



NextGen Performance™

Turnaround Strategy for Today's Market

Sharply divided views exist regarding strategic turnaround approaches in light of the new market conditions. Some refiners have taken the challenge to invest, rather than postpone their new units and/or revamps. Still other refiners that have chosen to defer or cancel planned expansions and revamps.

Now is the best time to review the site's overall long term Turnaround Strategy in this environment of reduced operating margins and change in capital markets. Is your site positioned for NextGen Performance and poised to be at the forefront when the market swings upward again? KBC can help review and validate current strategies, practices, and guidelines to determine the best strategy for your particular site.

POTENTIAL TURNAROUND STRATEGY CHANGES TO CONSIDER

Past turnaround management thinking is being challenged by the NextGen Performers.

"Due to poor current market conditions, we have been reviewing our priorities for the next turnaround versus the better margins we expect in the future. Now may be the time to invest for future profits," stated a National Turnaround Manager for a major North American Refiner.

Historical assumptions that should be revisited in light of current conditions:

Old Assumption:

Keep the next turnaround's duration as short as possible to avoid production losses, since the market needs everything we can produce.

NextGen Thinking:

Low product demand has caused plant throughput to be turned down by 10-20%, so adding a few days to a turnaround adds less cost from lost production than in the past.

NextGen Performance Tip:

Be proactive – too many "emergency" work orders indicates systemic problems

Old Assumption:

Capital projects will likely cost more now than in the future. The current management strategy is to delay spending as long as possible.

NextGen Thinking:

Raw material (such as steel and cement) prices have fallen recently, and labour/shop time is now more available. Current projects are likely to cost less now than in the future. Prudent management should take advantage of the current situation to lower the long-term ownership costs of Capital projects.

Old Assumption:

Completing all possible maintenance/repairs with the plant running has the lowest cost. The goal is to maximise plant production.

NextGen Thinking:

Some repairs/maintenance should be added to the scope of the next turnaround since they could be done more efficiently while the plant is idle. The goal is to reduce cost.

Old Assumption: Keep the next turnaround as far in the future as possible to maximise plant availability and production in the short term.

NextGen Thinking: Bring the next turnaround forward to take advantage of the present market conditions to maximise plant availability and production in the long term by significantly increasing the interval between the upcoming turnaround and subsequent turnarounds. Implemented changes will contribute to increased run length, increase production efficiency, and improved plant reliability.

(Continued)

Old Assumption:

Turnarounds are primarily designed to maintain current plant reliability, integrity, and availability.

NextGen Thinking:

A longer duration turnaround offers opportunities to further improve future plant reliability, integrity and availability. These investments would have a quick pay-back since increased reliability would lead to higher long-term production in future periods when product margins are expected to be higher.

Old Assumption:

We have completed dozens of Turnarounds, and our team knows how to improve performance.

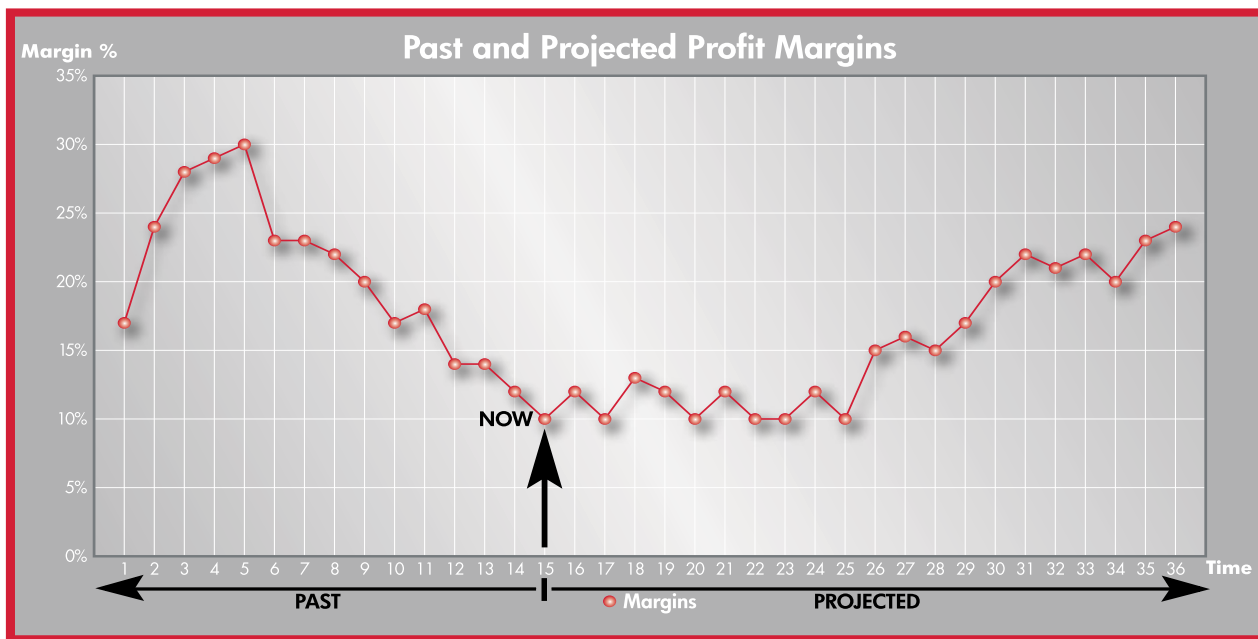
NextGen Thinking:

Expecting better results from past procedures is unrealistic. Improved performance can only come from implementing new ideas.

HOW KBC CAN HELP

- We can deploy a team of process and reliability engineers to help uncover opportunities for process and plant availability improvements.
- Our team performs Focused Reliability Integrity Reviews to help identify the potential deficiencies caused by any process turndowns and makes specific recommendations to mitigate the potential problems - both technical and behavioural.
- The KBC Turnaround Optimisation Programme (TOP™) helps customers plan and implement effective turnarounds.
- Risk-Based Work Selection (RBWS) is a methodology designed to gain consensus from everyone at the plant on what work should be included in the next turnaround.

Example Margins - Past, Present, and Future



Your Company + KBC Produces NextGen Performance[™]

We collaborate with our clients to create unique solutions to their specific challenges. Some of these challenges may include:



NextGen Performance[™]

Strategic Challenges

- Effective Business Strategy/Decisions
- Increased Return on Investments
- Enhanced Returns on Acquisitions/Divestitures
- Reduced Risk (Strategic, Capital, Other)

Market Challenges

- Enhanced Yields
- Effective Responses to Crude/Feedstock and Product Markets
- Improved Financial Performance
- Market Risk Management

Environmental Challenges

- Reduced Emissions
- Enhanced Compliance

Operating Challenges

- Improved Organisational Effectiveness
- Reduced Maintenance Costs
- Improved Energy Efficiency
- Behaviour-based Reliability/Performance
- Improved Safety Performance
- Operational Risk Management

For more information on how KBC can help you achieve Next Generation Performance, please visit www.kbcat.com, contact us at answers@kbcat.com, or call AMERICAS +1 281 293 8200 • EMEA +44 1932 242424 • ASIA +65 6735 5488