Experience the new way of working in a digital plant

Emerson Solutions Center in Singapore
A day in a life in a digital plant

EMERSON.

Digital transformation, Industrial Internet of Things (IIoT), Industry 4.0, Big Data, cloud, wearables, analytics, digitization, digitalization, wireless sensors, digital twin, mobile workforce, KPI, dashboard, augmented reality (AR), virtual reality (VR), RFID, RTLS, QR, Artificial Intelligence (AI), Machine Learning (ML), data science, edge, connected services, wearables — what do they all mean? How are they used in a plant?

Bring your team to the Emerson Solutions Center in Singapore for a day to experience these technologies in a plant-like environment and understand how new digital technology can transform the way you run and maintain your plant with new innovation.

Visioning Room

Digital Plant Vision
We start the day in our boardroom by talking about the challenges you face at your plant. This discussion covers reliability, maintenance, integrity, production, quality, safety, energy efficiency, loss control, emissions and sustainability.

Admin Building Environment
Still in our boardroom, each person is given the role of plant manager, reliability manager, maintenance manager, integrity manager, production manager, quality manager, safety manager, or energy manager. Each participant will carry an industrial tablet that has a dashboard with KPIs relevant to each role. Through the messaging software on this tablet, each participant will be receiving a mix of alarms relevant to the roles..

Central Control Room

Digital Plant

Fleet Management Center Environment
In the Remote Operations Workspace we focus on the ability to manage production and equipment in multiple plants from a central location anywhere in the world, a control tower. See your fleet of plants end-to-end at-a-glance. The data and video feeds. Such a support structure and collaboration makes work easier at sites that do not have sufficient experts themselves.

Example notifications are triggered for each role and this is the part where we play out various plant scenarios to learn how data drives response with analytics software apps wherever you are. Whether you're a maintenance manager, a reliability manager, an integrity manager, or an energy manager, you will understand how work will change also improving productivity and compliance.

Flip through sample reports for IIoT-based connected services such as monitoring of vibration, corrosion, erosion, control valves, and steam traps used when there aren't sufficient subject matter experts in the plant.

CCR Environment

In the Central Control Room (CCR) environment you will familiarize yourself with technology like Digital Twin in the form of process modeling and simulation software ideal for control optimization and control room operator training to improve production and operator performance. If you are a batch plant you can get a feel for batch analytics for more consistent batches: golden batch profile. You will experience rescue locating, geofencing, and distress call.

Digital Maintenance Office Environment

Much of the same data and software seen in the Remote Operations Workspace is also used locally in plants from their maintenance office. Understand how location analytics is used for shutdown/turnaround/outage contractor management.

Digital Plant Environment

To automate data collection you will physically install wireless non-intrusive sensors for corrosion and vibration; in seconds. Try out Augmented Reality (AR) providing you the information you need and guiding you to the asset you are looking for. Try out RFID asset location and identification for yourself. Instead of writing on a paper notebook, you will take a photo using messaging software on the tablet and share with relevant team members as you would when encountering a hazard, incident, near miss, or if something is damaged, in the plant. This drives continuous improvement of safety, reliability, and energy efficiency.


VR simulation of a plant inside a classroom environment

Digital Classroom Environment

Immerse yourself in Virtual Reality (VR) in our Digital Twin of a plant. Experience how field operators upskill to learn new tasks in the safety of a classroom.

Operational Certainty Discovery Session

Once you have experienced and experimented with these new technologies you know what is technologically feasible and can match it to the needs of the people in the plant, especially in your area of responsibility. We do an operational certainty discovery session to learn from the participants about the needs of the people in their team and understand their challenges. We look for patterns to prioritize the opportunities. The team can work around principles like eliminating paper, manual work, monotonous or time-consuming tasks etc. These are the first steps in design thinking methodology. This then becomes input for the digital transformation roadmap. We then select from tried and tested solutions, or co-create new innovative solutions where none exist.
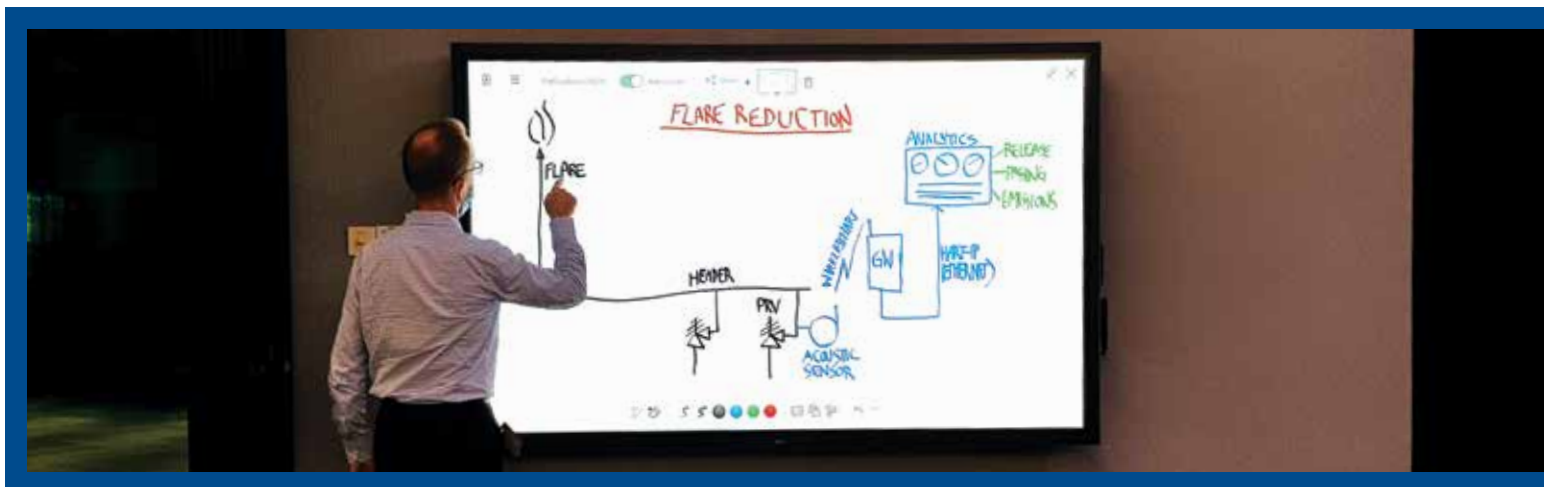
Wrap Up

We close the day back in the boardroom to review the experience of each participant and confirm the action items which have surfaced during the day.

▲ Digital Plantview from the
◄ Remote Operations Workspace

For more information, you may send inquiry to:
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