

Global Supply Chain Solutions

Success Story #1



Region | Europe

Executive Summary

An engineering and manufacturing service provider's legacy, manual processes were creating significant cost and hindering efficiency. A detailed supply chain assessment conducted by TTI showed that an automated replenishment, streamlined KPI controls and an improved process management system would exceed the company's performance goals, improve the stability of its supply chain and result in over €80.000 in annual cost reductions.

The Company

As an over 50-year-old company with 3,000 employees globally, this contract manufacturer was facing challenges in profitable growth despite their position as an industry leader and innovator in the semiconductor, connectivity and smart mobility sectors.

The Challenge

To determine an effective strategy, TTI processed a comprehensive and collaborative supply chain assessment to observe the current material and information flow processes. The assessment identified several cumbersome processes and an overall dissatisfaction with the level of process efficiency that resulted in high transactional cost and poor internal throughput.

Solution

In concluding the assessment four key initiatives were identified to achieve the greatest short-term impact:

- Setup a program for automated replenishment
- Setup a collaborative program for Muda management
- Implement supply chain risk management based on BoM analysis
- Setup a dashboard with KPIs to ensure continuous improvement

Results

- Reduction of transactional cost of €80,000
- Reduction of processing times in receiving
- Reduction of exception management
- Improved availability of components



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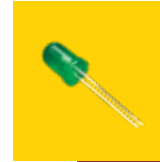
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Asia: SupplyChainSolutionsAsia@ttiinc.com
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Global Supply Chain Solutions

Success Story #2



Region | Europe

Executive Summary

Fluctuating demand due to customer mix and project sizes created simultaneous overages and component shortages for this global manufacturer of building automation and lighting systems. TTI supply chain analysis revealed that dynamic economic order quantity triggers, streamlined package labeling and automated material handling would result in more than €25,000 of annual savings for the customer.

The Company

A global 50+ year company developing and manufacturing custom electronic solutions in intelligent building and lighting technology, smart home applications, transportation, medical technology and more.

The Challenge

Customer was having difficulty anticipating and meeting the fluctuating demands of their customers and industry. This caused inventory misalignments resulting in overages and/or shortages. An excessive number of manual processes, both in purchasing and material handling, contributed further to the inflexible response time to their customers' needs.

Solution

In concluding the assessment five key initiatives were identified to achieve the greatest short-term impact:

- Minimize manual handling through increased automation
- Increased part availability through Just-in-Time replenishment
- Risk reduction and improved material flow
- Dynamic reservation system to take advantage of a cost sensitive market segment
- Instituted economic order quantities

Results

- Just-In-Time inventory system, reduced annual cost €15,000
- Annualized net savings of €10,000 from implemented automation

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Asia: SupplyChainSolutionsAsia@ttiinc.com
EMEA: SupplyChainSolutions@de.ttiinc.com



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Success Story #3



Region | Americas

Executive Summary

This longtime partner looked to TTI to reduce costs and accelerate inventory turns to reduce on-hand inventory as their part number count with TTI increased by 2,000 SKUs annually. A supply chain analysis recommended expanding an existing consignment program to align with the customer's improvement goals.

The Company

A nearly \$1B leading supplier of warehouse automation, electric vehicle assemblies, seating systems, and more to diverse industries. With a commitment to innovation, excellence and continuous improvement, the customer's solutions cater to the evolving needs of the transportation, warehousing, construction equipment, industrial and recreational vehicle markets.

The Challenge

TTI's long-term relationship with the customer enabled the investigation of innovative ways to address opportunities along the path of continuous improvement. Specific areas were analyzed to address performance goals, including inventory turns velocity and management of costs associated with on-hand components.

Solution

Based on a long-term relationship, TTI processed a detailed analysis of the existing processes and cost. The focus was set on constraints along the process and buffer inventory. In a strong collaboration improvement could be facilitated by the implementation of a consigned inventory model. Also new controls, the definition of key performance indicators and regular reviews resulted in excellent performance increases.

Results

- Increased turns velocity removed over \$250,000 inventory from the customer's balance sheet
- Proactive collaboration to add new part numbers to the program quarterly
- Proactive maintenance reporting identifies aging parts and velocity slowdown



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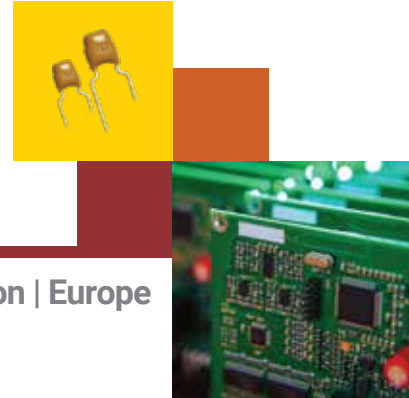
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Success Story #4



Region | Europe

Executive Summary

Limited warehouse space and excessive administration work for low-value items were limiting growth opportunities for this leading European EMS company. A TTI supply chain assessment recommended reorganizing warehouse design, more efficient material flow procedures and a new dynamic inventory reservation system. The implementation resulted in €124,000 reduced net transactional costs, a 95% decrease in expedited orders and enabled 15% growth with no added resources.

The Company

This €140M company employs 8,500 people across 12 European countries providing low-mix, high-volume electronic manufacturing services to a wide range of customers.

The Challenge

With a strategic roadmap calling for growing the business without increasing costs, the company needed to find opportunities to reduce costs and optimize efficiencies across the entire production process. A thorough TTI supply chain logistics assessment revealed that limited warehouse space and problematic material and information flow were limiting growth and causing expenses higher than necessary.

Solution

In concluding the assessment five key initiatives were identified to achieve the greatest short-term impact:

- Reorganize the warehouse layout
- Redefine material flow
- Implement a BoM-analysis driven dynamic inventory reservation system
- Establish ABC classification and risk assessment parameters
- Institute collaborative supply chain control

Results

- Reduced transactional costs by €145,000 yearly
- Annualized net savings of €124,000
- Decreased expedited shipments by 95%,
- Improved competitiveness through reduced order processing time
- Achieved an 18% reduction in procurement transactional costs
- Enabled greater than 15% growth without additional resources



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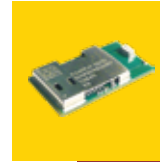
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Success Story #5



Region | Americas

Executive Summary

Increased flexibility in the supply chain, an optimized inventory management system and more efficient minimum order quantities helped this global power systems automation company improve delivery times and reduce lead time dollar drive.

The Company

A global \$1.6B company specializing in creating digital products and systems that protect, control, and automate power systems around the world. The company has over 6,500 employees and 100 offices globally.

The Challenge

The customer required a high degree of flexibility to support 5- to 10-day lead times to their end-customers. Additionally, there were challenges with unfavorable on-time delivery (OTD) due to order release and invoice timing, excessive minimum order quantity mismatches leading to unnecessary repacking requirements and the need for accurate forecasting.

Solution

In concluding the assessment five key initiatives were identified to achieve the greatest short-term impact:

- Improve forecasting accuracy with monthly review
- Streamline order processing
- Optimized inventory management
- Eliminate repackaging by converting minimum order quantities to standard packaging
- Added a value-added code to improve invoice timing

Results

- Redesigned re-order point calculation reduced lead time dollar drive by \$2M+
- Over 1,100 components on supply chain programs
- Eliminated unnecessary repacking for hundreds of shipments.



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Success Story #6



Region | Europe

Executive Summary

Optimizing costs and being able to respond to rapidly changing market conditions led this global electronics manufacturing company to a TTI supply chain analysis and solution. Applying the recommendations from that assessment created annualized savings of €270,000.

The Company

A well-established global electronics manufacturing services company with 1,940 employees and €257M in revenues utilizes multiple processes to produce PCB assemblies and complete products. The company serves power tools, small appliances, IoT, medical, and other markets.

The Challenge

The customer needed to react to changing market demands with agility while maintaining a lean, efficient supply chain with cost-optimized processes and constant availability. Their challenges included time-consuming exception management, manual material flow processes, and inaccurate forecasting that led to underconsumption.

Solution

In concluding the assessment six key initiatives were identified to achieve the greatest short-term impact:

- Optimize purchasing process and forecast generation
- Improve physical material flow
- Categorize parts for spot orders, Just-In-Time and consignment ordering systems
- Calculate minimum and safety stock levels
- Establish a delivery plan program
- Defined economic order quantities and value-added services for shipping and receiving

Results

- Annual savings of €40,000 by reducing exception handling in purchasing
- Optimized economic order quantities saved over €220,000
- Lean receiving processes save €10,000 yearly



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Success Story #7



Region | Europe

Executive Summary

This multinational industrial manufacturing company wanted to reduce costs and workload along the supply chain during the height of the pandemic. A remote TTI assessment program yielded a 4-step process which reduced cost and backlog while increasing inventory value.

The Company

With 900 employees spread across four sites located in France and Morocco, this 50-year-old company specializes in industrialization and manufacturing. Key products and services include high-quality electronic and wired boards and sub-assemblies, and the design of test systems and solutions for the aeronautics, defense, telecommunications, energy and medical fields.

The Challenge

The customer needed to reduce costs and workload in their procurement process. Due to the COVID-19 situation, the usual on-site process assessment was not possible, requiring TTI to adapt and provide optimal support remotely.

Solution

In concluding the assessment, a 4-step process improvement approach was implemented:

- Analysis of historical orders and product classification
- High-value and recurring parts were placed on a supply chain program
- Lot sizing was introduced to optimize order placement
- Rules were created for non-program parts based on rescheduling and inventory holding costs

Results

- 30% reduction of processing time in procurement
- 80% reduction in backlog rescheduling
- Reduced activity-based cost in procurement
- Reduced physical material handling costs

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Success Story #8



Region | Europe

Executive Summary

A leading global manufacturer of fire alarm systems and safety solutions needed to address challenges with their consignment inventory model. TTI conducted a comprehensive analysis of the product portfolio and implemented a min/max solution, reducing transaction costs, increasing consignment turns, and reducing shipments to the consignment by an estimated 60%.

The Company

A leading global manufacturer of fire alarm systems and safety solutions, operating in over 80 countries as part of a 45-company life-saving technology group with revenues exceeding €2.22 billion.

The Challenge

The company was running a consignment inventory model where replenishment was triggered by consumption, leading to inefficiencies and high costs. On average, over 1,500 replenishment lines were transacted annually, 50% of which were less than €50 in average value.

Solution

In concluding the assessment three key initiatives were identified to achieve the greatest short-term impact:

- Conducted a comprehensive analysis of the product portfolio, including recommendations for new consignment items, product classification, risk assessment and a baseline for improvement
- Generate a min/max solution based on an ABC movement classification reduced transaction costs for low-value item

Results

- 50 additional consignment parts allow the customer to be proactive rather than reactive
- Optimized min/max levels based on ABX/XYZ – classification resulted in consignment turns increasing from 2.5 to 6
- TTI enabled automatic calculation of lot sizes reducing shipments to the consignment by an estimated 60% while maintaining business volume
- Redesign of the processes resulted in reduction of €35,000/year in activity-based cost



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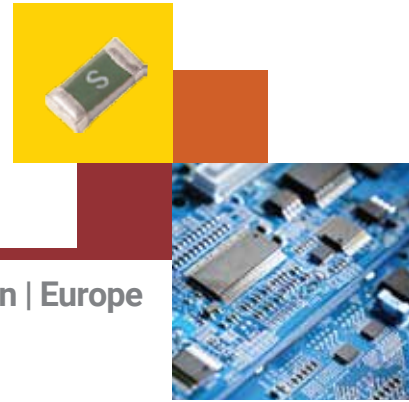
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Success Story #9



Executive Summary

A leading EMS company faced significant challenges in their supply chain, including manual processes and high transactional costs. TTI implemented a comprehensive solution involving automation, economic order quantities, and optimized material flow. The result enhanced the company's operational efficiency and profitability while reducing process costs by €51,000 per year.

Region | Europe

The Company

This prominent Electronics Manufacturing Services (EMS) provider specializes in delivering end-to-end growth capabilities and solutions to technology companies. Their high-quality services utilize the latest technology at competitive prices with a mission to respond to their customer's needs with speed, agility, and a proactive attitude.

The Challenge

The customer was confronted with a multitude of supply chain challenges. Predominantly manual processes in planning, purchasing, and goods-in led to significant inefficiencies. The absence of an automated logistics solution further compounded their troubles and escalated costs. The existing supply chain demonstrated a lack of flexibility, proving inadequate in adapting to fluctuating demands. These challenges collectively underscored the need for a comprehensive analysis of the customer's supply chain logistics programs.

Solution

In concluding the assessment four key initiatives were identified to help the customer solve these issues:

- Conduct a supply chain check, FMEA, Muda check; and part portfolio analysis to diagnose and set the path for future improvements
- Implement a replenishment strategy at the part number level to automate and optimize information flow
- Utilize economic order quantity calculations and an automated quoting tool to streamline procurement
- Introduce pre-receiving for C-parts to make the physical material flow as lean as possible

Results

- Automation and optimized material flow improved operational efficiency
- Process costs reduced by €51,000 per year
- Setup intelligent dynamic buffer to ensure availability
- The supply chain is more adaptable to changing demands, reducing competitive vulnerabilities

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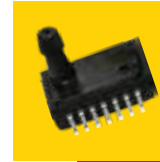


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Global Supply Chain S o l u t i o n s

Success Story #10



Executive Summary

A €1.4 billion global manufacturing company faced challenges in cost reduction and supply chain optimization. TTI implemented a comprehensive solution that resulted from portfolio analysis, risk reduction, replenishment solutions, and efficient warehousing. The implementation led to increased transparency, reduced waste along the supply chain, improved process quality, and optimal part availability. The result was a significant cost saving of €780,000 per year.

The Challenge

The primary challenge faced by the company was cost reduction. They had some logistic solutions in place with a few automated steps in procurement, however the receiving process was complex and largely manual. The goal was to optimize inventory and establish an efficient logistic system for optimal part availability.

Solution

After performing an in-depth assessment five key initiatives were identified to achieve the greatest short-term impact.

- Portfolios were performed on part number levels to find the best fitting demand fulfillment solution
- A FMEA analysis was performed to reduce risk in the supply chain
- Four different logistic models were designed following a cost benefit analysis of all options.
- Findings were used to design a replenishment solution on part number level and a strategy selector including optimized economic order quantities
- Warehousing, labeling and optimal packaging solutions were implemented to reduce the process steps and ensure a fast material flow

Results

- The implementation led to increased transparency in reservation strategy
- Improved availability of parts
- Improved flow by simple and efficient processes
- Improved process quality and stability
- Collaborative reviews ensure continuous improvement
- Cost savings with an improved economic lot size totaled €780,000 per year



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Asia: SupplyChainSolutionsAsia@ttiinc.com

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Region | Europe

The Company

The company is a global leader in the manufacturing industry specializing in the development, manufacturing, and marketing of sensors and controls technology for a variety of industries. Boasting a strong presence in over 150 countries with physical locations in 70 of them, the company employs 9,000 individuals, including 2,000 sales engineers. Annual revenue stands at €1.4 billion from customers as varied as assembly and robotics, automotive, material handling, metal forming, mobile equipment, plastics; and food and beverage.



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