

ERATOSTHENES Centre of  
Excellence (ECoE)



ERATOSTHENES:  
Excellence Research Centre for Earth Surveillance  
& Space-Based Monitoring of the Environment

# 1st virtual EXCELSIOR International Technical Workshop

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# International Ground Stations

@excelsior2020eu    

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RBC Signals



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857510



This project has received funding from the Government of the Republic of Cyprus through the Directorate General of the European's Programmes, Coordination and Development

CONSORTIUM



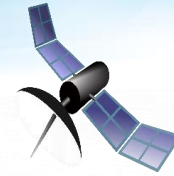
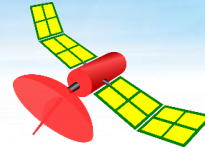
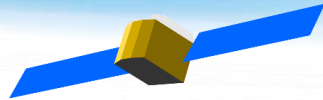
# Space Connected.



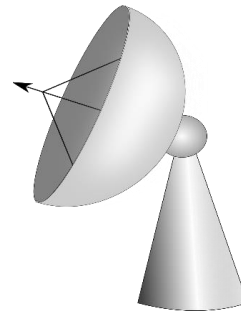
## The Challenge

- The ground infrastructure to handle the load of these constellations doesn't exist at scale today
- Without a significant transformation in the satellite ground segment architecture, the value inherent in space-based data will not be fully realized.

## Multi-mission Ground Segment “as a Service”



A multi-mission ground segment is where the capacity of any one ground system is leveraged to support the missions of numerous operators and operational spacecraft rather than serving just one individual mission.



# Merging Space Communication and Cloud Computing

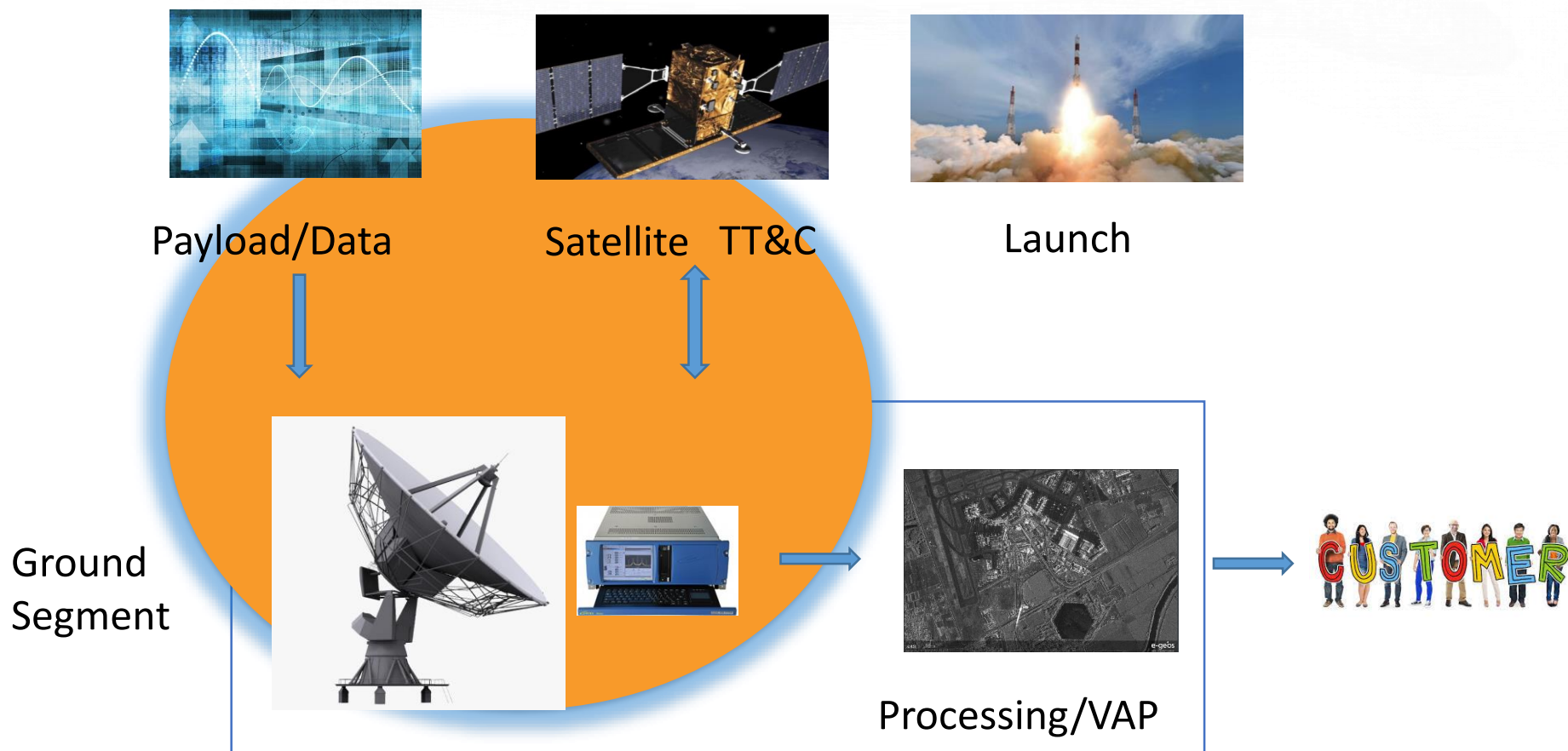
- Ground stations are the best place to handle edge computing for low latency data products for satellite operators. As soon as the data hits the ground, many key applications can run on top of the fresh data.
- To realize the full low-latency and cost benefits of this marriage, cloud computing infrastructure needs to be integrated into the heart of the ground station.

## What is RBC Signals?



- RBC Signals is a provider of global satellite ground station infrastructure **as a service**.
- RBC aggregates the unused capacity of existing satellite ground stations around the world.
- In addition, we build our own antennas for CORE services to meet custom requirements and deliver the highest service level possible.
- We have ~70 antennas in the network today in more than 40 locations, with more joining our network.

## Space Mission Elements



## RBC Signals Network





## Current space data services portfolio

### Communication Services



#### Core Services

- Guaranteed communication capacity
- Mission-optimized locations and hardware
- Unlimited use for flat monthly fee



#### Network Services

- Access to shared global network capacity
- Scheduled up to 48 hours in advance
- Pay per pass, per minute or per GB



#### Intelligent Edge

- Secure cloud compute and storage
- AWS Outposts, Azure Stack, VMs
- Pay per GB or per minute

### Support Services



#### Engineering Services

- Communication architecture design/review
- RF system analysis/part selection
- Ground station location optimization



#### Field Services

- Ground station site surveys
- Antenna procurement and construction
- System maintenance and operation

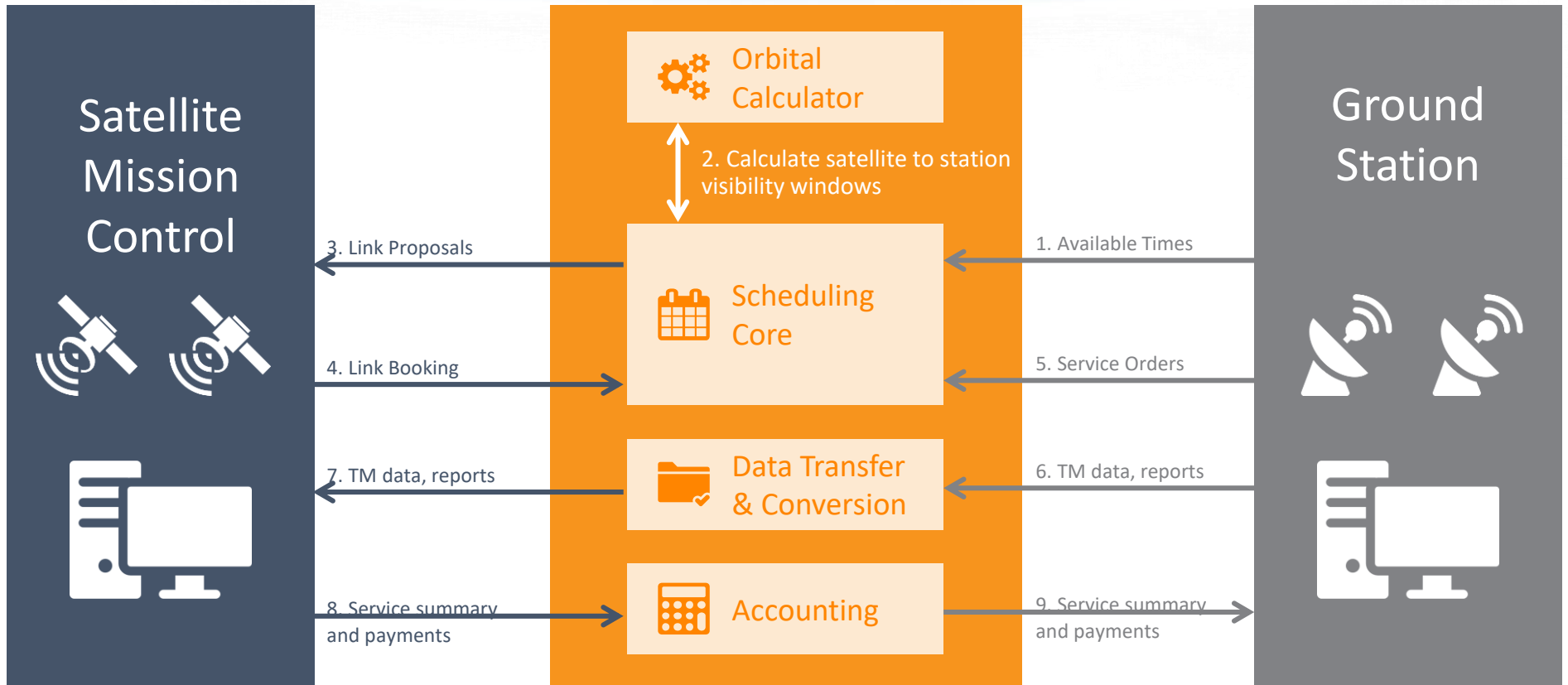


#### Regulatory Services

- Satellite and ground station licensing

## Technology

### ROSS



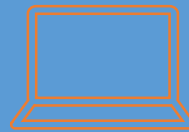
# Competitive advantages



**BROADEST  
COVERAGE**



**LOWER  
COST**



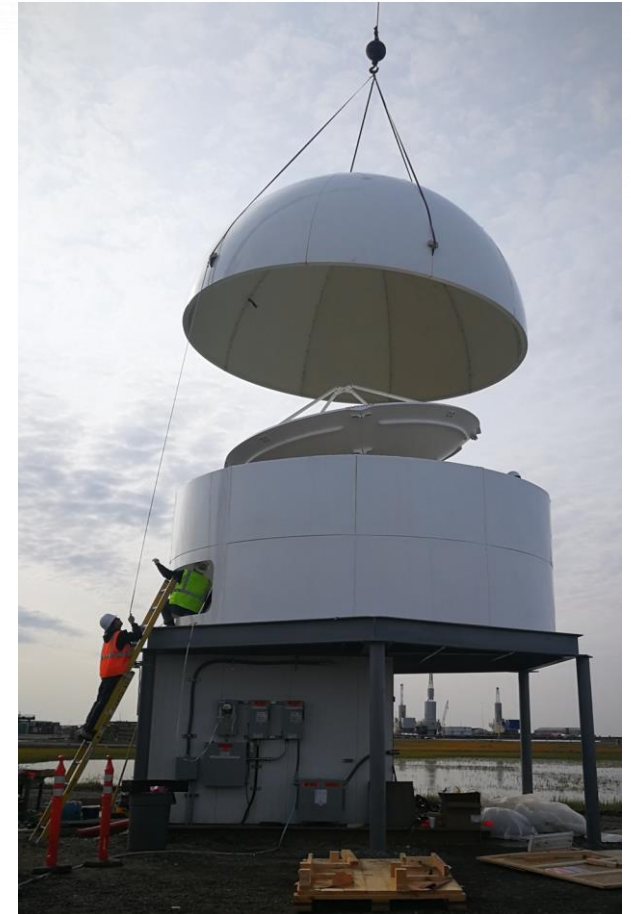
**PROPRIETARY  
SOFTWARE**



**OPERATIONAL  
FLEXIBILITY**



**SEASONED  
TEAM**



# THANK YOU FOR YOUR ATTENTION

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