



ARTHOR

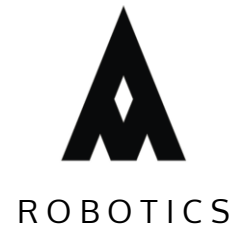
LLC

A 4IR Technology Research
and Development Company
for Smart Bangladesh

Transforming Bangladesh with
4th Industrial Revolution



An Ecosystem for Smart Factories, offering a wide range of IoT devices, software solutions, Automation and AI driven service. Factory Next is a sister concern of Arthor Limited.



Delivering a wide range of high end robotics & artificial reality simulation systems (AR, VR & Cyber Physical) for defense and security, training, education, and manufacturing sector.



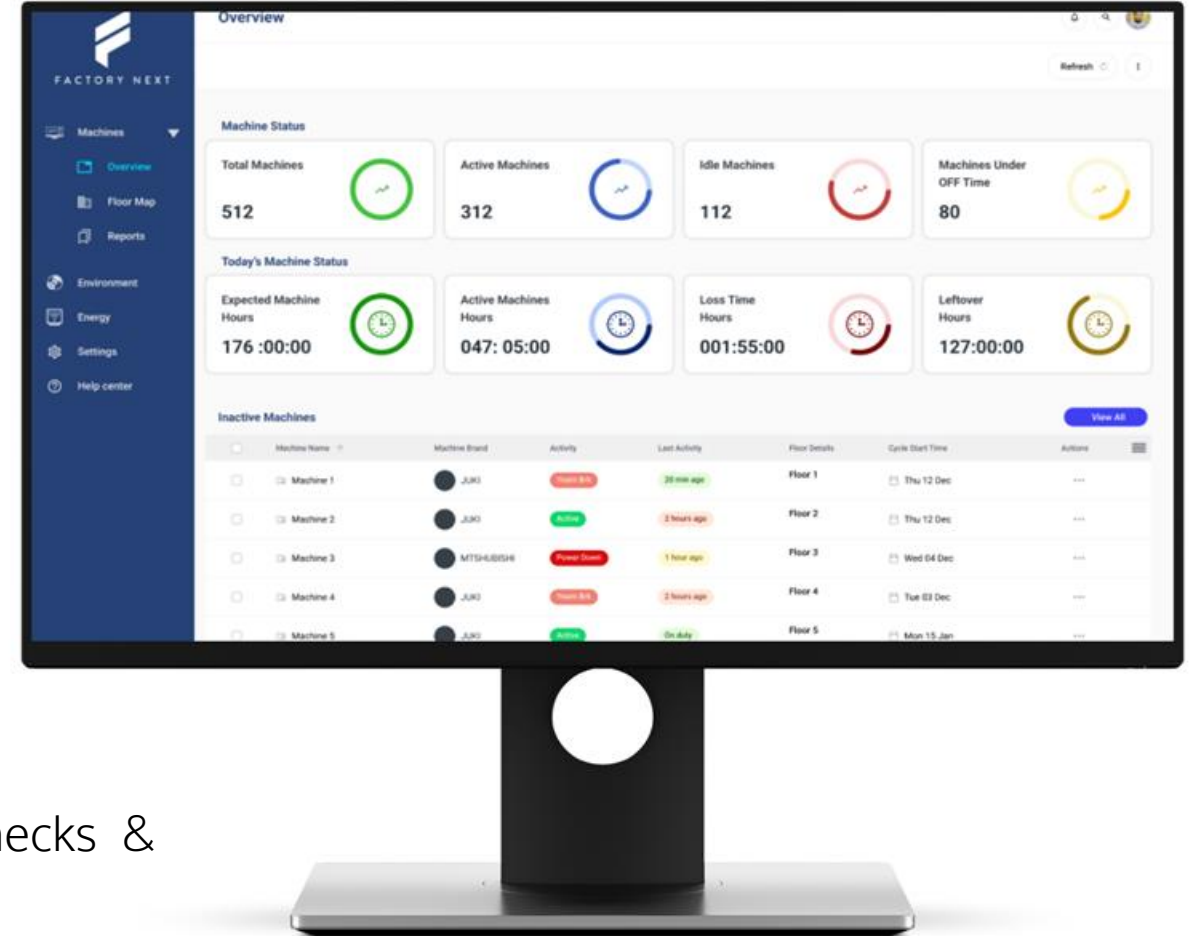
Arthor's Learn to Develop and Earn (LEAD) program is designed aiming to spread the technical knowledge of frontier technologies among students, corporate and govt stake holders.

Monitor

- Machine Speed,
- Run-time, Loss-time, Efficiency
- Faults & Their Reasons
- vibration & other technical machine data
- Production Count
- Operator Efficiency

Reports, Notifications & Alerts

- Historical & Analytical Reports
- Machine and Group-wise Reports
- Real-time notification and alerts for faults, bottlenecks & critical conditions over app, email and SMS
- Predictive & scheduled maintenance notifications





Monitor

- Humidity
- Temperature
- Light Intensity
- Flood and Water Leakage
- Air Quality (Oxygen, Carbon monoxide, Carbon dioxide, LPG, Sulphur dioxide, TVOC & Dust particles)

Reports, Notifications & Alerts

- Historical & Analytical Reports
- Location & Compartment-wise reports
- Real-time notification and alerts for critical conditions and safety breaks over app, email and SMS





Monitor

- Energy consumption
- Water consumption
- Gas consumption
- Oil consumption

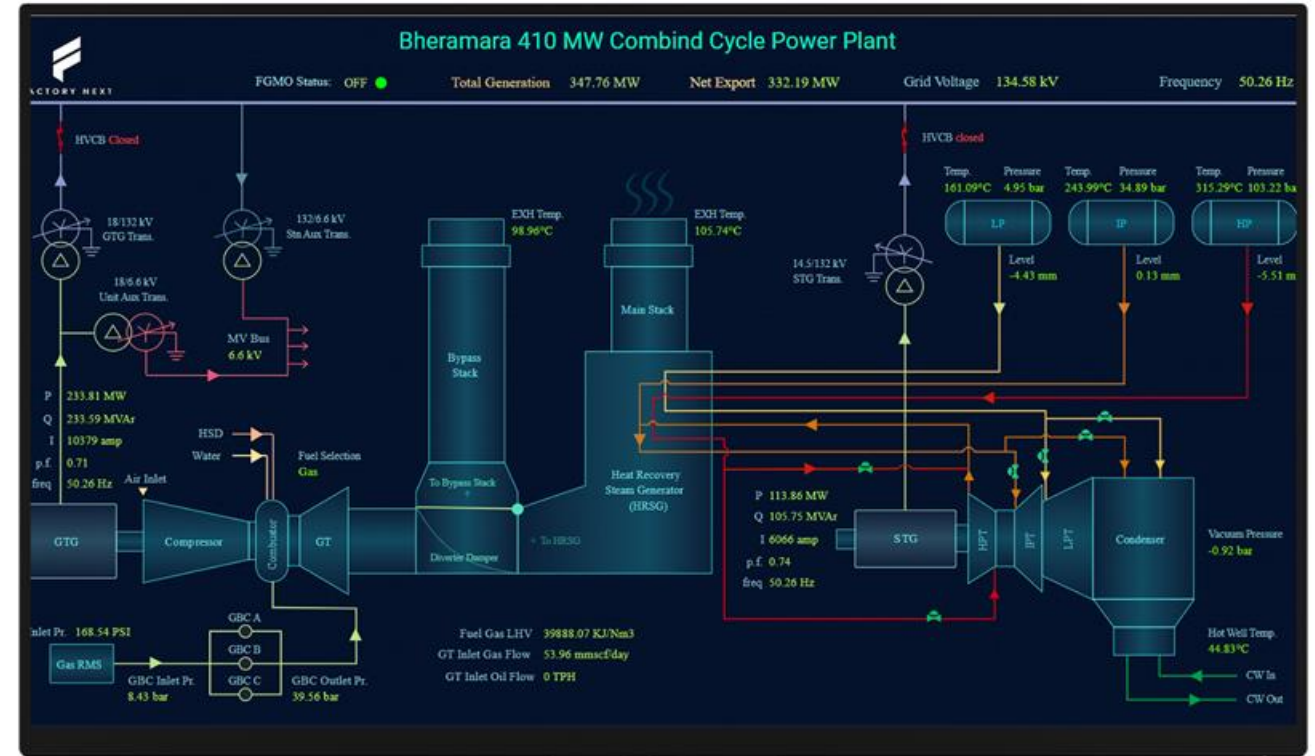
Reports, Notifications & Alerts

- Historical & Analytical Reports
- Location-wise reports
- Real-time notification and alerts for consumption anomalies over app, email and SMS





- Birds eye view of plant diagram with real-time monitoring
- Plant & process Automation
- Remote monitoring & control of plant & processes

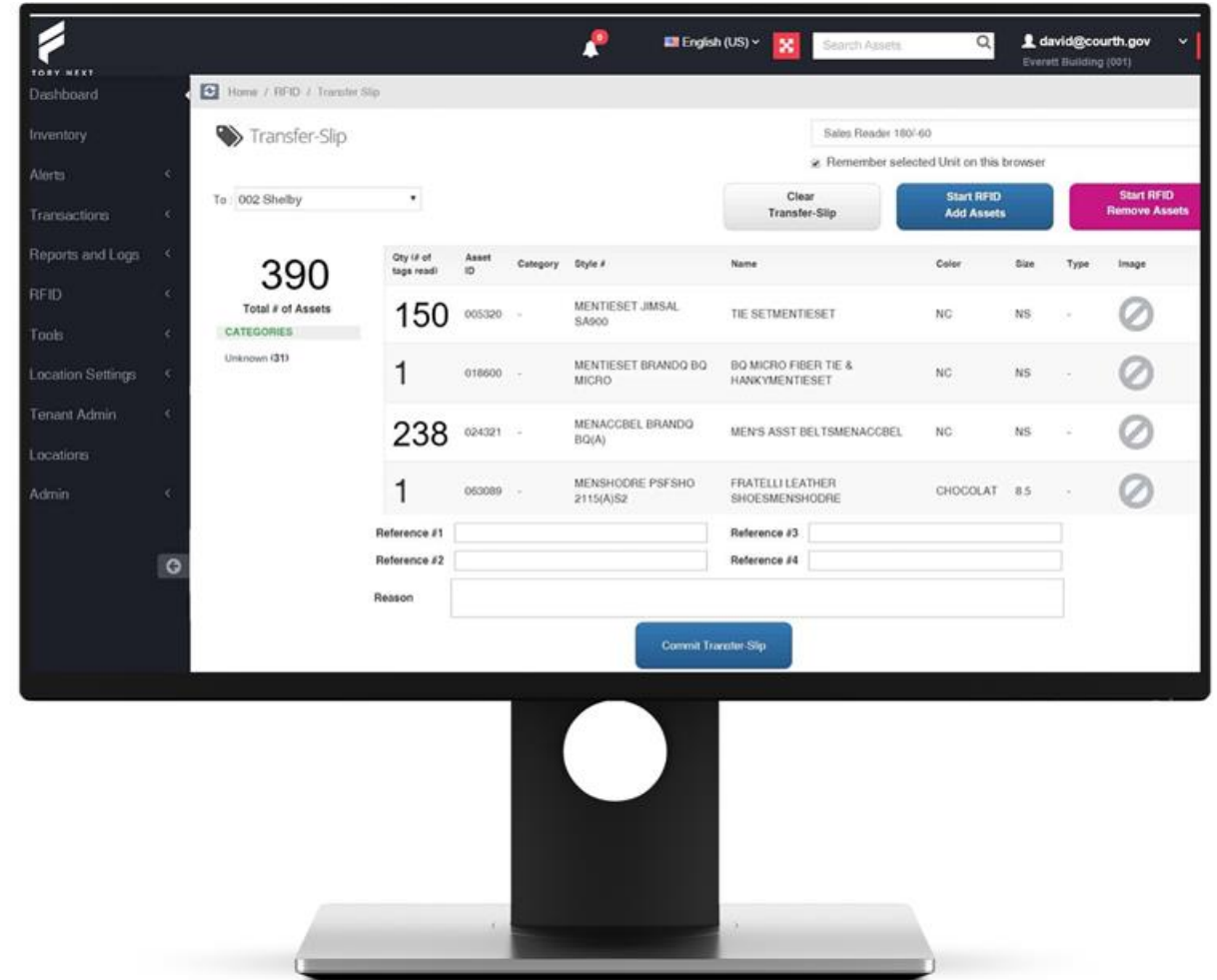


Long-range, Mid-range and short range RFID, Barcode & QR code based asset tracking portal & Inventory Management system

Application areas:

Warehouse Managements, Super Shops, E-commerce Businesses & Production Floor

Inventory & Asset Tracking



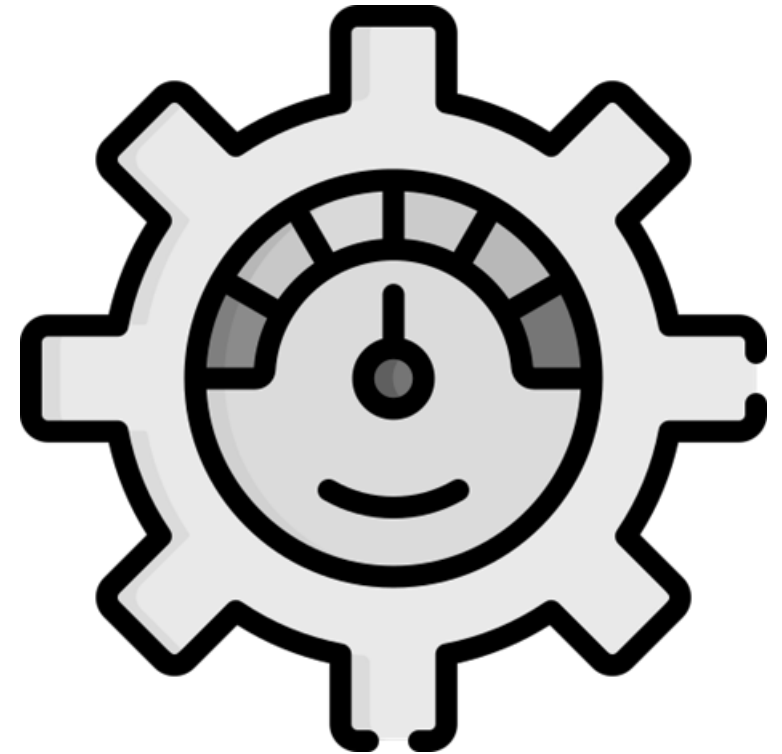


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- Reduced machine downtime
 - Get early notification about machine & process faults
 - Increased machine life
 - Save spare parts & maintenance expense
 - Increase return on investments





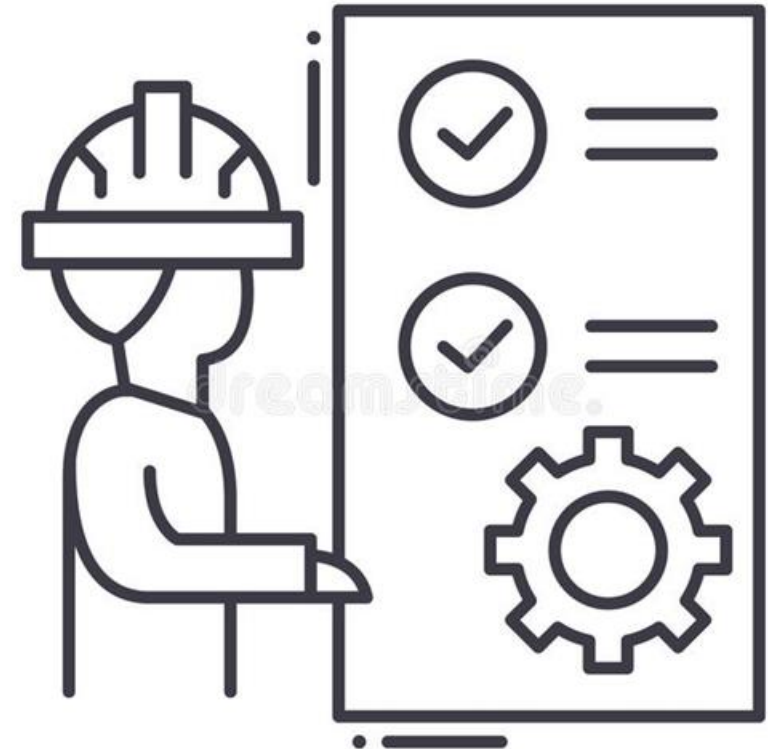
Optimize and fine tune your machine performance for maximum productivity. Find out the best operating conditions for your machines.





Use real-time production data, machine data, order information & operator performance analysis to formulate the best production plan.

Increase production efficiency & reduce time and raw material waste.





AI algorithms to analyze energy usage data and identify areas where energy efficiency can be improved.

Tack energy consumption patterns, forecast energy usage, and manage energy demand more effectively.

Reduce energy wastage and carbon footprint.





Machine Monitoring Devices



Beacon M Series

Used for machine state, speed, fault and efficiency monitoring & analysis



Environment Monitoring Devices



Beacon E Series

Used for environment monitoring, control & data analysis



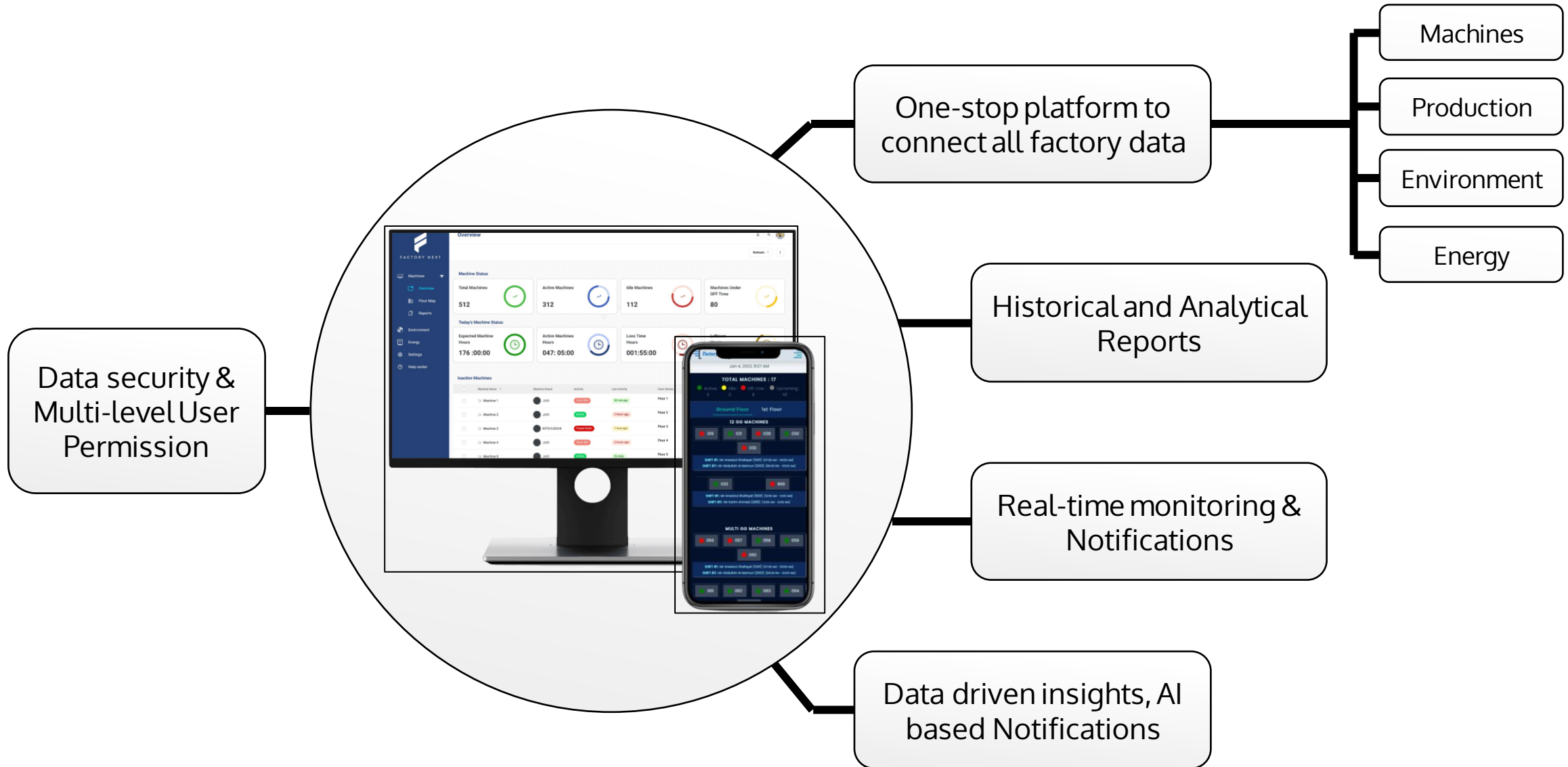
IoT Universal Data Acquisition Devices



DAQ-X Series

IoT Gateways, used for energy & utility monitoring, industrial instrumentation & automation projects







4IR Products

Robotics



Industrial Robots

Precision industrial robots for industrial manufacturing processes



HP Drones

Advanced UAV with high flight time and payload capacity

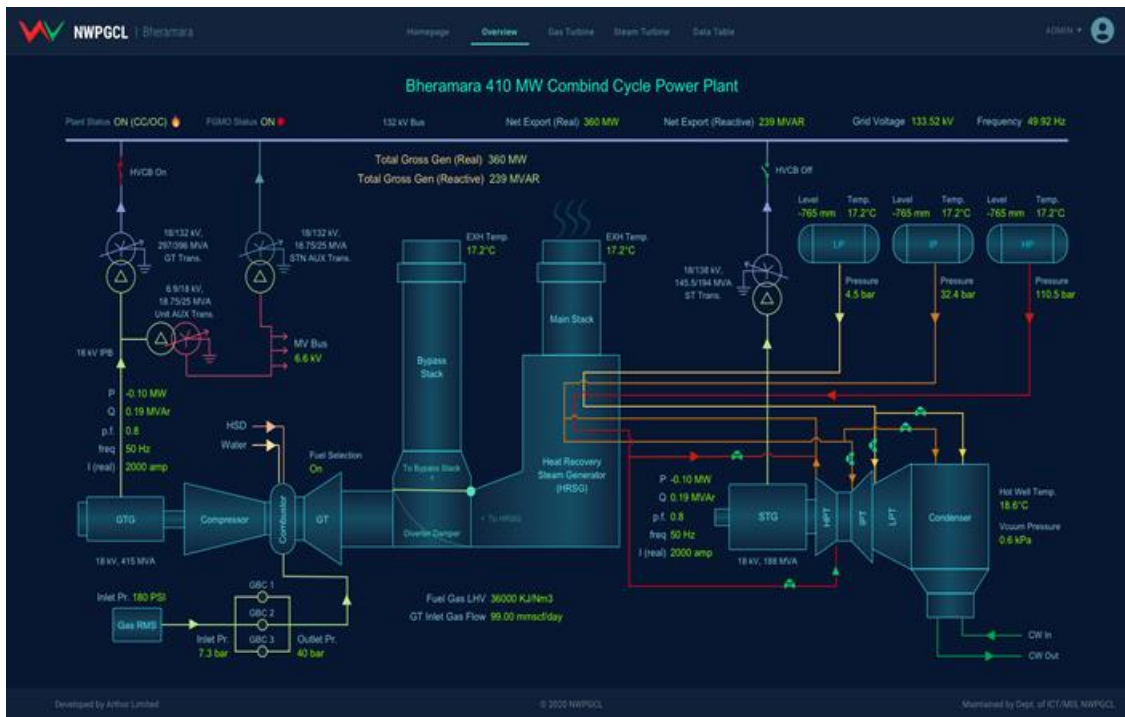


Cleaning Robots

Auto vacuum cleaning robots for residential and corporate office usage



Real-time Power Plant Monitoring



Bheramara 410 MW CCPP, NWPGL

Feature

- ☐ Online Plant Monitoring System for 410 MW combined cycle power plant situated in Bheramara, Kushtia
- ☐ User-friendly visibility and real-time monitoring access
- ☐ SCADA system

User Requirement

- ✓ NWPGL needed a system to monitor their plant, all of it at once



Environment Monitoring & Management



British American Tobacco

Feature

- ☐ Temperature and Relative Humidity measurement
- ☐ Real time monitoring
- ☐ 3 Hours Battery Backup
- ☐ Wi-fi and SIM based Connectivity
- ☐ Remote Calibration and support

Customer Requirement

- ✓ British American Tobacco Bangladesh were looking for a system that can track the environmental condition of their warehouses, located all over the country. Arthor Limited came up with the technology. Now, over 150+ warehouses are under the service of Environment Monitoring System



Environment Monitoring & Management



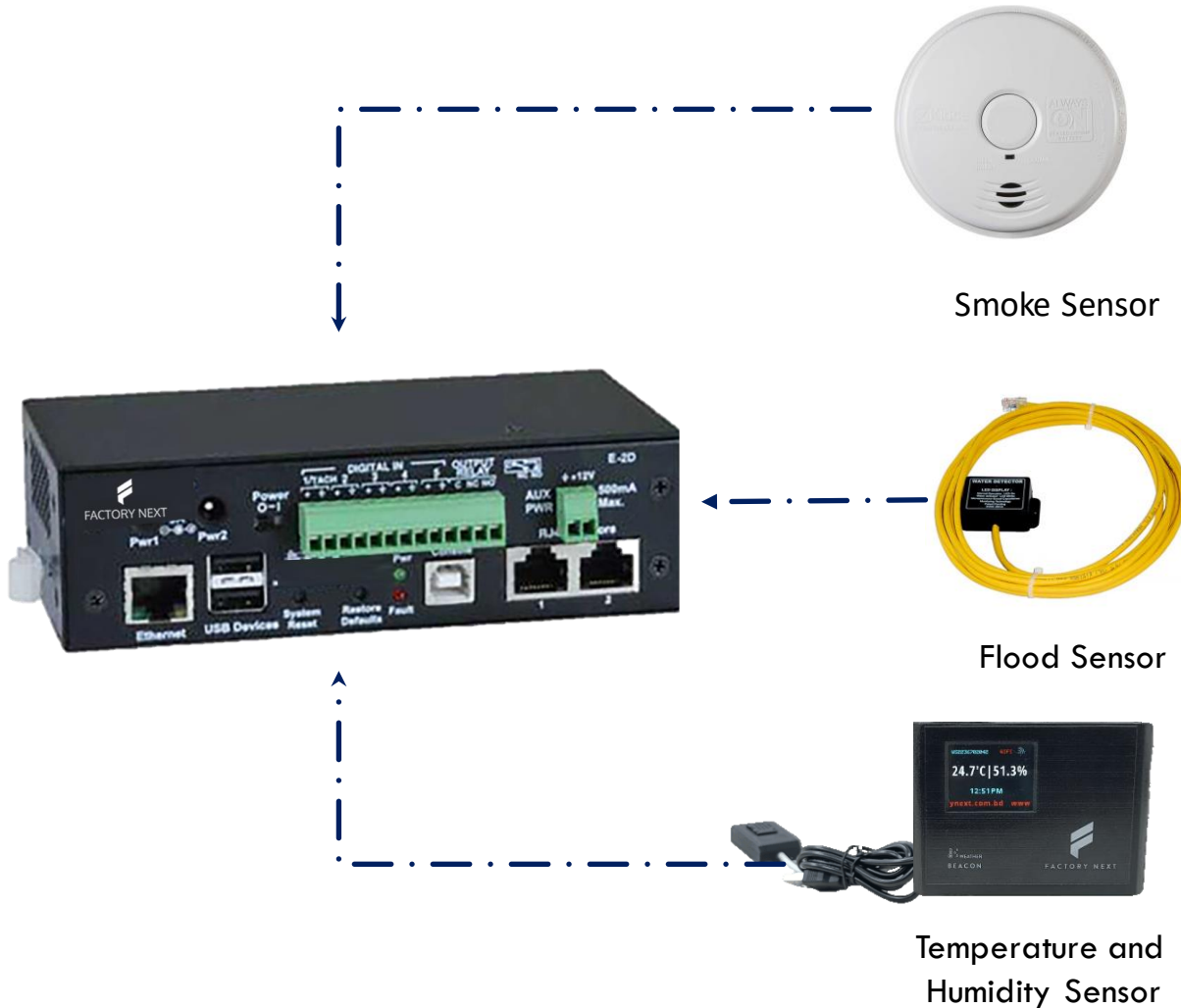
Walton Hi-tech Industries Ltd.

Feature

- ☐ Temperature and Relative Humidity measurement
- ☐ Real time monitoring
- ☐ 3 Hours Battery Backup
- ☐ Wi-fi and SIM based Connectivity
- ☐ Remote Calibration and support



Environment Monitoring & Management



Power Development Board, Bangladesh

Features

- ☐ Temperature, humidity and flood monitoring
- ☐ Smoke detection
- ☐ Wi-fi and SIM based connectivity
- ☐ Digital output for alarm control
- ☐ Customization option for AC, humidifier and dehumidifier control

User Requirement

- ✓ Power Development Board required an Environment Monitoring System for their server room in Chattogram. Arthor Limited designed, manufactured and installed the system successfully



Smart Production Monitoring

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Feature

- ☐ RPM measurement
- ☐ Real time monitoring
- ☐ Wi-fi based Connectivity
- ☐ Production Tracking
- ☐ Remote Calibration and support

User Requirement

- ✓ Meditex was looking for a monitoring solution to oversee their jacquard machine performance such as up time, down time, fault duration, fault type, fault count etc



Process Monitoring & Automation

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Feature

- ☐ RPM measurement
- ☐ Fault recognition
- ☐ Real time alert system
- ☐ Real time monitoring
- ☐ Wi-fi based Connectivity
- ☐ Remote Calibration and support

User Requirement

- ✓ Bengal Hurricane was looking for a monitoring solution for their Circular Knitting machine performance such as up time, down time, fault duration, fault type, fault count



Pedestrian Safety & Traffic Automation



British American Tobacco

Feature

- ☐ IoT based Pedestrian Crossing Switch
- ☐ Two Way Traffic Control Signal
- ☐ UHF RFID based Vehicle Tracking and Speed Limit Alert
- ☐ PLC Based Central Control Unit with UPS Backup
- ☐ Wi-fi based Connectivity
- ☐ Real-time Monitoring and Reporting Software

User Requirement

- ✓ British American Tobacco was concerned about the pedestrian safety in one of their blind corner turn. They were looking to control the speed of vehicles in the blind corner and identify those who are breaking speed limit. They were also looking for a system to control the traffic based on pedestrian switch installed on both side of a zebra crossing.

Welding Training Simulator



Bangladesh Army EME Core

Description

An Artificial Reality Solution for welding training activity of welders in Bangladesh Army EME Core. A virtual welding workshop and storyline was developed following the steps of standard welding procedure.

A physical hardware was designed to simulate the welding machine. Using the solution, a welder can be trained to do all the necessary activities before going for real world welding job.



Bike Racing Simulation



Success Cases:

- Mojo Catch the Thief Bi-cycle Race Simulation
- Bi-cycle Racing Simulation in BAT Campaign
- Bi-cycle Racing Simulation in Digital World 2019

Description: Wheel Encoder and Steering Direction sensor based Bicycle Integration Hardware for Physics Simulation and Virtual Reality Platform.



Wing Glider Simulator



British American Tobacco

Developed for British American Tobacco. An virtual reality paragliding simulator with multiple levels where the player has to avoid natural obstacles and collect collectables to pass each levels.

Functional Features

- Advanced Motion Architecture based Physics Simulation for Realistic Paragliding Experience
- Realistic VR experience of Paragliding

Technical Features

- Physics Simulation Modules
- Control Architecture
- Communication Architecture



Surfing Simulator



Functional Features

Advanced Motion Architecture based Surfing Platform for Balancing Challenge on a Surfboard

The solution is provided with a physical surfboard driven by a 3 DOF motion platform to experience the wave surfing in a realistic manner. The motion platform has provisions of controlling the surfboard movement by means of **3 fast and advanced linear motion actuator driven universal joints** connected to the surfing platform. Integrated sensor network consisting three 9 DOF motion sensors enables the system to implement a PID based feedback control system to accurately drive the motion platform according to desired positional command.

Our Clients

ARTHOR



NORTH-WEST
POWER GENERATION
COMPANY LIMITED



& 15 more trusted clients with 200 + active sites and 2000+ live devices