



**KBC**

NextGen Performance<sup>®</sup>

**FULCRUM<sup>™</sup>**

*Leveraging Maintenance and Reliability*

While the rest of the world has moved to the cry of “integration”, the world of Maintenance and Reliability remains mired in a dizzying array of single focus products with many overlaps and redundancies. In complex organisations, nothing is stand alone; if you integrate the wrong things, the solution cannot be optimal.

KBC recognises this fact and provides a unique approach through FULCRUM – a suite of proven Reliability and Maintenance products. We work with our clients to develop an integrated approach that is optimal to their specific situation that will allow them to achieve NextGen Performance.

### **FULCRUM - A SYSTEMATIC APPROACH TO IMPROVEMENT**

KBC collaborates with clients to improve operations. Starting with tried and true Reliability, Availability, and Maintenance practices, the KBC FULCRUM methodology – a combination of Routine Maintenance, Reliability Improvement, Turnaround Strategies, and Human Performance elements – leverages these strategies to tailor an improvement plan to the client’s specific situation.

### **ROUTINE MAINTENANCE: ONLY THE RIGHT WORK, DONE EFFICIENTLY**

For clients who are just beginning the improvement process, it is important to focus on critical equipment. KBC offerings are designed for quick implementation to assure that all work done is not only critical, but also focused on business objectives. A few of these offerings include:

- Risk Management
- Risk-Based Work Selection (RBWS)
- Prioritisation
- Planning and Scheduling
- Contracting
- Interfaces with Operations
- Spare Parts Optimisation
- Maintenance Management Systems (CMMS)

This process is intended to rapidly improve plant performance to take our clients one step closer to NextGen Performance.

### **RELIABILITY IMPROVEMENT: DEPENDABLE, “NO-SURPRISE” OPERATION**

Once the basic foundations of routine maintenance are in place, KBC offers a two pronged approach to improving reliability.

### **NextGen Performance Tip:**

*Focus on plant availability rather than maintenance cost*

### **Proactive – Optimal Asset Care Plans**

The KBC Risk-Based Asset Management Programme (RAMP) is the process of developing operational and maintenance care strategies for the life of an asset based on the technical knowledge, equipment maintenance/failure history, and operational experience provided by multi-functional site teams. This approach combines reliability methodologies and risk-based management techniques to provide leading maintenance and operational equipment care plans at a fraction of the cost of other approaches, and it is tailored to the client’s specific operating environment.

### **Defect Elimination – Solving Problems**

The KBC Defect Elimination (DE) programme is the systematic analysis of incidents or specific reliability issues, which pose significant risks to meeting business goals. The KBC approach:

- Drives problem analysis to the root cause
- Identifies cost-effective solutions to prevent the same or similar incidents/issues from reoccurring
- Documents investigation results, adding to our client’s corporate body of knowledge

### **Focused Reliability/Integrity Reviews**

Focused reliability/integrity reviews can provide a “rifle shot” approach to solving specific significant problems, providing immediate results to the bottom line. For clients that already have a well established maintenance and reliability program, these reviews can serve as a synergistic addition to your programs. If you are implementing a broader maintenance and reliability program, these reviews can provide more immediate results, which can improve and sustain the broader program. This approach integrates directly into our Defect Elimination program and the philosophy of site wide reliability.

### **Innovative Reliability Modelling Tools**

For more comprehensive or complex reliability issues, KBC has access to state of the art simulation and analysis software tools to assist with life cycle analysis. These tools allow “what if” scenarios to be performed quickly and effectively so that decisions can be tested and justified prior to implementation; this affords credibility to the implementation plans.

*(Continued)*

## TURNAROUND STRATEGIES FOR CHANGING ENVIRONMENTS

KBC works with clients to develop either long or short term strategies to reduce the impact of turnarounds on overall availability to meet changing economic conditions or business drivers.

Turnarounds have the most significant impact on overall plant availability; however, during tough economic times turnarounds can be viewed as an effective way to be ready for the next profit upturn. KBC can help customers implement a focused Turnaround Optimisation Programme (TOP™) delivering optimal workscope, optimal mechanical critical plant/cost, and minimum duration product to product down time.

Conversely, during periods of reduced operation, KBC has strategies to opportunistically perform necessary turnaround work that will allow the client to take maximum advantage of the upswing and achieve NextGen Performance.

## HUMAN PERFORMANCE

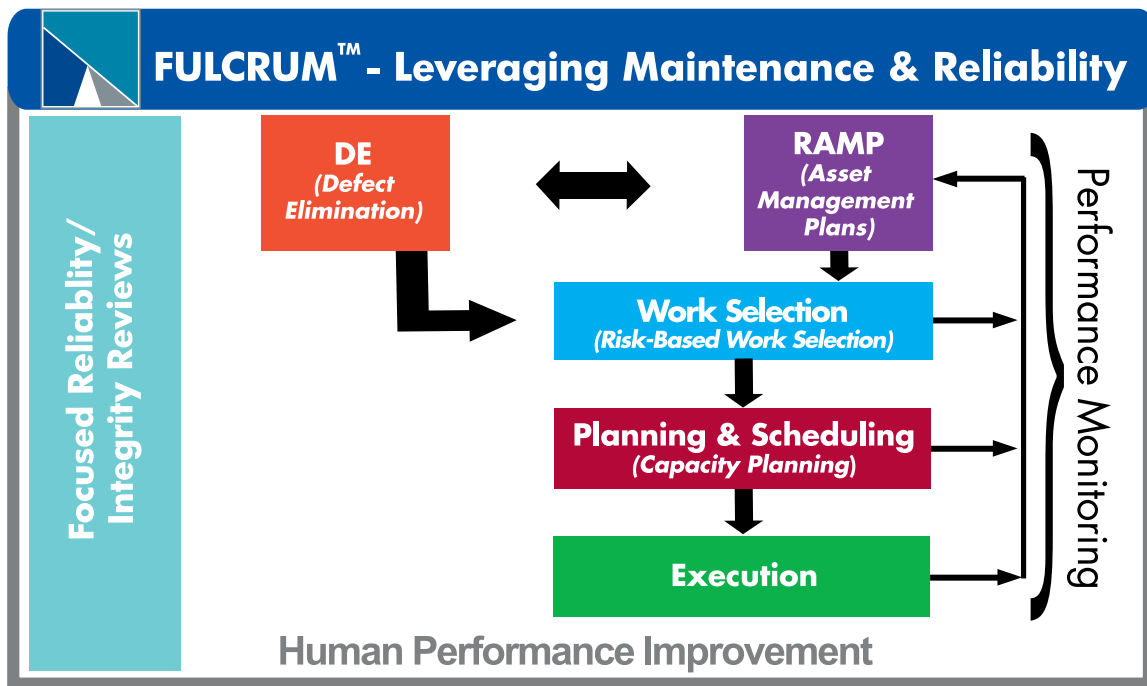
Most experts agree that the least reliable component of any organisation is the people. Work processes can be designed and optimised, but it is still up to people to execute those processes. The KBC Human Performance Improvement group has been leaders in this area for many years, providing a complete program for improving and sustaining human performance.

The KBC Human Performance solutions, which are critical to plant availability include:

- Operating for Reliability
- Process and Equipment Troubleshooting
- Job Performance Profiles
- Work Processes and Procedures

## THE BENEFITS

By applying specialist knowledge and industry leading tools in Reliability, Availability, and Maintenance, our hydrocarbon refining customers show an average increase in profitability through reduced costs and increased plant availability of 25-40¢ per bbl (or USD\$1.88-\$3.00 per tonne). Clients in other processing industries realise equivalent results through reduced direct maintenance cost and increased availability.



## Your Company + KBC Produces *NextGen Performance*<sup>n</sup>

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



**NextGen Performance<sup>n</sup>**

### 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](http://www.kbcat.com), contact us at [answers@kbcat.com](mailto:answers@kbcat.com), or call AMERICAS +1 281 293 8200 • EMEA +44 1932 242424 • ASIA +65 6735 5488