

BeGeo 2024

LA CONNEXION A L'ETAT PUR
DE ULTIEME CONNECTIE



How Earth Observation underpins the sustainability balance

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PEOPLE

PLANET

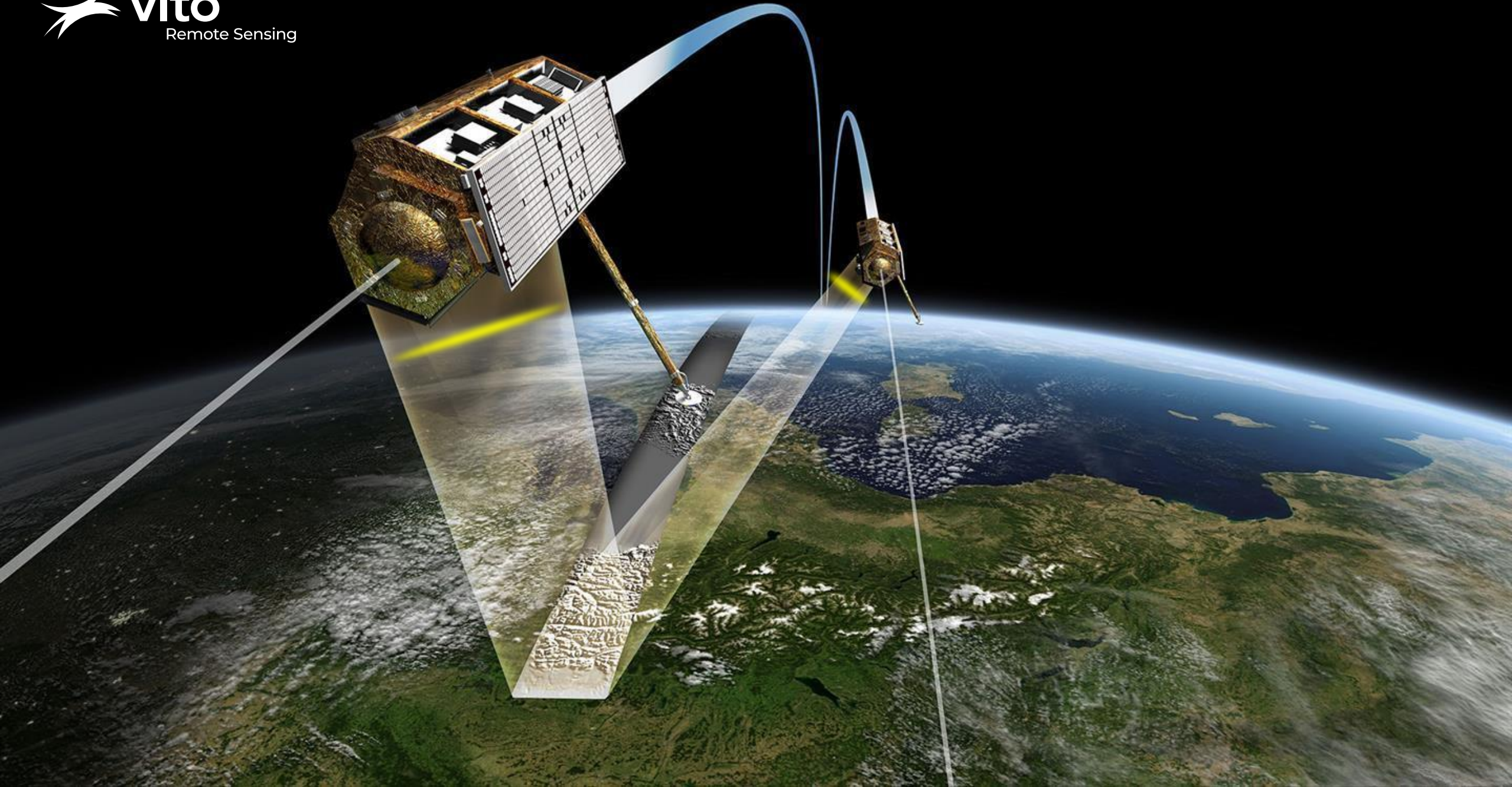
INNOVATION

PROFIT



SPACE ECONOMY

LOW ORBIT IS
OPEN FOR
BUSINESS





SPACE-TIME

BIOLOGICAL QUANTUM COMPUTING

QUANTUM COMPUTABILITY

VECTORS

QUANTUM ALGORITHMS

QUANTUM SUPREMACY

ENTANGLEMENT

ERROR CORRECTION

ALGORITHMS

HANDLING OPTIMIZATION

STOCHASTIC MATRICES

CHURCH TURING THESIS

QUBITS

INTEGER FACTORIZATION

TWO STATES AT ONCE

OPTICAL LATTICES

STATES

0 0 9 7 0 6 5 7 6 9
2 6 5 4 3 5 9 4 9 0 6 7
9 7 9 6 1 1 0 0 9 9 8 4 3 7 2 7 0 7 9 2 1 9



OBJECTIFY



DATAFY

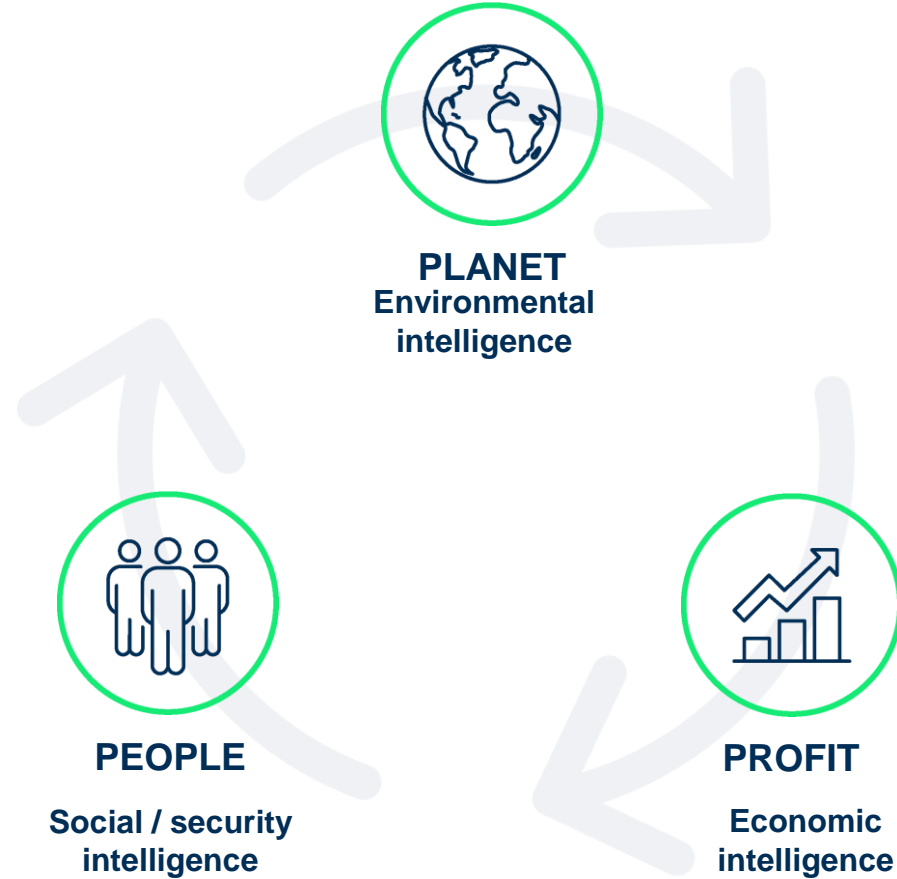


ANALYSE



GEO intelligence as an essential technology

Multi-domain sustainability balance



TIME

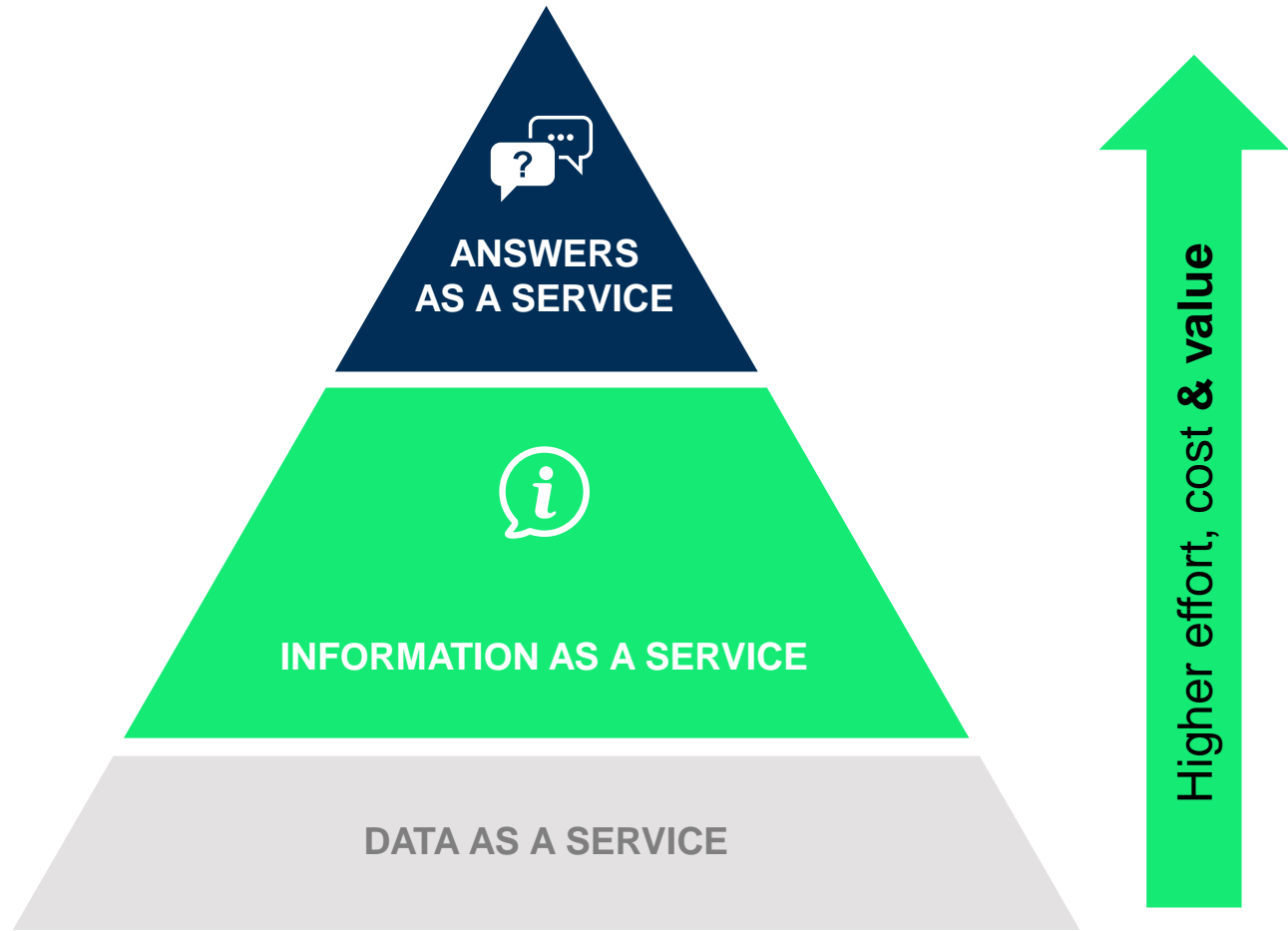


PASSIVE MONITORING TOOL

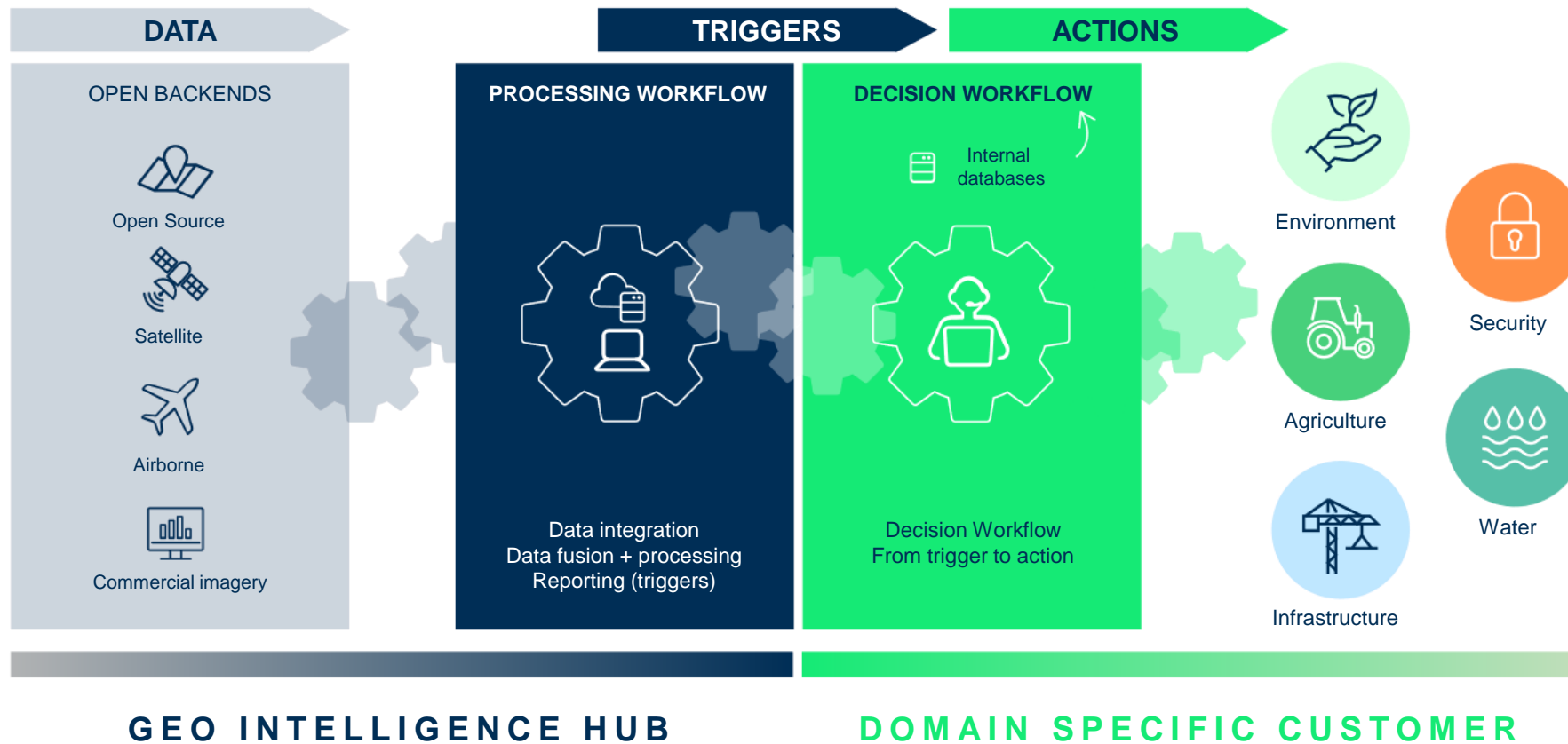
BALANCING ECONOMICS & ENVIRONMENT

NATURAL RESOURCE BASED ECONOMY

GEO INTELLIGENCE: ANSWERS AS A SERVICE

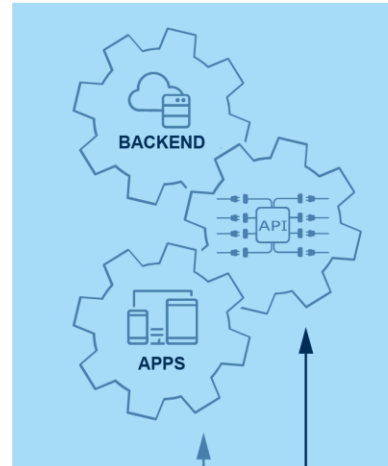


GEO intelligence dynamic near real time availability of answers

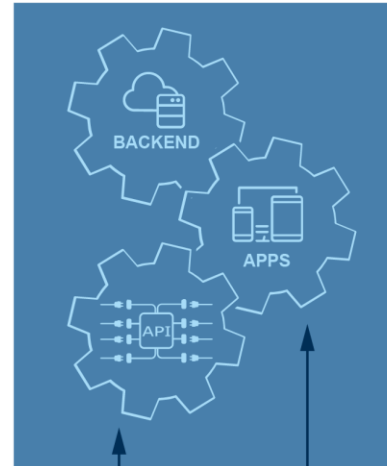


GEO intelligence distributed platforms*

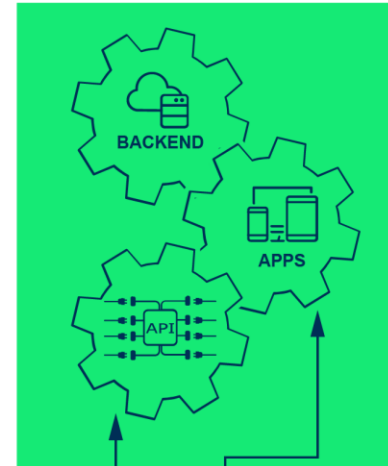
REGIONS & NATIONAL GOVERNMENTS



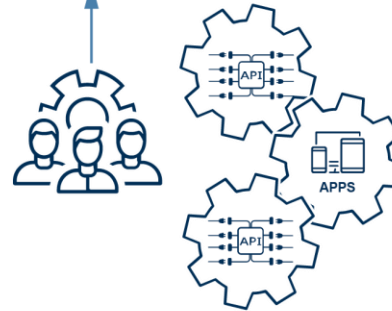
INTERNATIONAL ORGANISATION, EUROPEAN COMMISSION



INDUSTRY
GOOGLE EARTH ENGINE, ...



INFORMATION CONSUMERS



AI-API FRAMEWORK



INFORMATION CONSUMERS

* As opposed to centralized approaches like Google, Amazon, Microsoft



GEO Intelligence Hub

Democratizing the power of GEO Intelligence by low entry access to the data and the accompanying (AI/DL) analyses techniques

- **As a decentralized platform:**

To create, share and monetize GEO intelligence services at scale. It must be a decentralized GEO Intelligence network maybe implemented on a blockchain

- **As an ecosystem:**

Working with companies, governments, nonprofit, and other organizations to address local and global challenges and build stronger communities and a better world for tomorrow

WE COULD

WE SHOULD

WE MUST

PREPARING
TRANSITION

ACCELERATING
TRANSITION

DECISIONS BASED ON THE VALUE OF ALL
CAPITAL

MISSION



Reducing threats



Meeting human
needs

Tools & solutions

ACCELERATING
THE TRANSITION



GOALS



Ecosystems, species &
genetic restoration



Individual &
social well
being



Benefits shared
equitably

ACADEMIC RESEARCH

APPLIED RESEARCH

INITIAL APPLIANCE

COMMODITY APPLIANCE

RECOVERY

FULL
RECOVERY

2020

2025

2030

2040

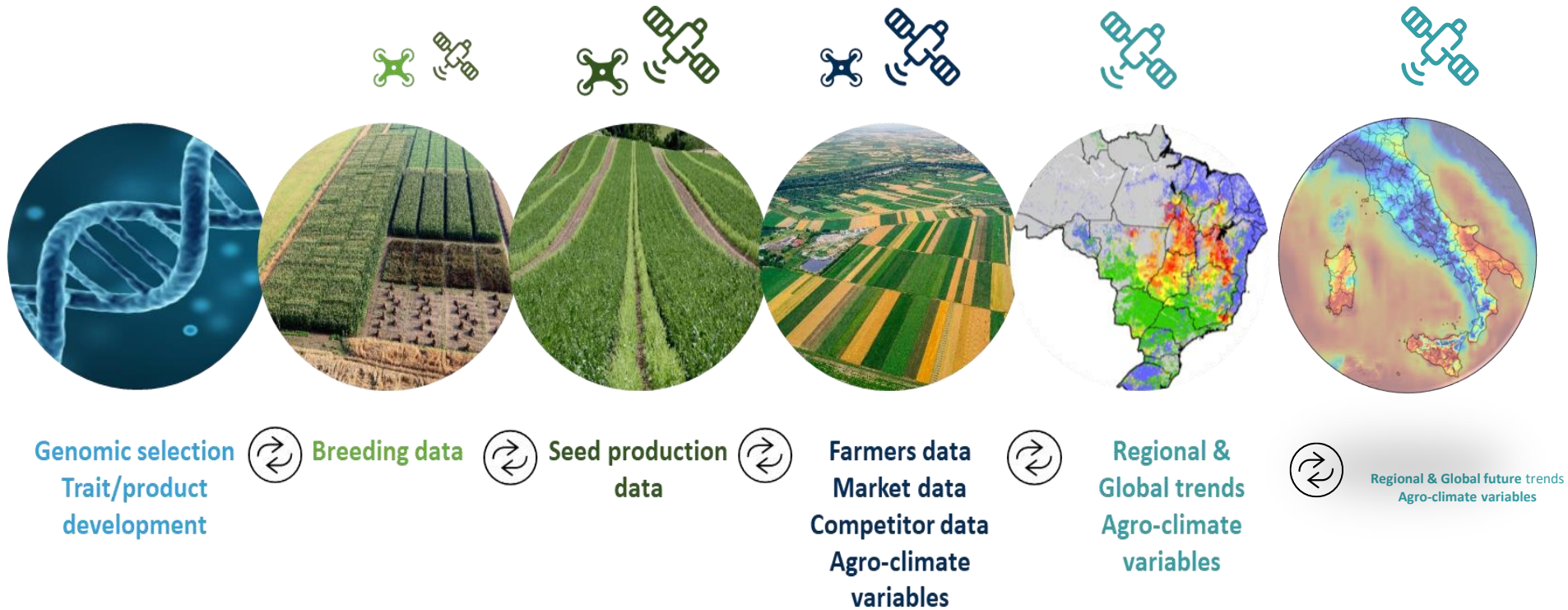
2050



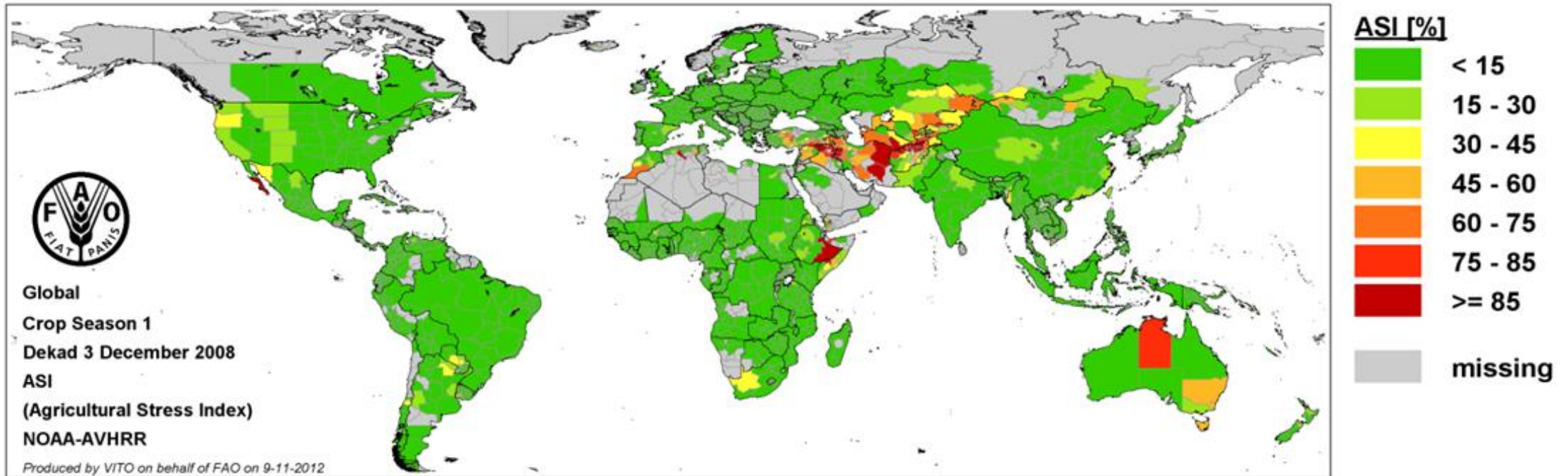


NATURE IS LOADING...

Food Security: climate adaptation in seed breeding & crop production

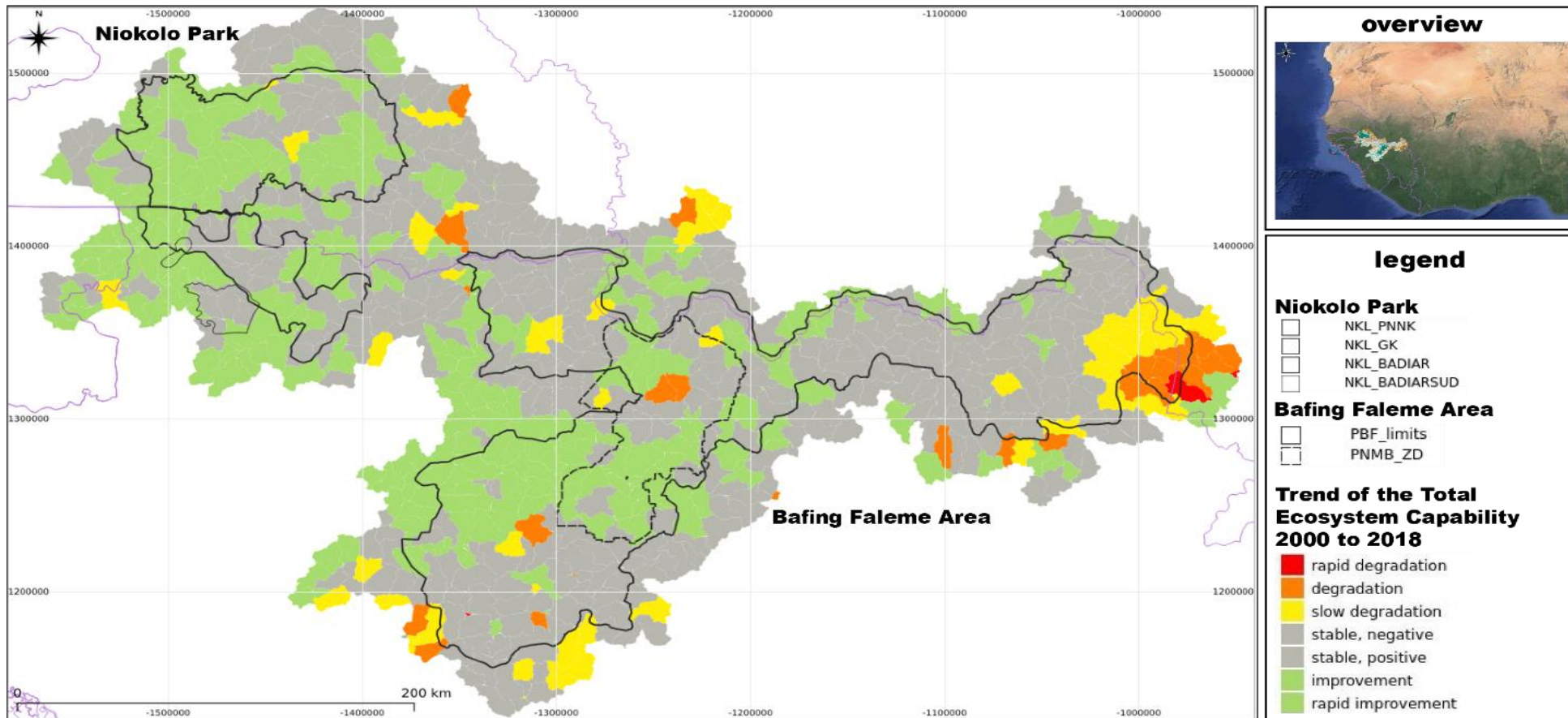


Food Security: Early Warning on drought impact in global agriculture

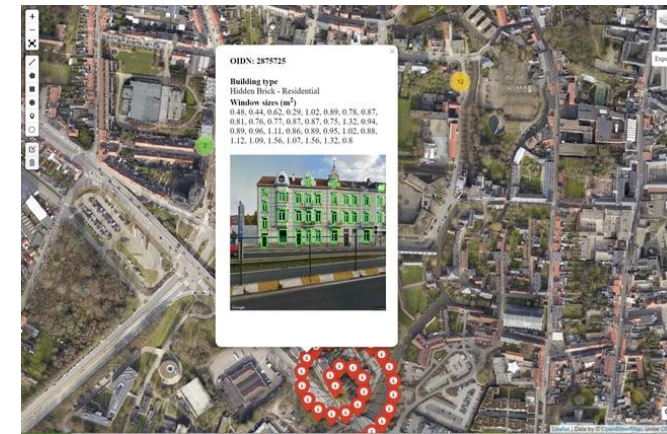


Agricultural stress index (ASI) at the end of 2008. The ASI is defined as the percentage of crop area within each administrative unit with a mean Vegetation Health Index (VHI) over the growing season below 35%.

Ecosystem monitoring: Valuing our Natural Capital



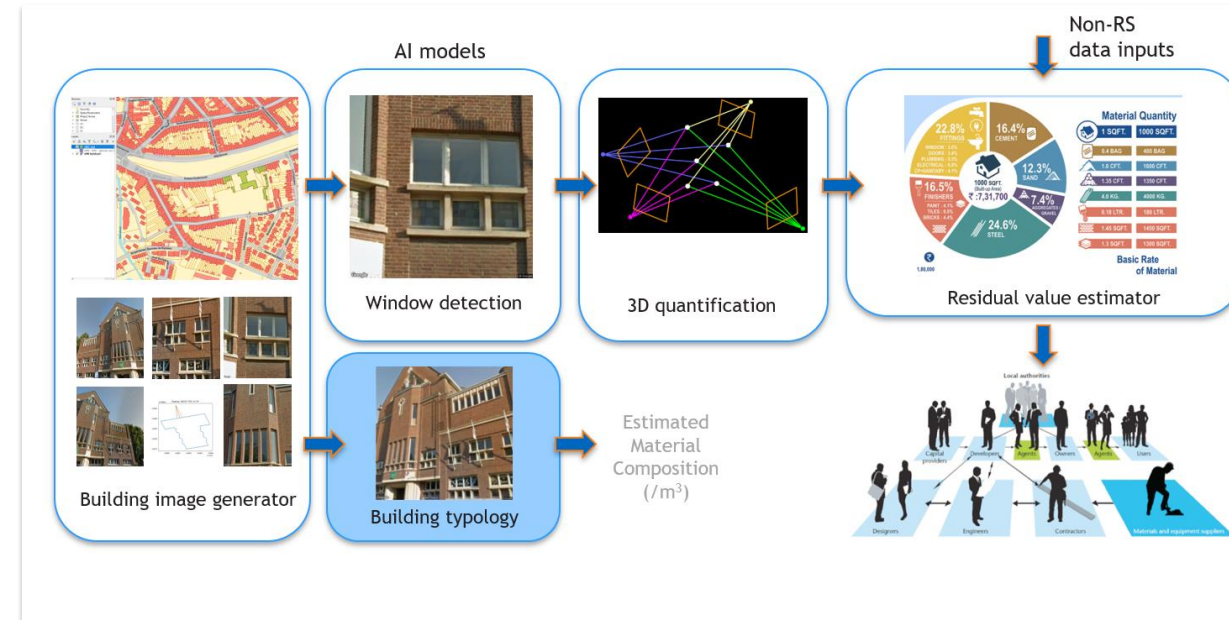
Urban Mining: circular economy in construction



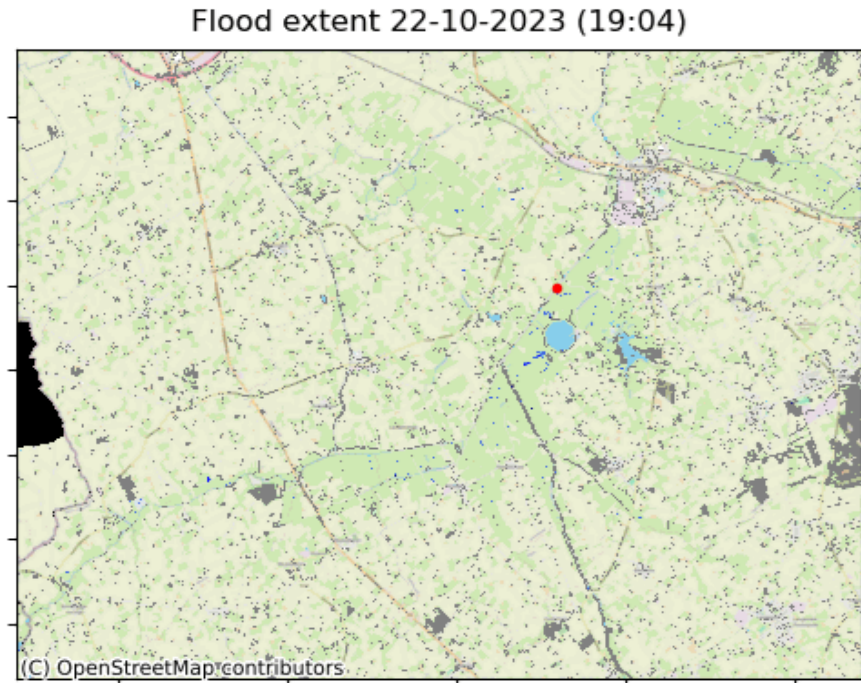
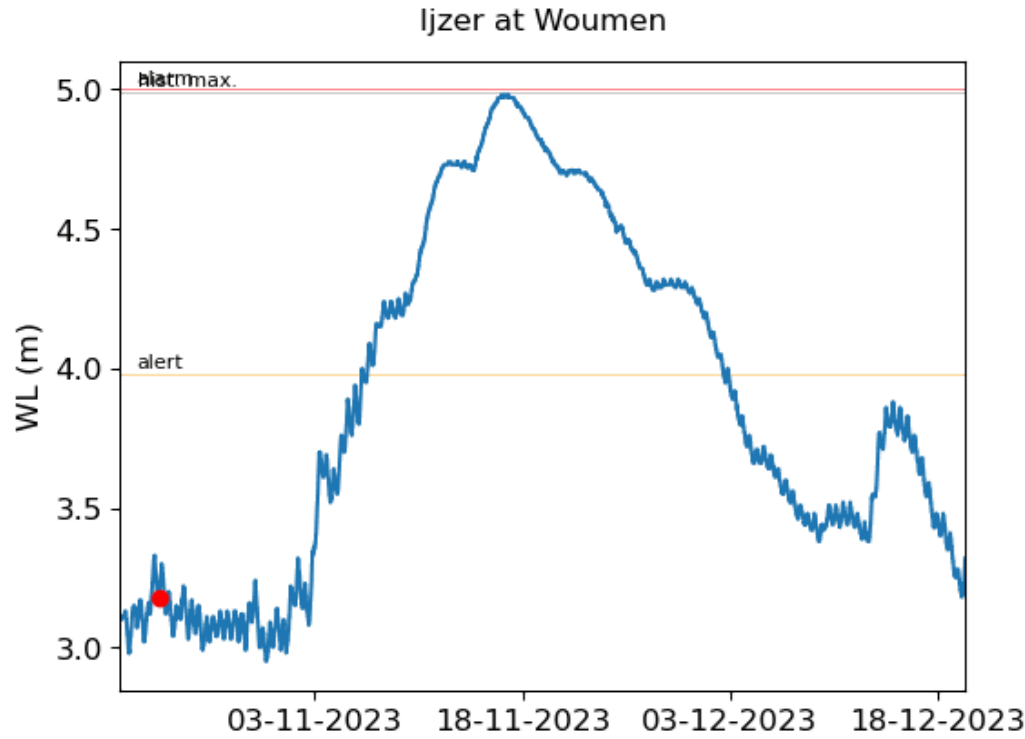
- 1 Generate value from an end-of-pipe perspective
- 2 Disposal of waste: burning & landfills



- 1 Secondary raw materials
- 2 Process residues
- 3 Component & product design
- 4 Repair & remanufacturing
- 5 Safe disposal: heat recovery & safe sinks



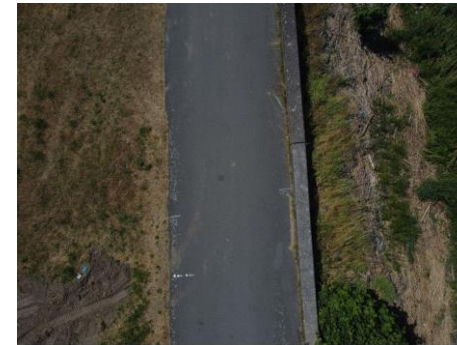
Crisis Management: Flood mapping



- permanent water
- flooding
- unsure flooding
- long-term flooding
- flooded vegetation
- probably flooded forests/trees
- forests/trees, flood state unsure

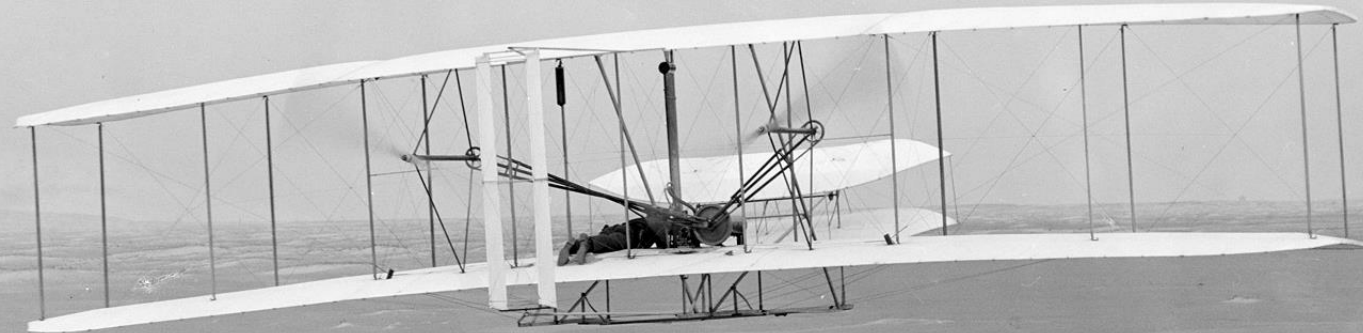
A world first for Belgium: citizens using drones to find waste on the banks of the river Scheldt

VITO and River Cleanup launch unique research project that combines citizen science and AI



With the neurodiverse support of





Multi-disciplinary is the new technical



Geo intelligence
for real world
answers

Thank You

+ Stay informed

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+ Get in touch

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