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Business Domain
GIS and Geospatial

Project Type
Deformation analysis software

Intetics Developed a Comprehensive, Cost-Effective Solution for Deformation and Slope Monitoring and Analysis

Client

The Client is a key player in the global deformation monitoring market and is also an authorized distributor for Leica Geosystems. The business primarily focuses on designing, installing, commissioning, and supporting monitoring solutions, especially for the mining and construction sectors.

Project

Developing the software with features for analyzing deformation spatial data:

- Visualization tools to enhance insights into deformation/slope trends
- Before/after comparisons to showcase improved accuracy and trend representation
- Manual, semi-automated, or fully automated prism monitoring

Objective

The Client aimed to create a new deformation monitoring system that would change the way automated monitoring processes work. The platform would integrate leading technologies, such as Prism, radar, inSAR, and Lidar, to provide a unique interface for analytical interpretation. These technologies would also facilitate interaction during data acquisition, measurement, scheduling, and notification.

Team Reinforcement

Intetics has assembled a specialized team with profound GIS experience, consisting of a Business Analyst, Team Lead, Front-end developers, Back-end developers, QAs (both manual and automation), UI/UX Designer, Project Manager, and Product Owner.

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Challenge

The Client's business is focused on designing, installing, commissioning, and supporting monitoring solutions, primarily for the mining and construction sectors globally.

The Client needed a new deformation monitoring software solution to replace its existing 3rd party solution. The tool must be more flexible, scalable, user-friendly, and integrated with leading technologies to provide a unique interface for analytical interpretation.

The Client required a trusted offshore partner that could build and manage a highly professional engineering team experienced in GIS technologies. Building a similar in-house team would require a 30% budget increase.

Quick Facts

- Connect, setup, and manage different types of geodetic sensors and equipment (GNSS hardware, total stations, piezometers, LIDAR scanners, etc)
- Data aggregation from different geodetic equipment and software
- Three years of continuous cooperation
- 35% of the development budget saved

Technologies

C# / SQL / JavaScirpt / ASP.NET MVC / ASP.NET Core / AngularJS / MongoDB / Entity Framework / Fluent API / Automapper / Quartz / Google cloud platform / QGIS / JSON / Leaflet / RXJS / NestJS / Visual Studio / Code / HERE Maps API / Docker

Solution

★ 01

Cutting-edge platform providing sophisticated features for deformation and slope monitoring.

★ 02

Advanced embedded tools with a concise and interactive visualization of the deformation of spatial data.

★ 03

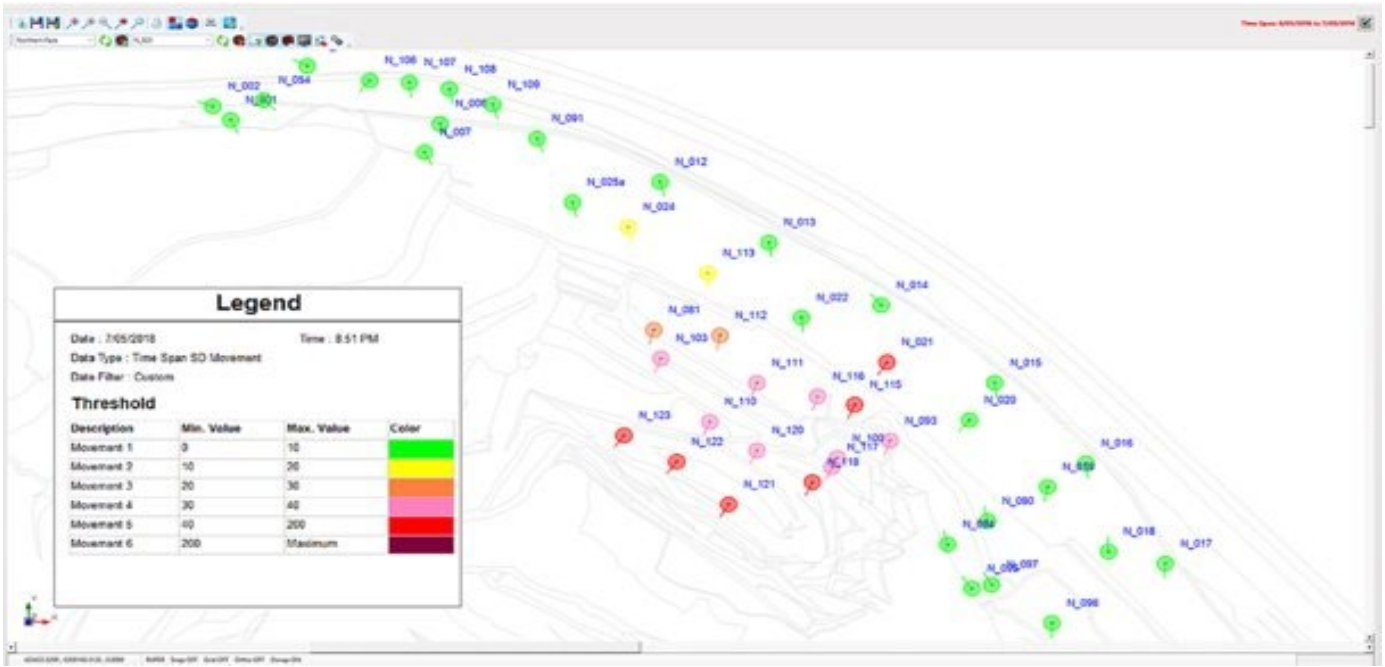
The software's intuitive and user-friendly interface makes it accessible and easy to use, even for beginners.

★ 04

The solution helps the Client’s customers to monitor their workflows efficiently, save money, time, and resources.

★ 05

The solution helps customers handle safety monitoring on the mining side.



Benefits and Results

- Advanced functionality to cover all mining site processes and avoid using the more expensive alternatives on the market.
- The solution supports connection to any sensors of predefined types from third-party manufacturers and connection to third-party software
- Web-based solution provides 2D/3D mining site visualization with in-depth analytics based on the device data and locations.
- Efficient sensor connection, management, instant data storage and analysis.

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Techstack:

C#, SQL, JavaScirpt, ASP.NET MVC, ASP.NET Core, AngularJS, MongoDB, Entity Framework, Fluent API, Automapper, Quartz, Google cloud platform, QGIS, JSON, Leaflet, RXJS, NestJS, Visual Studio, Code, HERE Maps API, Docker

Team: 11

Project Manager, Product Owner, 1 Team Lead, 2 Front-end developers, 2 Back-end developers, 2 QA, Business Analyst, 1 Designer