Case Study :
Forecasting

gulfcoast
solutions

gcs

The **Customer**

The customer is a North America-based, international construction services company which has earned recognition for undertaking large, complex projects and making a difference for its clients, employees and community.

With a staff of nearly 10,000 employees, the company completes $10+ billion of construction on 1,500 projects each year.
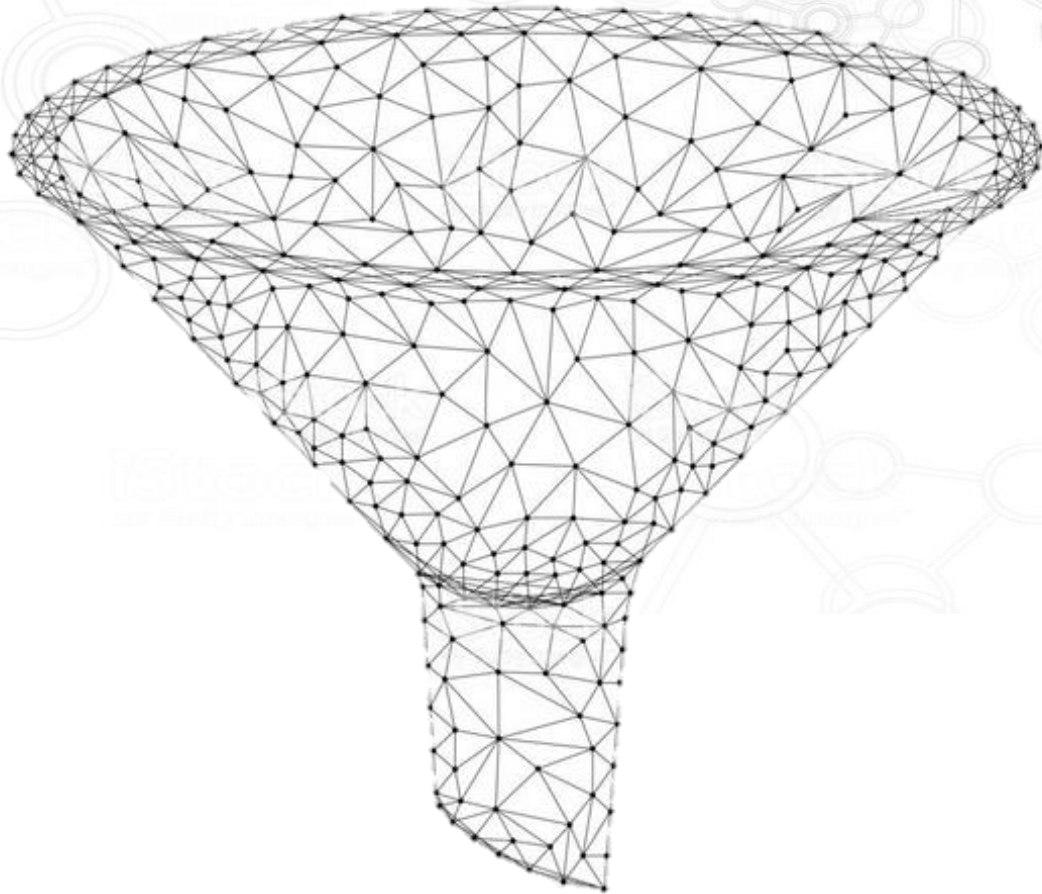
The **Challenge**

1. Standardize the way the business units and users created monthly project forecasts to employ a consistent organizational approach.

2. Integrate actuals real-time from SAP ERP accounting package to provide cost managers with the most complete and current information possible for their project.

3. Create a central library of past and current forecasting data to allow for training, collaboration, and process improvement.

4. Add a series of controls to enhance the forecasting process, including version management, enhanced dashboard, automated allocation and reusable templates.

The **Solution**

The GCS team worked closely with the customer to create an enterprise-class backend forecasting solution that was easy to use by its various business units:

- Web-based, front-end using .NET Core using SQL Server Enterprise for backend data storage and MongoDB for frontend caching

- Secure services/API layer to provide shared functionality across all modules

- Multiple backend worker processes used for ETL functionality for SAP ERP system

- Series of automated tools to enable user to perform bulk forecasting using a variety of mathematical models

- Versioning and authoring workflow functionality

- Additional modules to enable fine-tune adjusting of key forecasting components

- Reusable templates

- Advanced management module allowing for per-project controls, detailed reporting, dashboards, and notification processes

The **Metrics**

600 - 800	⟶	Total # of simultaneous users
8,000,000 - 10,000,000	⟶	# of avg. monthly transactions
800 - 1,200	⟶	# of active projects anticipated
95	⟶	Percentage of projects using system
10+	⟶	Longest forecasting period (in years)

The **Technologies**

ASP .NET MVC using .NET Core

Microsoft SQL Server

MongoDB

SAP

Handsontable

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