

Building a Better Future through better Planning and Scheduling



Medabil started business in 1967, and since its founding, has constantly increased its participation in national and international markets, always looking for technological innovations to meet the expectations of its customers.

Currently, Medabil is focussed on the design, construction, and assembly of metal buildings pre-engineered for industries, shopping malls, supermarkets, multi-storey buildings and distribution centres, among others.



Medabil is becoming the national leader and one of the largest companies in this sector in Latin America. The company has a wide range of products with solutions for the main and secondary structures, tiles for roofing and side closures, steel decking, lighting systems, insulation, and ventilation systems for large buildings.

With three plants in the mountain region of Rio Grande do Sul, Brazil and another factory in the south of Minas Gerais, Medabil it has now a production capacity of 140,000 tons/year. To increase its production capacity to follow the pace of growth, two new plants are in development, occupying strategic positions logistically in Pernambuco/Brazil and in Luanda/Angola. In addition, the company has an administrative centre in Porto Alegre, and offices in São Paulo, Recife and Rio de Janeiro.

The Problem

The flow of Medabil's processes comprise a series of distinct stages, ranging from the entry of a request for time and estimate, to the end of a complete work. A typical project follows the following logical sequence:-

- Estimate
- Planning
- Engineering
- Production Planning
- Manufacturing
- Transportation
- On-site Construction

The Planning department is responsible for setting dates for each phase of the project, having as objectives to guide the production time and create a general schedule of work, which may be accompanied by the customer. The complexities involved in the planning process are related to the need to plan all stages and sub-stages of work of which the client's requirements were not fully detailed.

The effort to divide work, allocate materials and determine the steps of the project have commercial importance, since the time of delivery has an impact on sales, and also technical importance, given that the delivery dates defined should guide the entire process of production. However, the information available for planning is at this stage very superficial yet the setting of deadlines should be based on analysis and estimates related to production capacity available in each of the factories.

In this context, Medabil knew the importance of optimizing their planning process, eliminating manual procedures and facilitating management analysis. Medabil's main difficulties were related to their promises of secure dates for delivery to their customers, and to their evaluation of the impact of adding a new work project into a plan already started.

With this in mind Medabil was seeking an advanced production programming solution in the market, given the complexity of their processes. After reviewing alternatives, Medabil hired ACCERA the Supply Chain Solutions, a Preactor Solution Provider in Brazil, to deploy Preactor.



The Solution

ACCERA initiated the deployment project with a Starter Pack in order to establish teams, align expectations and develop a basic design of the solution. This stage lasted 5 days and, through a detailed study of Medabil's process, it resulted in important definitions that would be considered in the project. It was established that the initial scope of work would have the objective of proposing an APS solution to the Planning department, considering the potential gains, and the level of information available at the moment.

After this, the project for the deployment of Preactor was initiated. It was decided that the Planning department needed the following:-

- Consultation Orders, allowing the evaluation of impact of the allocation of a work in a complete programming scenario;
- Outsourcing of products and operations, allowing flexibility of the delivery dates;
- Differential treatment for each order that has a different status (locked, confirmed, planned).

Moreover, an advanced programming solution for the Planning department needed to automate the generation of schedules that addressed the entire process, considering the parameters in each step of the process, focusing on the dates generated by considering the optimization of production at the factory and then, calculating dates for the remaining steps.

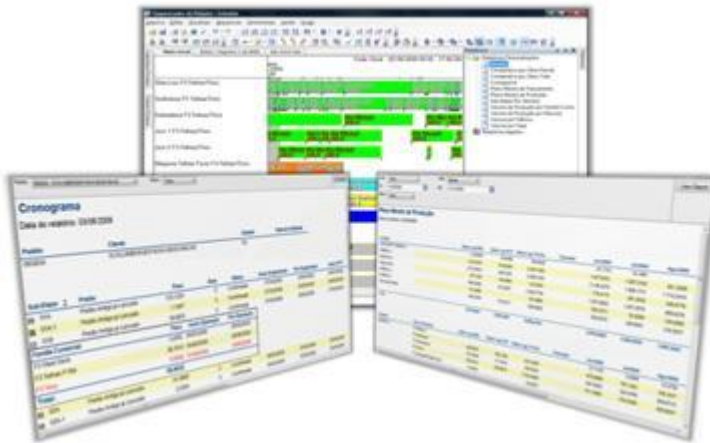
Preactor was customized to meet these requirements to sequence not only a production process, but a planning process involving many different areas with different variables to be parameterized.

Knowing that planning is an analytical activity, it was necessary to design special reports that generated the necessary information for setting deadlines. These reports were developed with the functionality available in the latest release of Preactor that offered interactive reports in which it is possible to view information at different levels just by clicking the mouse. In addition ACCERA integrated Preactor with ERP EMS Datasul.

Results

With the implementation of Preactor, Medabil's Planning department changed their action characteristics. Because of the automation of the setting of delivery dates, those responsible for planning activities began to assume activities of a more management nature, and left aside activities involving manual processes that were once required. After eliminating most of the spreadsheets, the planning of work is now done automatically by Preactor, and followed up through interactive reports. The human adjustments that are still necessary are related to scenarios analysis and decision making to improve the process, and which are consistent with the company's overall strategy.

The main consequences of this new form of planning, is that Preactor is a referential tool that helps the management of production. With the visibility provided by Preactor, resources that are occupied and the bottlenecks identified at any time, several hypotheses can be simulated by generating different scenarios to be analyzed. Among the possibilities of action, the acquisition of new resources and analysis related to the outsourcing of operations, and the transfer between plants stand out.



Furthermore, the accuracy of promised delivery dates to customers is now guaranteed by a tool that sequences all steps of the process, considering available capacities and parameters set. Unexpected interference in the process can be assessed in advance, reducing the response time and increasing the reliability of Medabil's process. In addition it could be seen that Preactor allowed a better relationship between the various departments of the company, which began to work in an integrated manner.

According to Edevaldo de Souza, Key User of the solution, "PREACTOR has a high strategic importance in MEDABIL, combining the company's expertise in the market of building systems with a supply chain that's increasingly lean, and also sustaining the exponential growth of the company in recent years through an optimized planning solution".

It should be noted that this project will define the priorities to be considered in a later draft of Fine Production Programming that may occur in the stages of manufacturing and engineering. With this, Medabil can count on a complete solution for advanced programming of production having Preactor as reference tool.