

# Cyber Security and Satellites

The Space Situational Awareness Strategic Challenges for India  
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# What is RUSI?

## **Independent Defence and Security Think Tank**

- Founded in 1831

## **Research**

- Evidence-based
- Policy relevant

## **Convening/communicating**

- Network spans government, academia, private sector
- Range of events
- Publications

# Research Themes

- **Military Sciences**
- **Defence, Industries and Society**
- **International Security Studies**
- **National Security and Resilience**
- **Proliferation and Nuclear Policy**
- **Centre for Financial Crime and Security Studies**

# Space and Cyber

How worried do we need to be?



# Types of Cyber Attack in Space

**Jamming**

**Spoofing**

**Hacking**

**Attacks on ground infrastructure**

# Potential Actors

**States**

**Organised Criminal Groups**

**Terrorists**

**Individuals**

# Vulnerabilities

**Rise in actors – state and commercial**

**More satellites/mega-constellations**

**Increased connectivity/Internet of Things**

**International supply chain**

**Changes in speed and costs of procurement and launch**

# Implications





# National and International Security

**Adversarial actions leading to potential conflict**

**ISR denial**

**Cyber attack as non-kinetic space ‘weapon’**

**Loss of essential data and information**

**Risks to Critical National Infrastructure**

**‘A day without space’**

# Space Situational Awareness

**Loss of satellite control**

**Impact on ability to track satellites - unpredictability**

**Intentional or unintentional collisions  $\longrightarrow$**

**increase in debris**

## So what's the solution?



# Solutions

**Understanding of space as Critical International Infrastructure and global common good**

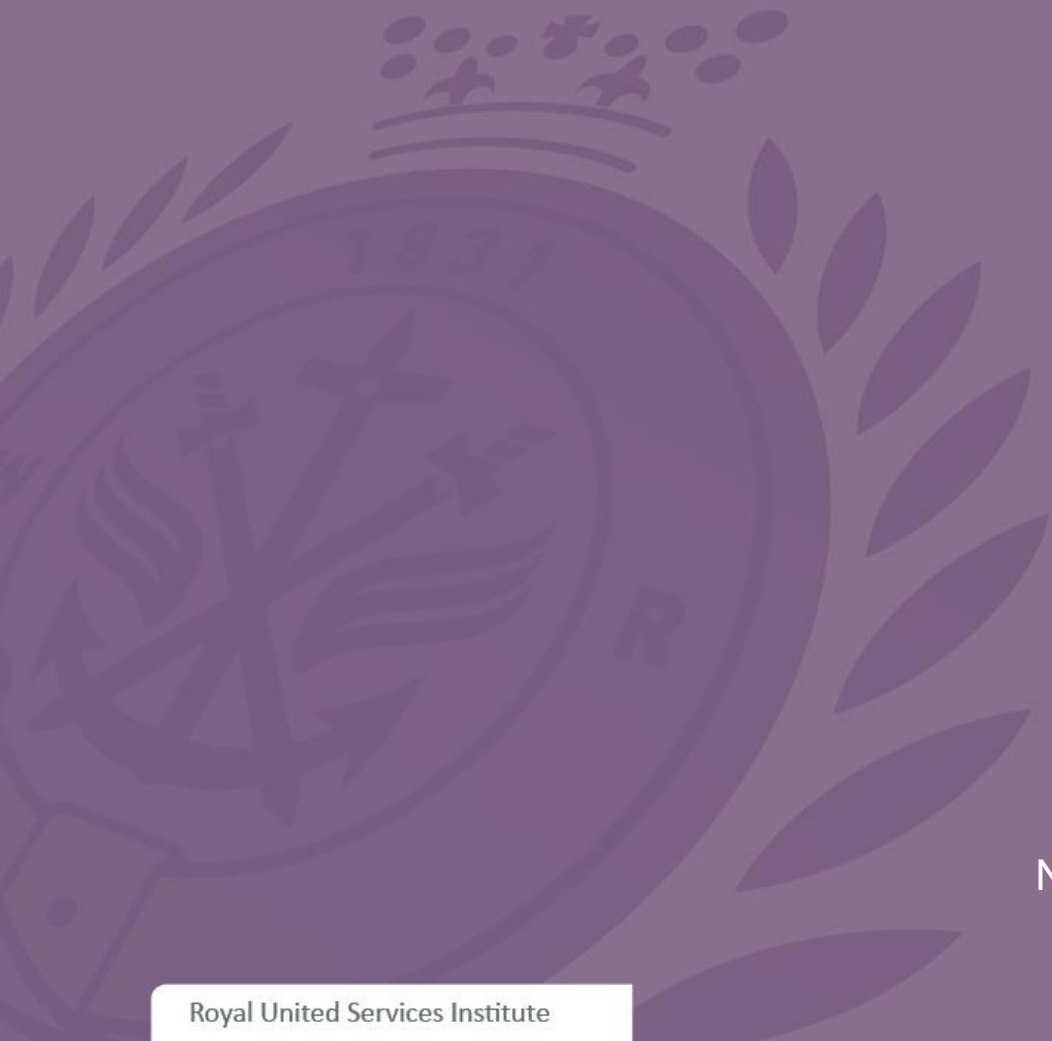
**Risk analysis/risk tolerance**

**Multilateral discussions regarding best practices**

**Flexible and adaptive regulation that does not fall too far behind technological developments**

**Getting rid of silos**

**Education**



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