



Case Study: PETRONAS Penapisan (Terengganu) Refinery, Malaysia

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Key Results

- **Tangible savings in excess of USD 5m**
- **ROI in excess of 4:1 against the project investment**
- **Operations Productivity improved by 63%**
- **Maintenance productivity improved by 34%**
- **Maintenance velocity improved by 79%**
- **Shut Down downtime reduced by 13%**
- **Identification of 20% manpower optimization opportunity**

"Renoir's approach has been very effective and they have helped us build the Productivity Culture we need."

Ahmad Hamizan Hasan
MD/CEO

"This is one of the best projects in my career. Renoir and the team have achieved all the objectives and exceeded our expectation."

Jamil Hashim
GM Plant

"Renoir's methodology is very effective to all level once we gradually go through the learning curve."

Tan Say Kwee
Senior MGR., Production



PETRONAS Penapisan (Terengganu) Sdn. Bhd. (also known as PP(T)SB) is a wholly-owned subsidiary and one of oil refineries of PETRONAS Group, a Fortune 500 Company. Located in the state of Terengganu, east coast of Peninsular Malaysia, the refinery processes over 100K barrels of Malaysian light, sweet crude oil per day.

OVERVIEW

In order for us to remain relevant in the market, particularly during this current economic situation, we need to continuously improve our performance. We need to ensure that besides being safe, we are even more productive and efficient in the way we carry out our tasks.

In March 2010, after an initial analysis, the Client and Renoir embarked on a project to achieve sustainable performance improvement. The LE²AP (Leading Efficiency Excellence Across PP(T)SB) project aimed to step up the pace and productivity in the way they do things, whilst ensuring the necessary competency to run the business more efficiently.

THE ANALYSIS

Throughout the analysis phase, it became clear that, even though the fundamental processes and (support) systems are generally available, their effective usage and hence the productivity of the staff can be greatly improved.

In order to improve the productivity of the current staff, focused improvement actions are required with respect to operational processes and their compliance as well as behavioral or cultural aspects.

PROGRAM

The LE²AP project vision was to achieve sustainable performance improvement with three main objectives:

- **Productivity Culture:** Embedding "Productivity" into the Company's Culture
- **Capability Building:** Ensuring necessary capabilities to run the business more efficiently.
- **Savings Realisation:** Converting performance improvements into savings realisation.

The Client agreed that the project approach would follow Renoir's Focus Process™ which has two key stages, namely Definition and Development before actual implementation of changes.

PROGRAM RESULTS

Four focus areas – or work streams - were indentified during the analysis as being the most appropriate in delivering the LE²AP objectives:

Productivity Improvements

Productivity measurement (Productivity = Efficiency * Utilisation) has been installed within the Refinery Operations and Maintenance (Engineering) departments. Visibility of Productivity has helped the Company to identify the improvement opportunities easily on daily basis. Both departments have achieved more than 30% Productivity Improvements during the project period.

Resource Optimisation (Manpower and OPEX)

As a result of Productivity Improvements, the manpower optimisation became possible. Overall, there is 20% of manpower optimisation opportunity indentified. The manpower optimisation proposal has been developed after both quantitative and qualitative evaluation. The execution is now in progress and managed by the Company's HR department.

Resource Optimisation (Inventory and CAPEX)

Inventory requirement settings were reviewed to best fit the users' need. Less capital spending (around USD 1 million) is expected after reduction of surplus items, increase of vendor stocking and reduction of purchasing.

Implementation of Cultural Initiatives

- Introduction of Performance Scorecard. Making the performance reporting more transparent.
- Establish SIC (Short-Interval Control)
- Capability Building by usage of SFM (Skill Flexibility Matrix)
- Behaviour/Mindset Change improved and monitored by SA (Situational Audit)
- Enhance meeting effectiveness

CONCLUSIONS

Tangible annualized cost savings in excess of USD 5 million were achieved arising out of the Key Results as listed above. However the results that will be felt the longest are those relating to behaviour:

- Greater transparency to ensure poor performance is highlighted and tackled in a consistent & timely manner.
- Enhanced focus on operational performance
- A productivity focus and culture across the business.

THE RENOIR GROUP

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Renoir offers a low risk approach and investment that delivers real and very significant results to the bottom line or operational performance, in rapid timeframes. Their implemented solutions and measurable financial results have a lasting impact on the competitiveness and performance of their clients' businesses with the safety of a fixed price.

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