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Key Performance Indicators



SHIPS

Key Performance Indicators

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Key Performance Indicators – What, Why & How?

KPIs – What They Are?

Key Performance Indicators (KPIs) are a series of defined measures which organisations use to gauge progress towards goals. KPIs can be used to measure the performance of an organisation at many different levels and over a range of time scales. Financial and business growth targets are often the subject of KPIs that are used to measure corporate and individual performance. Often, the level of annual incentive bonuses paid to employees are based upon these KPIs. Some organisations also use KPIs to measure performance in such areas as operational safety, human resources and environmental management.

From a loss prevention perspective, we will concentrate on KPIs related to safety and operations .

KPIs – Why They Are Used

KPIs help the organisation understand how they are performing in relation to the goals and objectives which have been set. Managers and staff members who are responsible for achieving those goals are thereby encouraged to focus attention on raising their scores so that targets are achieved. The Advanced Performance Institute, which is one of the world's leading research and advisory organisations on business performance, has determined that the main reasons companies define and use KPIs are to:



KPIs - How They Can Help Us

The October 2013 edition of North's loss prevention newsletter, 'Signals 93', contained an article entitled "Measuring Performance in the Shipping Industry" by Captain Kuba Szymanski, Secretary General of Intermanager. In that article, Captain Szymanski stated:

"Usage of the KPI system can be very versatile. It can benefit many different aspects of your work, from discussions with owners when arguing over budgets to winning new business by being able to demonstrate robust management performance. Maybe more importantly, it can be used for internal improvements and monitoring of your own performance over time and when benchmarking within your own departments".

The full article can be accessed [here](#):

Oil company and major ship owner BP state:

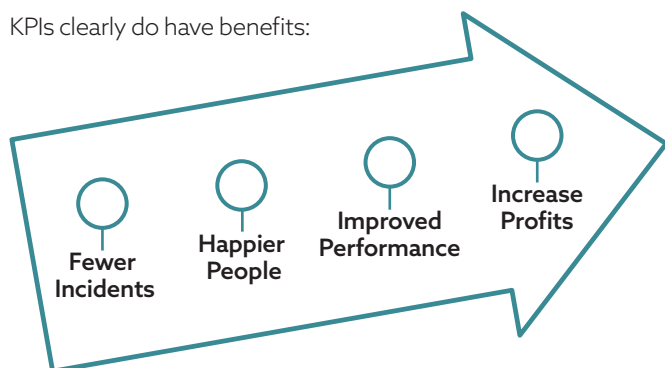
"We believe non-financial measures – such as safety and an engaged and diverse workforce – have a useful role to play as leading indicators of future performance".

Maersk Line initiated the use of KPIs across its fleet in 2009. The KPIs tracked energy, safety, daily running costs and best practice sharing. The company reported that, by 2012, savings made as a result of the KPIs amounted to US\$90 million in reduced fuel bills alone. Anup Rajan, performance manager at Maersk said at the time:

"If you can't measure something, you can't control it. If you can't control it, you can't improve it."

Key Performance Indicators (cont.)

KPIs clearly do have benefits:



KPIs Have Nothing to do with Me

Whose role is it to introduce KPIs?

Insurance Dept?	<ul style="list-style-type: none"> • Handling claims • Negotiating premiums. • NOTHING TO DO WITH KPIs!
CEO?	<ul style="list-style-type: none"> • Growing the company • Satisfying customers • NOTHING TO DO WITH KPIs!
Ship's Engineer?	<ul style="list-style-type: none"> • Maintenance & repairs • Too much paperwork • NOTHING TO DO WITH KPIs!

Do you recognise any of the above characters? One of them might be **you**. If you are reading this loss prevention briefing, the chances are that your work is intimately connected with shipping. So, any effort to achieve safe and incident-free operations within the shipping industry has a direct effect on **your** company's performance and therefore **your** remuneration and quality of life. Safe and efficient operations are all our responsibilities; not just CEOs, insurance managers or chief engineers. Those in senior roles may be sometimes better placed to develop KPIs as management tools, but we can all be instrumental in driving the process.

Operational and safety based KPIs have been in use in many industries for a number of years and they **do** work. One of the most often quoted stories related to KPI based success is that of British Airways (BA) in the 1980s. Lord King, who was the Chairman of the airline at the time decided to focus on key measures required to turn the ailing business around. Consultants appointed to investigate the most critical key measures reported back that the timely arrival and departure of aircraft was the main critical success factor. Lord King was not impressed by this finding – because everybody knows the importance of timely planes. The consultants eventually persuaded Lord King to heed their advice and to focus on measures that would increase aircraft punctuality. Consequently, Lord King was notified directly of any plane in the BA fleet that was delayed beyond a certain time period, wherever in the world it might be. The BA managers at each airport soon became aware that if any of their aircrafts suffered undue delays then they could expect a call from the Chairman of the company. Very soon, BA established a reputation for leaving on time. If your organisation does not yet employ KPIs which are used to measure and improve performance, and most particularly safety performance, then please read on. You may be able to take the guidance notes given here, adapt and develop them to suit your own organisation's needs and make a positive contribution to company performance. You may also be able to save a few lives along the way too.

Getting Started

The oil & gas industry, or more specifically The International Association of Oil & Gas Producers (OGP), who have focussed on developing practices which reduce the risk of having major incidents for many years, produced a report in November 2011 entitled 'Process Safety – Recommended Practice on Key Performance Indicators' which can be found online at

www.ogp.org.uk/pubs/456.pdf

This document is itself complementary to an earlier, December 2008, publication 'Asset integrity – the key to managing major incident risks' which can be found on-line at

<http://www.ogp.org.uk/pubs/415.pdf>

These documents are detailed and obviously geared towards oil and gas, but they nevertheless contain information which might fuel the imagination of those readers who are interested in the benefits that an improved safety culture can provide. The following is a highly condensed, simplified and adapted version of the OGP papers, but it is hoped it will assist Members in developing their own system of KPIs.

Key Performance Indicators (cont.)

Leading & Lagging Indicators

Recording the number of incidents, injuries or other unforeseen hazardous events that befall an organisation is a 'lagging indicator', i.e. a measurement of something that has already happened. 'Leading indicators', on the other hand, are pre-incident measurements; they are viewed as proactive measurements that are predictive of future performance results. Examples of 'leading indicators' might be the number of safety/quality audits performed within a specific time frame. More examples of leading and lagging indicators are shown below.

Leading	Lagging	Both
Number of audits and/or inspections performed	Lost time injuries	Near miss events
Number and types of findings and observations	First aid cases	
Training completed	Unscheduled machinery downtime	
Safety committee meetings	Losses of containment	

The above list is a representative sample of what a shipping company may want to consider in its list of KPIs. 'Near misses' can be both leading and lagging indicators – they provide information on the likelihood of actual incidents occurring in the future ('leading') and also provide information on existing weaknesses ('lagging'). OGP and the United Kingdom Health & Safety Executive (UKHSE) recommend a combination of leading and lagging indicators for each operational area under scrutiny. This approach is called 'Dual Assurance' where a lagging and leading pair of indicators are statistically correlated. That, however, is a subject for another time, and in the belief that we have to learn to walk before we can run, we suggest that Members initially implement KPIs that are the least cumbersome to analyse, whether they be leading or lagging.

KPI Selection

We previously indicated that anybody, from the CEO downwards, can be the instigator of KPIs. In practice, however, it's generally the health, safety & environmental (HSE) manager and/or the designated person ashore (DPA) who develops and manages safety related KPIs. To select meaningful KPIs, the HSE manager needs to ensure that those KPIs correspond to the company's existing risk management systems and are closely aligned with the company's culture and business plan. The HSE manager can then develop KPIs that can be used to gauge where the company stands in the short and/or long term. For instance, a company with an already well-developed safety culture; an effective and robust safety management system; experienced, dedicated and loyal staff ashore and

afloat and a host of demanding, yet well-satisfied customers; may set KPIs that are cutting-edge and up there with the industry leaders.

Conversely, the HSE manager for a small, young company with an emerging culture may initially wish to set limited short-term goals that ensure compliance with applicable regulations and requirements.

A very basic set of safety and environment based KPIs might be as follows:

Annual KPIs	
Lost time injury frequency	Hydrocarbon Losses of Containment greater than 1 litre
Crew retention rate	Near miss reporting frequency

Most Members would wish to have a more extensive list of KPIs than that given above. In choosing numerical targets, it's important that those targets should be challenging, yet achievable. If a company has a current crew retention rate of 60%, it would be unrealistic, overly ambitious and entirely counter-productive to set a target for crew retention for the coming year at 90%. Staff buy-in and engagement is critical to success – if KPIs are ill-conceived, unmeasurable or unrealistic then staff will simply ignore them.

Tanker Management Self-Assessment (TMSA) – Not Just for Tankers

The Oil Companies International Marine Forum (OCIMF) introduced TMSA in 2004 as a tool for ship operators (aimed particularly at tanker operators - but most measures can be adopted by any shipping sector) to measure and improve their management systems. The 12 elements of TMSA could provide a backbone for Members wishing to implement or enhance a system of KPIs. The 12 elements are:

1. Management, leadership and accountability.
2. Recruitment and management of shore-based personnel.
3. Recruitment and management of vessel personnel.
4. Reliability and maintenance standards.
5. Navigational safety.
6. Cargo, ballast and mooring operations.
7. Management of change.
8. Incident investigation analysis.
9. Safety management.
10. Environmental management.
11. Emergency preparedness and contingency planning.
12. Measurement, analysis and improvement.

Key Performance Indicators (cont.)

Full copies of TMSA can be purchased from Witherby Seamanship International:

Witherby Seamanship

Tel: +44 (0)1506 463 227

Fax: +44 (0)1506 468 999

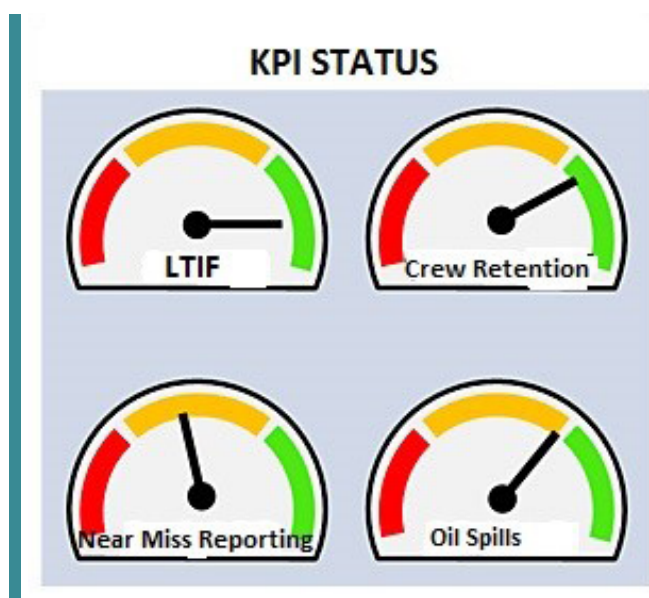
North's loss prevention briefing on TMSA may be [read here](#).

The following points need to be borne in mind when selecting KPIs:

- Quantity does not equal quality
- Ensure ship staff and senior management buy-in
- Measure the most important things, not everything
- Consider trial programme on small section of fleet before rolling out company-wide
- Don't let the cost of measuring exceed the value of results

Managing KPIs

To be successful, KPIs need to have a system whereby they can be tracked and communicated to the applicable workforce (and, where applicable, customers or the general public). The most widely used, and possibly simplest, method is by means of a **dashboard**, which is basically a progress report, often displayed on a web page linked to a database. Some Members may be familiar with the 'traffic light' system where the progress of goals or projects is depicted graphically by gauges with colours, like this:



Further information can be found at:

[http://en.wikipedia.org/wiki/Dashboard_\(management_information_systems\)](http://en.wikipedia.org/wiki/Dashboard_(management_information_systems))

ICE - The Problem with KPIs

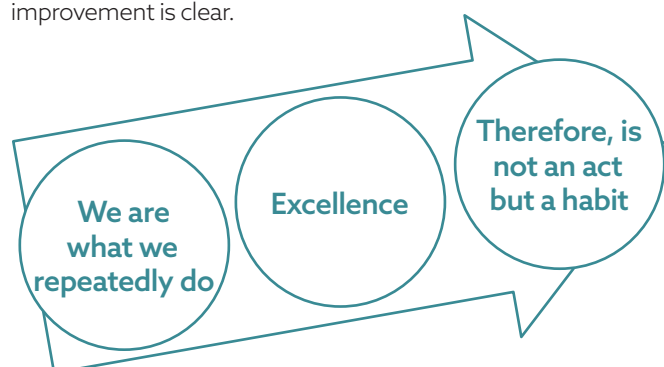
Many organisations adopt what the API has termed the 'ICE' approach:



To avoid falling into the 'ICE' trap, Members are encouraged to focus upon KPIs that will clearly help their organisations learn and improve. Concentrate on a small number of KPIs that are easily understood by all stakeholders. Remember the term **KEY** Performance Indicator. Suffice to say that if you choose to adopt 100 KPIs, there is no way that all of those 100 can be "KEY".

Continuous Improvement

We should not forget that one of the most important benefits of employing KPIs is that they allow us to embark upon a process of continuous improvement. By measuring performance, setting targets and allocating rewards for achieving or exceeding those targets we incentivise our work force to always be striving for excellence. To set a KPI target of, say, an LTIF of 1.5 this year and to have that target met every year, without ever changing the target, is not an incentive towards continuous improvement. If, on the other hand, the Year 1 target of 1.5 was achieved and a more ambitious target imposed for Year 2 of, say, 1.3, then the goal of continuous improvement is clear.



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Key Performance Indicators (cont.)

Summary

KPIs are:

- Used by organisations to measure progress towards defined goals.
- Major tool for reporting, monitoring & learning.
- Best way of ensuring continuous improvement.

KPIs should:

- Be aligned with company's business plan.
- Measure the most important things – not everything.
- Have support of workforce.
- Be ever more challenging, yet always achievable.

Used effectively, KPIs can ensure your workplace is more:

- Safe.
- Happy.
- Environmentally friendly.
- Profitable.

Disclaimer

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