Case Study

Overview

Water systems are becoming increasingly complex and instrumented and require a rich set of features to deal with the complexity efficiently. Web Synergies was engaged to implement a water management system for a state government in the Republic of India centred around powerful dashboarding, background analytics, visual analytics, management through exception, and codifying standard operating procedures. This new water management software supports customizable key performance indicators (KPIs), business rules for managing water flow, and real-time reporting on a rich geospatial visual.

Client

A State Designated Agency (SDA) for the implementation of projects under the National e-Governance Plan (NeGP), including State Data Centre (SDC), Statewide Area Network (SWAN), Common Service Center Delivery Gateway (SSDG), and other Mission Mode Projects (MMPs) in India.

Challenges

Water supply represents a vital problem for people, and this imposes the need to know the information regarding consumption, resources, and production. This implies continuous supervision of the water supply process to solve any problem that could occur and, at the same time, to maintain standard functioning key operational parameters.

Automating and Monitoring

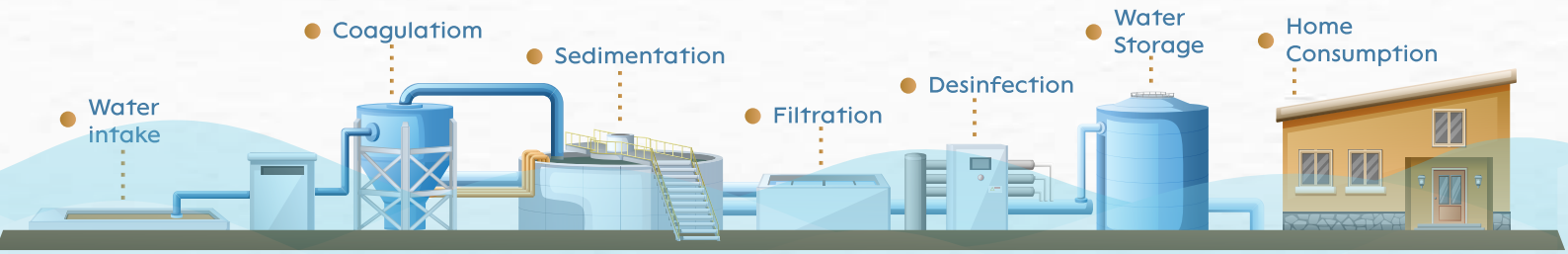
A supervision and control system needed to be built integrating PLCS for basic functions like communication, adjusting, measuring, etc., IoT gateways that support industry-standard open communication protocols (OPC-DAt Modbus), data from solar-powered borewells, libraries, communication systems, standard interfaces or dedicated ones with sensors, electrical drive elements, measuring devices.

Analytics

Real-time analytics systems needed to be deployed in order to prevent unwanted phenomena by analyzing, processing, and visualizing the data across dashboards leading to optimum functioning of water systems and ensuring that financials (LPCD Specific Energy Consumption, Service Level NRW calculations) were also calculated to manage the system.

Data Integration

Data from over 300+ SCADA systems (Local client server based) needed to be consolidated and aggregated into an N-tiered web and mobile application for monitoring and controlling technological parameters across the system.



Solution

The fully scalable SCADA systems Implemented by Web Synergies are live, taking care of more than 800 MLD water daily and presenting all key performance Indicators to business users in 24 Hours water supply cycle. The AI-powered system is empowered to generate intuitive alerts/push notifications to business users to make informed data-driven decisions to ensure proper water supply.

Informatics

- ETL (Extract, transform, and load) & ELT to refine data before pushing it to a shared repository and expediting MIS loading time for reporting all KPIs using live data.
- It is integrated into the industry standard SAS -BI tool to forecast dam level and water demand/supply scenarios.
- Web-based data import/export tools to manage asset inventory.

Web/Mobile App Dev.

- PostgreSQL and Apache Kafka services were used to manage data.
- NET-based web application integrated with multi-layered legacy CIS application to facilitate geo-tagging of assets was implemented.
- The hybrid mobile app was developed using Flutter - with jurisdiction based user access and rights management powered by CIS.

SCADA

The fully scalable SCADA systems allow the optimum functioning of the pumping system, safety, and endurance growth in the equipment and installations, exploring, in turn, obtaining efficient energy usage and optimum administration of drinkable water. Our SCADA system's KPIs-based implementation logic can be extended to any SCADA systems across other industry segments like Oil and Gas, Manufacturing, and Power Utilities.

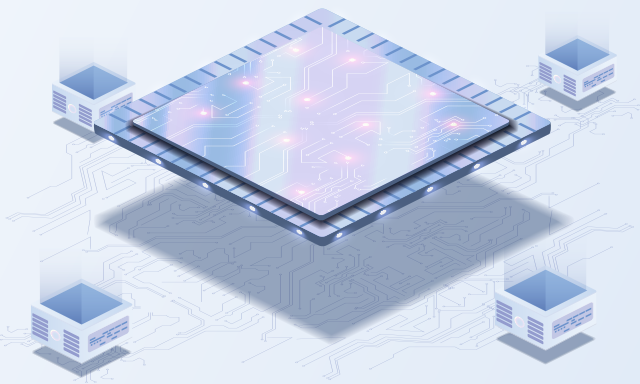
Case Study

Overview

Our client is a prominent full-service semiconductor design, development, fabrication, and innovation company with a global presence. Committed to advancing the world by creating cutting-edge products and technologies, they aim to simplify lives and confront the challenges of tomorrow head-on.

The Challenge

Our client has faced several significant challenges in their operations. They relied on a labor-intensive manual process to monitor their end-to-end test flow procedures, hindering efficiency. Moreover, they desired to offer their customers transparency by enabling them to track the progress of their requests. Additionally, optimizing equipment utilization and resource planning posed significant hurdles.



Our Solution

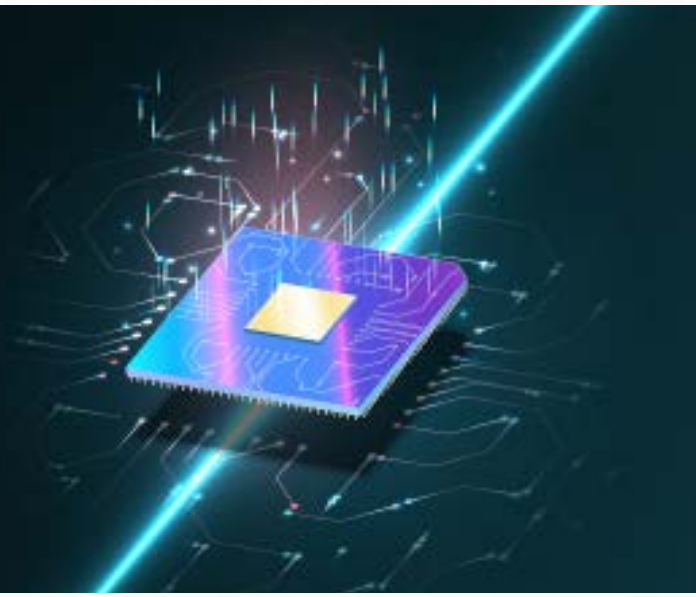
A user-friendly online capacity booking system was meticulously designed and developed to address these challenges. The primary goal was to create a test lab system that would facilitate request submission, planning, scheduling, and test result recording, ultimately enhancing the efficiency of their test engineering processes and increasing overall visibility.

The solution leveraged the Synergion (Formerly iLab) product as a foundation, which was then customized to align with our client's specific requirements. The application was built on the MVC platform, with MS SQL Server as the robust backend infrastructure.

Case Study

Implementation

The project was executed following Agile methodology, involving client user champions. A "test as you go" approach established a testing environment, ensuring robust quality control. In addition to this, Web Synergies efficiently set up the necessary infrastructure environment, including firewall configurations and backup procedures.



Technologies Deployed

The technology stack employed for this solution included MVC, SQL Server, jQuery, Windows Server, and Bootstrap. .

.NET MVC · Microsoft SQL Server · Windows Server · Bootstrap · jQuery write less, do more.

Results

Enhanced Capacity Visibility: Implementing the new system improved Our client's view of their booking capacity, allowing for better resource allocation and planning.

Real-time Progress Tracking: Customers gained the ability to monitor the real-time progress of their test flow processes, improving transparency and communication.

Optimized Equipment Utilization: Our client optimized equipment utilization with real-time progress visibility, resulting in more efficient operations and cost savings.

Improved Test Lab Productivity: Overall, the project significantly increased the productivity of our client's test lab operations, streamlining their processes and improving their ability to meet customer demands effectively.

Case Study | SAP

Industry: Supplier, Trading, Service Provider, Wholesaler

Products & Services: Hot Rolled Coils, Cold Rolled Coils, Steel plates, Coal

Solution

SAP Business One Implementation was done within the stipulated time symbolic reduction of variation in actual stock & virtual stock Import purchase tracking was done easily

Technologies Used

SAP Business One SAP Azure

Project Challenges

Integration with SAP S4 Hana with the parent company.
Customer Relationship Management
Actual & virtual Stock Mismatch
Customization to automatically create PO once they create So in SAP S4 Hana

Business Value Added

End to End Optimization of Business Processes.
Quick access to information to management.
Effective Inventory Management and capturing its movement at various stages.
Finance and Accounting linked to all respective transactions in SAP
Easy Customization to meet typical requirements
Efficiency improvement with integration capabilities.
Accurate reporting of Profit & Loss margins, thus helping improve the bottom line.

Case Study

Overview

Our client is a Carbon black Manufacturer with 5000+ clients globally. Their customers are big-name brands of tire manufacturing, black pigment manufacturing, ink manufacturing, and plastic component manufacturing. With quality matching global standards, our client is helping their customers with world-class products.

Challenges

Our client lacked a single digital platform for process integration and SAP best practices for Material Management, Production, and Quality control. There was a lack of quality checks at multiple levels, a lot of manual input, and unbalanced workloads. There was improper batch management and stock consolidation at the SFG level. RM And FG stock storage location management, reject material stock storage management, weighbridge management, and spare parts management for plant maintenance had to be implemented.

Solution

The overall solution covered the multiple scenarios of SAP solutions, field integration, software integration with MES, ASRS, LIMS, OT Data, QR code, and overall plant output increment by 1%. Yokogawa India Limited will provide and install the field devices (An equity partner of Web Synergies). The objective is to increase the plant output by 1%, decrease the manual workload, improve quality, ease system usage, data accuracy, and field integration.

Result

We optimized the plant output by an increment of 1%, reduced manual work by 70%, increased data accuracy, optimized data protection, improved dashboard designs for management executives, automated the weighbridge system, and achieved machine integration at all levels

Case Study | SAP

Industry: Shipping

Products & Services: Shipping, Transportation & Logistics

Solution

Our solution - A holistic B2B supply chain and packaging solution platform was implemented for this sizeable Japanese client, cutting across APAC and Japan.

- Connects suppliers and customers using the latest innovative technologies using AI, Machine Learning and a Chatbot.
- Reduce manual input workload, and increase supply chain visibility and operational efficiency, and improve data accuracy

Technologies Used

SAP Business One SAP Azure

Project Challenges

Lacked a single platform for all its diverse operations. The buyers were expecting faster deliveries with multiple channel management.

- No digital solution existed, there were several manual inputs, and the operational workload became too large to manage efficiently.
- There was a lack of visibility, accountability, compliance, quality checks, and no collaborative platform for reviews and chat.ll

Business Value Added

Our team implemented a business solution, including artificial intelligence, machine learning, and chatbot integration, which increased operational efficiency by 50%, reduced manual input workload by 70%, and data accuracy and uptime by 80%. Information searching became easier, reduced the number of processes and cycle time, and increased accuracy and visibility with the dashboard reporting & analytics.

Case Study | Application Development

Industry: Shipping

Products & Services: Container Shipping, Logistics, Leisure

Solution

- Implementation of a system to reduce the line managers' workload by 50% and improve the quality and timeliness of data collection so that the company can act upon it.
- The cost savings for a global shipping operator are enormous as assumptions for cargo weight & port weight comparisons need to be accurate to avoid costly shutout periods.
- The system should generate multiple reports and an automated Coastal Capacity Alert to avoid last-minute issues and manual user intervention.

Technologies Used

Client Challanges

- The client wanted to reduce their manual input workload by 70%.

Business Value Added

- State-of-the-art technology ensures the system is both cost- effective and robust.
- Accessibility using mobile devices - since the workforce is global and mobile.
- Electronic lodging of capacity allocation, which increased visibility of its container booking and allocation operations
- Our solution works for both data processing & management information systems
- The solution integrates with existing systems - since security and data integrity were essential components.

Case Study | Application Development

Industry: Trucking, Automobiles, Heavy Equipment
Products & Services: Compactors, Demolition Equipment, Dumpers, Trucking, Material Transfer Vehicles etc.

Solution

E-Commerce B2B standard solution developed on .NET Framework hosted on Azure cloud hosting.

Technologies Used

Project Challenges

Customizing of the product according to the complex requirements and usability enhancements. Sign-off and User acceptability.

Business Value Added

User-friendly UI, quick part browsing for dealers, very fast order processing for HUBS.
Order Portal accessible for dealers from multiple countries
(like Singapore, Malaysia, Indonesia, Australia, etc.).
Automatic email notification to the dealer, HUBS, and suppliers on each order processing.
Automatic email notification to the supplier (from APAC and Europe) when order is placed has context menu

Case Study | Microsoft Dynamic 365

Industry: Construction & Real Estate
Products & Services: Development of Gated Communities, Residential Townships, Commercial Complexes/ Malls, Residential Layouts

Solution

Provided easy-to-use, customizable Microsoft Dynamics sales CRM based on client requirements.
Integration of website and call center application.
Aparna ERP system integration to exchange property booking details.
Integration of property portals eliminated the manual lead creation by sales executives. Thus leads get created based on qualified lead data received from property portals.
Once the lead is qualified and the property has been reserved the information is sent to the rewards system to award the customer.

Technologies Used

Microsoft .NET | .NET ASP.NET | MVC | Web API | Windows Server | Microsoft SQL Server

Project Challenges

Streamline manual, tedious, time-consuming manual sales process to automation.

Business Value Added

Leads import from property portal, customer follow-up, lead change into opportunity and finally close the lead once the customer is happy.
The CRM system integrates with property portals, Finance to fetch and update property booking details.
Visibility for property heads and top management by automating the sales process.
Increased operational efficiency.
Visibility on reporting with dashboard creation.

Case Study | Azure

Overview

Our client is a global asset management company, sought to enhance their digital infrastructure. Facing challenges with Sitefinity CMS and data center hosting, they migrated to Azure for improved reliability and high availability..

Challenges:

- Azure environment in Southeast and East Asia for DR and high availability.
- Internal load balancer for webservers with web application firewall.
- SQL Failover Cluster (Active-Passive) and separate network resource groups.
- Jump Server and Development server with Point-to-Site VPN.

Solution

- Relied on Sitefinity CMS for corporate and country portals.
- Needed firewall, vulnerability management, DR, and high availability for databases.
- Previous environment hosted in a data center.

HA Configuration:

- Web and File servers synced across regions through VPN Gateway.
- Traffic Manager for seamless changeovers during updates.

Results

- Solution deployed in 40 days; 20 days of user testing.
- ASP.NET & Sitefinity CMS functionality tested successfully.
- Restricted environment access to Jump Server; enhanced security.
- Successful Qualys Vulnerability Assessment integration.
- Azure VPN Gateway minimized data traffic costs.
- Efficient DR through Traffic Manager DNS priority.
- Stable SQL server high availability configuration.
- Uninterrupted access to country-based portals.
- Seamless multi-country website management.
- Streamlined document publishing on CMS through File server.

Case Study | Microsoft Power Apps

Industry: Appliances, Electrical, and Electronics Manufacturing
Products & Services: Medical Imaging Solutions, Corporate & Education Solutions, 4K, HDR, Healthcare, PTZ cameras, IP Live solutions, professional audio, and professional monitor

Solution

Our team successfully implemented a comprehensive solution for our client using Power Automate, PowerApps, Common Data Service (CDS), Azure, and SAP S/4HANA. We developed a suite of custom applications including the Fixed Asset Management App, Dealer SellThru Collection App, Payment Request App, and Vendor Management App. The CDS served as the robust back-end for these applications, ensuring seamless data integration and consistency.

Technologies Used

Microsoft PowerApps

Power Automate

SAP S/4HANA

Project Challenges

Our client encountered operational challenges with manual and time-consuming processes in asset management, dealer sell-through collections, payment requests, and vendor management. These processes were error-prone, lacked real-time visibility, and hindered efficiency. A digital transformation was sought to automate and streamline these workflows.

Business Value Added

Improved Efficiency
Enhanced Accuracy: Integrated CDS with S/4HANA for accurate, consistent data across systems.
Real-time Visibility: Enabled tracking and monitoring of critical processes for immediate insights.
Increased Productivity: Mass upload and workflow reminders improved efficiency and task focus.
Seamless Integration: Power Automate synced transactions between apps and S/4HANA ERP.

Case Study | Microsoft SharePoint

Industry: Appliances, Electrical, and Electronics Manufacturing
Products & Services: Consumer Electronics, Energy Solutions, Housing Solutions, Audio-visual solutions, and Corporate Citizenship

Solution

The project will refresh the SharePoint Intranet portal by providing department users with more flexible content management options without affecting the current intranet business functions. Three departments were selected for the pilot that moved to production successfully. All department sites are set up with ongoing content migration.

Technologies Used

SharePoint

Project Challenges

To improve the intranet usage and ensure that content is up-to-date and maintained by the business owner. The standard best practice user interface was designed to help users upload the content and maintain it subsequently.

Business Value Added

Common look and feel with master pages
Standardization of template
Better content management and access control