Driving Decarbonization with Integrated Satellite-based Monitoring Solutions

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Telespazio Belgium at a glance

Who are we?

+195
EMPLOYEES

~55M €
2022 REVENUES

+22
NATIONALITIES

+40
YEARS OF EXPERIENCE

38
% of women in the company

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Telespazio Belgium Sustainability Mission

Space is open for business

Space has the power to improve everyday life
Objective

Find opportunities

Create Roadmap

Decarbonisation

Upstream
- Improved/new mission concept

Downstream
- Space-based products/services

Technical development
- AI, IoT, Digital Twins & SatEO
Decarbonization

The road to decarbonization crosses all industries and geographies!

Despite technological improvements and active regulations, the working paradigm is still not harmonized. There is an urgent need of removing CO₂ from the atmosphere requires additional effort and a “need-to-have” approach.

- Need Remove CO₂, reducing the ecological footprint of the human activities
- Need of Efficient Technologies to support the challenge
- Need of Standards and Regulations to have certified figures, improving the industrial, financial, and social sustainability of the human activities and business
The added value of satellite data

"The Space Sector holds the key to unlocking economic and environmental progress by filling the demand for data, integrating it into economic and environmental contexts, supporting development, and most importantly, paving the way for genuine decarbonisation efforts while avoiding the pitfall of greenwashing“

- Space Sector must **help** feeding the demand for data
- Space Sector must **integrate** data in economic and environmental contexts
- Space Sector must **support** development
- The space sector must help **avoid greenwashing** and support decarbonisation
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Scope of Telespazio EO

**Need**
- Need to achieve **green and inclusive** economic growth
- Need to establish **space as key pillar** to contribute to decarbonisation.

**Goal**
- Demonstrate space applications have **significant potential**
- Help industries & society accelerate towards **zero net emissions**

Need to establish space as key pillar to contribute to decarbonisation.
Telespazio Belgium Decarbonisation

**Supporting technology**
- Studying and tailoring the *advantages and limitations* of satellite data use cases
- Define integration criteria of *satellite technologies* into the decarbonization context

**Supporting industry (carbon handprint)**
- Analyzing the *industrial needs*
- Create a specific *decarbonization roadmap*

**Supporting the decarb-ecosystem**
- Certifying the *zero-impact transaction*

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Supporting technology

- Studying and tailoring the advantages and limitations of satellite data use cases
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Supporting the decarb-ecosystem

- Certifying the zero-impact transaction
State of the Art Satellite Technology

- Current possibilities
  - Soil moisture
  - Evapotranspiration
  - Crop classification
  - Fertilizer monitoring
  - Canopy monitoring
  - Dry matter productivity
  - Burn Aera
  - Chlorophyll
  - Gross primary product

- Equipment
  - Multispectral imaging
  - Radar imaging
Technology on ground

Platform as a smart enabler for centralizing data, analytics and R&D under one single roof

Big Data Layer
A.I. Model Layer
Applications Layer
Future developments

- Monitor Changes in Soil Conditions
- Produce Soil Properties Maps
- Produce Tool for Supporting Decision Making
Tool for Supporting Decision Making

Continuous monitoring on European scale → Data Based Standard → Data integration → Decision Support System
Conclusions

• Telespazio Belgium journey to decarbonisation has just started

• Goal is to integrate satellite data into existing ecosystems

• Create the means to make standard and regulations enforceable

• Support companies in decarbonising their supply chain
THANK YOU FOR YOUR ATTENTION

www.telespazio.be

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