



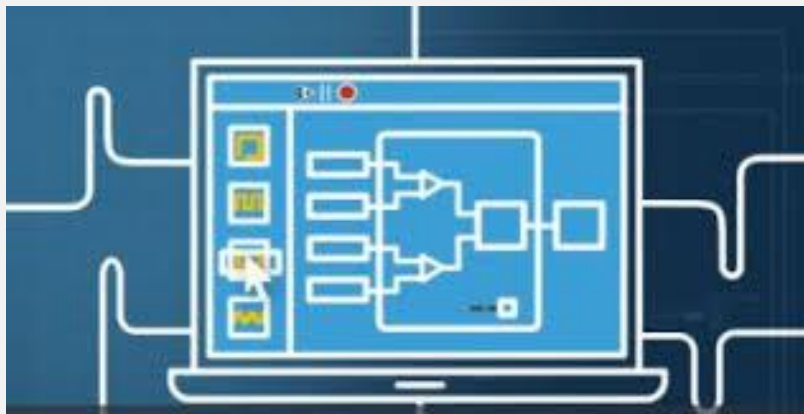
ASHWAMEDHH

UNSTOPPABLE INNOVATION

We strive to deliver Innovation, Development & Upgradation at Ease



Introduction



Services & Products Offering

Product & Services

A. Industrial Equipment & Automation Solution
offering Automation & Software solutions In the Domain of Automobile, Biotech, Pharma & Defence.
(ECP, Test Control & Monitoring , Test Equipment ,Industry 4.0, IoT, MES, Traceability, BMS)

B. SmartMate 3.0
Focused On - Advanced Production/Manufacturing,
R&D, Maintenance & Training Application

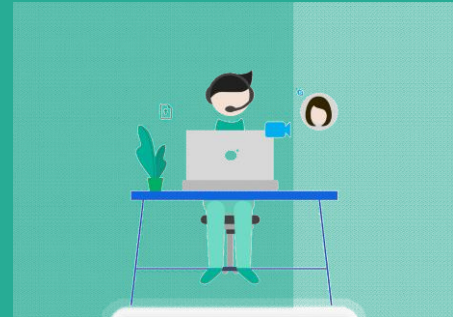
C. Digital LOTO
Digitalise solution of maintenance LOTO activity



A. Industrial Equipment & Automation Solution

INDUSTRIAL PROGRAMMING

- PLC programming using different make PLC
- HMI, SCADA Programming
- LabVIEW, Python, C++, Robotics



REMOTE SUPPORT

Offering Remote Support for

- Industrial Programming
- Development & Testing



REAL TIME DATA MONITORING

Proactively reviewing and evaluating your data and its quality to ensure that it is fit for purpose using Various Industrial programming (PLC, HMI, Python) on customized dashboard



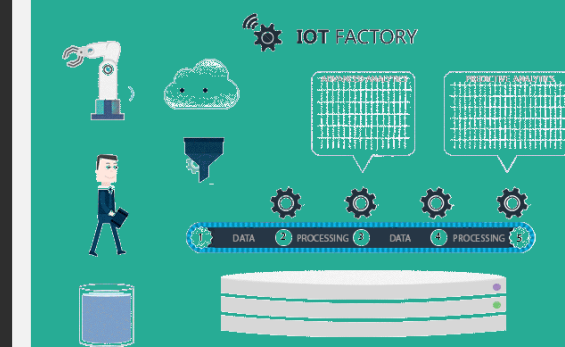
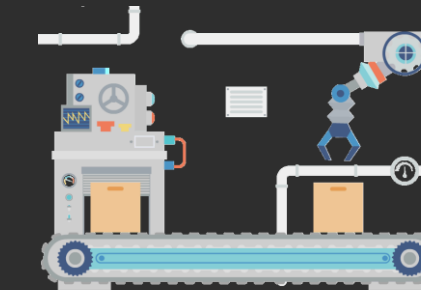
AMC / CMC

Offering Project Lifecycle Management in

- Assembly Lines
- Electrical Maintenance

Industry 4.0/IOT/AI

- Predictive Data Analysis
- Data Visualization
- Decision Making



CUSTOM EOL

- Supply of SPM,
- End Of Line Equipment
- Production assembly line

B. SmartMate 3.0



SMARTMATE

SmartMate 3.0

Advanced Safety, Production/Manufacturing, R&D, & Maintenance Training Mate(Application)

Empower your workforce Efficiently , Profitably , & sustainably .

Superimposing information & insights on real/augmented/virtual world views of plant



How SmartMate 3.0 will assist you?

- **How SmartMate 3.0 will assist you?**
 - A. Are you in Safety dept. or Training ?
 - B. Are you in Process/manufacturing or R&D ?
 - C. Are you in Maintenance ?
- **Then SmartMate is your mate**

New age training program to effectively and swiftly train the newly-hired/workforce, and make them factory-floor ready



Safety Training



Features –

- Enable safety layer around your processes and machines with an understanding of the Do's and Don'ts of working.
- Presented with information as per environment with operation sequence & task details
- Trains workforce -
 1. Hazard Recognition
 2. Emergency Response Training
 3. Equipment Operation
 4. Confined Space Training
 5. Active Shooter and Workplace Violence Scenarios
 6. Healthcare and Patient Safety
 7. Consequence-based learning
- Past incidents integration
- Digital Certification.



Production/Manufacturing, R&D Training

Features –

- Product Design and Prototyping
- Training and Skill Development, simulate operating machinery, learning skills in a risk-free environment.
- Manufacturing Process Simulation -Presented with information as per environment with operation sequence & task details
- Process Optimization: VR can simulate manufacturing workflows to identify bottlenecks and improve efficiency.
- Manufacturers can test and validate new production lines virtually before physical implementation.
- Simulated Environments: VR environments can replicate production conditions to test product durability and functionality.
- Virtual Tours: Customers and stakeholders can explore factories and production processes virtually,



Maintenance Training



Features –

- Its immersive nature allows technicians and engineers to visualize complex systems, simulate maintenance tasks, and enhance training programs
- Provides a safe and controlled environment for technicians to learn and practice maintenance tasks.
- Simulations can mimic real-world scenarios, such as equipment malfunctions, without risking damage to actual machinery.
- Visualizing Complex Systems, Technicians can use VR to explore detailed 3D models of machinery, making it easier to understand complex assemblies.
- This helps in identifying issues that may not be visible or accessible in the physical world.

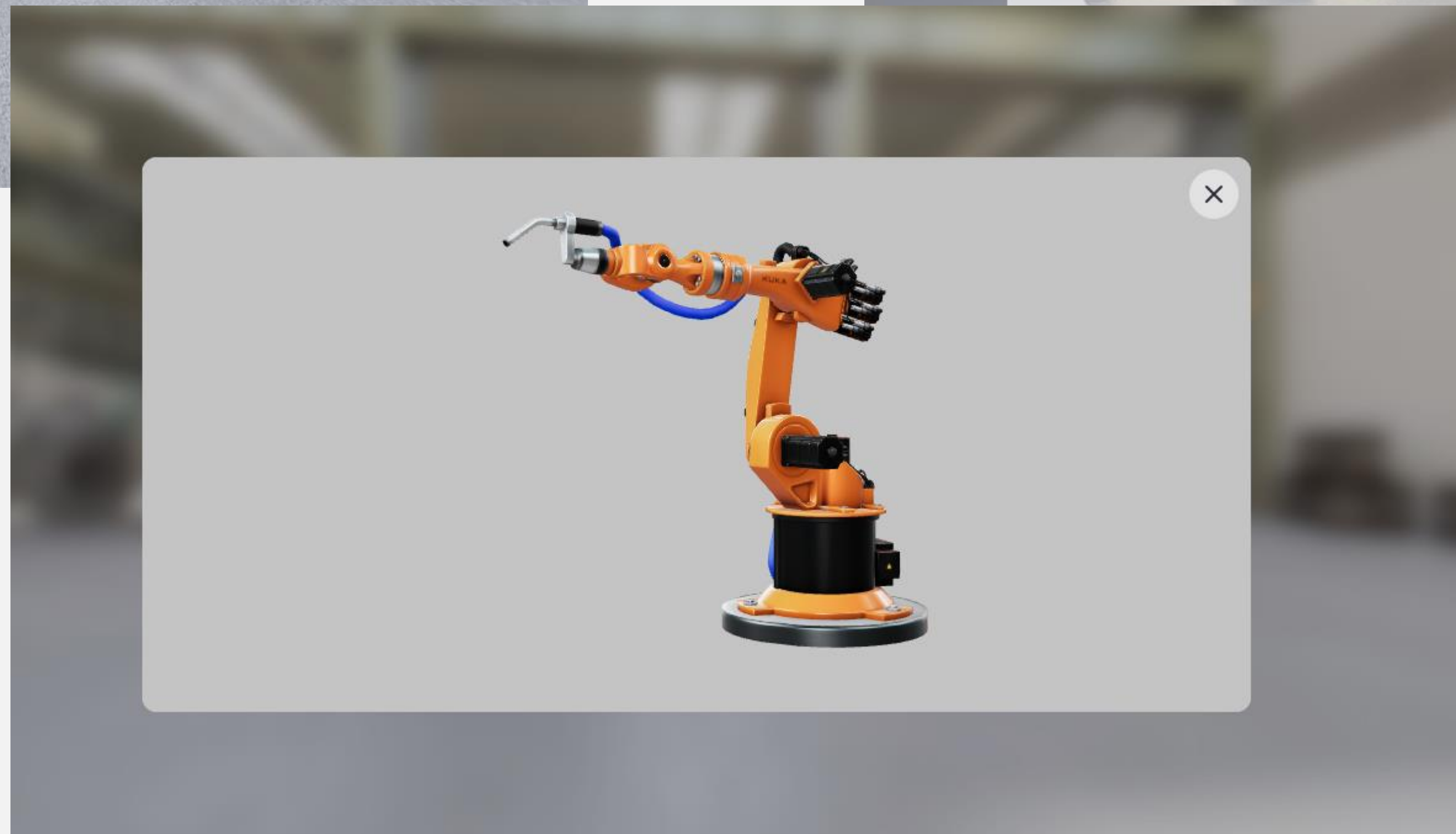
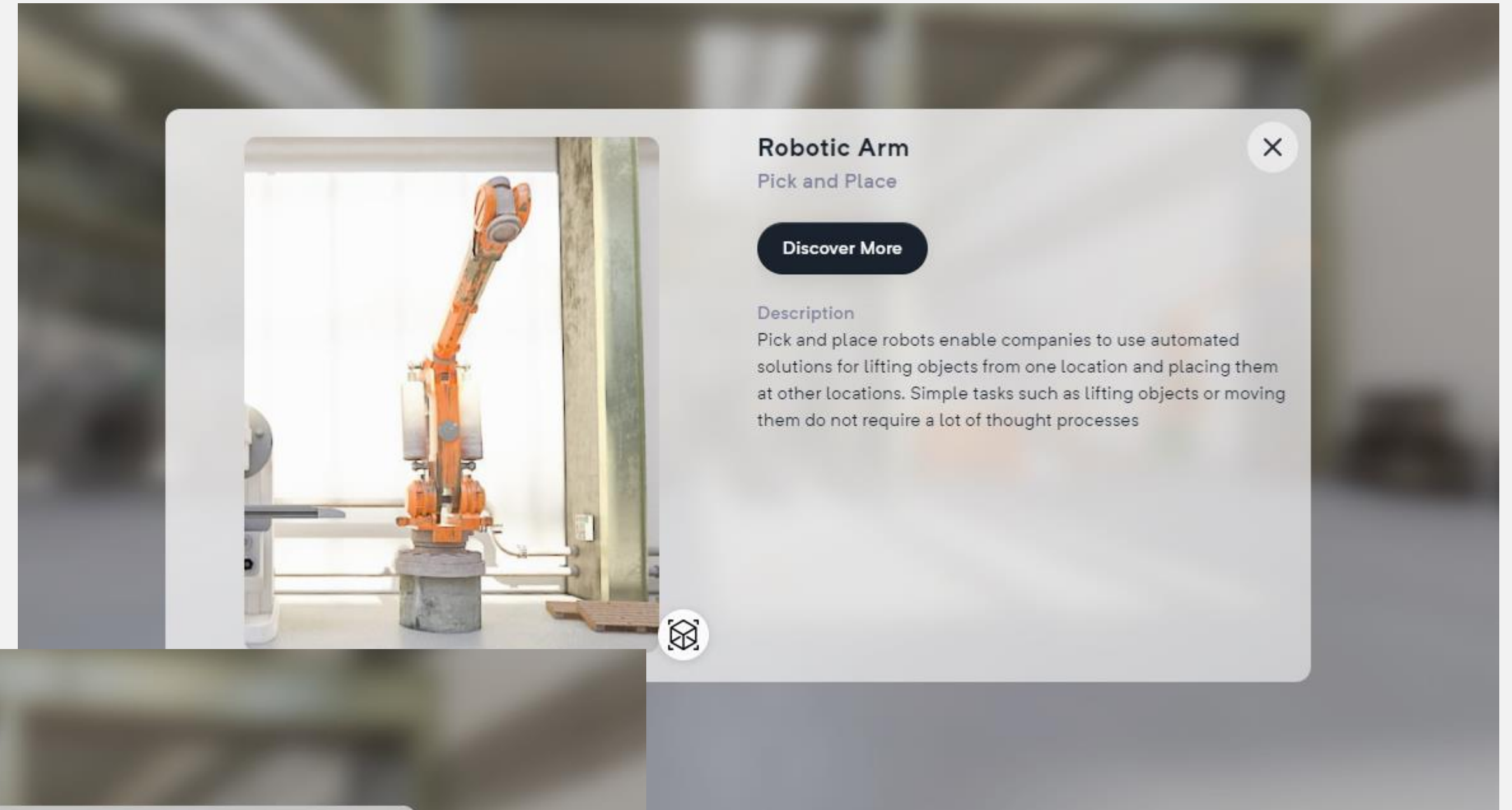
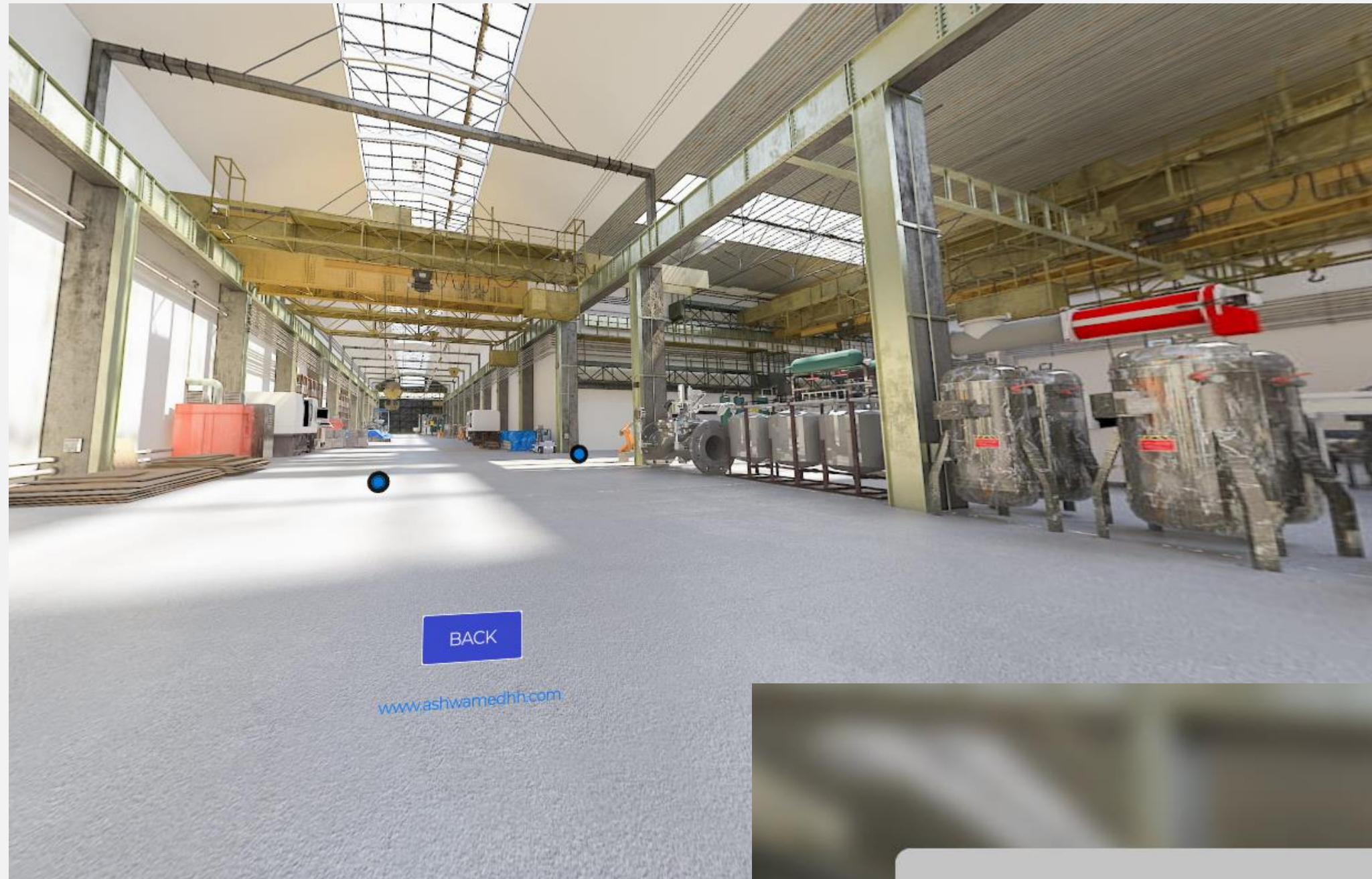


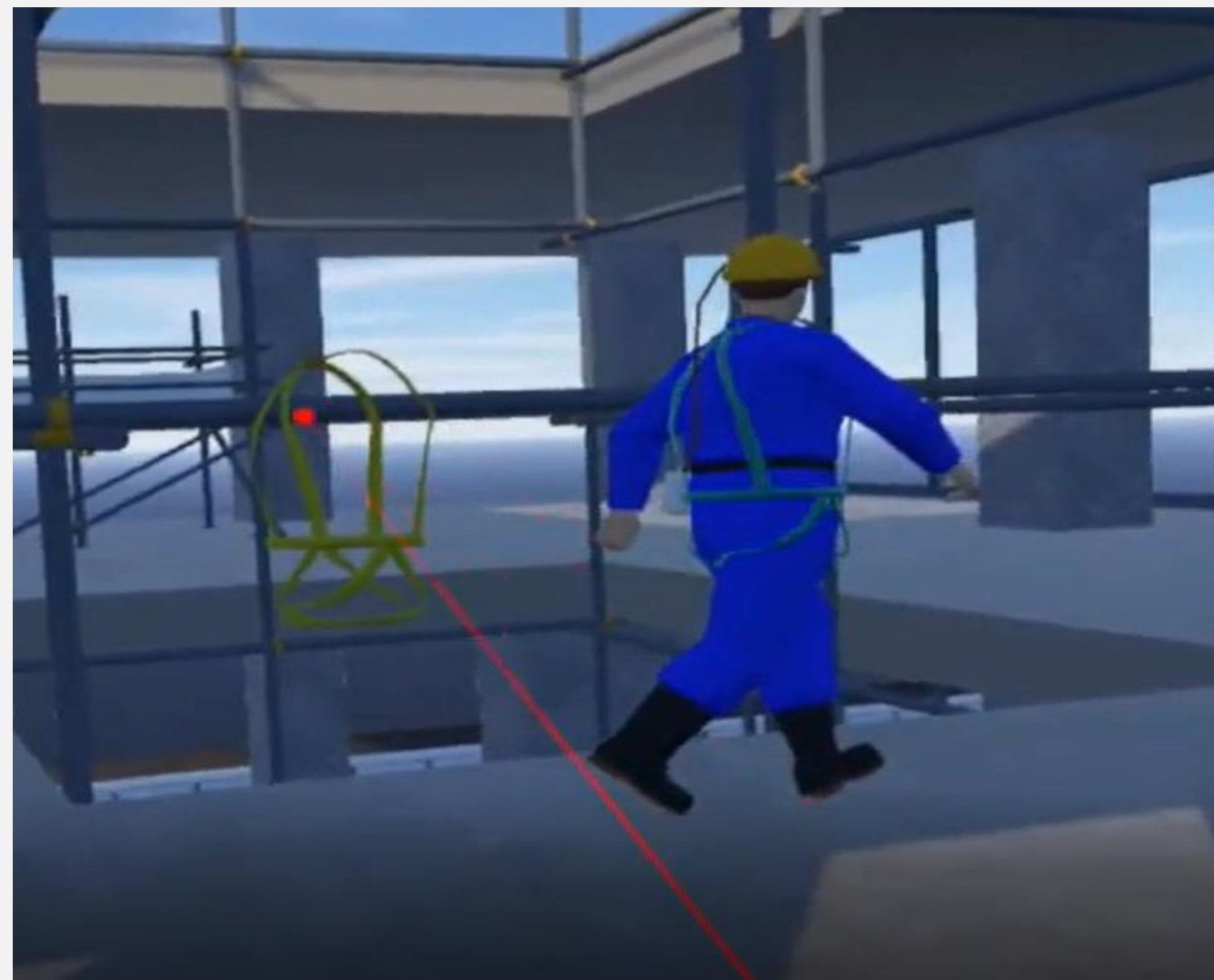
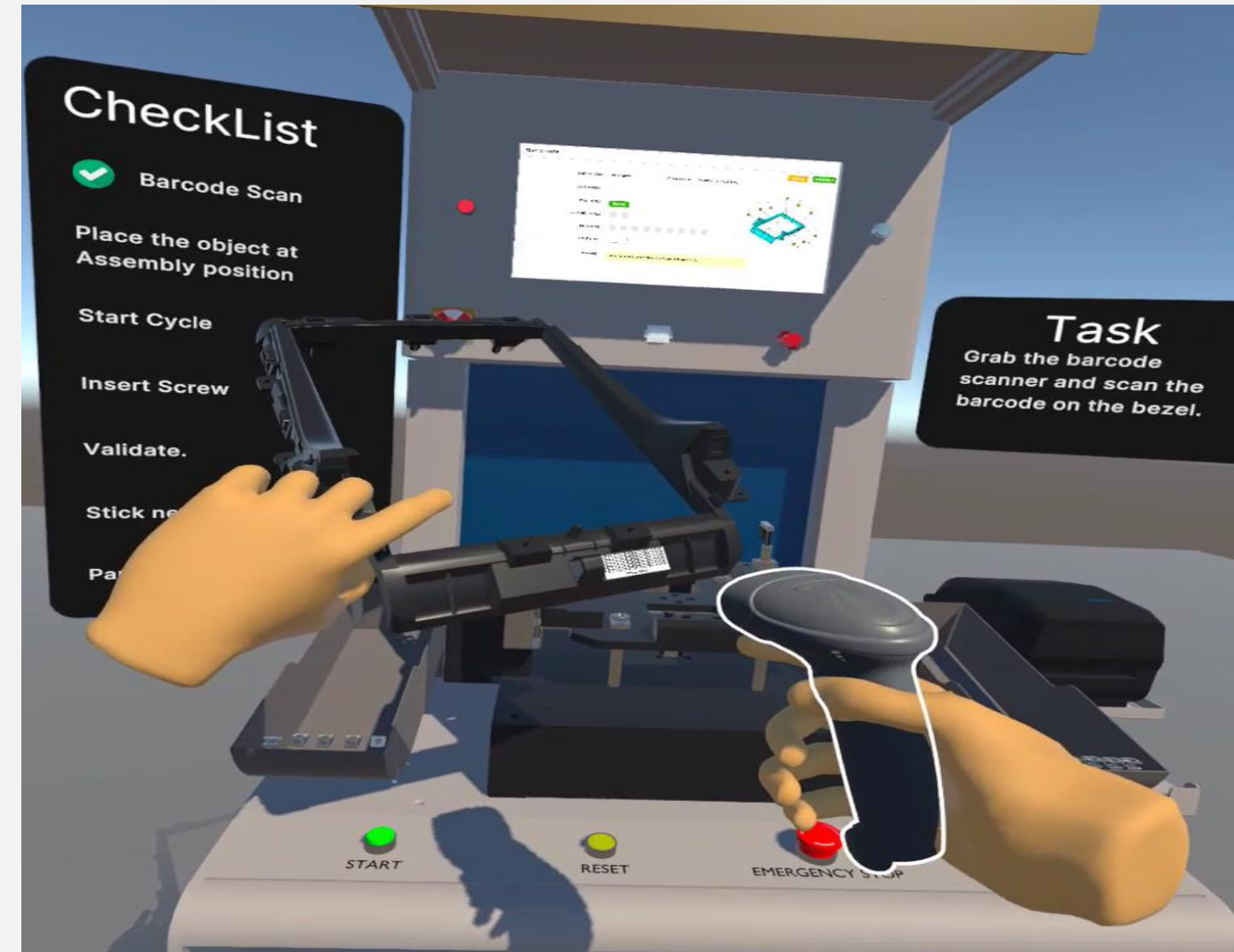
Benefits of SmartMate 3.0

- **Immersive Learning:**
Participants "feel" the real-world stakes, enhancing retention and engagement
- **Cost Efficiency:**
Reduces the need for physical prototypes and training setups.
Minimizes the costs associated with equipment downtime during training or troubleshooting.
- **Improved Accuracy:**
Enhances the precision of maintenance tasks by providing detailed visual and interactive guides.
- **Time Savings:**
Faster onboarding and skill development for new technicians.
Quick identification of problems and solutions through visualizations.
- **Enhanced Safety:**
Decreases the likelihood of accidents during training and actual maintenance tasks.



Overview





LOTO Overview

23:50


LOTOW MANAGEMENT SYSTEM


06-11-2022

HY - 1

RUNNING...

HY - 2





Pradip Gokulade - 

HY - 3

RUNNING...

HY - 4



Siraporn Sornwale - 

HY - 5

RUNNING...

HY - 6

RUNNING...

HY - 7

RUNNING...

HY - 9

RUNNING...

HY - 10

RUNNING...

HY - 11

RUNNING...

HY - 11-1

RUNNING...

HY - 12

RUNNING...

HY - 14

RUNNING...


HY - 16


RUNNING...

HY - 18

RUNNING...

HY - 19




Anil Senan - 

TL - 1

RUNNING...

TL - 2

RUNNING...



REFRESH

ACTIVATE NEW LOTOW

CLOSE LOTOW

REPORT

EXIT

LOGIN

ENTER USERNAME & PASSWORD



login ID



VVS

Password


Acknowledge

OK

 CANCEL

NEW - LOTOV - INFORMATION

LOCK-OUT TAG-OUT



DO NOT OPERATE
UNLESS
AUTHORIZED

FILL THE LOTOV INFORMATION

06-11-2022

*Location Of LOTOV : S1 - Test Lab

*Equipment Where LOTOV : HY 2
Need To Apply

Reason For LOTOV : Maintenance

Other :

SUBMIT

[illegible]

Features/Advantages –

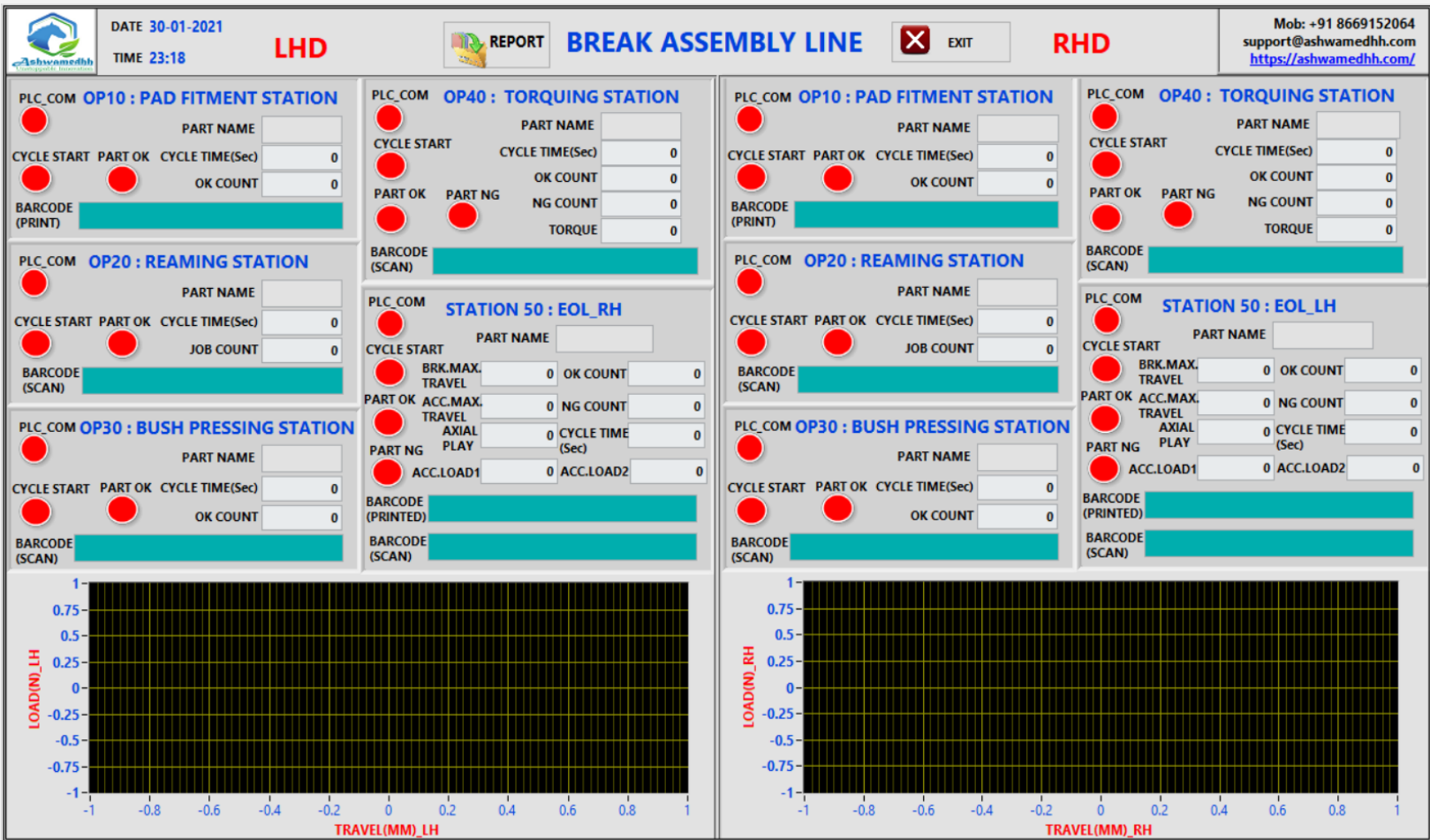
- Individual dedicated Console for Digital LOTO
- Digitalization of LOTO activity.
- No Paper work & ordinary record.
- All the data & control on your single click.
- Follows all the safety norms as per your standard.
- Application based LOTO activation & Close.
- LOTO Indication/Notification to concerned persons.
- Smooth operation & reduces the accidents & Improves productivity
- Digital LOTO IN/OUT checklist.
- Data Record/Report View & Generation
- LOTO Information/Report on Mail.

Project Highlights



MES/ Traceability System


- Tracks and documents the production of a product from start to finish
- Developed MES/Traceability system for assembly line. It ensures to trace the production of part, tracking each stage of production.
- Data is stored against every production stage/station wise over long period of time in Excel format, MySQL, MSSQL DB
- Reports are generated based on the data saved against each barcode(part), Excel, PDF & HTML report generation.
- To monitor efficiency of production line.
- Andon lean manufacturing



MES software can help manufacturers:

- Optimize production planning and scheduling
- Improve quality control and reduce waste
- Increase uptime and reduce inventory and costs
- Meet regulatory compliance and transparency requirements






Andon Screen

	OP-10	OP-20	OP-30	OP-40A	OP-40B	OP-50A	OP-50A	OP-60	OP-70	OP-80	OP-90A	OP-90B	OP-10	OP-11A	OP-11B
ANDON INDICATOR	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
No Material	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Machine Breakdown	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Quality Issue	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

STATION	OP-10	OP-20	OP-30	OP-40A	OP-40B	OP-50A	OP-50A	OP-60	OP-70	OP-80	OP-90A	OP-90B	OP-10	OP-11A	OP-11B
NO MATERIAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MACHINE BREAKDOWN	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0
QUALITY ISSUE	0	22	73	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL LOSS	4	32	81	0	0	0	0	0	0	0	0	0	0	0	0

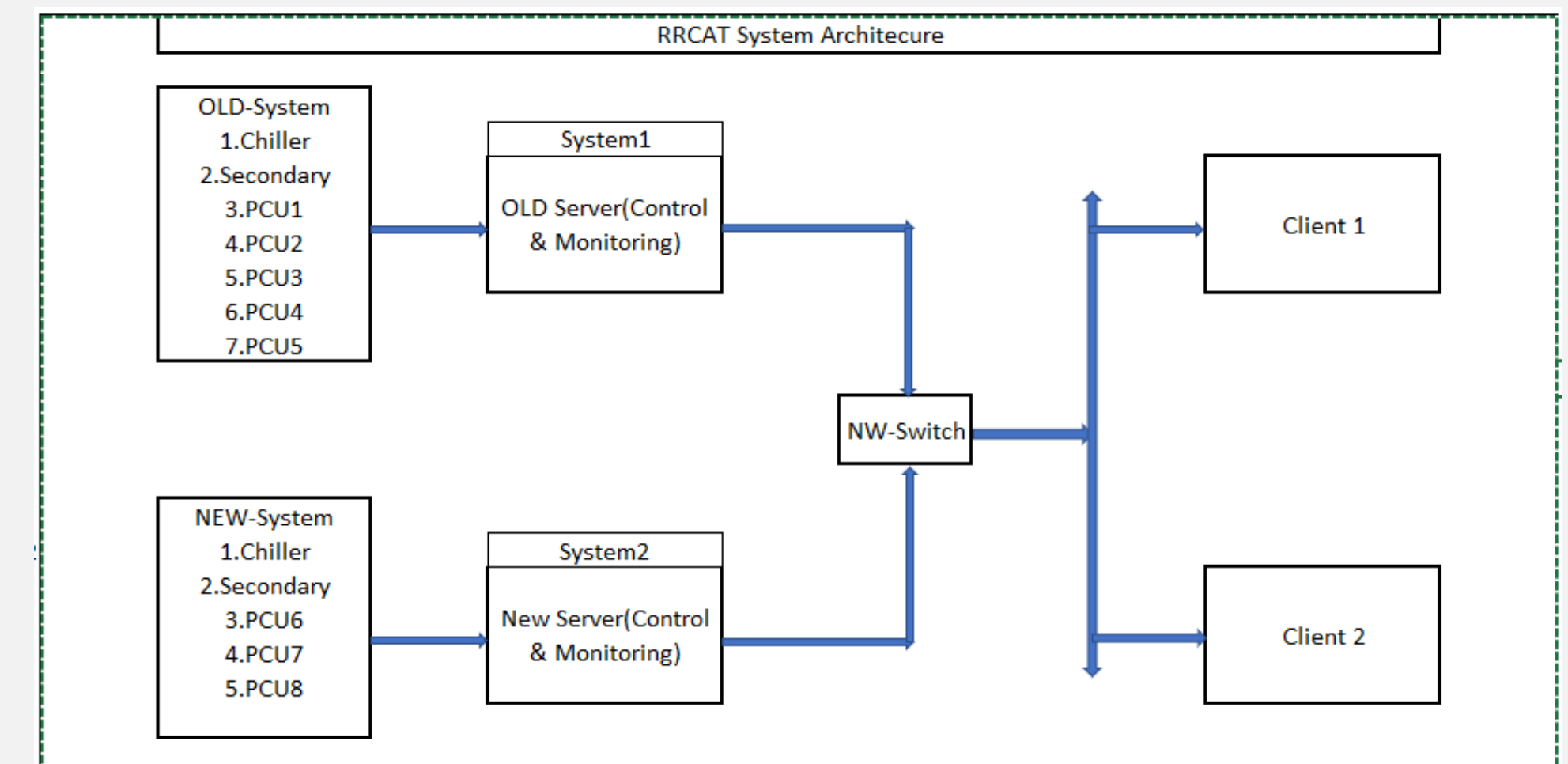
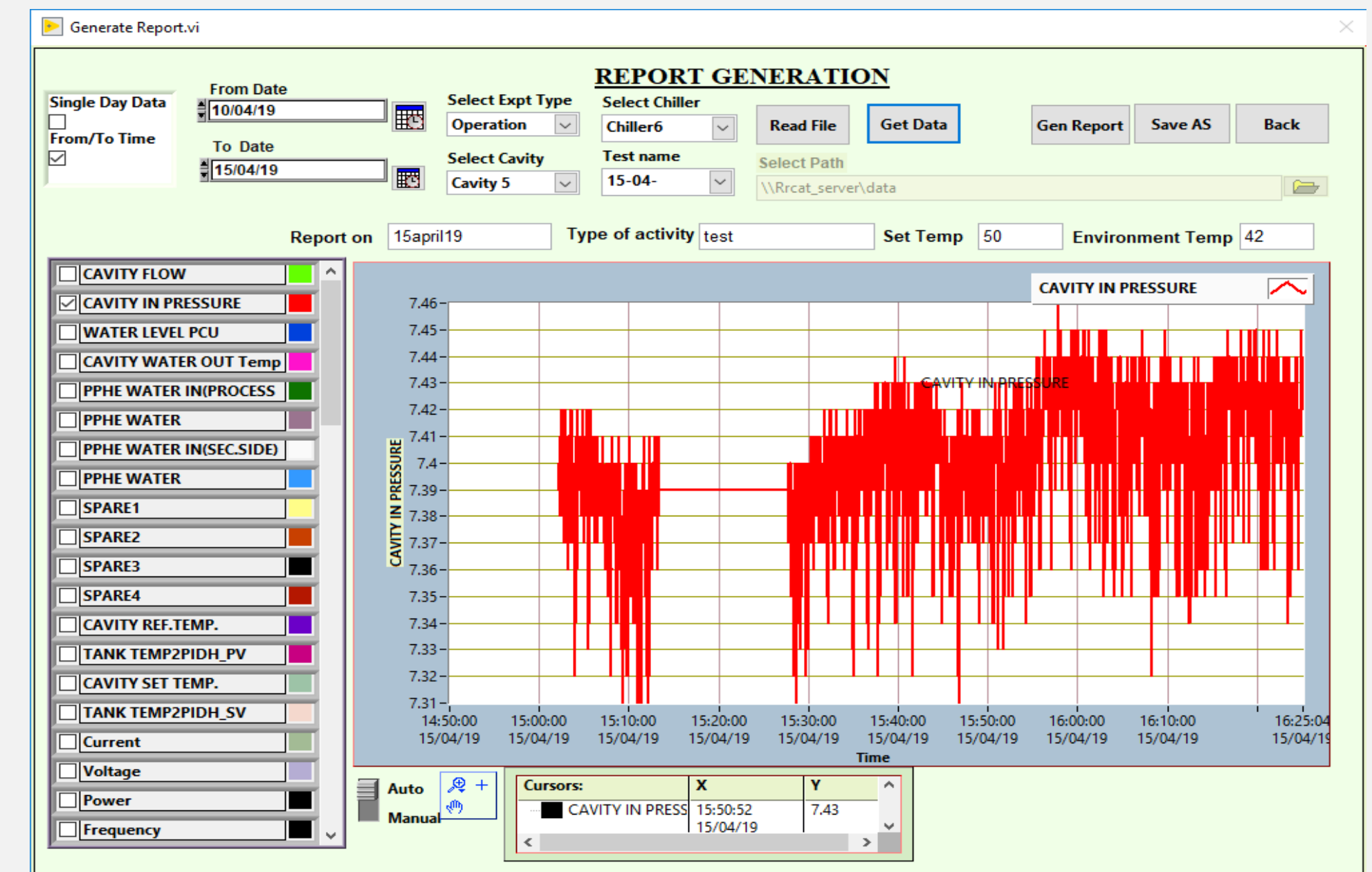
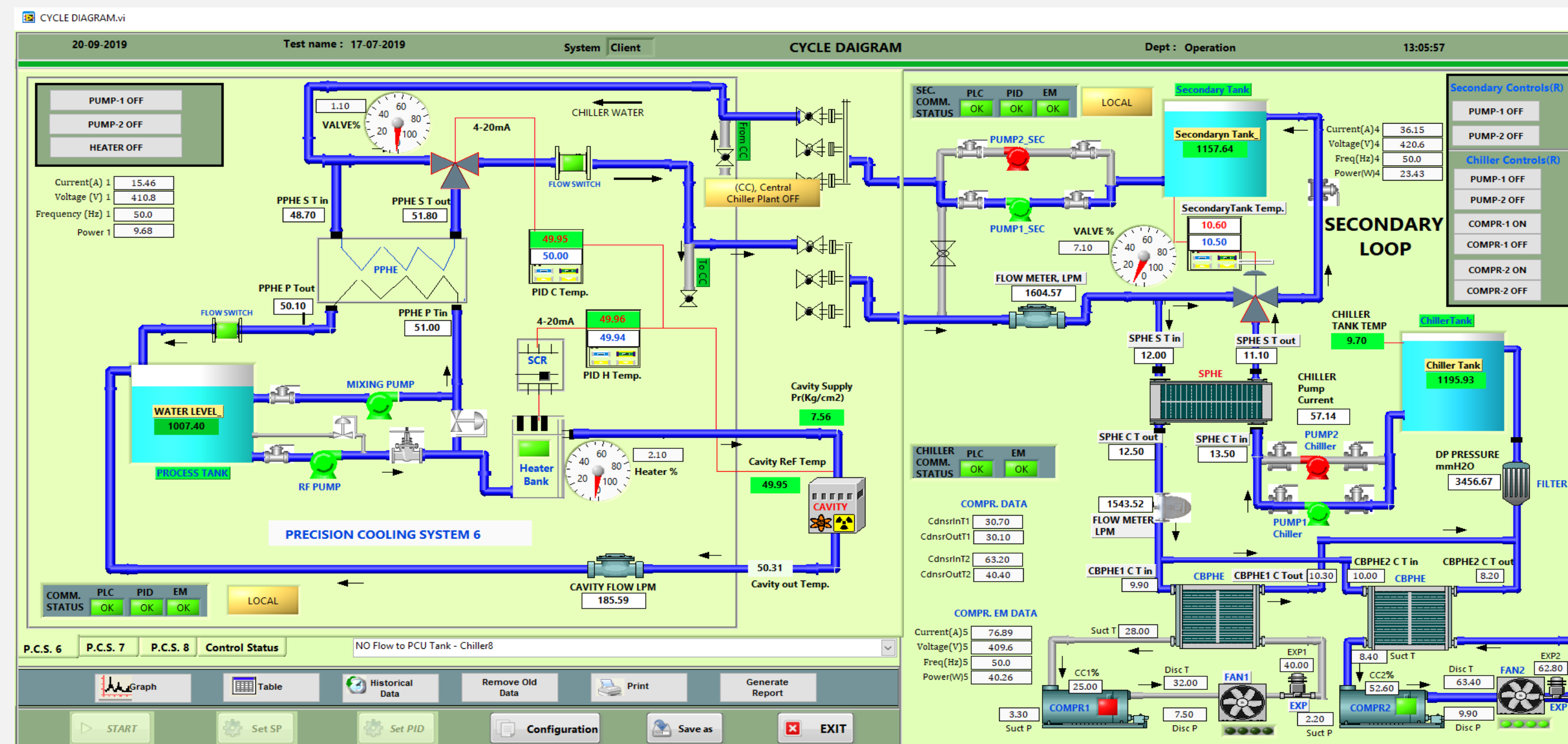


BACK

Project Highlights

Refrigeration/Cooling control system for particle acceleration unit (RRACT)

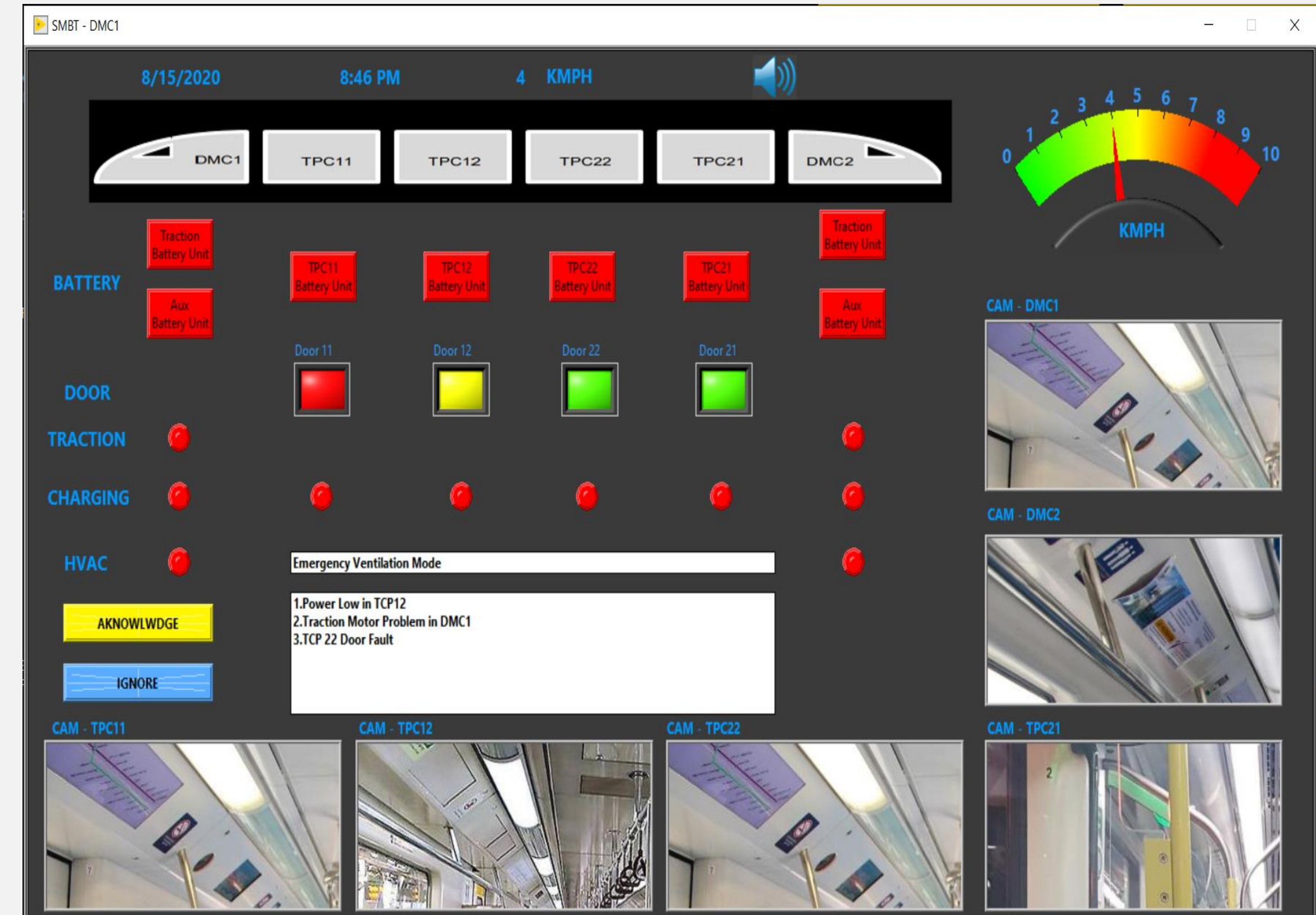
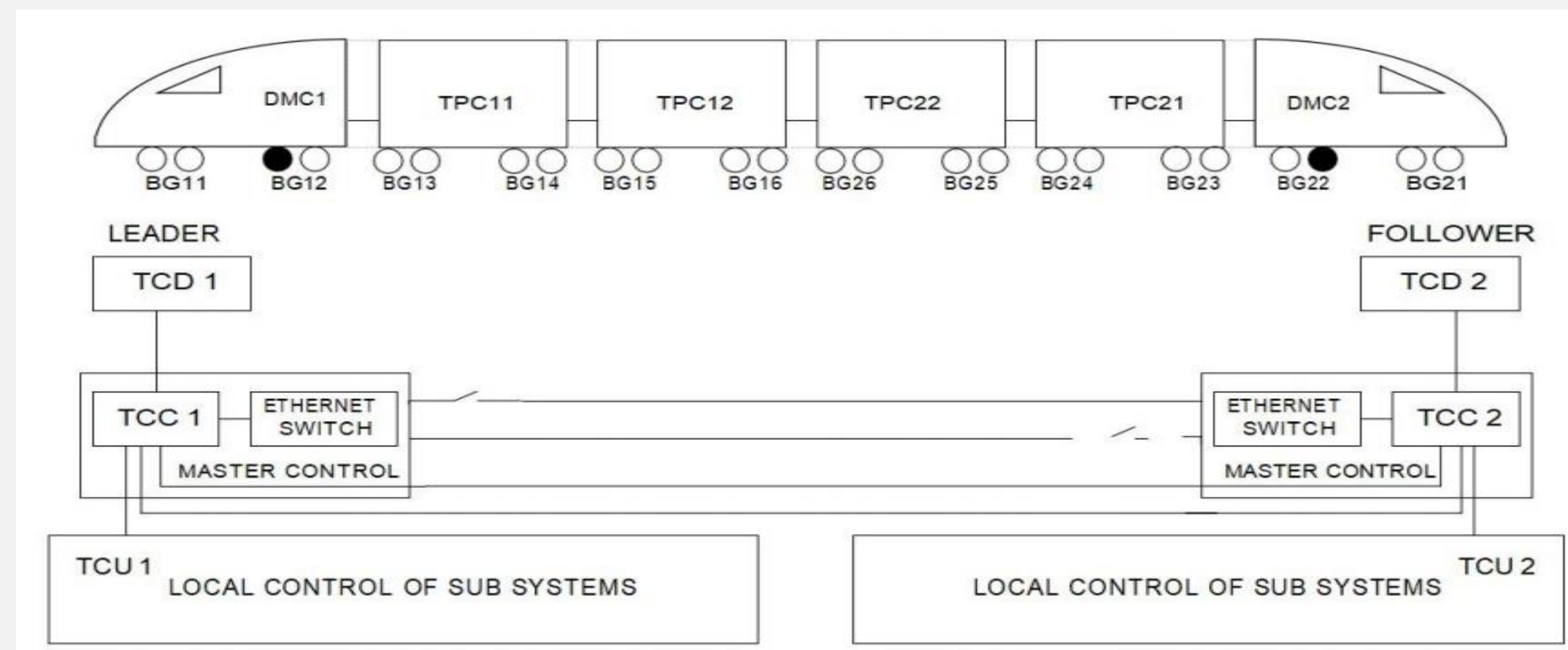
- Monitor ,control & save the data of all the system Parameters.
- There are 2 systems , every system consist of five to seven PCU -Precision Control Unit, one Secondary water pump & cooling system, & one chillers. Every Individual system has 207 No. of IOs. Both system can be monitored on Both client.
- Data is stored system wise over long period of time (Number of years).in Excel format,
- Data acquired from multiple hardware's (PID, Energy Meter, PLCs & NI cRIOs) all integrated in single platform system .
- Control settings, Process flow visualization, PID control, Compressor control, Graphical data analysis , report generation & historical trend analysis .
- Report generation in excel & PDF format.



Project Highlights

Smart Mini Bullet Train (SMBT) Monitoring & Control console

- Successfully Developed a Control & Monitoring system software for the smart mini bullet train (SMBT).
- The vehicle monitoring application runs on two Train control units (TCU). Both units TCMS monitoring systems will show all train data.
- As per architecture & data same sharing between two TCMS units one will be master.
- The train has an Ethernet train network (ETN) that forms the communication network between the two 3-Car units and provides a pathway for system redundancy management , data sharing between 2 TCMS .
- Controlling - Traction Motor, HVAC, Automatic Door System, PECU, PIS, Brake System, Air Supply System, Battery and Solar Power System, Anti-collision System, ATP System.



Project Highlights

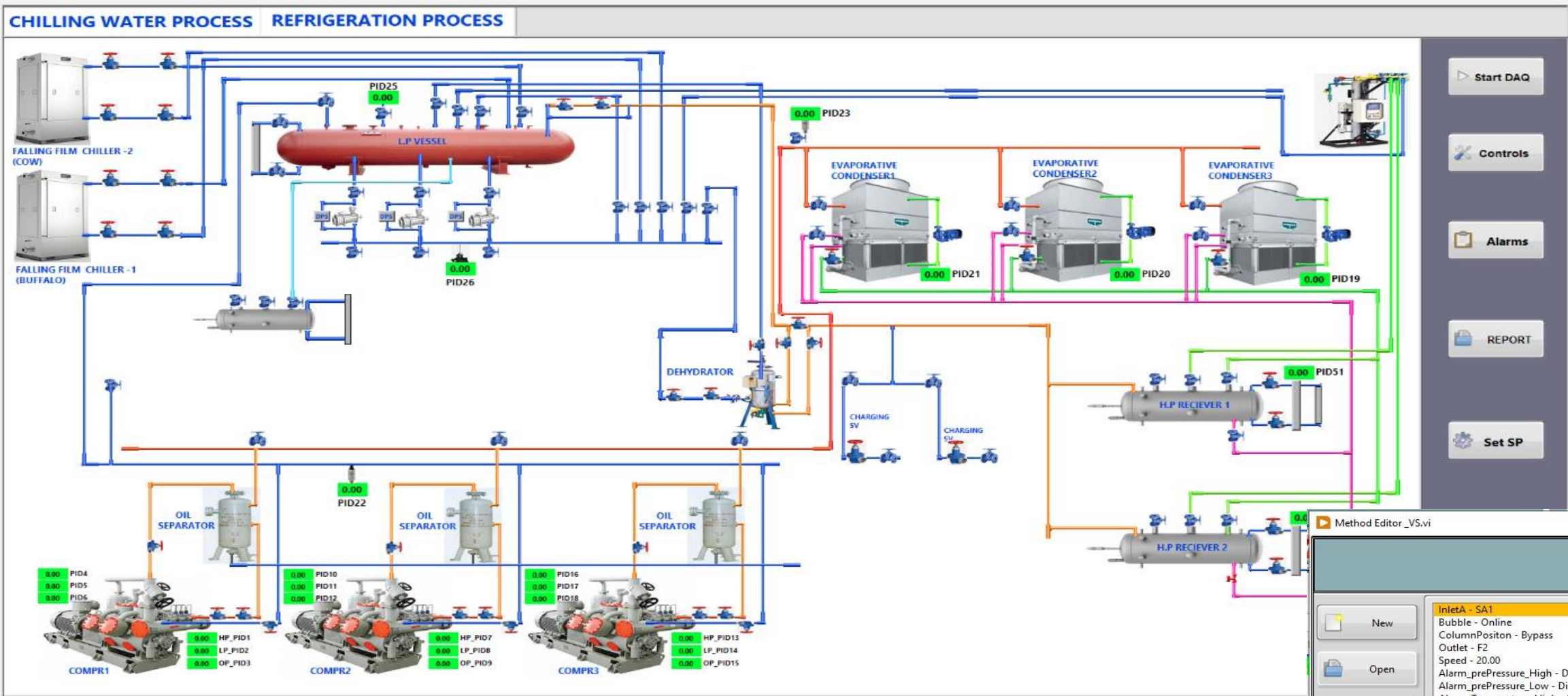
Vision inspection System

- Development of camera base Inspection Systems.
- Barcode(1D/2D) , QR Code , OCR, OCV Printing & Decoding.
- Object Identification, Inspection & Measurement (Length, Diameter & Light Intensity Measurement)
- Data saving against test , Report generation & historical data view.

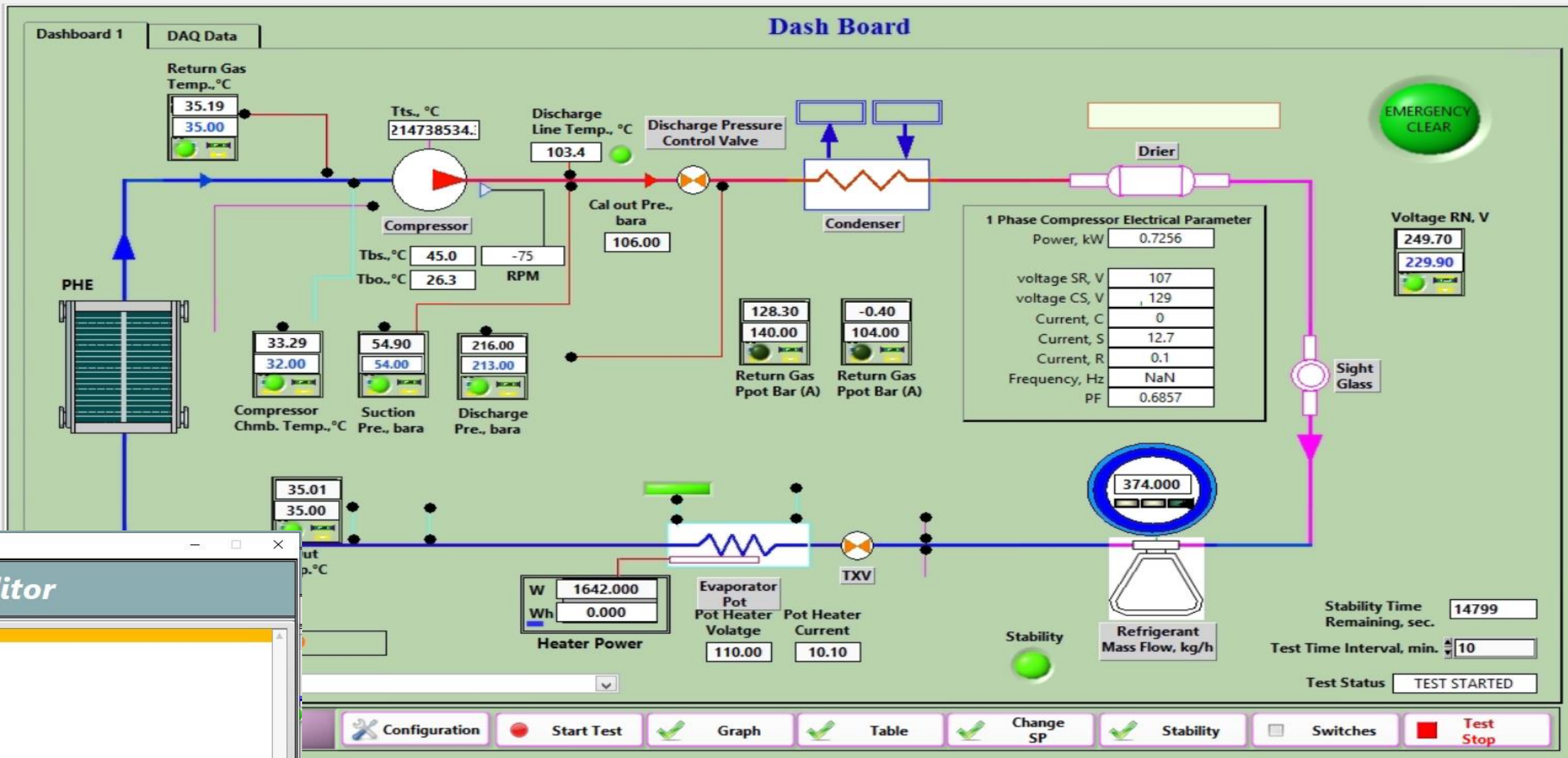


Project Highlights

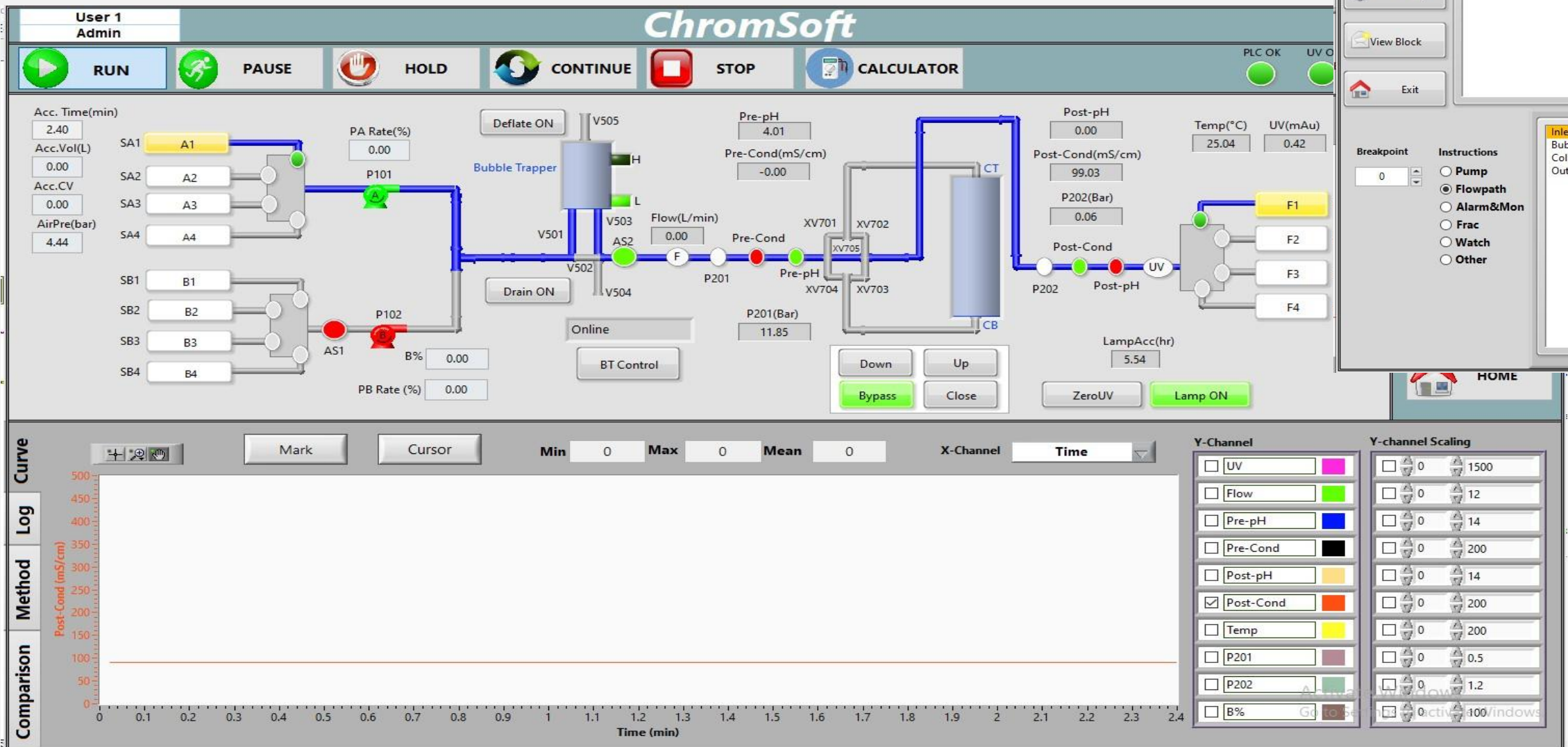
Refrigeration Plant SCADA System



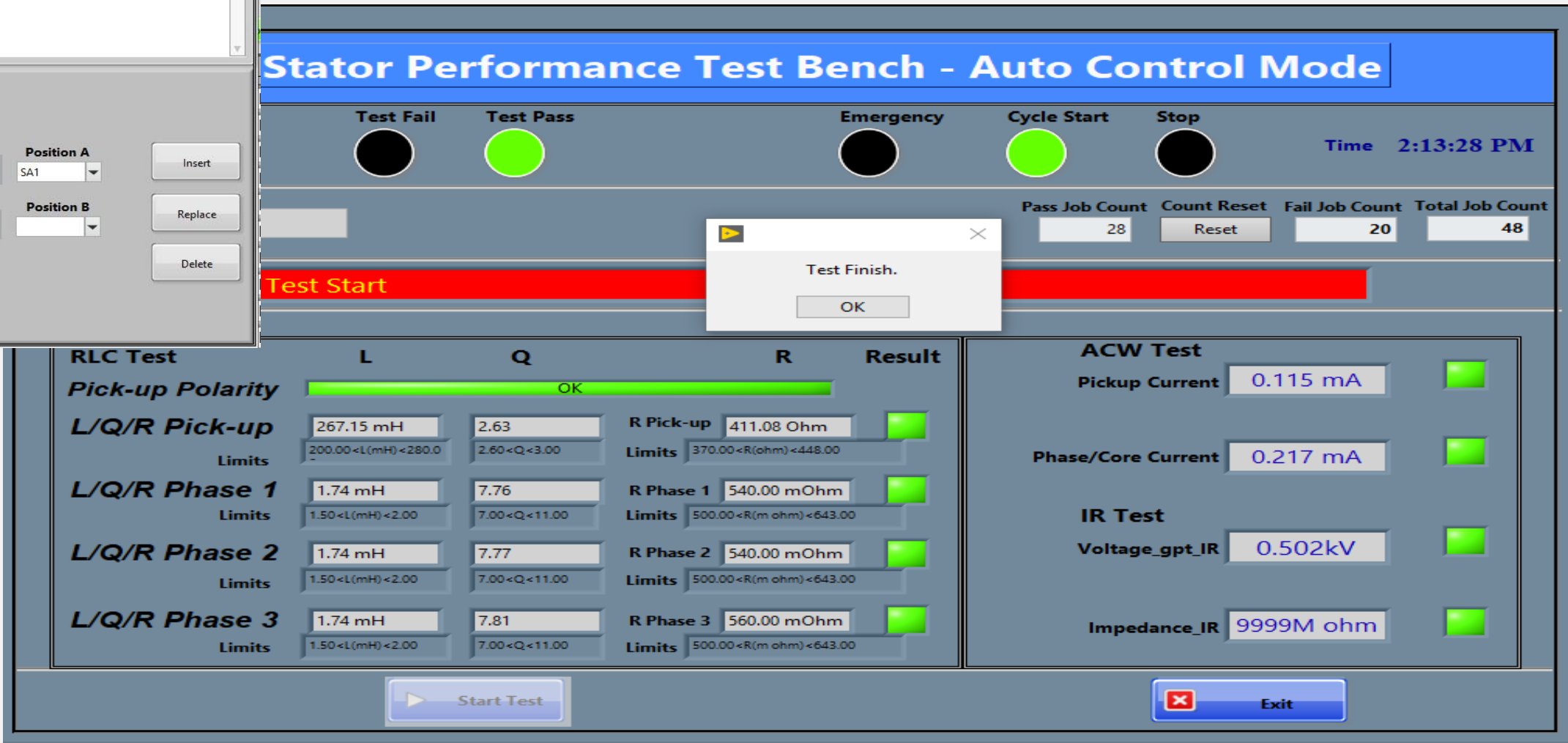
Compressor Test Software



Chromatography System



Alternator Coil Test Bench



Project Highlights

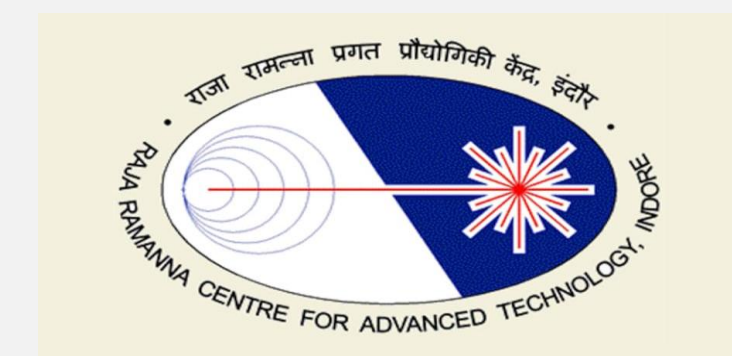
Working for **NSTL** Projects (Controls system for INS Submarine) in collaboration with Godrej/Dynalog
Project - Winch control system for submarine

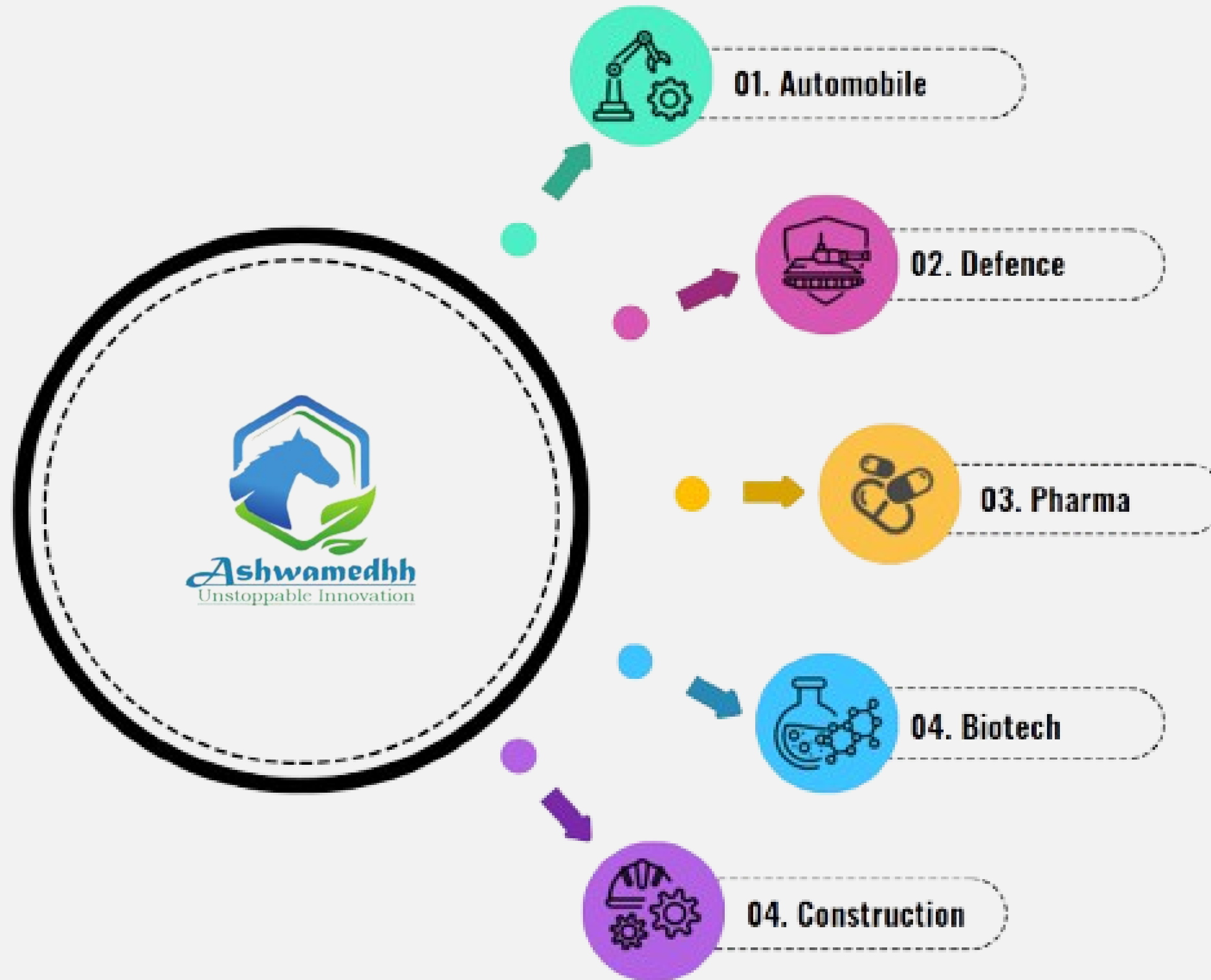


Working for **ARAI** in collaboration with Rockwell/Roxel
Project - Car Crash Test System




Working for **RRCAT** Indore, in collaboration with SRPL
Project - Precision cooling control system for Particle accelerator





We are looking forward to connect with you to discuss opportunities to prove our expertise in the best interest of your organization.

Thank you

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