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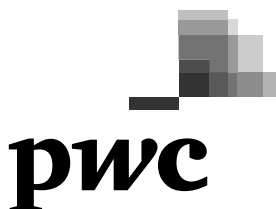
Formerly Booz & Company

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# *Rewriting the rule book*

**&**

**Improving line  
performance  
in safety and  
environment**



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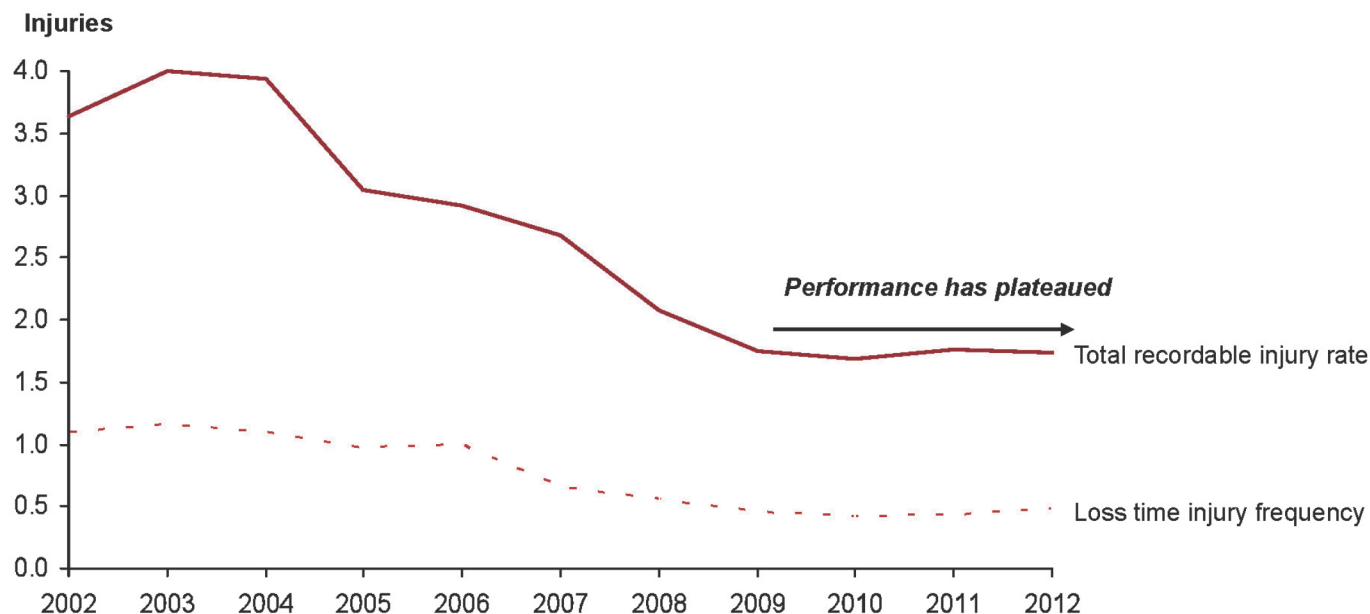
# Rewriting *the rule book*

**Andrew Clark and Rose Landau, Strategy&, UK,** unveil a new model to enable line performance for safety and environmental management in the oil and gas industry.

**F**rom a safety and environmental perspective (S&E), large process industry companies have made huge strides in the last decade. More rigorous guidelines, an increasing emphasis on personal and process safety programmes, and better risk-management practices, mean S&E is far better than it used to be. Yet the ultimate goal – ‘zero harm’ levels of performance – has remained elusive, as S&E performance has plateaued in recent years.

Part of the problem is the focus on functional activities, and the benign neglect of the interface between S&E and the front line. The usual approach is to assign S&E advisers to front-line work sites, and give those advisers a broad and poorly defined mandate to ‘support day-to-day S&E activities.’ This has led to a sharp drop in injuries and fatalities in the last 10 years, but the ambiguity in this approach also leads to duplication and a ‘do it for me’ attitude, and may open the door to a sometimes confusing stream of new initiatives.

Companies can take the next big step forward in their S&E performance if they clarify the role and mission of the co-located S&E advisers and make front-line workers truly accountable for day-to-day S&E performance. Front-line workers need to understand their new responsibility and develop the capabilities to fulfil it. Where a capability is missing, the role of S&E advisers is to help build the capability, not substitute for it. A structured approach, beginning with



Note: Total recordable injury rate: number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked; Loss time injury frequency: number of lost time injuries (fatalities + lost work day cases) incidents per million hours worked  
 Source: International Association of Oil & Gas Producers, Safety Performance Indicators – 2012 Data; Strategy& analysis

Figure 1. Evolution of S&E Performance, 2002 - 2012.

a self-assessment and a clear statement of the ideal end state and S&E organisation, can help companies achieve this step change.

### S&E's evolution: something's got to give

Oil and gas companies have made sizeable investments in their S&E functions. As a result their S&E systems have become more sophisticated, and players are more ambitious in their safety goals. While some oil and gas companies may now aspire to zero injuries and fatalities, for most this goal has remained elusive. Even if fatalities only happen at a fifth or a tenth the rate of 20 years ago, they do happen. For CEOs and boards, the question is how to make real additional progress, now that many of the most obvious initial steps have been taken.

In an economic climate that is not sympathetic to investments in non-revenue-producing functions, the answer has been predictable: S&E leaders have been asked to find ways to be more effective without any increase in resources (and sometimes with fewer resources). But 'do more with less' is not the right advice for the workplace safety function. Instead, S&E management needs to be fundamentally rethought.

### Recent improvements

In the industries where S&E performance is most pressing, there has been significant progress in the last decade. For example in oil and gas, the total recordable injury rate decreased to 1.74 per 100 workers in 2012, from 4.00 in 2003.<sup>1</sup>

These improvements have resulted from efforts in four areas. To begin with, most companies have instituted a more ambitious set of guiding principles and concepts. The idea of a workplace in which the safety record is perfect and injuries do not happen is perhaps the most obvious example of how a principle can help. Companies have taken steps to embed a culture of safety in their operations and prompting employees to move beyond mere 'compliance' to take responsibility for mitigating risks.

Most companies have also introduced safety-related programmes and systems. A programme might focus on changing the protocol for transporting flammable liquids within a manufacturing plant (a process

safety issue), or on a requirement to wear protective equipment (a behaviour-based safety issue). Companies have also introduced new and sophisticated management systems for data recording and analysis.

The third area of improvement is in reporting and key performance indicators (KPIs). In particular, companies have started using far more detailed indicators, viewing safety performance through the lens of asset, business, or geography. Moreover, companies are not just looking at fatalities; greenhouse gas emissions and working days lost but at more nuanced metrics such as lost time injury frequency and more forward-looking metrics such as 'near misses.'

The fourth big corporate improvement effort in S&E has been in the area of risk management. Companies have put in place more rigorous, comprehensive risk management frameworks and have embedded risk management in every aspect of their operations.

### Shifting the focus of S&E

In spite of these advances, safety performance as measured by at-work injuries has plateaued in recent years (see Figure 1). To be sure, companies could continue to focus on guidelines, programmes and systems, KPIs and risk management and they might well get some incremental performance improvement. But these efforts are reaching their natural limit and are unlikely to lead to the step change that most companies are looking for in S&E. Which leads to the question: What do companies do next?

A paradigm shift is now required. The focus needs to shift from the function to an interface, which has probably been the least examined, the 'coal face', or front line, of businesses. This is where workers are directly involved in the operations. A step change improvement in functional delivery across this interface will enable the next leap forward in S&E performance. This aspect of the S&E operating model has been investigated for a number of companies and the opportunity is striking.

Three problems tend to crop up. The first is when companies have no clear model for defining the role of the front line and the role of the HSE function, and no consistent approach to how the two should interface. This leads to issues such as highly complex and confusing organisation models at the site level. In other situations, the lack of an agreed-on model leads everyone at a site to cede S&E accountability to the HSE advisors, as opposed to the front line workers.

The second typical problem is the wide variety of determinants of site-level resourcing. Some companies follow no discernible pattern at all, some use industry benchmarks to determine how many S&E people to deploy, and some link the number of safety advisors to the hazard level (the higher the hazard, the more sizeable the onsite S&E staff).

The third problem in S&E is the duplication of activities across the HSE organisation. This leads, at a minimum, to a lot of waste and unnecessary cost. But it can also backfire if line workers feel overwhelmed by the amount of input they are getting, or by the flood of ideas.

## Redefining roles and adding capabilities

There is a better way. By ensuring that their front line has a high degree of internal competence in S&E, companies can avoid a lot of this dysfunction – and make a step change in safety performance. To reach this new model though, companies need to drive change in two areas. First, they need to be clear about accountabilities. There are three categories of employees whose new responsibilities should be spelled out:

- ▶ The front-line workers: those directly involved in producing the revenue-generating asset.
- ▶ The S&E advisors who are assigned to (and co-located at) worksites.
- ▶ The central S&E staff.

In the model advocated by this article, the front-line workers alone are responsible for ensuring safety – the advisors do not play a role in this. Instead, the advisors' job is to coach, provide guidance, and drive continuous improvement. As for the central S&E staff, their job is to stay on top of regulations and develop best practices, and be a resource for the S&E advisors to draw on.

The second change, necessary for the first to work, involves building new capabilities. This means giving front-line workers (at all levels, not just management) the tools and training necessary to execute S&E activities as an integrated part of their daily work. In the function, it means developing credible, experienced, independent advisors who understand how to coach the front-line workers and how to get them to challenge their own assumptions. This takes some work. Typically, those in S&E have either spent their whole careers in the function (in which case they have only a limited knowledge of operations), or are long-tenured operations people who have been transferred to S&E at a late stage of their careers, without a lot of functional knowledge. Either way, there are gaps to fill.

## Changing the model: a five step process

To make the substantial changes that are involved in moving to the new model, companies need to work through a number of challenges. A step-by-step approach, illuminated by actual case examples, follows below. This article has aggregated the several companies into a single 'oil and gas' company, for ease of example.

### 1. Reviewing the current operating model, focusing on resources and capabilities.

This starts with understanding how the S&E imperative is currently being satisfied – the operating philosophy. What is the function, at a high-level, set up to do?

When an oil and gas company did this assessment, it found that its approach to S&E was built around compliance – that was its 'mental model' – and that a lot of energy went into enforcing

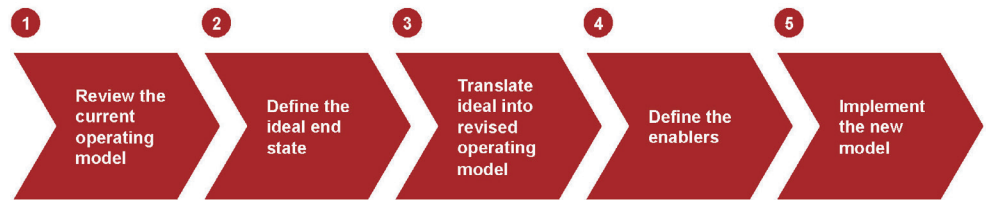


Figure 2. Changing the S&E operating model. (Source: Strategy&).

prescribed behaviours, and acting as a sort of on-site auditor of S&E practices. This had clear implications for how the company allocated resources, and for the capabilities of its front-line workers, S&E advisors and central S&E staff. Among other things, it meant that there were many S&E advisors at multiple work sites, making sure the front line was following safety practices, and correcting violations. The S&E advisors were not particular experts in safety – they just had to be familiar enough with the prescribed practices so they could recognise when the practices were not being followed. With the S&E advisors playing this role, the front line did not think of itself as responsible for safety. As for the corporate S&E staff, it was spending most of its time generating the policies and procedures – the rulebook – that its onsite advisors were enforcing.

For some companies, this is not an inappropriate way to handle S&E. Investing in compliance can help a company reach an acceptable safety level. But this is an early stage of S&E evolution and is expensive to maintain.

### 2. Defining the ideal end state, based on needs and overall aspiration.

In this next step, a company maps out its ideal S&E model. Among the questions to be answered: What role should the central S&E staff and S&E advisors play? In what ways should the advisors support the front line, and in what areas should the front line operate on its own?

At the oil and gas company, the answer to at least one of these high-level questions was clear. The company wanted the S&E advisors to move away from their enforcement roles and focus on continuous improvement. This would not mean pulling S&E advisors away from the front line but rather transitioning the advisors to 'partner' and teaching roles, and reducing the time they spent checking up on operations and on other supervisory tasks. The goal was to improve safety performance; the mechanism was shifting responsibility for day-to-day S&E activities to the front line. If this allowed the company to operate with a reduced number of S&E advisors, that was seen as a nice by-product of the change but a strictly secondary benefit.

### 3. Translating the ideal into a revised operating model.

The next step for a company is to think about its ideal end state in the context of what is feasible – and then start pushing toward that. The calculations include who to put in which positions; which capabilities to develop; how to allocate resources; and how to structure reporting lines to support the new goals of both the front line and the central function.

One oil and gas company believed it would help if both the front line and S&E function had input into the discussion. So the company held workshops with representatives from both sides. A key question was defining the role that the corporate HSE function should have. One argument called for limiting it to pure policy development, while the other called for a combination of policy development, dedicated support and an expert pool of resources. After some discussion, the company decided on the focused 'policy and expertise' role for the corporate function and then moved on to create the new organisation

model, including roles and responsibilities, reporting lines, team structures and a responsibility assignment matrix.

#### 4. Define the enablers.

Companies do not move easily to new models; they are prone to inertia. If the S&E model is to be changed, the right enablers must be employed.

The oil and gas company used several enablers, notably leadership behaviours; decision rights; capability development; knowledge networks; and line/function rotation. So for example, leadership behaviours underscored that S&E was a company-wide priority, decision rights made it easier for the central S&E function to get the right people in the right positions while capability development put the company in a position where it could start to think about S&E differently.

#### 5. Implement the new model.

By its nature, shifting the responsibility for daily S&E activities to the line is not a flip-the-switch endeavour. A company with scores of work sites may have many different operating philosophies and S&E advisor ratios.

This was the case at the oil and gas company. The approach to S&E was very different at one European work site compared to another in the same market, and entirely different again from the approach in Africa. As a result, the implementation plans for these sites had to be developed individually. Using what the company knew the project teams set a plan for what should happen where, when it should happen and how long it should take. The work was prioritised based on both the magnitude of

different sites' safety issues and on the likelihood of achieving visible, momentum-building successes.

### Benefits of a changed model

In getting the S&E operating model right, the oil and gas company has started to put itself in a position where it can not only achieve a level of safety performance on par with its industry but can begin to approach the ideal of zero injuries. It has put the onus for S&E performance on the managers who already have credibility and the trust of their staff because of their operational experience. At the same time, it is allowing the S&E function to develop its regulatory and subject-matter expertise, so that it can pursue continuous performance improvement and reduce its role as a stand-in safety officer.

At best, many companies today are on track to make incremental improvements by tweaking the S&E models they already have in place. They should consider a paradigm change, moving to an entirely new model. It is a model that shifts accountability for day-to-day S&E performance to the front line, re-defines the role of the central S&E function and eliminates a kind of overlap that may once have been justified but has since become an obstacle to future progress. The potential of this paradigm shift will unlock significant further improvement steps again in coming decades. ■

### References

1. International Association of Oil & Gas Producers, Safety Performance Indicators, (2012 Data).



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