THE **PRODUCTION LINE** REVOLUTION

Top 7 concepts revolutionising **production line maintenance**

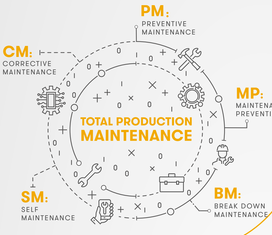
The pace of change in the manufacturing world is accelerating with the adoption of new technologies, approaches and processes. These are having a tangible impact on the way production lines are maintained today and in the future. Here we take a look at a few examples of such changes.

REPAIR	PREVENT	PREDICT
React fast if a failure occurs	Take measures to avoid breakdowns ahead of time	Use insight to perform maintenance only when necessary

1 TPM (TOTAL PRODUCTIVE MAINTENANCE)

By empowering operators to be involved in maintaining their own equipment, with an emphasis on proactive and preventive maintenance, enables improved production with fewer breakdowns, stops, and defects.

TPM provides a framework of pillars for an improved production process.



2 THE INTERNET OF THINGS (IOT)

Initially a concept in the consumer space, Industrial IoT is now being adopted right across manufacturing. It allows greater levels of data to flow to ERP systems or cloud based dashboards enabling better decisions to be made.

3 COBOTS COLLABORATIVE ROBOTS

Previously, production line robots were condemned to work alone in cages. Today, robots are leaving their cages to collaborate with operators. They take care of all tasks that are difficult or not feasible for humans.

4 3D PRINTING AT THE DOORS OF THE WORKSHOPS PRODUCTION

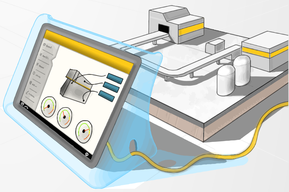
Today, 90% of 3D printing is used for prototyping. Despite many constraints (speed, manufacturing capacity, and machine cost), 3D printing is of increasing interest to industry and aeronautics for its ability to produce lightweight parts and significantly reduce material waste.

5 CONNECTED MEASUREMENTS

Connected test and measurement instruments with intelligence allows trends to be established, and results shared with experts so repairs are made only when required and unnecessary downtime avoided.

6 THE HUMAN-MACHINE INTERFACE (HMI)

Increased processing power & connectivity is allowing greater levels of process visualisation and control. The HMI provides local or remote display of the real-time production line status and performance aiding both operators and maintainers.



7 ENERGY MANAGEMENT AND REDUCTION

There will be an ever growing focus on the energy used by production lines to help ensure operational efficiencies as costs rise, and to further reduce carbon emissions. It will be everyone's concern. Components and systems will be increasingly built into production processes to measure usage and allow easier management and control.

What is the **real impact of downtime** on the manufacturing industry?

A recent survey concluded that machine downtime is the biggest impact on manufacturing productivity after staff absences.

Did you know that on average:

Source:
https://www.themanufacturer.com/articles/machine-downtime-costs-uk-manufacturers-180bn-year/