

MONNAIE DE PARIS

Case study



Challenge:

To offset dematerialization, contactless purchases and the fact that the French use fewer and fewer coins, the Monnaie de Paris wanted to strengthen its axis of development abroad, in order to improve responsiveness toward international tenders.

Solution:

Monnaie de Paris chose DELMIA Ortems to rationalize all of its industrial processes, improve its production monitoring, clean up its technical data and integrate its procurement information into its ERP.

Benefits:

Project teams saw a real improvement in the monitoring of production and better synchronization between production and supplies, with the key success factors being the optimization of 20% of cut changes, a better reliability of the information being fed into the computer system and rationalization of production monitoring.



“DELMIA Ortems gives me real reliability of supplies and a secure schedule, which allows us to limit the risk of rupture which is essential”

— Nicolas le Goarant, in charge of procurement and planning, La Monnaie de Paris.

TWELVE CENTURIES OF FRENCH KNOW-HOW

The Monnaie de Paris (MDP) is responsible for coining everyday currency. Officially founded in 864, the Monnaie de Paris is the oldest French institution and one of the first companies in the world. It is Louis XV who decided to build the building currently used on the quai de Conti, in the 6th arrondissement of Paris.

The Monnaie de Paris was officially installed December 20, 1775. The production of arts and crafts according to ancestral know-how and methods passed down from generation to generation, still practiced today, make this institution the first and last factory in activity in Paris.

In 1958, faced with the increasing volume of coins to be minted, it was decided to decentralize production. Thus, the new factory located in Pessac in Gironde manages since 1973 industrial minting or current currencies. The Paris site maintains the activity of art production and small limited collections.

Attached to the Ministry of Economy and Finance since 1796, the Monnaie de Paris becomes a public industrial and commercial establishment (EPIC) on January 1, 2007. Its current turnover is around 138 million euros and relies on 470 employees, at both sites.

THE INDUSTRIAL SITE OF PESSAC

Pessac produces the current currency that circulates on French territory for 650 million pieces in Euros manufactured per year. A multidisciplinary team of 170 employees manufactured 1.5 billion pieces in 2018, 55% of which are for export in local currency. The Paris Mint mints current currencies of more than 40 countries worldwide (Asia, Africa, Middle East, Latin America). The Pessac site also provides storage and spare parts services for the Banque de France. The site has three workshops: two for collector 's currencies and one for the realization of monetary instruments.

Technological innovation is decisively at the heart of the company's development strategy and the production of money is almost completely automated. 850 coins are minted every minute, by 24 monetary presses, in perfectly orchestrated key stages.

It all starts with a metal coil of about 3 tons which is cut by stamping to give birth to a blank. This little piece of circular material is then "degreased". Then a cord on the turn of the blank is made for coins of 1, 2 or 5 centimes, before the coppering operation; the coin blank is then polished. A

visual inspection operation to verify the dimensions and the qualitative aspect of the coating is then realized. The blank is now ready for minting. Then begins the minting operation carried out using 24 presses, for the manufacture of 6 to 7 million pieces per day, before proceeding to the packaging phase. Many quality controls are performed throughout this process. The site also stores current currencies intended for export; maritime containers represent several hundred million pieces.

NEW STRATEGIC STAKES

The Monnaie de Paris was dependent on the delivery of the metal coils and on its raw material supplier, about 1000 tons per year. This adversely impacted smooth running of production and impacted the profitability of the company increasingly turned to international markets.

Because of the dematerialization of payments and to contactless purchases, the French use fewer and fewer coins. To mitigate this situation, the Monnaie de Paris decided to strengthen its development in foreign markets, which required it to have a better responsiveness in terms of response times to international tenders.

A scheduling and supply planning cell was thus created at the beginning of 2016 with a clearly defined objective: to plan the production and supply of all of Pessac from the ERP.

“When I came to the company in 2016, production planning was done on EXCEL,” Jérémie Sourbé, manager of the Supply Chain and manager and the DELMIA Project, said. “There was no sequencing in the true sense of the word. The PMP (Production Manager Program) evolved daily, which implied a daily check of the correlation between components, tools, labor and PDP EXCEL, without an effective synthesis tool. This process offered us a very low visibility in real time on the situation of supplies of raw materials, which represent between 80 and 90% of the cost of production. ”

The manufacture of metal coils and blanks indeed requires from 3 to 6 months. The Monnaie de Paris had to anticipate its orders and have the necessary storage space in the factory. “We were looking for a solution that would better regulate our supplies of raw materials and finished products,” Jérémie Sourbé continued. “We needed a powerful planning tool, linked to our SAGE X3 ERP”.



“We were looking for a solution that would allow us to better track our supplies of raw materials and finished products. We needed a powerful planning tool, linked to our ERP SAGE X3”

- Jérémie Sourbé, Supply Chain Manager, and manager of the DELMIA project.

FROM EXCEL TO DELMIA ORTEMS

The production manager was until now in charge of planning. All the packaging lines were displayed on an EXCEL table on which the commitment decisions were colored. The logistics department suffered from this situation because the last change orders impacted the performance of the production and further delayed the next steps. It was necessary to centralize the supply part to avoid having each foreman order his own consumables, components and raw materials.

"We did not have visibility on the consumption of our resources or our stocks and our information was unreliable," Jérémie Sourbé added. "To move forward and plan better, we needed to invest in scheduling software that would allow us to visualize our finished capacity. We had to clean up our production monitoring and technical data. The Needs Calculation was unreliable because everything was done by hand. Following DELMIA project launch meetings, we became aware of the need to work on these parameters and to integrate our procurement data into our ERP. The Monnaie de Paris thus decided to feed Ortems, scheduling software, from SAGE X3, to streamline all industrial processes. "The DELMIA Ortems solution met all our needs and had a certified interface with SAGE X3, facilitating integration", Jérémie Sourbé continued.

PILOTING INNOVATION

The first step was to synchronize a production and procurement planning to avoid surplus inventory and link the in house MES * with the ERP. Much of the key information was not captured in real time in SAGE X3 or was missing. "It is now possible to enter the order from the tender that is associated with a forecast order, launch the production orders and track production. All of our keyed in information has been made reliable and we now have the actual operating times entered by the operators," Jérémie Sourbé said.

Transforming and innovating to be more competitive requires changing user practices. Accompanying change also means supporting teams prior to project deployment.

"We involved management, all decision-makers and future users very early, to make them aware of new ways of working that are free of old organizational models. We have also trained the maintenance operators who provide the time spent to make the adjustments and who validate when operations are finished. This information feeds the scheduling software that tells us exactly when the machine is ready to start a minting operation," Jérémie Sourbé said. The experience of the project manager ensures that the objectives sought by MDP are matched with the specifications of the DELMIA solution. Project monitoring was ensured by a project committee and a steering committee.

ALREADY TANGIBLE BENEFITS

Since the deployment of DELMIA Ortems in January 2019, the project teams have seen a real improvement in the monitoring of production and a better synchronization between production and supplies, with the following being the main key success factors:

- Optimization of monetary changes estimated at 20% (setting times are long, between 4 and 12 hours depending on the machine)
- Reliability of the feedback of information in the computer system
- Streamlining of production monitoring
- Establishment of meetings and a production planning led by the Supply Chain with a single reference for the company; before implementing the scheduling software, each foreman issued his POs (production order) without consultation and there was 1 PO per mint that grouped several machines.



The manufacture of metal coils and blanks requires a period of 3 to 6 months. Anticipating its orders and providing the necessary storage space in the factory was paramount

About La Monnaie de Paris

Assures the public service mission of minting Euros for France and other foreign currencies.

Products: Coins, jewelry, gifts, decorations, art objects

Employees: 470 on the Paris and Pessac sites

Revenue: 138 millions d'euros

Headquarters : Paris, France

For more information:

<https://www.monnaiedeparis.fr/en>

“The interface with DELMIA Ortems gives us a real advantage in process understanding and in monitoring the activity,” Nicolas Le Goarant, in charge of procurement and planning, said. “I have much better daily visibility on my production schedule, for all workshops. I am able to tell at any moment which bill or coin is being minted on which press. The tool provides real reliability of supplies and a secure schedule, which allows us to limit the risk of disruption, which is essential.”

While it is still difficult to measure precisely the benefits generated by the software, DELMIA Ortems has undeniably become a reference and a structuring tool for the various departments of the company. The reliability of the delivery dates has a positive impact on the activities of the sales and marketing department. The tool, in addition to its technological prowess, allows a much more fluid communication and creates real synergy between the various newly interconnected trades.

NEXT STEPS

The Monnaie de Paris is now working to exploit the other functions of DELMIA Ortems and more particularly:

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- The integration of the “ARIM” tooling, Money Instruments Realization
- Workshops, in the planning and,
- Establishment of a CIP (Continuous Integration Platform) process to establish a sales forecasting process.
- Manufacturing Execution System (MES) or the management of industrial processes



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