

## **CONDITION MONITORING &** PREDICTIVE MAINTENANCE

Condition monitoring and analytic solutions will be the key to eliminating unplanned downtime.

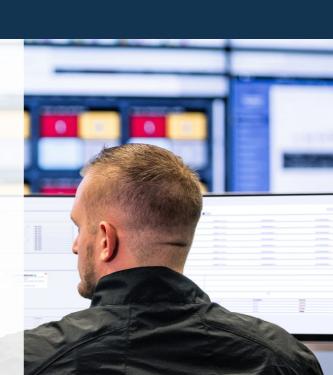
#### SENSOR ADVANCEMENTS & INNOVATIONS

Advancements in technology will allow facilities to install more sensors to collect more data to monitor machine health.



# DATA-DRIVEN PREDICTIVE **TECHNOLOGIES**

Remote monitoring developments are enabling manufacturers to identify potential problems early, schedule downtime when convenient and keep operations running as planned.





## **5G & EDGE COMPUTING**

Communications technology advances including 5G networking are allowing manufacturers to install more sensors at scale for a bigger picture of machine health.

# FOG COMPUTING

as well as enhanced security and greater manageability, fog computing is critical for enabling the connections that make the IIoT possible.

By enabling real-time control

### **DIGITAL TWINS** Digital twin technology will

increase consistency and productivity reflecting the actual condition, status and performance of the physical piece or machine.

# Innovative ways of using IoT

**HEALTH & SAFETY** 

manufacturing technology provide benefits for employees as well as the facility.



# The data analysis and communication enabled by IIoT advances

▶ FLEXIBILITY & AGILITY

provide unprecedented flexibility in areas such as supply chain, enabling manufacturers to be agile in supplier selection, ordering and procurement strategy and inventory management.



# With more wireless devices in

**CYBERSECURITY** 

manufacturing facilities, addressing cybersecurity is critical for manufacturers.

THE SMART FACTORY

upon us. 2023 may be the year in which the smart factory becomes more of a norm.

With the above trends taking hold, the era of the smart factory is truly



