Insight into BG Group’s Operational Excellence

Interview with Iain Shaw, General Manager Production Operations and Rik Evans, Group Process Owner Integrated Planning

Jason McGee-Abe What are your respective roles and how are you connected to the direction and the governance of the operational excellence programme?

Iain Shaw I’m the general manager for production operations in BG Group. In that role, I lead the production operations function globally. We strive as a production operations function to deliver value to BG Group through excellence in effectiveness, efficiency and execution. Effectiveness relates to our ability to meet our targets and promises. Efficiency is about ensuring that we minimise waste and provide maximum return to the group in terms of operating cash flow and cash from operations.

The final element of operational excellence leadership is execution. Excellence in execution is about consistently doing our work safely, reliably, and in the most efficient and effective manner possible. Leadership happens at all levels of the organisation, so within BG we expect all of our production operations staff to be leaders and to strive for our consistent purpose around delivering the three Es.

Rik Evans I’m the operations excellence manager in BG Group production operations. Picking on a couple of the themes Iain mentioned, the number one role as OE manager is to make happen what you’ve just heard from Iain, the aspirations of the PO community. When we talk about operational excellence, first and foremost it’s actually a mind-set, the role of a OE manager is to bring that about and create that - the ways of working that are going to bring about operational excellence.

We expect everybody to be a leader, so how do you make that happen? That’s the question I’m here to solve fundamentally. And through the last couple of years of our OE journey we’ve witnessed demonstrable evidence of the improvements in effectiveness, in efficiency, and in execution that the programme has been able to bring about.

JM How are you installing this mind-set of operational excellence throughout the company?

IS As mentioned, everybody in production operations is expected to be a leader and take a leading role in delivering our production operations. We consider what being an operations professional in BG Group looks like. What are our expectations of an operations professional? I can summarise it with four attributes.

The first attribute is awareness. This includes being aware of where they fit into the production system, where they fit into our organisation, and how they interact with others in order to meet our overall objective. So we expect people to have that awareness of what production operations as a whole looks like.

The next one is skill. We expect people to be aiming for excellence in their own personal knowledge and expertise. Trustworthiness is the third attribute, this plays into our effectiveness, as much as this is about being responsible for your behaviour towards others, working collaboratively, delivering on personal promises and commitments. This is about
being a reliable, trustworthy individual within our production operations organisation. And the final one is discipline, discipline comes into being effective in execution, it’s about consistently following prudent procedures and practices to give us an increased confidence in the reliability of outcomes.

**JM** So how does this play into operational excellence and what do you do to support that?

Well, if I look at awareness as the first one, when we kicked off our operational excellence programme we were very conscious that we weren’t looking at this from a functional perspective. When we talk about operations, we are talking about that period, that timeline in any venture’s life that is the operate phase. So this is from start-up following project execution and completion through to end of field life and it incorporates everything that supports us in the delivery of our hydrocarbon production in that timeline. I’ll let Rik talk about this a bit more.

**RE** You can slice and dice a business a number of ways and I think it is crucial to emphasise the point that Iain’s just mentioned. When we talk about operational excellence in this concept, we are talking about all of the functions interacting for that, for the venture in the operational stage of its lifecycle. Why is that important and why have we both emphasised it? It’s because that implicitly requires the collaboration, the integration that Iain’s just described as being a critical part of what we consider to be operational excellence. You need to interact with your colleagues. You need to understand you need to take responsibility for that piece of the business for which you’re delivering. You need to understand who’s dependent on your work, where your dependencies are, and collaborate around that to deliver work at the point of execution.

So how did we do that in our operational excellence framework? We call it the OE book which consists of 21 elements that cross the entire gamut of that operational business. Some of those are traditional production operations type activities; maintenance, production chemistry. But equally we have elements that correspond to other functional disciplines – CMP, reservoir engineering and so on – because those are critical aspects of that operational entity and therefore they are part of that broader integrated picture of the excellent operational asset. The building of the book itself was a process in integration, bringing together people who didn’t necessarily collaborate on a day-to-day basis.

**RE** The OE journey isn’t just about the creation of that book. That’s the start. The journey is about creating that interaction and enabling more collaboration in the business. For me, if not more important is how you use that information going forward. What are the mechanisms that you put in place on an element by element basis? So if you think of those as the horizontal pieces of a matrix, or on an asset by asset basis, the vertical pieces. How do you create collaboration through both of those dimensions in order to build on your story of excellence? How do you stick, or how do you create, the connectivity in an asset between that element and other ones? That is really what the OE journey is all about.

We run both operations academies and frontline operations academies which are very much about supporting our operational excellence approach in BG. So, it is not all about a book, as Rik said.
**JM** How are you tangibly measuring it?

**IS** I think it is important that all of these programmes are measured using low and high level metrics. You can have some great stuff around what you’re doing in the operational excellence space but actually as production operations and the way we feed into the group here at BG, there are three measures that are really. number one is safety. We will be a safe organisation and all we do in terms of our operational excellence programme will only support and enhance that performance, so that’s measure number one - safety.

At the next level the organisation expect us to deliver our hydrocarbon production, so the next measure is around PE, our production efficiency, and that’s very important in BG. You start looking at metrics and measures around PE, we have a demonstrable improvement over the last three or four years that we’ve been doing this piece of work. And in our last Q3 results we were able to indicate that we would be at the higher end of our production forecast range and the organisation generally has much increased confidence in our ability to deliver our production targets, having consistently delivered on targets for many of the last quarters in our results.

The final measure is around cash from operations our operating cash flow. Certainly when I look at our operating cost component, what we’re spending, we are on a positive journey and we can see that when we start looking at our unit cost, Dollar per BOE cost. So any measures that we have within our operational excellence programme have to be subservient to achieving those three key measures.

**RE** If you consider any one of our 21 elements, there are KPIs that are associated with that particular element. So if I can consider integrated planning, there are a suite of metrics that define how well integrated planning is being delivered in any one asset and the same goes, and we have defined the same, for all 21 of the elements. That’s only half the story, though.

The other half is, how well is the element performing itself? So we’ve actually identified a series of what we refer to as range statements within each element and each one of those range statements defines an observable behaviour, an observable outcome within the performance of that process. And we very simply identify against each one of those range statements what’s bad, what’s really bad, what’s okay, and then to the right-hand side what does good and what does excellent look like. And I think it’s important to use both of those characteristics, the hard process-based KPI and then the OE range statements, because only then do you get a perspective not only in terms of the delivery of work, but then also the success of the change programme that you’re carrying out.

**RE** I think that’s part and parcel of our methodology. And the crucial thing is, that picture of excellence sometimes, depending on the asset and depending on the external environment you find yourself in, you may not want to be performing exceptionally in all areas at once, recognising that it’s not possible to move everyone to excellent all at once. The range statement and the measurement and the scoring of that actually gives you a mechanism to prioritise your change effort and it gives you a mechanism to visualise your journey.

**JM** How do you overcome resistance and how do you actually get people to buy into the change and embrace operational excellence?
I think, the first thing to ask is, who owns it? I don’t own it. Rik doesn’t own it. We created it with our Global Production Operations Leadership team, so it was the most senior person in each of our operations, globally, came together and initially supported the concept and principle of what we were trying to achieve and took that back to their operations. We then worked very closely with them to define what it should look like. This was never a central office creation. It was created in conjunction with and in collaboration with each of our senior leaders and their leadership teams in the assets. How do you overcome the resistance to change? You make them own the change at the beginning and create the change.

And that was important. And in fact if I was to be quite honest, it caught us by surprise and we could not keep up with their appetite to go after this. When we published our first draft version of our OE book for review, before we knew it, they were enacting it in their assets. They were working at a pace we were struggling to keep up with.

You can read any number of manuals and tonnes and industry books and specialisms on change management but that concept that Iain repeatedly mentioned about ownership, runs through all of them. I think, one of the differences, certainly in our approach to those that we tried previously in BG and as I’ve seen elsewhere in the industry, is that one of federated ownership: bringing people together from across the organisation all the way through the programme. People from the assets were integral all the way through that and continue to be integral.

When we talk about an element, we have element owners. Those element owners are across the organisation. They don’t just sit in a “Centre of Excellence in Thames Valley Park”. It’s a community of people and they drive forward that change and bring about the improvement, fundamentally, because they’ve got some skin in the game. You know, it’s their programme. If you go right back to one of the first questions you asked, the role of the OE manager. And I said, it’s one of enabling; it’s facilitating. It’s not driving. It’s not, you know, cracking the whip or anything like that. It’s really trying to enable people to make the most of that awareness, the skills, the trustworthiness of this and bring them on, bring them up.

We have a Global Production Operations Leadership team. There is an expectation that they do give a proportion of their time to production operations, as a global entity. These guys are running challenging operations at challenging times but they also give a proportion of their time for the good of the group and during the creation of the book that Rik’s referring to, our VP of operations from India came and worked with us on this for a month. Our VP of operations in Egypt was unable to come here himself but he purposely allocated a proportion of his week to being involved.

It wasn’t just the senior leaders who were keen on it right the way through the organisation, Iain and I both alluded to the demands that we put on people, that everyone’s a leader. We’re into a sustain mode now, in terms of our OE journey. It’s part and parcel of the culture and one can see that in the assets and in terms of our engagement with them about the programme.

We are now moving beyond a sustain mode, into a new place and, I think, the long journey probably started around 2008. One of the things we had to create on top of all of that was actually a way to bring about change because it wasn’t just enough to have the document.
So, a lot of the barriers and resistance that our operational excellence programme could have had were actually addressed through that four-year period and it was about engagement so that the Operations Academy and the Frontline Operations Academy; were very much put in place to communicate, reinforce, and enforce, a consistent way of doing production operations and every senior leader, down to facilities leader, OIM level, in our organisation did the operations academy and we did the Frontline Operations Academy in every single asset covering OIM, down to shift supervisor.

How can we improve and make sure the same way we’re doing it is the right way and the best way? That was the start of the operational excellence book and the operational excellence approach.

It was a process of building that sense of community. And that was then something that we could lean upon or build upon to then create this new phase of the journey, which we called operational excellence but was really just a continuation of those programmes that have gone before and will continue on into the future.

The resistance, of course, we got when we started to define this excellence and put this book together and there was a requirement for assessments, was actually resource, of course. That was the primary blocker we had. The other was “we don’t have time”. That really depends on how important your senior operations guy in the assets sees it, and we have seen mixed views. The thing that tipped it to being important for everyone was when our COO saw it. Their absolute 100% support and endorsement was a tipping point in getting traction in all of our operated assets.

The part of the journey we’re on, now we have defined excellence, is working on the operational context part of what operational excellence looks like because there isn’t one excellent way of doing things.

And it won’t stop there. We’ll be presented with another paradigm in the industry in two/three years’ time and perhaps something coming out of Paris at the end of the year, which will then further refine the framework in which we deliver operational excellence and prolong the journey.

Could you give your view of the current market situation, views on the North Sea and OpEx?

The situation that UKCS finds itself in now is the new paradigm, it’s presenting to us a whole new set of challenges, lifting costs, maturity of the resource available to you, age of the platform you’re operating on, and so on. Those are new constraints and they give you guidance on the direction that OE has to take.

We have to have a sustainable, consistent, and predictable production efficiency. It’s a declining resource, so actually it means an absolute focus on production optimisation. I’m afraid, our production targets in mature basins are not going to be saved by new developments, so it is absolutely, rigorous production optimisation and then it is about absolutely caring about your costs. It is about caring about costs and not being embarrassed to care about costs.
BG Group’s OpEx Book:

- 21 Elements –

These have been designed to span the breadth of any venture in the Operate phase. Each element is in turn broken down into sub-elements and ultimately into range statements that define a level of excellence (in process delivery, behaviours, integration with other elements, etc.). As you can see these are both “traditionally Operations” type activities as well as from other functions that are part of the delivery of a business in that stage of its life.

1. Asset Register and Criticality Ranking
2. Competence Assurance Management System
3. Contracts and Procurement
4. HSSE and Asset Integrity Management
5. Integrated Activity Planning and Scheduling
6. Management of Change
7. Materials Management
8. People Logistics and Personnel Transport
9. Production Management
10. Shutdown Management
11. Reservoir Management
12. Well and Reservoir Surveillance
13. Well Integrity Management
14. Well Intervention
15. Equipment Maintenance Strategies
16. Equipment Reliability Improvement
17. Inspection and Testing
18. Operations Integrity Management
19. Safe Systems of Work
20. Work Management
21. Commercial Management

Both Iain Shaw and Rik Evans are discussion leaders at the upcoming Operational Excellence in Oil & Gas Aberdeen Roundtables taking place on 23 – 24 February 2015. The 2-day interactive forum is designed for oil & gas industry experts to meet and discuss the vital changes that operational excellence can bring to oil & gas companies with an unparalleled 8 roundtable discussions.

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