



Key performance indicators are a vital tool for ensuring work or processes are carried out safely and economically, writes **Bruce McMichael**

WORKING SMARTER WITH KPIs

The difference between success and failure is difficult to pin down. In the highly competitive oil and gas industry it is the role of company staff to minimise and remove the gap between a job well done to disaster. Today's executives are armed with dozens of management tools designed to eradicate bad practice. A key tool used to ensure work or processes are carried out safely are key performance indicators (KPIs).

KPIs, as the name suggests, are specific markers helping companies define their performance by following tasks designed to enhance safety and efficiency. While KPIs vary from industry to industry, they all need to match the overall goals of the company. Thus KPIs need to be chosen carefully, making them both quantifiable and actionable.

A typical KPI has two attributes: it is usually expressed as a number, and it captures a key driver of the business. Some businesses use colour-coded systems of measurement, such as traffic lights – from red signifying a problem, through amber for a warning to green, indicating that work is progressing to plan.

KPIs signal how well a process or practice is working. For example, they can be used to measure compliance with permit to Work (PTW) requirements, where the PTW system is designed to control hazards including ignition sources.

Knowing how the different areas of your business are performing is valuable information in its own right, but a good measurement system will also let you scrutinise triggers for any changes in performance. This puts companies in a better position to manage performance.

Performance selection

One of the key challenges with performance management is selecting what to measure. The priority here is to focus on quantifiable factors, such as days without lost time incidents (LTIs) or feet drilled per week, that are clearly linked to the drivers of success.

However, quantifiable is not the same as financial. While financial measures of performance are among the most widely used by businesses, non-financial measures can be just as important.

Knowing how the different areas of your business are performing is valuable information in its own right, but a good measurement system will also identify any triggers for any changes in performance. This puts management in a better position to manage performance proactively.

The benefits of target setting

Once the key areas that drive a particular process or

business performance are isolated and a way to measure them chosen, then a natural next step is to start setting performance targets to provide a clear sense of what employees should be aiming for.

Strategic visions can be difficult to communicate, but by breaking top-level objectives down into smaller, more manageable targets it is simpler to manage and identify the delivery process. In this way, targets form a crucial link between strategy and day-to-day operations.

Typically management information is required on the predicted costs of the problem, the risks involved, the remaining life of the affected equipment and what can be done to improve or eradicate the problem. For example, KPIs have been developed to measure the effect of corrosion on the technical and financial performance of assets and to address the performance of particular critical corrosion-related systems.

In many cases pipeline corrosion is high on the priority of issues to watch and manage. It is important to understand how much in integrity and financial terms do these threats pose. Understanding the threat/cost relationship can then be used to plan or assist in maintaining the safety, integrity and profitability of the asset.

KPIs and growth strategy

Exploration and production company Tullow Oil watches a number of KPIs including seven closely associated with growth strategy. Delivering against these KPIs is strongly aligned with the company's strategic objectives and creation of shareholder value.

Indeed, the bonus element of the company's executive directors' remuneration is directly linked to lost time incident frequency rate (LTIFR), working interest production,

reserves and resources replacement, cash operating costs per barrel of oil equivalent and total shareholder value.

Tullow's most recently published KPIs include LTIFR figures which in 2008, the company sustained three LTIs in 5.6m hours worked across the group resulting in a LTIFR of 0.54 – Tullow's best ever performance.

What constitutes acceptable performance however may well vary from asset to asset or company to company.

The company's ambition to minimise its lost time injuries is split into three sectors.

Aim

Tullow's top operational priority is to keep people safe – employees, contractors and local communities. The Group's aim is to deliver a performance that is in the top quartile for the industry.

Measurement

Detailed, disciplined and consistent incident reporting procedures are in place throughout the Group, incorporating follow-up and remedial measures as appropriate. Health & Safety (H&S) performance measures are reported to the Board monthly and annually.

Risk management

H&S management is a complex issue given the nature of the industry, the geographic location of Group activities and the scale of its operations. Tullow has clear H&S policies and procedures supported by strong leadership, accountability and commitment at each level of the organisation.

A road map for progress

Megan Brown, a senior human resources consultant at UK-based classification society and consultants Lloyd's Register, presented a paper at last year's Offshore Europe Oil & Gas Conference & Exhibition held in Aberdeen, UK arguing that: "KPIs give an indication of how well a process or practice is working. In relation to process safety this provides a measure of how well the barriers or hazard controls related to preventing process safety incidents and the mitigation measures preventing escalation are working.

"For example, measuring compliance with

permit to work (PTW) requirements, where the permit system is designed to control hazards such as ignition sources, provides an indication of how well the PTW controls those hazards."

KPIs form the primary means of management feedback on the control of process safety risk and form part of the business assurance model for safe operation. Reporting on KPIs provides an opportunity for management intervention and corrective action, through the establishment of performance goals or targets on each KPI.

Many companies have a KPI-driven culture, where those activities that are accompanied by targets in individual performance contracts are those that receive the majority, and in some cases all, of the individual's attention. Therefore, in such companies, KPIs can be a useful means to focus attention on areas that require prioritised improvement. However, caution is needed in determining the right indicators and targets for companies with this type of culture as the individuals may see their role as managing the indicator rather than managing the process.

Internal process perspective helps in evaluating the efficiency of an organisation's internal processes and operations. The number of oil spills, volume of gas flared, natural gas processing as per the standards and the efficiency of use of energy at plants and refineries can act as appropriate measures for determining performance.

Customer satisfaction

An important factor in determining the success of a business is its customers. Businesses like to be seen in a positive light by the customers it serves. It can be easily achieved by the image it portrays by engaging in social investment activities and taking initiatives to reduce the number of fatalities and injuries of its staff and working to maintain good relations with business partners. These issues can all be measured using KPIs.

Another major pointer to an oil company's performance can be its environmental initiatives. KPIs to measure it can include the company's initiatives to reduce greenhouse gas emissions, freshwater use and properly manage the waste generated.

Lloyd's Register's Brown notes that when LR was contracted by a client to create a set of KPIs to enhance their process safety management (PSM) performance, a provisional list of 70 KPIs was first suggested before being edited down into three discrete sets, totalling 18 KPIs.

- Category One – KPIs that were considered to have the greatest potential to drive performance improvement in those PSM controls that required immediate attention;
- Category Two – KPIs that were considered to have potential to drive performance improvement in those PSM controls requiring attention in the medium term;
- Category Three – KPIs that would drive improvement in PSM controls requiring attention in the longer term.

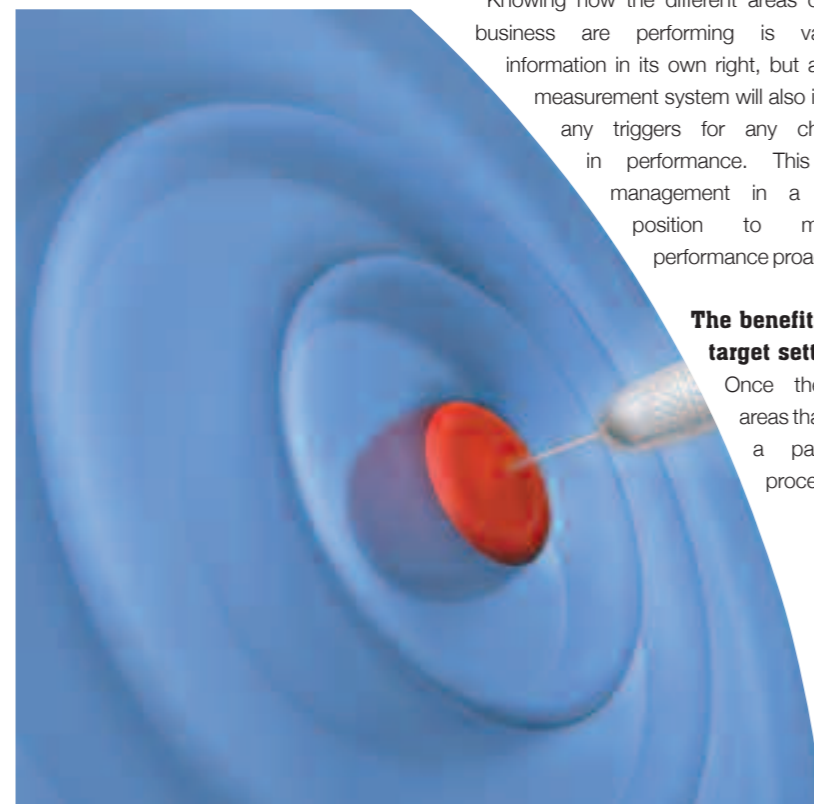
Energy companies seeking to insure assets and production often need to provide KPIs to their insurance firms. For example, when researching past accidents, insurance companies might look to determine which KPIs could have highlighted the failures that led to the incident. Issues that the markers could address might include piping corrosion, implementation of work permits, effect of anchor drag on pipelines and structural resilience against the wind.

As for an insurer's KPIs, these companies focus on issues which caused the last loss they paid out on and events which caused major losses. Insurance company and energy specialist Marsh suggests that companies develop a system for learning lessons from incidents across the industry, and then a system for deeply embedding the lessons learned.

Ultimately KPIs are a tool for monitoring and improving performance. They provide a truer picture of a company's PSM performance, providing senior managers with accurate information on which to base decisions.

As LR's Megan Brown says: "It is the 'acting upon' that is crucial to the improvement in PSM performance. Measuring alone will not drive this improvement."

The information the KPIs provide must be used by senior managers to change safety management, procedures, practices and beliefs, and it is these changes that will drive and enhance overall improvement. **ep**



KNOWING HOW THE DIFFERENT AREAS OF YOUR BUSINESS ARE PERFORMING IS VALUABLE INFORMATION IN ITS OWN RIGHT