PREDICTIVE MAINTENANCE

Advanced maintenance management programs enable engineers to be deployed where they are needed most and to predict problems before they happen
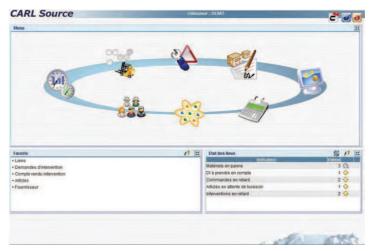
Not a week goes by without the emergence of a new digital revolution in yet another area of activity. Even the most unprepossessing sectors are affected and industrial maintenance is no exception.

During the 1990s and 2000s, maintenance was transformed into a service activity with ever-greater levels of availability, quality and production. This transformation relied on outsourcing maintenance organizations, or implementing Total Productive Maintenance – a program that brings together maintenance and production activities onto one platform.

Maintenance activities in the postal sector went through similar transformations to meet new production levels and regularly increasing parcel flows. The maintenance organizations working at various postal centers slowly increased their expertise and responsiveness in order to meet well-established maintenance policies.

Today, the flow rates of mail and parcels are constantly varying and are difficult to anticipate. Everything in postal operations changes on a daily basis – not simply the volumes, but also the production modes, types of product, levels of service and, of course, income. Maintenance must therefore become more agile to meet these needs and new technology can help achieve this.

One solution is the adoption of a computerized maintenance management system (CMMS) that is flexible, accessible and powerful. Such a tool permits the operator to control and allocate tasks and resources on a daily basis, within a changing environment. The planning functions, which are linked to the equipment pool, allow for the adjustment of intervention planning, and help to prepare the correct spare parts and proper tools at just the right moment. The geo-location of technicians also means resources can be allocated more efficiently in relation to the proximity of the task.

Solystic's CMMS solution provides maintenance workers with an easy-to-use dashboard

With tablets, technicians can now access and exchange all the necessary data from anywhere, whether alongside a machine or in the workshop. They snap photos to overlay on technical diagrams of equipment, and likewise film 'breakdown scenarios' to upload to remote technical support groups. They can rapidly identify components or spares by simply scanning barcodes or by communicating with the RFID devices implanted in the equipment.

CMMS software also helps technicians to benchmark the activities of several sites to analyze and develop maintenance plans. Present-day tools permit reports and dashboards to be generated easily, and thanks to the analysis of these reports, maintenance plans no longer need be static; they can adapt with greater agility to changes in production, aging equipment or volumes handled.

By interfacing the CMMS with the equipment, the frequency of certain preventive maintenance operations can automatically adjust to the operating conditions, as well as to the volumes handled. Alarms can automatically be triggered even before production has observed any problem.

The maintenance data stored in the CMMS, combined with technical data generated by the equipment and systems, thus forms a big data pool. This data can be linked and further embellished by existing deep learning algorithms in order to forecast events and implement more efficient maintenance programs.

Solystic designs its equipment with easy maintenance in mind. A maintenance support service provider, it prides itself on being an expert in learning techniques. Strengthened by its cross-functional vision, the company is currently preparing for the predictive maintenance revolution. It is in the process of implementing its CMMS-based solution with Belgium's leading postal operator, bpost.