

Safety Performance Indicators in the Explosives Industry

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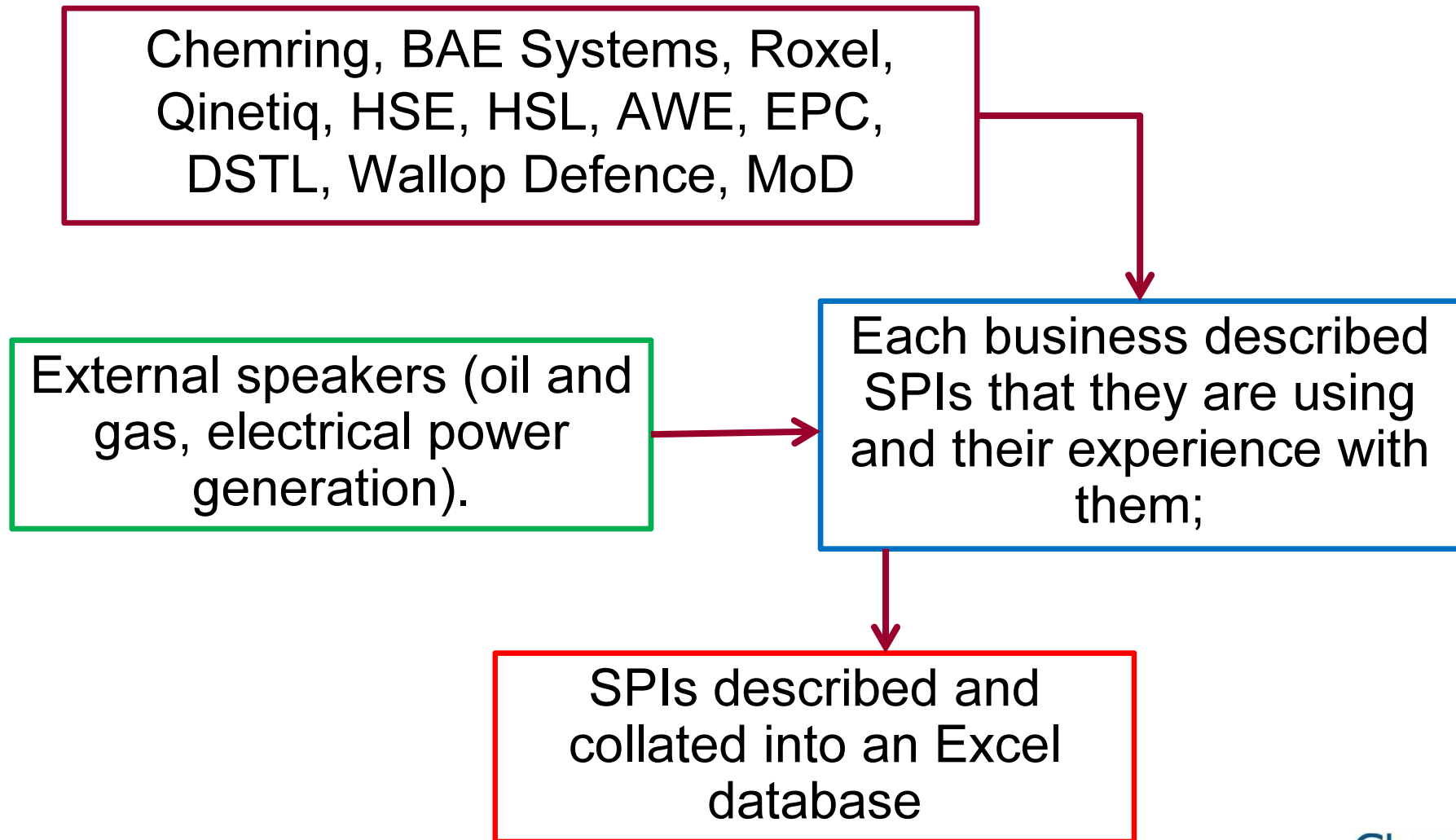


UK SPI Working Group launched

- In July 2011 a UK explosives industry group was formed to look at SPIs.
- The main task was to share good practice both amongst the participants and to other external interested parties.
- There is a lot of guidance and research but what are we actually doing and what are our experiences; what works?



Outline Process





We considered:

- How much effort it takes to collect the data?
- How well it grabs management attention and drives change?
- The ease of verification.



Categorisation

The challenge was to identify, collect and use meaningful and informative measures rather than worry about leading or lagging or occupational v process measures.

We decided to focus on subject areas: leadership, culture, process safety, competence, audit and compliance but ultimately sorted them in to:

- **People,**
- **Plant Integrity and**
- **Processes.**



Challenges shared

- Leading indicators are harder to collect – they can take a lot of time and effort;
- It is very difficult to verify SPI data;
- Setting targets for SPIs is a problem;
- It is more difficult to implement SPIs around ‘people’ issues;
- Resource for SPI implementation and data collection is an issue.



Organisation of the database

- We started with 135 SPIs of which some were very specific to an organisation, had overlap or incomplete. These were placed into a sheet called 'Other SPIs (in draft)'.
 - People
 - Processes
 - Plant Integrity



For each SPI we recorded:

- Category;
- SPI title;
- Status (new, embedded or discontinued);
- Safety and other business benefits;
- Problems or challenges;
- Background;
- Typical sources of data;
- The amount of effort required to produce the report;
- The way the data is presented;
- The ease for management to influence the indicator.




The database is a typical spread sheet structure:

SPI RE: PEOPLE, PROCESS OR PLANT INTEGRITY	SPI CATEGORY	SPI	STATUS OF SPI (Select new, embedded or discontinued)	SAFETY BENEFITS AND OTHER BUSINESS BENEFITS	PROBLEMS OR CHALLENGES	BACKGROUND/CONTEXT	TYPICAL SOURCES OF DATA	HOW MUCH EFFORT IS REQUIRED TO PRODUCE THE REPORT? (Select Easy = Fully automated, Medium = semi-automated, Difficult = data manipulation and consultation required)	HOW IS THE DATA PRESENTED TO MANAGEMENT?	HOW EASY IS IT FOR SENIOR MANAGEMENT TO INFLUENCE THE INDICATOR?
PEOPLE	Leadership	Number of senior executive tours completed (leadership visibility)	Embedded	1.Demonstrates to the workforce that the directors are interested and care. 2.Promotes an understanding of the workplace issues to the .Directors. 3.Improves communication and trust. 4. Directors can challenge the standards and promote improvement in the workplace. Improved communication and trust helps all aspects of the business	The challenge lies with the management team having sufficient time to undertake the inspections, audits and visits.	This is about completion of one monthly workplace visit, audit or inspection by each director. The visibility, leadership and standard setting delivered by senior management through programmed workplace visits, inspections and audits.	Directors contacted monthly	Contacting each director monthly. Medium	Number of inspections, visits and audits to programme with a traffic light	Requires complete commitment of directors
PEOPLE	Leadership	Leadership visibility- Number of talk safe discussions completed	Embedded	There are about 1200 'talk safe' discussions at the workplace recorded per month. This has improved the safety culture and workplace standards. Improvements in the safety culture have a knock on effect on quality.	Difficult as it requires extensive training programme and a large commitment Keeping the programme going and the safety discussions to a high enough quality Each person undertaking the talk safe discussion will spend 4 to 8 hours per month.	This is about completion of 4 talk safe discussions monthly by directors, managers, supervisors and other personnel. 300 people have been trained to undertake discussions at the workplace on how safety can be improved through individual ownership and responsibility for themselves and others.	Individual enters discussion on a data base.	Report collation very little once data base set up. Easy	Balanced scorecard with numbers and traffic lights. Periodic reports on the type of safety issues discussed. Listing of the 300 participants and their 'talk safe discussions' to programme	Easy
PEOPLE	Leadership	% of safety meetings chaired by Managing Director	Embedded	Shows Leadership and commitment	None	MD should chair all safety meetings to demonstrate commitment	Minutes of meetings	Easy	Traffic lights and charts	Easy
						This measure management				



Separate sheets are used for each category:



9	PEOPLE	Resources	Percentage of back-to-work interviews	New	Absenteeism manage
10	PEOPLE	Safety Culture	Results of pulse and annual safety culture surveys	Discontinued	Improve culture

Navigation bar: **PEOPLE** | PROCESS | PLANT INTEGRITY | Other SPIs (in draft)



Examples

People	Process	Plant Integrity
Leadership	Near miss reporting	On time maintenance
Culture	Risk assessments	Pre-operation checks
Training	Contractor safety	Breakdown rate
Competence	Emergency preparedness	Aging plant
	Management of Change	Safety critical equipment identification
	Permits to work	Workplace inspections



We discovered that...

- Leading indicators are harder to collect – they can take a lot of time and effort;
- It is very difficult for an external group; for example, corporate auditors, to verify SPI data;
- Setting targets for lagging SPIs is a problem. It is a little easier for leading indicators (but harder to verify performance);
- It is more difficult to implement SPIs around ‘people’ issues;
- The amount of resource required for SPI implementation and data collection is significant and therefore it is important to implement those that provide the greatest impact.



Thoughts about implementation

- Consider the meaningfulness of the data to management - SPIs should be giving management the true picture;
- Make sure the data is being collected for the right reasons (to drive improvements in safety);
- Be mindful of unintended consequences (e.g. when SPI is taken away, does the behaviour continue?);
- It is useful to run a pilot of SPIs – this can quickly indicate what data does not add value;
- Traffic light systems can be misleading. Amber and red should be seen as opportunities for improvement rather than failure.
- Be aware of the pitfalls of having too many SPIs in operation at any one time. It's better to have a relatively few meaningful, representative SPIs in operation.



The Data

- Ideally, a business that has a performance issue can look through the database and spot an indicator that might work for them;
- If necessary , the provider of the entry can be contacted for further information on their experiences and difficulties.



Summary - The purpose of the database

- To provide the explosives industry with a central database to exchange knowledge and thereby inform the practical implementation of SPIs. It is not about prescribing SPIs to industry;
- To encourage more interrogation of data to better understand what it is indicating/contributing;
- To encourage wider adoption of SPIs among industry.
- The choice of SPIs may need to change over time, either because the indicator stays persistently healthy (not a good sign) or the activities across the organisation change. All the participants found difficulties with setting and monitoring some SPIs, especially for human factors.



Where can you get hold of the database?

It is on the memory stick that you received at registration.

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