

Transforming Industrial Asset Management with **NSEIT's Cloud-Based Solution**

CASE STUDY



About Client

Leading structural integrity assessment firm



Industry

Engineering, Manufacturing, and Infrastructure



Service

Unified, cloud-based monitoring and inspection solution



Business **Need**

The client needed a versatile, configurable platform to collect, analyze, and manage asset integrity data across diverse industrial clients and asset types. They required a system that could handle dynamic asset hierarchies, provide

powerful analytical and reporting capabilities, add/remove industry-specific modules on the fly, and support multi-tenancy for seamless product upgrades.

Business **Challenge**

Before the new implementation, the client faced several challenges in their data management and reporting processes, including:

- ▼ Managing diverse asset types and structures across multiple industries
- ▼ Handling large volumes of sensor data and time series information
- ▼ Providing customizable modules for different client needs
- ▼ Ensuring data segregation and security in a multi-tenant environment
- ▼ Transitioning from on-premises installations to a cloud-based solution

Business **Solution**

NSEIT developed and maintained the client's critical asset management platform. Key features include:

- ▼ Dynamic asset hierarchy and attribute configuration
- ▼ Multi-tenant architecture hosted on Azure
- ▼ Integration with various data sources (e.g., PI server) for online monitoring
- ▼ Support for drawing and image uploads with data overlay
- ▼ Google Maps integration for geospatial asset tracking
- ▼ Customizable reporting through Power BI and Azure functions
- ▼ Modular design allowing for additional product capabilities on the fly

Technology **Stack**

The solution leveraged a mix of modern technologies and services. These included:

- ▼ Microsoft .NET
- ▼ Microsoft Azure (cloud hosting)
- ▼ Azure Functions with Python
- ▼ Google Maps API
- ▼ Power BI (reporting)



Project **Differentiator**

This project stands out due to its innovative use of technology and efficient approach, including:

- ▼ Highly flexible and configurable platform adaptable to various industries
- ▼ Seamless integration of engineering expertise with IT capabilities
- ▼ Comprehensive product engineering services, including application lifecycle management

Business **Impact**

The implementation resulted in significant improvements for the client. The overall business impact included:

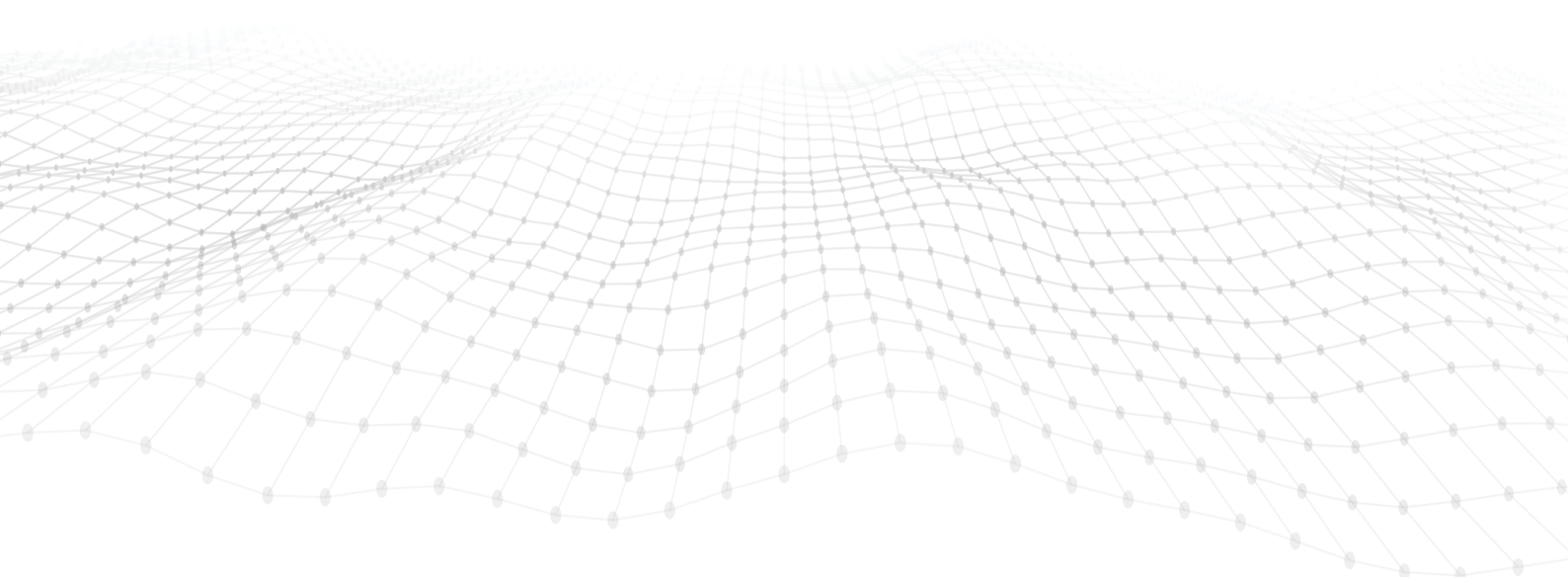


-  Core platform enabling the client's entire business operations
-  Increased interest and inquiries from potential clients after product demonstrations
-  Expansion of client's service offerings through modular product design
-  Improved efficiency in data collection, analysis, and reporting for asset integrity management

Conclusion

The asset management platform developed and maintained by NSEIT has become a critical component of the client's business, enabling it to provide comprehensive asset integrity management services across various

industries. The solution's flexibility, scalability, and analytical capabilities have positioned the client to expand its client base and enhance its service offerings in the complex field of industrial asset management.



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