



TELLUX

Unearth the soil pollution !



Tellux, in a few words ...



Created in 2019, Tellux is a start-up specialized in digital soil analysis: hyperspectral technology coupled with artificial intelligence to provide you, in real time, on site, the physical properties of the soil and the pollutants.

14 collaborators

2,5 M€ R&D supported by ADEME et Regional BPI funds

ADEME
AGENCE DE LA
TRANSITION
ÉCOLOGIQUE

UNION EUROPÉENNE
LEADER
Fonds européen agricole pour le développement rural :
l'Europe investit dans les zones rurales

bpi france

**RÉGION
NORMANDIE**

Patented technology, giving Tellux a unique position on the market !

Environmental remediation market



Large number of delayed and costly projects



Examples :



*"Saint-Nazaire: why is this major real estate project in the city centre going to be **delayed by at least four years?**"*

[...] Two residual sources of pollution have been found after an initial remediation phase."

- Actu.fr



*"The Villiers-sur-Marne eco-neighbourhood **blocked for more than a year** because of the enormous extra cost of depollution [...] which has risen from **12 to 35 million euros.**"*

- Les Echos



*"Collège Seine Gare in Vitry: **two years of delay** due to pollution.*

*[...] The cost of cleaning up the pollution is higher than expected: **€8 million instead of €5 million**, i.e. a third of the construction cost of the school."*

- Le Parisien

Environmental remediation market



A lack of reliable information on soils

- Before any land or material movement project, it is mandatory to carry out pollution diagnostics
- Process:



Soil survey
Lack of precision



Samples collection
Lack of representativeness



Sent for external analysis
Waiting time for response

QUALITY

- Half of the pollution diagnoses are unrepresentative *
- Late discovery of pollution

Unclear DELAY

- Prolonged studies
- Risk of site stoppage/delay

Uncertain COSTS

- Further studies needed
- Unclear volumes of polluted land

Our mission : Providing information



Why?

Aider les réhabilitations des fonciers dégradés, Réduire les risques



1st market:

Land pressure
Zero net development
Brownfields fund

Thousands of brownfield sites to be recycled



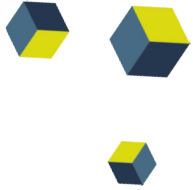
Future markets

European green taxonomy, TGAP, ZAN...
Tensions on raw materials
Circular economy & reuse of materials
Protection of biodiversity & carbon footprint of operations

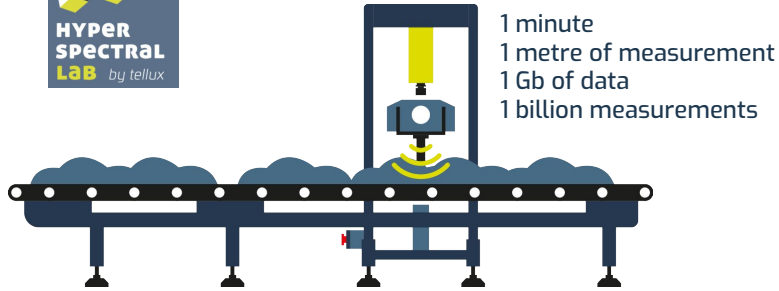
Who?



2 innovative technologies



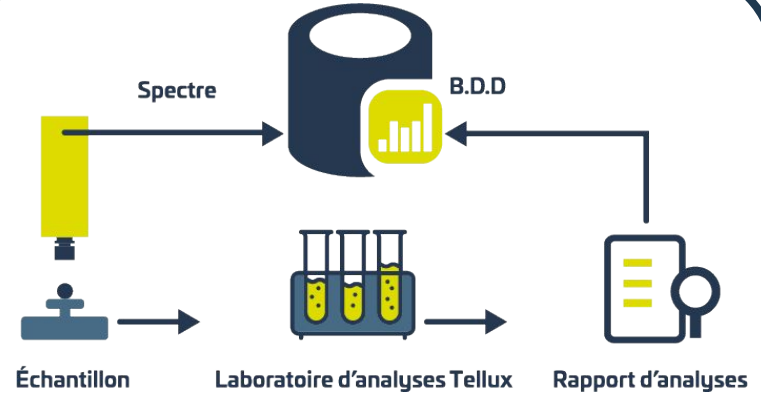
Hyperspectral imaging



The camera measures the light absorbed by a material

High-resolution spatial and spectral data

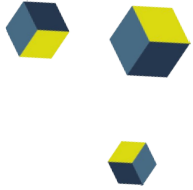
Learning methods



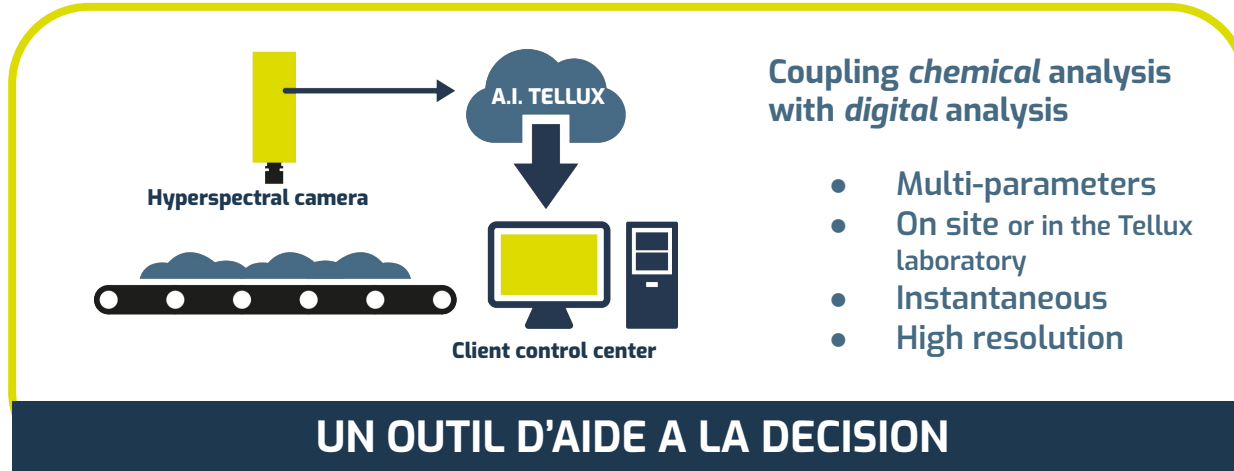
Artificial intelligence compares spectra with known data

Analyses in real-time

Our solution: the HyperLab



Providing information to derisk the remediation



QUALITY

Increase the precision and representativeness of diagnoses

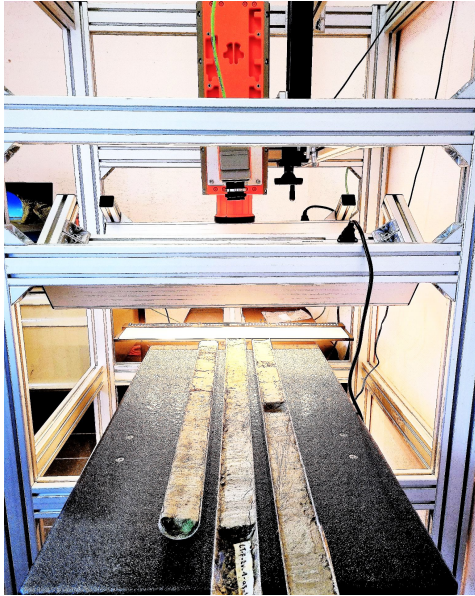
COST

Reducing the volume of polluted soil

DELAY

Accelerate studies and responsiveness in case of pollution discovery

HyperLab : multi-parameters analyses



Analysis parameters:

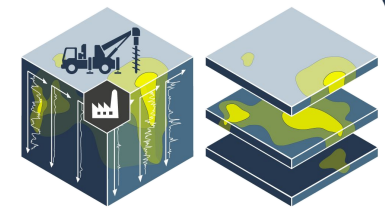
- Water content
- Physical characteristics, soil properties
- Total organic carbon
- **Hydrocarbons (C5-C16/C16-C40, alif. + arom.)**
- PAHS
- Chloroethylenes (TCE, PCE, DCE)
- Sulphates, ammonium

Materials detected

- Concrete
- Rocks
- Wood
- Metals
- Plastics
- Micro-plastics
- Bricks and ceramics

+ others parameters on request

HyperLab : analyses on site




Drillers

Opening of core drillings

Mobile laboratory

Results in real time


Soil survey
Driven in real time

Excavation
Immediate sample analysis


Analyses
on site

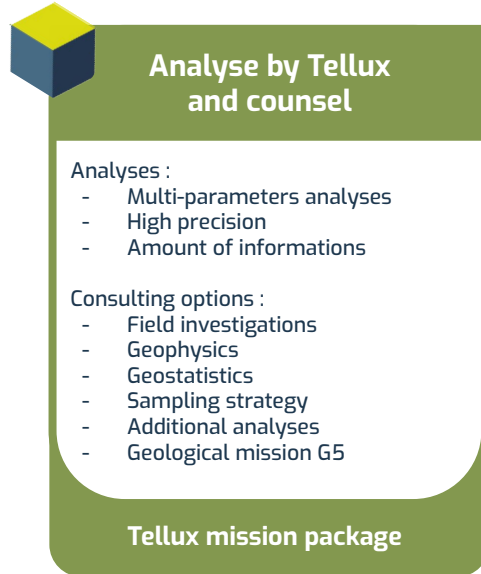


Reactivity
Rapidity
Autonomy

Offers



1.1 Tellux HyperLab



Analyse by Tellux and counsel

Analyses :

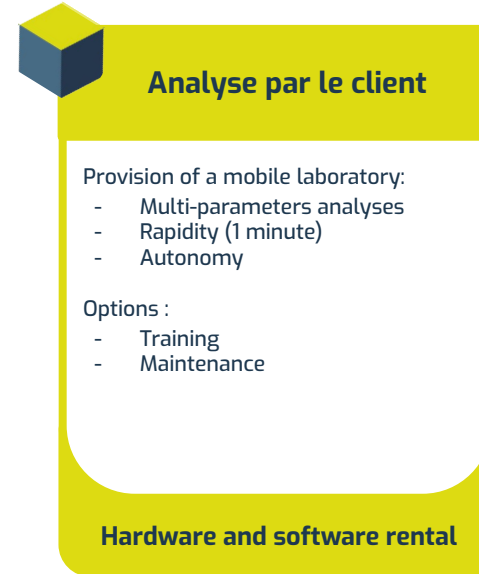
- Multi-parameters analyses
- High precision
- Amount of informations

Consulting options :

- Field investigations
- Geophysics
- Geostatistics
- Sampling strategy
- Additional analyses
- Geological mission G5

Tellux mission package

1.2 Client HyperLab



Analyse par le client

Provision of a mobile laboratory:

- Multi-parameters analyses
- Rapidity (1 minute)
- Autonomy

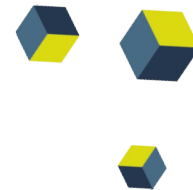
Options :

- Training
- Maintenance

Hardware and software rental

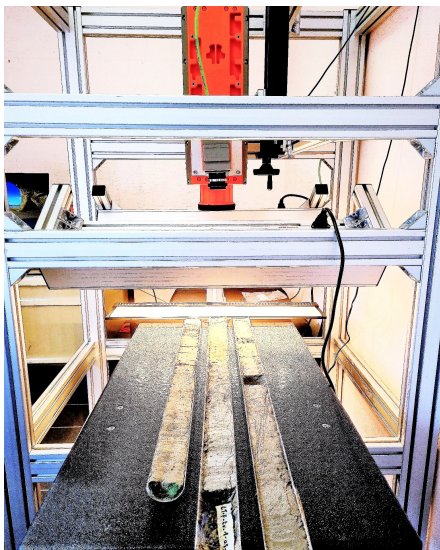
[Video presentation of the HyperLab](#)

Offer 1.1 : Tellux HyperLab



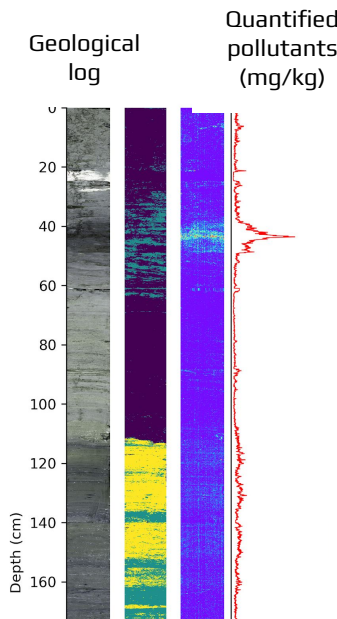
A high resolution analyses service

Analyses on site



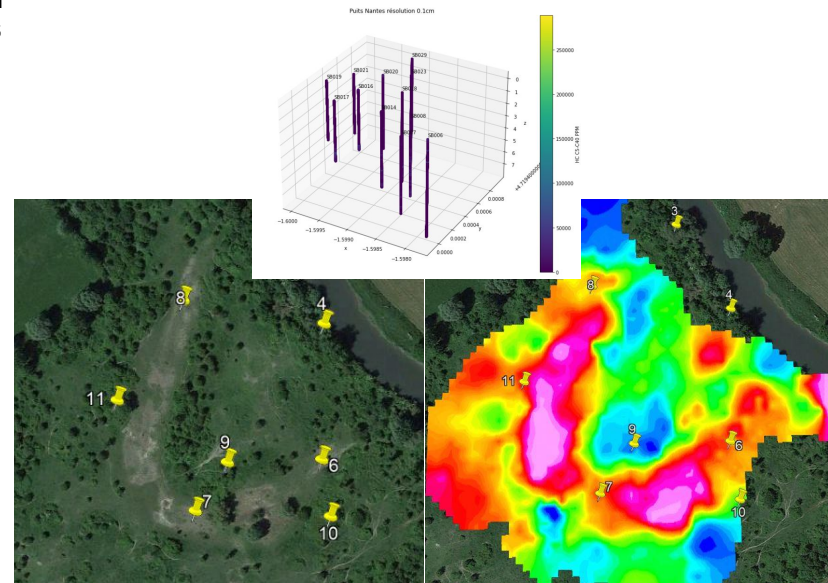
+ analyses

High resolution logs



+ informations

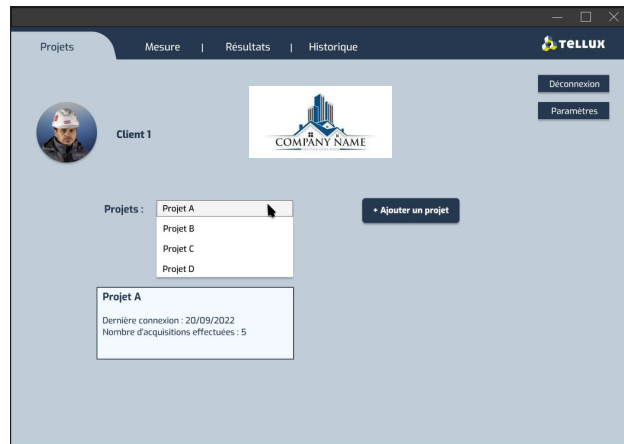
Cartography



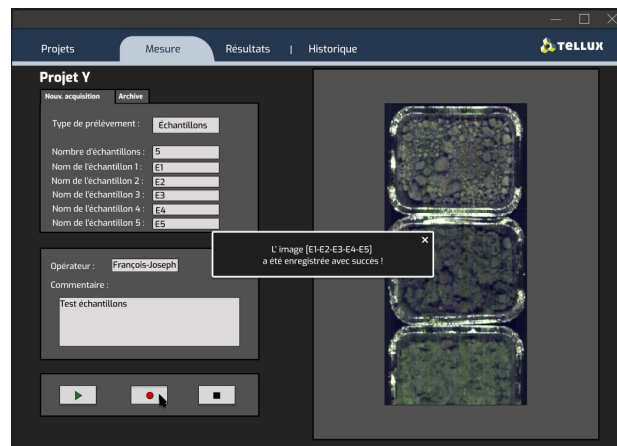
+ representativeness

Offer 1.2 : Client HyperLab

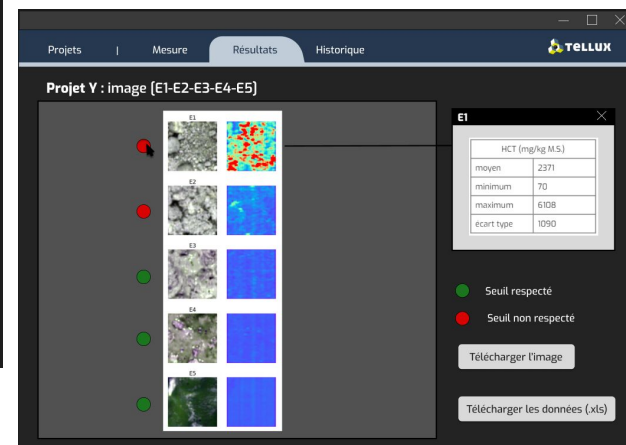
Real-time soil sample analysis software:



+ rapidity



+ analyses



+ informations

Tellux 2025 : a new offer

A continuous measurement module on conveyor and screen to sort in real time (pollution + materials)

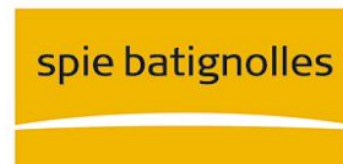


2022 - Prototype

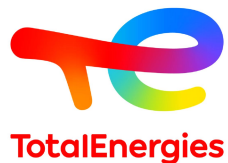


2025 - On work site

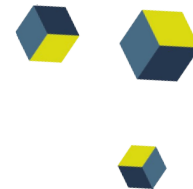
Our clients



/malet



Our partners



UNION EUROPÉENNE
Fonds européen agricole pour le développement rural :
l'Europe investit dans les zones rurales

business
incubation
centre

Nord France





Thank you!

Contact

Maxime Lhoir
Business development

maxime.lhoir@tellux.fr
06 66 30 26 93

www.tellux.fr

 Tellux