

CASE STUDY FIRST TIER SUPPLIER

THYSSENKRUPP STEERING

The thyssenkrupp Presta AG leads the business unit for steering systems through **thyssenkrupp Steering**, which is a manufacturer of innovative and qualitatively exceptional steering systems. thyssenkrupp top-end services have resulted being one of the largest manufacturers in the world of steering systems, and the global market leader in steering columns. The cold forging business area, with its unique manufacturing using weight and cost-saving "net shape" methods, is the technology leader in the field of cold forging.

Overall, a total of approx. 8,500 employees worldwide work in 17 plants and development facilities in Liechtenstein, Switzerland, Germany, France, Poland, Hungary, Mexico, Brazil, the USA, China and Japan, where steering systems for more than 20 million vehicles per year are developed and produced.

The core of this Business Unit is in Eschen, Liechtenstein, with approx. 2,500 employees. The team focuses on helping to shape megatrends: autonomous driving, connectivity and powertrain electrification.

ANALYSIS

The increasing volumes, varieties and complexity of products, the growing number of intercompany relationships among different plants of the Group brought up the strong need to integrate cross-plant planning functionalities, as well as to standardize corporate planning and scheduling processes and systems.

After a significant Best of Breed market selection, in 2016 thyssenkrupp chose sedApta as the new partner to implement those needs.

The modules identified as critical elements of the solution refer to the following components of the sedApta suite:

- » Resource & Supply Planning (in each individual plant and for cross plant functionalities)
- » Factory Scheduling
- » Inventory Management.

In order to obtain the benefits deriving from the implementation of this new solution, as they were evaluated in the As-Is analysis phase, the essential and supporting elements needed at Management level were the following:

- » Review all cycles and technical data: setup and processing times, main and alternative resources and any missing phases
- » Enter the missing cycles
- » Manage Bills of Materials
- » Perform the planning in a correct and structured way
- » Create a feasible and balanced Main Production Plan.

SOLUTION

The main functionalities of the ONE V&OP (Volume & Operations Planning) Project includes the following:

- » Rolling (weekly to daily) Capacity Planning (or MPS master production scheduling) and load balancing in a range of 12 months on a weekly granularity considering:
 - » immediate visibility on the virtual stock levels for raw materials as well as for finished goods as a consequence of the planners simulations
 - » detailed BoM information (bill-of-process and bill-of-material) for each part number
 - » customer call-off and packaging information
 - » supplier capacity information
 - » supplier in transit material and delivery notes
 - » on-hand stock information (warehouse for buy parts and order progress for make parts)
 - » transportation calendar
 - » lot-size rules
 - » dynamic production order generation based on lot-size rules and production rhythm – Every Part Every Interval (EPEI)
 - » production patterns including EPEI logic for individual parts / part families
 - » packaging lot-size rules.



COMPANY
THYSSENKRUPP
STEERING



SECTOR
GLOBAL MANUFACTURER
OF AUTOMOTIVE STEERING
SYSTEMS



SIZE
17 PRODUCTIVE SITES
AND 8,500 EMPLOYEES
WORLDWIDE



TURNOVER
€34.7 B (2018)



SEDAPTA MODULE
RESOURCE & SUPPLY
PLANNING
FACTORY SCHEDULING
INVENTORY MANAGEMENT

- » Daily scheduling for Production areas:
 - » including production lot-size information, customer oriented packaging lot-size consideration, EPEI logic, supply strategies and customer oriented security stock policies
 - » respecting set-up matrixes, supply strategies, detailed call-off granularity, dynamical lot-size optimization by bundling work-orders but respecting packaging and handling unit quantities
- » Re-scheduling functionality using same rule-set and model by integration of:
 - » current order status information from production
 - » continuously updating supply & stock integration - real-time control and return
- » Integrated material availability monitoring:
 - » respecting actual stock information, in-transit- and supply-stock (ASN) information, work-in-progress for make-parts, packaging material availability considering customer oriented packaging logic
- » Compliance with dates and appointments of the missing components of the frozen Assembly Plan (last two weeks)
- » Optimization of work / overtime and workforce distribution.

BENEFITS

The solution integrates mid- to short term planning and scheduling functionalities using the same restrictions and master data, enabling a holistic, integrated and aligned planning philosophy from 12th month down to the latest hour with reliable process in Asia, Europe and Americas.

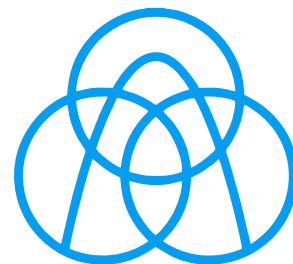
This leads to:

- » a system which allows an ongoing reduction of *muda** both in the production, and in the planning areas
- » an integrative and strategical cross-plant capacity planning concept that ensures thyssenkrupp Steering to recognize global defects in the planning and scheduling process in an effective and early way
- » a process harmonization and optimization of the plants efficiency.

* Muda is a Japanese term that identifies useless activities or that do not add value or unproductive and is part of the lean concept, at the base of the Toyota Production System.

"A combination of functionality, implementation support, flexibility and commercial aspects led us to choose sedApta as a strategic partner in this huge transformation process!"

*Stefan Fink, Head of CC Supply Chain Excellence -
Corporate Supply Chain Management*



thyssenkrupp