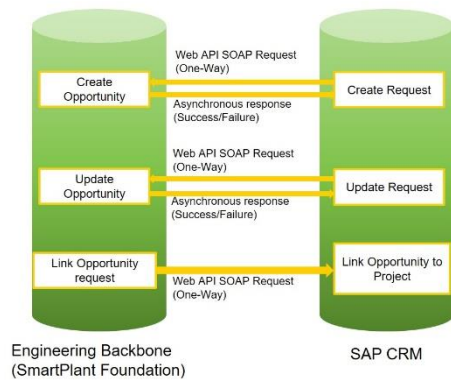# Web service development

Customisation and bespoke development

Summary

TecSurge combines its expertise in software development with specialist knowledge of common industry applications to deliver custom web services, enabling modern, decoupled system integration solutions.

Typically, our clients seek a means to update, query or synchronise data held within engineering applications with other systems, through a SOAP or RESTful web service interface. TecSurge leverages expertise and experience with bespoke software development, web services, and domain-specific knowledge of the target applications to deliver custom web service application programming interfaces (APIs) meeting client requirements.

SmartPlant Foundation SAP CRM custom web service integration
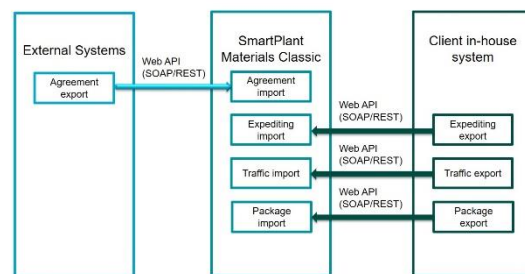
Differentiators

- Extensive bespoke software development experience
- Familiarity with web services standards such as SOAP and REST
- Experience with .Net technologies such as Web API and WCF
- Comprehensive domain knowledge across engineering, procurement and construction applications

Deliverables

Like any bespoke software development project, the implementation will be divided into several phases depending on the precise scope. TecSurge typically delivers incremental releases of the software at each phase, enabling review and testing by the client in the delivery environment. Typical deliverables for bespoke web services projects include:

- Published web application folder(s).
- Configuration including settings file (e.g. WCF web.config).
- Web Services Description Language (WSDL) specification files.
- Custom web service source code.
- Application configuration files.
- Documentation including specification, design, installation and user guides.

Intergraph Smart Materials client in-house system web service integration

While the potential scope of bespoke web service development is nearly unlimited, recent examples delivered by TecSurge include:

- A custom web service supporting an integration between SAP CRM and SmartPlant Foundation, enabling the synchronisation of opportunity and project data between the systems.
- A custom web service supporting an integration between a client's in-house purchasing and logistics application and Intergraph Smart Materials.

Work Process

The TecSurge process begins with consulting and conducting a workshop to ensure a clear understanding of requirements and constraints. After gathering the requirements, TecSurge divides the project into manageable and controllable phases.

A design specification is prepared along with a prototype implementation, which is presented to the client for feedback, after which detailed implementation can proceed

Sample web service test script

Quality Assurance

Along with the development of the web service, TecSurge prepares a test client or test harness to validate the services. Test scripts and data sets are also prepared to exercise all key web service functionality and edge cases. Test run results are documented and delivered to the client in the form of a test report, minimizing the chances of unexpected errors and defects, and providing working examples for system integration.

Getting Started

To understand the scope of the work, a specification from the client or a workshop is typically required, however some key questions can help to set the scene:

What are the applications involved in the web service integration, and which of these require custom web service development?

Why: This is a key input to understand the main purpose of the project and to derive the scope.

Which web service protocol should be supported (e.g. REST or SOAP), and are any other standards applicable (e.g. authentication, encryption, etc.)?

Why: This would help us to understand the design and flow of the web communication.

If this service describes your situation, and you're able to provide the engineering inputs and answers to the questions listed here, please contact us today to discuss your options. Let's talk.

Contact us

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