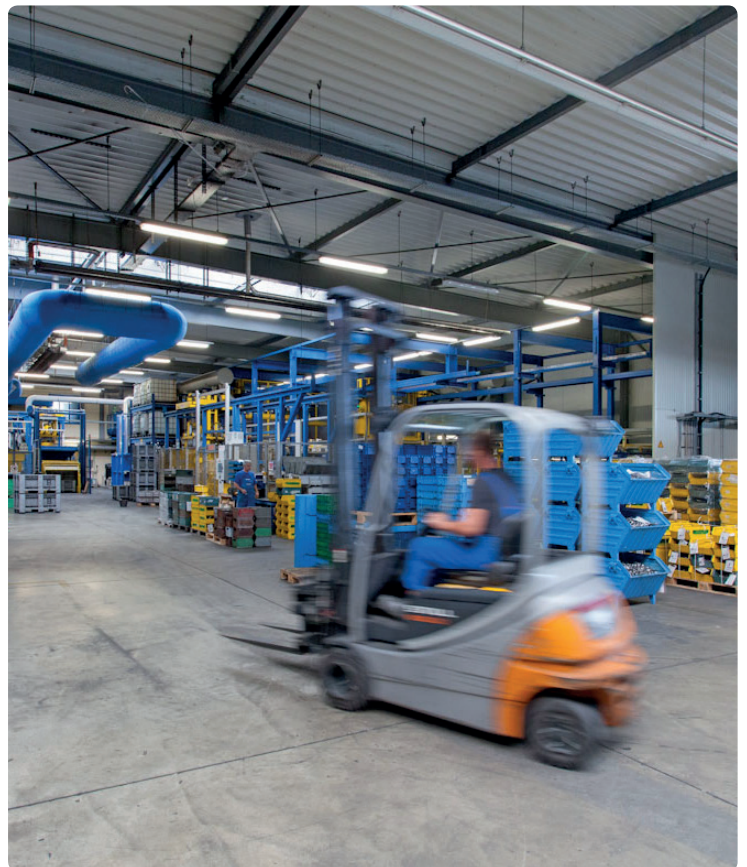


# GALFA production planning: transparent and flexible

The functional surface coatings specialist has integrated three production sites with the DUALIS GANTTPLAN planning tool



# A Planning Network for Industry 4.0, armed and ready



Galvanic surface coating of mass-produced parts

Planning is at the heart of manufacturing. So states Galfa, with more than 5000 surface coating orders per month to process and schedule at 40 processing areas spread over three separate sites. The planning is completed by DUALIS's short term planning and production optimization tool GANTTPLAN. Galfa's GANTTPLAN solution enables centralized planning for their three production areas, and is helping the company develop their vision for an Industry 4.0 smart factory. Improved throughput times, better planning accuracy, and more on-time deliveries are just three of the benefits from the GANTTPLAN implementation.

GALFA is a specialist provider of coating systems for functional surfaces in the areas of cathodic corrosion protection and pre-applied thread locks. Based in Finsterwalde, Germany, their range of services includes high-quality coatings for small, mass and base frame metal parts, with the main focus on fasteners, stampings and constructional elements. Reputable customers work in the automotive sector, the construction, fittings and electrical industries, as well as in metal fabrication and mechanical engineering.

Of the three production sites, one is located at their headquarters, a second in nearby in Massen, and the third in Katowice (Poland).

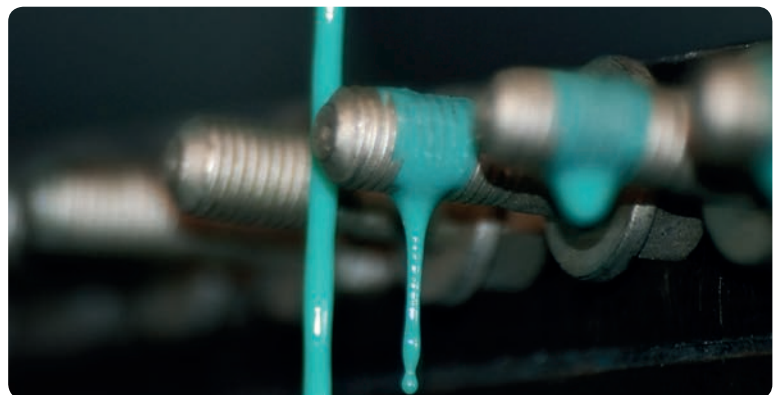
Previously, each site produced independently and scheduled orders using an Excel spreadsheet. However, with steady growth in sales came increased order complexity and customer demands for on-time delivery. Often there were many orders with processing requirements spread over several facilities. This necessitated an integrated planning approach for all three sites. In terms of today's industry 4.0 requirements, GALFA required overall production transparency, flexibility and efficiency to meet customer requirements.

During 2014 an Advanced Planning and Scheduling (APS) tool was introduced in parallel with a new SAP ERP system. Now the centralized production planning of all GALFA coating systems including all production processes is completed automatically by GANTTPLAN. The APS tool from DUALIS was the only tool that met all key planning criteria set by GALFA during the evaluation phase.

## High goals for production: Networked and 4.0

The project requirements and goals for GANTTPLAN were set high. The system should be compatible with SAP and deliver central planning for all sites based on actual production states. It should produce accurate delivery time information for customers, and transparency of the production for coordinating internal resources and external partners. In addition, the planning solution needed to simulate different planning scenarios before committing to a schedule, and allow for manual re-planning if needed. The overriding objective was to deliver maximized system efficiency with minimized lead times with respect to customer deadlines.

As GANTTPLAN promised to meet the requirements, fulfilling all the evaluation criteria for an integrated planning control center with manual re-planning support, it was put into practice.



Thread coating of microencapsulated adhesives



Piotr Majchrzak  
the Team Leader for Production Planning  
Galfa GmbH & Co. KG

“An important prerequisite for the successful roll-out of a planning tool as GANTTPLAN is the selection of the project team. A well balanced planning approach requires a high-level holistic view combined with a practical understanding of daily operations. The introduction of a central planning function has an impact on the entire company and is therefore an important management issue.”

## The concept phase: A key factor for successful planning

DUALIS advised that the project teams work very closely during the concept phase of the planning tool's development. “The concept phase was valuable time invested, and we were well advised to invest more effort earlier on - because this pays back later with better production planning efficiency,” explains Piotr Majchrzak, Team Director of Production Planning at Galfa. “We had no previous experience in automatic planning, and it was highly likely several business processes would need to be redesigned,” adds Majchrzak. Also during the concept phase, GANTTPLAN was prepared for integration with Galfa's new ERP system, SAP, by developing a corresponding interface. Key elements that were important for the planning structure were identified in the system configuration phase. These included: forward scheduling (processes start at earliest possible dates); hard restrictions (shift planning, material requirements); soft restrictions (completion dates, order priorities); objective criteria (on-time delivery and set-up cost optimization), machine utilization (parallel vs. serial), set-up and sequence optimization (static/ dynamic sequencing of production resources and tooling); and sequencing (for batch and order grouping). Implementation of the short-term planning system began after 18 months of preparation and coincided with the introduction of SAP. Over the first six months of operation GANTTPLAN was fine tuned based on practical feedback and results.

## Perfect planning – perfected production

An immediate advantage from the switch to automatic planning with GANTTPLAN was visibility of current order status at all operation points within the enterprise. With this information, production deadlines could be clearly aligned with customer delivery dates. Previously, many orders had a delivery status of “delivery date open” until quite close to the end of production. Initially, the planners found working with the automated system challenging, as an understanding of the planning principles and the influencing factors for automatic planning needed to be understood. But after appropriate training and a familiarization

phase, the new planning system was very well accepted and even recognized as a major relief from the stress of manual planning. Today two planners are required for all planning tasks, formerly five people were needed, and the three freed resources found useful work in other areas of the company. “Job satisfaction and the number aspiring to be production planners at Galfa, has improved considerably with the introduction of GANTTPLAN” says Majchrzak. Production performance for internal and outsourced processes is now measured using verifiable performance metrics. All objectives - from planning accuracy with on-time deliveries and improved lead times has been achieved.

### Facts - Check:

**Goal:** delivery date optimization , throughput time optimization , improved planning accuracy and transparency

**Budget:** 70,000 €

**Go-Live:** 2014

**Software licenses in use:** GANTTPLAN OE

**Special features:** iDoc interface to SAP, multi-siteplanning

**Materials:** 15,000

**Resources/ Work centers:** 38

**Tools:** 28

**Work Plans:** 3,200 routings

**Operations:** approx. 5 per routing

**Active production orders:** 1,100



## About Galfa

GALFA was founded in 1958 in Finsterwalde (Germany) and today is a respected provider of coating systems for functional surfaces in the areas of cathodic corrosion protection and pre-applied thread locks. The range of services includes high-quality coatings for small, mass and base frame metal parts, with the main focus on fasteners, stampings and constructional elements. With over 50 years of tradition and experience, GALFA is a professional partner to industry, serving reputable customers

in the automotive sector, in the construction, fittings and electrical industries, as well as in metal fabrication and mechanical engineering. With over 50 years of tradition and experience Galfa is a partner in industry, providing innovative methods and modern technology with unsurpassed quality and customized solutions for the issues of corrosion protection and thread locks. From the Finsterwalde and Massen plants Galfa delivers over 60,000 tons per year of customer parts treated with different

chemical and galvanic processes, zinc flake coatings, partial thread coatings and other special procedures.

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## DUALIS GmbH IT Solution

DUALIS GmbH IT Solution was founded in 1990 in Dresden, Germany and is specialized in simulation and planning software. Proprietary products GANTTPLAN and the optimization tool ISSOP provide detailed planning and optimization of production and manufacturing processes. In addition the simulation tools from Finnish Visual Components deliver 3D planning and optimization for production and logistics systems.

Users benefit in multiple ways from the DUALIS products, first during strategic planning and then through operational use. Using a 3D simulation platform, realistic models of complex production systems can already

be evaluated during the planning stage. The plant simulation saves time and costs and ultimately reduces risk. Software based production planning significantly increases the efficiency of the entire production process. Orders are optimized based on all planning restrictions and available resources including personnel, fixtures and tools. The ability to meet delivery deadlines is increased significantly by identifying exact delivery dates. Combining production and 3D simulation results in an optimally designed facility running optimised operations.

The realistic 3D visualisation from the VISUAL COMPONENTS suite is not

only for internal planning processes, it also supports system integrators and machine builders to convincingly demonstrate their system's benefits and communicate new production concepts.

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