CASE STUDY – INTELLIGENT MONITORING SYSTEM: HYDRAULIC TELESCOPIC BOOM CRANE

REGION – US

OBJECTIVE
Implementation of IoT based remote health monitoring solution for the hydraulic telescopic cranes

BUSINESS CHALLENGES
• Cranes working in remote, isolated, harsh and non-connected environments
• Logistically challenging and expensive to monitor crane operations locally
• Huge financial impact of down-time of cranes – periodic maintenance not feasible or economical
• Connectivity challenges associated with the remote and harsh operating conditions
SOLUTION APPROACH

• Advisory & consulting services for problem & outcome definition
  ▪ Development of detailed requirement specs along with the customer
  ▪ System architecture from sensor to analytics: equipment data collection, connectivity, cloud, analytics and visualisation

• Identifying the right hardware and connectivity platform
  ▪ Microcontroller Platform, Sensor integration and connectivity solutions
  ▪ PCB Designing with EMI / EMC tested proven design concepts
  ▪ Sub 1GHz RF plug-n-play UART module based over LoRa Protocol.
  ▪ RS485 bus/ Ethernet for Event Recorder interface.

• Connectivity
  ▪ LoRa and GPRS Gateway Integration

• Cloud, Apps & Analytics
  ▪ Compare, analyse, recommend cloud platform and deploy the cloud applications
  ▪ Analytics and visualization over the mobile and web based services

• Verification & Validation
  ▪ Design, development, verification & Validation of the complete solution.

• Manufacturing
  ▪ Low level prototyping of 50 numbers for alpha testing and acceptance testing.

EXPECTED BUSINESS OUTCOME

• Real-time remote operations monitoring
• Inventory optimisation & Efficient Spare part management
• Predictive Analysis & Failure Prediction
• Warranty management through intelligent insight
THE TECHNOSOFT ADVANTAGE

- Access to cross-disciplinary expertise across relevant domains and technologies
- Flexible and requirement based ramp up ramp down of the team and easy access to SMEs for specific technological needs
- Faster implementation and time to market
- Support in the deployment and pre certification

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