CELTIC-NEXT
Proposers Day

23rd of February 2021, Online via WebEx

Pitch of the Project Proposal

Modular Array Antenna

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Teaser

Idea

- R&D of modular Array Antenna technology
- Stand-along active antenna tile
- Variable antenna size

Value

- Multiple frequencies
- Addressing different applications across various industries
- Deployment onto curved surfaces
- Extending size based on demand

Participation

- The broad application opportunities
- Innovation potential for various industries
- Along entire value chain

eureka
innovation beyond borders

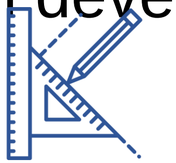
Organisation Profile

Corporate

- Commercial SME
- Located in Germany (GmbH) and Luxembourg (s.a.r.l)
- Founded in 2020 and 2021

Development

- ICT hardware with high innovation potential
- Focus on satellite communication
- Small satellite s-band patch antenna on market
- SDR based communication system in development



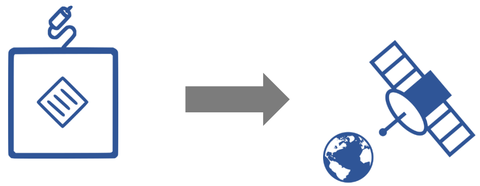
Projects

- In-orbit demonstration mission scheduled for September 2021
- ESA BIC Bavaria
- Fit 4 Start #10 Space in Luxembourg

Proposal Introduction

Starting point

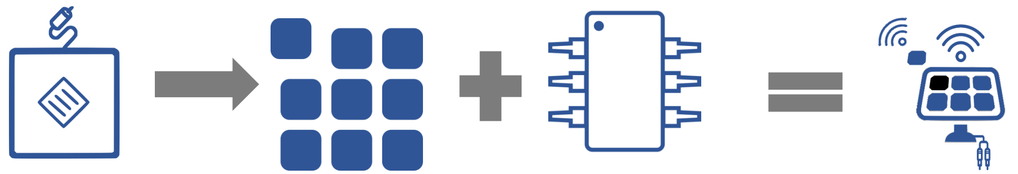
S-band patch antenna



Payload system for small satellites

R&D target

Patch antenna know-how transfer into tile development



Patch antenna single element

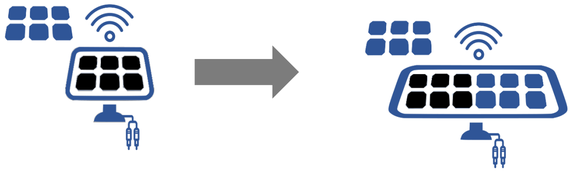
Individual tile for array

Electronic circuit

Array with singnal control

Innovation

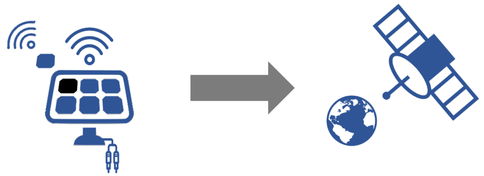
Interface technology of tiles



Modular antenna, with variable size

Vision

Enabling clean space by cataloging mm-size debris



Small satellite array atenna

Use Cases

Satellite

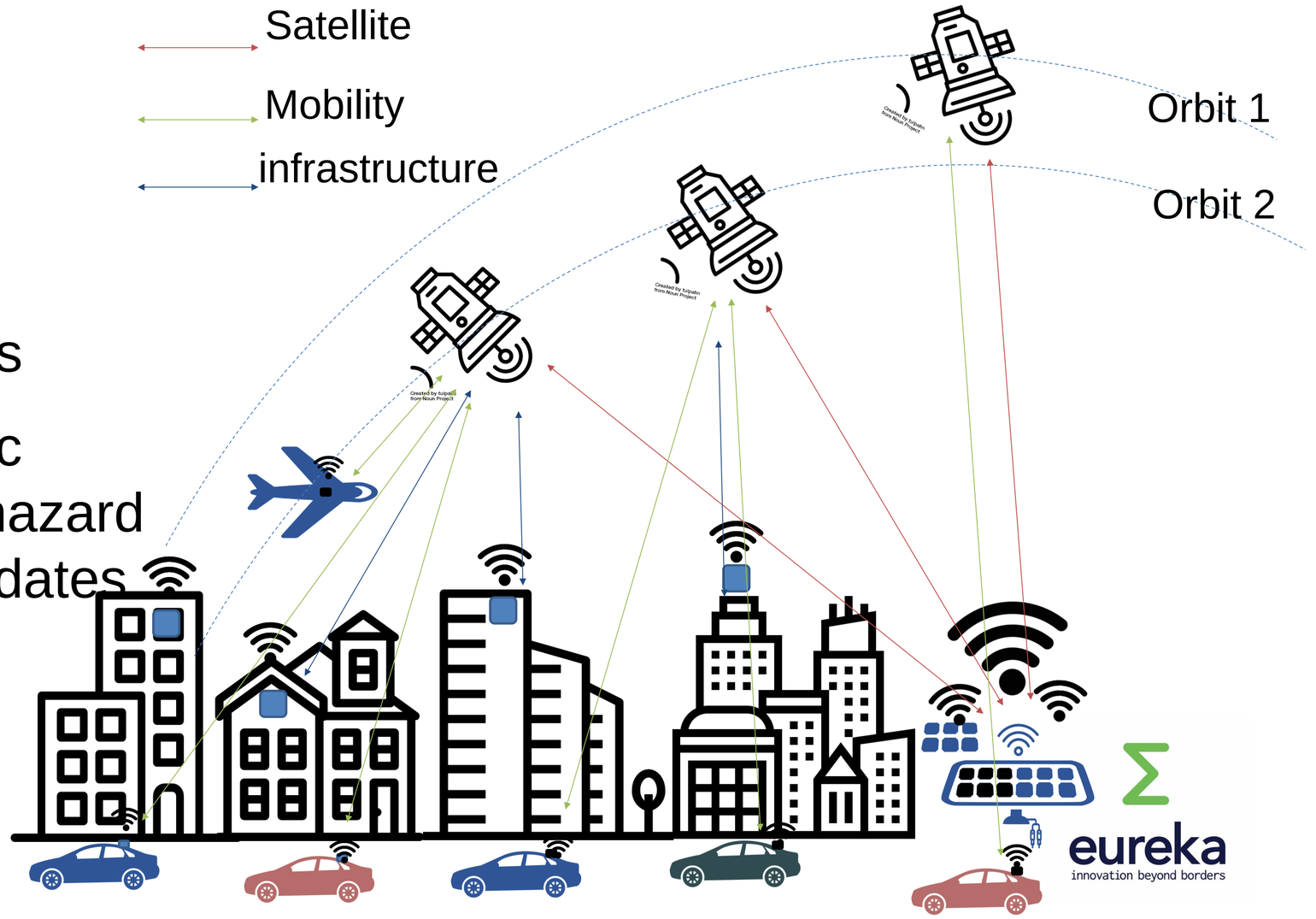
- Small satellite antenna in space
- Ground station antenna
- Tracking mega-constellations

Mobility

- Realization of high data traffic
- maps, traffic, weather, road hazard information, and software updates

Infrastructure

- 5G base stations
- Smart city applications
- Wireless backhaul
- Connectivity for devices



Proposal Introduction

Impact

- Modular antennas for any application across various industries
- More flexible antennas regarding mechanical, electrical and performance controls

Demonstration

- Pilot project with potential customer
- In-orbit demonstration of 1st ever active Phased Array Antenna for small satellites

Roadmap

- Software antenna design (sept-2021)
- Fabrication of hardware (end-2021)
- Modular feature demonstration (aug-2022)
- Modular array antenna test (end- 2022)
- Pilot project demonstration (mid-2023)
- Product launch (end-2023)

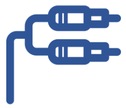
Deliverables

- Finished product (modular tile)
- Development and test reports

Partners

Value chain

Component provider



System integrator

System operator

Service provider

End user

We are looking for partners concerning

Engineering support
- Antenna and RF engineering support
- Signal processing and communication protocols

Demonstration
- Pilot project planning

Value-added services
- Processing satellite data to provide downstream services

Customer/user segment
- Defining product requirements
- verifying the product-market-fit
- pilot project planning

Contact Info

For more information and for interest to participate please contact:

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Presentation available via:

CELTIC-NEXT
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Join the follow-up Telco

Join meeting

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