



A Premium Geospatial Industry Conference

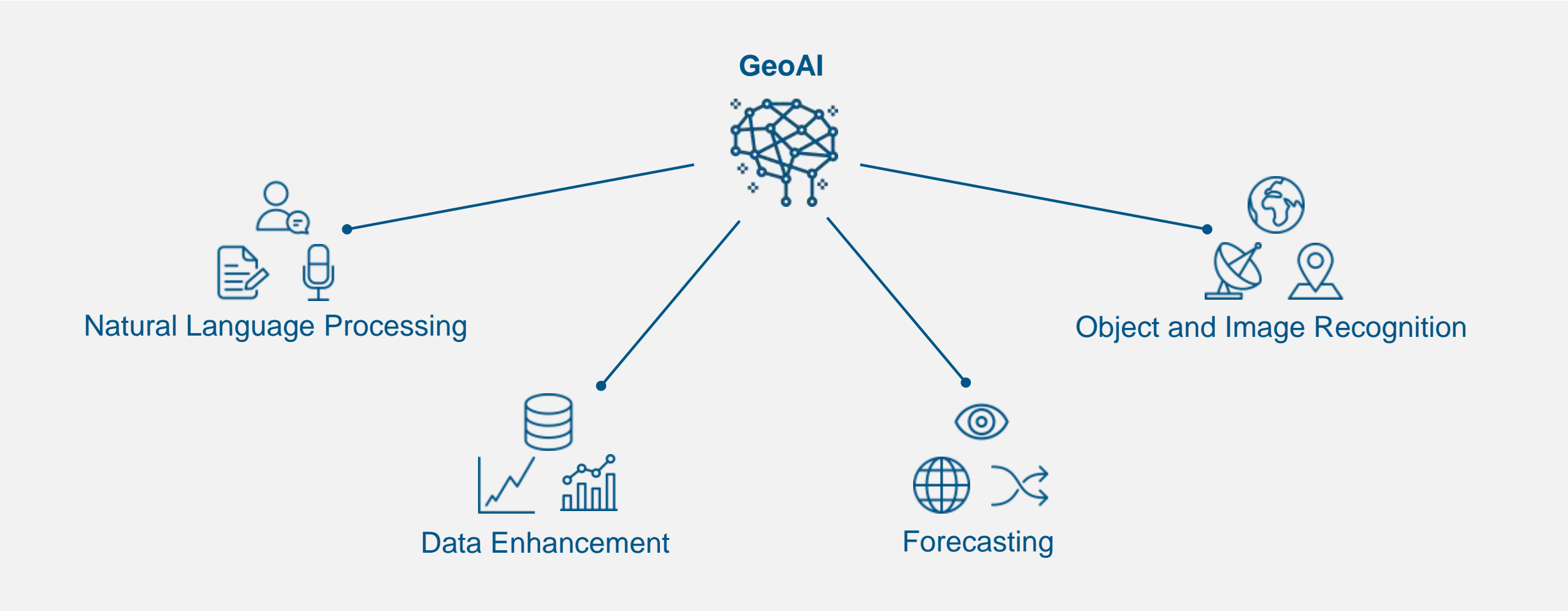
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Opportunities and Possibilities of GeoAI on Open Data

Geospatial World Forum – 11.05.2022

GeoAI at con terra



GeoAI at con terra



Data Enhancement

- Anomaly Detection
- Data Quality Control



Object and Image Recognition

- Analysis of Satellite-Data
- Detection in Aerial Images



Natural Language Processing

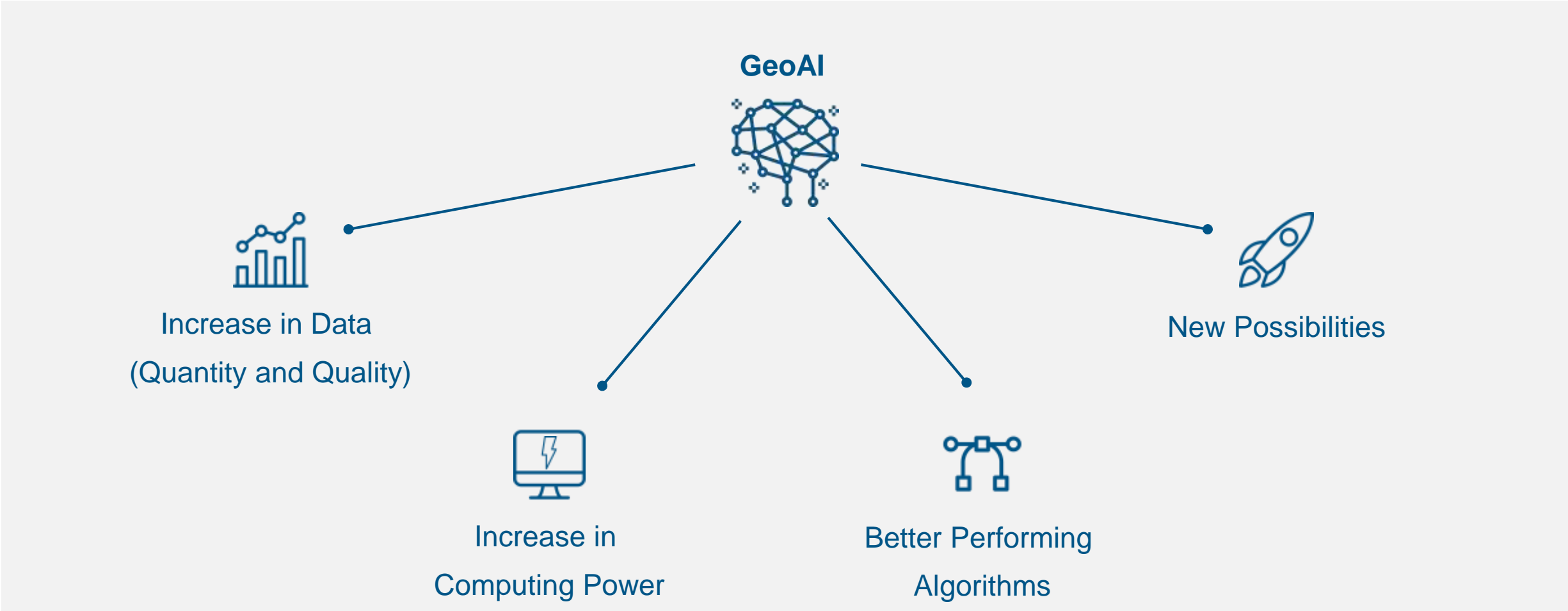
- Voice Control
- Analysis of unstructured Data



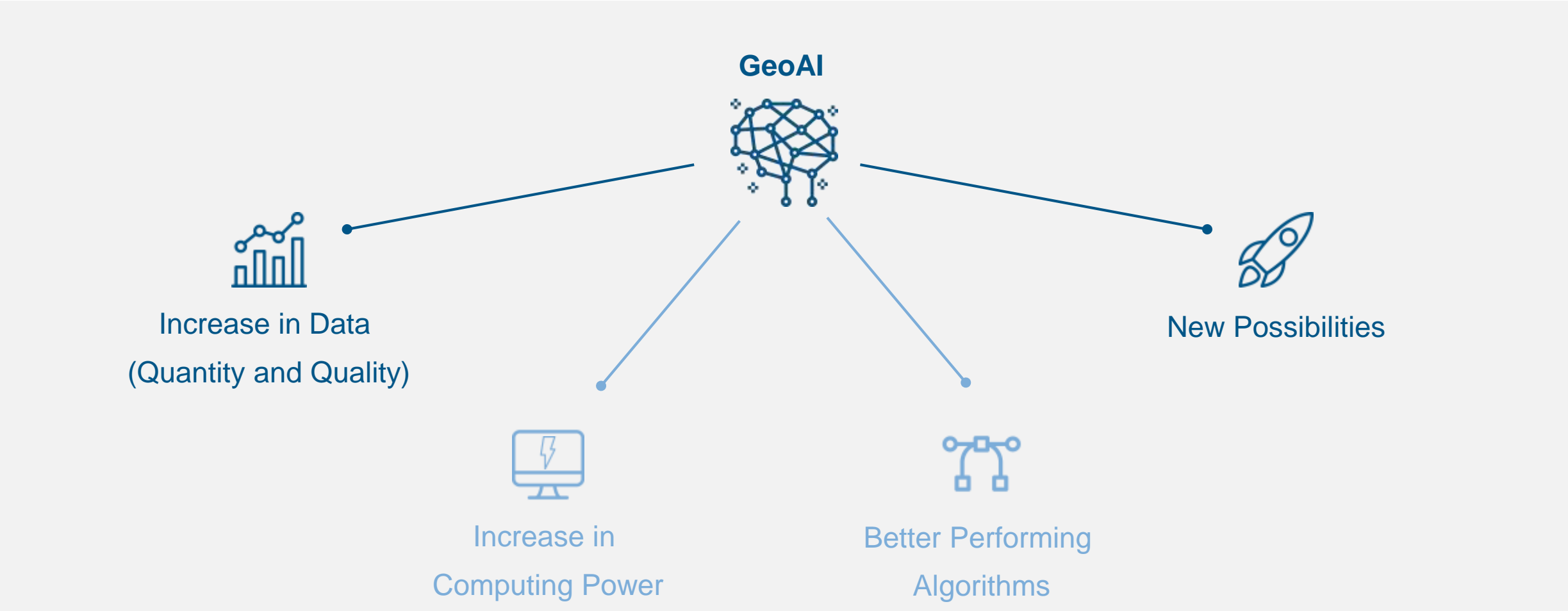
Forecasting

- Prediction of local Events
- Analysis of dynamic Systems

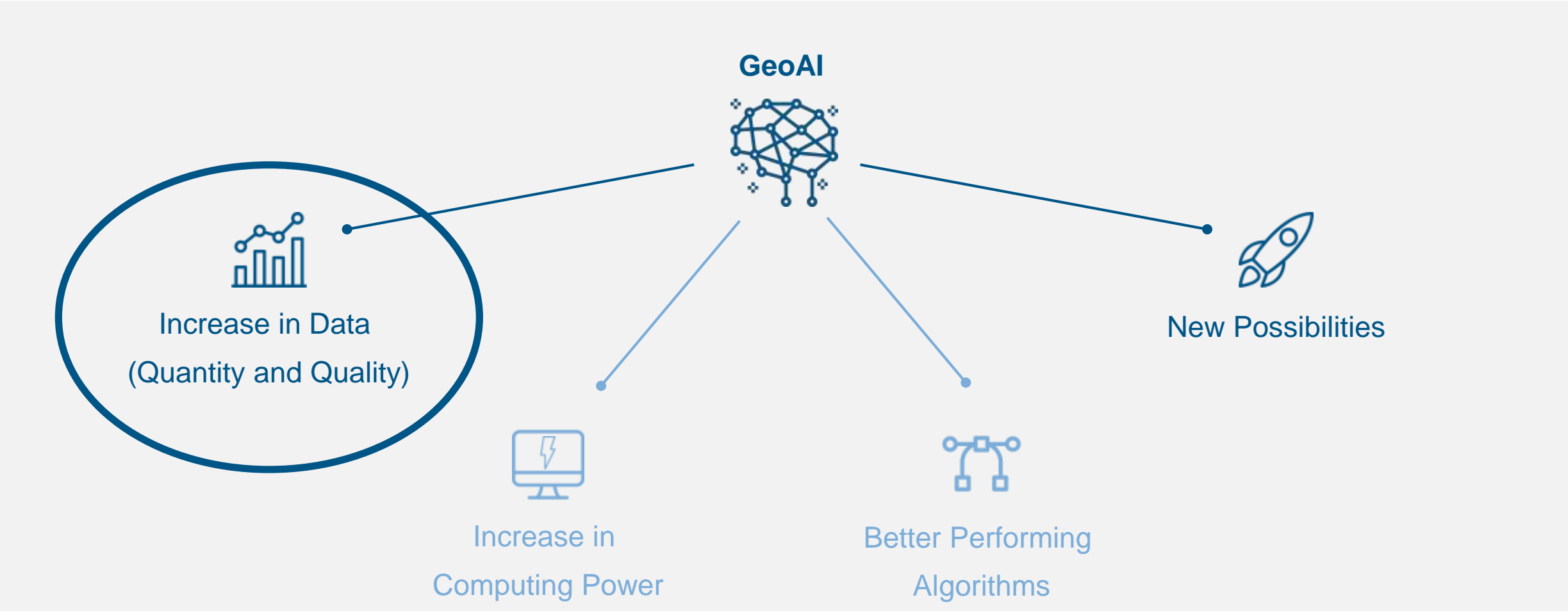
Why AI? Why now?



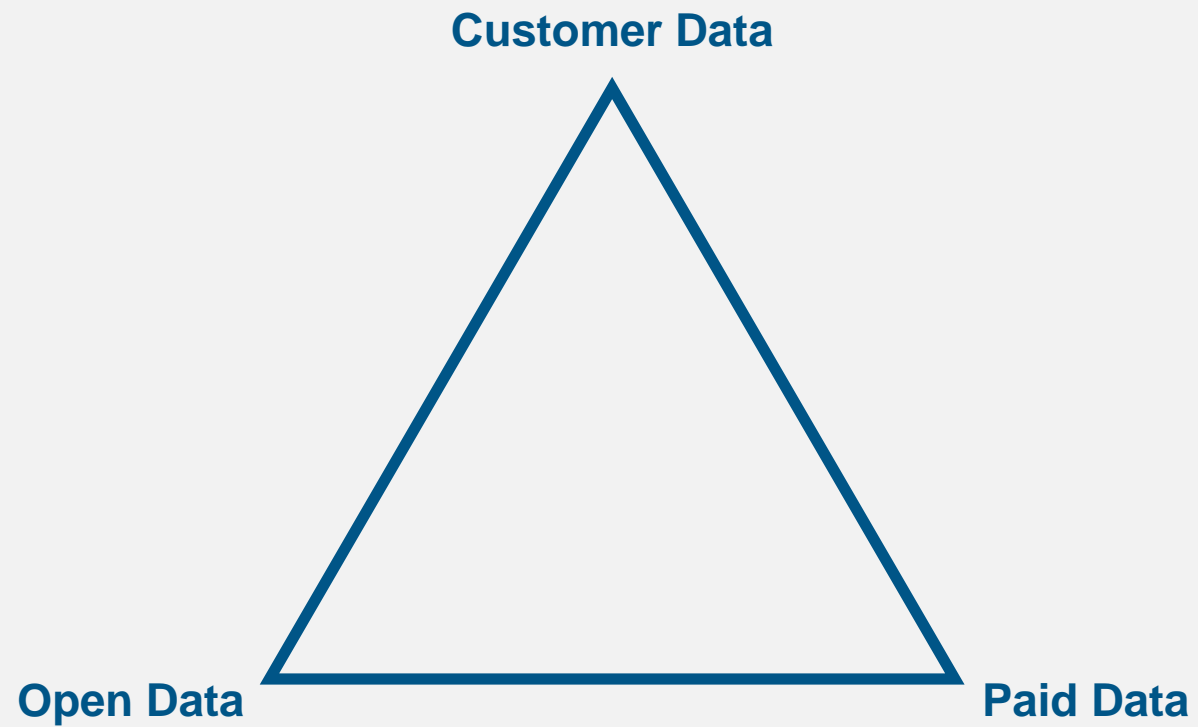
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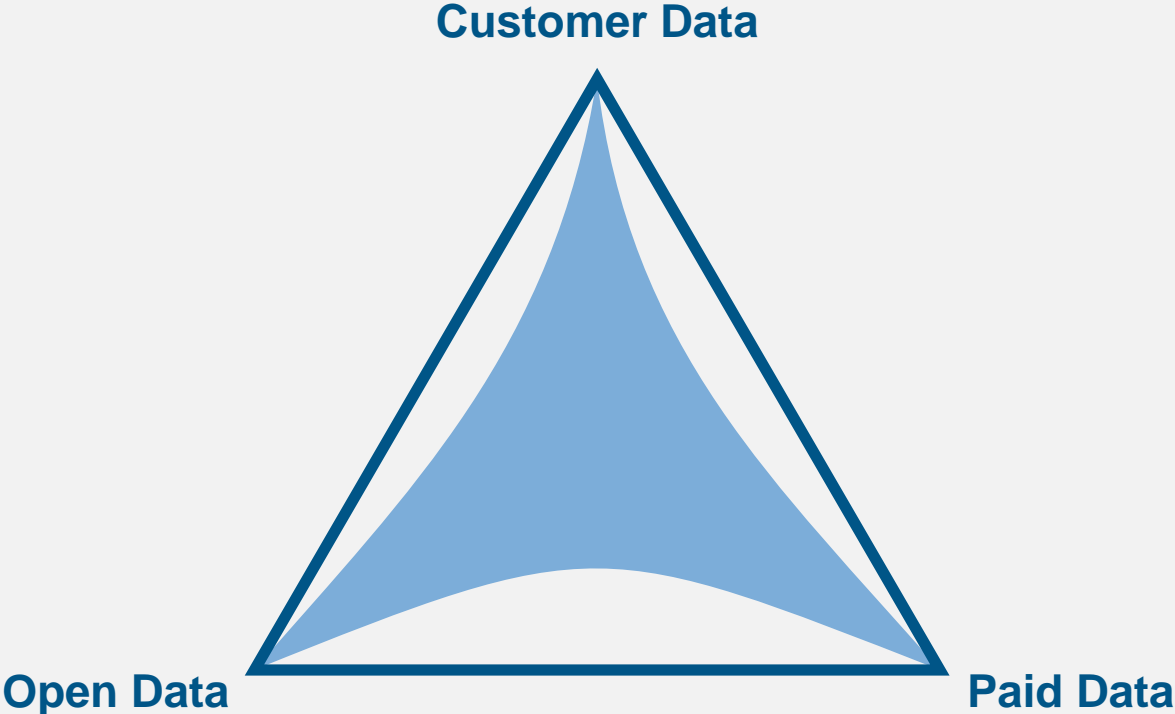
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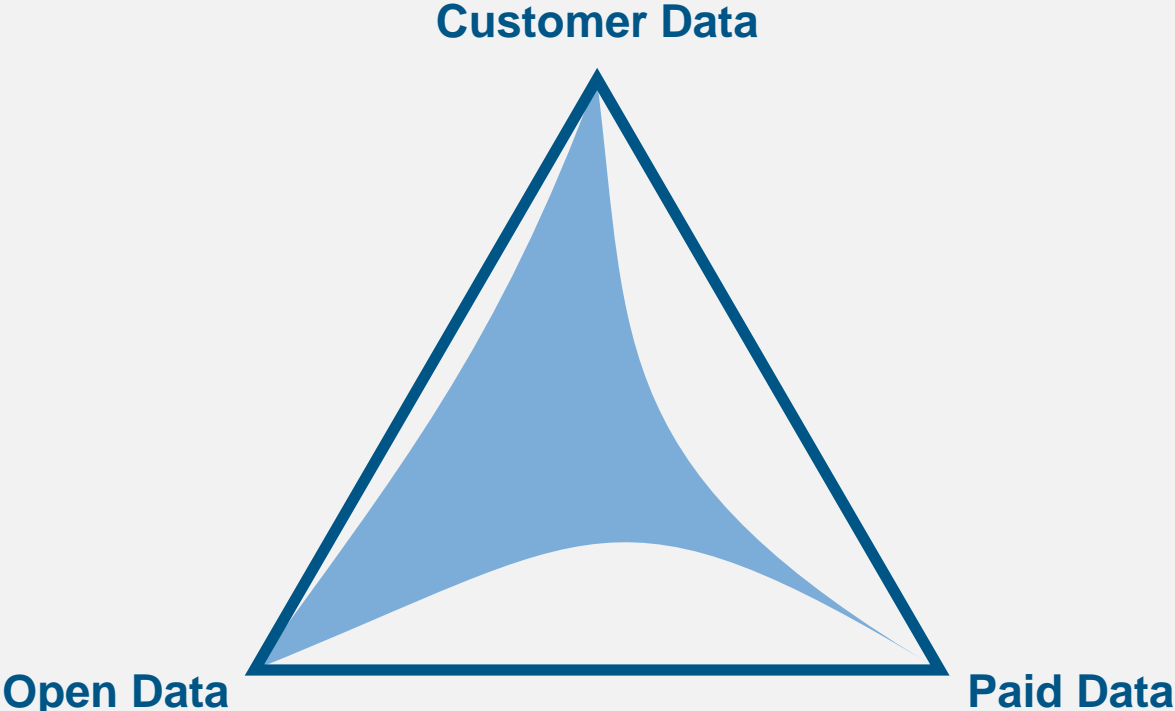
What about Data?



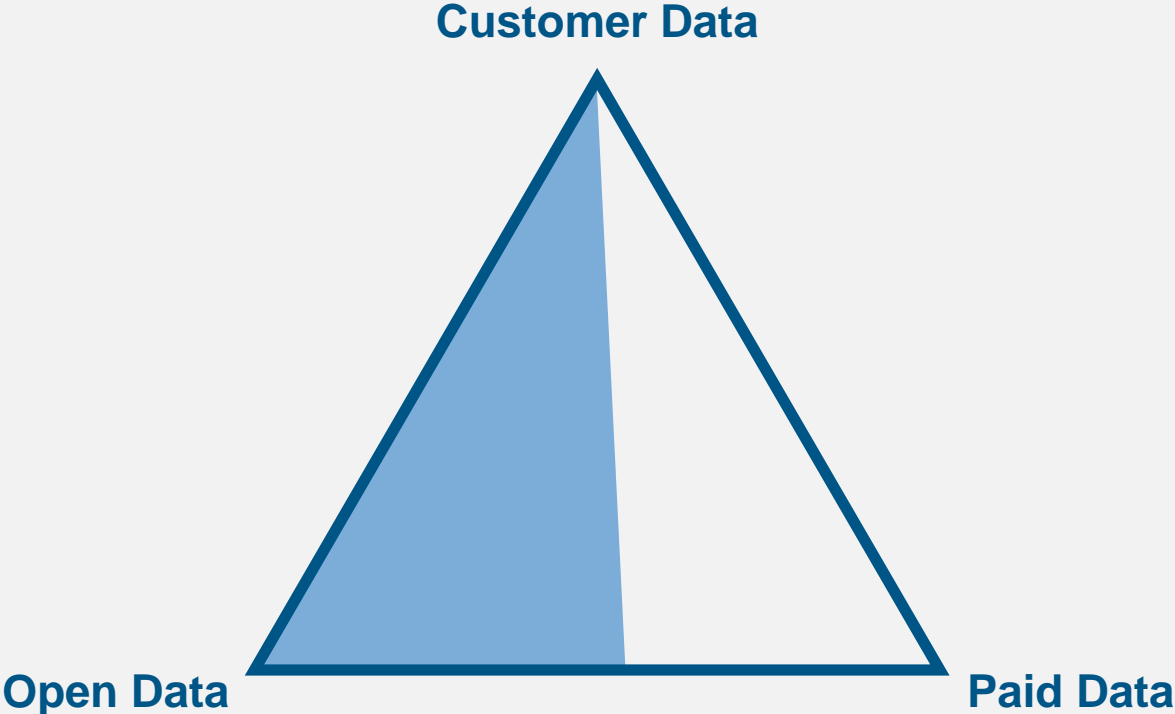
What about Data?



What about Data?



What about Data?



Open Satellite Data

Copernicus Sentinel Data

- Resolution of **10m per Pixel**
 - New Data every **6 days**
 - Accesible for **free**
- **free, up-to-date** and **permanent** solution



Open Satellite Data + GeoAI

Allows us to observe...

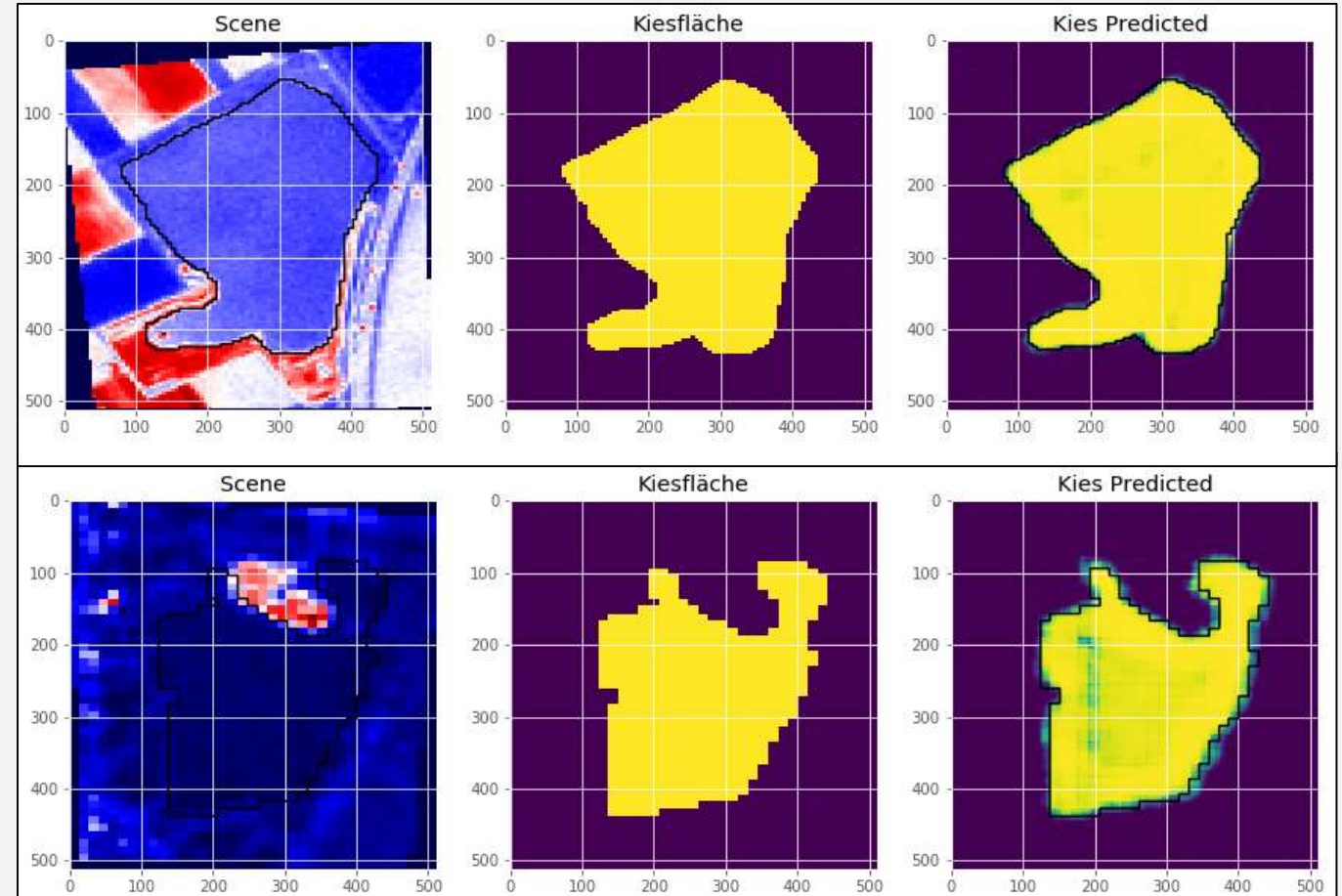
- ...changes in **Forest Areas**



Open Satellite Data + GeoAI

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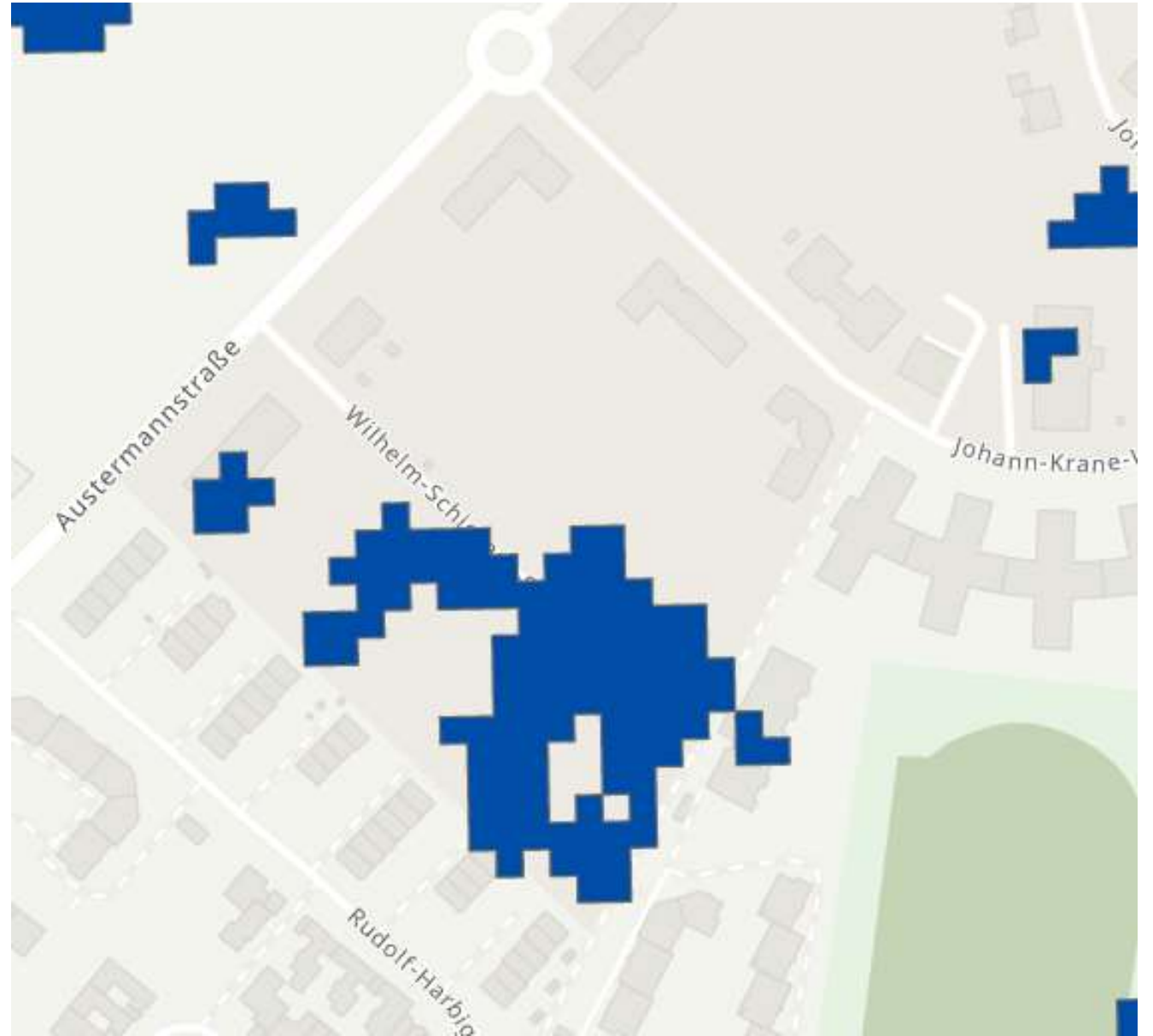
- ...changes in **Forest Areas**
- ...changes in **Extraction Sites**



Open Satellite Data + GeoAI

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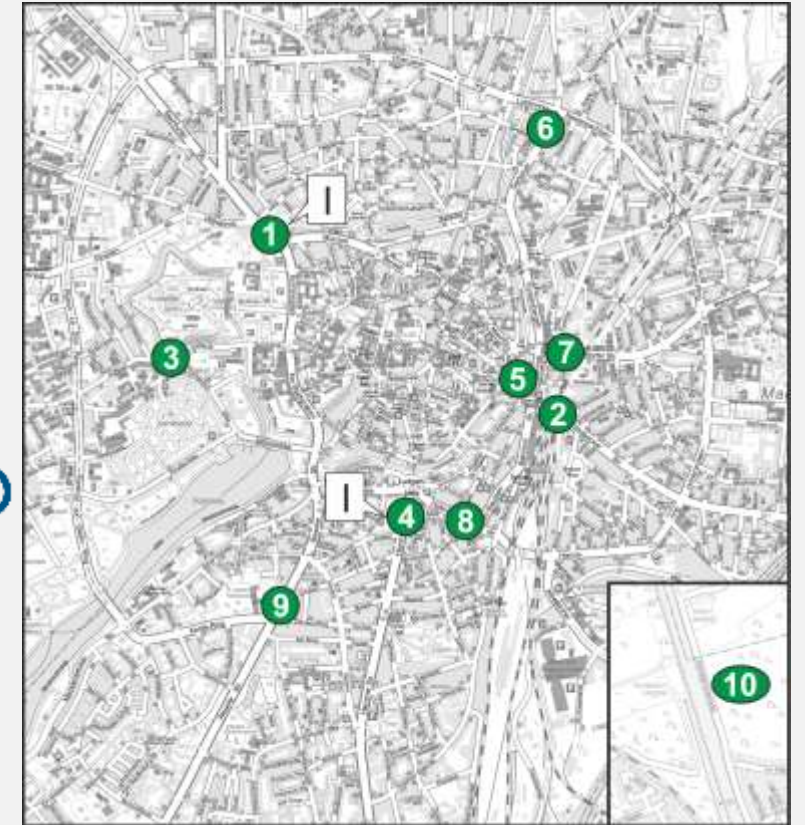
- ...changes in **Forest Areas**
- ...changes in **Extraction Sites**
- ...developments in **Urban Areas**



Governmental and Communal Open Data + GeoAI

Allows us to...

- ...make riding Bikes more comfortable



Governmental and Communal Open Data + GeoAI

Allows us to...

- ...make riding Bikes more comfortable
- ...improve **Detection for Photovoltaics**



Governmental and Communal Open Data + GeoAI

Allows us to...

- ...make riding Bikes more comfortable
- ...improve **Detection for Photovoltaics**
- ...improve **city and communal planning**

open.nrw – interactive noise pollution map



© MULNV

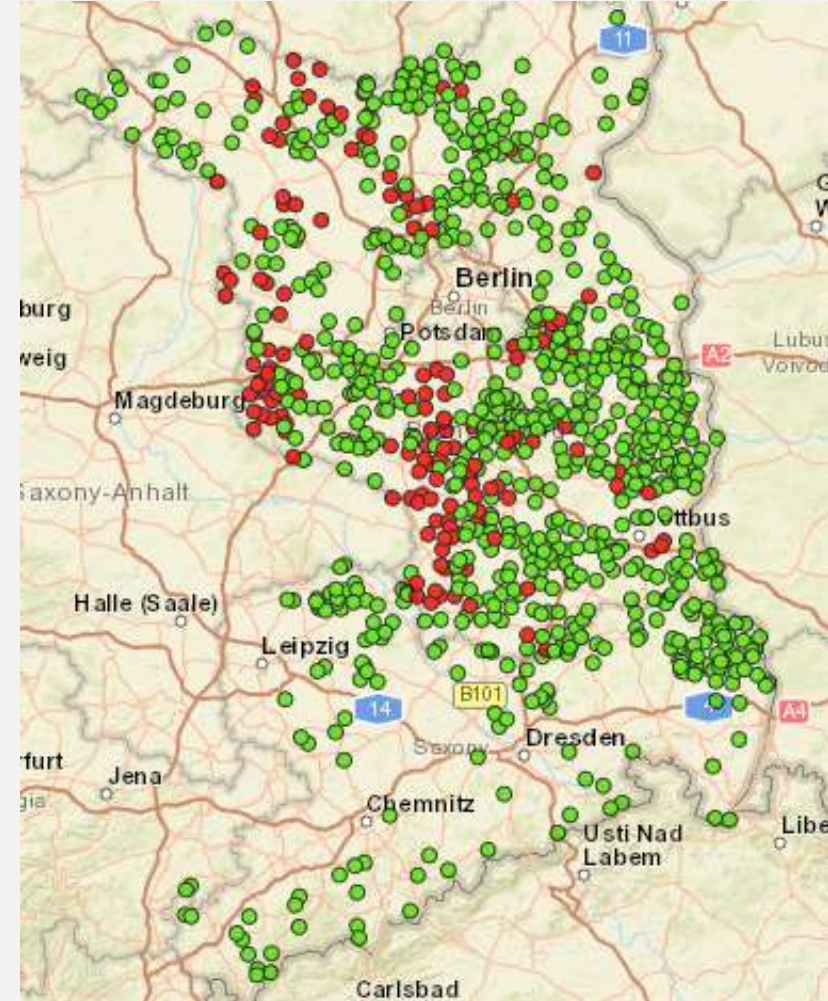
Interaktive Lärmkarte

Im bevölkerungsreichsten Bundesland Deutschlands ist es laut. Wie laut genau und wo die Pegel besonders hoch ausschlagen, verrät eine Umgebungslärmkarte des MULNV.

Open Weather Data + GeoAI

Allows us to predict...

- ...weather impact on forest pests



Open Weather Data + GeoAI

Allows us to predict...

- ...weather impact on forest pests
- ...damages or future risks



What keeps Companies from using GeoAI?

GeoAI Solutions will be...

- ...expensive
- ...invasive/disruptive
- ...non-transparent
- ...taking over jobs

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GeoAI Solutions will be...

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What keeps Companies from using GeoAI?

GeoAI Solutions will be...

- ~~...expensive~~ → light weight and cost-efficient
- ~~...invasive/disruptive~~ → embedded in a functioning infrastructure
- ~~...non-transparent~~ → understandable through XAI
- ~~...taking over jobs~~ → making jobs easier, less repetitive and more interesting

Thank You!

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