

# Sasol engages SAMI to stabilize operation

Strategic Asset Management Inc. (SAMI)

Sasol Synfuels, a division of Sasol Pty Ltd. of Johannesburg, South Africa, has dramatically reduced its revenue losses that had been a result of equipment reliability issues. An ongoing intervention in partnership with Strategic Asset Management Inc. (SAMI) focusing on the foundation processes for asset healthcare has improved maintenance artisan productivity by more than 45 percent. This additional work capacity has been applied to reducing equipment downtime thereby cutting revenue losses by 25 percent during the first year of sustaining the processes.

The Synfuels facility in Secunda, South Africa, is the largest manufacturing entity in the Southern Hemisphere. At this location synthetic auto and truck fuels are produced by Sasol's patented process of recovering crude oil from coal deposits plentiful in this region of the continent. The facility contains a refinery downstream of the coal conversion process and a variety of other petrochemical feedstock processing facilities utilized by Sasol and others at various locations around the country.

## Facing the brutal facts

The leadership of the Secunda facility

faced the brutal facts concerning their asset healthcare approach following a strategic assessment conducted by SAMI two years ago. The results of this assessment pointed to a considerable number of gaps between the actual state and the vision that Sasol had developed for itself.

Being a technologically superior company, it came as a shock when Sasol realized that the basic elements of work management and proper planning/scheduling execution had been restricting their productivity substantially. Further, the investment that had been made in developing an extensive network of reliability engineering centers within the facility had not paid off; these higher stage procedures and processes had been built on the shaky foundation of an inadequate "Stage 1" work management process. The data and discipline required in these foundation processes were not in place to support the higher stage work being attempted by the reliability engineering function.

Once the organization decided to partner with SAMI to intervene at the foundation level, a strategic planning process was engaged to develop the long-term plan for

success in capturing Sasol's vision, including strategies and action initiatives to attack the gaps found during the assessment.

Once approved by the stakeholder community, the plan was transferred to a design team facilitated by SAMI to build the corrections for the gaps, then the implementation plan, training materials and requisite collateral information to take the designs to the field for installation. The work was intense and demanding of the team charged with these tasks. Developing a consensus on the proper correction to an identified gap proved to require monumental effort in stakeholder and change management, something that the technologically minded Sasol personnel had little experience with in the past. They had discovered that the design of a process is relatively simple compared to getting a buy-in on the contents of the process and how it is to be utilized.

An almost never-ending series of "challenge sessions" were held during the course of the strategic planning and design phases of the project to take these procedures out to the end-user community; they became involved in the solution well before they engaged in utilizing the new processes. These assess-plan-design phases consumed a large portion of 2003; during this period, Sasol continued to suffer severe revenue losses due to an inadequate approach to asset healthcare.

## Rallying the troops

In January 2004, the new design for asset healthcare was introduced to the operating units with a degree of fanfare and anticipation of great success. The previous stakeholder management and buy-in received during the challenge sessions assisted in paving the way for acceptance in the field. A "waved" implementation was designed and executed such that one-third of the facility would begin the process followed in 13 week intervals by the second wave units, then the third wave. This approach proved to be quite effective for such a large facility; it allowed a limited number of resources to concentrate their efforts in getting the procedures installed without diluting their efforts.

As the first stage installation was completed, a number of SAMI consultants and internal coaches were left behind in that unit to "sustain" the processes while the bulk of the team moved on to the wave two units. Project communications peaked during the install period to keep the entire organization in tune with progress being made. Equally highlighted, problem areas were discussed openly with the full organization so that mistakes would not be repeated during successive waves.

## Measuring success

A proper scorecard was developed to measure the success of the installation and sustaining phases of the initiative. These

measures, both leading and lagging indicators, were designed not only to measure the project, but to be the long-term set of indicators that would be used to manage the function well past the completion of the intervention. Each unit in the facility had its own set of defined benefits as the assessed gap closure activities were quantified in both value and time to complete. These were reduced to a simple set of curves showing the targeted value return expected along a timeframe measured monthly. These resultant figures are reported monthly and plotted against the target curves in each business unit.

The leading indicators of percent emergency work, schedule loading, schedule compliance and preventive compliance took an early lead in showing progress. This was expected as the processes themselves are designed to enhance the work management indicators of improving overall work capacity. Those listed above in conjunction with worker "wrench time" provided the proof that the processes were gaining momentum in acceptance.

By the end of the first year since beginning installation in all three waves, these indicators are all well ahead of their original expectations curves. Most significantly, reactive type emergency work has been reduced by more than 65 percent of original levels and worker "wrench time" is up by 45 percent. This suggests that those "reactive demands" on a daily basis had been reduced — allowing the units to plan their work — and that these planned jobs have had a major impact upon the overall productivity of the workers. This additional work capacity has been applied to activities that have improved inspections on equipment catching potential problems before they catastrophically fail. This has reduced the failures, reduced production losses and therefore improved facility revenues.

## The path forward

SAMI will continue to work with Sasol Synfuels on the "Stage 1" asset healthcare project through 2005 achieving the financial commitments of reduced revenue losses and increased cost reductions that their management team has deemed necessary. In the next several months, SAMI will begin the establishment of the "Stage 2" processes for asset healthcare, and the application of "Stage 1" principles for production management will enter the implementation phase by mid-summer.

**For more information on the SAMI processes, the SAMI Pyramid (which includes the Asset Healthcare Triangle) and additional case studies, please visit [www.samicorp.com](http://www.samicorp.com) or call (860) 675-0439. Please visit SAMI's booth — booth 923 — at the upcoming NPRA Reliability and Maintenance Conference May 24-27. □**



**Strategic Asset Management Inc.**  
We Deliver Change!

SAMI is a global management consulting group specializing in Asset Management strategy development and implementation. We lead the industry in defining and implementing Strategic Asset Management for clients and enable organizations to progress quickly from thinking differently, to acting differently, to establishing a new Asset Management Culture.

### What We Do

- Achieve dramatic financial improvements with our clients, generating ROI's 3x to 100x our fees
- Lead the industry in defining Strategic Asset Management (SAM)
- Work with clients to create and implement their Operational Excellence (SAM) strategies through collaborative Strategic Planning, Design, and Implementation of major change initiatives within a condensed timeframe
- Ensure that improvements implemented are significant and sustainable in the new culture
- We deliver change!

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