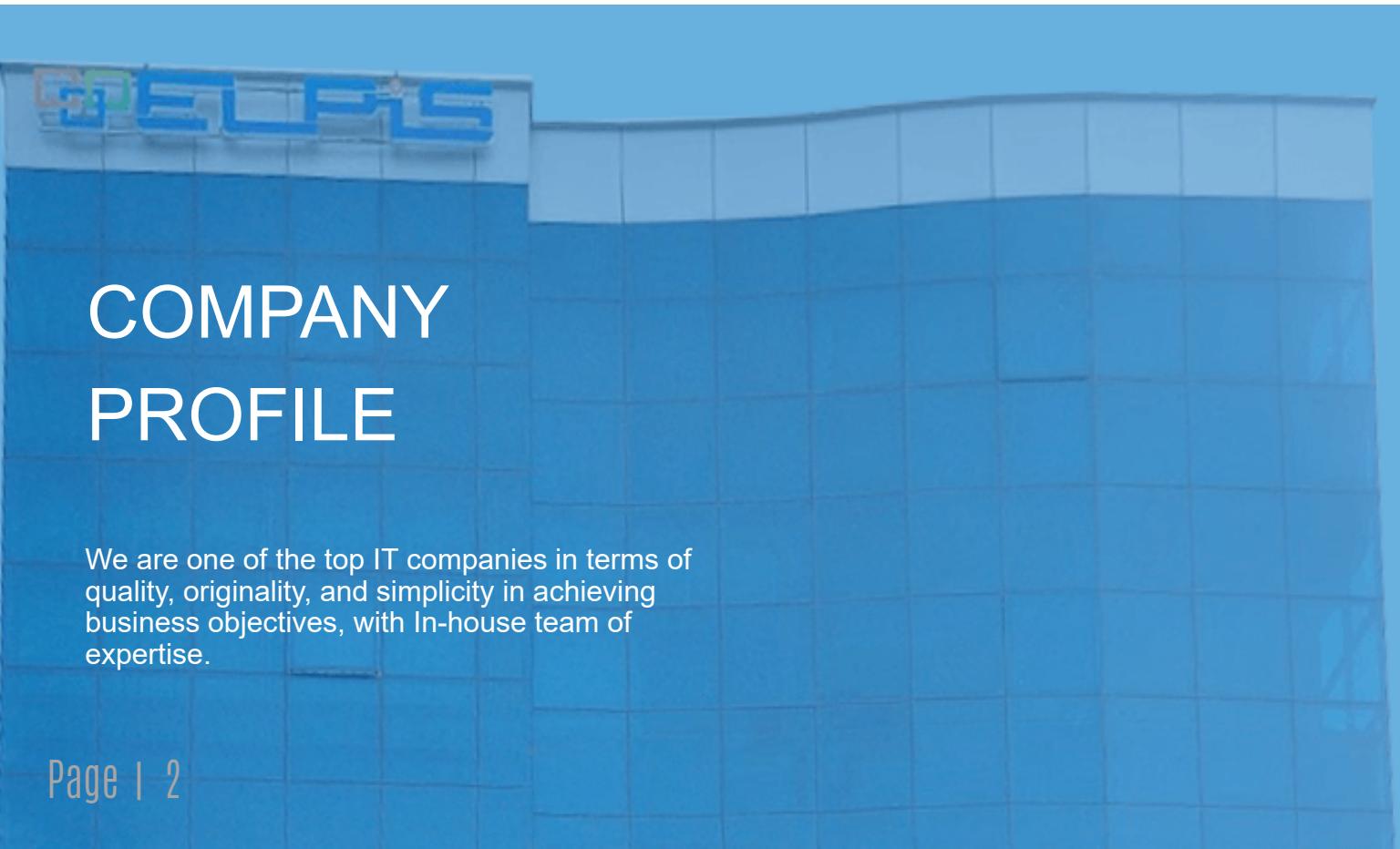




**THINK CREATE ENABLE**



**Industrial Automation  
IT Solutions & AI/ML  
INDUSTRY 4.0**

# WHO WE ARE?

## THINKER

### Solutions Provider

We are a highly experienced team of Technology Solutions in IoT & Industrial Automation. We serve our customers globally having presence in India, USA, Japan & Middle East.

## CREATOR

### Technology

We leverage Cutting Edge Technologies to provide Integrated solutions for Industrial Enterprise segment both in HW & SW.

## ENABLER

### Competitive Cost

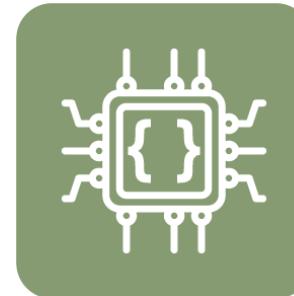
We emphasize on the Cost Effectiveness and thrive for excellence. We undertake software development on outsourced model.



**INDUSTRY  
4.0**



**ENTERPRISE  
SOLUTION**



**EMBEDDED  
& HARDWARE**



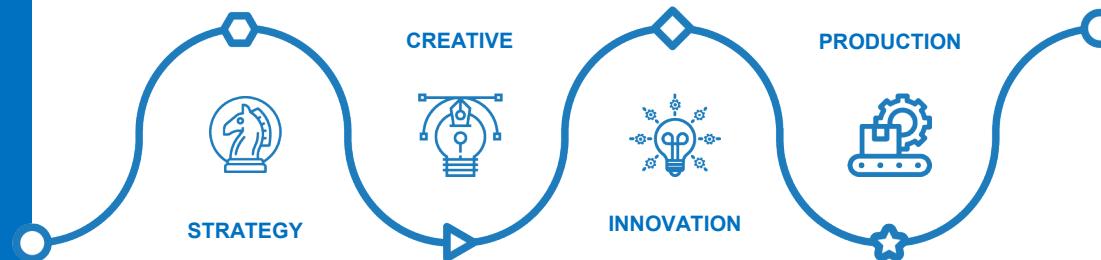
**OFFSHORE  
DEVELOPMENT  
SERVICES**

# OUR SERVICES

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We are the name of quality, creativity, simplicity in terms of accomplishing business goals.

- INDUSTRIAL AUTOMATION SOLUTION
- TECHNOLOGY CONSULTING
- EMBEDDED SYSTEM SERVICES
- DATA ANALYTICS
- OUTSOURCING
- SOFTWARE SERVICES
- TECHNOLOGY TRAINING
- IIOT SOLUTIONS
- OPC SOLUTIONS
- VISUALIZATION
- DATA SOLUTIONS



# INDUSTRY 4.0 CAPABILITIES



## INTERNET OF THINGS

A set of end-to-end services that businesses contract with external providers to design, build, install and operate IoT solutions. Here are a few of the tools we use to make a step advanced in technology : OPC, MQTT, AMQP, IoT Gateway, Apache Kafka, HiveMQ.



## CLOUD COMPUTING

A delivery model for IT services that enables several IT companies to provide their customers with access to computing resources, such as servers, storage, and applications, on demand by using Azure, Azure IoT, AWS.



## AI / ML

Frameworks – TensorFlow, Keras, PyTorch, H2O.ai, KNIME, Scikit-learn, Statsmodels, Prophet.



## MICROSOFT & TECHNOLOGIES

C#, ASP.NET Core, WPF, WCF, MVC, MVVM, C++, Xamarin, and MS-SQL. These technologies are all part of the Microsoft to build its products and services, which helps various organizations in software development frameworks that allows developers to create a wide variety of applications for Windows, macOS, Linux, and mobile devices.

# INDUSTRY 4.0 CAPABILITIES



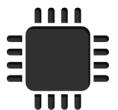
## OPEN SOURCE

We use these open-source technologies such as Angular, React JS, Node JS, JSON, JAVA, PHP, JavaScript, HTML5/CSS, Python, MySQL, and SQLite stack allows any organization to quickly and easily build and deploy web applications, and to take advantage of the latest innovations in web development.



## OPC (Open Platform Communications)

OPC solutions enable secure, reliable, and standardized data exchange between automation systems and IT systems. OPC Solutions includes -OPC DA Server, OPC DA Client, OPC UA Server, OPC UA Client, CTT, Lab Certification, COM/DCOM.



## EMBEDDED

LTE/GSM, GPS, Wi-Fi, BLE, Touch Screen Display Industrial Controller Design Highspeed PCB Design Board bring up U-boot and Linux Driver Development.



## MOBILE APP

Android / iOS, Android Studio / X Code, Objective C, Xamarin

# PORTFOLIO

# ODC and Product Development Services

For over a decade, we have successfully converted customer ideas into real products and Go To market with cost effective processes. We have a **State of Art Infrastructure facilities to accommodate Offshore Development Centre** with Highly Skilled Resource Pool in Hardware, Software, and Middleware Applications.



**Ideas To Products**



**Highly Skilled Resources**



**Cost Effective**



**Technical Support**



**Global Delivery**



**Better ROI**



**Secured Centre**



**Shorter Release Cycle**

# OUR PRODUCTS

# OEE Tracker

Overall Equipment Effectiveness Tracking Device



- To measure Industrial assets Overall Equipment Effectiveness (OEE) and track locations.
- Used in various platforms like Automotives, Oil & Gas, OEMs, Mining & Construction, Aerospace and machine Builders.

# mDAQ

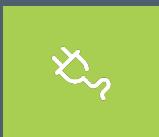
Data Acquisition Device



**Sensor**

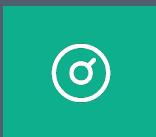


**DAQ Device**



**Power**

- 9-30v DC Input



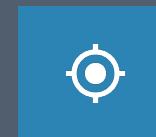
**Analog Input**

- 4-20 mA or 0-10v Input,
- 24V DC Powered Circular Connector Interface



**Visual Alert**

- Power On LED
- GPS/GSM
- LEDs
- Reset Switch



**GPS**

- Cold Start <40s
- Warm Start <32s
- Hot Start 5s
- Accuracy 5-20m



**Cloud**



**Battery**

# Edge Gateway

IoT Gateway Controller Device



- Enables PLC data acquisition & communicates to 3<sup>rd</sup> party applications like E-REMOS using 4G and Wi-Fi
- Used in many platforms like Oil & Gas, Power/Energy Manufacturing, Industrial Automation, System Integrators, Machi

# E-IDOS

Elpis IoT Device for Oil Sampling

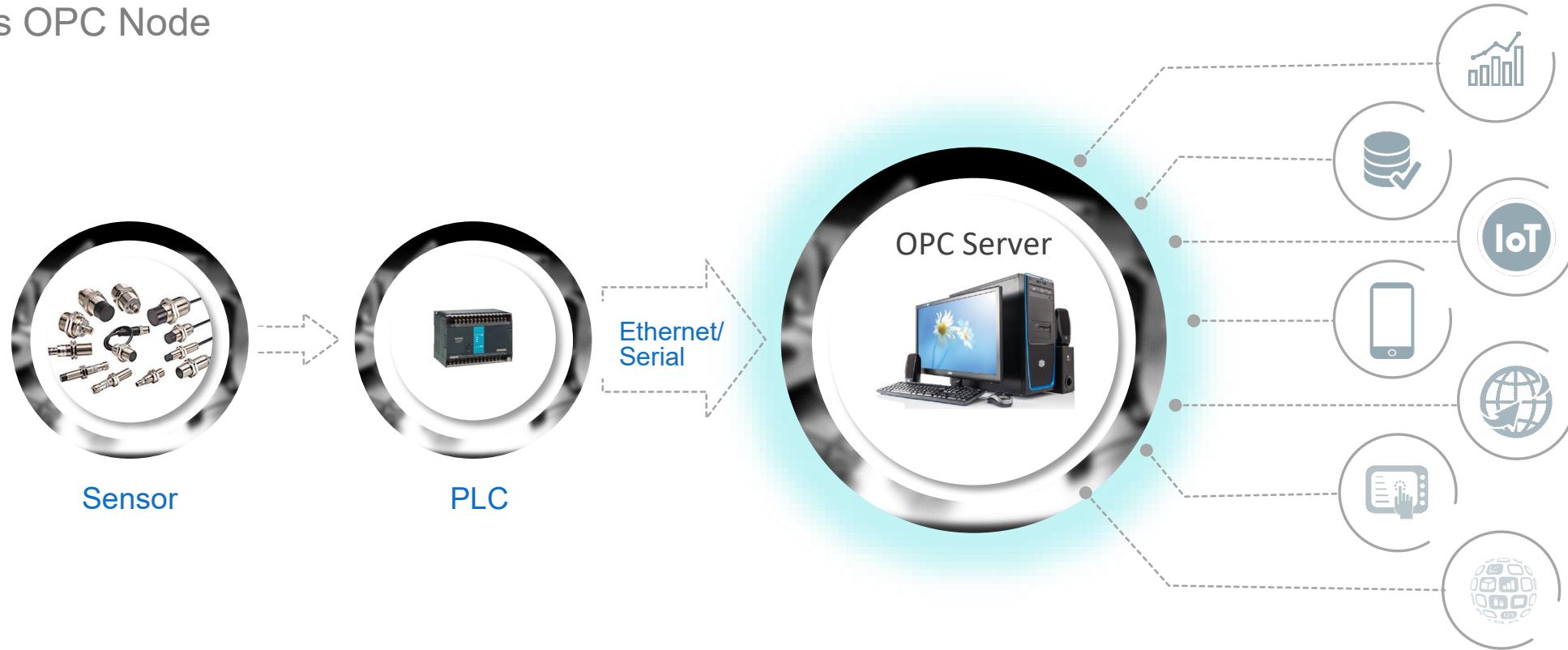


## Specifications

- 4G/Wi-Fi/ZigBee/BLE
- 2 USB, Ethernet Port, MicroSD Card Slot
- Thermal Printer
- Touch Screen HMI
- RS232/RS 485 Interface
- Motor Drive Interface

# E-ON

## Elpis OPC Node

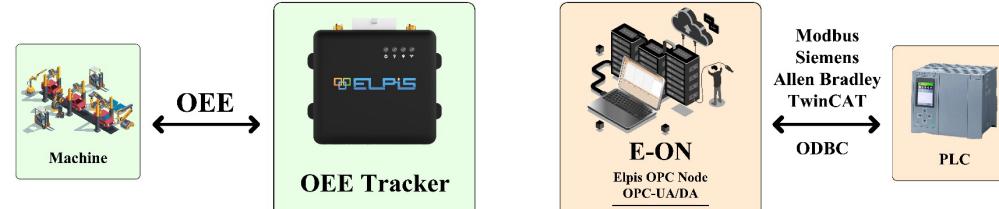


### Drivers Supported

- Modbus Protocol
- Twin CAT
- S7 Protocol
- ODBC
- Allen Bradley Ethernet/IP

# E-REMOS

Elpis Remote Monitoring System



Realtime Monitoring of Critical Parameters



Configurable Dashboards & Alarms



Analog and Digital Data Monitoring



Early Detection of Faults

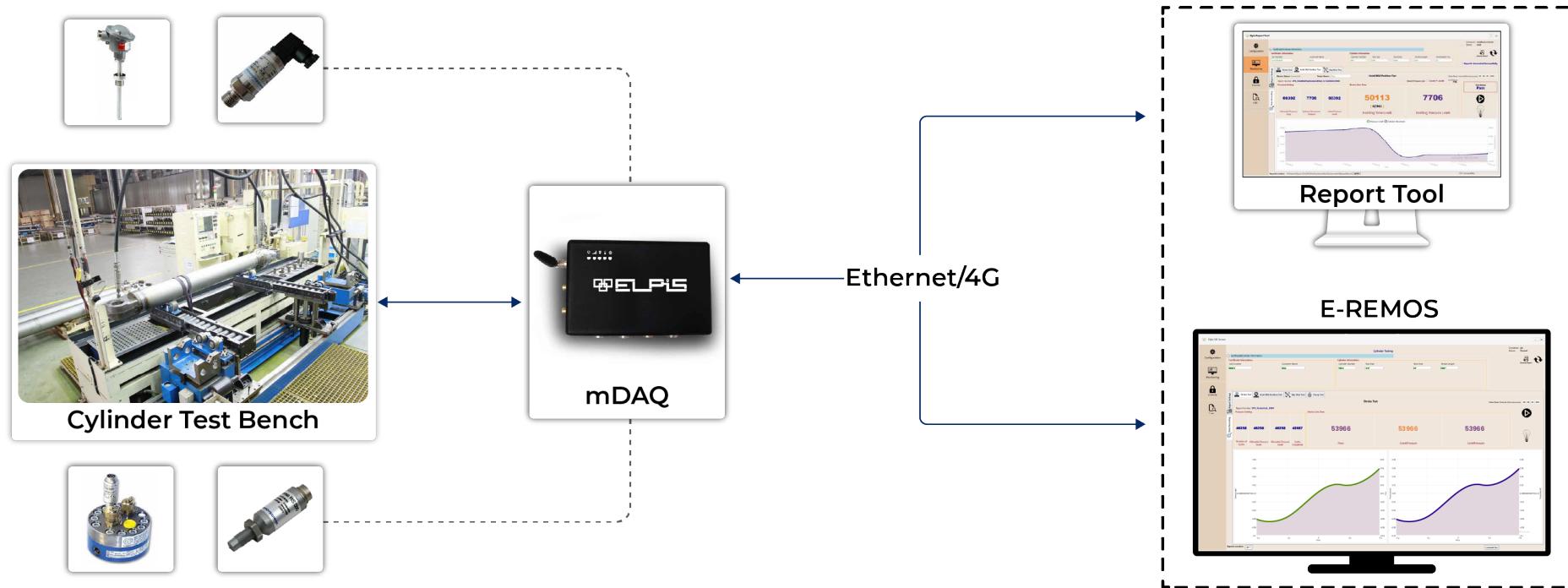


Reports



# Test Bench Reporting Tool System

Hydraulics Pump & Cylinder Test Bench Monitoring Solution



Enables automation of Pump & Cylinder Test Bench

- Configurable Test Bench
- Can be integrated to any 3<sup>rd</sup> party devices
- Centralized test monitoring and management
- Scalable architecture to add any number of devices and communication type

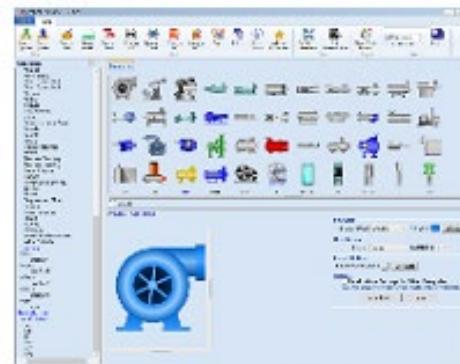
# More Products



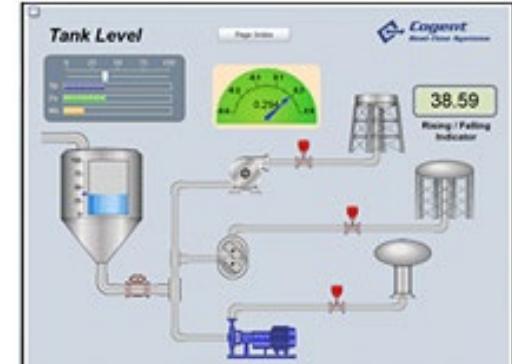
## OMNI SERVER



## DATALOGGER



## SYMBOL FACTORY



## WEB VIEW



## DREAM REPORT



## INDUSTRIAL GADGET



## SLIK-DA

# OUR SERVICES

# TESTING

Service



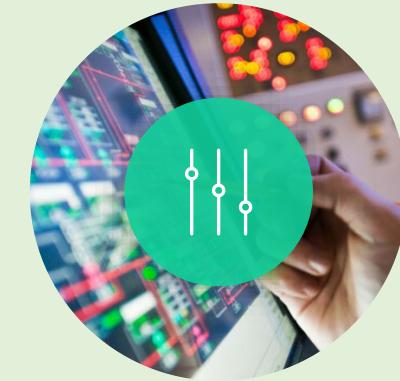
Functional &  
API Testing



Integration  
Testing



Automated &  
Manual Testing



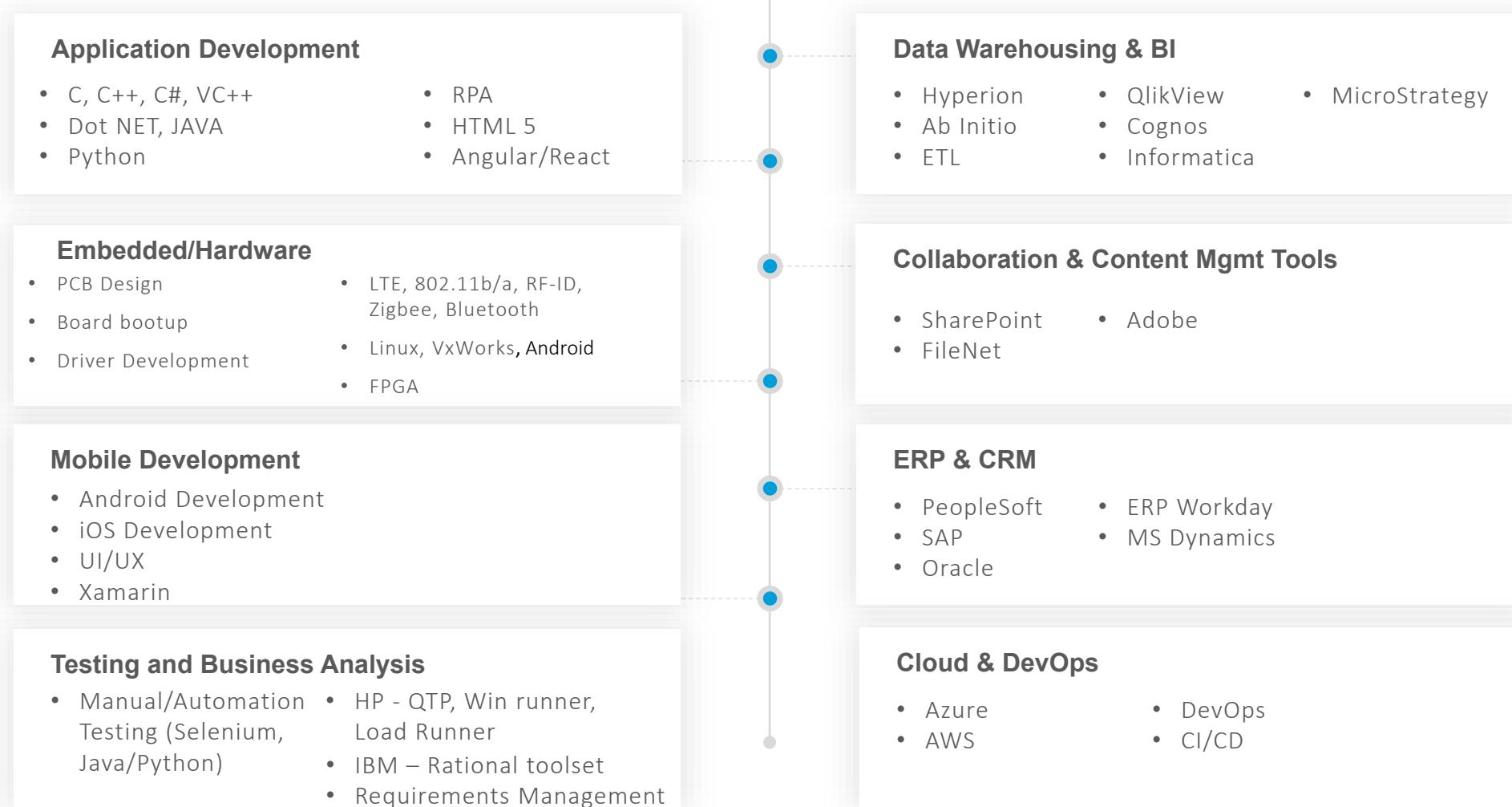
Performance  
Testing



Mobile  
Testing

# OFFSHORE DEVELOPMENT

# Capabilities



# C A S E     S T U D Y

# Case Study on Data Acquisition

## PROBLEM

It is not an easy task to monitor and measure various parameters of hydraulic pump in dredger. This increases maintenance cost and huge lose due to downtime.

## SOLUTION

In the Dredger, install **mDAQ** device to monitor various analog sensors.

One of our customers monitors the following parameters using single **mDAQ** device:

- Hydraulic Oil temperature
- Dredge pump high pressure
- Cutter high pressure
- Swing high pressure

## KEY BENEFITS

- Cost saving
- Real-time status of connected equipment
- Live Production monitoring
- Reporting, Data logging and trends

## ON SERVICE & MAINTENANCE

- *On-time Inventory / Spares planning.*
- *Predictive maintenance of the machine.*

Installation of mDAQ in Dredger



Elpis mDAQ, which provided a solution to the preceding problem

# Case Study on Oil Contamination

## PROBLEM

The lack of real-time analysis of oil contamination and water saturation in hydraulic and lubrication systems can lead to challenges in running predictive maintenance.

## CHALLENGE

Traditional methods of oil analysis, such as manual sampling and laboratory testing, are not able to provide real-time data on the condition of the oil. This can make it difficult to identify and troubleshoot problems early, which can lead to costly repairs and downtime.

## SOLUTION

E-IDOS acquires data such as solid particle, water saturation, oil flow in hydraulic & lubrication systems both in on-line and off-line states. It is widely used in the industry for performing real-time analysis of the oil contamination and water saturation. The data curated from these analysis helps in running predictive maintenance.

## KEY BENEFITS

- *Portable, easy to carry on field for operations.*
- *Results in 15 minutes instead of weeks, Reduces operational costs.*
- *Compliant to Cleanliness code ISO 4406/NAS 1638.*
- *Enables quick decision making for Predictive/Preventive maintenance.*
- *Highly interoperable with multiple Particle Sensors.*

For more info visit [elpisitsolutions.com](http://elpisitsolutions.com)

Watch video about E-IDOS [youtube.com/watch?v=jfSDCQ-z6hU&t=11s](https://youtube.com/watch?v=jfSDCQ-z6hU&t=11s)



E-IDOS, which provided a solution to the preceding problem

# Case Study on OEE Tracking

## PROBLEM

The lack of industrial assets tracking in industrial facilities is leading to inefficient and unsafe operations, resulting in increased costs and reduced profitability for organizations.

## SOLUTION

Therefore, there is a need to implement effective industrial asset tracking systems to optimize asset usage, reduce costs, ensure compliance, enhance safety, and improve overall asset management in industrial facilities.

**mTracker**, an IoT device with digital inputs, **4G/Wi-Fi**, and **GPS**, was connected to the machines on the assembly line, and the following parameters were monitored by the client:

- *Production time.*
- *Idle time.*
- *Machine availability time.*
- *Intermediate stoppage times.*
- *Unscheduled downtimes.*

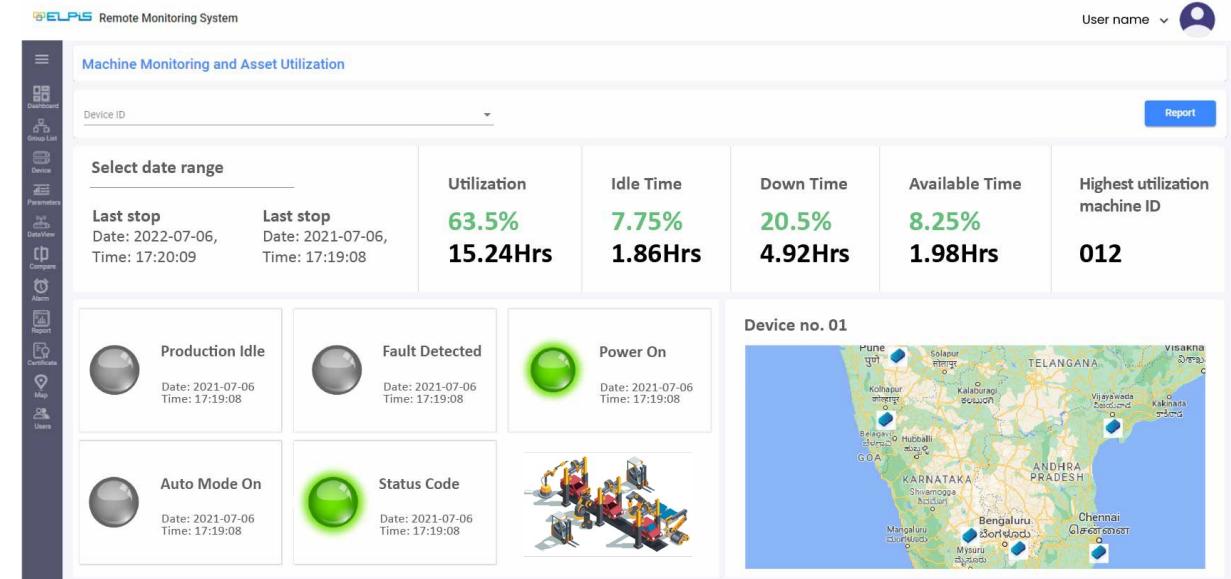
## KEY BENEFITS

- *Cost saving.*
- *Real-time status of connected equipment.*
- *Live Production monitoring from the comfort of wherever you are!*
- *Reporting, Data logging and trends*

For more info visit [elpisitsolutions.com](http://elpisitsolutions.com)

Watch video about OEE [youtube.com/watch?v=IKSK-QMdowM&t=69s](https://youtube.com/watch?v=IKSK-QMdowM&t=69s)

Source for statistics: 'The Internet of Things: Today and Tomorrow' by cloud-based security networking company.



Elpis OEE Tracker, which provided a solution to the preceding problem

# Testimonial



“Elpis IT Solutions has been an excellent choice as a partner as we continue to grow our global business. They truly understand what we need and work diligently to deliver it and to deliver added value.” JOHN WEBER, **PRESIDENT, SOFTWARE TOOLBOX INC, USA**

We support Software Toolbox by develop their Industrial Automation Software which requires specialized skills like OPC DA , OPC UA and technologies like C#,.NET, WCF, WPF and Microsoft Technologies.

## Jobvite

“We found Elpis IT solutions to be highly competent team. They are flexible to work with and deliver high quality solution on time and within budget. We are extremely happy with our working relationship with Elpis” SHANHI SAMBATHKUMAR. **PRODUCT MARKETING MANAGER, JOBVITE**

We support Jobvite with their web application development which needs skills in WordPress & PHP



“We are with ELPIS since 7 years and they are always Supportive and Excellent in providing quick solutions. The team is very Cooperative and Efficient.” SRIDHAR RAO **DGM-IT M/S.STUMPP SCHUELE & SOMAPPA SPRINGS (P) LTD**

Stump Schule Somappa in need of critical spring design and analysis software. We helped the by creating software from scratch. We used technologies like Angular, .NET and Azure cloud computing.

# Partners



# Clientele



# Global Locations

- **ODC AND INDIA HEAD OFFICE**

No. 102/1, 3rd Floor, Outer Ring Rd, Kamadhenunagar, B Narayanapura, Mahadevapura, Bengaluru,  
Karnataka - 560016  
+91 81979 53120  
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- **PUNE OFFICE**

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# THANK YOU

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