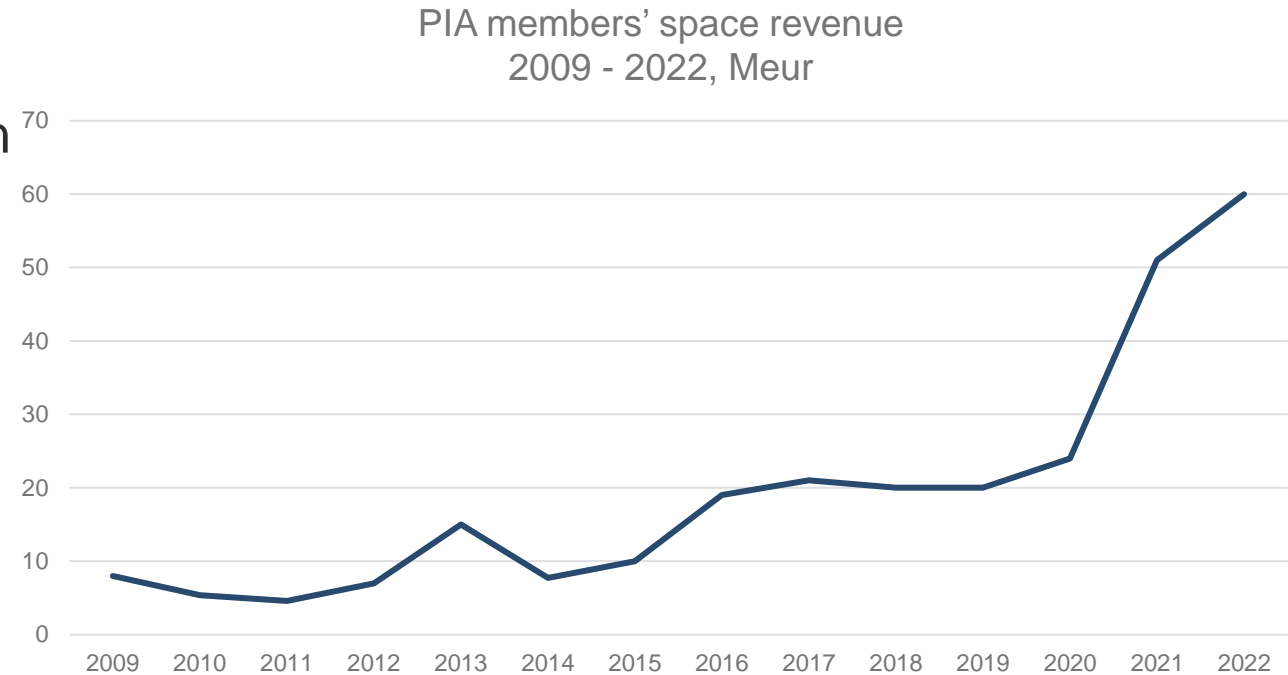
**PRIME CONTRACTORS:**  
DA-DESIGN OY | HARP TECHNOLOGIES OY | RUAG SPACE FINLAND OY | SPACE SYSTEMS FINLAND OY

AIRBUS DS FINLAND OY | BITTIUM | REAKTOR INNOVATIONS OY | T&G NORDIC OY | VTT TECHNICAL RESEARCH CENTRE OF FINLAND LTD

ASSOCIATION OF FINNISH DEFENCE AND AEROSPACE INDUSTRIES

# Development of the Finnish space industry

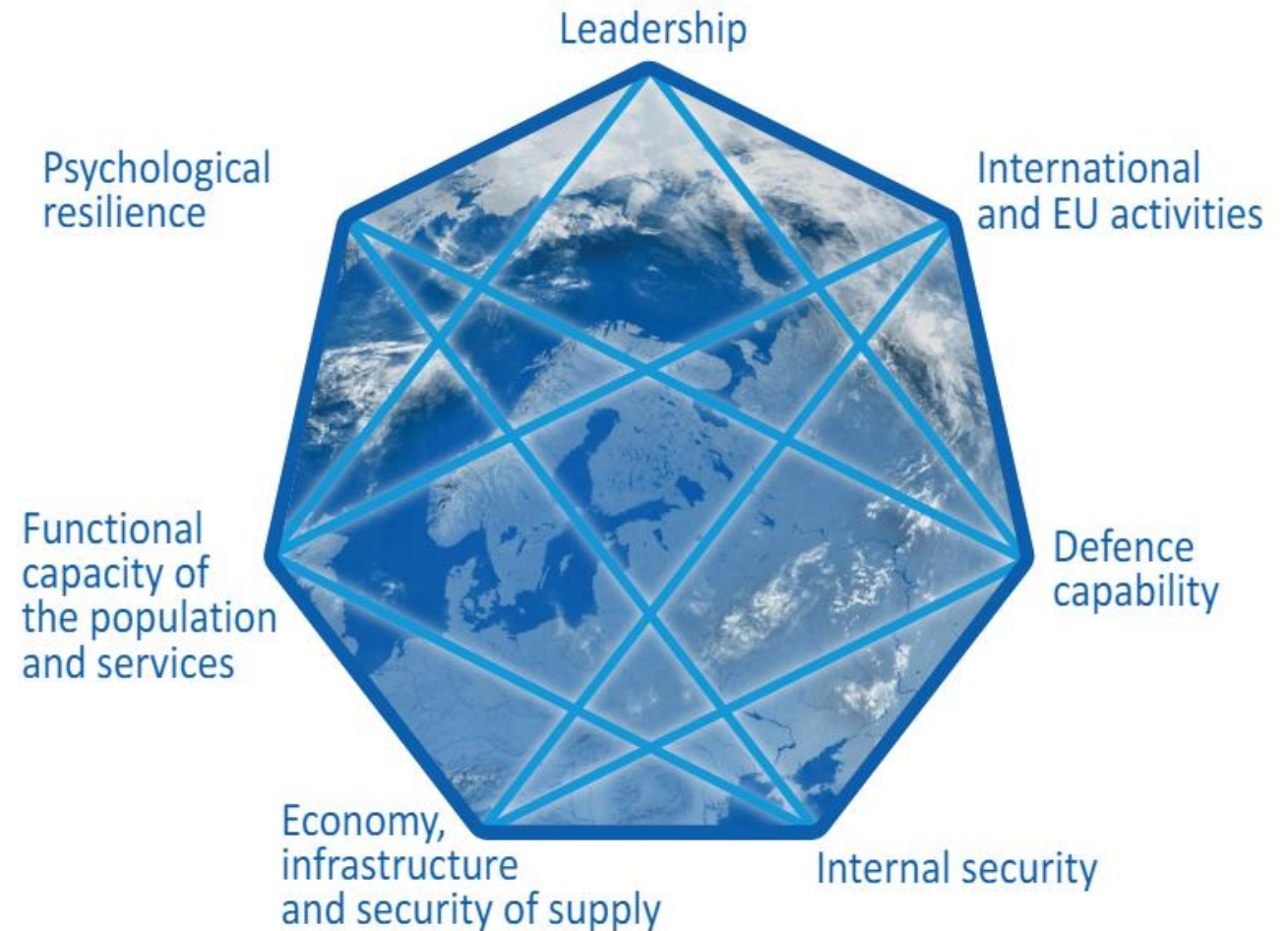
- Compact but growing rapidly
- The Finnish industry capabilities have increased significantly, improving our position in several markets and forums
- Strengths include technological leadership, high quality research and development, and co-operation within industry and with academia
- Small companies are agile, and Finland is a reliable operating environment
- Contributing to the economy, capability, international co-operation and security of supply in Finland



# Space for comprehensive security

- Situational awareness
- International activities
- Economy & infrastructure
- Security of supply

## THE FUNCTIONS VITAL FOR SOCIETY



Source: Security strategy for society, 2017



**Thank you.**

