SPECTRUM

earth i

intelligent data from space

Case Study – Infrastructure Monitoring for Construction

Customers working on the A14 and the A27 road development projects in the UK used our Earth Observation portal, SPECTRUM, to understand the historical and ongoing risks to their works and the infrastructure in build and through life. These customers include the world's biggest consulting engineers and construction companies.

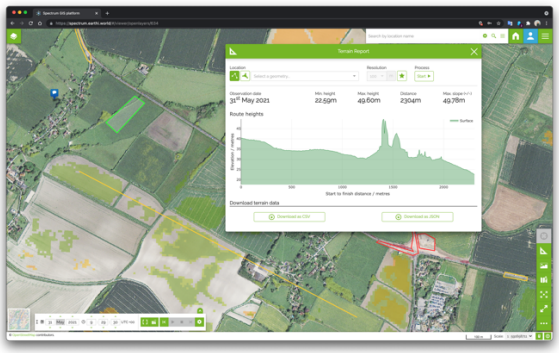
Earth-i Infrastructure Monitoring helps with a variety of infrastructure lifecycle phases, such as:

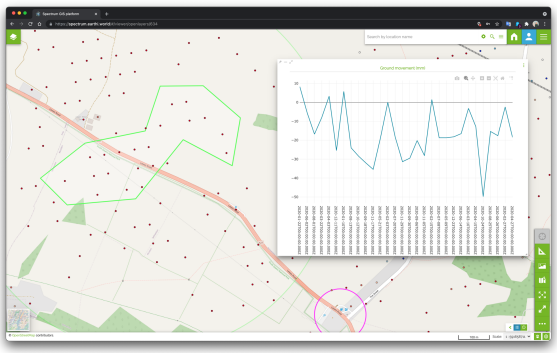
- Pre-construction survey, search, and routing
- Monitoring of construction while underway, or historically
- Monitoring for maintenance

It works by analysing space imagery from optical and radar sensors to provide a dense layering of analytics which when used together provide a variety of insights.

Vegetation detection	Land cover	Millimetre precision ground movement
Object detection	Terrain height modelling	Third party data

Our users view these layers in our easy-to-use web-based GIS platform, Spectrum. Here they can annotate issues they find, view our findings, and collaborate with their colleagues. All of the analytics are displayed both as individual layers and as change over time, so this draws the attention to areas of importance.





Within these projects we have confirmation from the ground of the effectiveness, with corresponding ground movement detected from space and on site and works identified which match the project reports. SPECTRUM also has detected unauthorised and unknown works and changes around the site, such as farmers digging pits which have affected drainage and burrowing issues caused by wildlife.

Other uses of SPECTRUM include vegetation monitoring for power companies and searching for appropriate locations for solar and other distributed industrial installations.