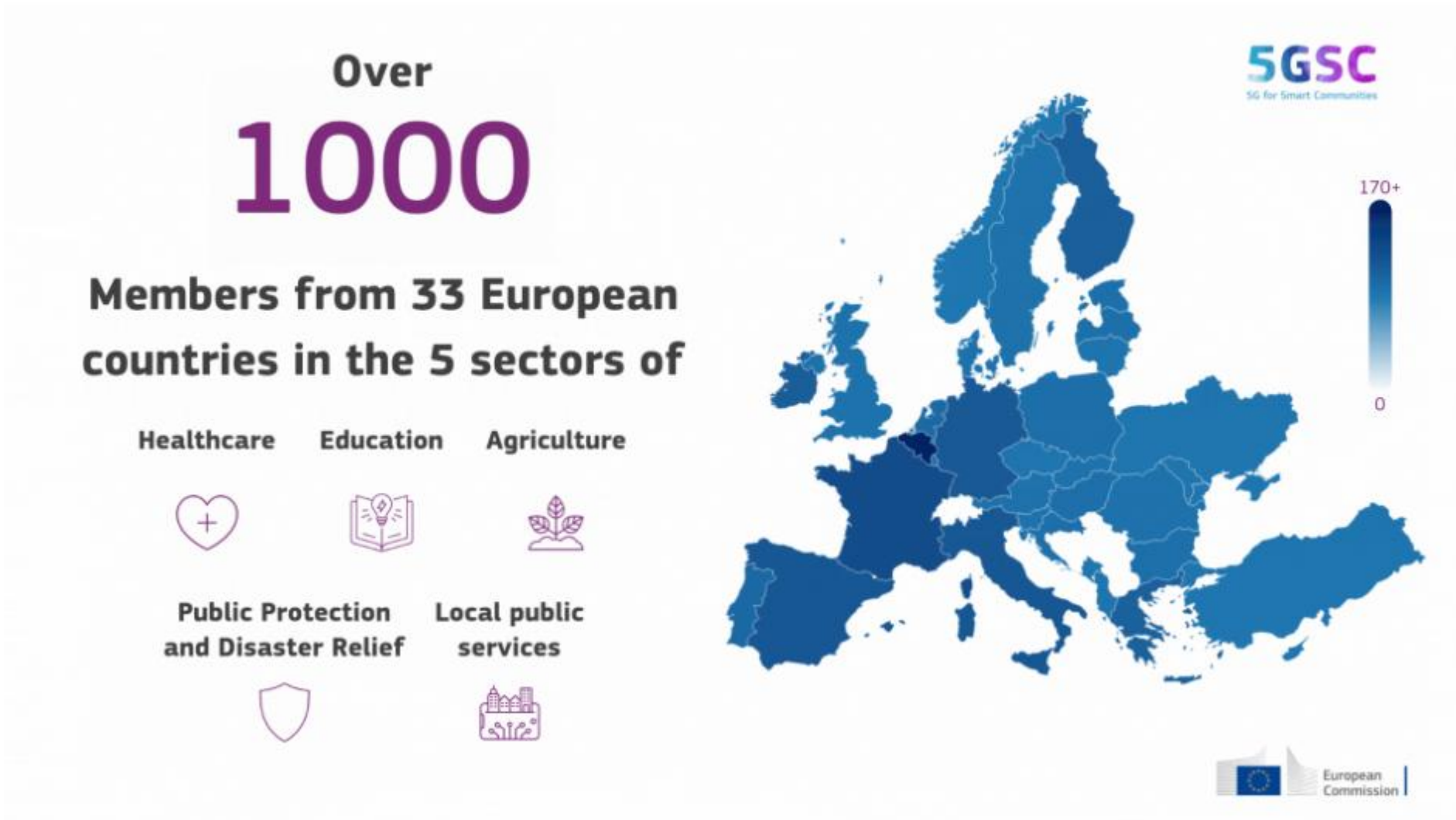


5GSC

Drones Subgroup

10.07.2025

Visit our online networking and knowledge-exchange community for '5G for Smart Communities'



Welcome

5GSC

5G for Smart Communities

www.5GSC.eu



Save the dates

 **Thursday July 17, 2025 - Online**

Cloud & EdgeAI subgroup

 **Thursday September 18, 2025 - Online**

Working Group 3 - Business and investment models for 5G pilots

Save the dates

 **Tuesday, October 7, 2025 - Brussels**
CEF Conference & European Digital Connectivity Awards

 **Wednesday October 8, 2025 - Brussels**
5G Community Conference

5G Deployment Guide

The 5G Deployment Guide, developed by the 5G for Smart Communities Support Platform, serves as a vital resource for public and private stakeholders aiming to bring 5G quality connectivity to life. Grounded in practical experience and shaped by collective expertise, the Guide provides clear direction for the establishment, funding, and implementation of 5G projects across Europe.



Learn more and
download the 5G
Deployment
Guide here



5G Community Survey

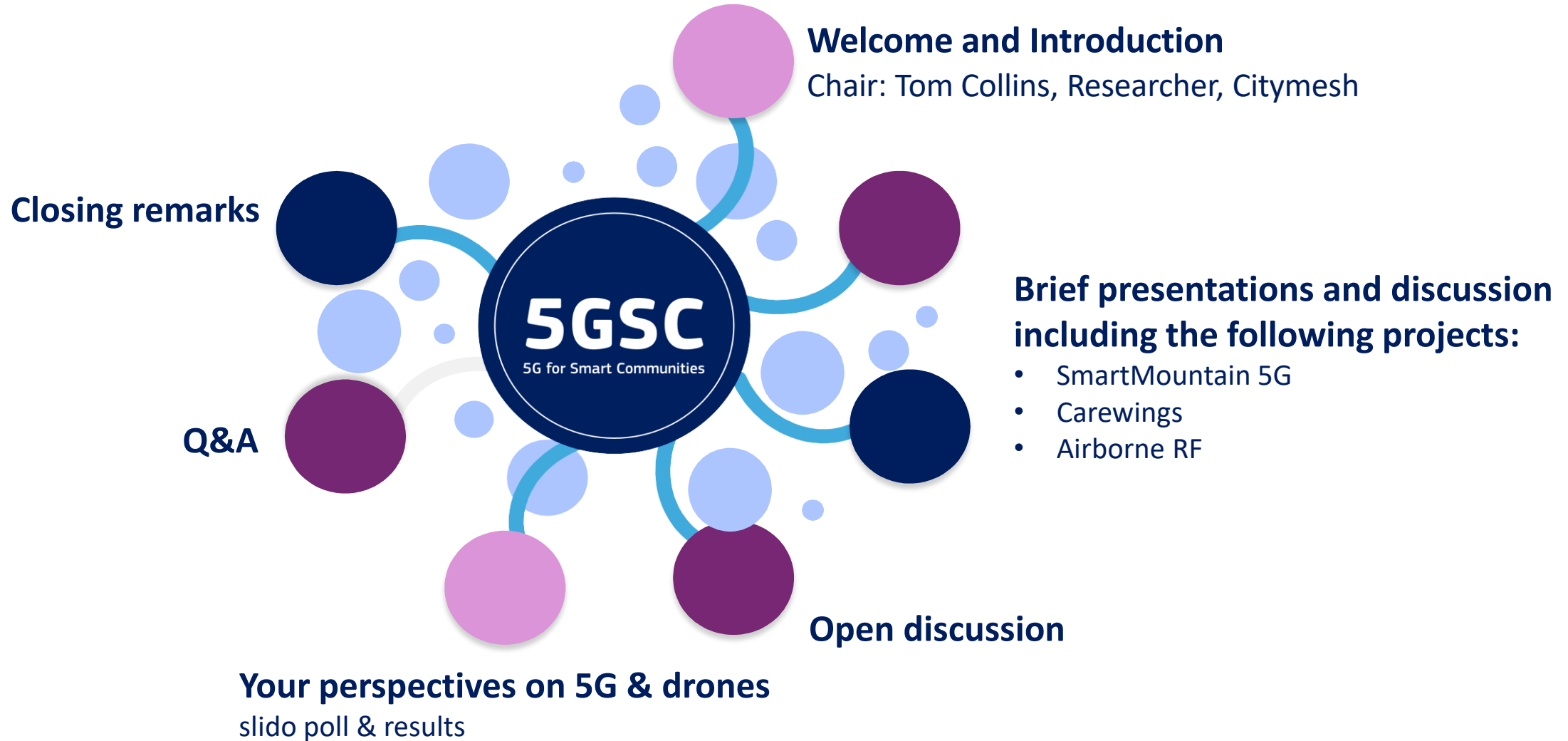
A new study by the 5G for Smart Communities (5GSC) Support Platform offers a detailed overview of the public funding support made available at national level across the EU-27 for 5G deployment. The research spans the 2022–2024 period, while also looking ahead to planned support schemes for 2025–2027. The study captures not only the current state of investment but also highlights best practices, use case trends, and national project repositories.



Learn more and download the 5G Community Survey here



Agenda



Live interaction



slido

OR

A screenshot of a web browser displaying a Slido session interface. The browser's address bar shows "5G for Smart Communities Support Platform". The page title is "Drones subgroup". The main content area is a dark purple rectangle with a play button icon and the text "The session hasn't started yet. You can join the video conference 10 minutes before the session starts." Below this, it says "Thursday 10 July 2025 11:00 - 12:00" and "Drones subgroup". On the right side, there is a "Discussion" panel for the "Drones Subgroup" with a "Q&A" section and a "Polls" section. A question is listed: "Sofia Profico 1 minute ago" with a "0" replies and a "1 question" indicator. At the bottom right, there is a green "Ask" button circled in black.

Welcome Remarks

Chair: Tom Collins, Researcher, Citymesh

Projects presentations & open discussion

Chair: Tom Collins, Researcher, Citymesh

Projects presentations & open discussion



Chair
Tom Collins
RESEARCHER
CITYMESH



Didier Flaender
PRESIDENT
NUMERISAT



Heikki Almay
CO-FOUNDER
POUTANET-OY



Gorazd Mirkovski
PROJECT DIRECTOR
DIMETOR



Didier Flaender

PRESIDENT
NUMERISAT

Project: **SmartMountain 5G**

CONVERGENCE OF SATELLITE AND 5G PRIVATE SERVICES:

SMART MOUNTAIN5G

A 5G Private Network dedicated to mountain services !



Didier Flaender
President Numerisat



SMARTMOUNTAIN5G

An European Project to deploy 5G Private bubbles connected via Satellite links in an Alpin Valley to deploy and test uses cases dedicated to mountain economy.

Connecting Europe Facilities (CEF) Smart Communities and Edge computing



Presented by:

Numerisat: Telecom operator. Coordinator of the project

Firecell: 5G private network specialist

Clevertvalues: Value creation Engineering

Hydrostadium (EDF): Hydraulic power plants specialist

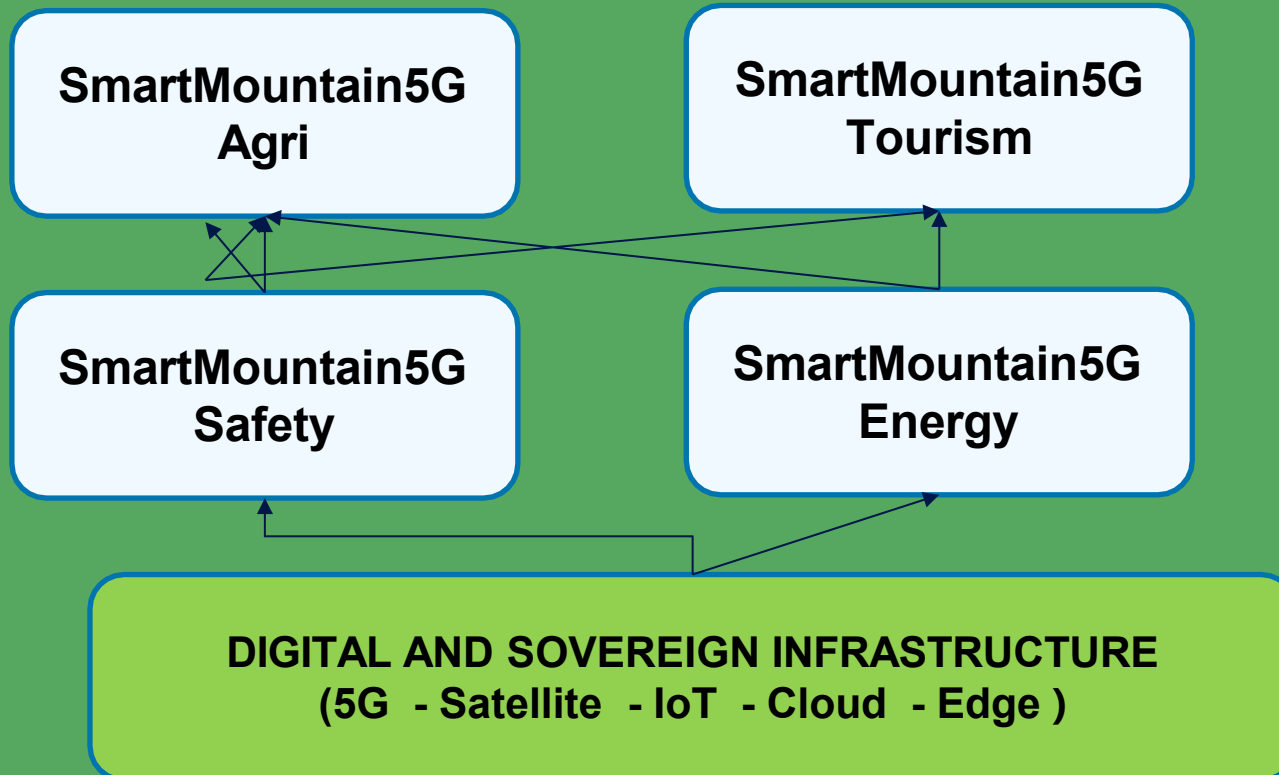
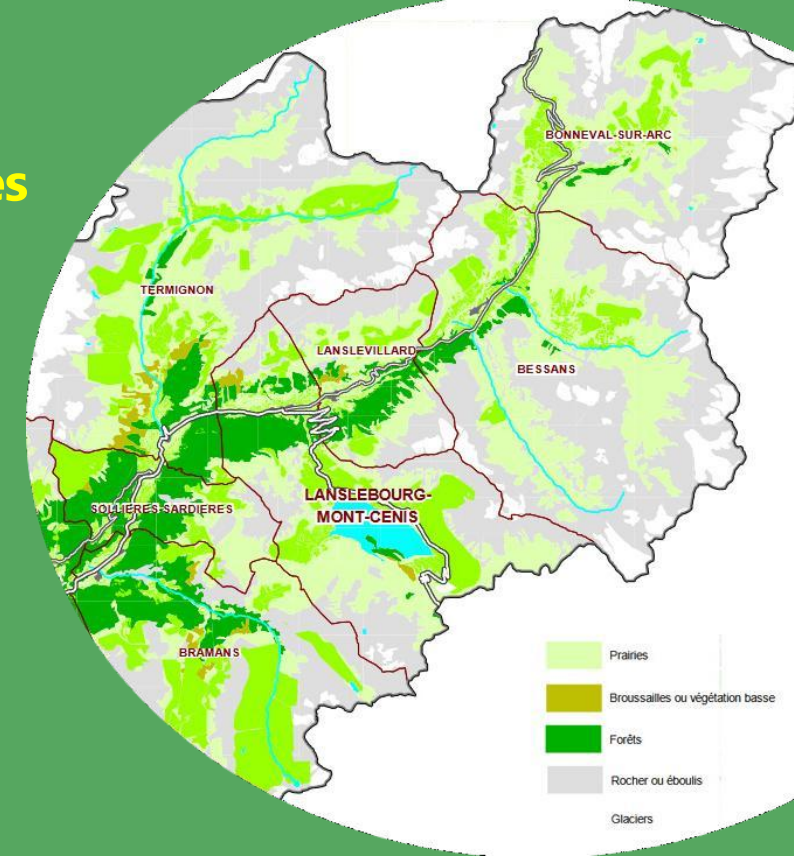
Savoie MontBlanc University



A 5G private network in An Alpin Valley

For 4 uses cases thematics:

Isolated Territories
Energy producer
Agriculture
Impact of Global
Warning



2 694 Inhabitants
619 km²
Altitude: 1040 – 3855 m
Seasonal activities:
Winter: x20
Summer: > 300 000 Visitors



An Evolutive Set of Use Cases defined using Clevervalue methodology and AI tools involving the different economical actors of the valley



Smartmountain Energy

Monitoring of
Microhydraulic Centrals

Safety of installations and
Alerts

Sustainability of renewable
energy production



SmartMountain Tourism

Monitoring of public and
ski resort infrastructures

Water consumptions

Tourism flow
Management

Workers security

Events management



SmartMountain Agri

Water resources monitoring

Field monitoring

Automatic machines for
milking

Herds monitoring and
animals health

Agricultural infrastructure
optimization

Farmers live conditions



SmartMountain Safety

Environment monitoring

Avalanche corridors
monitoring

Communication

Crisis management

Rescue Teams



A SECURED CONNECTIVITY EASY TO DEPLOY WITH 100% COVERAGE FOR BROADBAND and IOT SERVICES

Private 5G bubbles with

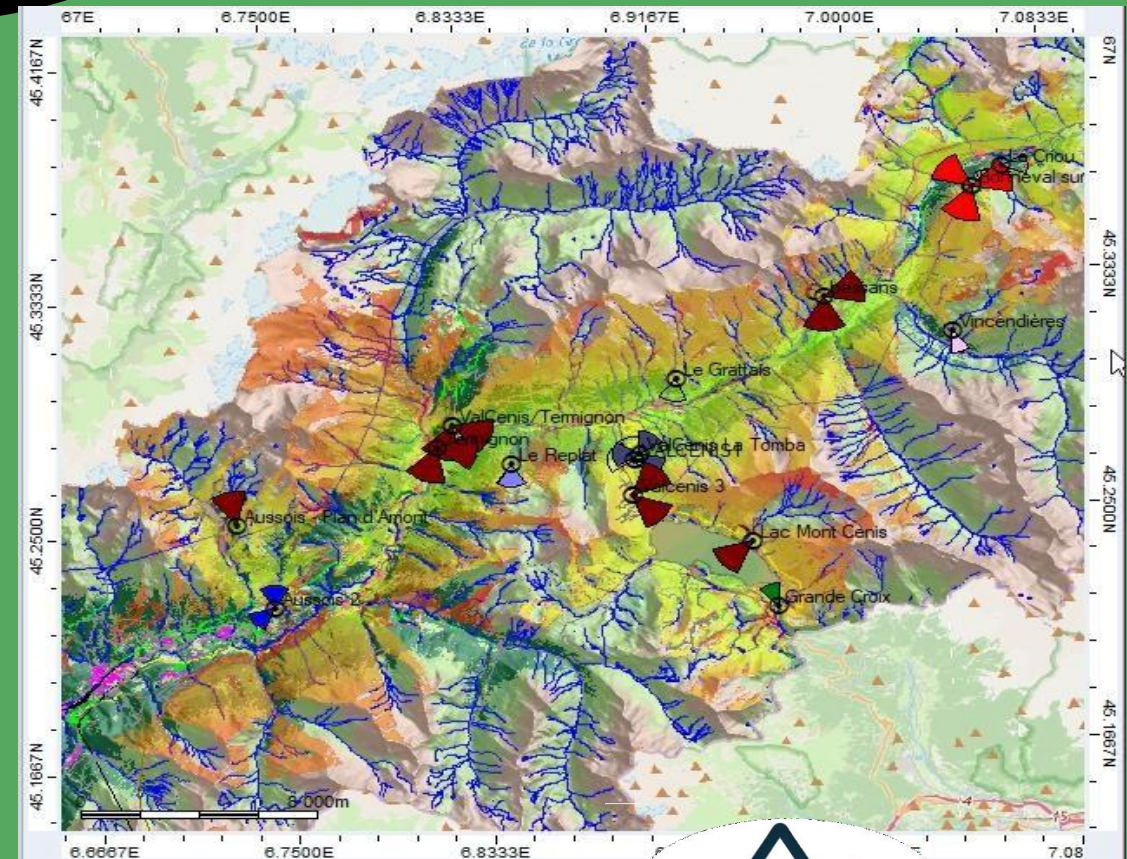
- RAN from 250 mw to 5 W
 - Core located in a cloud
- LEO and GEO Backhaul
NTN IOT Services

12 N77 transmitters to cover the area located at
altitude from 1200 m to 2300 m
Complementary coverage with 5G NTN

A connectivity model available
everywhere and easy to deploy

Secured connectivity

The largest 5G Private network in Europe



Drône services interest in Smartmountain 5G

WP4 Smart Mountain 5G Energy Use cases 3: Infrastructure resilience



WP5: Smart Mountain 5G Tourism Use Cases 2 Tourism flow management

Val Cenis Aussois Mountain Refuges

WP7: Smart Mountain 5G Safety use case 1 avalanche corridor monitoring Rescue teams

Bonneval sur Arc MND





AN INNOVATIVE, POWERFUL AND SECURED
5G PRIVATE INFRASTRUCTURE EASY TO DEPLOY PROVIDING
A MIX OF BB AND NBIOT SERVICES

EDGE COMPUTING AND AI

START OF DEPLOYMENT: 06/2025

PROGRESSIVE IMPLEMENTATION OF THE USE CASES

ENVIRONMENTAL IMPACT ANALYSIS

www.smartmountain5G.fr

www.numerisat.fr

contact@smartmountain5G.com



Heikki Almay

CO-FOUNDER
POUTANET-OY

Project: **CAREWINGS**



CARE WINGS-5G

pouta



Redstoneaero

vaiscom

PYHTÄÄ
PYTTIS



HEALTHFOX
EASIER TOMORROW

Aufwin
DEFENCE



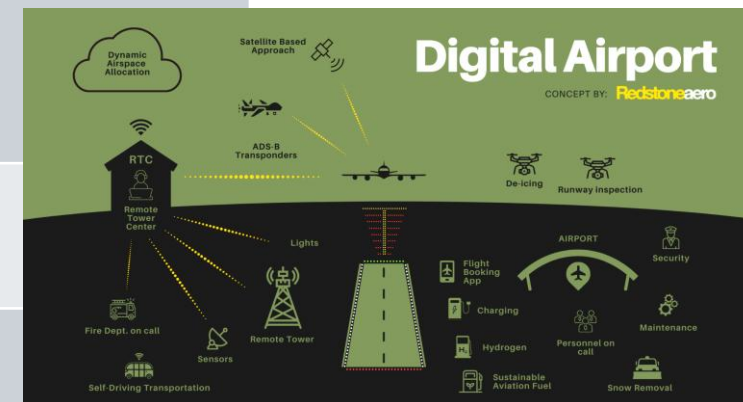
 **Funded by
the European Union**

“Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or HaDEA. Neither the European Union nor the granting authority can be held responsible for them.”

CEF GRANT N:O 101180459

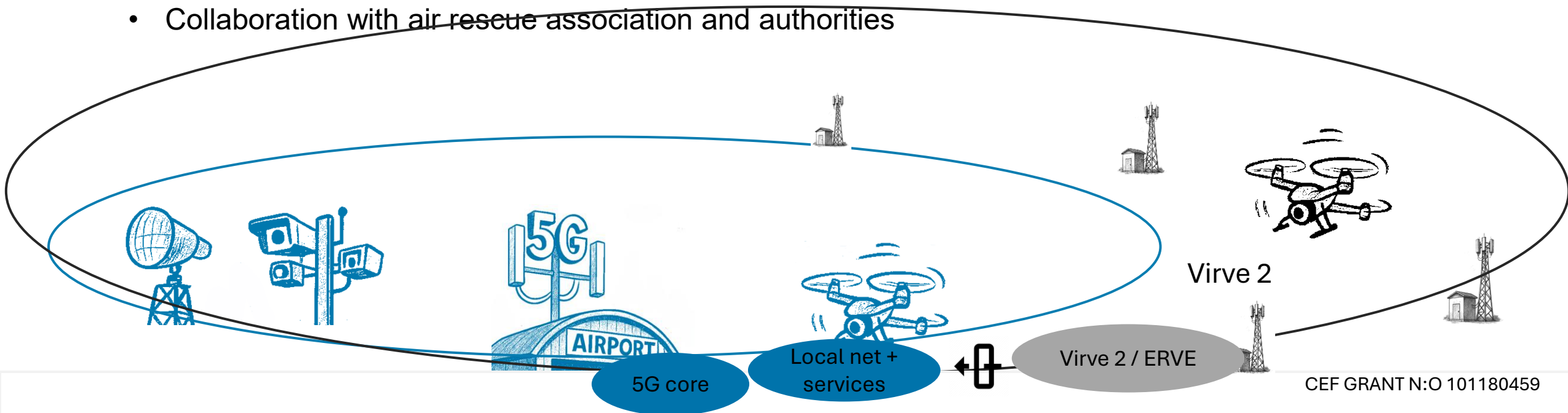
Digitalizing Helsinki-East Aerodrome

Use cases & goals	Notes
<p>Demonstration of use cases</p> <ul style="list-style-type: none"> • <i>Search and Rescue</i> • <i>Emergency Response</i> • <i>Sample Medical Delivery</i> 	<p>Use cases owned by authorities in Finland => authority aviation. This enables</p> <ul style="list-style-type: none"> • Use of Virve 2 service on the missions • Collaboration with the air rescue association
<p>Airport Management System</p>	<p>Automation & enabler for remote operations</p>
<p>4G/5G connected drone</p>	<p>Private 5G mobile network for Airport. Virve 2 for drones when flying. [Virve 2 is the 4G service for authorities in Finland. (5G SA available for testing.)]</p>
<p>5G connected devices and sensors for the airport</p>	<p>Similar NPN use cases as on large airports – but need more flexibility!</p>
<p>Blueprint of the ecosystem for small-medium sized airports</p>	<p>Automation and central remote control are enablers for airport services at small airports.</p>



Instant drone support for authorities

- Currently
 - Police needs to get to the target area first for using their own small drones
 - Air rescue association team also gets to the target area (2 -3 hours delay)
- Bigger drones are becoming available
- Carewings-5G tests/develops process for getting a drone that is stationed at the airport into air asap.
 - Collaboration with air rescue association and authorities



Learnings & recommendations

Req spec: Less than 10% of all requirements relate to mobile networks

- Regulation and airport management are the more complex topics

No point in requiring very advanced 5G features (UE support...)

Private 5G & Virve 2 to be used in parallel. Network selection by UE.

- Major constraints by regulation and security policies.

Dear EU


- Fix a liberal U-space regulation asap.
- Encourage civilian authorities to make use of BVLOS capabilities.

Technology is not holding us back, regulation is.

CAREWINGS-5G
GA No. 101180459
CEF-DIG-2023-5GSMARTCOM-EDGE-WORKS



Deliverable No.	D2.2
Deliverable Title	5G enabled Smart Airport Req.. Specification
Dissemination level	Sensitive
WP Leader	Poutanet Oy
Main Authors	Kimmo Terävä, Heikki Almay, Martti Ylikoski
Issue date	Due date: M6 Submission date: M6


CEF GRANT NO: 10118045



Gorazd Mirkovski

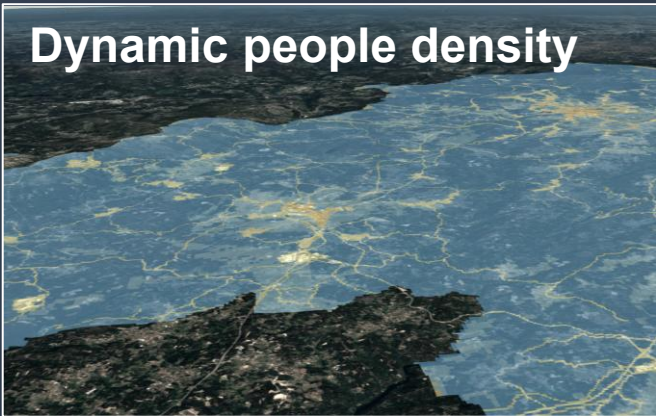
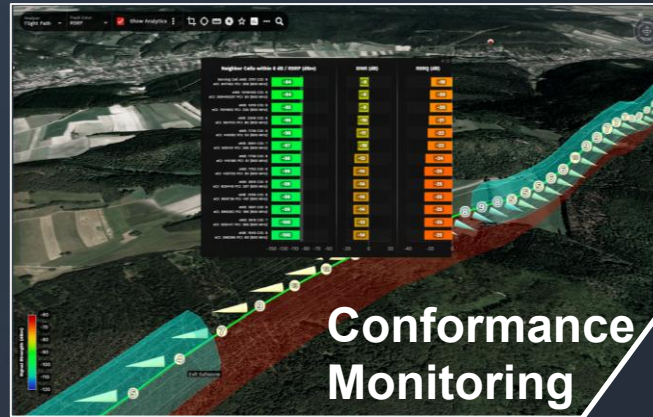
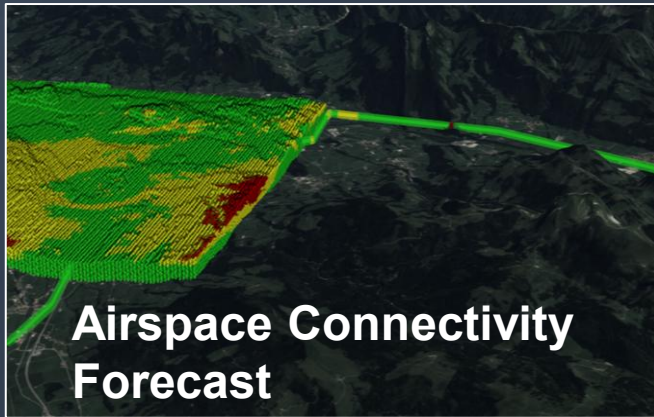
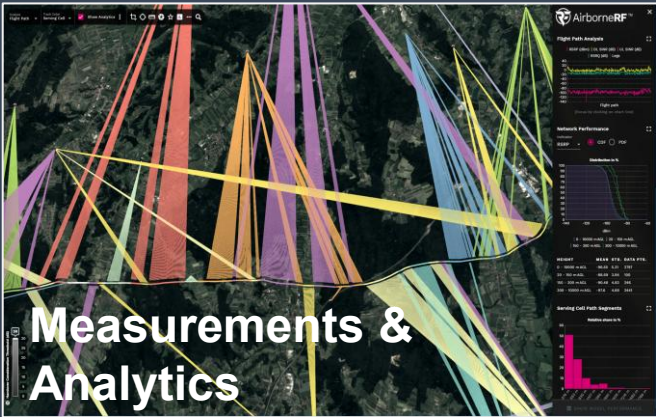
PROJECT DIRECTOR
DIMETOR

Project: **AirborneRF**



Turning telco data into safety and business critical information in Aviation, Cyber Security and Defense

Analytics. Monetization. Safety. Defense.



Data APIs

CITYMESH
connecting opportunities.

Mobile Network Operators

AirborneRF
NAV Sentry

Safety & Scale

Use cases

First Responders & Public Safety (Fire, Police, Medical Service icons)

Inspection & Surveil. (Drone icon)

Government & Defense (Helicopter, Drone icons)

Delivery (Drone with package icon)

UAM / AAM (Urban Air Mobility / Air Taxi icon)

Automotive & Robots (Car, Robot icon)

Business Cases

Data MNO core business

- Role of MNOs:**
- Infrastructure as a Service
 - Platform as a Service
 - **End-to-end Drone Operators**



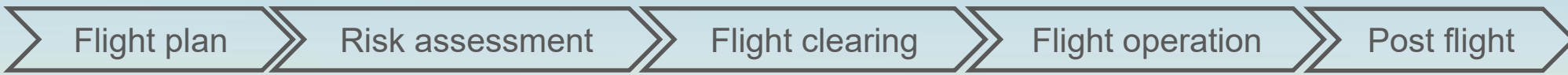
AirborneRF

Radio Space

Flight Operation

Settings

About



1 Connectivity data & analysis

3 Alternative Position & Validation

4 GNSS Spoofing/Jamming Monitoring & Detection

2 People density (mobility) data

All dependent on OEMs, UAS characteristics, Antennas, Modems, ...

We process & deliver telco data for aviation systems

Live interaction



slido

OR

A screenshot of a web browser displaying the Slido interface. The browser's address bar shows the URL '5G for Smart Communities Support Platform'. The page header includes navigation links: 'Welcome', 'Events', '5GSC Support Platform', 'Participants', '5G Community Conferences', '5GSC Marketplace', and 'Capacity Building Sessions'. The main content area is a dark purple rectangle with a play button icon and the text: 'The session hasn't started yet. You can join the video conference 10 minutes before the session starts.' Below this, it says 'Thursday 10 July 2025 | 10:00 - 12:00' and 'Drones subgroup'. On the right side, there is a 'Discussion' sidebar for the 'Drones Subgroup'. It features a 'Q&A' section with a text input field 'Type your question' and a 'Popular' tab showing a question from 'Sofia Profico' posted '1 minute ago'. The question text reads: 'Welcome to the forum for the Drones Subgroup. Share ideas, solutions & challenges on deploying 5G across Europe. Use the slido during the session to post your contributions and engage with others. For any information or to share with us useful material, reach out to: community@5GSC.eu'. At the bottom right of the sidebar, there is a green circular button with the word 'Ask' inside, which is circled in black.

Open discussion

Chair: Tom Collins, Researcher, CityMesh

Live interaction



slido

OR

A screenshot of the Slido web interface. The top navigation bar includes '5G for Smart Communities Support Platform', 'Welcome', 'Events', '5GSC Support Platform', 'Participants', '5G Community Conferences', '5GSC Marketplace', and 'Capacity Building Sessions'. The main content area shows a video player with a play button and the text: 'The session hasn't started yet. You can join the video conference 10 minutes before the session starts.' Below the video, it says 'Thursday 10 July 2025 11:00 - 12:00' and 'Drones subgroup'. On the right, there is a 'Discussion' sidebar for the 'Drones Subgroup' with a 'Q&A' tab selected. It shows a question input field and a list of questions, including one from 'Sofia Profico' with a '1 minute ago' timestamp. At the bottom right of the sidebar, there is a green 'Ask' button circled in black.

Closing Remarks

Dimitra Vasilias, Project Manager, 5G for Smart Communities
Support Platform