



InSAR-Deformation-Monitoring- Services for the energy sector and administrations

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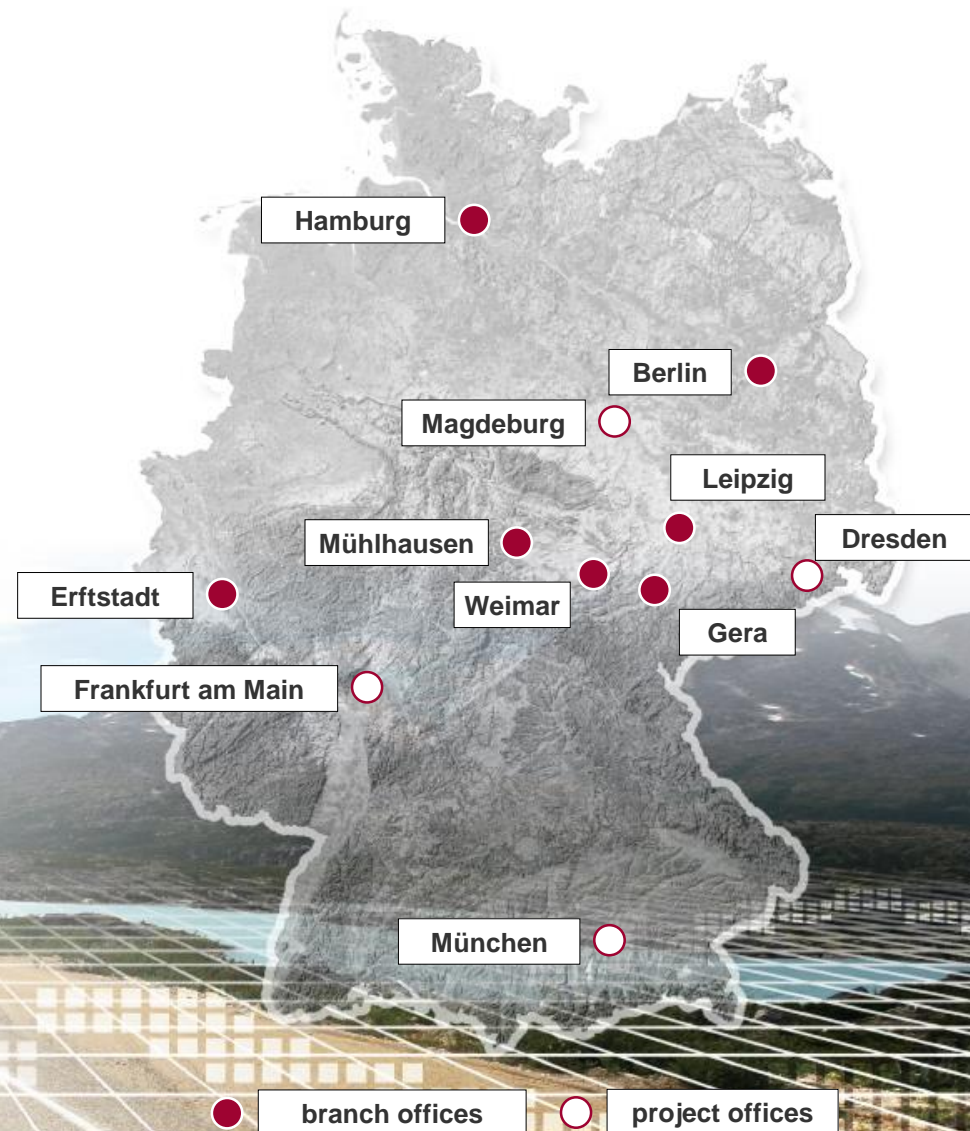
About TRIGIS



- Founded in: 1990
- Headcount: > 150
- Business areas:
 - Engineering surveying
 - 3D-Laserscanning / spherical images
 - Photogrammetry & remote sensing
 - UAV
 - Geoinformation
 - Mobile mapping

■ Head office: Korbußen / Gera

■ Certification (TÜV):
DIN ISO 9001:2008 since 1999



From measuring point to surface



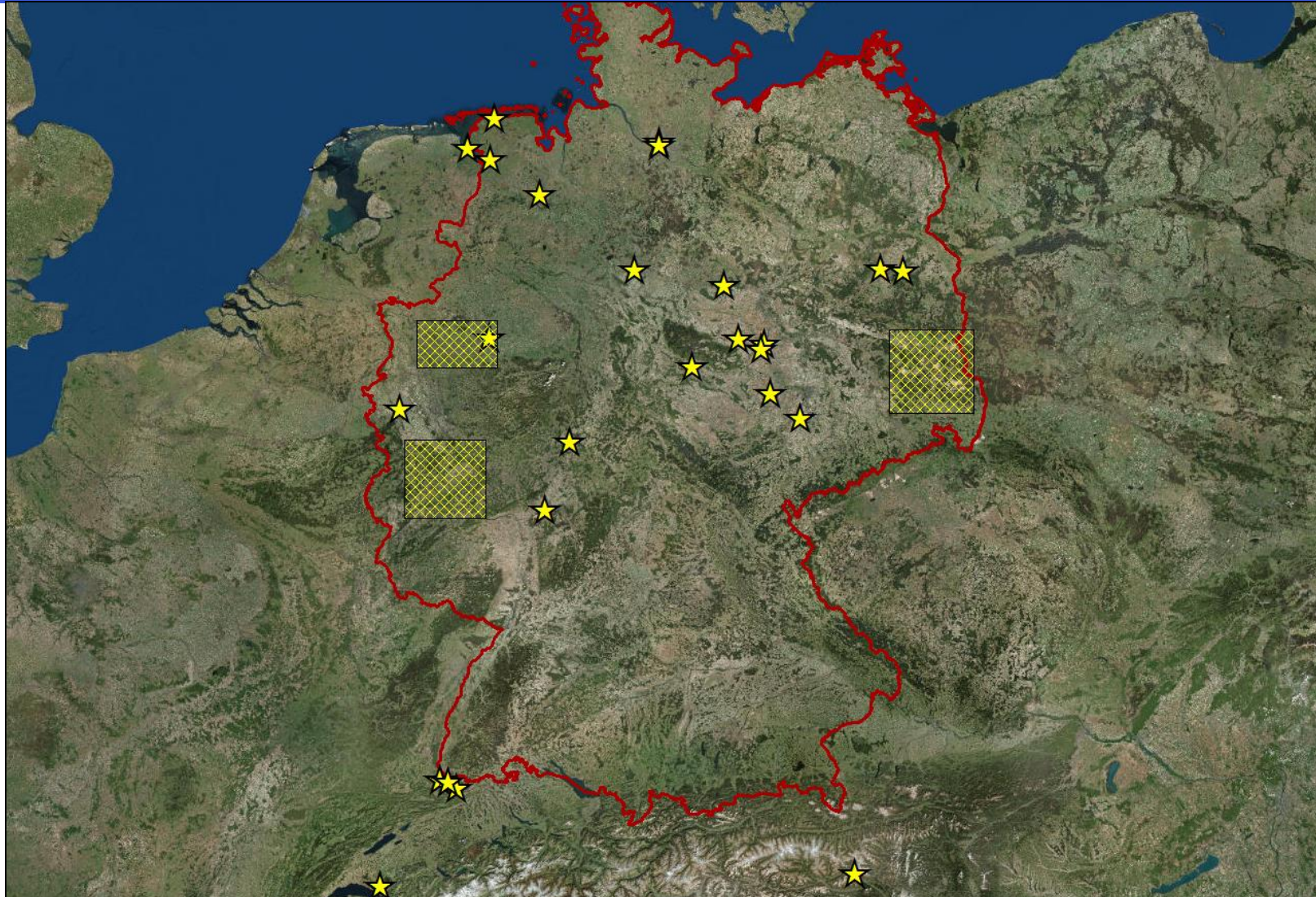
Gap closure

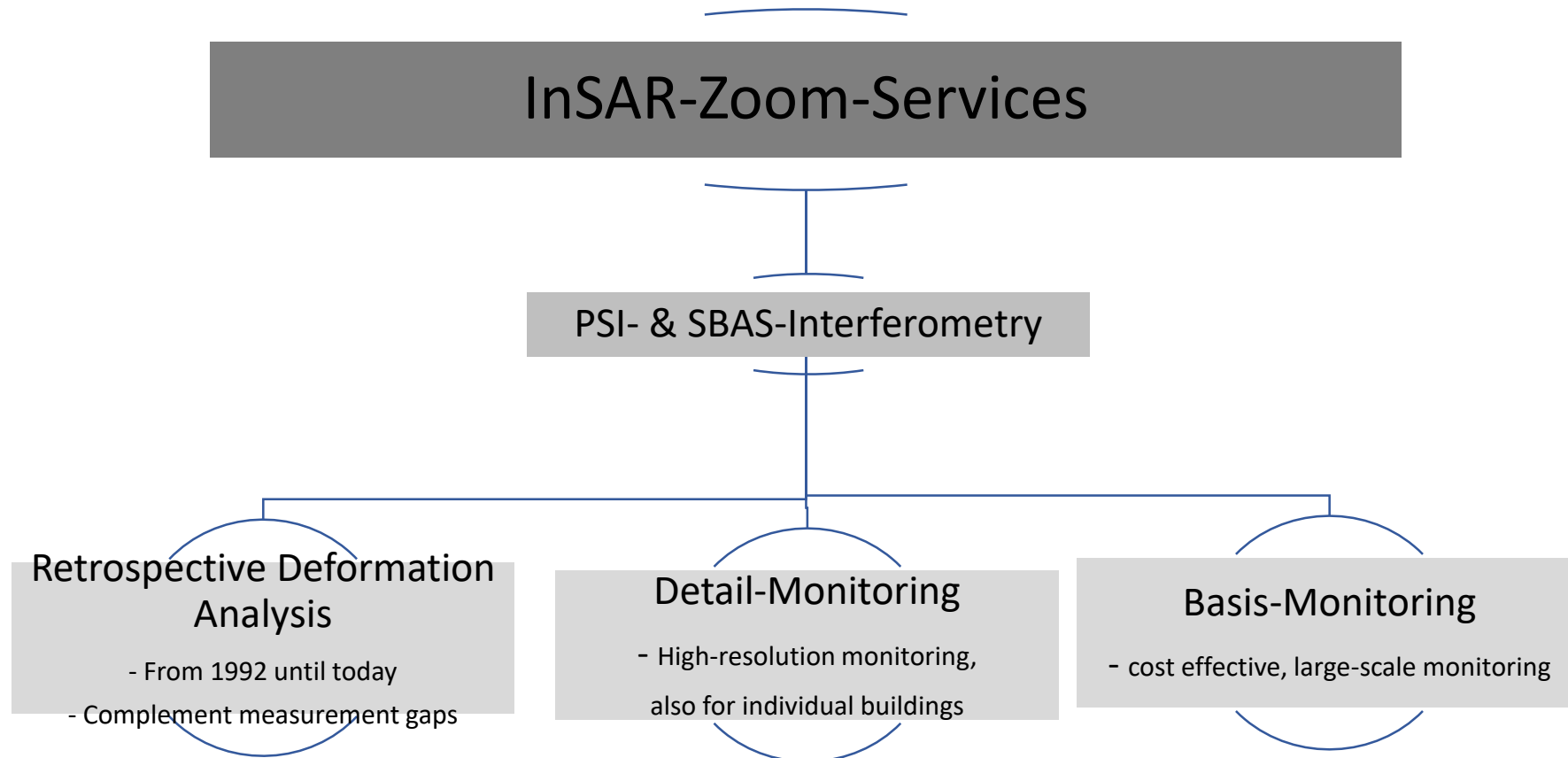


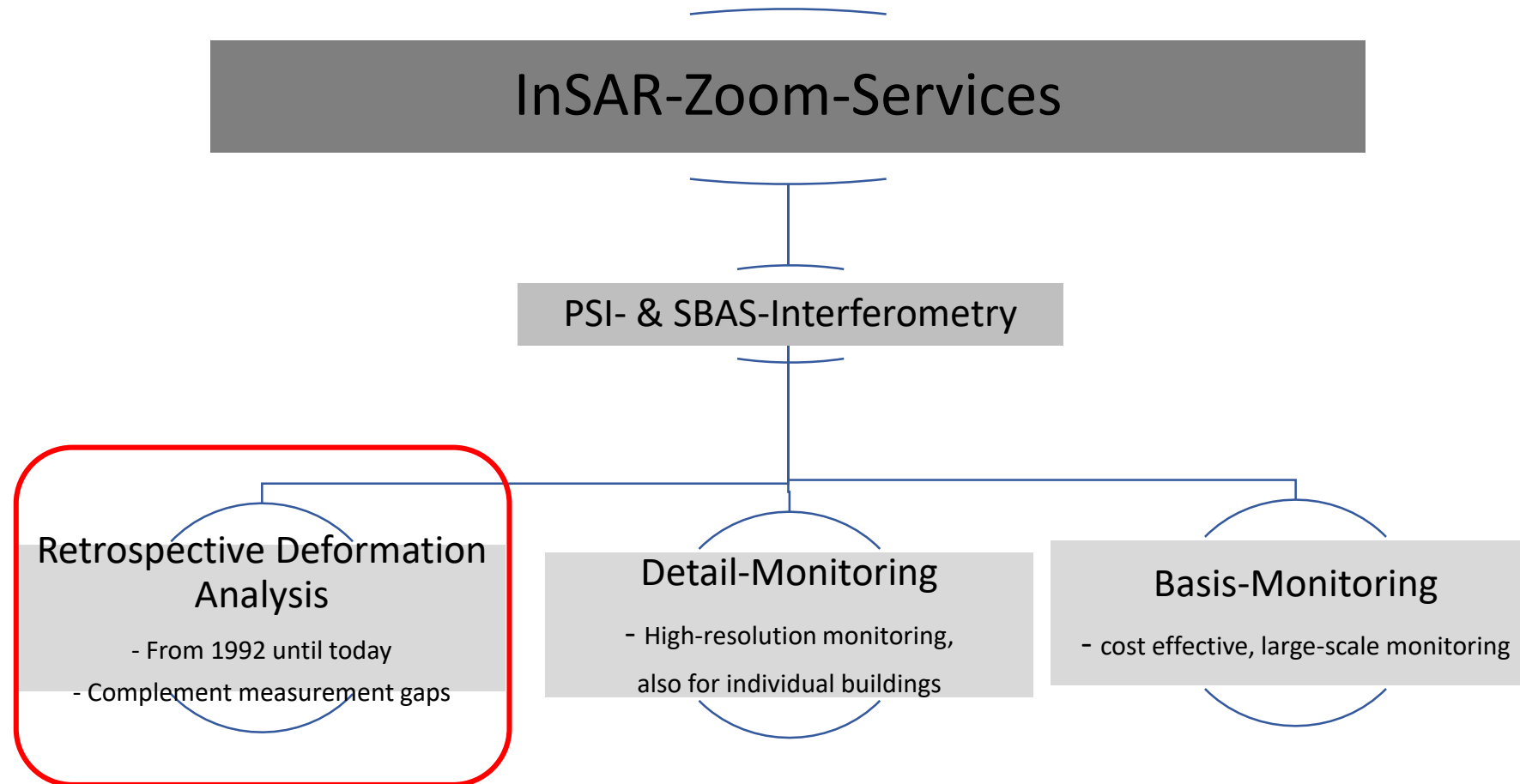
TRIGIS-InSAR-Zoom-Services



InSAR-Projects:
D, A, CH



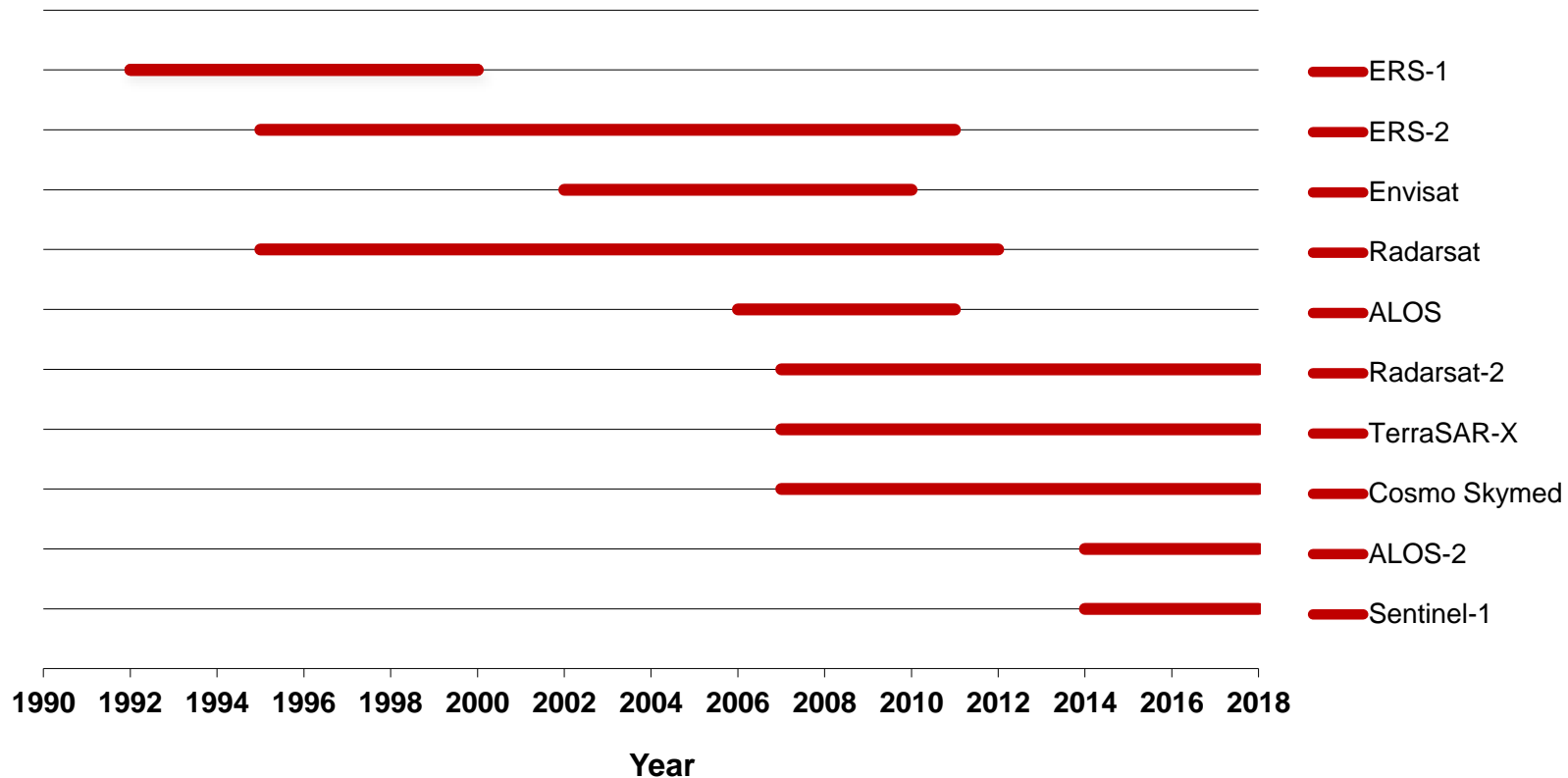




TRIGIS-InSAR-Zoom-Services



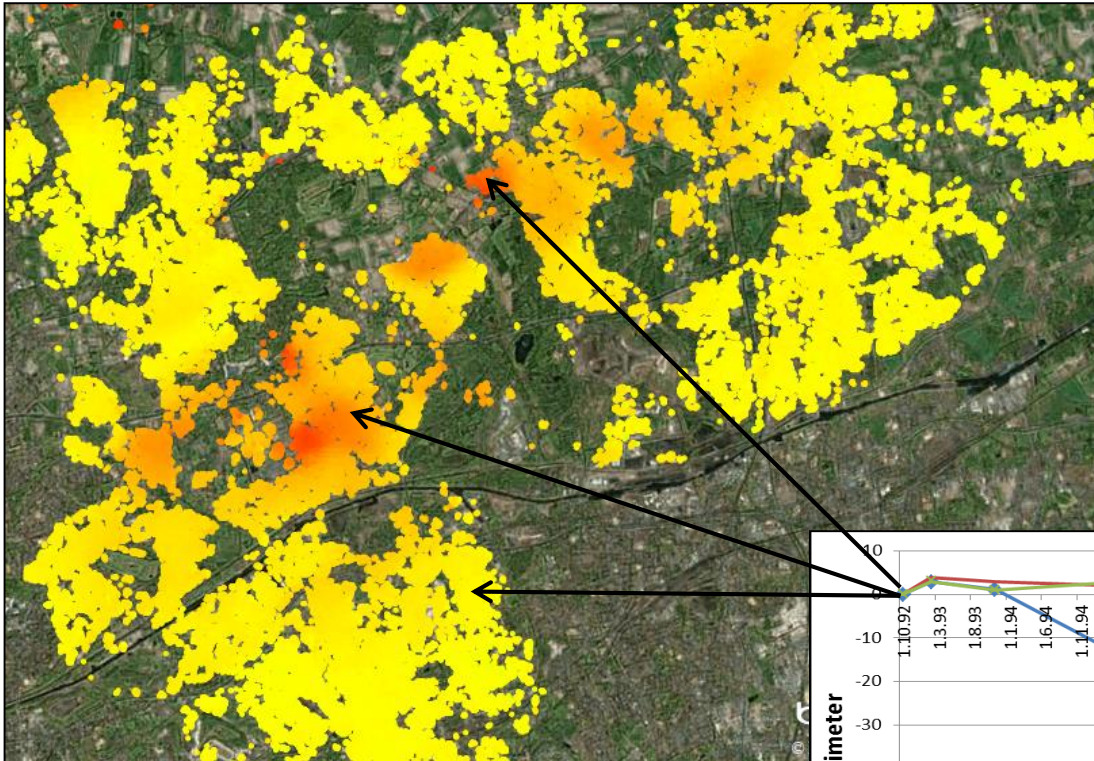
Temporal coverage of different radar satellite systems



TRIGIS-InSAR-Zoom-Services



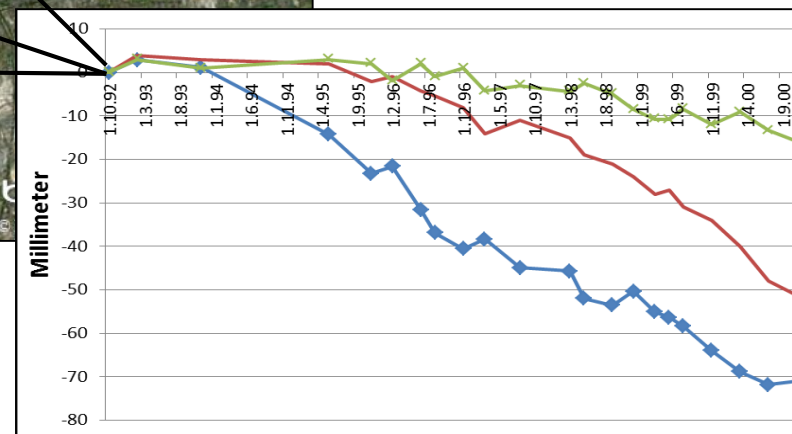
Ruhr area: Retrospective SBAS-Analysis



The result of the SBAS-Analysis is a regular grid of points:

- Envisat/ERS: 25 m

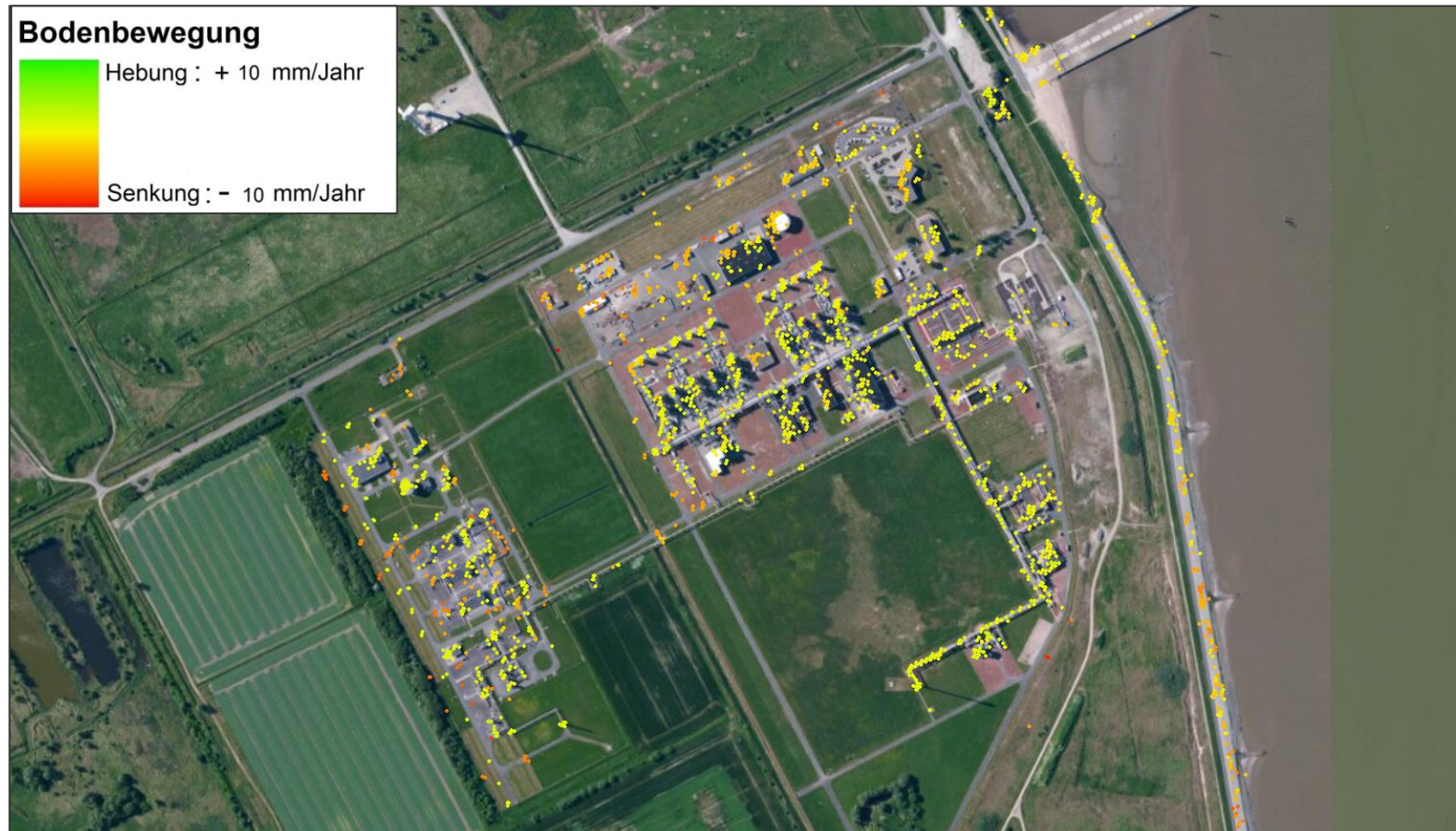
The temporal deformation profile can be read out for each pixel.

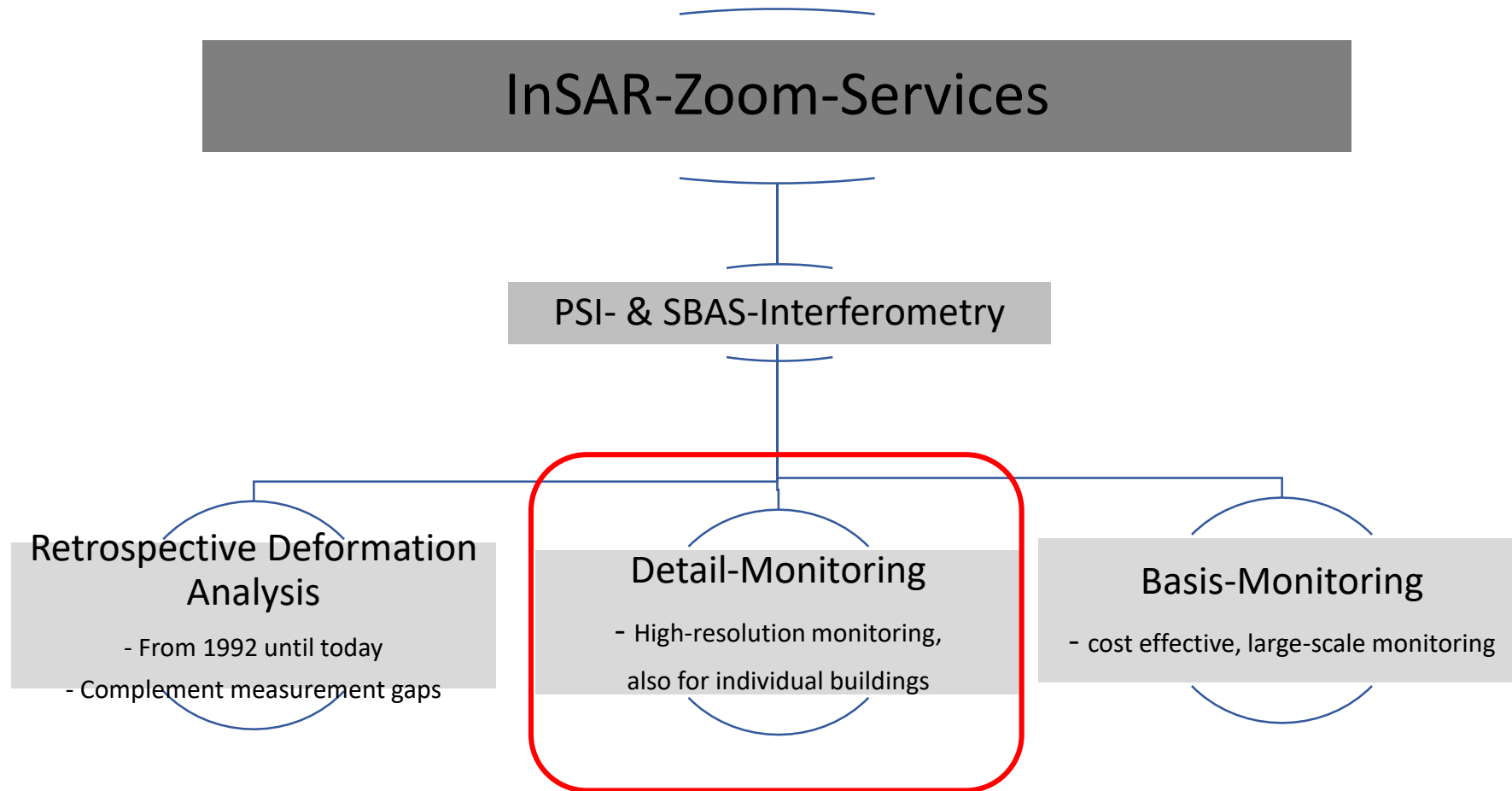


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Industrial sites: Retrospective PSI-Analyse using Envisat (2003 – 2010)



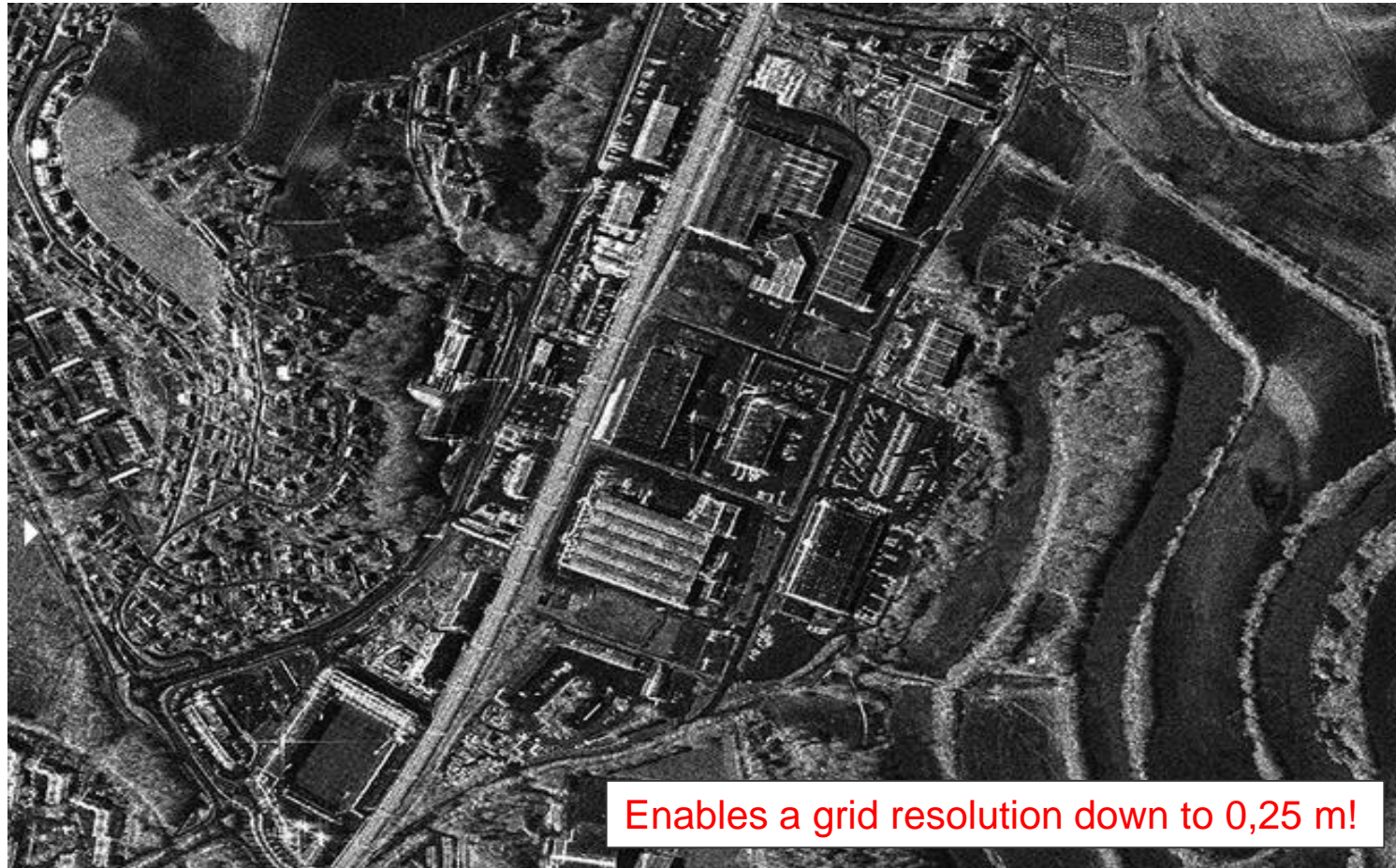


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Development of radar satellite technology

TerraSAR-X – 0,25m



Enables a grid resolution down to 0,25 m!

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PSI-Analysis based on Sentinel-1 data



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PSI-Detail-Monitoring based on TerraSAR-X data



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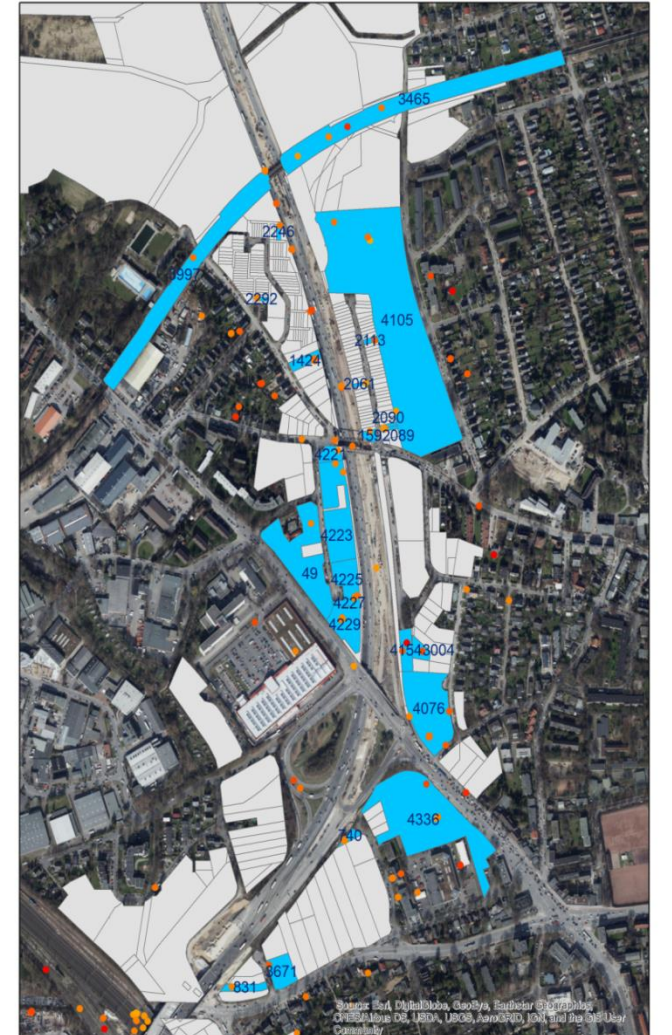
Construction work on the A7 – Hamburg **DEGES**

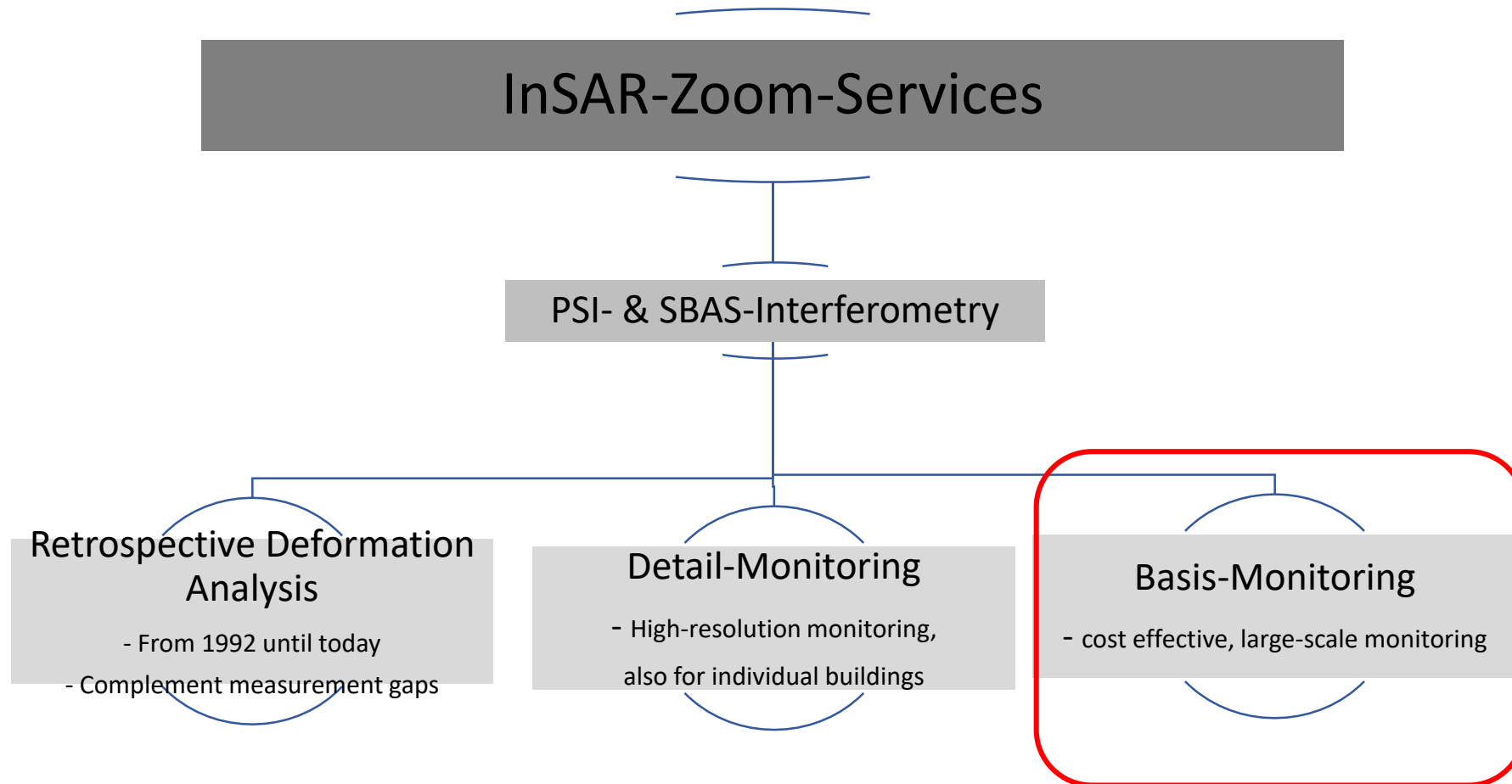


TRIGIS-InSAR-Zoom-Services



Construction work on the A7 – Hamburg **DEGES**

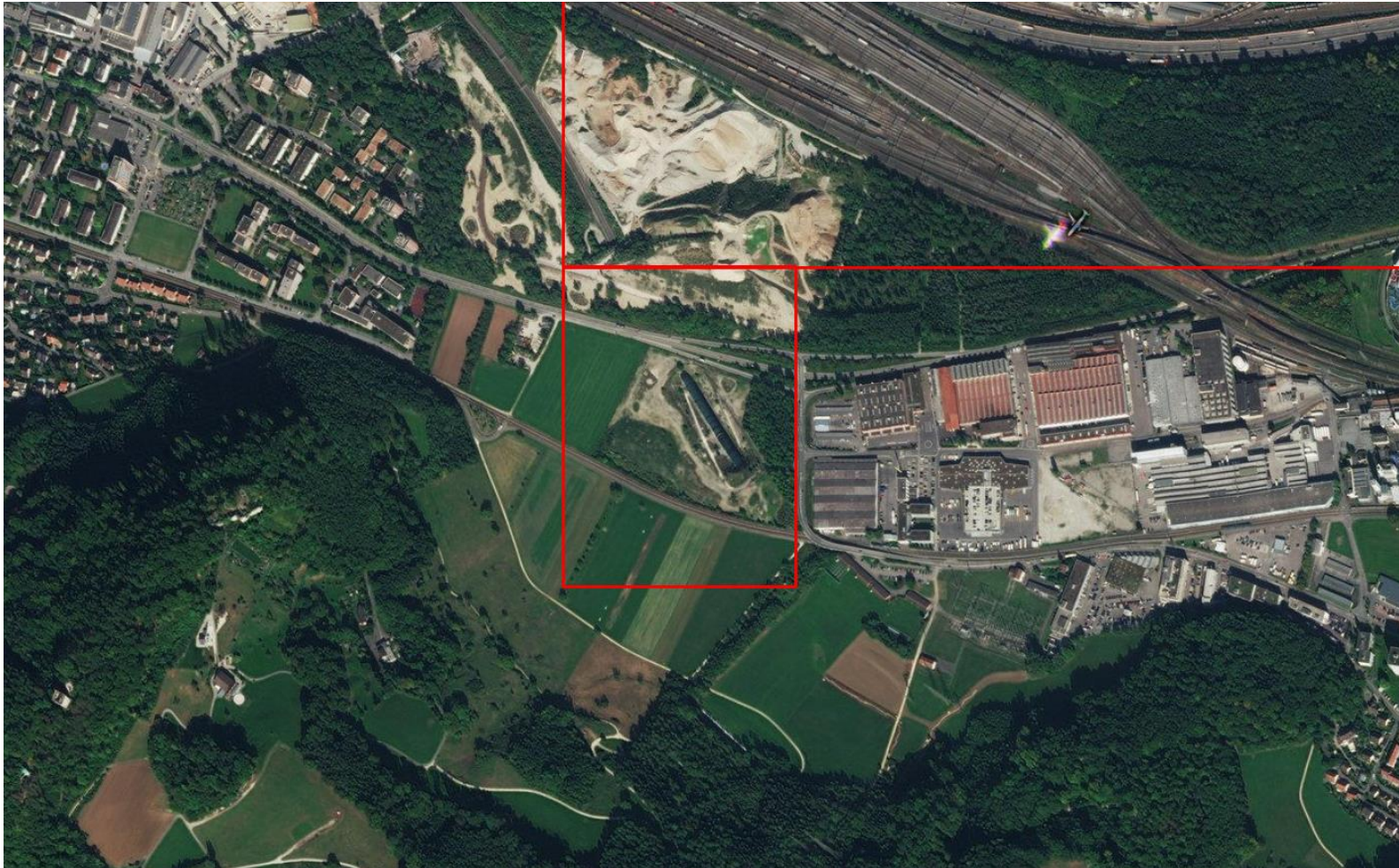




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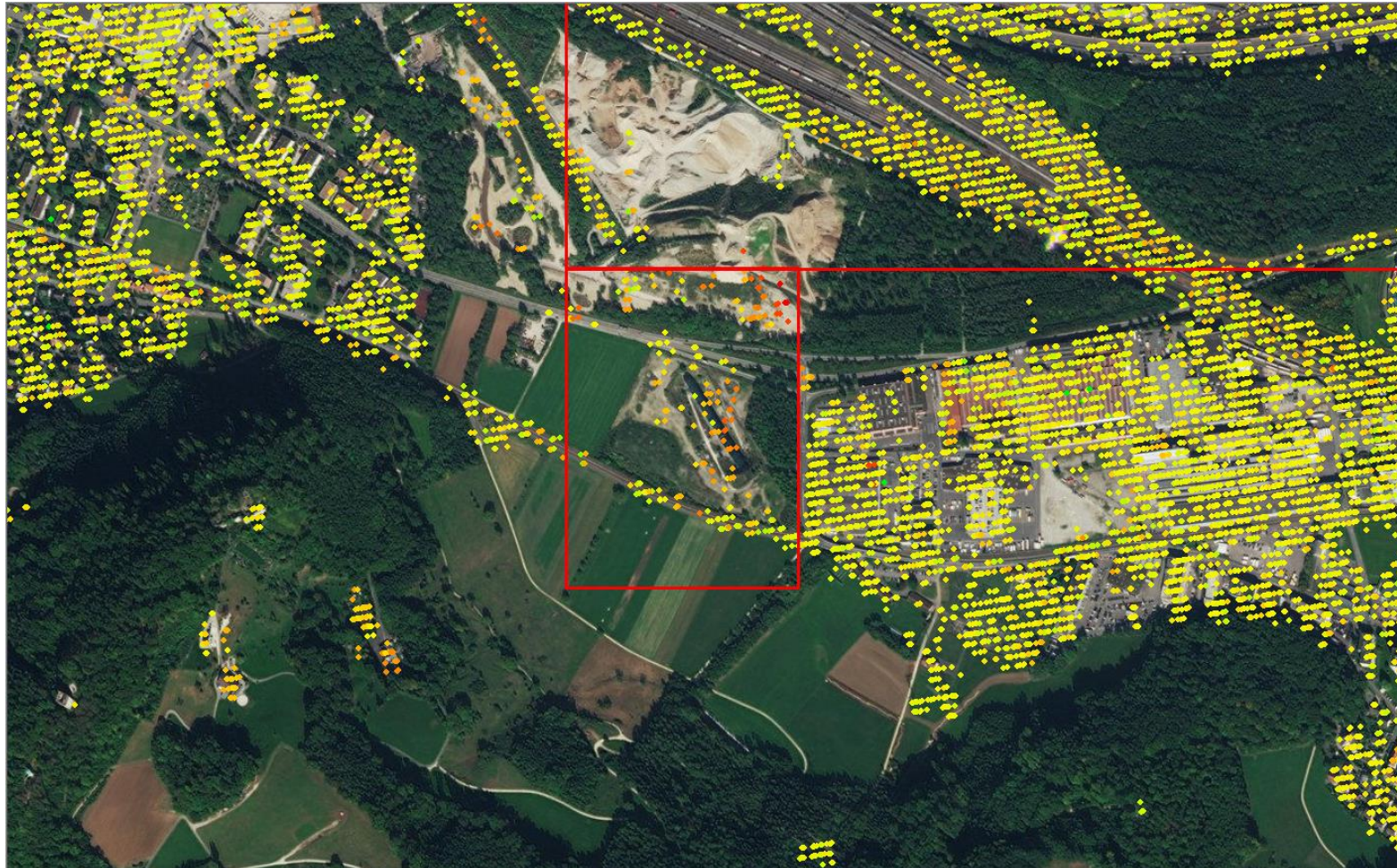
Urban monitoring



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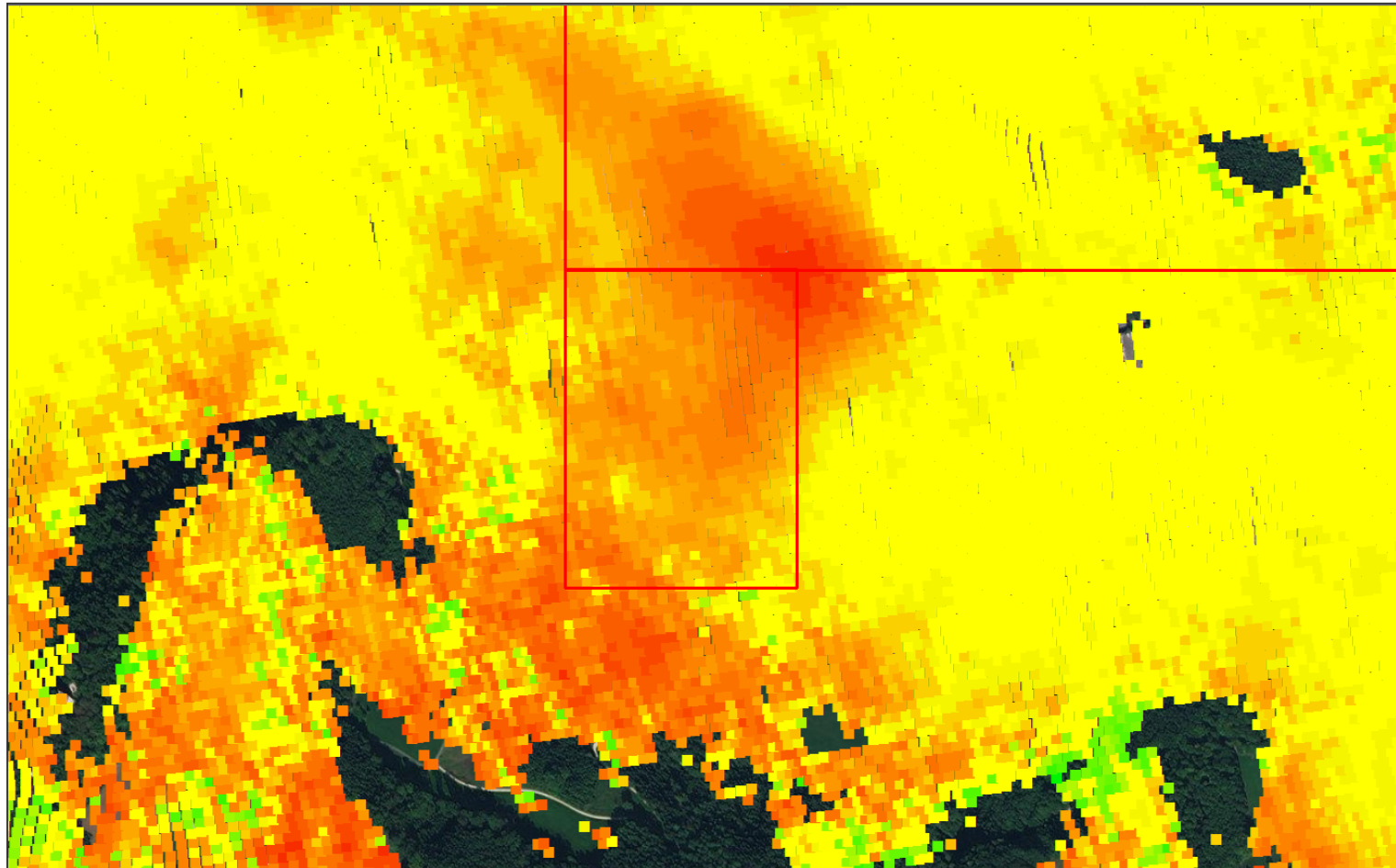
PSI-Monitoring based on Sentinel-1 data



TRIGIS-InSAR-Zoom-Services

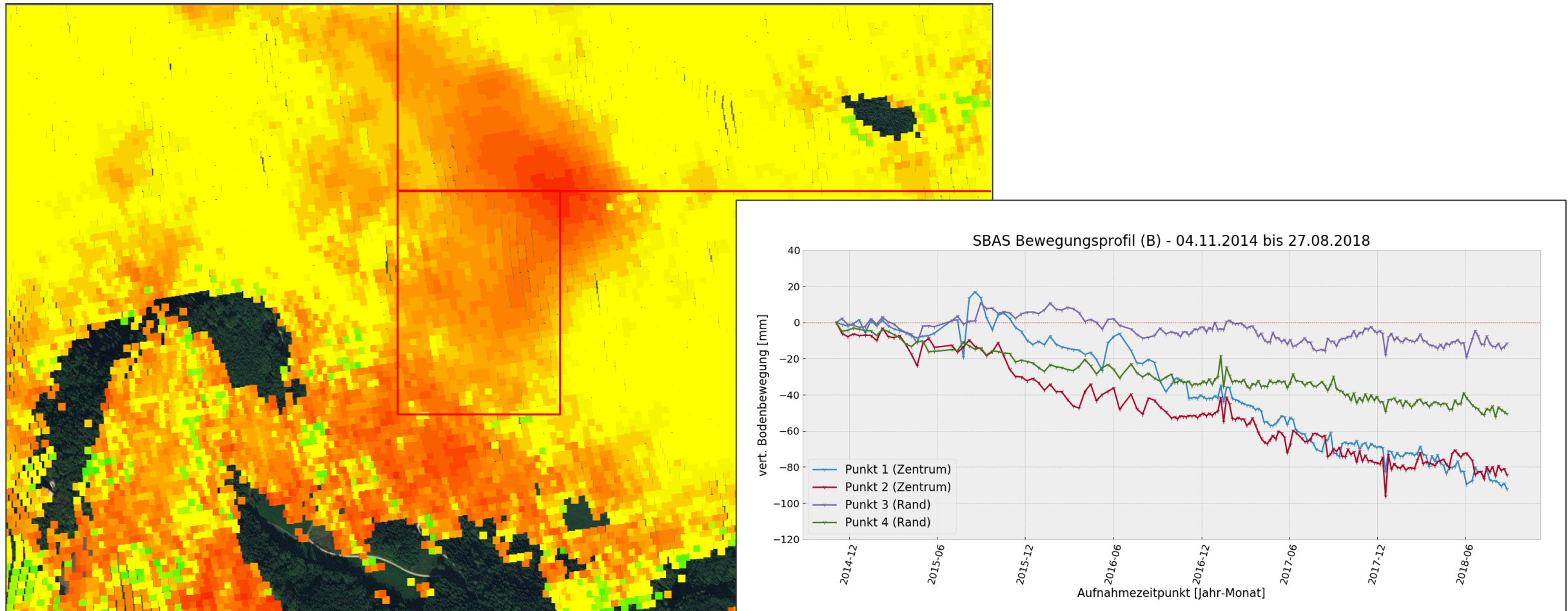


SBAS-Monitoring based on Sentinel-1 data





SBAS-Monitoring based on Sentinel-1 data



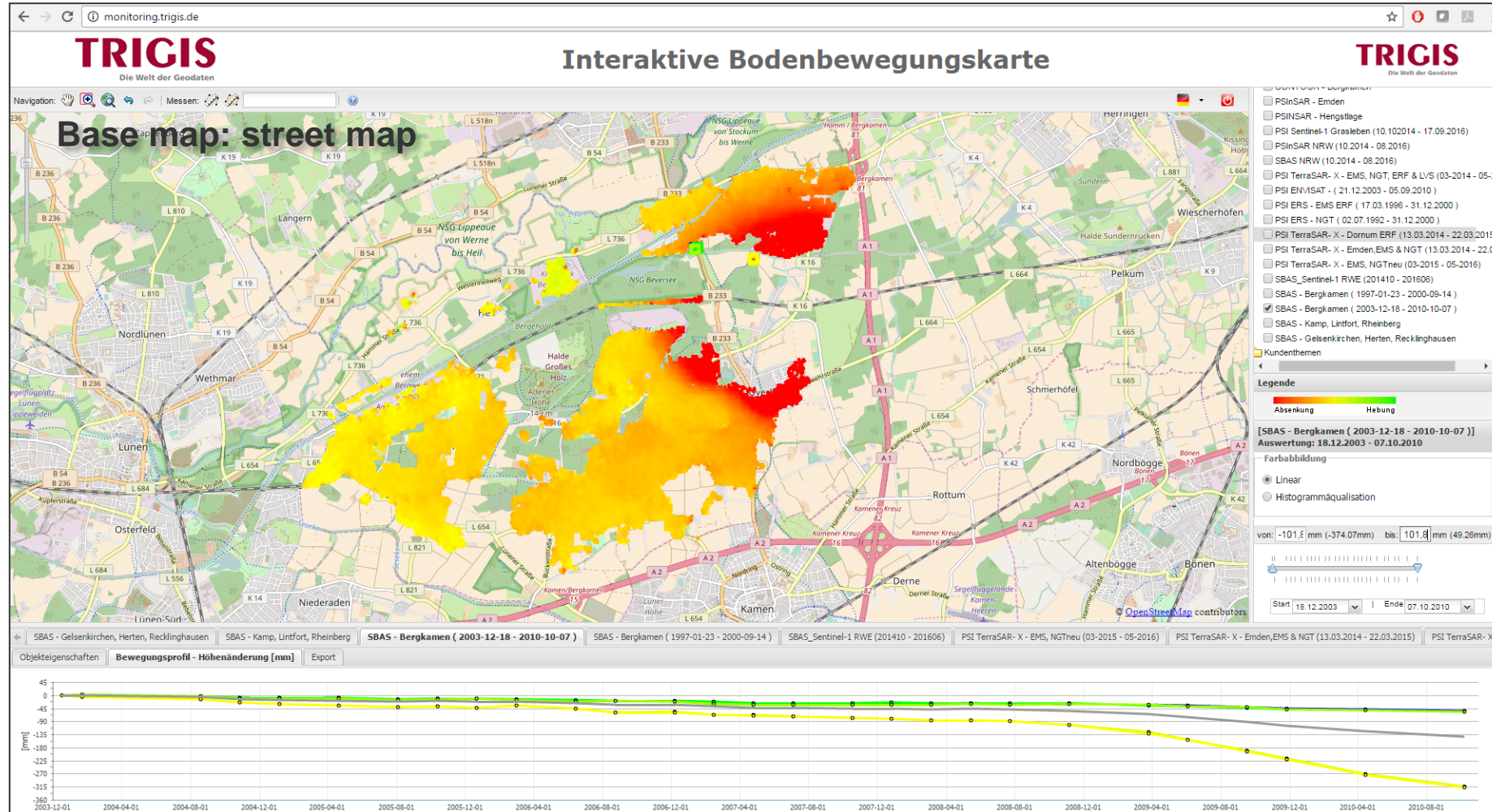


WebMap-Services: Interactive maps of ground movement

WebMap-Services



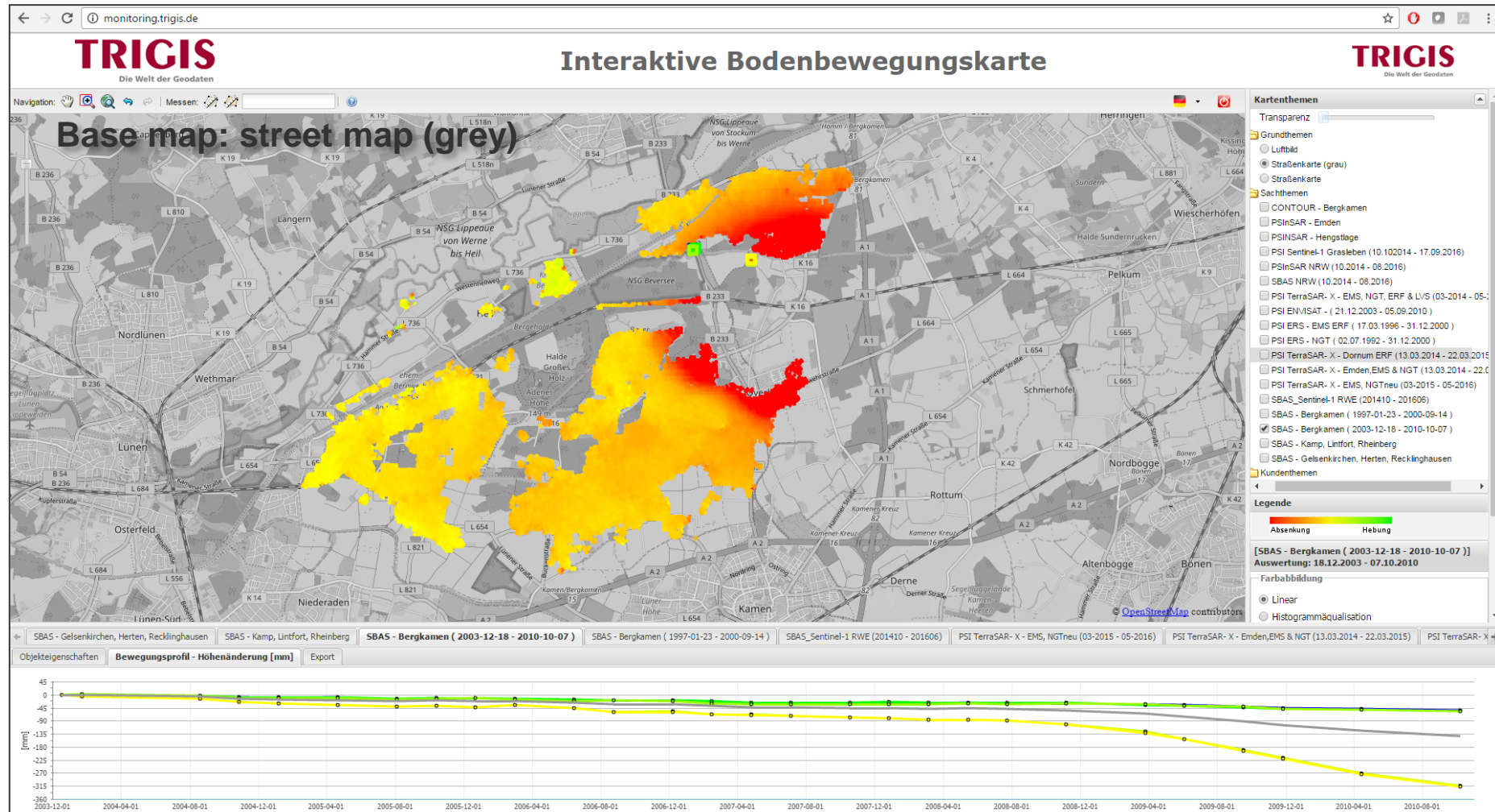
Online provision of the results



WebMap-Services



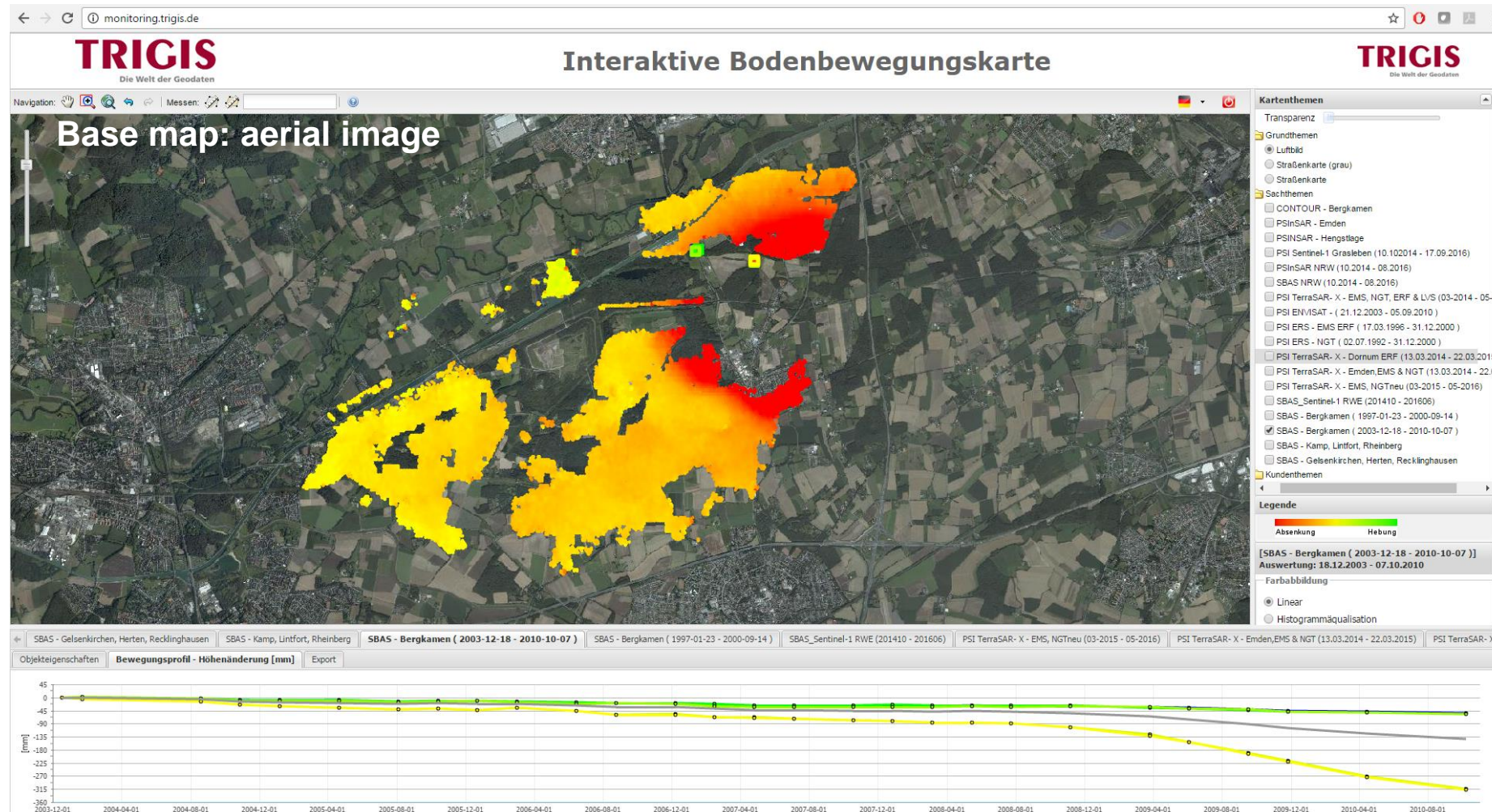
Online provision of the results



WebMap-Services



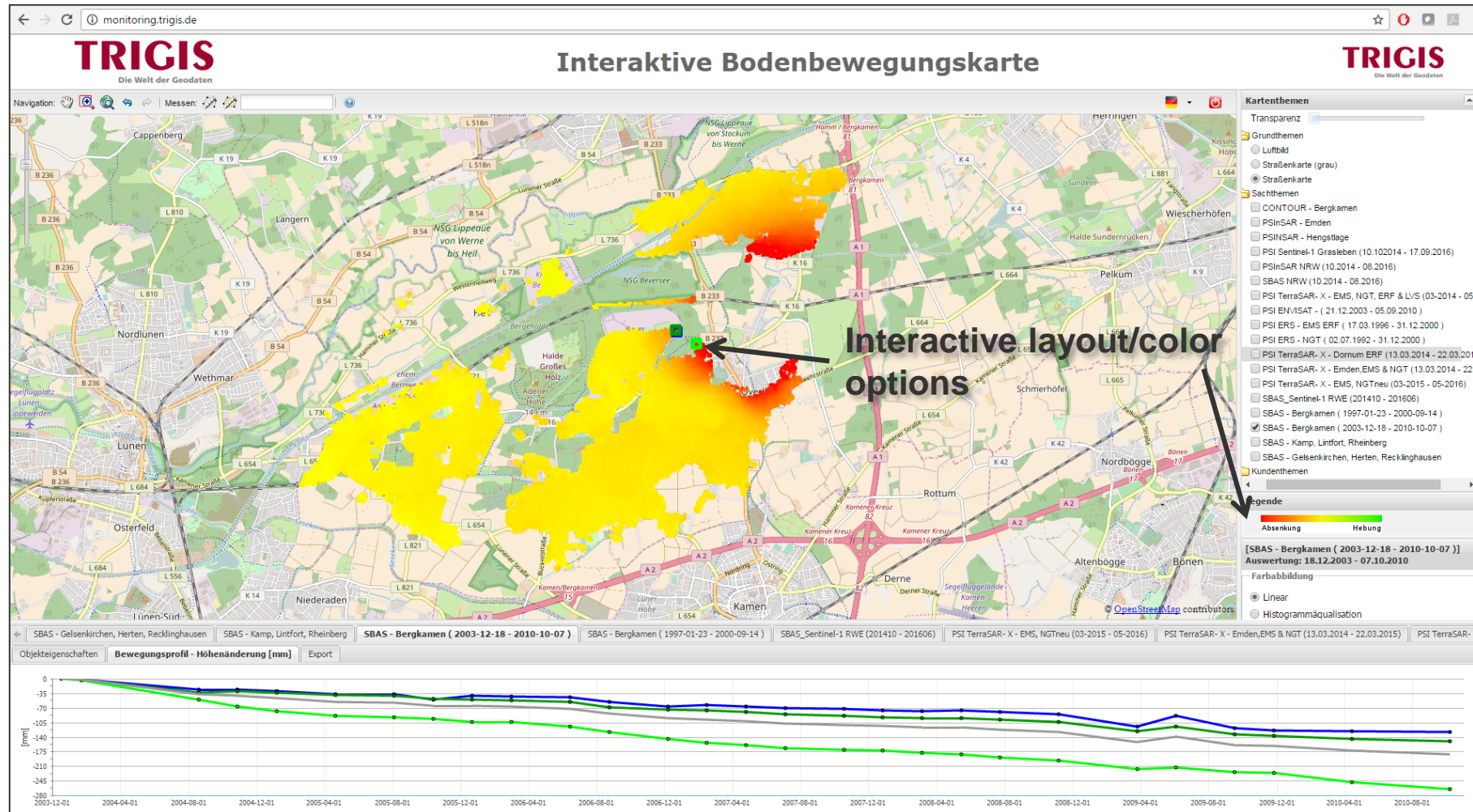
Online provision of the results



WebMap-Services



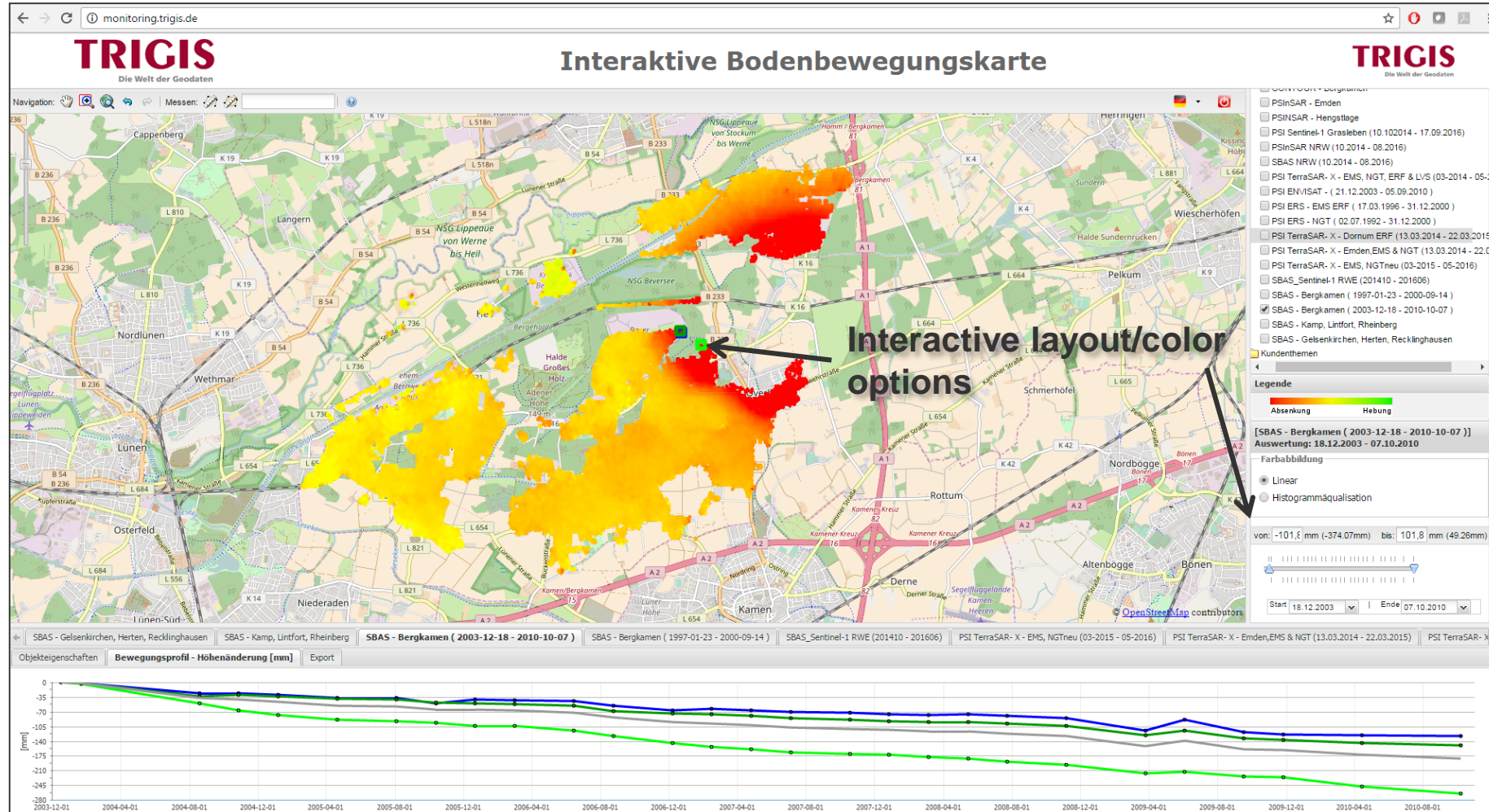
Online provision of the results



WebMap-Services



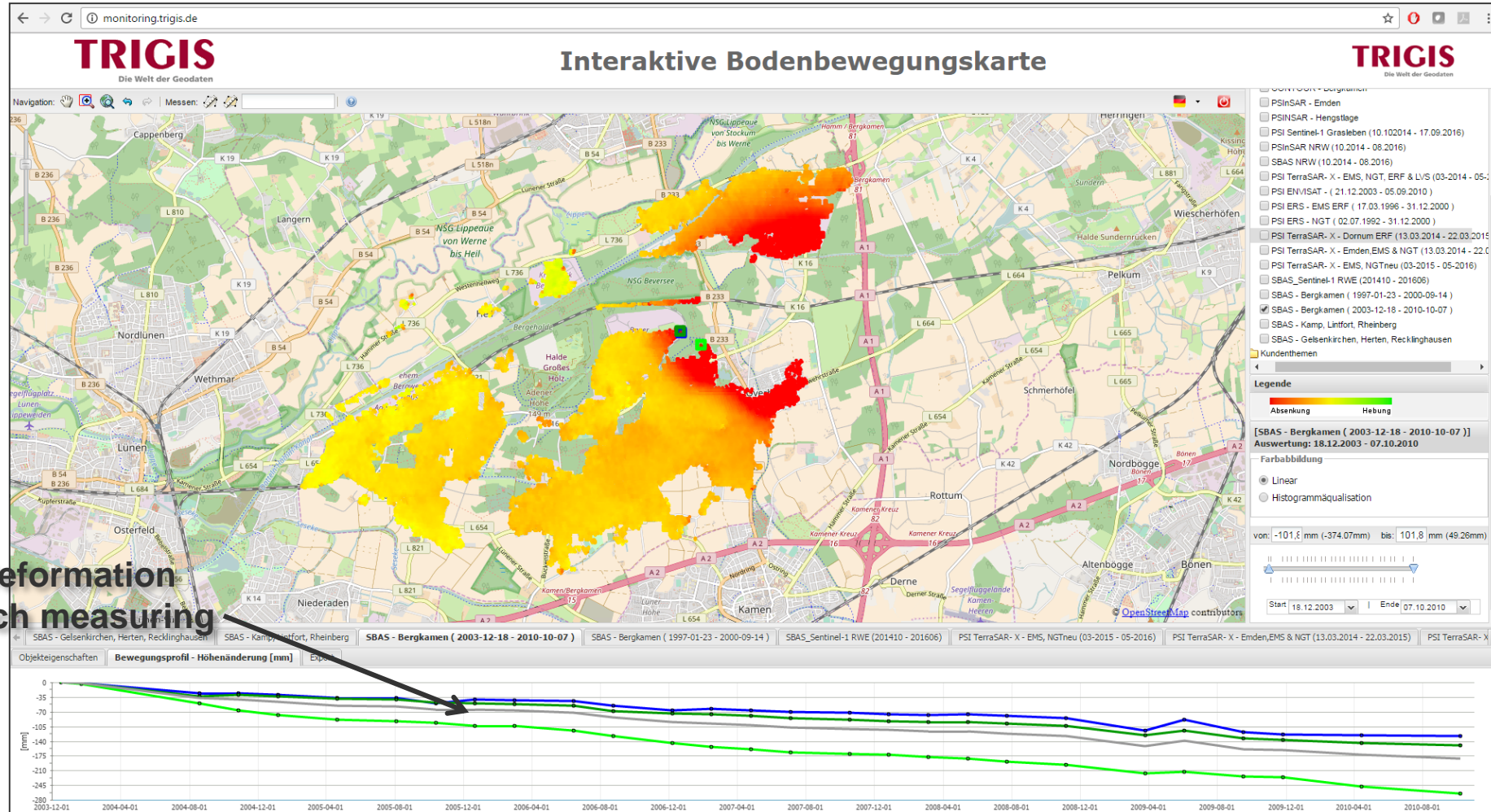
Online provision of the results



WebMap-Services



Online provision of the results



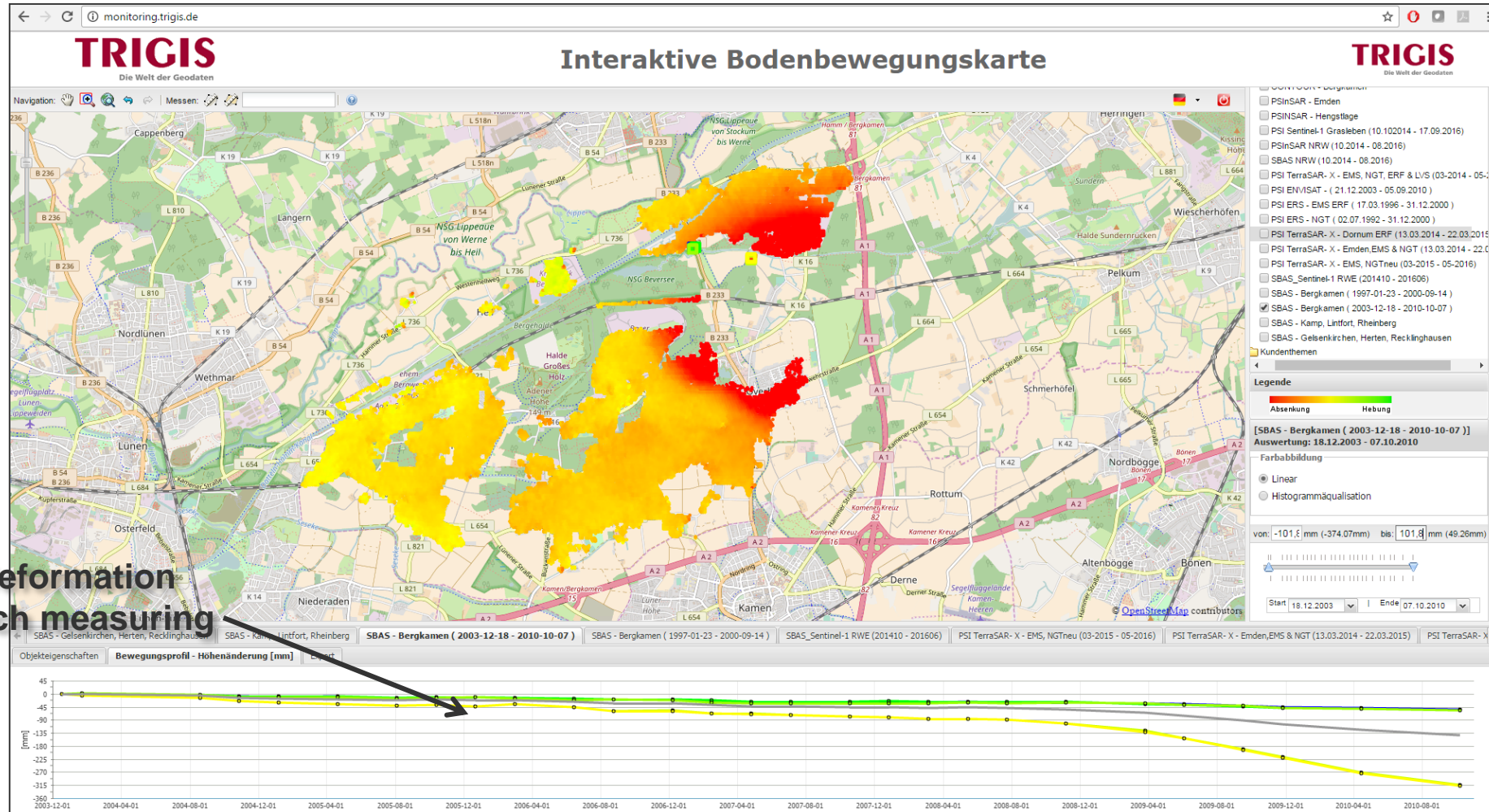
Time series: Deformation profiles for each measuring point

hour

WebMap-Services



Online provision of the results



Time series: Deformation profiles for each measuring point

hour

WebMap-Services: Construction work on the A100



Site of the A100 in Berlin

TRIGIS Die Welt der Geodaten

Interaktive Bodenbewegungskarte v4.0

TRIGIS Die Welt der Geodaten

Navigation: Messen:

Kartenthemen

Transparenz

Grundthemen

- Luftbild
- Straßenkarte (grau)
- Straßenkarte

Sachthemen

- "LIDAR/DGM-Differenzmodelle" für LIDAR/DGMs
- "PSI - A100" für InSAR
- "Terrestrische Messdaten" für Vermessungsdaten

Legende

Absenkung Hebung

Farabbildung

- Linear
- Histogrammqualisation

von: -64,4 mm (-91.99mm) bis: 64,4 mm (15.85mm)

Start: 23.01.1997 Ende: 14.09.2000

← "LIDAR/DGM-Differenzmodelle" für LIDAR/DGMs SBAS - Kamp, Lintfort, Rheinberg SBAS - Gelsenkirchen, Herten, Recklinghausen PSI TerraSAR- X - Emden,EMS & NGT (13.03.2014 - 22.03.2015) PSI TerraSAR- X - Dornum ERF (13.03.2014 - 22.03.2015) PSI ERS - NGT (02.07.1992 - 31.12.2000) PSI ERS - EMS ERF (17.03.1996 - 31.12.2000) PSI EI →

Objekteigenschaften Bewegungsprofil - Höhenänderung [mm] Export Report

Nr.	X	Y	Höhe	Bewegung [m...]

WebMap-Services: Construction work on the A100



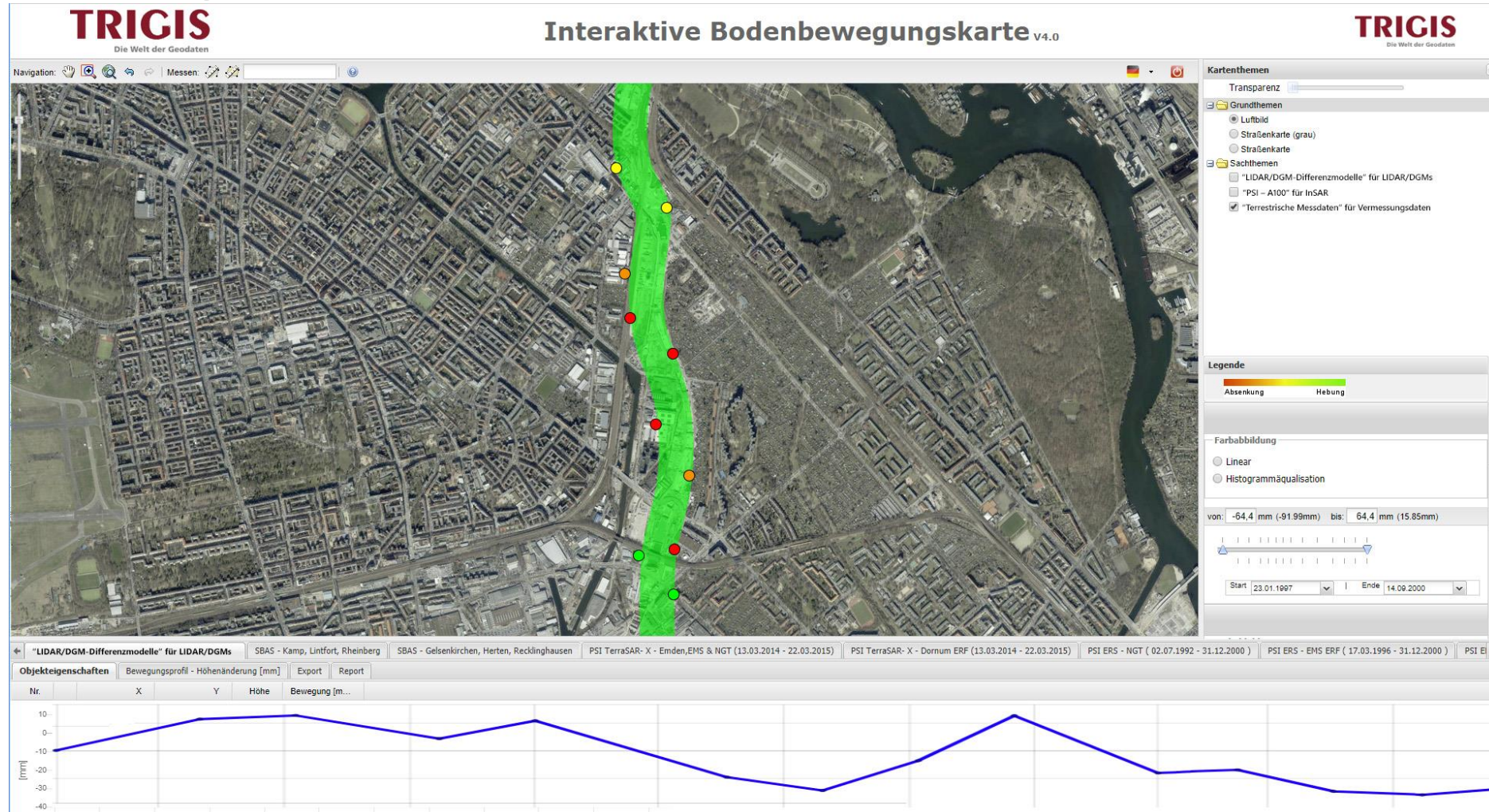
Site of the A100 in Berlin



WebMap-Services: Construction work on the A100



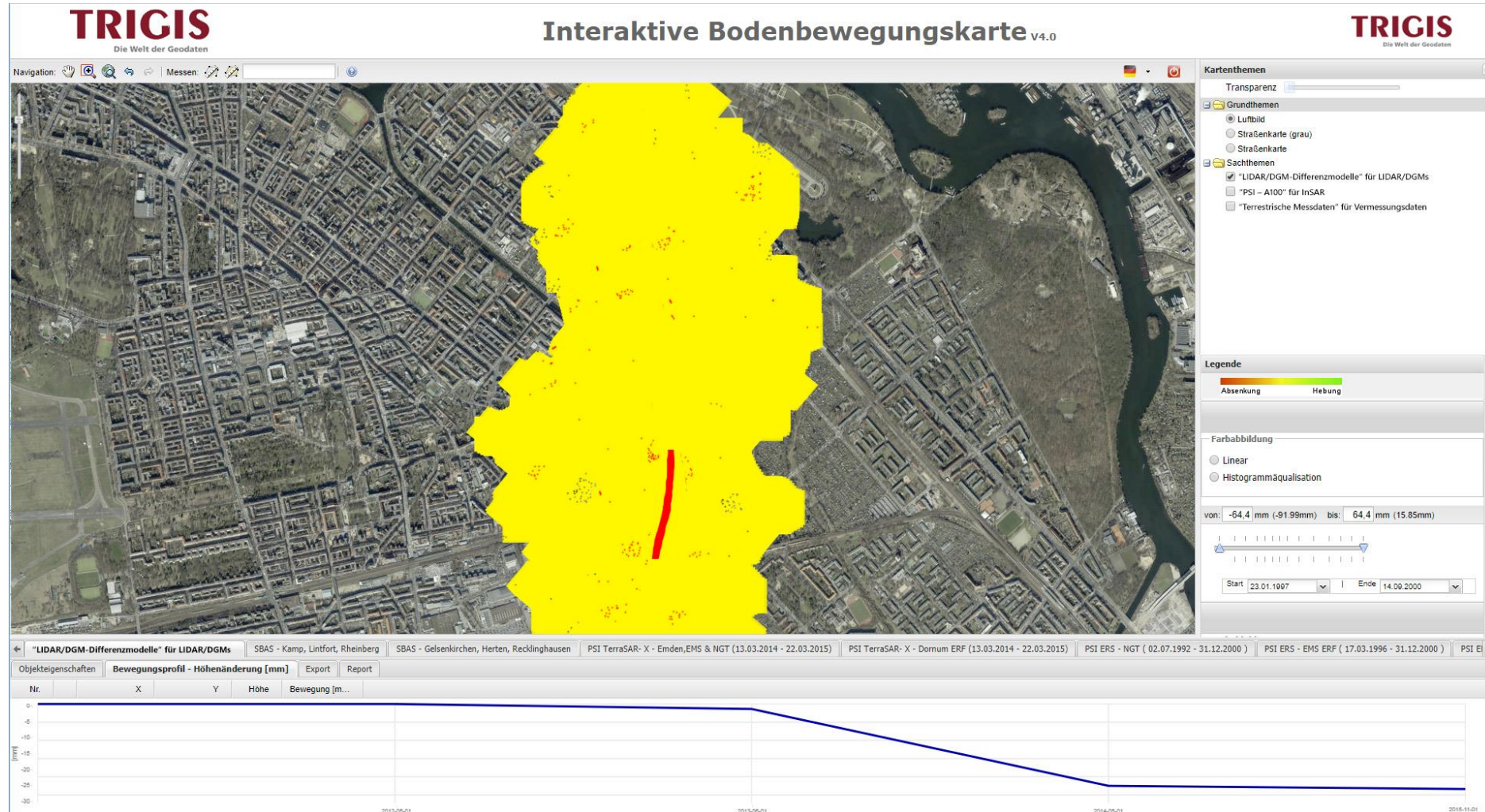
Measurements: Integration of fixed points



WebMap-Services: Construction work on the A100



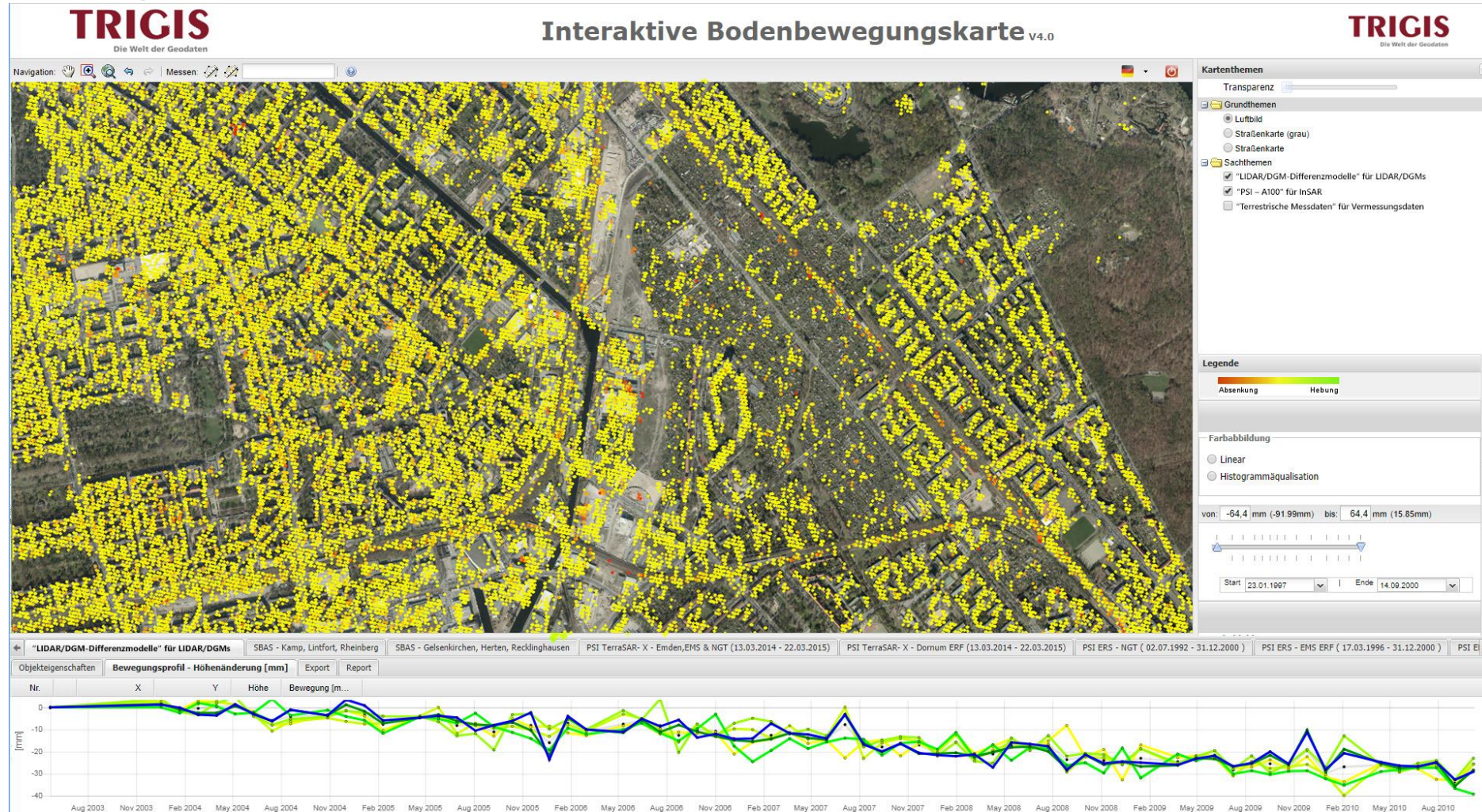
Interactive maps of DTM difference



WebMap-Services: Construction work on the A100



InSAR-Monitoring





Thank you for listening!

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