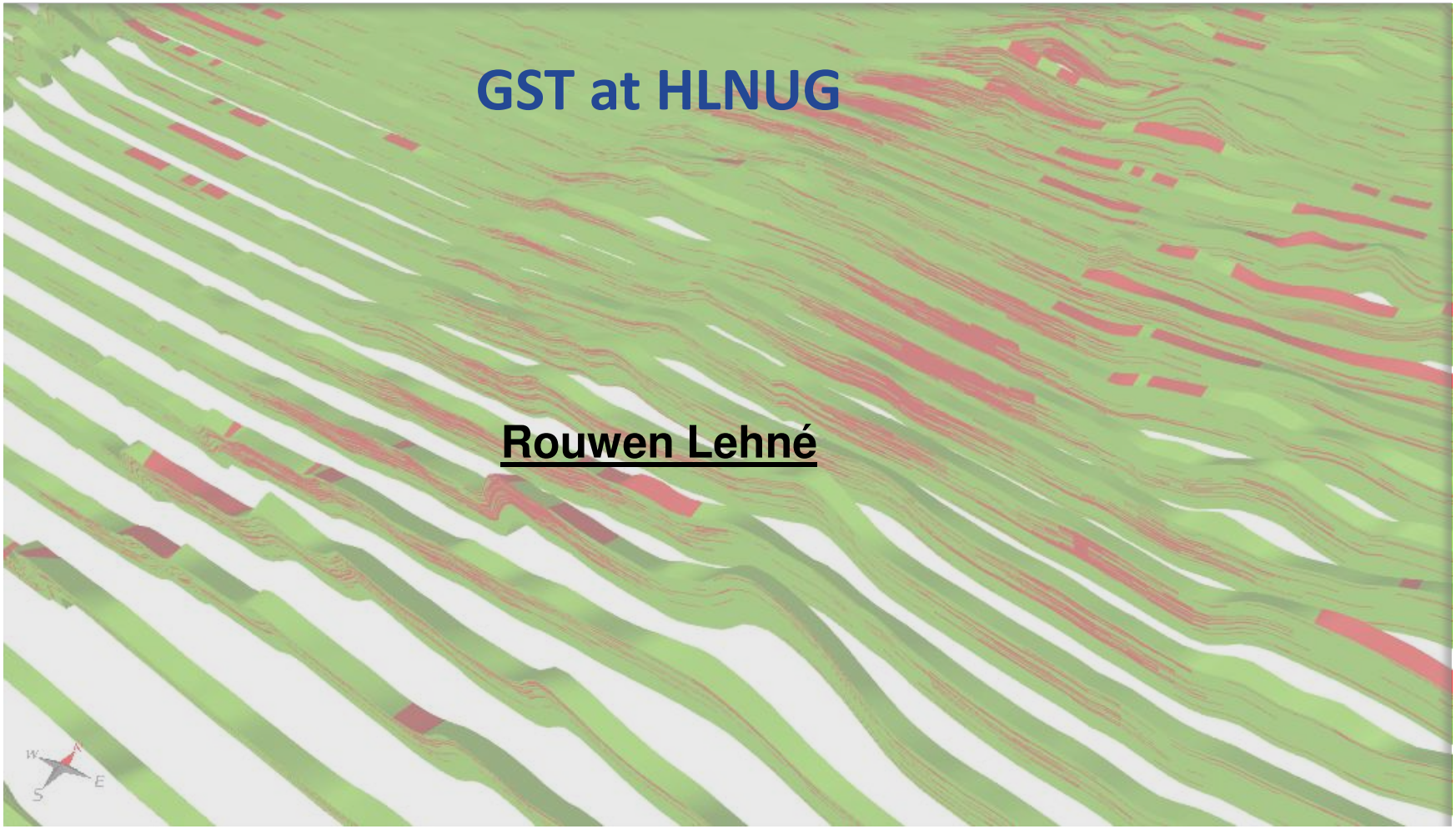
HESSEN



# GST at HLNUG

**Rouwen Lehné**

HESSEN

# Framework

## 2 GST instances

1) In-house since 2017
2) Publicly accessible since 2022
   https://hlnug.giga-infosystems.com/

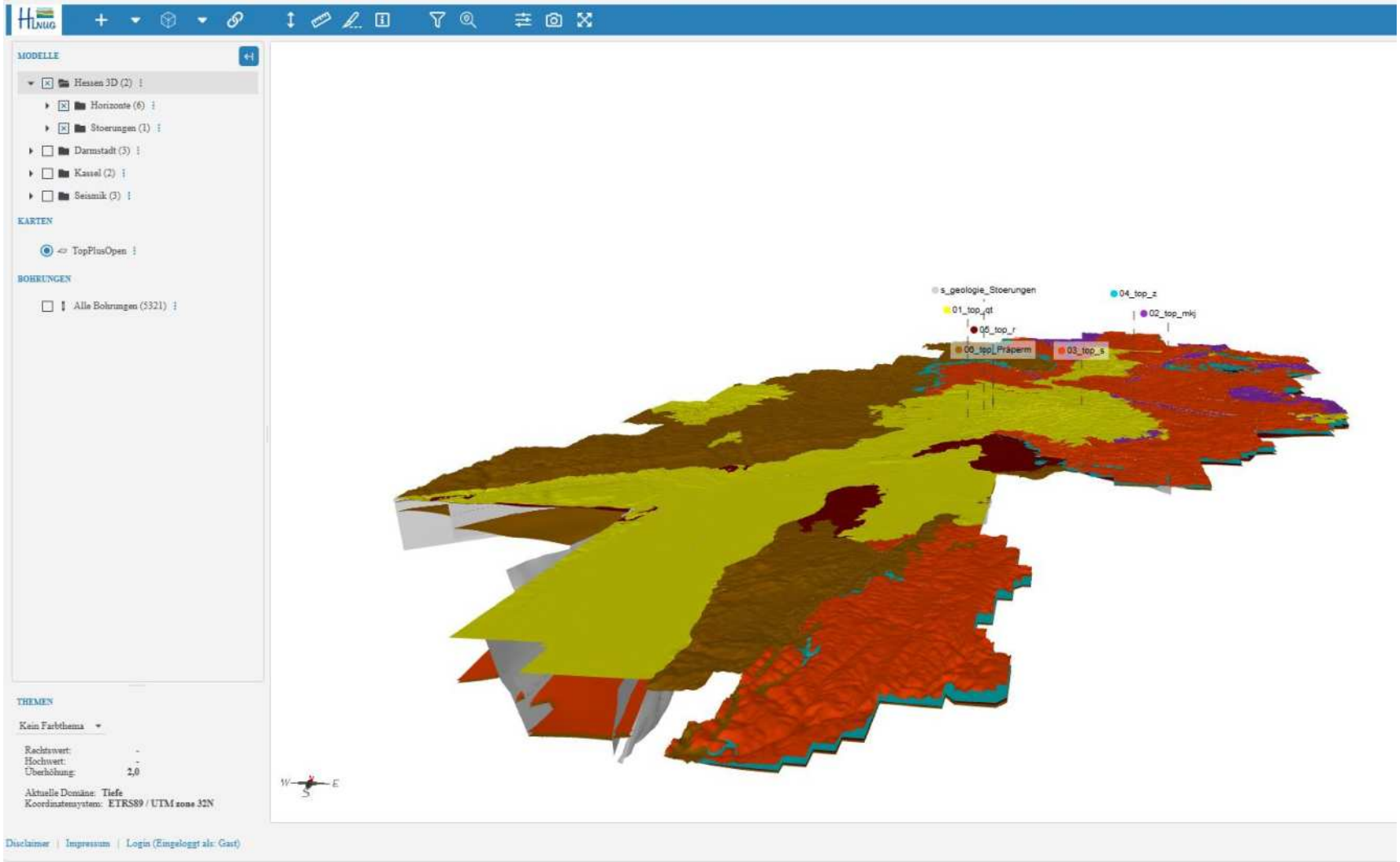
2 = SaaS, based on a efficiency analysis and the requirements for IT-security according to BSI

## IT-Security

For both instances technical safety concepts according to BSI have been elaborated

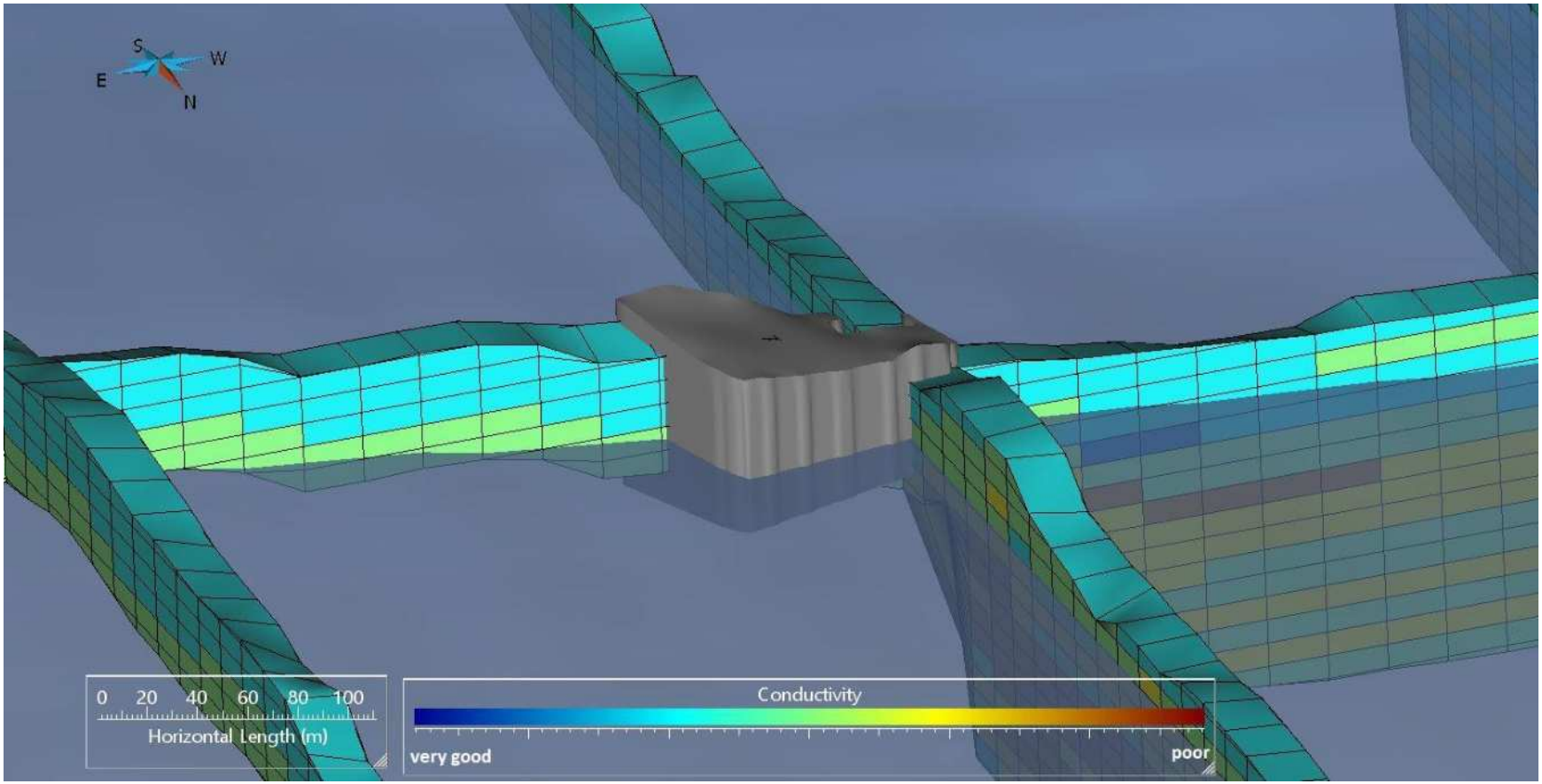
HESSEN

# Use of GST



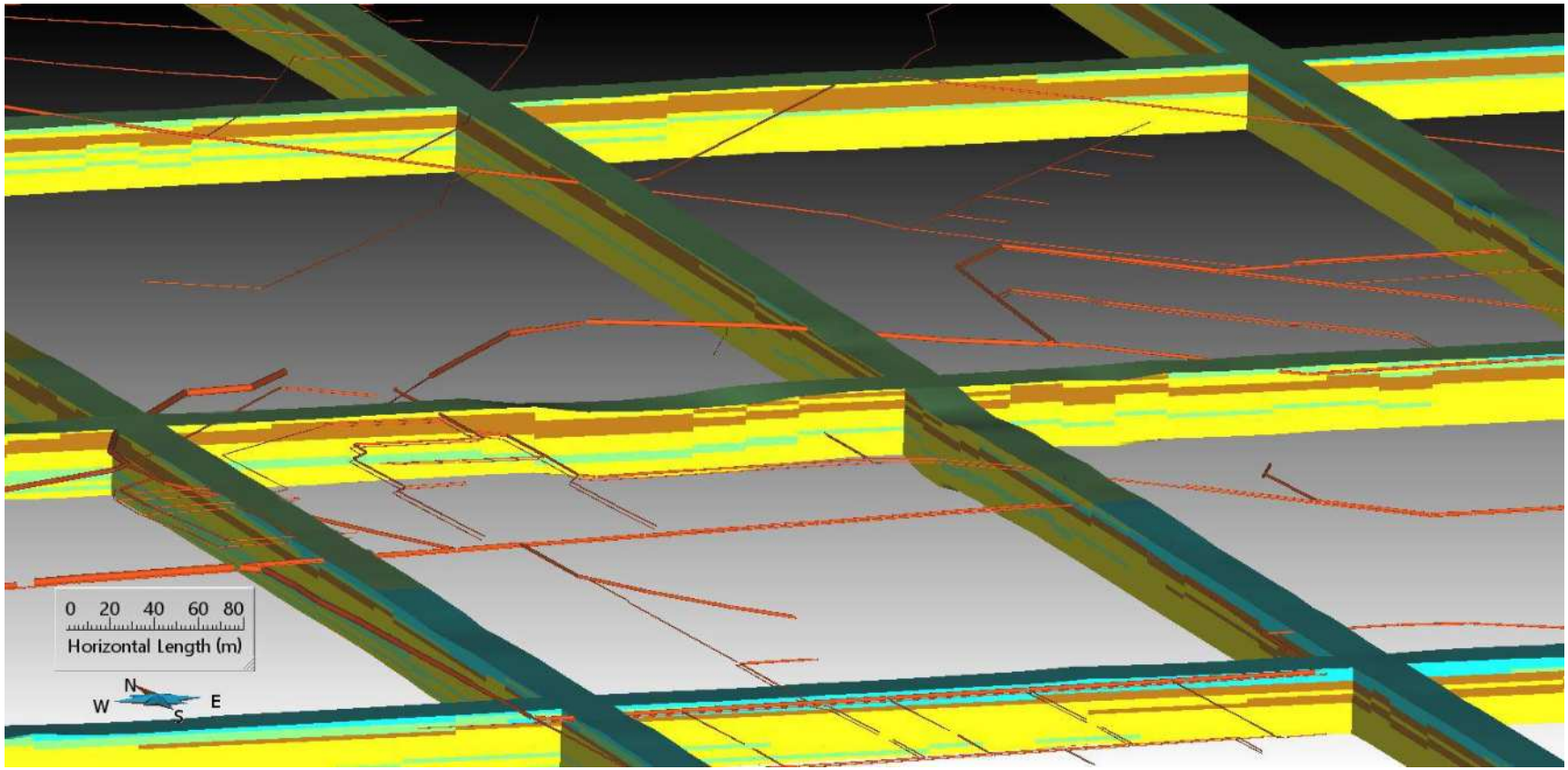
HESSEN

# Integrated modelling in urban areas



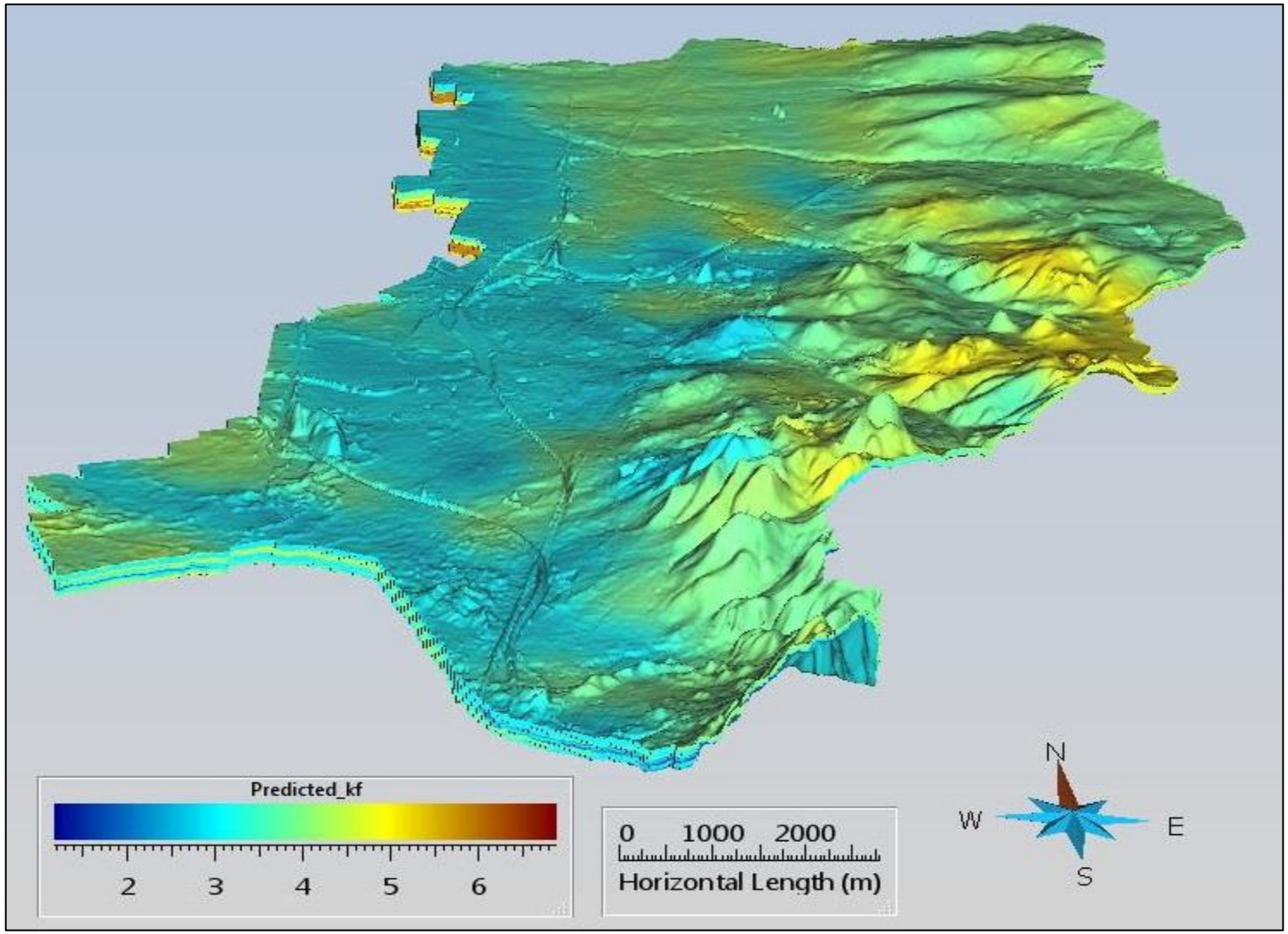
HESSEN

# Integrated modelling in urban areas



HESSEN

# Integrated modelling in urban areas



HESSEN

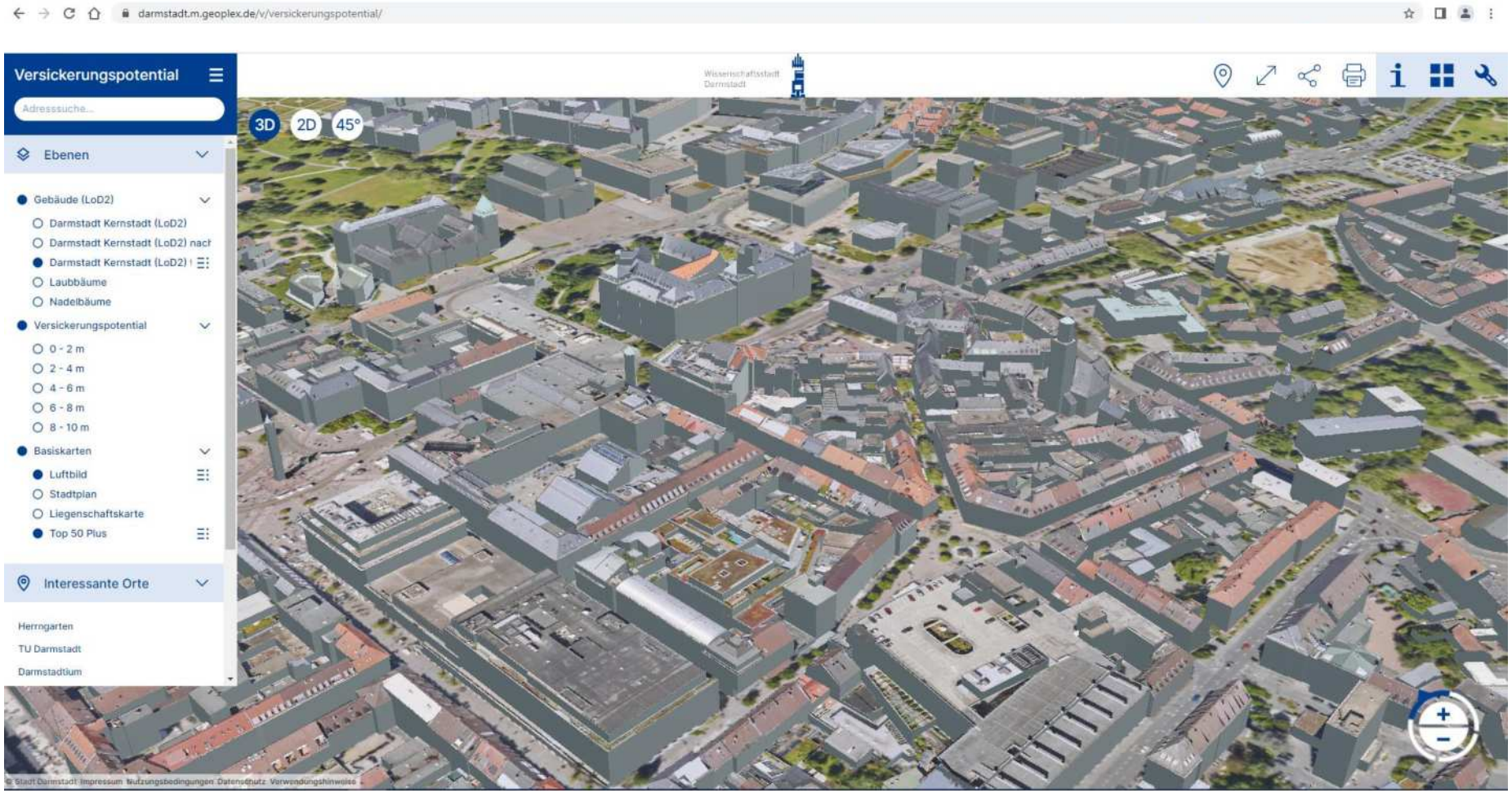
# How can we get connected?




https://kassel.virtualcitymap.de/#/legend

HESSEN

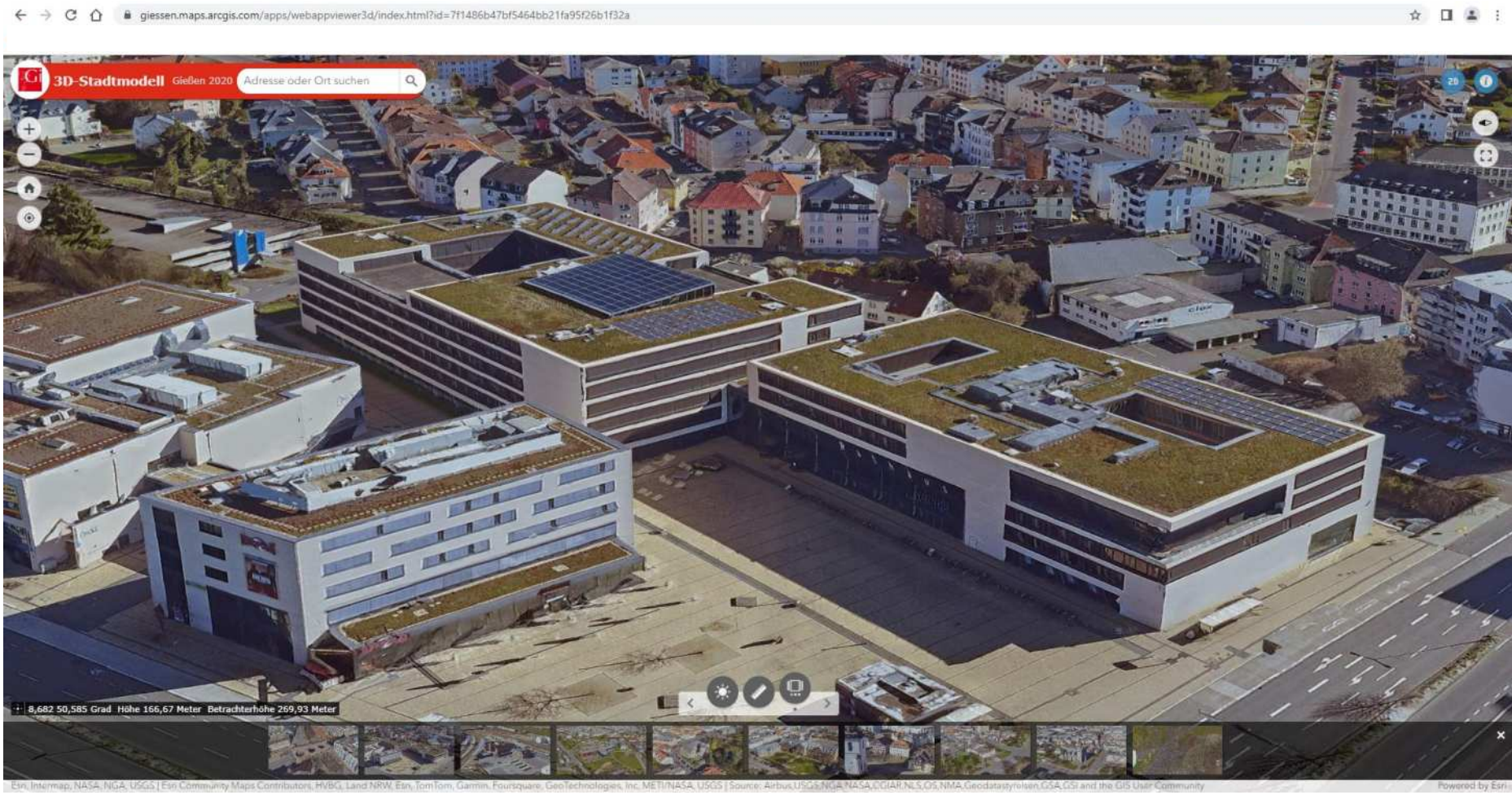
# How can we get connected?




https://darmstadt.m.geoplex.de/v/versickerungspotential/

HESSEN

# How can we get connected?




https://giessen.maps.arcgis.com/apps/webappviewer3d/index.html?id=7f1486b47bf5464bb21fa95f26b1f32a

HESSEN

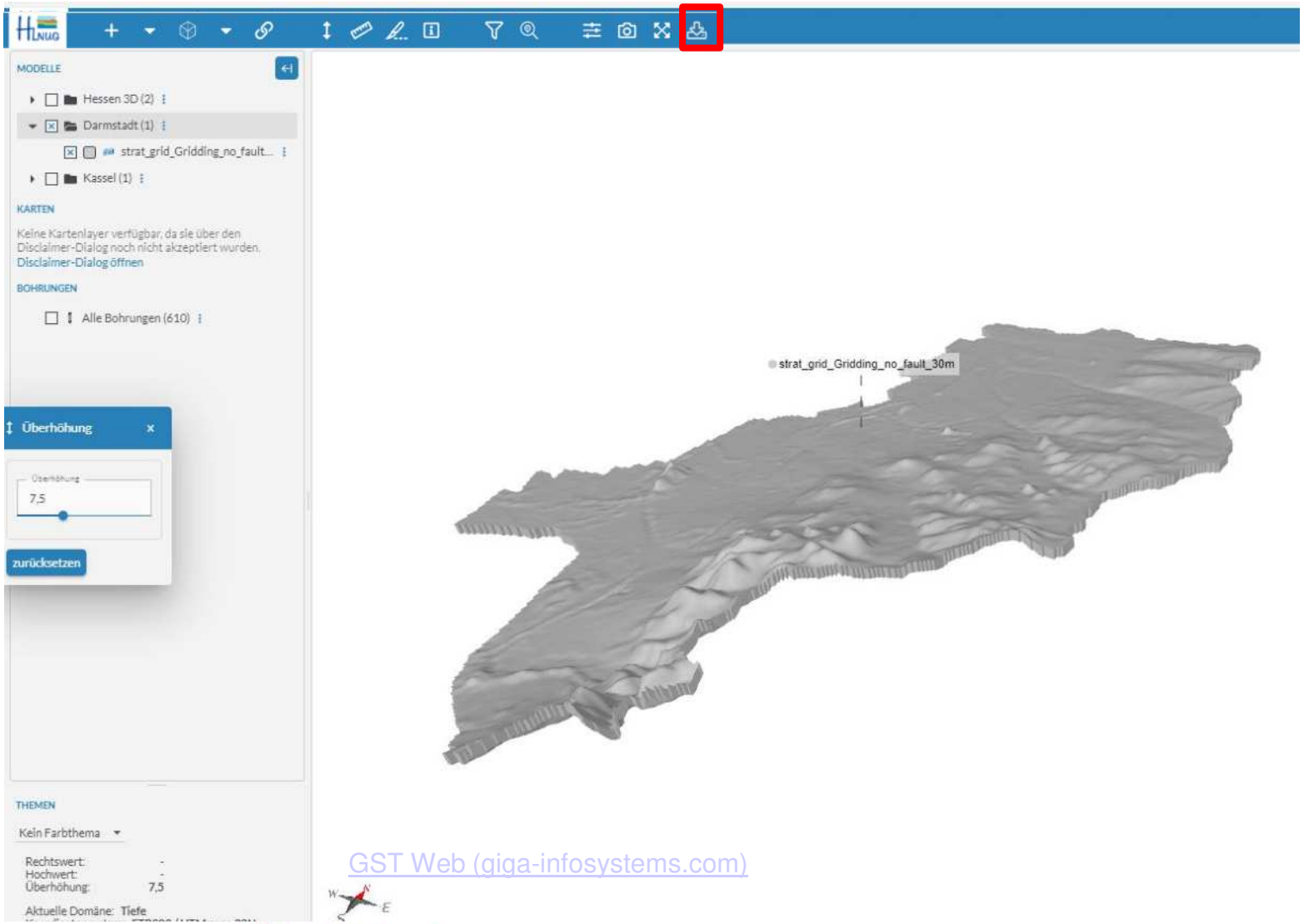
# How can we get connected?




https://giessen.maps.arcgis.com/apps/webappviewer3d/index.html?id=7f1486b47bf5464bb21fa95f26b1f32a

HESSEN

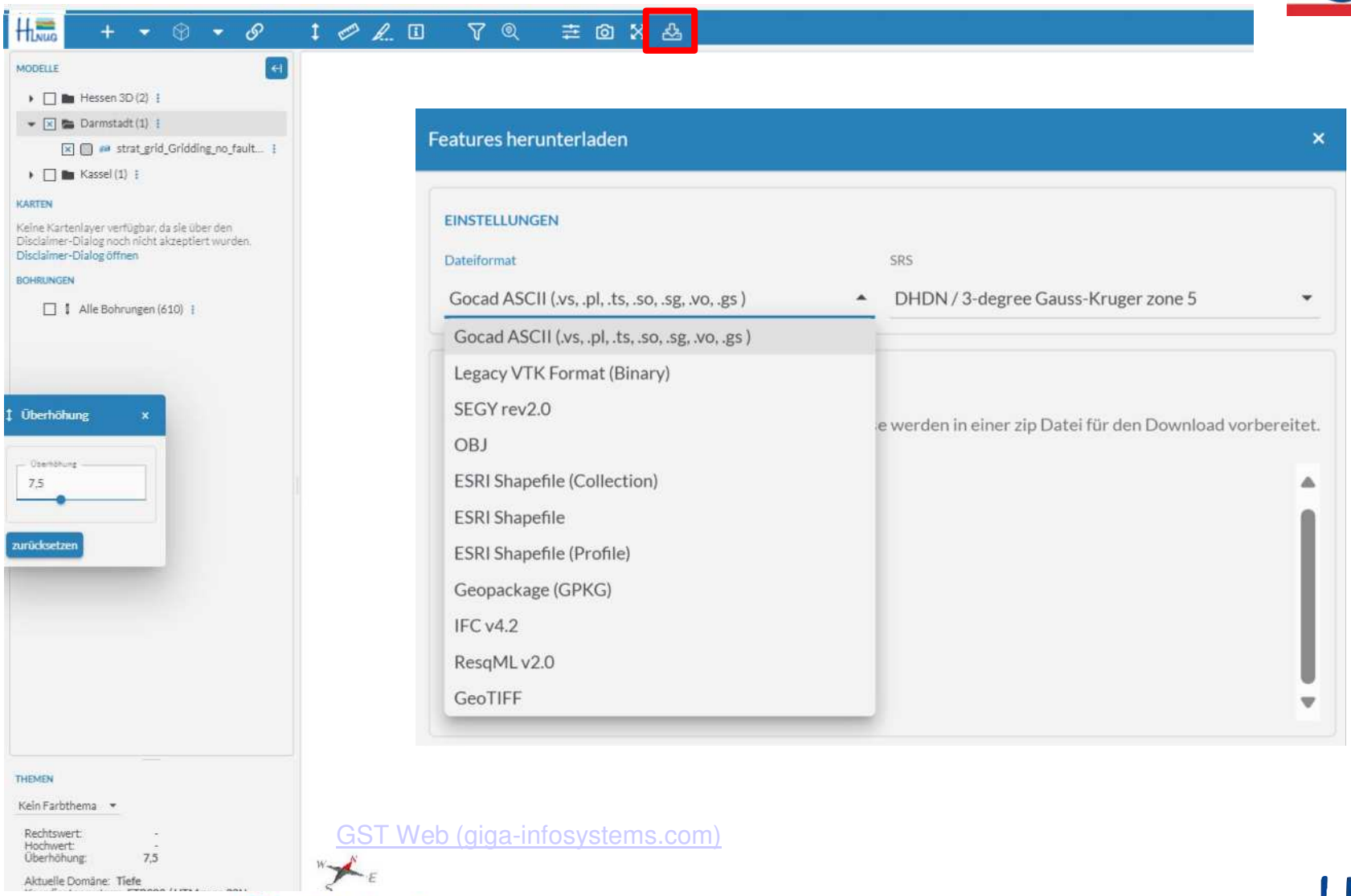
# Use of GST




GST Web (giga-infosystems.com)

HESSEN

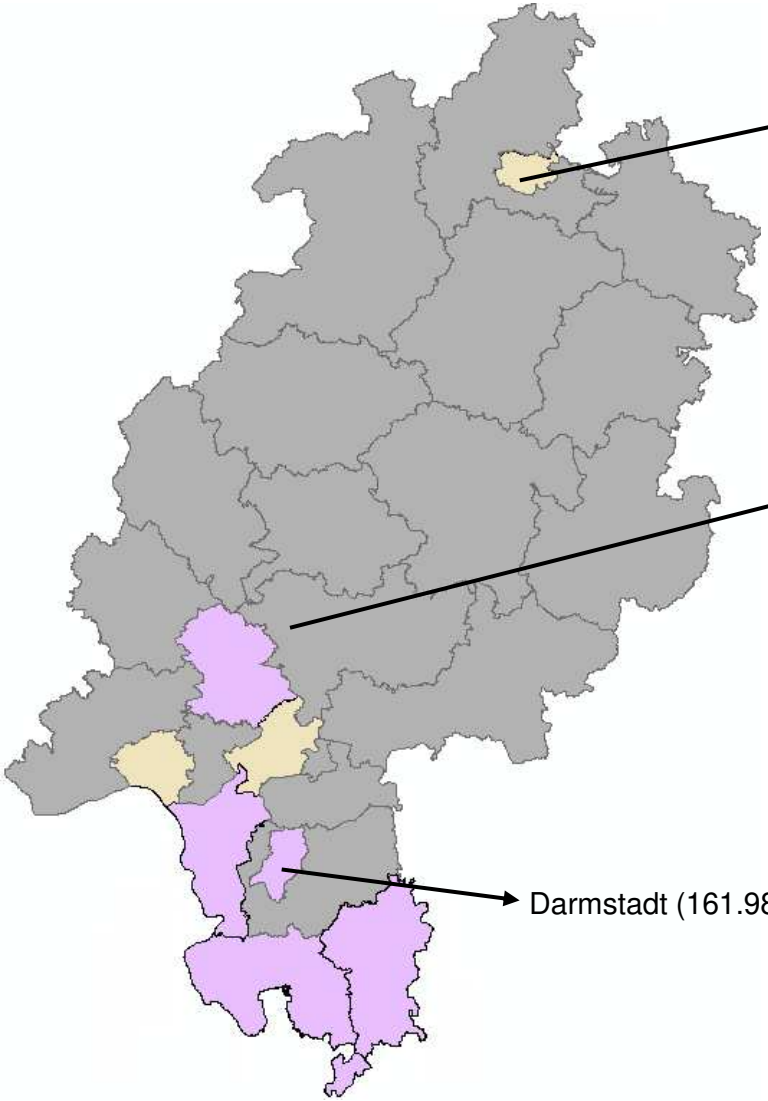
# Use of GST




GST Web (giga-infosystems.com)

HESSEN

# How can we get connected?



Kassel (203.657 inhabitants)[1],VCS)

virtual city systems

Gießen (93.523 inhabitants)[1],ESRI)

esri Deutschland

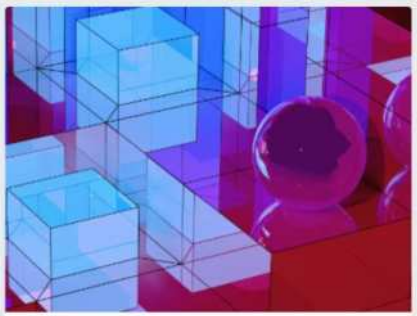
Darmstadt (161.982 inhabitants)[1], Geoplex)

GEOPLEX

HESSEN

# Interoperable deployment through GST

## OGC-APIs




| API | Point | Line | Polygon | Voxet | 2D-Grid | Sgrid | Solid | Attribute | Symbology |
|---|---|---|---|---|---|---|---|---|---|
| 3D GeoV | X | X | X | X | X | X | X | - | - |

HESSEN

# Interoperable deployment through GST

## OGC-APIs







| API | Point | Line | Triangle | Voxet | 2D-Grid | Sgrid | Solid | Attribute | Symbology |
|---|---|---|---|---|---|---|---|---|---|
| 3D GeoV | X | X | X | X | X | X | X | - | - |
| Styles | - | - | - | - | - | - | - | - | X |

HESSEN

# Interoperable deployment through GST

## OGC-Schnittstellen > 3D-Stadtmodelle







Exchange format
3D-Tiles

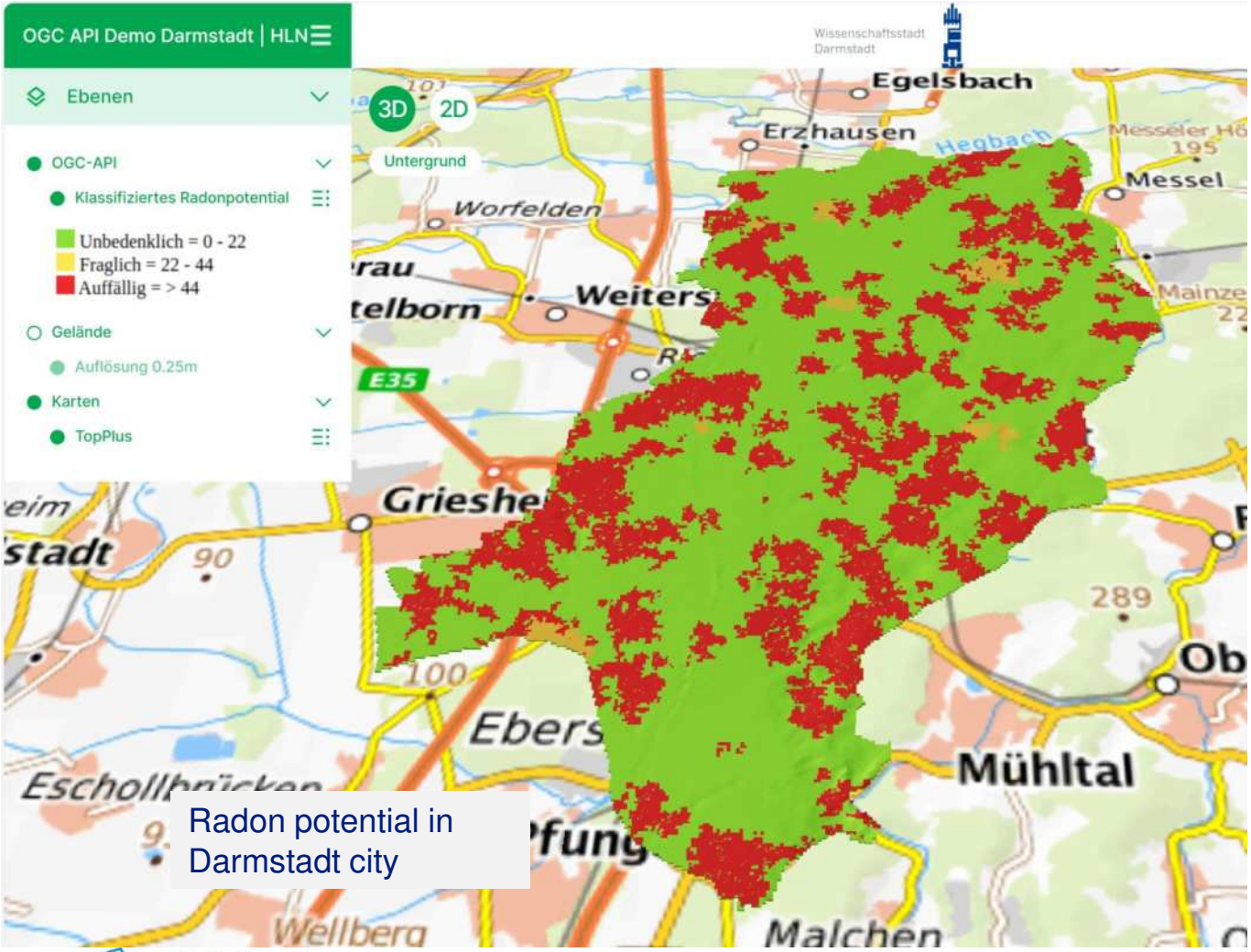
| API | Point | Line | Triangle | Voxet | 2D-Grid | Sgrid | Solid | Attribute | Symbology |
|---|---|---|---|---|---|---|---|---|---|
| 3D GeoV | x | x | x | x | x | x | x | - | - |
| Styles | - | - | - | - | - | - | - | - | x |
| 3D-Tiles | x | x | x | x | x | x | x | - | x |

Supported by Geoplex and VCS, but not by ESRI and QGIS

HESSEN

# Interoperable deployment through GST

## OGC-APIs

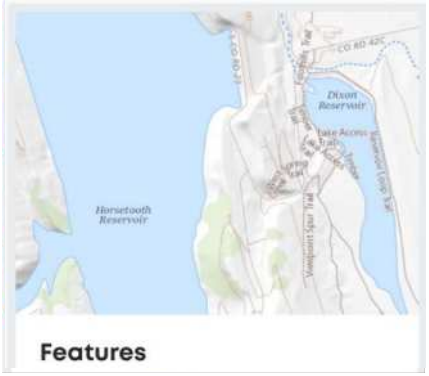



Radon potential in Darmstadt city

HESSEN

# Interoperable deployment through GST

## OGC-APIs > GIS work environment







Exchange format
I3S

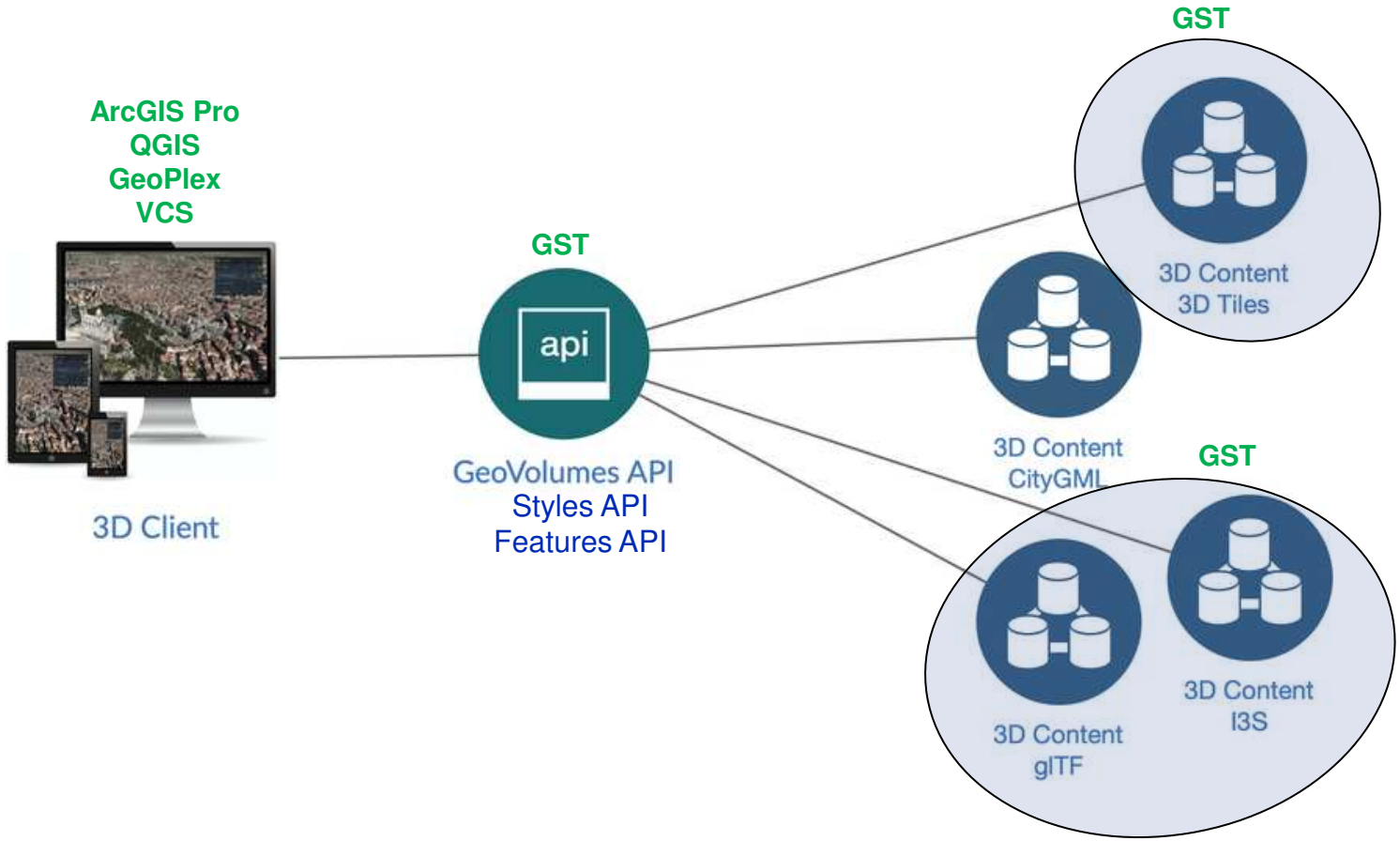
| Schnitt-stelle | Punkt | Linie | Dreieck | Voxet | 2D-Grid | Sgrid | Solid | Attribute | Symbologie |
|---|---|---|---|---|---|---|---|---|---|
| 3D GeoV | X | X | X | X | X | X | X | - | - |
| Styles | - | - | - | - | - | - | - | - | X |
| I3S | X | X | X | X | X | X | X | - | X |

Supported by ESRI and QGIS (in realization)

Other formats?? (GOCAD ASCII, GeoH5, RescueML, IFC, GITF)

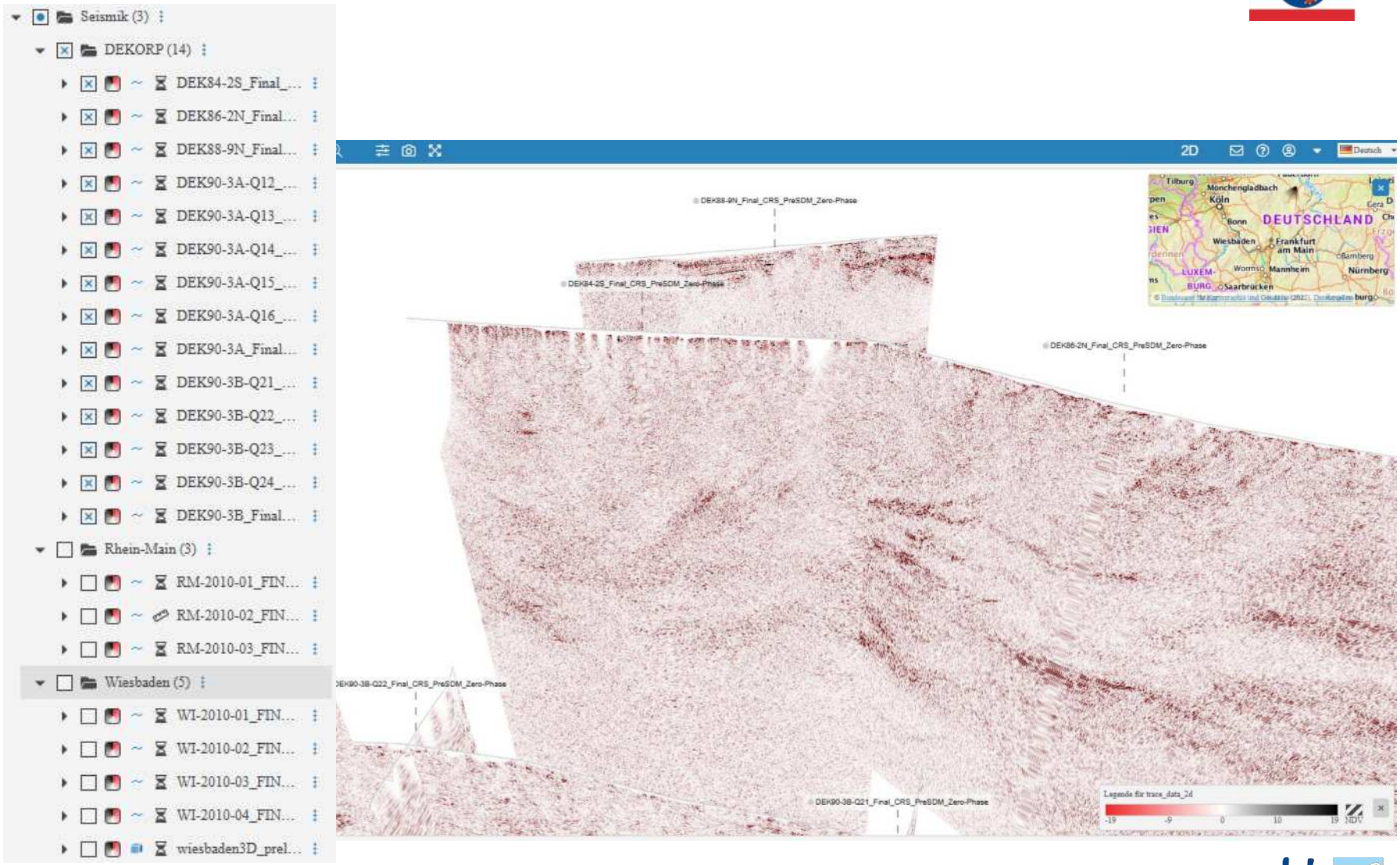
HESSEN

# Summary



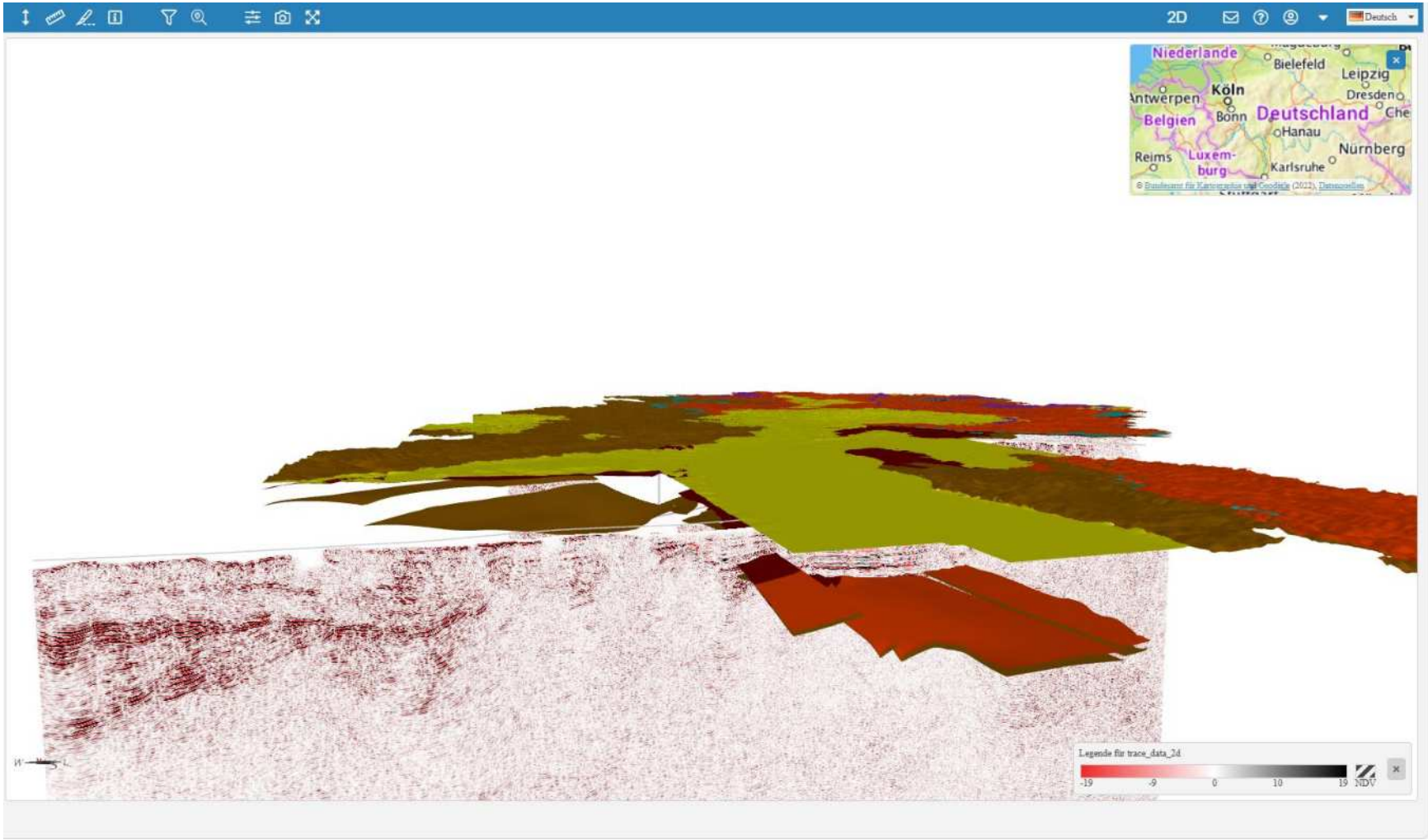
HESSEN

# GST as a data hub?! Desirable?



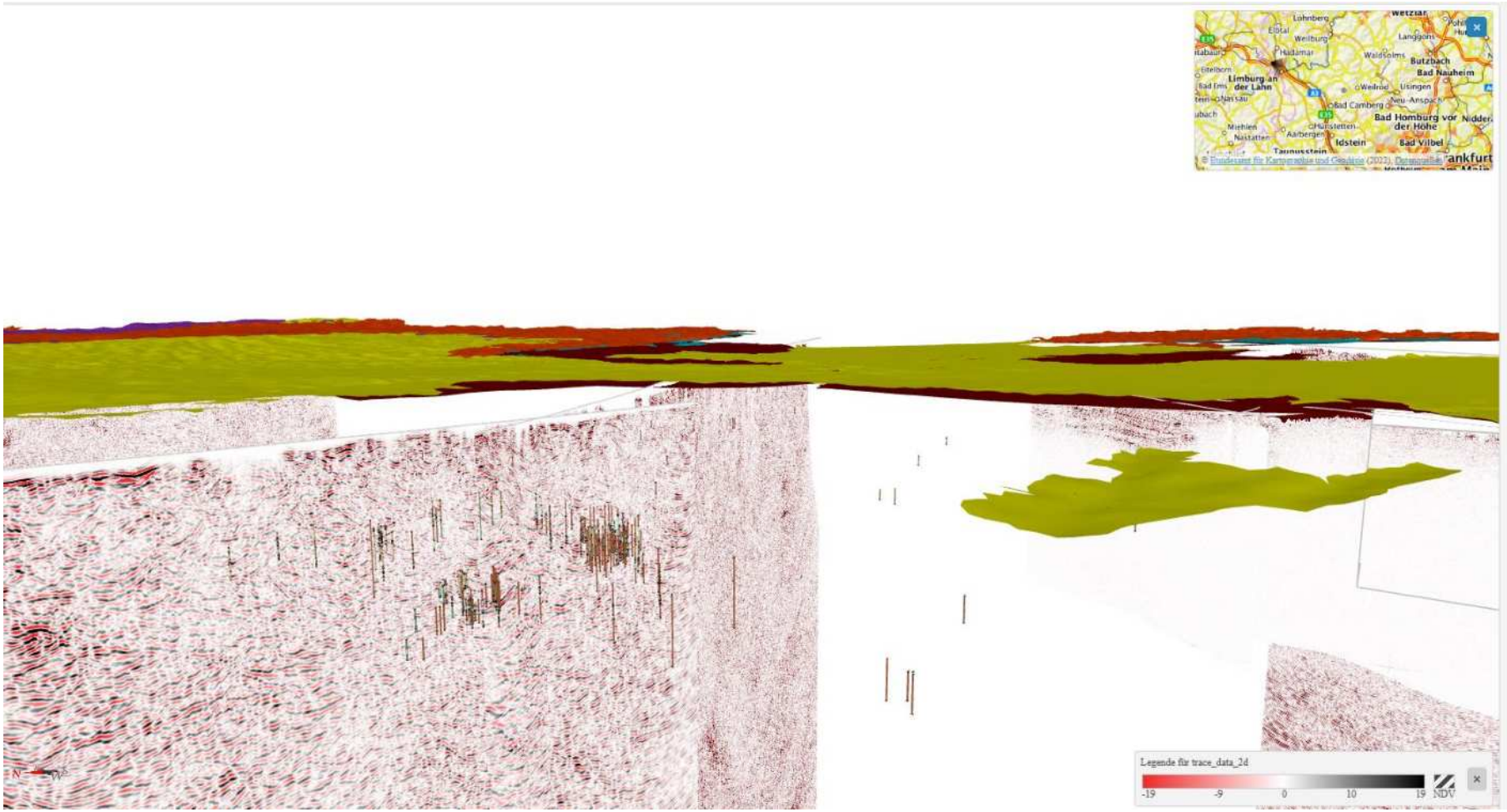
HESSEN

# GST as a data hub?! Desirable?



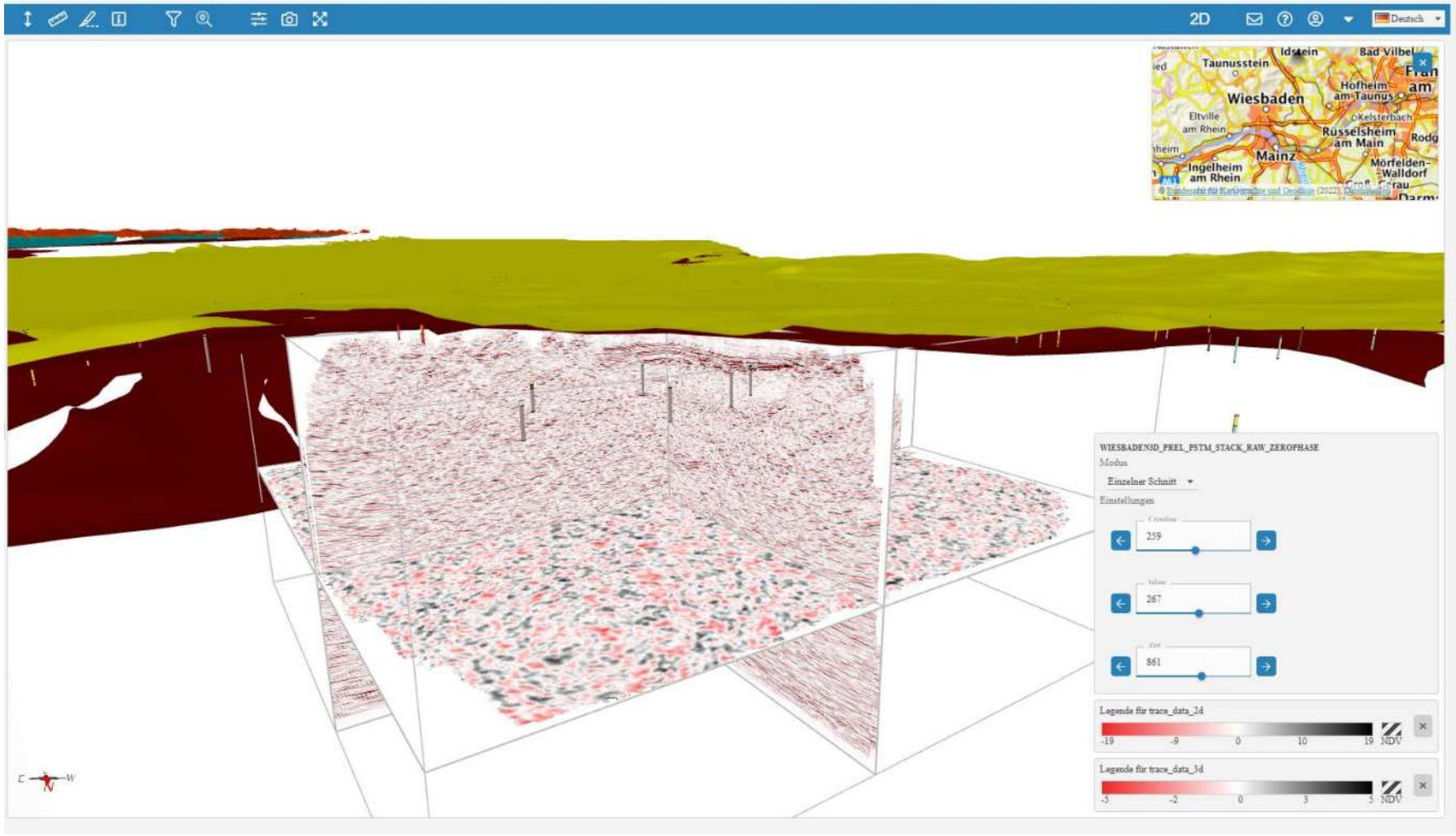
HESSEN

# GST as a data hub?! Desirable?



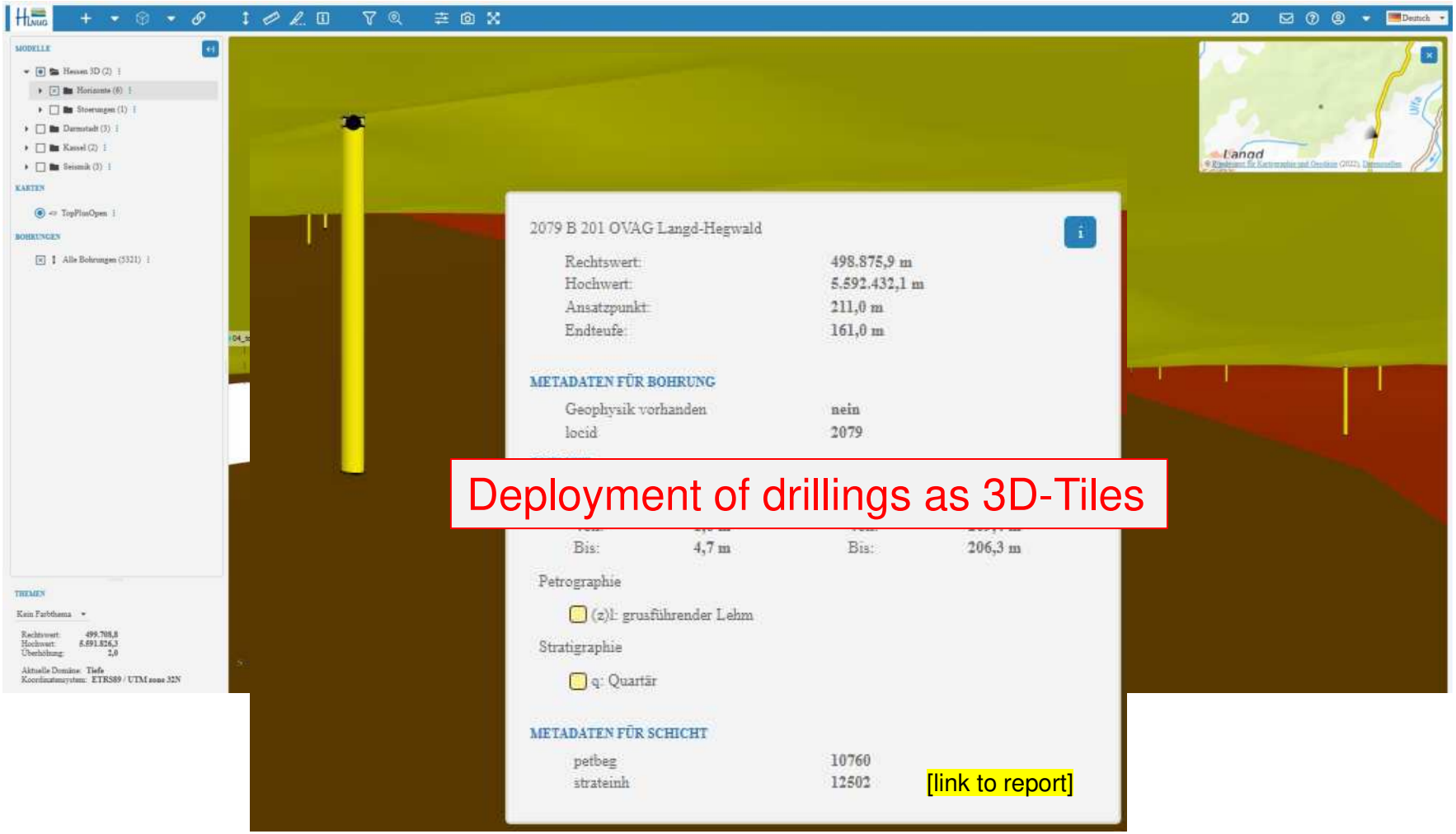
HESSEN

# GST as a data hub?! Desirable?



HESSEN

# GST as a service driven data hub?! Desirable?



HESSEN

# GST as a consumer of OGC feature layers (GIS)?

1 question

Wouldn´t it be a great added value, GIS content could be integrated as services in GST?

2 theses

1) Such a possible combination of 2D and 3D information could significantly increase the internal reach of GST in particular.

2) It could also counteract the current developments around license costs for ESRI products, for example.

# Thank you

rouwen.lehne@hlnug.hessen.de

