



INDUSTRY **BUILDING MATERIALS**  
TOPIC **OPERATIONAL EXCELLENCE**  
METHOD **PROCESS IMPROVEMENT WITH LEAN AND SIX SIGMA**

## OPTIMISED PROCESSES CEMENTED AT HOLCIM



*“The production of cement is energy-intensive. Thanks to J&M, we have identified a number of unexploited potentials to optimise our processes with which we now significantly reduce costs. The attempt to apply Lean and Six Sigma also to the building materials industry really paid off for us.”*

**Morten Holpert, Holcim (Deutschland) AG**

Holcim (Deutschland) AG, a leading manufacturer of cement has successfully applied Lean and Six Sigma techniques in a traditional industry. Thanks to a consistent and continuous improvement of processes, the building materials group has significantly reduced its production costs while increasing its operational capacity.

“Lean and Six Sigma are well established in industries such as the automobile, chemical or pharmaceutical – we asked ourselves whether these methods might not also work for us as a manufacturer of building materials”, Marius Seglias, Plant Manager at the premises in Höver, named one motivation for the project. Added to this was the fact that national competition is constantly increasing in the building materials industry as a result of improved transport networks. Due to increasing energy and material costs the company was under pressure to act if it wanted to achieve competitive costs. Alongside the continuous optimisation of the production technology, Holcim’s objective was to keep the analytical and project management capabilities of its team up to date, to ensure continuous improvements also in the processes.

J&M, the long-standing partner, confirmed that Lean und Six Sigma would be suitable to achieve precisely this objective. After a brief scan phase in which potentials were identified, subprojects were named and defined, and the Holcim project managers were selected, the implementation planning phase began. J&M offered its consulting services of which a large portion was success dependent.

### **Lean and Six Sigma techniques integrated into everyday operations**

The core of the project work is the so-called DMAIC cycle (Define, Measure, Analyse, Improve and Control) according to which all projects were dealt with. “The systematic approach according to which existing processes are first of all defined, then measured, analyzed and ultimately improved and controlled, prevents snap decisions and ensures sustainability” explains Frank Müller, J&M Project Manager. The decisive factor is however not only to provide the theoretical training of these techniques but that the training takes place parallel to the project work and that an experienced consultant supports the project managers with advice and assistance with the im-

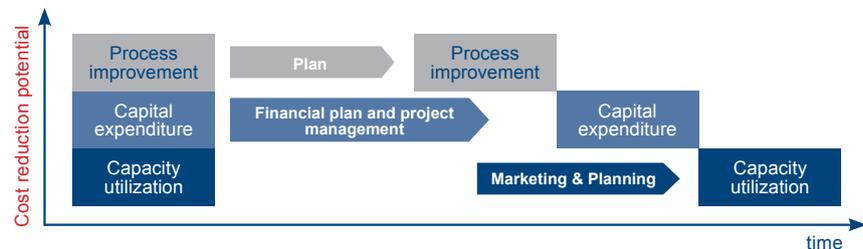


## Holcim (Deutschland) AG

Holcim (Deutschland) AG is northern Germany's leading building materials manufacturer and has its registered office in Hamburg. Almost 150 years ago the original focus of its activities was to manufacture cement; today the core areas of the group of companies are the strong and independent product divisions: binders, gravel and concrete. In addition, customers are provided with complete building materials solution and a range of additional services. The Company thinks beyond the boundaries of the divisions to provide the customers actively with services which add significant value.

Holcim (Deutschland) AG is a subsidiary of the global building materials group Holcim Ltd, Jona/Switzerland, one of the world's leading building materials manufacturers. With affiliated companies in over 70 countries on all five continents, Holcim Ltd has the largest geographical network of operations in the global cement industry.

## Cost reduction potential in three main areas



mediate implementation in the project. The training courses were carried out in blocks, alternating between the northern German plants in Lägerdorf and Höver. This also provided the employees with the opportunity to exchange views on the progress of their projects and the knowledge acquired throughout the plants, and to give feedback on the respective phases.

Thanks to this active management of change, the consultants won the confidence of the employees in Lean and Six Sigma and the acceptance of the project on the whole. "The initial skepticism of our employees was replaced by a new confidence in their own abilities", reported Morten Holpert, Plant Manger in Lägerdorf. "By changing between theory and praxis, the employees quickly began to grasp how a structured approach could help them in producing cement."

### Energy consumption reduced – output increased

In the two Holcim plants in northern Germany the project team worked on eleven subprojects for the areas in which they identified promising opportunities for process improvements. For example, the burning process and the sequences in the grinding process were improved. The cement mills generated significantly more output using much less energy.

The supply shortfall which existed at the start of the project was thus eliminated permanently. Another subproject dealt with planning and controlling the electrical energy consumption. By not running energy-intensive plants in parallel, Holcim was able to avoid current peaks and significantly reduce energy costs.

### Return on consulting convinced

All these projects together generated a return on consulting of 10 for the cement manufacturer. I.e. for each euro put into the optimisation project, Holcim saved ten euros. J&M was even able to exceed the expectations agreed upon between Holcim and its project partner with a target achievement of more than 100 percent.

The Holcim project managers were qualified to continue working on continuous process improvements beyond the scope of the project itself and to use their own initiative to also cope with complicated situations successfully. "The certification of our employees as Six Sigma Black Belts at the end of the project provided additional motivation in the team", reported Marius Seglias. As far as Holpert and Seglias are concerned, the résumé is very clear: "The attempt to apply Lean and Six Sigma also to the building materials industry paid off for us."

## J&M CREATED VALUE

- Tapping previously unexploited potential in the production processes
- Return on consulting rate of 10
- Qualifying the project managers in Lean and Six Sigma and thus establishing a continuous improvement process
- Creating the basic requirements to develop new markets