# **NeoSOFT<sup>®</sup>**

Capabilities

# Driving Digital Outcomes in the Oil & Gas Industry



## **Certified To Deliver Quality**

KPMG



This is to affirm that

## **NeoSOFT Private Limited**

**Organizational Unit: Software Development Unit** 

has been appraised at

**Maturity Level 5** 

of the Capability Maturity Model Integration for Development,

Version 3.0



9001:2015 Quality Management ISO 27001:2013 Information Security

ISO

20000-1:2011 IT Management ISO

22301:2012 Business Continuity Management

## What We Do

## **Team Augmentation**

A team of 4000+ Battle Tested engineers across 100+ Different Stacks.

We are your Digital Factory, dedicated teams to supercharge your development throughput.

0 Operational Overheads.

Agile & On Demand.

## **Fixed Scope**

We offer meticulously crafted project specifications and timelines for cutting-edge development, seamless integrations and feature-rich solutions.

The NeoSOFT approach ensures your projects are delivered with precision and excellence.

## **Managed Services**

Our IMS services helps enterprises to run Business as usual.

With strong SLA driven services, 24x7 Support, Governance and Technology expertise, we help to optimize processes and costs.

## **Our Expertise**

We help businesses wherever they are in their digital journey. From consulting for a **digital transformation** to carving out a **technology roadmap**. Our expertise helps you to **drive ROI** from your digital initiatives.



## **Selected Clientele**



## Case Studies

## **Global Leader in Manufacturing Fuel Products**

Built a smart automation tool for gas-pipes welding process.



## **Outcomes**

### **Improved Visibility**

 Simple yet intuitive UI that provides real-time status on the automated and remotely monitored welding activity and helps identifying abnormalities.

#### **Quality Outcomes**

 Automation of welding gas pipes using advanced technologies yielded precision and superior outcomes.

### **Improved Productivity**

• Elimination of the traditional manual welding process boosted productivity and overcame the risk of human casualties.

## Challenges

- Achieving high-levels of productivity was crucial as the client operates in the oil and gas sector, where factors such as time, yield, and budgets were necessary to be kept as minimal.
- Leveraging IoT Technology in the industrial framework required coupled efforts ensuring that the communication between the hardware devices and the software was thoroughly built.

## Technical Spotlight

- Node. js supports the MQTT protocol, commonly used by IoT apps, making it easy to connect to independent and third-party services and prepare it for integration through multiple environments.
- IoT in welding offered delivering insights on system performance that led to identifying communications between systems and deriving performance data.

## **Solution Highlights**

- The application developed for the oil and gas industry automates the welding process for pipes of diameter ranging from 6-8 inches. The process involves welding from inside as well as outside with well precision and accuracy.
- The project is based on the IoT platform and establishes server to server communication and server to client communication.
- Integration of various cameras and sensors to perform precise welding and rotation and movement modules to move the torch in various positions.

## **Tech Stack**





mongoDB

express





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	5	250 mm Wiseroot+		WPS 135-FW-7 rev. 0	C Thomas Anttonen Ritchie Schmitt	3 C
	6	650 mm Wiseroot+		WP5 135-FW-4 rev. 0	Ritchie Schmitt	1 C
	7	250 mm Wiseroot+		WPS 135-FW-11 rev. 0	🔀 Patrik Werfel	1 C
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## One of the Largest Integrated Energy and Chemicals Companies

Engineered an IoT-based solution for industrial equipment monitoring.

(	Industrial IoT	Sensors	Integration	Data Analytics

## Outcomes

### **Improved Visibility**

• The system provides a clear visibility on equipment availability, performance, downtime, and its condition.

#### Accelerated Operations

• Real-time tracking of equipments enabled the client to identify bottlenecks and ensure 99.99% uptime of the manufacturing process.

### **Operational Insights**

 The data captured on a real-time basis is integrated with ERP which delivers insights on the operation efficiencies and manufacturing productivity.

## Challenges

- Difficulty in keeping a track of equipment performances that have been added to the production line.
- Minimize unplanned downtime and establish transparency throughout the equipment's lifecycle.
- Lack of system that could capture the production milestones and perform analysis to derive the gaps.

## **Technical Spotlight**

- Connecting PLC, controllers, and sensor-based devices to one platform.
- For serving machine views, Express.JS HTTP server has been used.
- -• Connecting devices to the SAP Cloud.

## **Solution Highlights**

- Manufacturing process orchestration by real-time tracking.
- Show real-time dashboards of the machine on the shop floor, generate reports and KPIs.
- Handling massive amounts of data emitted by sensors.
- Enable safe and secure operations, monitor equipment availability, condition, and performance.

## **Tech Stack**















## A Leading Indian Oil & Gas Refining Company

Created a tailored ERP system that integrates crucial business operations.



## Outcomes

### **Improved Sales**

• Automation and data transparency improved business decision making, subsequently impacting sales growth.

#### **Increased Collaboration**

 Integrated business operations elevated collaboration between internal and external stakeholders.

### **Elevated Customer Experience**

 Capturing user interactions in real time enabled the agility to address customers' demands/queries.

## Challenges

- Spreadsheets were used to maintain critical business data; which over a period of time became difficult as the volume of transactions and data started growing exponentially.
- Manual processes hindered the operations and increased the rate of manual errors.
- High risk involved in data consistency, integration, analytics, and security.

## **Technical Spotlight**

- Leveraged Odoo for its capability to own a complete suite of business-applications.
- Odoo's open source feature made it convenient to customize and configure the system.
- Python's simplicity made complex data appear simple and easier to analyze.

## **Solution Highlights**

- ERP Modules Sales, Purchase, Accounting, Inventory, Back office.
- Centralized data repo and secured access.
- Real-time data dashboards with insights into production efficiency and quality.
- Streamlined audits with greater financial visibility and control.

## **Tech Stack**









## A Leading Government Entity in Oil and Gas

Developed a custom CRM for enhanced visibility on business operations.



## Outcomes

#### Accurate Demand Forecasting

 Enables identifying market patterns, trends, and demand-forecasting and speeds up time-to-market

#### Improved Product Quality

 CRM captures data from multiple sources and helps analyze process errors in real-time that might be contributing to product defects.

### **Intelligent Supply Chain**

 Detailed and useful insights about operations, inventory management, order processing, warehousing, and distribution chains, empowering manufacturers to manage production schedules.

## Challenges

- Lack of visibility on sales and demand forecasting, which subsequently disabled competitive growth.
- Difficulty in managing customer information, leads and opportunities, deals, quotes, and order status.
- Building up a holistic happier experience for its customers, partners, and vendors.

## **Technical Spotlight**

- Leveraged Microsoft Dynamics 365 in hybrid cloud environment to establishing connectivity between data, business logics, and processes.
- Limitless and flexible UI controls using WPF.
- Custom report generation using MS SQL server databases.

## **Solution Highlights**

- The CRM integration in the clients digital ecosystem was introduced to achieve solutions that enabled -
  - 360-degree view of concise and consistent operations.
  - Greater visibility into the sales pipeline.
  - Intelligent production planning.
  - Supply chain visibility.
  - Enriched customer relationship.
  - Quality leads





'.NET

Core





## A Globally Renowned Petroleum Company in Bahrain

Built a multilingual (English & Arabic) CMS website.



## Outcomes

### **Increased Traffic**

• A unique and innovative experience boosted the amount of users visiting the website.

### Improved User Experience

• Implementing a dynamic and intuitive interface elevated the user experience and increased user satisfaction.

### **Improved Interactions**

• Access to CMS enabled client improve their TAT in sharing latest updates with their customers.

## Challenges

- Absence of a dedicated back-end module enabling admin to add, update and delete posts.
- A difficult and dull interface led to users dissatisfaction.
- Lack of an option to change language as per user preference decreased user engagement.

## Technical Spotlight

- Crafted dynamic, quick-loading and interactive modules using Microsoft Sharepoint 2013.
- Integrated the HTML5 video for the landing page of each menu item.
   Video.js is used to achieve this functionality.
- Used Oil Api to fetch WTI and CRUDE oil online price.
- Used yahoo weather api to get weather.

wpf

## **Solution Highlights**

- All pages are adopted for 2 languages: English and Arabic.The website is divided into 6 main chapters. Each of the chapters have it's own colour palette. Colours of links, footer colour and some other details on these pages are different in colour.
- Website consists of multiple modules like-
  - 1. About
  - 2. Operation
  - 3. Procurement
  - 4. Responsibility
  - 5. Career
  - 6. Clubs and Facility



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## Canada-based Retail Chain of Fuel and Petroleum Products

Engineered a next-gen data-engine and analytics solution for its multiple gas stations spread across cities.



## Outcomes

### Improved Data Insights

 Integrated data engine enabled client to capture data from the POS located across multiple cities and gain customer purchase history records.

#### **Enhanced Operations**

 Centralised data, inter-connected systems, inventories and transparency boosted operational activities.

### **Loyalty Boost**

 Acquired 20% of the population as loyal customers after introducing fuel-loyalty reward program.

## Challenges

- Stiff market competition in a high-demanding but saturated business model, led to need of launching innovative campaigns.
- Lack of centralized data and no clarity on sales, inventories, and purchase patterns led to ambiguity in devising the marketing campaigns.
- A dire need to get competitive by making inferences based on integrated data, insights, and real-time market analysis.

n python

athena software

## **Technical Spotlight**

- Leveraged S3 for data ingestion while loading it from multiple sources (RDBMS/ API/ FTP).
- Used Tableau to interpret data present in Redshift/Athena and represent them in visual format.
- The platform was built using Python for its convenience in harnessing data for statistics and scientific functions.

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## **Solution Highlights**

- Capture, analyse, and control data of fuel and non-fuel related sales, and analyse budgets at any given point of time.
- Dashboard that provides real-time insights on bottom-line sales, geography that yields highest sales, loyal/repeat customers, and rewards through fuel station loyalty program.
- Report generation and visualisation using Tableau.





## One of the Largest State-owned Oil and Gas Companies in India

Created a refinery optimization portal to maximize profits in cracking units.



## Outcomes

### **Optimized Temperature Control**

 Automated hourly temperature recommendations for refinery units improved efficiency and maximized profits by leveraging data-driven insights.

### **Improved Data Accessibility**

• Real-time data retrieval and display through SQL Server and Python streamlined access to critical information for panel officers.

#### **Enhanced User Interface**

 Interactive dashboard and data visualization provided a clear, responsive experience for users to monitor and analyze refinery metrics.

## Challenges

- Effectively integrating and synchronizing data from various sources to ensure real-time accuracy.
- Ensuring that the platform can efficiently scale to handle increasing volumes of data and user requests.
- Creating an intuitive and user-friendly interface that can effectively display complex data sets while remaining responsive.

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## **Technical Spotlight**

- Used Python for seamless connectivity between the application and MSSQL Server to automate data fetching.
- Utilized Node.js for its non-blocking architecture to handle concurrent data requests and processing.
- Leveraged React.js and Redux for a modular and maintainable UI architecture that supports dynamic data visualization and state management.

ろ

Windows

Server

React

n 🔁 python

## **Solution Highlights**

- Provided accurate and up-to-date information for the optimization algorithms.
- Enhanced the ability to manage large data volumes effectively.
- Ensured a more intuitive and responsive user experience, making it easier for users to interact with complex data sets.

🖨 Flask



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						Total net std volume		94,985	91,969	3,015 b
						Total net mass		30,760,014	29,783,506	976,508 lb
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## A Company Providing Drilling, Production Services to Oil and Gas Industry

Built a platform to streamline oilfield run ticketing for crude oil and water haulers.



## Outcomes

### **Improved Operational Efficiency**

 Automation of ticket creation and submission reduced manual processes, leading to faster operations and decreased turnaround times.

#### **Increased Data Accuracy**

 Auto-populating data fields minimized input errors, resulting in higher accuracy in reporting and reduced accounting discrepancies.

#### **Enhanced Real-Time Reporting**

 Supervisors received immediate updates on oilfield assets, allowing for more informed decision-making and timely interventions.

## Challenges

- Ensuring consistent functionality and appearance across iOS, Android, and Windows platforms.
- Accessing device-specific features (like GPS and camera) when using cross-platform tools.
- Implementing and maintaining complex business rules for ticket management without leading to code bloat and maintenance challenges.

Xamarir

## **Technical Spotlight**

- Leveraged Xamarin's shared codebase capabilities to create a consistent experience across all platforms.
- Implemented Xamarin Essentials to access native device features ensuring seamless integration.
- Applied a modular design pattern in C# and XAML to separate business logic from UI components, making maintenance easier and code cleaner.

CUDSCUD

Visual Studio

## **Solution Highlights**

- Achieved a unified look and feel across devices, enhancing user satisfaction and minimizes learning curves.
- Enabled easy integration of native features, enhancing user experience.
- Simplified the codebase, making it easier to manage and update business logic without affecting the UI.



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©	2024 Aimsio Inc.			Count	t: 2						

## An Indian Company that Refines and Markets Petroleum Products

Built a portal to monitor and evaluate oil samples, ensuring compliance with system specs.

Performance Optimization	UI/UX	Database Management	)(	Reliability
			$\sim$	

## Outcomes

#### **Better Performance**

 Significantly enhanced application performance, resulting in faster response times.

### **Enhanced Security**

 Improved the application's security posture, safeguarding user data against vulnerabilities.

### Streamlined Data Management

 Optimized data retrieval and manipulation, leading to improved data consistency and integrity.

## Challenges

- Scaling the application to handle higher loads effectively without degrading performance.
- Ensuring data consistency and integrity in a multi-user environment with concurrent data access.
- Meeting the requirements for real-time data processing in the application, which relies on timely information updates.

## **Technical Spotlight**

- Implemented Java MVC architecture to create a scalable application design.
- Utilized Oracle 11g for robust database
   management with transaction controls and integrity checks.
- Leveraged Redis for in-memory data
   caching and real-time data processing.

## **Solution Highlights**

- Allowed for the seamless addition of new features and better handling of increased user loads.
- Ensured high data reliability and reduced the risk of data corruption.
- Enhanced the platform's capability for real-time data updates and interactions, leading to a more dynamic and responsive application.

















## A Company Offering Maintenance Services to the O&G Sector Across the GCC

Developed a system to streamline employee data, project tracking, and loan management.

Operational Efficiency	)(	Cross-Platform Compatibility	) (	Data Integrity	)(	Automation
	/ ·					

## Outcomes

#### **Streamlined Employee Management**

 Centralized tracking of employee data, room allocations, and loans improved data accessibility and streamlined internal processes.

### **Improved Project Tracking**

 Real-time project estimation and customer data management enabled efficient project oversight and timely updates.

### **Increased Efficiency**

 Automated data handling reduced manual tasks, enhancing workflow speed and reliability.

## Challenges

- Ensuring that data remains consistent and synchronized across various systems and modules.
- Processing large volumes of data in real-time while maintaining responsiveness across the platform.
- Designing a user interface that is interactive and responsive, providing a seamless experience across devices.

n python

## **Technical Spotlight**

- Used PostgreSQL for a centralized database and Django Rest Framework to manage data interactions via APIs.
- Implemented AWS Lambda for real-time processing and Django ORM for efficient database interaction.
- Utilized HTML, CSS, and DataTables to build an interactive, responsive user interface.

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🕩 git

Windows

Server

GZ

PostgreSQL

## **Solution Highlights**

- Reduced the risk of data discrepancies and promoted reliable data exchange across systems.
- Allowed the system to deliver real-time updates with minimal delay.
- Enhanced interactivity with features like sorting and filtering, and ensured that the platform is responsive, offering a seamless user experience across multiple devices.

DataTables

django



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## A Global Trade Association Representing the Oil and Gas Drilling Industry

Built a learning platform offering industry courses, certifications, and user management features.



## Outcomes

### Improved Learning Experience

 Implemented a user-friendly dashboard and course management system, enabling a seamless navigation and personalized learning journey.

#### **Streamlined Payment Process**

• Integrated Stripe payment system for secure and efficient course purchases using debit cards, simplifying financial transactions.

### **Scalable Architecture**

• Built the platform using a scalable tech stack to ensure future growth and feature expansion.

## Challenges

- Creating a user interface that scales well across devices while maintaining a dynamic and responsive layout.
- Integrating a payment system that can handle transactions while ensuring user data protection.
- Efficiently managing a dynamic catalog of courses and tracking individual user progress while keeping the system organized and responsive.

## **Technical Spotlight**

- Used React.js and Flex to build a dynamic, flexible, and responsive UI that adjusts to different devices.
- Integrated Stripe, with built-in fraud protection, for handling online payments
- Utilized JavaScript and TypeScript for efficient management of dynamic content such as course catalog, filters, and user progress.

React

stripe

JS.

## **Solution Highlights**

- Made the platform accessible and responsive on both desktop and mobile devices.
- Ensured secure and seamless transactions for users.
- Boosted the maintainability of the codebase, providing an efficient and organized system to track courses and progress.

## **Tech Stack**





## An Energy Company Involved in Refining and Distributing Petroleum Products

Built the corporate website, including backend, database, and frontend integration.



Web Development

Performance Optimization ) (

) ( ui/ux

## Outcomes

### **Optimized Website Performance**

 Integrated backend management and frontend technologies to improve website loading speeds and overall user experience.

#### Improved Data Handling

• Created and optimized a database schema, ensuring efficient data storage and retrieval for the website.

#### **Cross-Platform Compatibility**

• Ensured the website's compatibility across various UNIX/Linux platforms, expanding accessibility and reach.

## Challenges

- Optimizing website speed and performance when handling large volumes of content and traffic.
- Ensuring efficient management and integrity of large datasets, maintaining accurate and consistent information.
- Creating a platform that works seamlessly across different devices, browsers, and operating systems.

## **Technical Spotlight**

- Optimized front-end assets (images, CSS, JavaScript) and used AJAX for asynchronous data loading.
- Structured a robust MySQL schema and utilized Laravel's ORM for data handling.
- Developed a responsive layout using CSS3 and HTML5 for cross-device compatibility.

## **Solution Highlights**

- Enabled faster page loads with reduced server strain and improved user experience.
- Ensured reliable data handling, improving data integrity and efficiency.
- Enabled a responsive design that adapts seamlessly to various devices, offering an optimal user experience.







## Leading by Passion. Driven by Innovation

