

T.A. COOK IN THE PRESS

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No turning a blind eye: Part 2

Monitoring risks

The 'bow tie' model used by the Senior Manager and his colleagues is unlike conventional approaches in that it documents preventive countermeasures alongside the usual risks and their consequences. These so called 'barriers' can stop a risk from occurring. If a risk nonetheless occurs, then the bow tie model also outlines contingency plans in the form of potential countermeasures (plan B). The term 'bow tie' refers to the way in which hazards, risks and effects are visualised. 'The risk is placed in the center, with hazards and barriers to the left and impact and contingency measures to the right, so that it looks like a bow,' said Muller. Typical barriers include putting weather proofing and temporary tents in place so that workers can still do their jobs in poor weather conditions, or having another contractor on standby that can immediately jump in on critical tasks and help out if the original provider is too slow. Right up until the dress rehearsal: 'A trial run is a simulation of a full working day during a shutdown. From the bus journey to the plant, through safety orientation, typical activities and material transport, to acceptance and documentation,' explained Dirk Träger. At 51 years old, Träger is CEO of the T/ANGO Turnaround Management Group, a company specialising in turnaround/shutdown management that mainly delivers project management services.

'It might cost some money, but the findings we obtain can be used to overcome challenges during the actual shutdown, and that makes up for the cost many times over.'

Muller added that it is often relatively simple, ordinary measures that go wrong, 'which makes contingency measures even more important.' If the worker trained to operate a freight elevator is off sick, then it can bring an entire subproject to a halt. Without a qualified operator, no materials can be transported to the construction site unless, of course, management has had the foresight to train additional personnel beyond their usual duties to be able to take over in an emergency. Although minor issues such as these can be managed relatively easily, it is the overarching impact of all project risks, such as additional costs or delays, that is far

more difficult to capture. Can the plant be restarted on schedule? Will the project stay on budget? Are contractors delivering the needed quality?

Project managers are unable to give serious answers to these frequently asked questions, say the experts: 'It is impossible to know the answers to questions about future events.'

Nevertheless, these questions can be a useful risk indicator when managers start asking counter questions. 'What can I learn about the things I don't know?' Can the scope be frozen as planned? The honest answer to this question would have to be 'I don't know.' What shutdown managers can actually find out is the ratio of scope remaining versus time remaining. Another common question might involve the share of qualified in-house and less qualified external personnel provided by contractors, or the progress of construction and approvals for a capex project to be integrated. Anyone who takes risk management seriously will therefore define some kind of early warning system instead of merely stowing the risk register in a drawer. These people continuously monitor KPIs to check how the probabilities of risks occurring change over time. '18 months before the start of a turnaround, it is not a major issue if the ratio of planned scope and remaining time do not align 100 percent,' said Muller. 'I still have time to react and recruit additional planners.' If the problem is not addressed until seven months beforehand then it will be that much more difficult to respond.

Assessing impact

Whether to respond, and how, is also a question of tradeoffs. In their book 'Waltzing with Bears', DeMarco and Lister describe two events drawn from everyday life. Any sensible driver will step on the brake if they see a ball roll into the street. True, a rolling ball does not necessarily indicate that a child is about to run in front of your car, but most people would prefer to be safe than sorry. The same cannot be said of people watching the weather report before taking a weekend trip to the beach. Even if the five day forecast shows early signs of rain, very few people will cancel their trip at that point,

preferring to wait and watch for a few days. T.A. Cook supports companies in documenting and identifying the impact of risks using its proprietary Excel management tool. For all risks listed in the bow tie model, either the experts or the customer give an assessment of the corresponding risk exposure or potential hazard. 'This assessment is structure based and expressed as precisely as possible,' Muller explained. Take the example of accurate scope creation. A development status is assigned from 1) On schedule to 5) Deviates strongly from schedule; there is no initial list available. 'This is how we ensure that the assessment is as accurate as possible,' he said.

After all, an accurate assessment is absolutely essential for a mathematical model to quantify the risk impact in terms of quality, safety, costs and duration, down to the last euro for the latter two points. 'It's true that this can only ever be a snapshot, since risks are constantly evolving throughout the entire preparation phase,' said Muller, 'but that in itself is an enormous help when taking concrete decisions.' T.A. Cook calls this process 'dynamic risk management.' Anyone who talks to the Board in terms of euros and cents is more likely to be heard, and can also eradicate the preconception that risk management costs a lot and achieves little. Data driven analysis using the dynamic bow tie model clearly demonstrates that good risk management is less of a cost factor and more of a tool for proactive and successful shutdown management. 'I have to know that I am in control of risks to be able to consciously take them and capture opportunities,' Muller concluded. It worked for Jenson Button and his former Honda team. Just two and a half months later the British driver celebrated his first ever Formula 1 victory at the Hungarian GP.