



THE FLEXIBILITY FACTOR

Frank Capristo, Matrix Service Inc., USA, discusses how a collaborative, integrated approach to maintenance can help oil, gas and chemical facilities achieve operational excellence during changing market conditions.

Those who have worked in the oil, gas or chemical industry for any amount of time know the challenges of managing through market cycles all too well. It can mean pushing utilisation while margins are low and, at the same time, looking for creative ways to minimise cost and operational impacts until market conditions stabilise. These inevitable economic cycles can be further exacerbated by critical maintenance cycles, the timing of which are dictated by mandatory inspection or regulatory intervals. Together, it is a difficult task that can be made even more complex if the facility has held fast to a legacy organisational structure that may inadvertently pit its own internal business units against each other.

For example, in most complex process facilities, routine maintenance is budgeted and managed separately from capital construction, each with their

own management team, work processes, priorities and success metrics. More often than not, these groups compete for the same key resources including personnel, material, equipment and/or operations support. The end result of this model can be multiple teams of craftsmen with redundant skill sets being managed to different standards. This can, in turn, negatively impact overall safety, efficiency, quality, and workforce utilisation.

A better way

A small population of progressive facilities have overcome these legacy organisational limitations by adopting a 'bigger picture' approach to resource management. This collaborative approach is underpinned by a flexible, well-trained and highly deployable craft base.

There is a common and prolific myth in the maintenance community that says, 'you may get two out



Figure 1. Matrix Service Inc.'s on-site staff comprise nearly one-third of the total workforce at BP Cherry Point Refinery. The team provides the refinery with a flexible, well trained and highly deployable craft base.

share a mutual interest in the ongoing strength and success of the relationship. The return on investment is a future where key resources are efficiently leveraged and thoughtfully shared throughout the facility.

For those who seek a better way, growing resource flexibility by fostering a competent and scalable workforce is critical to managing a safe and productive workforce against the inevitable economic cycles of our industry.



Figure 2. On-site contractors should work in partnership to fine-tune maintenance and repair services to meet customer needs.

Case study

Matrix Service Inc. (Matrix) has been the primary onsite contractor at BP's Cherry Point Refinery in Blaine, Washington, US, for nearly three decades. The company performs maintenance and repair work, including tanks, piping, civil and structural work, mechanical, electrical and instrumentation, insulation and asbestos abatement, as well as fleet maintenance. It also provides professional services, including planning, scheduling, estimating, project and document controls, warehouse support and logistics.

The ability to scale this workforce has been integral to managing work in daily maintenance operations, capital construction and turnaround work, which, in turn, provides a significant advantage in resource utilisation and cost control, especially during cyclical market challenges like those experienced in recent years.

Extensive cross-training of these embedded craftsmen has allowed Matrix to work with refinery decision-makers to apply resources where they are most needed or provide the most value for the facility. This ability to move key resources seamlessly between routine maintenance, capital construction and turnaround work has also minimised the time delays that would otherwise result from having to train new crews on the refinery's processes and procedures – a benefit that increases in value with the tenure of every craftsmen employed. It has also allowed Matrix to maintain a competent and capable workforce that can deliver safe, predictable and dependable results.

Sharing a common safety culture and intimate knowledge of the refinery is even more critical during planned outages where craftsmen counts can quickly climb to 1000 or more. During these major events, the refinery's management team is supported by Matrix's expertise across the refinery, even when they need onboarding support and step-up foremen or coordinators to provide direction to other contractors.

of your contractor, but you can't have three' (with 'three' being maintenance, capital construction and turnarounds). This mindset encourages the belief that traditional maintenance craft and organisations are incapable, sluggish, or generally lack the competency required to perform anything other than routine and repetitive mechanical tasks. This inherent lack of confidence or unwillingness to leverage the experience of maintenance personnel in small capital construction programmes or turnaround events is inefficient and costly to the facility.

Alternatively, those that have invested wisely to overcome this age-old paradigm have generally enjoyed immediate and sustainable returns.

There is no question that the transformative journey away from the status quo can be challenging and uncomfortable. It requires a healthy measure of honesty, introspection and a willingness to tackle difficult issues that were decades in the making. The journey culminates in a strategic governance model that is based on the principles of trust, partnership, and stewardship, where the owner and contractor

By adopting a flexible, collaborative, integrated maintenance model, BP Cherry Point has streamlined its operations across the refinery and, in turn, positioned itself to consistently achieve operational excellence, even during changing market conditions.

Employing an integrated maintenance contractor

Oil, gas and chemical facilities that are looking for ways to consistently achieve operational excellence should consider employing a collaborative, integrated maintenance contractor. When doing so, the following are a few of the benefits that should be screened for and expected:

Improved craft utilisation and schedule attainment through maintenance experience and capability

It is important to establish competency standards and expectations that are protected by contract language and audit protocols. Primary mechanical resources should be able to be moved seamlessly between routine maintenance, capital construction and turnaround services to maximise value and utilisation.

Reduced redundant resources for cost savings and improved resource flexibility

By leveraging the infrastructure and administrative resources of a qualified, embedded maintenance contractor, a refinery should achieve measurable annual overhead cost savings, cut response time from days to hours, and be able to safely respond to unplanned events through direct access to a resource pool of skilled craftsmen and specialty equipment. Owners/operators should challenge their incumbent providers to think and act differently. They should also ask for specific examples of how any contractor they are considering has achieved this for others.

Improved asset availability and uptime through predictable, dependable, skilled resources

Cross-craft training programmes can provide greater flexibility, while improved quality and reduced re-work can be achieved through structured craft competency, testing and progression programmes. It is important to ask contractors for specific details relating to their training, craft competency, testing and progression programmes. Qualified contractors should also be able to provide examples of the bottom line impact of these programmes in achieving asset availability and improved uptime.

Collaboration with alliance contractors to improve craft efficiency, response time and facility morale

Facility owners and/or operators should choose a contractor with core values centred on safety, building positive relationships, integrity and stewardship. Strong and productive relationships with alliance contractors and other nested resources can have a significant impact on



Figure 3. On-site contractors who have been properly cross-trained provide process facilities with greater flexibility, improved quality and reduced rework, as well as support for special events like fluid catalytic cracking (FCC), coker and full plant turnarounds.

safety, efficiency, quality and cost. This could be the difference between meeting or missing a project deadline, and completing work as efficiently and timely as possible.


Efficient craft recruiting and onboarding for greater access to prequalified resources and shorter mobilisation times

Facility owners and/or operators should ask their primary contractors and potential service providers about their ability to attract, retain and deploy qualified resources to cover expanding needs, and also ask for a description of how they prequalify employees. Moreover, they should be sure to examine their investment in ongoing employee development to ensure those working at the facility can meet current and future expectations. A maintenance provider that may be delivering less than is required should be challenged. Notably, facilities should avoid the trap of expecting less from their maintenance providers based on past performance.

Exceptional safety that will protect the refinery's reputation and reduce risk

Owners/operators should go beyond standard total recordable incident rate (TRIR) or third-party pre-qualification services. They should ask questions about a contractor's safety programmes, awards, references, fit-for-purpose safety training and consistent application of health, safety and environment policies and programmes. Reducing risk can help refineries make savings on their insurance premiums.

Conclusion

In the end, the flexible and scalable benefits of an integrated maintenance contractor come down to one word: partnership. With this model in place, owners/operators of oil, gas and chemical facilities can be confident that they are well-positioned to achieve operational excellence across the inevitable market cycles that are part of the industry. 



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