



SNCB-NMBS

FACTORY LAYOUT DESIGN
AND PLANNING

Design, improve and validate a maintenance line aiming to double the load capacity

SUMMARY

Industry

Rail maintenance

Customer Location

Namur, Belgium

Business challenges

Reorganize, move and improve a maintenance line

Keys to success

- Powerful, flexible planning and scheduling simulation capacities
- Focused approach
- Intensive implication and partnership between SNCB-NMBS and AMIA Systems
- Flexibility and adaptability of SIMOGGA

Results

- Validation of the new layout by the management
- Average **lead time** reduced from **20 to 6,5 days**
- Validation of the new operational organization (shifts, operators, batch, etc.)
- Future increase in load **capacity** estimated to **150%**
- Identification and **removal** of two **bottlenecks**
- Up to **€1Mio reduction** in investments on improvements

*"Thanks to **SIMOGGA Layout Design**, we were able to design our ideal future layout as we envisioned it. **SIMOGGA Planner** allowed us to challenge all our ideas while validating the operational feasibility. The metrics, the visuals and the graphs generated by the software allowed us to communicate and strengthen consensus around our solution."*

S. Corneillie, Implementation Responsible SNCB-NMBS



A pair of wheels and their axle about to be mounted

The customer

SNCB-NMBS is the national railway company of Belgium. The site of Salzinnes performs the major maintenance of diesel and electric locomotives, with complete dismantling and revision of all its component parts (electric motors, relays, bogies, axles, diesel engines).

The challenge

The increase of internal demand and the EU market liberalization of the train maintenance sector in Europe force Salzinnes' site to improve its productivity in order to meet the coming load growth. The entire site is being redesigned to increase capacity while reducing lead time. Before investing, SNCB-NMBS needs to validate the operational capabilities of the future line while taking efficient decisions.

The project

The bogie section of the plant (the chassis carrying wheels) is crucial in the maintenance flow and was the first focus of our analysis. Moving the bogie hall was the perfect occasion to optimize flows through adopting a cell layout. **SIMOGGA Layout** in combination with **SIMOGGA Planner** were used to visualize the future layout and simulate the planning based on parameters such as shifts, lot sizes, operations distribution and finite capacity constraints such as human resources or equipment.

The results

The material produced by SIMOGGA (visualization, quantification and optimizations) was used to communicate and convince decision-makers. The cost of investments has been minimized (including the cancelation of a relocation of a machine and a new investment for ~1Mio€) while maximizing the future line capacity (increased by 150%), removing bottlenecks and decreasing the lead time from 20 to 6,5 days. SNCB-NMBS has validated its operational, financial and logistical choices and is moving forward with a strong understanding of its future operations.

"We shared the same commitment to get operations moving forward."

S. Corneillie, Implementation Responsible SNCB-NMBS

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