

A HAZÁÉRT



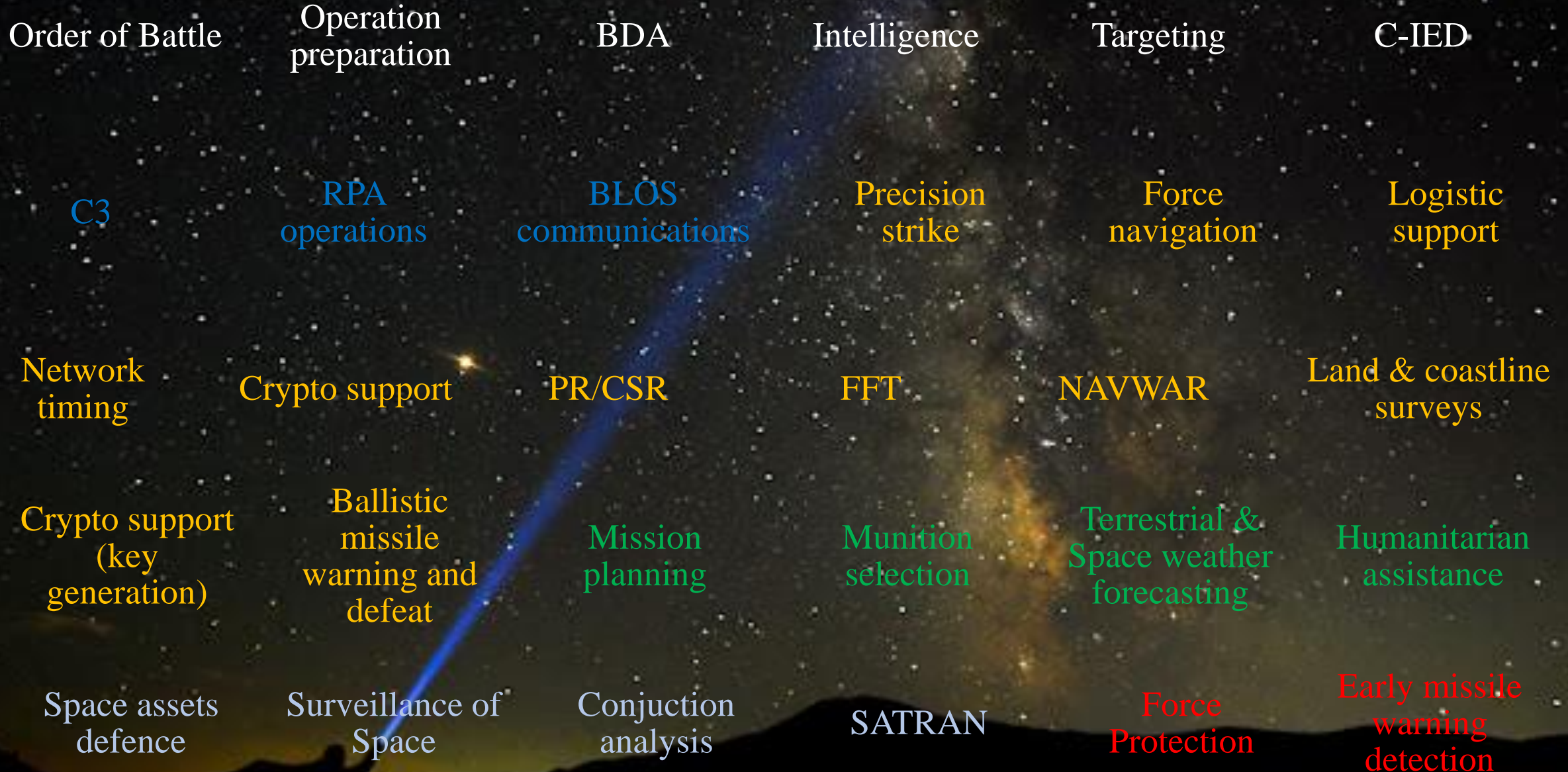
OF-3 Gábor Nagy

SPACE OPERATIONS SUPPORT DOCTRINE FOR THE HUNGARIAN DEFENCE FORCES

SECURITY, DEFENCE AND OUTER SPACE
international conference



WHY Space is a different operational domain?





„SPACE” Doctrine

- Space Operations
- Space Threats & Challenges
- Procedures, Tasks and Resources
- „Space Products”



Space Operations

ISR

SATCOM

PNT

SSA

METOC

SEW

Threats



Source: NATO Space Handbook

Threats (in the real life)

- Conduct counter-space operations
- Defined constellation, optimised for a high revisit rate
- Using PGMs
- Counter ISR/PNT campaigns
- Satellite tracking
- Intermittent SATCOM jamming
- GPS/PNT jamming
- Handheld/backpack jammers
- Using mobile ground-based assets to counter space-based ISR
- Space based SIGINT constellation
- Naval Reconnaissance
- Mobile ground-based terminals to receive and locally decrypt signals
- Earth Observation – land mapping, infrastructure analysis
- Remote sensing stations
- Real-time data transmission
- Detect and track launches of BMs
- BMD radar system to track LEO objects
- SSA
- Optical telescopes for GEO observations
- Laser trackers
- High definition imagery
- ISR remote sensing capabilities
- Space-sourced imagery
- ASAT – Counter space technology
- Directed Energy Weapons
- Mobile Laser Dazzlers
- Jammers
- Decoy

Space Coordination

J2 - Intelligence

- Request for Information
- Contribution to Intel Fusion
- Analysis of Space-related intel
- Provision/impacts of RED ORBAT
- Impacts of Space weather
- Support to target development

J3 – Intelligence - Fires

- Nomination of Space/NAVWAR targets
- Impacts of EMI / jammers
- Impacts of Space weather
- Provision/impacts of RED ORBAT

J3 – Intelligence - EMBC

- Coordination of MIJIWARNREPs and TACREPs
- Provision of PDOP charts
- Provision of EMI Mitigation Measures
- Inputs to Joint Restricted Frequency List
- Coordination of NAVWAR

J4 - Logistics

- Coordination of impacts to logistic services

J5 - Planning

- Support to short/medium/long term planning process

J6 – Communication & IT

- Impacts of terrestrial & space weather
- De-confliction of the JFRL
- Assessments of MIJIWARNREPs
- Assessments of PACE considerations
- Prioritization of SATCOM links for monitoring

J9 - CIMIC/STRATCOM

- Analysis/impact of civilian space based services
- Coordination in support to STRATCOM



Space Coordination Interaction

SSR

MIJIWARNREP

GPS modelling

SATRAN

PDOP



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**Thank You for Your
attention!
Questions?**