



Industry Focus: Primary and Secondary Forming

Quick success with tailored solutions

TARGUS works.

TARGUS
Management Consulting

TARGUS Expertise

Efficient consulting and sustainable change

We are the industry's leading consulting company for operations in the primary and secondary forming industry. Since its founding in 2001, TARGUS has gained substantial experience and expertise in more than 100 projects in this industry, covering the entire value chain. The selected project examples in this brochure provide an overview of our experience and way of working.

	Competitive Advantage through High Performance	4
	Success through tailored solutions and systematic implementation	
	Expertise in Primary and Secondary Forming	5
	Project overview and focus areas	
Foundry	Fast Turnaround – Result-Driven Restructuring	6
	Result-driven improvement roadmap	
	Productivity Increase on the Molding Line	7
	More transparency and fact-based action definition	
Forge	Productivity Increase	8
	Utilizing optimization potential	
	Modern Maintenance	9
	Identifying bottlenecks	
	Optimize Internal Logistics	9
	Defining the actual capacity baseline	
Rolling Mill	Statistical Business Data Analysis (SBDA)	10
	Turning a data graveyard into a goldmine	
	Material Cost Management (MCM)	11
	\$10M in 10 weeks	
	Hybrid Maintenance Organization	11
	The best of two worlds	
Press Plant	Roadmap for Success	12
	Fast implementation increases acceptance	
	Lean Overhead – Effective Realignment	13
	Making the organization more efficient	
Your Project	The TARGUS Approach is Risk-Free for our Clients	14
	Full remuneration only expected with full satisfaction	
	Selected References	15
	Realize sustained results with TARGUS	
	About Us	16
	Our commitment for your success	
	Example Methods for the Primary and Secondary Forming Industry	18
	Applied and proven	



Competitive Advantage through High Performance

Success through tailored solutions and systematic implementation

Competitive advantages are not based on standard solutions or theoretical concepts. To be successful in the long term, solutions must be innovative with goal-oriented implementation.

Equipped for the future

Market-saturation, lower demand, changes in global trade, and macro trends have led to reduced global metals prices. Additionally, China and India are likely to remain highly competitive in this industry in the near future, with further competition emerging from other Southeast Asian countries.

Pressure will continue to be driven by the automotive industry, one of the largest consumers of metal. Ever-increasing fuel efficiency requirements and stronger emission regulations in the automotive industry will continue the trend of adopting lighter fabrication materials. This will continue driving growth of new materials and alloys; aluminum, magnesium, plastics, and composites.

These factors have put immense cost pressure on primary and secondary suppliers, leading to site closures, layoffs, other cost-cutting efforts, and acquisitions.

To overcome these challenges, companies are turning to innovative products, process optimization, and data analysis to help close the gaps. Those that cannot adopt new ways of doing business and improve their cost position will shut their doors, or fall victim to market consolidation.

Over the past decades, we have used our tailored consulting approach to decisively support companies in the foundry and forming industry. With our support, our clients have achieved significant and lasting organizational and operational cost improvements.

Sustainable results through tailored solutions

Our experienced consultants will identify your unique potentials and use our proven methods to maximize your return on capital.

Learn more about TARGUS, and our methods, and our results with project examples in the following areas:

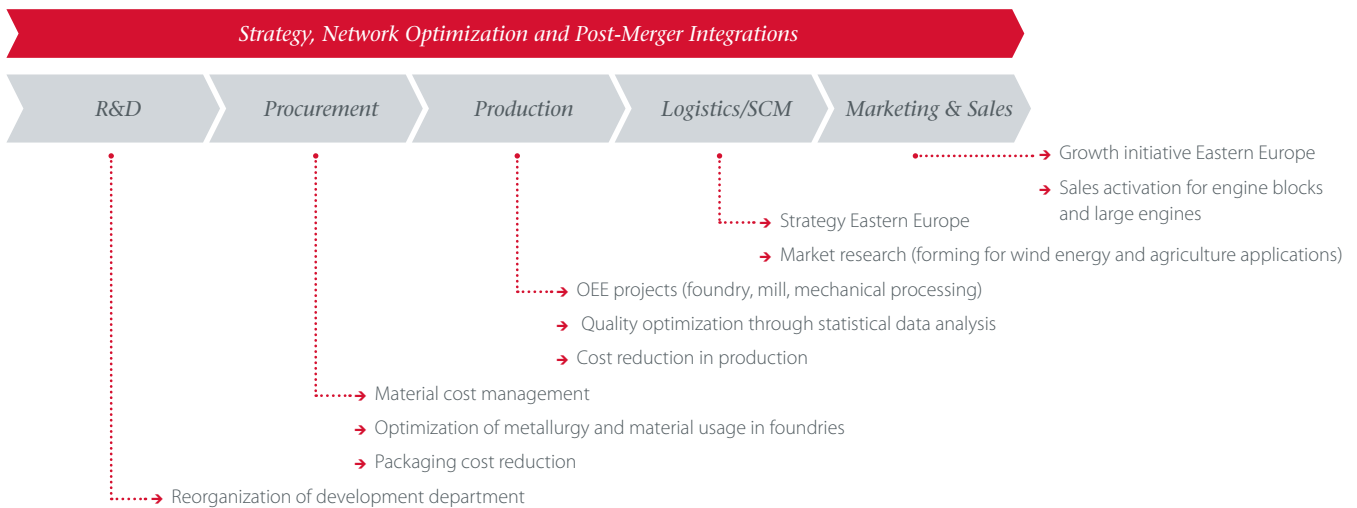
- Foundry
- Forging
- Rolling
- Stamping

Expertise in Primary and Secondary Forming

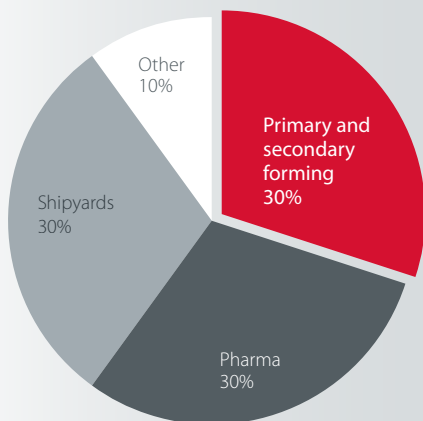
TARGUS uses an integrated consulting approach for optimization along your entire value chain. Using our extensive industry experience, we work side-by-side with your organization to develop tailored solutions. We then drive implementation to ensure you achieve sustainable P&L impacts.

>100
projects for primary
and secondary forming

Project examples for primary and secondary forming



Overview of TARGUS project review



Our staff:

- > 90% engineers and scientists
- > 50% with long-time management experience
- > 10 years of experience on average
- 100% on-site – including the partners
- Can assume all interim management functions
- Method development based on real life

Company culture is "successful implementation"

Efficiency improvements

- Performance transparency
- Implemented roadmaps for performance improvements
- Improvements in operational procedures
- 10 – 40% cost reductions

Lean overhead and lean quality

- Process and interface optimization
- Roadmap for sustainable overhead cost reductions
- Process optimization with lean methodology
- 10 – 25% cost reduction

Material cost management

- Cost transparency
- Sustainable programs for material and service cost reduction
- Mindset change to significantly reduce waste
- 8 – 20% cost reduction

TARGUS works.



Fast Turnaround – Result-Driven Restructuring

With our Fast Turnaround approach, we systematically examine all possible improvement levers to identify the best opportunities for achieving rapid and significant P&L improvements. We ensure evaluation of all levers through in-depth analysis of financial results, operational KPIs, and spending data. Improvements are then developed to target the largest potentials identified anywhere in the organization.

A global manufacturer of iron came to us about the dire situation of two of their foundries. Both facilities employed our Fast Turnaround approach to return to profitability.

Roadmap for improving results

Through a complete review of financial results, operational KPIs, and spending at both facilities the following approaches were identified as having the most potential for rapid P&L effect:

- Productivity improvement on the molding lines and in the blow room
- Material cost reduction (purchasing, extended workbench, and maintenance)
- Sales activation and acceleration

In six cross-functional teams, consisting of diverse specialties and seniority levels, a detailed roadmap was developed,

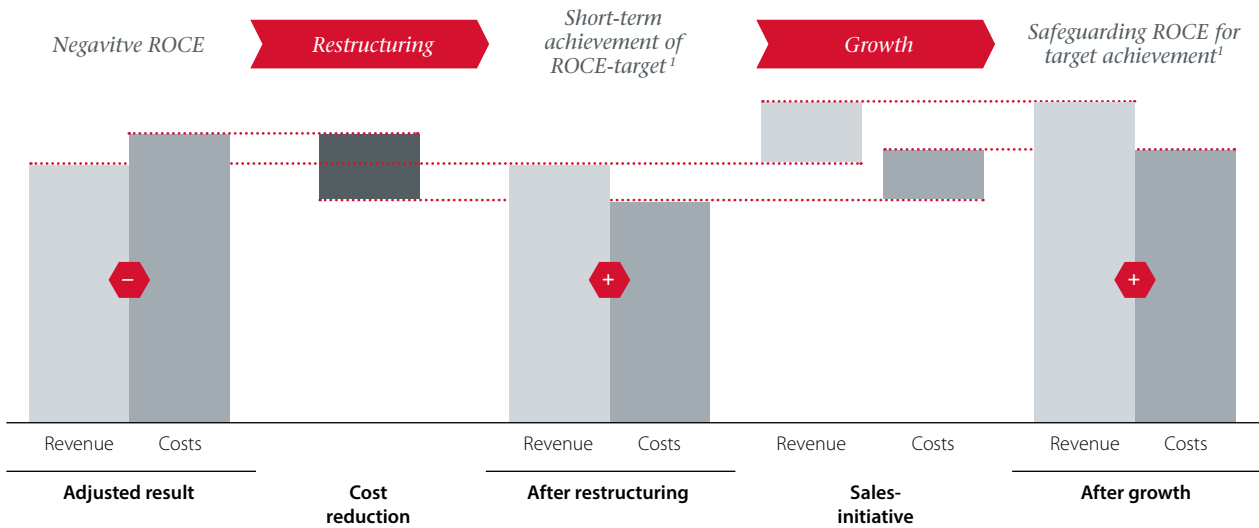
improvement goals identified, and countermeasures were defined for immediate implementation. These measures included optimization of sand preparation, improvements to the melting process, and cost reduction through efficient utilization of materials. Position improvements and process improvements were made in each of these areas. To activate sales, we identified new products to expand the client's portfolio. Additionally, we screened target customers and markets to develop tailored acquisition approaches which resulted in increased sales and improved competitiveness.

This project's success was due to the involvement of nearly all on-site personnel, their ownership of project goals, their involvement in implementation, and continuous project progress tracking that we developed specifically for the client.

Project Results

- Roadmap for creating transparency
- OEE increase of 7% with existing molding equipment (target: > 4%)
- Total personnel and material cost savings of more than 14% (target: > 10%)
- Definition of new sales approach based on potential client analysis as well as organizational adjustments for new products and markets

TARGUS Fast Turnaround



¹ Including a reduction of capital employed

Productivity Increase on the Molding Line

Overall Equipment Effectiveness (OEE) is an ideal productivity indicator for foundries. With OEE, key operational statistics – machine availability, performance, and quality – are measured against the highest theoretical output. This approach provides a transparent view of production performance and highlights areas with the biggest potential to make significant P&L improvements.

At a large family-owned iron foundry, this approach was used to increase output to meet increased orders and avoid additional capital investment. Prior to the project, the foundry planned to seek funding for a costly expansion of their molding line to capture increased de-

mand. Unfortunately, doing so would have significantly hurt profitability. They found themselves in this situation due to a lack of transparency in production performance, which hid their true potential.

More transparency and clear definition of improvement measures

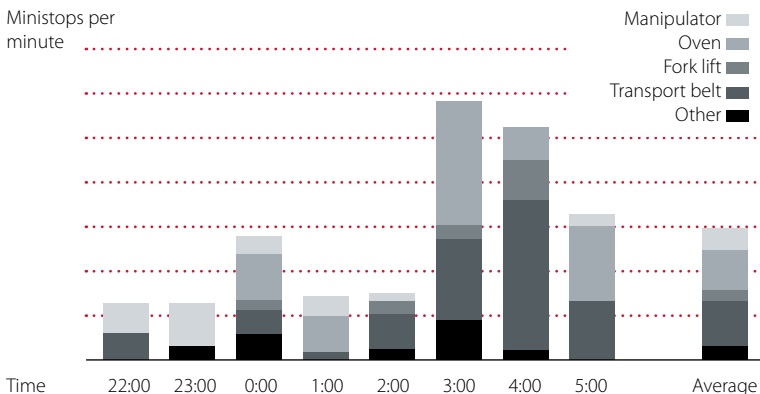
To create concrete steps toward increased productivity, close cooperation with the foundry staff, maintenance experts, and leadership team was key. Their close participation allowed them to own and implement new processes to completely capture and document all production disruptions. This level of

involvement and documentation allows for the meaningful analysis that delivers insight about productivity issues.

The tracking of degree of implementation and results were important measures for the success and transparency of the project. Visualization of results enables teams to see their status and project progress easily. Rapid feedback helps to maintain team momentum while continuing to implement improvements. The key factors of success for this project were consistent focus on mutually developed goals, continuous implementation, and the rapid development of countermeasures for deviations to planned results.

As part of the project, employees received continuous improvement training to ensure the successful integration of all measures and sustained results.

Recording and visualization of ministops for a forming line



Project Results

- Increase in productivity > 30% (target: 23%)
- Avoidance of additional capital investment
- Sustained results through continuous improvement
- Transparency of current productivity KPIs



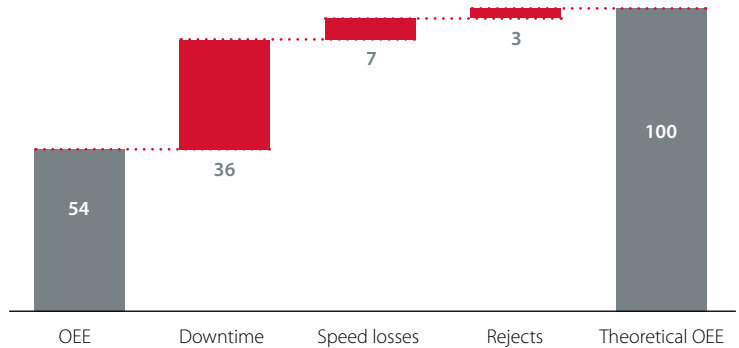
Productivity Increase

A forging company with 2,500 employees sought to increase productivity, reduce finished goods inventory, and improve customer satisfaction.

Due to the high amount of product variation, components were built in small to medium-sized batches. This led to frequent setup processes, resulting in start-up difficulties; disruptions became a regular part of production for this company.

We were able to accomplish significant productivity increases through creating transparency in production. To help drive transparency efforts, a committed

Example of OEE at a forging line



implementation team was installed at defined stages of production. Each team was equipped with tailored reporting and visualization tools. Additionally, critical changeover steps were optimized to reduce setup times at each forging press.

Through better definition of key performance indicators, the establishment of a production data collection system, analysis, bottleneck optimization, and

data visualization, significant optimization potentials were identified and captured.

The key to achieving success was the rapid and consistent implementation of practical solutions. This was achieved through the tailored reporting and visualization tools created for their unique production, which were adopted by all areas of management.

Project Results

- Development and implementation of a shop floor KPI system
- OEE increase by more than 35%
- Sustained adoption of reporting system by all areas and management

Modern Maintenance

Maintenance is essential for equipment availability and is a primary driver of a company's output, and therefore its bottom line.

At a drop forge client, the maintenance plan has not been able to adapt to the changing conditions into which the business had grown. The result was an overallocated, underprepared, and excessively expensive maintenance pro-

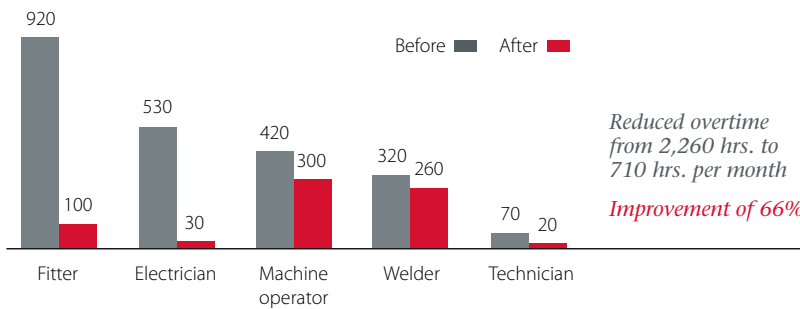
gram that was only capable of providing underwhelmingly low equipment availability.

Reorganization of maintenance

As a first step, we implemented modern maintenance methods, such as Total Productive Maintenance (TPM) and Reliability-Based Maintenance (RBM). The key to driving adoption of these new

approaches was through involving shop floor personnel in the development of new maintenance activities and countermeasures. Employee representatives were involved at an early stage to plan and implement the reorganization of the maintenance area. This was done specifically to establish a high acceptance level of the new approaches by personnel.

Optimization of maintenance overtime



Project Results

- Increase in plant availability by 13% (target: 8%)
- Reduction of maintenance overtime by 66%
- Labor cost reduction and optimization of positions through new shift model

Optimize Internal Logistics

When considering process improvements, internal logistics are often neglected. However, internal logistics offer numerous starting points for increasing efficiency.

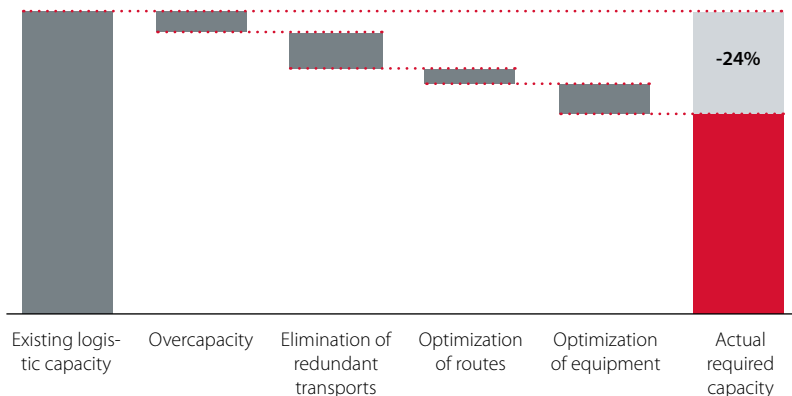
Due to mature processes in large plants with a wide range of manufacturing, optimization of production planning traditionally takes place within each

department. This leads to issues with harmonization of processes and a less than optimal state for all processes. Typically, symptoms of this can be seen in unbalanced production quantities. This imbalance leads to increased work in process (WIP), inefficiencies in logistical processes, increased material handling, and ultimately increased throughput times.

Expose vulnerabilities

Our data-driven value stream analysis enabled the transparency needed to identify weak points in internal logistics. This process started with the targeted collection of production and capacity data. Thus, we identified logistics activities and internal transport routes to be optimized for reduced throughput times. For a typical foundry, throughput improvements and capacity harmonization across forging, thermal treatment, mechanical processing, painting, and assembly are achievable.

Capacity analysis for internal logistics

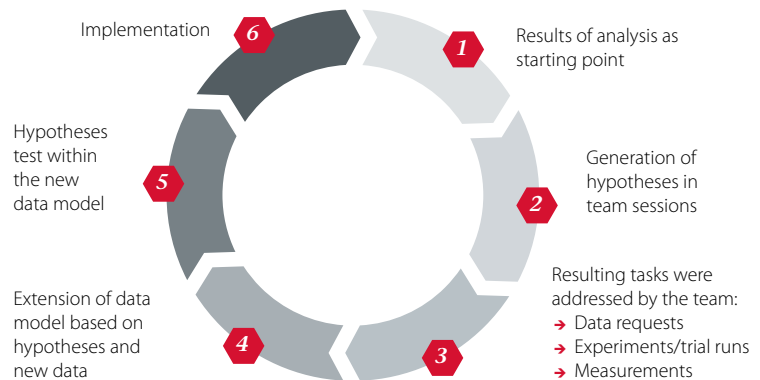


Project Results

- Cost savings of more than 20% for internal plant logistics
- Significantly reduced inventories and throughput times
- Implementation of the measures in less than six months
- Sustainability through an individually adapted KPI system

Statistical Business Data Analysis (SBDA)

The Statistical Business Data Analysis method developed by TARGUS provides data driven insights for complex inter-dependent processes. In highly automated production facilities, large amounts of production data are collected at nearly every process step. In most cases, a majority of this data remains unused.



For a large aluminum rolling mill, we used this method to identify and remedy the root cause of significant, but sporadic, quality issues on a precision rolling mill – greatly improving customer satisfaction and a reduction of returned material.

A data gold mine instead of a data graveyard

An SBDA analysis was conducted which evaluated the last three years of production data, along with all available data from preliminary process stages: the aluminum smelter, suppliers, and even

weather measurement data. An analysis was conducted to determine the relationships between process variables and the resulting quality problem. With this approach and close collaboration with technical experts, the root cause was determined. The root cause relationships which were uncovered also provided management with a new understanding of their unique manufacturing conditions.

Project Results

- Identified root cause of the quality issue
- Countermeasures for the quality problem implemented
- Reduction of operating costs due to improved quality
- Reduction of customer complaints and returns

Material Cost Management (MCM)

Material costs are often actively influenced by only a few employees in the purchasing department. Although materials account for a large part of the total costs in the primary and secondary forming industry, the levers to drive prices down are rarely utilized to their fullest.

Together with TARGUS, a large rolling mill launched an aggressive initiative for massive material cost reduction.

10 in 10

Savings of \$10M were defined in just 10 weeks. With our tailored approach to material cost management, we were able to systematically optimize con-

sumption habits, material specifications, and logistics costs along the value chain. Additionally, the formation of interdisciplinary teams and the expansion of the purchasing department's authority were essential to achieving success.

Our experienced consultants trained and coached each of the client team leaders in the TARGUS methods. As the team leaders became effective in the new methods, our consultants acted as advisors and coaches to help with unforeseen hurdles.

Project Results

- More than \$10M in savings potential identified
- Customer employees became qualified as MCM team leaders
- Sustained implementation of all measures

Hybrid Maintenance Organization

In an effort to improve maintenance's reaction speed to downtime events, a client chose to dismantle its centralized maintenance organization. They were able to achieve their goals, but the new structure created a new problem – specialized knowledge was kept in a decentralized manner (i.e. redundant costs spread across different locations and shifts, and a lack of transparency). The customer ultimately faced significantly higher maintenance costs as a result and was now concerned about the impact on their bottom line.

The best of two worlds

Our goal was to implement a hybrid maintenance organization. To achieve this, employees with specialized knowledge were brought together; programmers, hydraulics experts, and certified welders. These key personnel were physically centralized for better coordination and collaboration.

To drive costs down, processes outside the core capability of the on-site maintenance team were outsourced to a third-party maintenance service that was able to improve efficiency in these processes. Additionally, detailed work planning and cost coordination, facili-

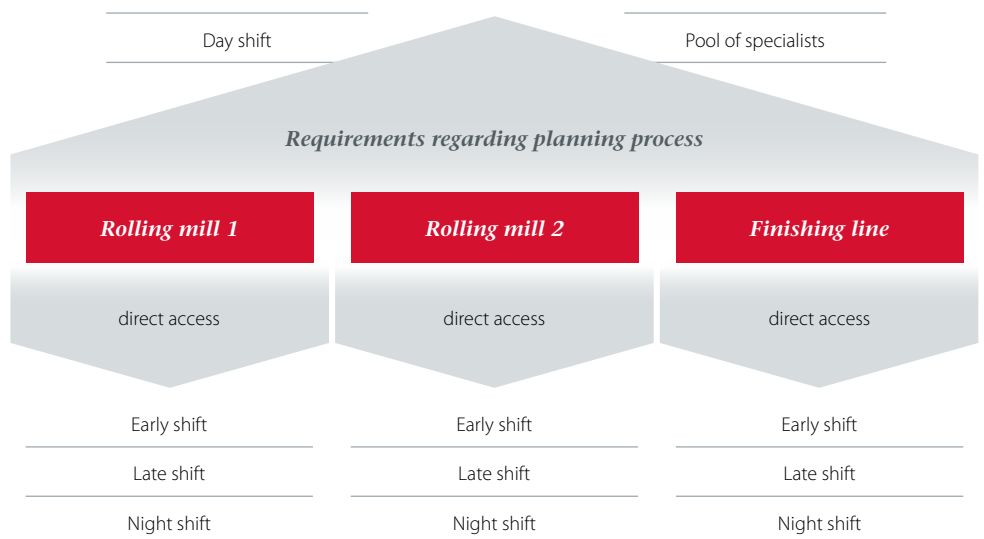
tated by the new centralized group, ensured the company's own services were cost effective.

In the end, each facility's maintenance program focused on providing critical production support. In this way, a considerable reduction in external maintenance requirements were achieved without the need to build up in-house staff, costs were reduced, and maintenance responsiveness was increased.

Project Results

- Reduction of maintenance expenditure by \$2.20M (2M€)
- Reduction of maintenance costs without loss of productivity
- Introduction of effective work planning
- Increased transparency and collaboration

Maintenance organization – the best of two worlds



PRESS PLANT



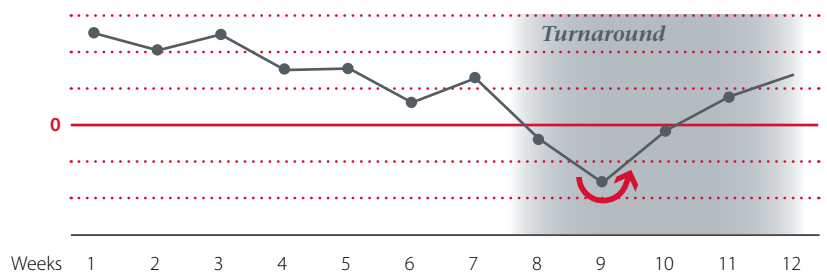
Roadmap for Success

A large network of stamping facilities supplying the automotive industry had the goal of reversing their steadily deteriorating profitability. Consisting of a head office and six plants of different sizes, most of the facilities were operating at a loss.

Our proven Fast Turnaround process was used to quickly reverse profitability issues. In this process, the Roadmap for Success was developed side by side with management and key SMEs (subject matter experts). This roadmap created the strategy for generating additional benefits for the entire group and was binding for all employees based on the public commitment by management.

The first step was to create transparency around the current situation of the company. The key areas for transparency were:

Profit development over time



- Customer profitability and expected sales
- Performance of the plants and their cost structure
- Overhead of the central office

As a result of the transparency, official financial planning needed to be significantly revised downwards. However, it became clear that an extensive cost and waste reduction program was necessary if they were to achieve a rapid earnings improvement. The plan would require participation from the head office and each facility. With all organizations participating successfully, the project was able to realize significant cost reductions of over 20%.

The unique challenge to this project was coordinating a common approach for all locations. Additionally, there were a tremendous number of employees which needed to buy into the project for it to be successful. This was resolved by establishing teams in all organizational units to ensure coordination and implementation started on day one.

Building transparency into expected sales and the actual financial situation for the company laid the foundation for this project. That level of transparency, among other things, facilitated identification of savings all the way down to individual process steps.

Project Results

- Cost reduction of 23% (target: approx. 20%)
- High degree of employee engagement and skill transfer
- Return to profitability

Lean Overhead – Effective Realignment

As demand grows, administrative roles also tend to grow. Unlike demand, these roles tend to not go away, creating more and more burden to profitability. For most organizations, ample opportunity to improve profitability can be found here. To successfully implement lean overhead, early involvement of managers and key personnel is critical.

The improvement of performance and the optimization of processes were the main levers for achieving sustained reductions in overhead costs. After detailed analysis to bring transparency to the current situation, all activities within the scope of the study were

recorded in a function matrix. Then, each process was analyzed and costs were examined.

By identifying and eliminating processes with highly skewed cost/benefit, scopes of work were reduced to just the most valuable functions in order to create sustained efficiency improvements. For additional P&L effects, a new organizational structure was developed with reduced budgets to make the new lean overhead permanent. In order to avoid pushback, we developed tailored communication strategies for employees and stakeholders.

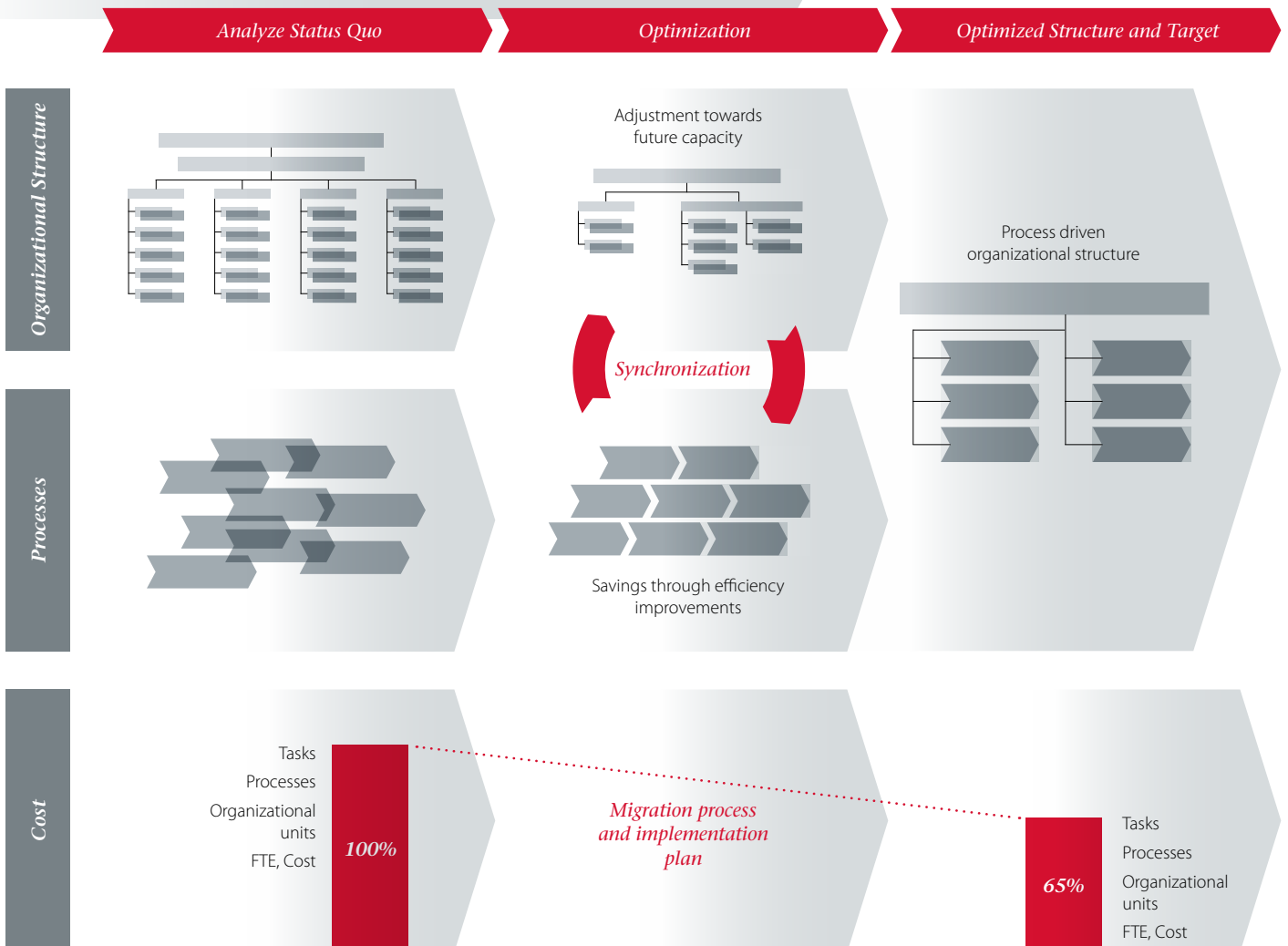
The key success factors of this project were transparency, a high degree of communication, and clear targets setting. Additionally, by involving the management team at an early stage, we were able to increase the acceptance and speed of implementation.

Project Results

- Cost reduction through eliminating non-value-adding activities
- Increased efficiency through streamlining of existing processes
- Development of new efficient business processes
- Reduction of overhead costs by over 30%

Systematic Approach for Lean Overhead

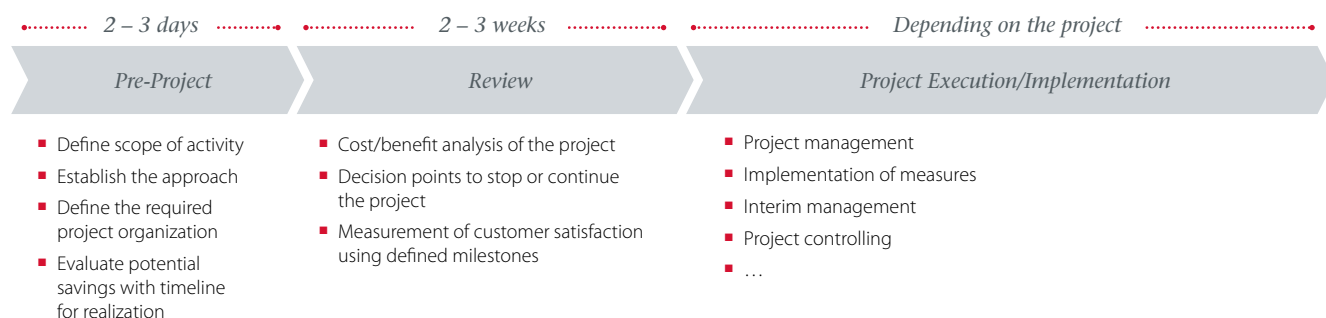
Preparation: Get buy-in from the management team and define communication strategy



The TARGUS Approach is Risk-Free for our Clients

Full remuneration only expected with full satisfaction

Prior to each project we conduct a pre-project for our client, free of charge. This allows us to evaluate the likelihood of success, and to develop a tailored proposal including estimates regarding the future potential. To ensure the achievement of the project goals, we conduct a review after the project start that additionally evaluates the project approach and team composition with regards to achieving the expected improvement potential to the full extent.



We are subject matter experts

Our consultants have years of practical management experience. TARGUS is the successful combination of structured methods and rigid implementation, as our consulting approach does not end with an action plan. We also facilitate successful implementation to ensure achievement of our client's goals.

Success can only be achieved as a team

Technical expertise, communication, and management skills are very important to us. Successful consulting is done as a team, and our consultants are all selected to be great teammates.

Our project methodology, which has been used effectively for decades, prioritizes transparency and implementation speed – tracked through predefined milestones. To reflect our confidence in our methodology, we offer a flexible compensation model to guarantee that TARGUS will help you realize results.

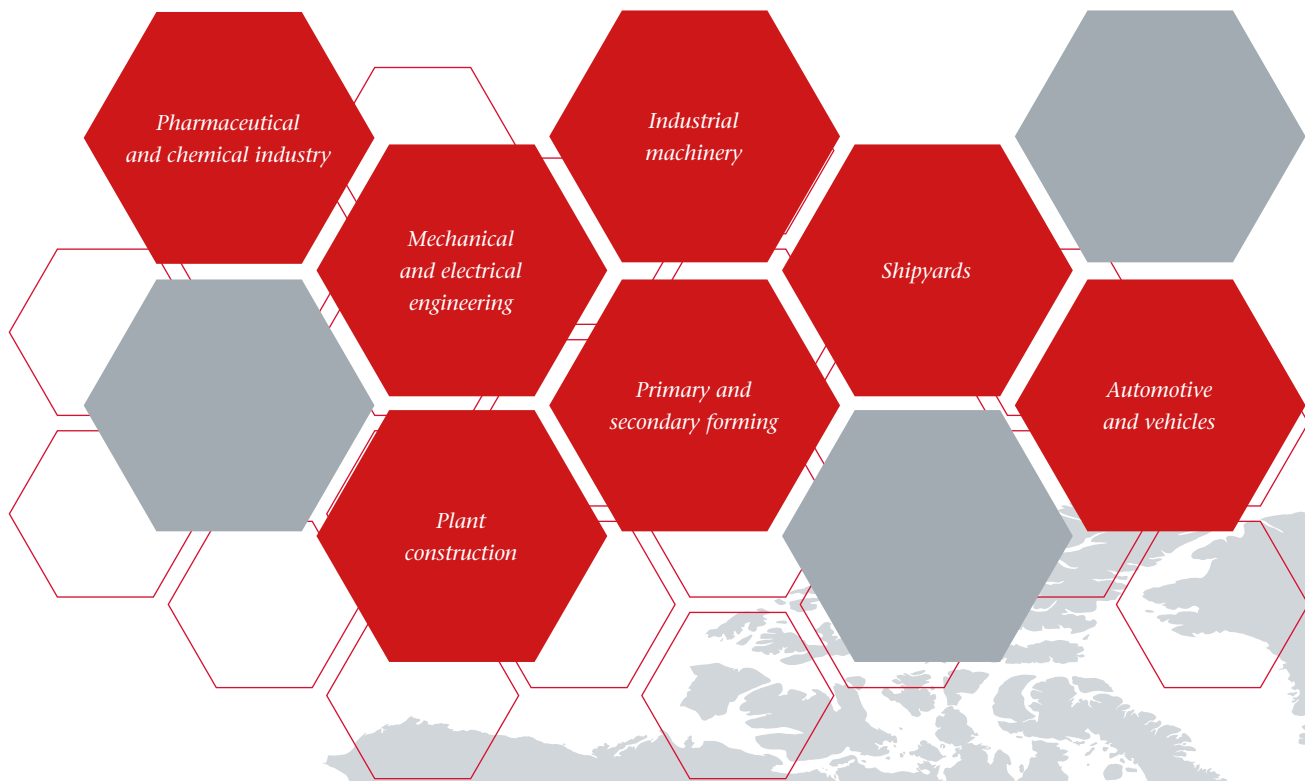
Selected References

Realize sustained results with TARGUS

We help our customers wherever they need us. Whether domestically or internationally, at the headquarters or in local offices and production sites – our customers profit from our experience and capabilities of our consultants as well as on our proven methods.

A selection of primary and secondary forming clients

- Alunorf GmbH
- Amesbury Group Inc.
- Bochumer Verein Verkehrstechnik GmbH
- Böhler-Uddelholm
- Dana Holding Corporation
- Fritz Winter Eisengießerei GmbH & Co. KG
- Georg Fischer AG
- Gestamp Umformtechnik
- Gienanth GmbH
- Hammerwerk Erft G. Diederichs GmbH & Co. KG
- Hydro Aluminium Deutschland GmbH
- Industrieverband Massivumformung
- Johann Hay GmbH & Co. KG
- KSM Castings Gruppe GmbH
- Silbitz Group GmbH
- Tekfor GmbH
- thyssenkrupp AG
- thyssenkrupp Berco
- thyssenkrupp Forging Group
- Voestalpin



Our staff:

- More than 60 consultants with technical competence (> 90% engineers and scientists)
- On average > 10 years of experience per employee
- Longterm operations managers with management experience
- Creative thinkers with extensive consulting background

Our project team:

- Tailored team composition for your project

Our areas of expertise:

- Research and Development
- Sales and Marketing
- Logistics and Supply Chain
- Purchasing
- Operations and Production
- Engineering and Maintenance
- Organization and business processes
- Strategy

Our offices:

- Ratingen near Düsseldorf, Germany
- Detroit, MI, USA
- Chicago, IL, USA

Our workplaces:

- Wherever you need us
- 100% on-site – including the partners

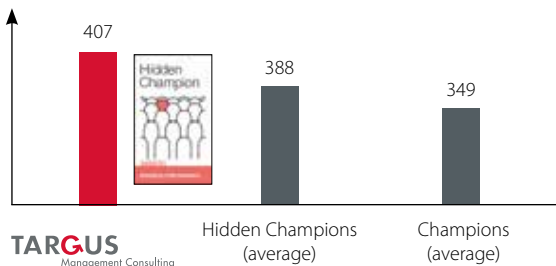
About Us

Our commitment for your success

Fast results and sustainable change through our smart methods and implementation-driven approach.

What sets us apart?

Implementability ¹



TARGUS
Management Consulting

Hidden Champions
(average)

Champions
(average)

¹ WGMB Study "Hidden Champions of consulting 2020/21"
(Implementability has the highest significance of all criteria for the consultant's decision)



Example Methods for the Primary and Secondary Forming Industry

Material Cost Management

Achieving significant saving effects through changing consumption habits, utilizing new technologies, and optimizing purchasing behaviors of direct and indirect materials, as well as services. We can empower your organization to get costs down.

KPI Management and Downtime Reduction

With the right data at the right time, deviations are detected as early as possible and disturbances and downtimes are minimized through quick countermeasures, ensuring a healthy bottom line. We can bring you the transparency your organization needs.

Operational Excellence

Operational Excellence is a challenge for every company, each path to achieving this is unique. With our expertise and experience, we select the appropriate methods for your project from our OpEx toolbox and adapt them to the exact requirements of your company. We tailor to your needs.

Total Productive Maintenance (TPM)

Maintenance is essential to the healthy operation of every business. Therefore, bringing world-class practices to improve reliability and to reduce costs is of utmost importance. We have the expertise to bring your organization there.

Statistical Business Data Analysis (SBDA)

Analysis is the key to insight. We have developed methods to reduce operating costs and increase the productivity of your company through leveraging your own data. Your company sits on a treasure trove of untapped potential. We have the methods to uncover it for you.

Fast Turnaround

Declining profitability is unacceptable, and root causes are not always clear. Therefore, our consultants are experts in cost reduction, material flow and quality improvement, product development, product portfolio streamlining, lean overhead, and customer (re)acquisition – whatever might be your root cause. With our expertise and commitment to complete implementation, we can achieve the rapid turnaround your company may need.

TARGUS works.



TARGUS Management Consulting AG

Dechenstraße 7, D-40878 Ratingen

Phone: +49 2102 94 22 66

Mail: info@targusmc.de

www.targusmc.com

TARGUS Group North America, LLC.

26153 John R Rd, Madison Heights, MI 48071

Phone: +1 248 541 33 20

8745 W. Higgins Rd, Ste.110, Chicago, IL 60631

Phone: +1 773 341 9110

Mail: info@targusmc.com

www.targusmc.com