

# INNOspace® Network

## Space2Agriculture

German support of the Sustainable Development Goals and facilitating Cross-Industry Innovation based on Space Technology

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# INNOspace® Network Space2Agriculture

## Challenges: global – European – national

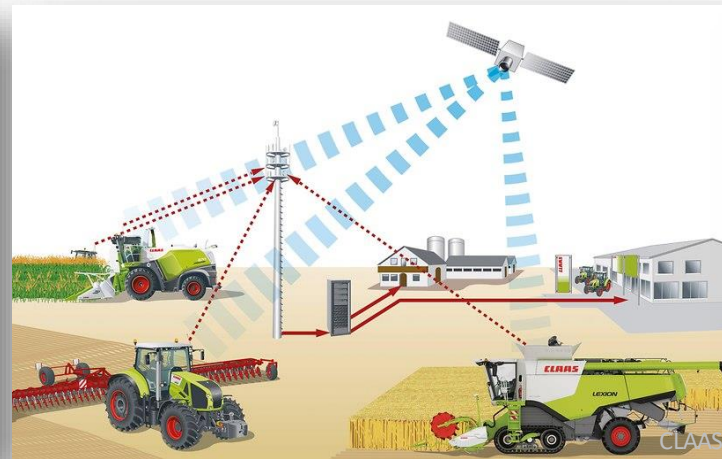
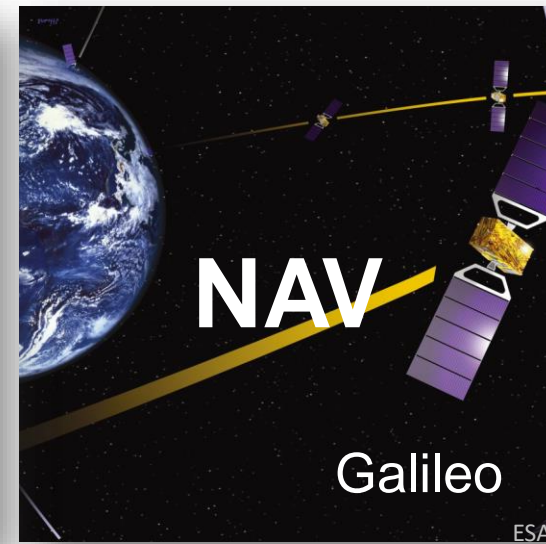
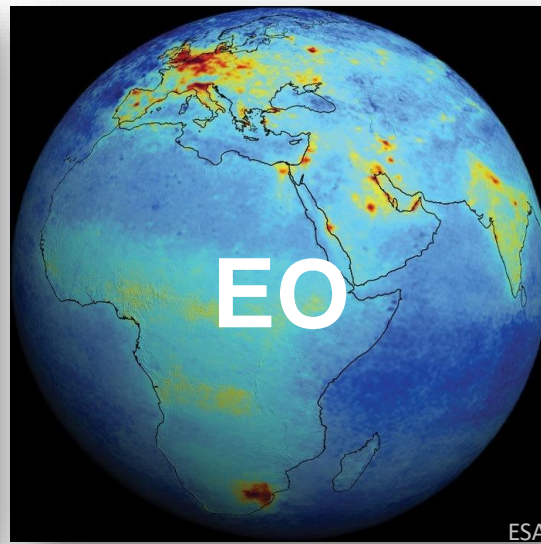
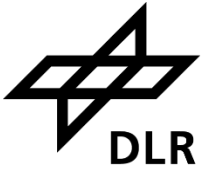
- ensuring food security for a growing world population
- climate change (mitigation & adaptation)
- soil degradation & water scarcity
- loss of biodiversity & **tree cover**
- digital transformation

## Goals of Space2Agriculture

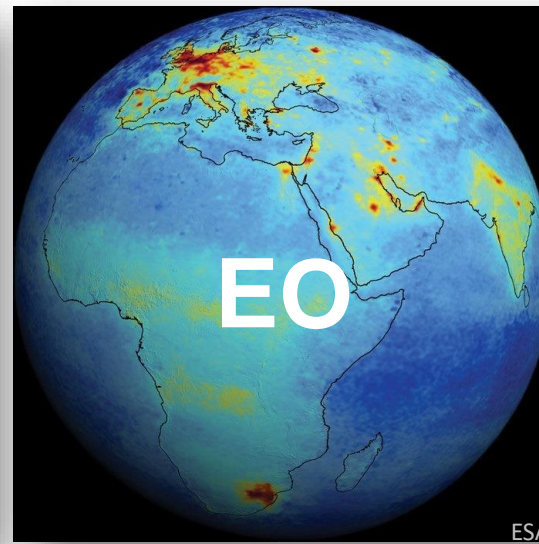
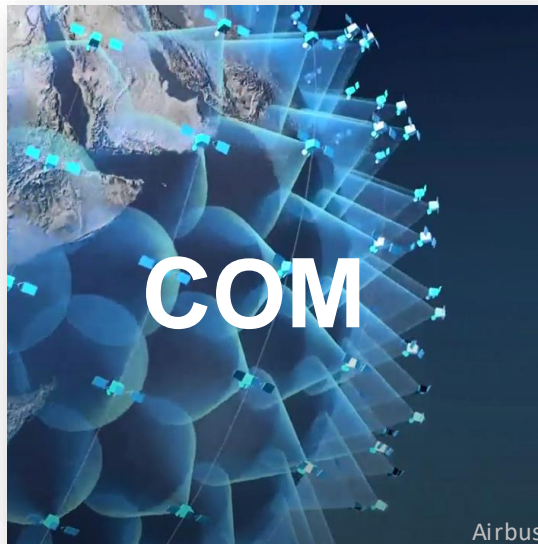
- bringing space and agricultural players together
- **transferring knowledge and technology to address agricultural and environmental challenges**
- initiating joint R&D projects and business relations
- leveraging synergies
- presenting space technologies, projects and services



# Using space technologies and services to support agriculture and the SDGs



# Using space technologies and services to support agriculture and the SDGs

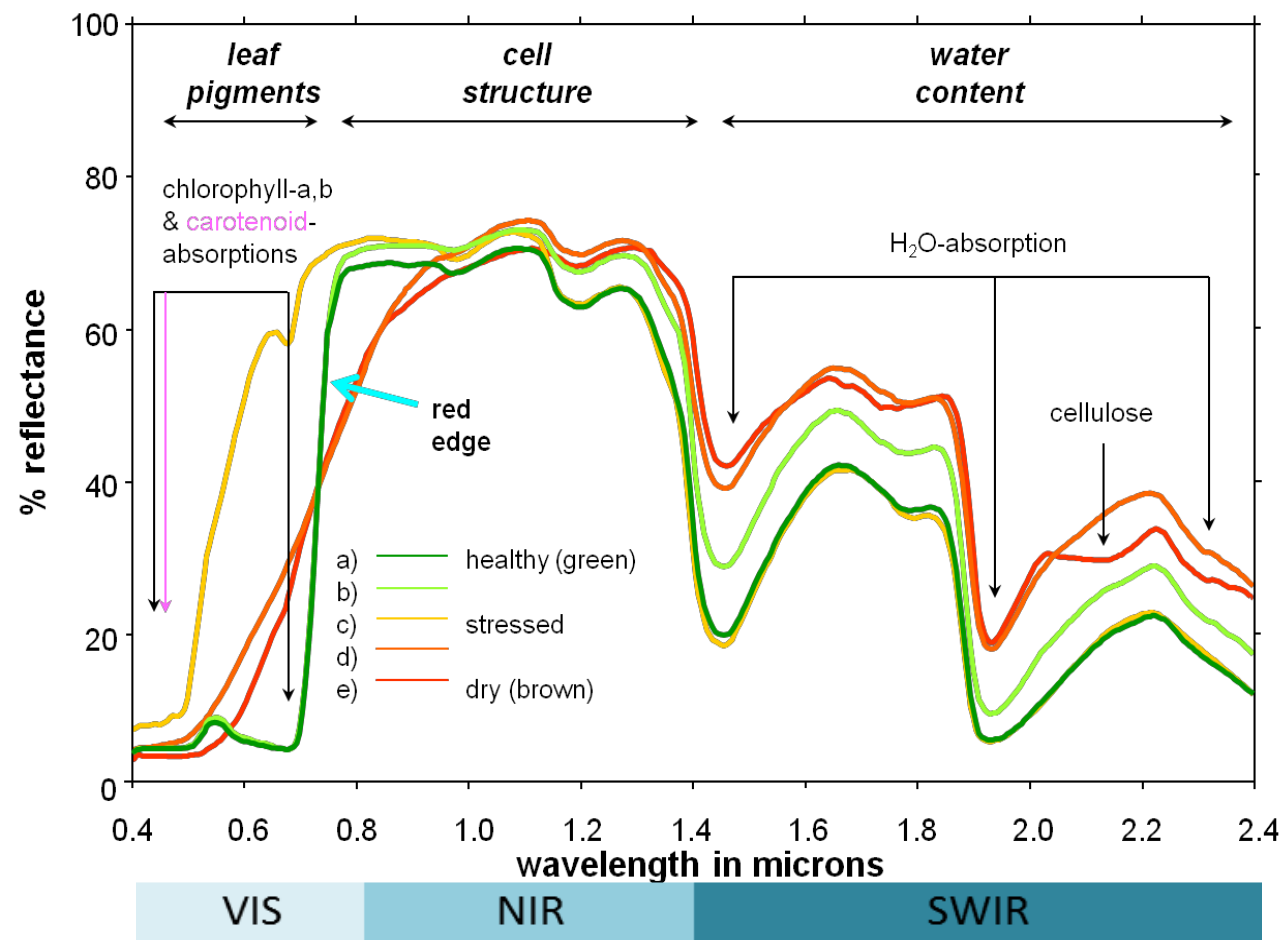
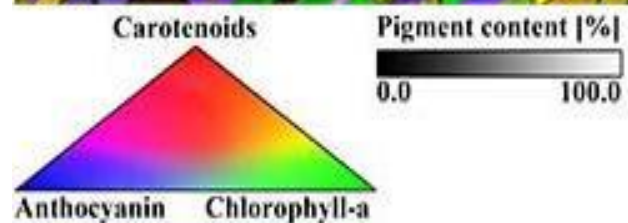
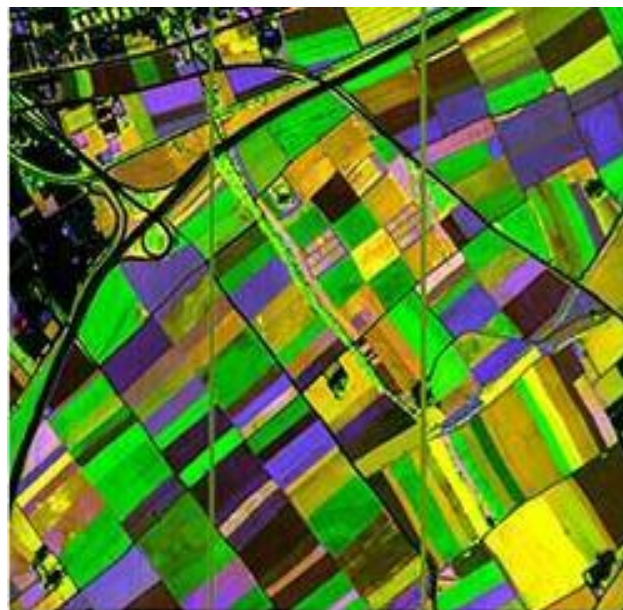


# EnMAP - mapping plant variables

**EnMAP**  
Hyperspectral Imager

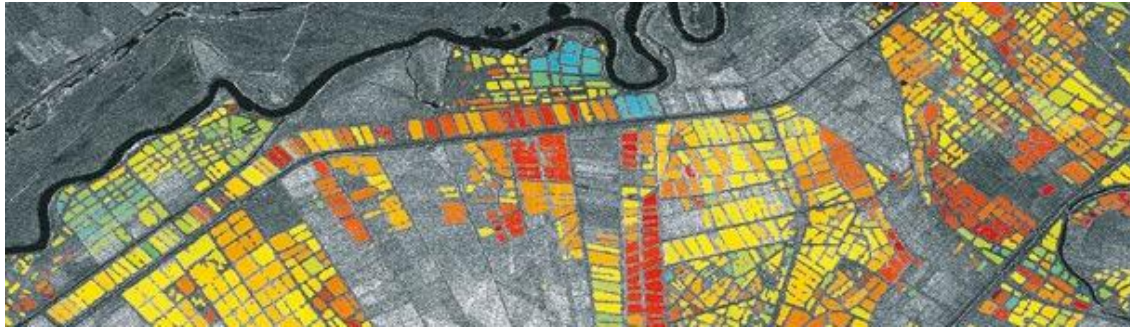


## Determination of plant vitality and biomass content from reflection spectra



# Main working groups in Space2Agriculture

**Space infrastructures for the digital transformation of agriculture and forestry**



**Technology transfer between space and agriculture (spin-offs und spin-ins)**



**Space technologies for agriculture in the context of climate change and food security**



**Space technologies to support the restoration of biodiversity and sustainable agriculture**

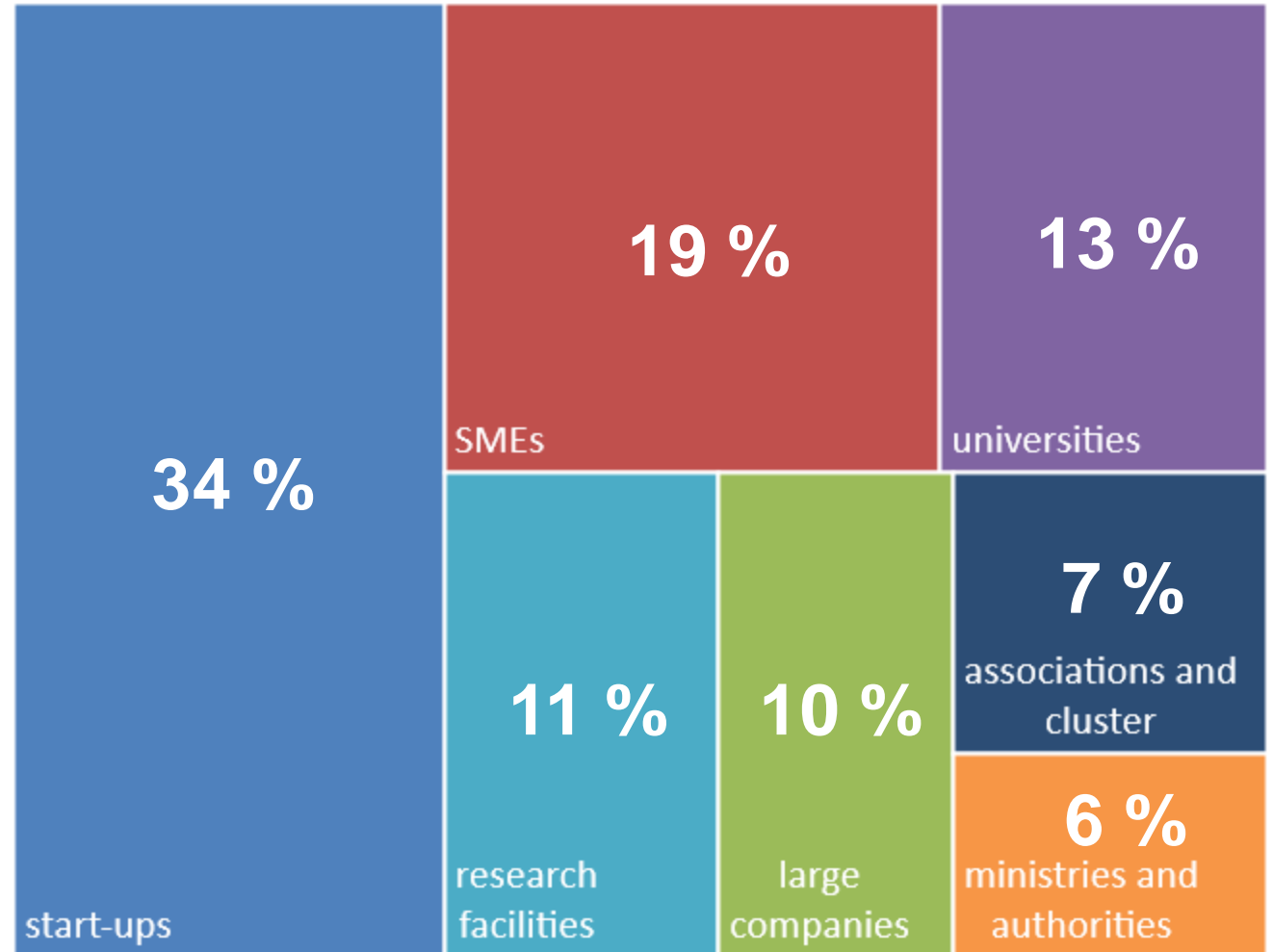
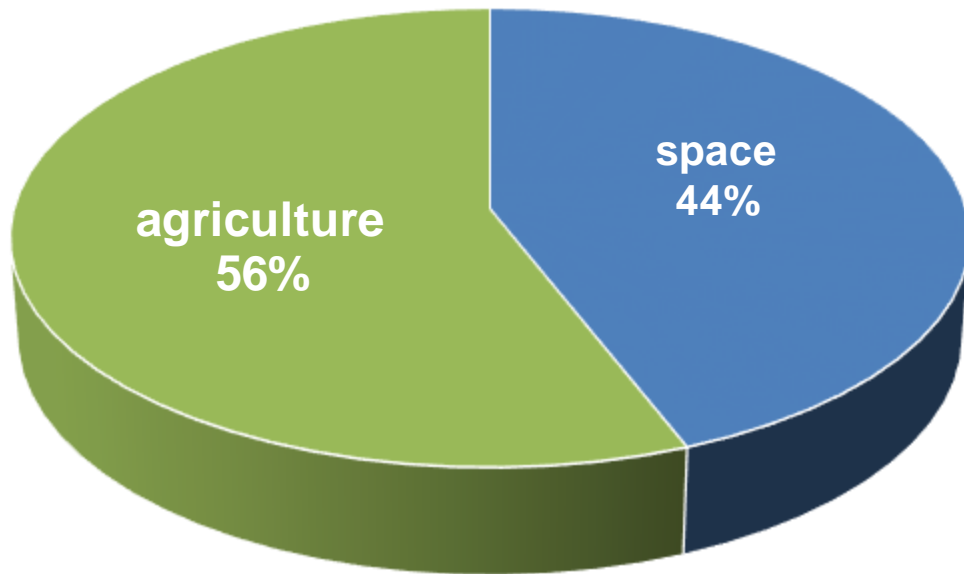


# founded in 2019



# Facts and figures

- 250+ official members
- slightly more partners from agriculture





# Sample project: EOekoLand



## Goal of the German Government: Expansion of organic farming



25 %

organic cultivated area



30%

Today in Germany:

10,8 %

Bio-Flächen in  
Deutschland 2021



BÖLW, 2022

## Earth Observation & Artificial Intelligence

- Distinction and nation wide data on organic vs. conventional cultivation
- Extent, measures and effects of organic farming expansion
- Evaluation of target achievement / Support of Political Decision Making

## Research Questions

- Can the patterns and trends of land use and the differences between organic and conventional farming be captured with satellite remote sensing data and methods?
- Can the integration of high-resolution satellite data with Copernicus data (Sentinel-1/-2) and services generate additional value?



# Thank you for your attention!



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