



MEDIAPOSTE

PRODUCTION SCHEDULING ENGINE FOR MECHANIZATION PLANNING



Aims:

- To automate the mailer bundle machine assembly process
- To optimize material and human resources



Solutions:

- Eurodecision's LP-Scheduler production scheduling optimization engine integrated into the Mediaposte ERP
- Automated planning for each machine offering highly flexible configuration possibilities
- Gradual rollout to avoid causing difficulties on sites against the backdrop of strong change aversion



Results:

- Time-saving in planning, better response to contingencies
- Allowance made for the specifics of each site
- Team satisfaction
- Practices across all sites harmonized

"The key strength of the Eurodecision engine is its planning speed, which makes it highly responsive to changes of scope and contingencies. Having polled the teams working on the various platforms, we know that the vast majority of users no longer want to return to their old practices or revert to working out the machine schedules by hand!" Laurent Oreilly, AMO's Project leader

"Discussions with the Eurodecision experts were fruitful and constructive throughout the project. Their proposals were very relevant, their explanations highly informative and they were always available and quick to respond to our requests for adjustments or support. Incidentally, our opposite numbers stayed with us from the word 'go', so not only did they become very familiar with the project, but that helped us build strong mutual trust", Jan Boschetti, Production and Logistics Manager of the IT Division

Mediaposte, which specializes in relational marketing, is a local communication expert and leads the "unaddressed advertising" sector, namely the letterbox distribution of advertising matter.

These documents are pre-assembled into bundles for delivery by some 10,000 distributors, on one of the Mediaposte group's distribution sites located all over France. The mechanization rate is increasing, and 54 of the 295 platforms now boast new-generation machines for assembling these bundles of advertising matter.

In 2016, in order to improve task scheduling on each machine and the operators' workdays, the Mediaposte Industrial Division decided to invest in a planning optimization solution for this assembly activity. The tender was awarded to Eurodecision, the decisional mathematics specialist and resource planning expert.

Emphasis was placed on the importance of team collaboration as soon as the project kicked off in 2017, which is primarily why the Eurodecision engineers went onto the sites. They visited a mechanization platform to find out what the operators' jobs really entailed and discussed working conditions with the local teams. Three platforms were selected as pilot sites, with a view to harmonizing the group's processes to the utmost.

The engine developed by Eurodecision, based on its LP-Scheduler component, was integrated into the Mediaposte in-house production and logistics management tool (PROLOG), to simplify the team managers' planning work. In point of fact, it could take managers up to a full day to manually plan the week's activity.

Now, mechanization planning is optimized. The Eurodecision algorithm sets the production sequences for each machine – i.e. the best sequence to form bundle "blocks" from the order data (bundle make-up and geographical distribution zone), while minimizing delays in making them available. All the production (e.g.: the order of advertising leaflets, special formats. etc.), time (reception of leaflets, bundle shipping) and safety constraints (e.g.: limiting clutter around a machine) are factored in by the planning engine. As the computing times are very short (rarely over a minute), the tool can also create a new planning run in the event of contingencies, such as unscheduled machine downtime or adjusting bundle production times. Furthermore, by optimizing workday organization, the sites have clearer visibility on the activity and the operators' schedules, which has resulted in better dimensioning and enhanced temporary staff management.

The planning solution was rolled out on three pilot sites and from January 2019 to August 2021 was implemented across all the mechanization platforms. This gradual deployment meant that site-specific constraints were integrated into the engine, which was thus more flexible. The Mediaposte project team set up change management, to support the operators as long as needed to become familiar with the solution, without being baffled by the new software tool.

The engine now runs every day on 54 sites with variable volume and typology-driven bundles. Peaks of 130 schedules per week have been observed on a site during intense activity periods, (while another site might be working on fewer than 10). Automated planning makes for real operator time saving, yet they can still tweak the tool occasionally to meet a local need.

Mediaposte and Eurodecision continue to work together. Workshops are planned to integrate the tool's new capabilities as part of the continuous improvement approach, and satisfy the users even more.