

# DISRUPTIVE INNOVATIONS THAT WILL CHANGE GOVERNMENT AND DEFENSE OPERATIONS OVER SATELLITE

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**VP GLOBAL SALES**

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**Newtec**

# REQUIREMENTS FOR GOVDEF APPLICATIONS OVER SATELLITE



MULTI-BAND  
MULTI-MODE  
TERMINALS



SECURE

INTER-  
OPERABILITY

FLEXIBLE IN  
THEATRE  
CAPABILITIES

AGILITY

RESILIENT

READY TO  
DEPLOY  
ANYTIME  
ANYWHERE



BEAM  
SWITCHING

ON-THE-MOVE  
ON-THE-PAUSE

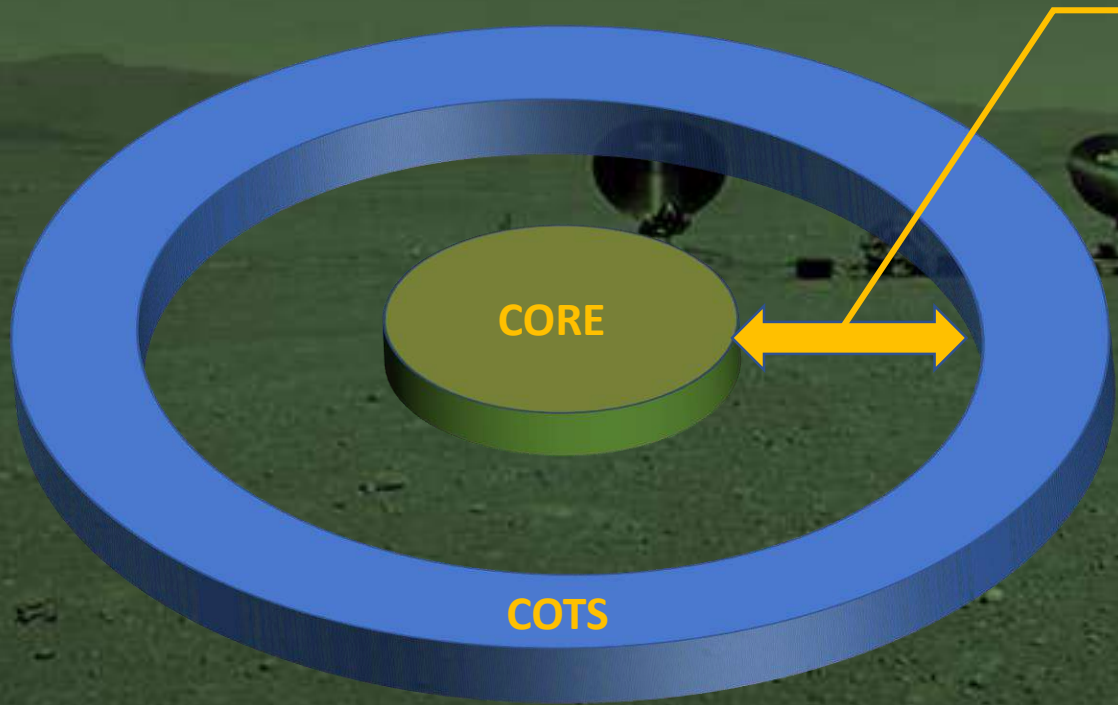
ROBUST



OBFUSCATION

# JOINT GOVDEF VALUE PROPOSITION

## GOVSAT - NEWTEC

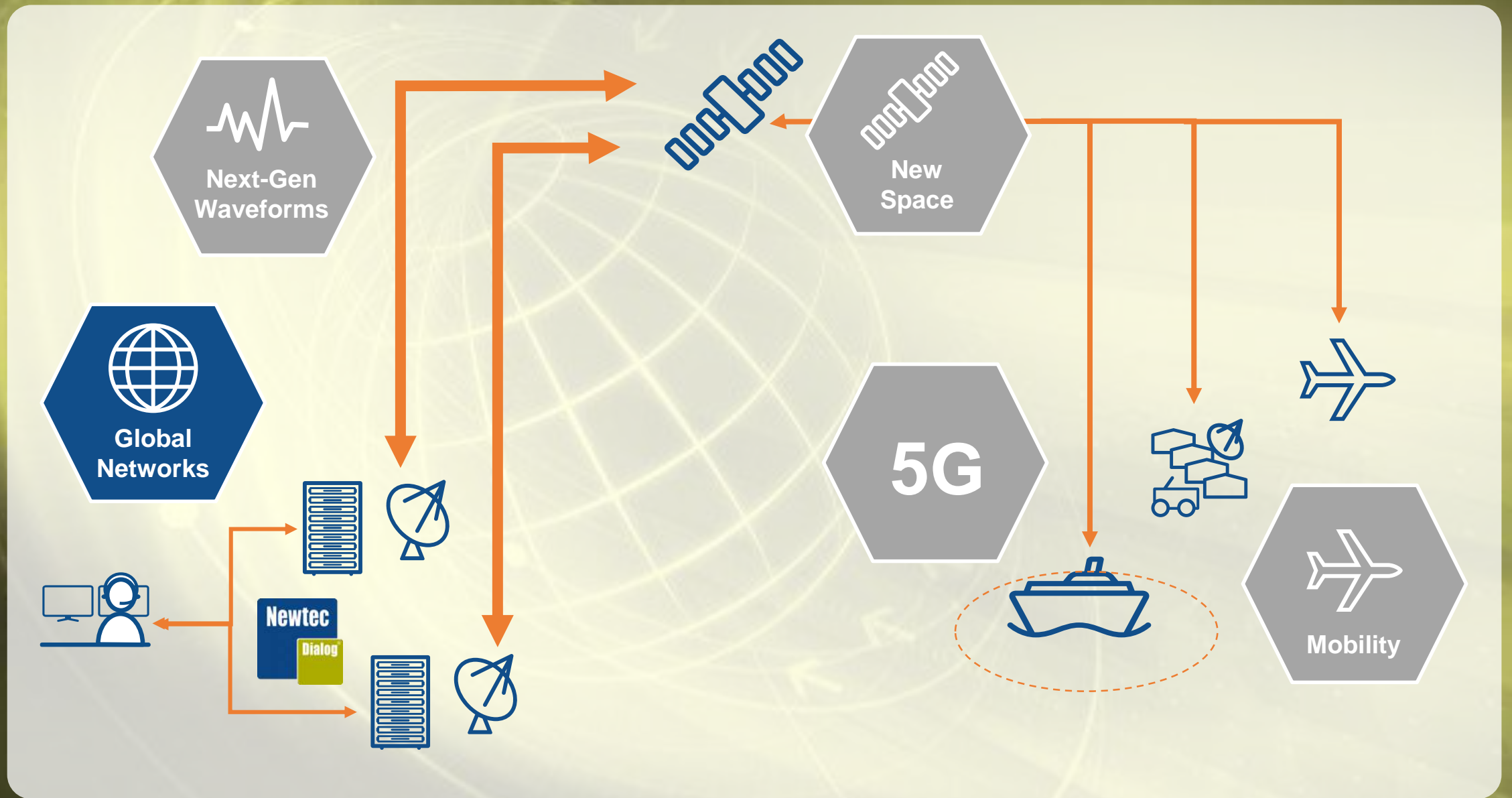


- Increased Resilience with multiple satellites
- Robust Links
- Counter DoS attacks
- Spread Spectrum (LPI/LPD)
- No GPS position distribution
- Government-grade frequency hopping with randomized carriers
- Difficult to intercept
- TX-Mute

**GOV**  
**SAT**

Newtec

Dialog



# GLOBAL NETWORKS

## Global Networks Consist of

- Plurality of Satellites
- Mix of Military / Government / Commercial
- Plurality of Gateways/Teleports
- Mix of Widebeam / Spotbeam

## Example Newtec Dialog Platform Operational Today

- 10+ Satellites
- 20+ Gateways
- 100+ Beams
- 1000+ Mobile Terminals, 5 Beamswitches / Minute

**All managed through 1 central NMS**

**Newtec**

# MULTISERVICE NETWORKS

## MULTI-APPLICATION & MULTI-PLATFORM

- Multiple Operations
- Multiple Services
- Multiple Applications
- Multiple Beams
- Multiple Gateways
- Multiple Platforms

- OTM, OTP or Fixed Platform
- SLA
- BOO
- Performance
- Cost
- Congestion
- Availability



**MoD Headquarters**



**Commercial Teleport**

01

**Naval Anti-Piracy Operation**  
(Crew Welfare, E-medicine, ISR, Video Conference, Tactical)

02

**Land Operation**  
(AISR, MWR, On-the-Pause, Logistics, Tactical, Video Conferencing, Internet Access, Administration, etc.)

03

04

05

**Other MoD Operations**

06

07

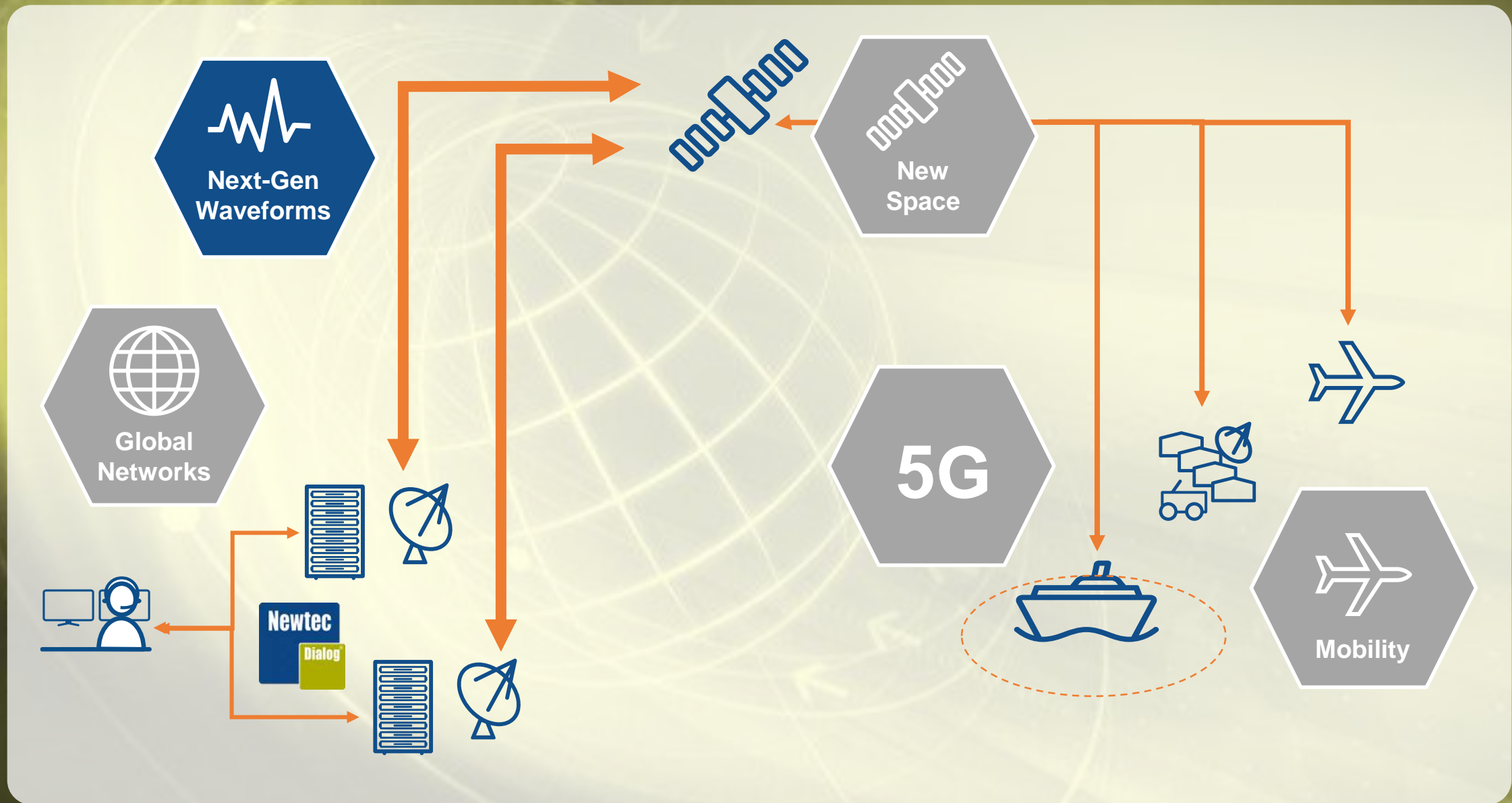
— Satellite beam 1 (highly congested)

— Satellite beam 2

— Satellite beam 3

— Satellite beam 4

— Satellite beam 5 (Commercial)



# NEXT-GEN WAVEFORMS





# NEXT-GEN WAVEFORMS

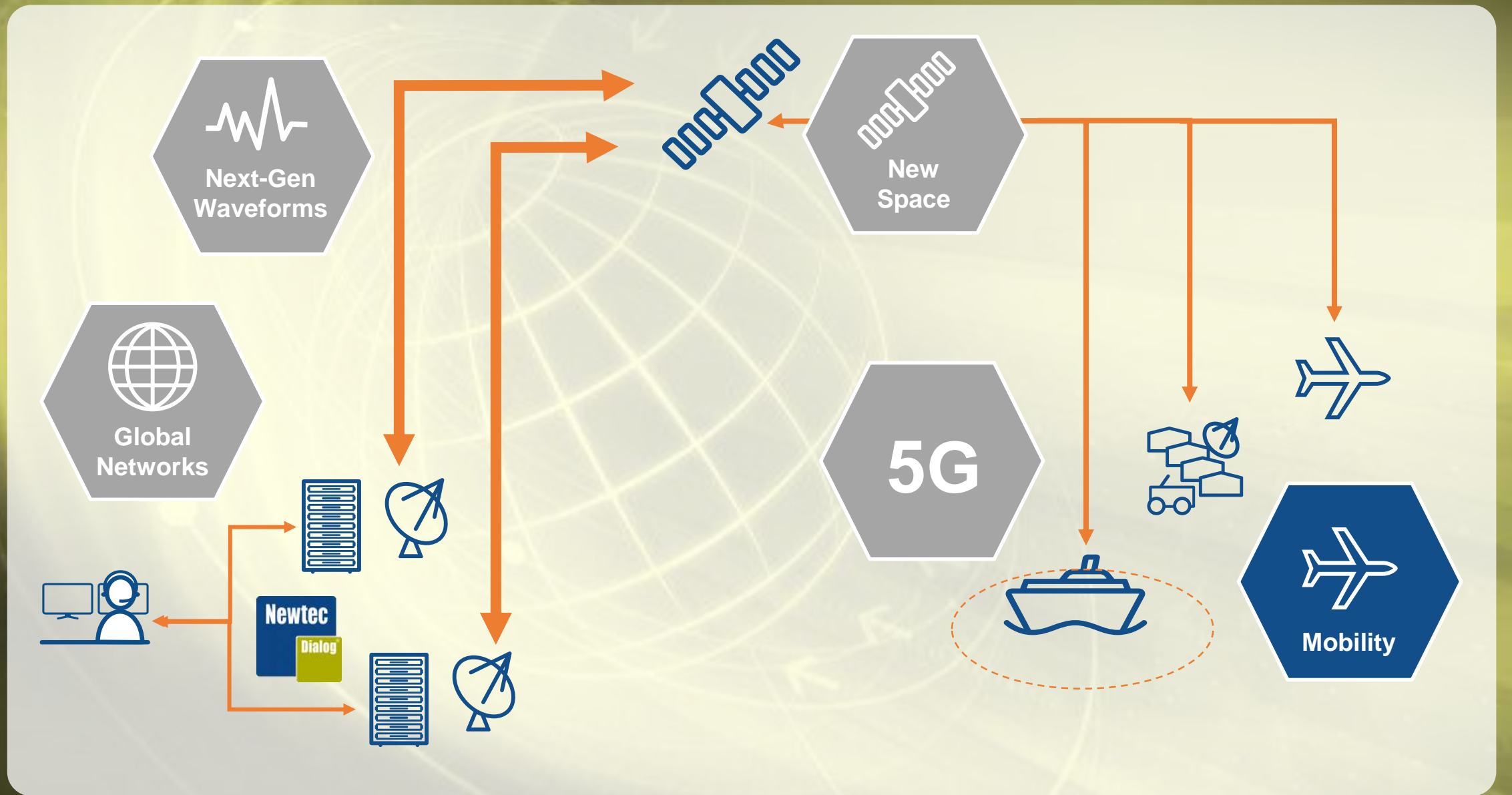
## EFFICIENT, RESILIENT & SECURE

# NEWTEC DIALOG

# SECURITY MEETS

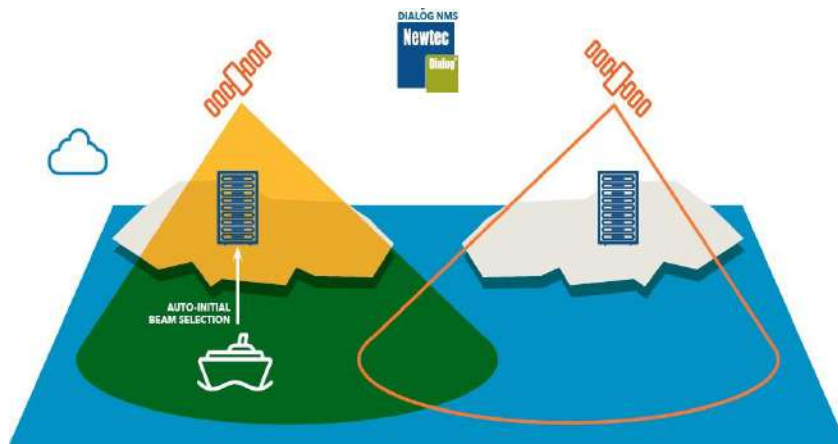
# EFFICIENCY!





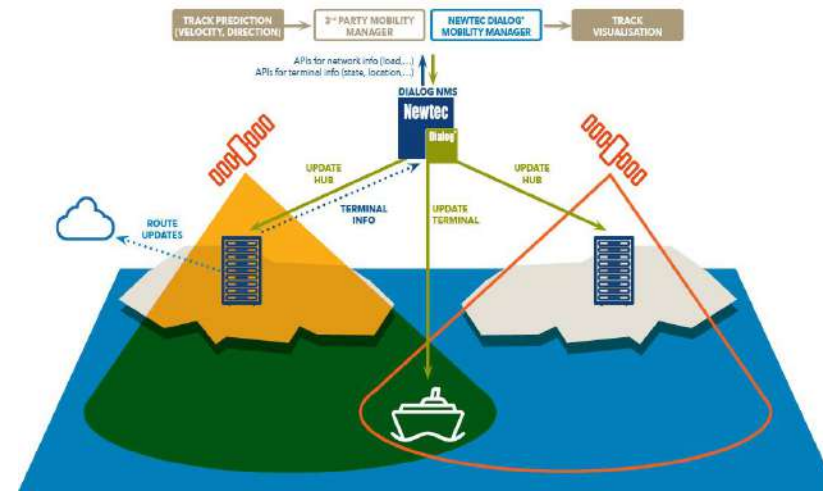
# ON-THE-MOVE EFFICIENCY SEAMLESS BEAMSWITCHING

## Automatic Initial Beam Selection

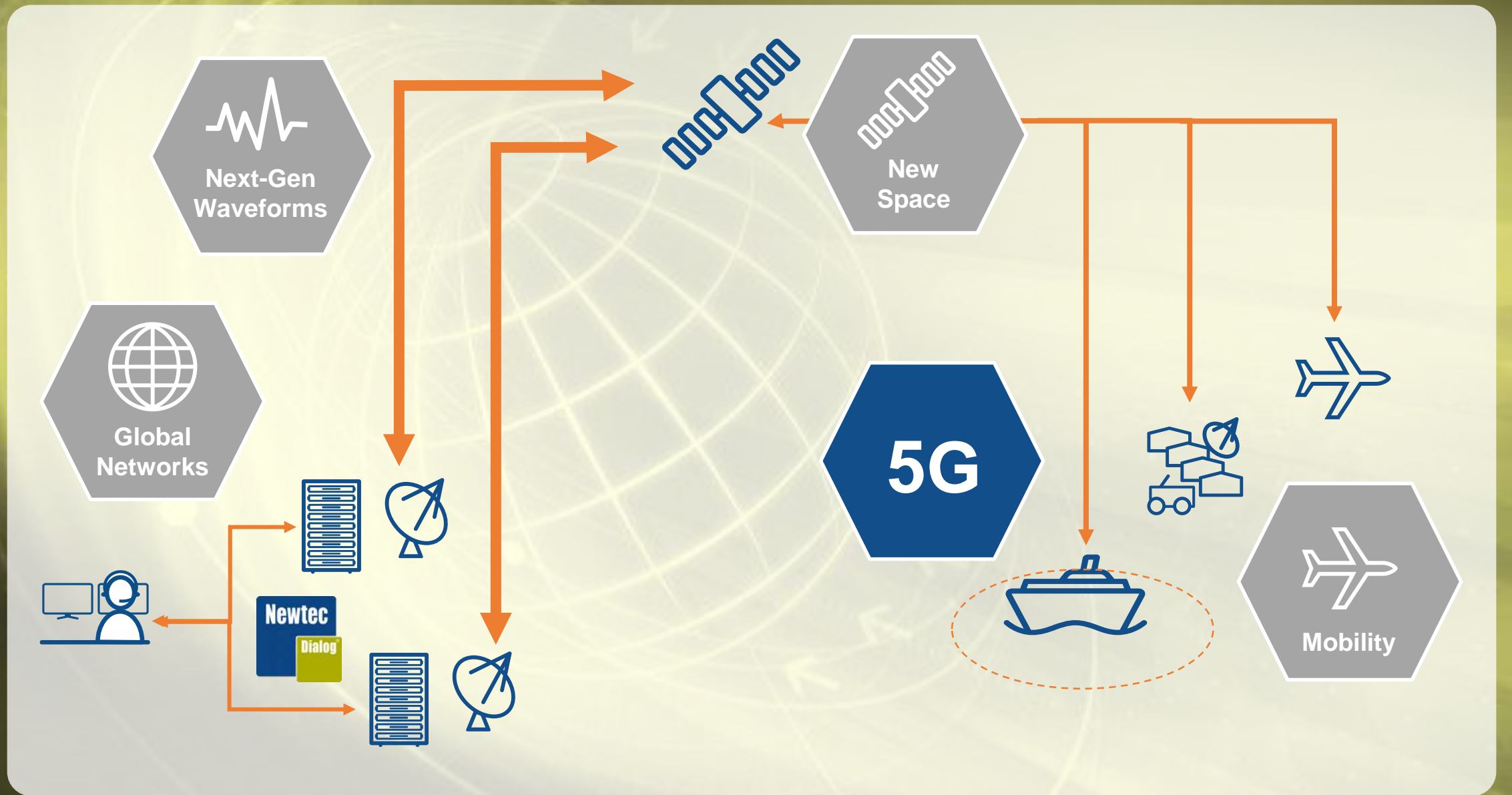


- On-the-move / On-the-pause
- Rules-based Selection Criteria
  - Beam Database
  - Cost
  - Elevation Angle

## Automatic Beam Switching

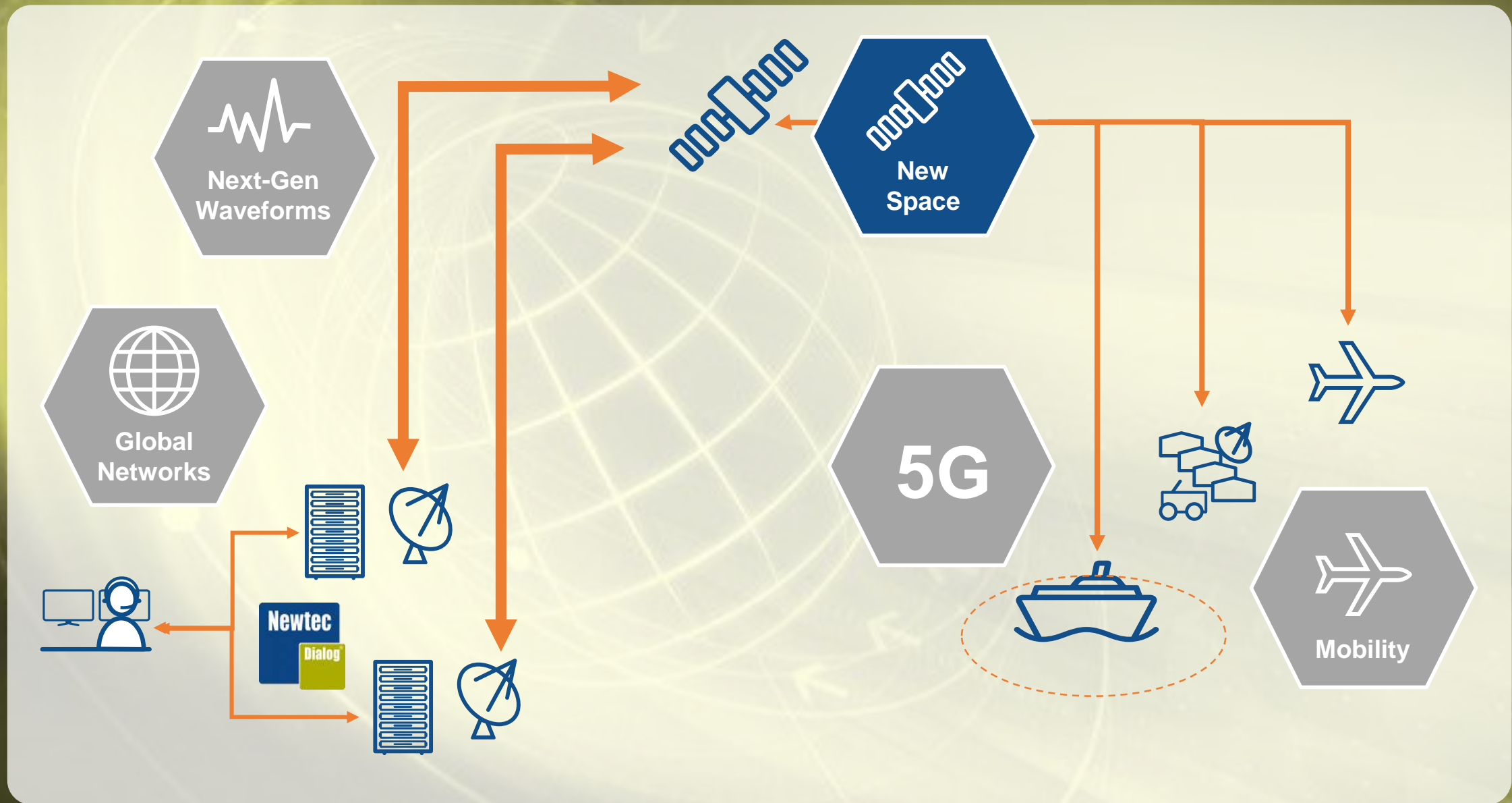


- On-the-move
- Sophisticated rules based switching logic
- Towards seamless switching



# 5G

- 5G is the first step towards a unified system for satellite / terrestrial communications
- **Newtec actively involved in the 5G ecosystem:**
  - Development of waveform cores (IPcore division in Brest, France)
  - Member of 3GPP standardization and other steering groups
  - Evolution of Newtec Dialog towards SDN/NFV, edge cloud,...
  - 4G/5G traffic optimizations in Newtec Dialog
- **The 5G infrastructure story is still being written...**



# NEW SPACE

GEO

MEO

LEO

HEO

VHTS

Flexible beams

Digital payloads

Terrabit satellite (constellation)

High-Altitude Pseudo-Satellite (HAPS)



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# NEWTEC DIALOG VSAT PLATFORM

## GOVDEF VALUE PROPOSITION



**EFFICIENT**  
DOUBLE THROUGHPUT AT THE  
HIGHEST AVAILABILITY



**FLEXIBLE**  
READY TO DEPLOY ANYTIME  
ANYWHERE



**SCALABLE**  
SCALE YOUR NETWORK TO YOUR  
OPERATIONAL NEEDS



**ON-THE-MOVE**  
SEAMLESSLY CONNECTED ON  
SEA, AIR & LAND



**MULTISERVICE**  
VIDEO, VOICE & DATA ON A  
SINGLE PLATFORM



**GLOBAL**  
FROM REGIONAL TO GLOBAL  
CONNECTIVITY



**AFFORDABLE**  
COTS CAPEX & OPEX FRIENDLY  
TECHNOLOGY



**EASY TO USE**  
EASY TO PLAN, INSTALL AND  
OPERATE



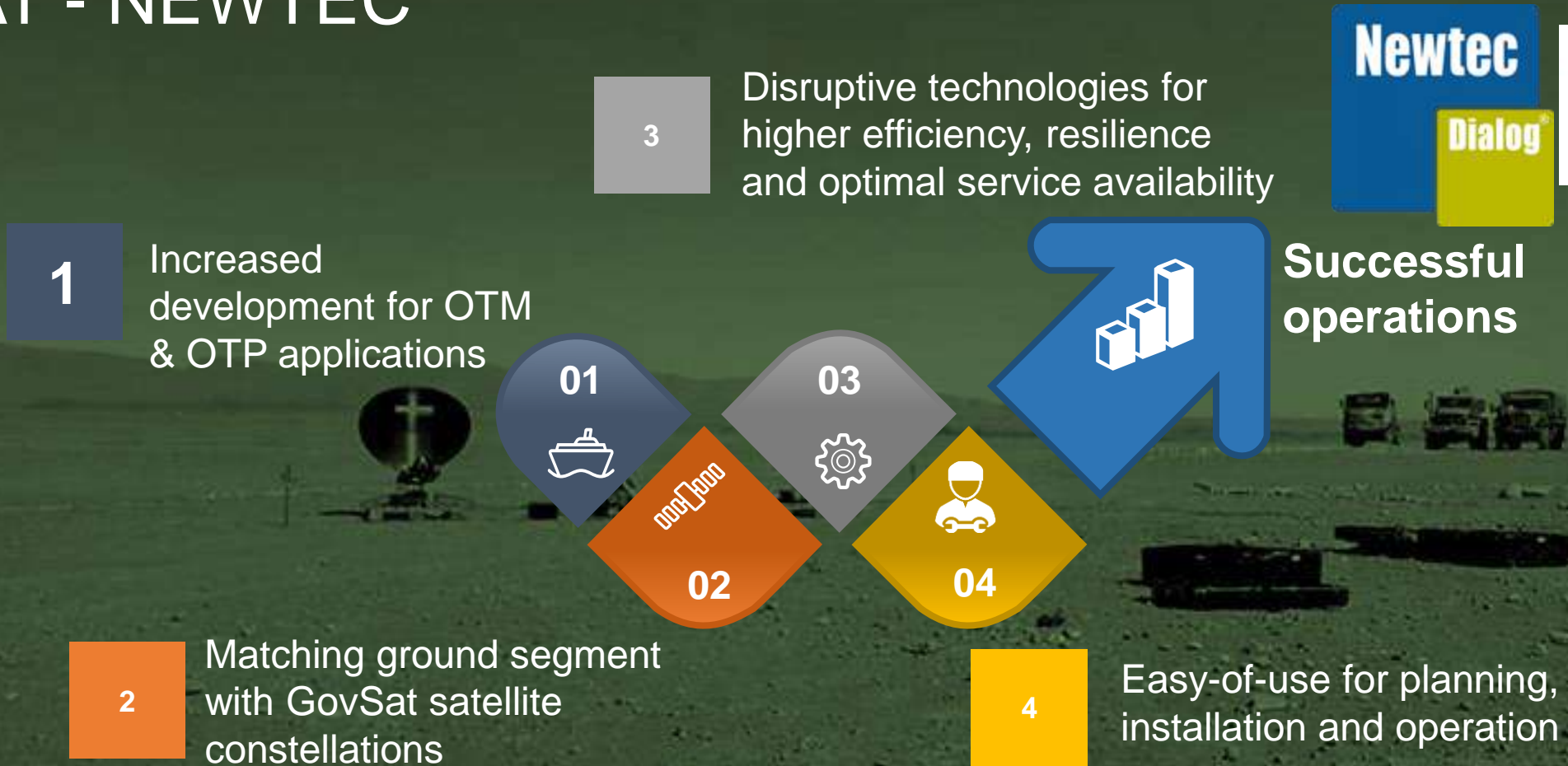
**SECURE**  
SECURE & RESILIENT LINKS AT  
HIGHEST EFFICIENCY





# JOINT GOVDEF VALUE PROPOSITION

## GOVSAT - NEWTEC



THANK YOU FOR ATTENDING

# Newtec

Get in touch

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