

# **XV SAFEX INTERNATIONAL CONGRESS**

## **Plenary Session - Developing a Diagnostic To Assess the SH&E 'Health' of an Organisation**

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### **Developing a Diagnostic To Assess the SH&E 'Health' of an Organisation**

In today's plenary session I would like to develop the concept of a SH&E template, in the context of considering the similarity between assessing the health of an individual and assessing the SH&E health of an organization.

We will then consider some key elements of the template in the workshops that follow this afternoon.

I'm going to use the analogy of a visit to the doctor when something is not quite right. What steps does the doctor follow?

Before he or she can determine if a deviation from normal health is present, he (and we'll use the generic he for the rest of this paper) must first know what is the range of normal health.

#### **Slide – A Visit to the Doctor**

- Defining the norm
- Assessing the deviation
- Making the diagnosis
- Writing the prescription
- Returning to and maintaining full health

First one lists the symptoms to the doctor, aches & pains, areas of concern, etc. After examination, he may complete some specific, more complex tests to collect additional medical information. He will also review the past history of treatments and ailments.

At this point, he possesses several indicators, both objective and subjective. What does this tell the doctor? Relatively little.

#### **Assessing the deviation**

The indicators have to be compared against the 'norm' of good health i.e. a blood pressure reading of 120/80 depending on age, temperature of 37C, blood results of XYZ, etc. These norms have been developed over time to supplement or support the medical knowledge and expertise the doctor has obtained from study, practice and consultation.

#### **Making the diagnosis**

Once the area of deviation is understood, then a series of possible diagnoses can be made. If further information is required to narrow down or select the final diagnosis, these tests will be ordered.

### **Writing the prescription**

Once the diagnosis is made, then the path back to normal health (“the Prescription”) can be defined – chemical, physical, behavioral modification, whatever is required.

A note here – the ‘norm’ can sometimes change, become more demanding, and when this occurs the prescription must also change. The doctor also needs to be aware of changes, and have a process for maintaining currency.

The last step is the return to health i.e. take your medicine, close off actions ‘so to speak’. And keep it there.

Let’s see how this analogy holds together when we apply it to an organization.

### **An Organizational Template for SH&E Health**

Again we first need to define the template. How are we going to manage our SH&E requirements?

Let’s say you are approached and asked to comment on some organizational problems. For example there have been some concerning incidents i.e. several Recordable Cases, significant incidents, even fatalities.

You ask about standards in place, degree of compliance, assessment of performance, etc.

He indicates they have no idea. Standards have not been set; there are no measurements, etc.

Here we can see there already two important components of the template missing – standards and monitoring.

A diagram of an overview template might look like this:

#### **Slide – The Virtuous Circle**

Clear SH&E policies have been set by the Board.

The standards here are set in support of the policy – the ‘what to’

The business procedures are in place – the ‘how to’. There may be many procedures in place, some more critical than others.

A compliance measuring process exists, - the 'need to'.

Gap identification and addressing the gaps leads to improvement.

And an overall annual process of assurance exists.

### **Slide – Why a Systems Approach to Safety**

Let's touch at some of the template elements in more detail, starting with standards.

These better define the totality of what needs to be in place. A partial list, not meant to be exhaustive but including the priority requirements, would be:

### **Slide – SHE Standards**

1. Appropriate resources
2. Training
3. Risk assessments – new projects, existing processes
4. Safe systems of work
5. Engineering controls
6. Emergency planning
7. Incident reporting & analysis
8. Change processes
9. Monitoring/measurement

Two key enablers of getting these standards met are:-

### **Slide – 2 Key Enablers**

1. Management leadership and
2. Employee participation in the process

Some of these will be discussed further in the workshop sessions.

There will be sessions on modification control, software systems, operational audits, etc.

### **Slide – Workshop Sessions**

But let's move to the next step – assessing the deviation.. How do we do this?

- We can look for warning signs – injuries, conflicts (near misses etc.) and analyse them for root cause (**Slide – Injury Graph**)

### **Slide – A Caution . . .**

- We can look at leading indicators – completion of training plan, how well actions are closed out, number of modification notices raised and risk assessed. **(Slides – Dashboard Examples)**
- And we can audit – by site managers
  - by 2<sup>nd</sup> party auditors ( ie internal to the company) – system, compliance, technical, etc.
  - by 3<sup>rd</sup> party (external – eg. ISO, supplier)
  -

### **Slides – Typical Audit Structures**

The combination of :

- obtaining evidence, either objective or subjective from audits,
- from retrieving records (incident reports), and
- from interviews (getting information on symptoms)

allows us to assess the deviation.

Now it's time to 'make the diagnosis'. The cause of the increased number of incidents may be simple non-compliance to procedures (assuming that the procedures are in place) The fix may be some type of behaviour modification, or even discipline.

Or it may be related to training, either lack of or effectiveness of. The assessment of training plan completion, including refresher training, may be required here.

### **Slide – Training Matrix**

Or it may be more deeply rooted, with processes not designed to be fit purpose or operational personnel not aware of the Basis of Safety for their processes.

In this case, detailed design reviews and verification will be required, including the need to implement robust processes for validating new product and process introductions.

Investigating non-compliances to root cause will allow the correct diagnosis to be used.

An example..... .

### **Slides – The Longford Incident**

Writing the prescription – once the correct diagnosis has been made, the recommendations for improvement can be made. These might include developing or strengthening a modification program, improving risk assessment processes, by both involving operators and improving the quality of the process.

These recommendations need to be based on the evidence. And they can only be agreed with the line manager in authority - to ensure they are understood, that the implementation path is clear and that resources are available.

Finally – the return to health.

This is an area that suffers in the process. Why? It could be

- Lack of resources
- Lack of commitment
- Lack of agreement
- Other priorities
- Further lack of monitoring on the closeout.
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Yet arguably it is the most critical part of the process. If we ignore our doctor's advice, our position can go critical / terminal.

### **Slide - Action Closeout Tracking**

Ensuring good action management processes are in place is critical to the 'return to health'.

### **Summary**

### **Slide – Conclusions**

To ensure the SH&E health of your organization it is critical that you

- establish and communicate the norm
- provide the tools to meet the norm
- monitor compliance to the norm
- close the gaps.

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