



BUSINESS EXCELLENCE CASE STUDY

ALCOA ALUMINA REFINERIES

SHARING BEST PRACTICE GLOBALLY IN ALCOA

March 2007

Executive Summary

In late 2004 Alcoa Alumina Refineries recognised the need to facilitate the sharing of best practices in its nine refineries globally. The initial outcome was to create \$10 million in savings or production increase. The process was defined and implemented building from SAI Global's nationally recognised Driving Knowledge Performance methodology and ongoing mentoring from SAI Global specialists.

The success of the initiative is best demonstrated by the decision to replicate what has been done in the Alumina Business area into other key Business Units within Alcoa. SAI Global's ongoing mentoring role is helping achieve this expansion in a cost effective manner while ensuring that the benefits continue to be accrued from the initial initiative.

Background of the Client

- Alcoa is the world's leading producer and manager of primary aluminum, fabricated aluminum and alumina facilities, and is active in all major aspects of the industry.
- Alcoa serves the aerospace, automotive, packaging, building and construction, commercial transportation, and industrial markets, bringing design, engineering, production, and other capabilities of Alcoa's businesses as a single solution to customers.
- In addition to aluminum products and components, Alcoa also makes and markets consumer brands including Reynolds Wrap®, Alcoa® wheels, and Baco® household wraps. Among its other businesses are closures, fastening systems, precision castings, and electrical distribution systems for cars and trucks.
- The company has 123,000 employees in 44 countries.
- In 2006 it was 10 times safer to work for Alcoa than it was in 1991.
- Alcoa makes a very sustainable product: almost 70% of the aluminum ever produced is still in use, equalling 480 million metric tons (529 million tons) of a total 690 million metric tons (761 million tons) manufactured since 1886.

- Every day, worldwide, Alcoa:
 - Mines 86,300 tons of bauxite and 27,300 tons of coal
 - Refines 41,000 tons of alumina
 - Smelts 9,575 tons of aluminum
 - Recycles 2,300 tons of aluminum
 - Manufactures 8,810 tons of aluminum products
 - Produces 166 million closures for beverage and food containers
 - Assembles wire harnesses for 20,400 vehicles
 - Generates 96,000 MWH of electricity
 - Purchases \$27 million in goods and services

Situation

- Mining and Refining is being conducted across the globe in four key continents by employees staff and management speaking multiple languages
- Lessons being learnt in one area are not easily communicated to other locations
- Best practice needs to be flexible to address local situations, as different regulatory and technical conditions require customisation of some procedures
- Any adjustment to process needs to be carefully qualified, as adopting the wrong new practice could lead to significant cost to the business
- \$10 million worth of value needed to be generated from the initiative, relying on the full time management and facilitation team of two.

SAI Global Solution

SAI Global worked with Alcoa's Best Practice Team to achieve the following:

- Determine the process for:
 - Identifying of requirements from mining and refining operations,
 - Source Best Practices required to address identified requirements
 - Qualify suggestions for best practice
 - Encourage transferring those best practices which had been identified and qualified to the other 8 locations.

SAI Global Solution (cont)

- Determine methodologies for measuring and rewarding the appropriate behaviours.
- Retain a focus upon the spread and application of the best practices
- Maintain effective stakeholder management including a comprehensive communication strategy
- Design a management system to monitor and encourage performance of the Best Practice system.

Results

The objectives have been achieved using extremely limited resources. SAI Global has played a pivotal role in mentoring the team through the barriers which arise during the course of any such initiative.

By building from the Driving Knowledge Performance methodology SAI Global was able to concentrate the efforts of the team on achieving value through maximising the application of Best Practices.

The initiative has been so successful that it is now being drastically expanded to provide value to other Business Units within Alcoa.

Acknowledgements

SAI Global acknowledges and thanks the Alcoa's Best Practice Team for providing the information presented in this case study.

About Us

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