

## **HEARTS AND MINDS PROGRAMMES THE ROAD MAP TO IMPROVED HSE CULTURE**

Rob Holstvoogd, Shell Global Solutions

Gerard van der Graaf, Robin Bryden, Volkert Zijlker, Shell Exploration and Production

Patrick Hudson, Leiden University

The Shell Group's improvement in safety performance has historically been driven via the classic technological & management system initiatives. Focus is now on the behaviour of people and cultural attitude of the organisations in which they work.

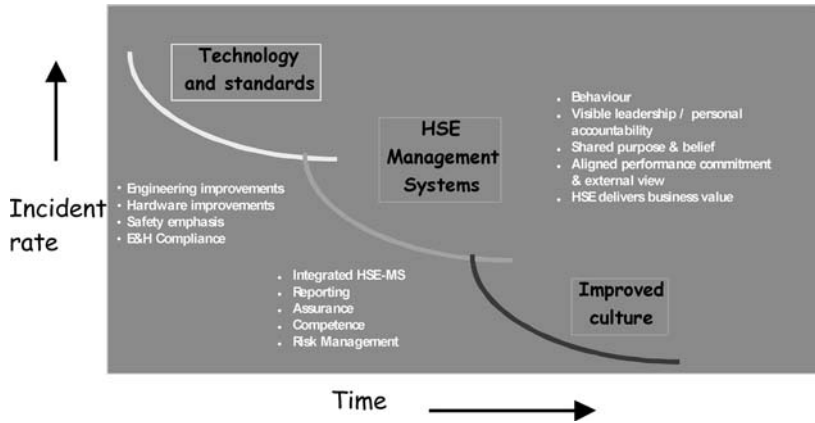
Shell has been actively involved for many years in research into incident prevention and human behaviour. Work with universities of Leiden, Manchester and Aberdeen, have produced incident investigation tools such as Tripod and more recently a set of "Hearts and Minds" tools, which look at the behavioural & cultural condition of an operation. This paper provides an overview of the research and the practical tools that have been developed and the methods and strategy to successfully turn science into practice. A stage has now been reached in which these "Hearts and Minds" tools really start to make a difference and successes become visible in the form of revived enthusiasm and genuine care for HSE (Health, Safety & Environment), which is not forced by the management system but comes from "inside" because the people believe in it. Since the tools represent "best practice" in behaviour and culture change programmes.

### **INTRODUCTION**

World-class HSE performance involves more than mechanically applying a management system. Most companies have implemented the essential elements of an HSE management system. However, implementation in the form of ticking-off that the activities have been done is by no means necessarily equivalent to proving the existence of an HSE culture and is certainly not a guarantee for good HSE performance. In a mature HSE culture all the elements are executed with enthusiasm and in the belief that this is really what is required to do a better job, make a better company and a better life for everybody involved. Everybody has the desire to do all the HSE critical tasks properly. Figure 1 reflects how over time improvements in HSE have been achieved and further improvements will not depend on hardware or mechanically applying management systems but on the "liveware" that leads to an improved culture. Though it is essential that the basics, Technology and standards and HSE management systems, should be very well maintained and kept alive, the Hearts and Minds programme is developed to get people intrinsically motivated to work in line with the management system requirements not because the system tells them to, but because they want to.

### **OBJECTIVES OF HEARTS AND MINDS TOOLS**

The objective of the Hearts and Minds tools is to achieve this "buy-in" to the execution of the HSE management system elements. The HSE culture ladder (see Figure 2)



**Figure 1.** HSE improvement drives

characterising the various levels of cultural maturity, and the change process required to achieve a lasting change in personal and organisational culture level is described in some Society of Petroleum Engineers (SPE) conference papers. The various characterisations of the cultural levels help organisations to discover the gap between their present level of



**Figure 2.** The HSE culture ladder

cultural maturity and the aspired level. The change process followed in the Hearts and Minds projects is designed so that people become conscious of the gap between aspired levels and their present reality, and through various steps develop the wish to commit to changing personal behaviours. Basically what the process is trying to achieve is that people say things like:

- I do understand why we need to change
- I believe it is worth working towards that goal
- I am reasonably sure that it can be done
- I want to be part of the solution

Only then people are really prepared to commit to planning and action, and as they believe it, and want it, it is likely to be successful.

Several theoretical approaches and practical tools building on the theory and the above processes have also been described in references 1 to 8. New tools have been added over the last two years, which can be used as part of day-to-day activities or in workshops. The problem areas they focus on are:

- Not following the rules and procedures
- Poor Supervision and Leadership
- Inadequate hazard spotting and intervention during work execution
- Inadequate hazard spotting and reaction to circumstances during driving
- Management not understanding how their behaviours and decisions impact on the perceived level of commitment to HSE
- Poor understanding of personal role in managing risks and demonstrating ALARP

These areas are often emerging when analysing the underlying causes of serious incidents e.g. by using Tripod accident causation models. In addition, a tool has been added to assist with making change in and improving HSE culture in problem areas that have not been defined above. An overview of the various Hearts and Minds tools that are presently available is presented in figure 3. The references (1–8) refer to SPE papers that provide a more detailed description of theory, change processes and workshop styles.

The manuals for the tools describe in simple language the basic problem aspects and the various approaches to address the problems. They all provide step-by-step guidance and material to organise effective workshops at the appropriate level of the organisation. The design of the workshops and material is such that they can be organised without needing specialist consultants. In the workshops participants identify solutions to the problems. As the actions are generated in a particular national and organisational culture, they will be tuned to that culture and more likely fully accepted by the participants.

The basic principle of creating change by stimulating the desire in people to change applies also to a large extent to the way in which the tools are made available in the organisation. So far the process of introduction of the Hearts and Minds concepts in Shell has been through the creation of “pull” from the potential users. There has been no formal

Tools available	What they do and When to use them
<b>HSE Understanding your Culture</b>	<b>What:</b> An engagement tool to identify local strengths and weaknesses identifying a way to improve. <b>When:</b> Use 1st to engage people, discover their aspirations and build a case for change (2-3 hours + follow up).
<b>Seeing Yourself as Others See You</b>	<b>What:</b> HSE upwards appraisal tool to understand other's perceptions and identify how commitment is turned into action. <b>When:</b> Use 2nd to challenge the commitment and behaviours of any "safety leaders", (20 minutes + follow up).
<b>Making Change Last</b>	<b>What:</b> A general tool for managing change and supporting any improvement process or organisational change programmes. <b>When:</b> To design your own tools (1 –2 hours to start).
<b>Risk Assessment Matrix: Bringing it to life</b>	<b>What:</b> Helps people understand their risks, makes them personal and stimulate action. <b>When:</b> Anytime to better manage the risks. (1 hour).
<b>Achieving Situation Awareness: The Rule of 3</b>	<b>What:</b> To help everyone make better risk based decisions and be able to justify them. <b>When:</b> If people lose sight of their risks, or if complacency threatens to set in. Can be used anytime, especially when there is change (<5 minutes).
<b>Managing Rule-Breaking</b>	<b>What:</b> To prevent incidents being caused by rule breaking. <b>When:</b> If procedures are not being followed, or a need to improve procedures (2-3 hours initially then, 1 hour per issue).
<b>Improving Supervision</b>	<b>What:</b> To improve the non-technical skills of supervisors. <b>When:</b> If the quality of supervision, is identified as a (possible) cause of incidents (4-5 hours first time).
<b>Working Safely</b>	<b>What:</b> Intervention programme that builds on and supports existing programmes or can be run by itself. <b>When:</b> If safe working practices are not being followed (8 hours in total, 1 hour slots).
<b>Driving for Excellence</b>	<b>What:</b> A suite of exercises to change the behaviour of drivers and the people who manage them. <b>When:</b> When driving is a significant risk, professionally or personally (8 hours in total, 1 hour slots).

**Figure 3.** Overview of Hearts and Minds tools

roll out plan driven from the top (“push”). The approach has been to make tool brochures attractive and their application pleasant and “fun”. The exercises can be done in a short time by people who are keen to do them. In most organisations they can be slotted into existing HSE meetings and therefore do not require management approval and budget.

The “pull” was created by informing people about the essence and availability of the tools through learning events and management workshops. No formal uptake or action plans was requested from anybody. Although this approach may not seem very business-like, it has resulted into an ever-growing interest for the tools. Though at the moment in some businesses some “push” is being exercised to increase the growth.

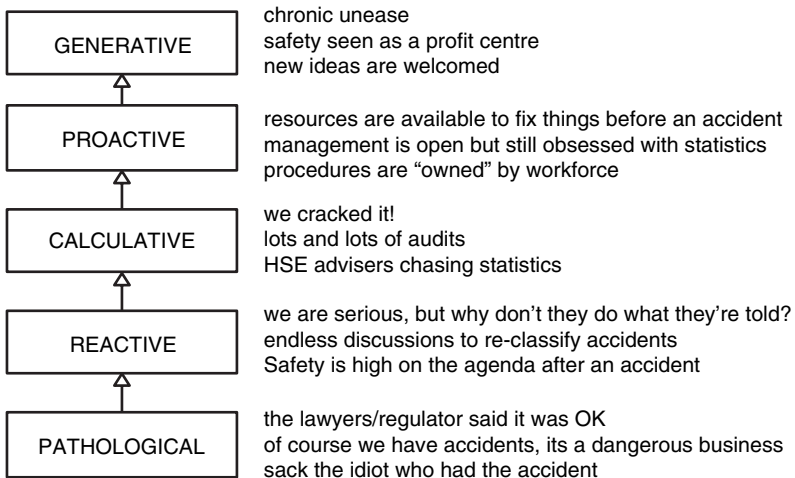
However, just showing people some interesting tools and appealing to their common sense and emotions to start doing the “right” thing is not good enough. Also, the set of Hearts and Minds tools is not another “silver bullet” that will resolve all the problems and do away with everything else. The culture change and intrinsic motivation building activities should build on existing system elements such as a systematic HSE management system with clear specification of the required management controls and roles, responsibilities and competencies of the people to make sure that the controls are in place. Integration of these system and “liveware” aspects is required to find the road to the top.

**THE HSE CULTURE LADDER**

In the research (ref. 7) a culture ladder has been developed to characterise various levels of cultural maturity. The ladder is shown in Figure 2. At the lowest level we find the Pathological culture where nobody cares to understand why accidents happen and how they can be prevented. At the highest level, the Generative culture, HSE is no longer a topic of separate discussions. HSE is totally integrated in the business and therefore part of everything that is being done.

In between, there is the Reactive stage in which a lot of attention is given to HSE (but mainly Safety) after an accident has happened. In the Calculative stage, people are of the opinion that they have everything in place. They can “tick the boxes” and demonstrate that everything necessary according to the books is being done. In the Pro-active stage, they have everything in place but are still looking for further improvements. A simple characterisation of these culture levels is shown in Figure 4. For use within Shell Companies a more extensive characterisation has been made with 18 descriptions for each of the 5 levels of the ladder (ref. 2).

These descriptions are used in workshops to get a better understanding of the strengths and weaknesses of a company’s culture and the changes required. In addition, characteristic descriptions have been made of personal behaviours that align with the 5 culture stages. As an example, Figure 5 provides the characterisations for managers at Pro-active level. The basic premise is that a company culture needs to be supported by individuals. In workshops these characterisations are used as “seeds” for participants to develop their own personal statements on preferred behaviours. These workshop tools



**Figure 4.** Simplified characterisations of the stages of the culture ladder

- I find HSE interesting and feel competent to manage it
- I enjoy talking to workers about HSE when I am on a site visit
- I try to have the best HSE performance amongst my peers
- I am proud of my team's ability to investigate incidents
- I follow up action items personally after incidents and hazard reports
- I expect incident investigations to get down to the underlying causes
- I appoint some of my best people to HSE positions to develop them
- I agree that management bears responsibility for system failings that cause incidents
- I look for other ways than incidents to measure success of our HSE activities

**Figure 5.** Personal behaviour characterisations for management team members in a pro-active culture

lead to a deep understanding of changes required by individuals to jointly achieve a higher company culture level.

### **THE ROUTE TO WORLD CLASS HSE PERFORMANCE**

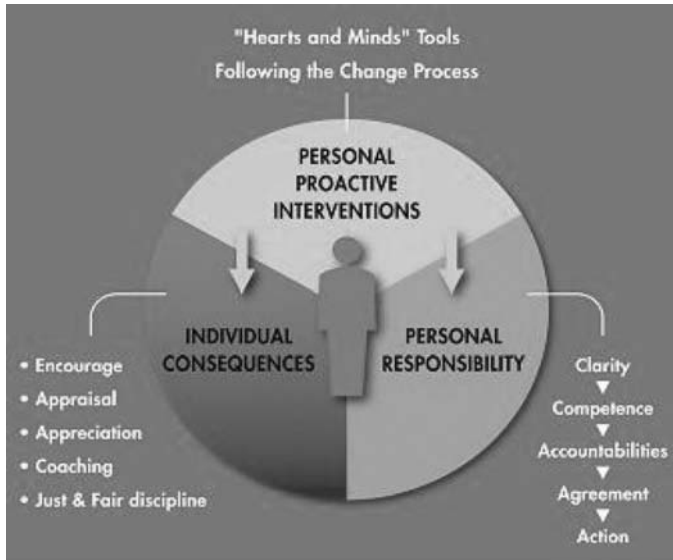
The overall “Route to the Top” means progressing up the HSE Culture ladder, developing an HSE culture maturity to become truly pro-active and generative. There are many advantages to be had from such improvement and these will have impact well beyond our HSE performance. The workload actually decreases as an organisation becomes pro-active, because more problems, failures, errors will be solved, repaired, prevented before the incidents. Increasing trust and informedness HELP allow organisations to get on with their work without requiring extra supervision and control; managers can be left to manage, workers get on to do the work. Being better informed and aligned around the business goals and trusted to deliver, people can be held accountable for their performance in a just and fair way.

The process to achieve world-class performance, moving from having an HSE management system (HSE-MS) “in place” through to actually “bringing it to life”, requires a focus on three key elements, which are shown in Figure 6, and explained below.

### **PERSONAL RESPONSIBILITY**

*I understand and accept what should be done and know what is expected of me.*

This is about being “crystal clear” in HSE expectations. It provides a ‘translation’ of the management system documentation into ‘digestible chunks’ for individuals. Know exactly what you expect of others and what others expect of you. Agree how you are going to deliver on those commitments, and whether you have the skills and competence to do it. To support this and remove ambiguous messages, these expectations and intentions must be part of a clear line of accountability that is regularly discussed so that



**Figure 6.** Key elements for bringing HSE-MS to life

people only accept for what they can deliver. The final agreement reached in this discussion could be expressed in terms of:

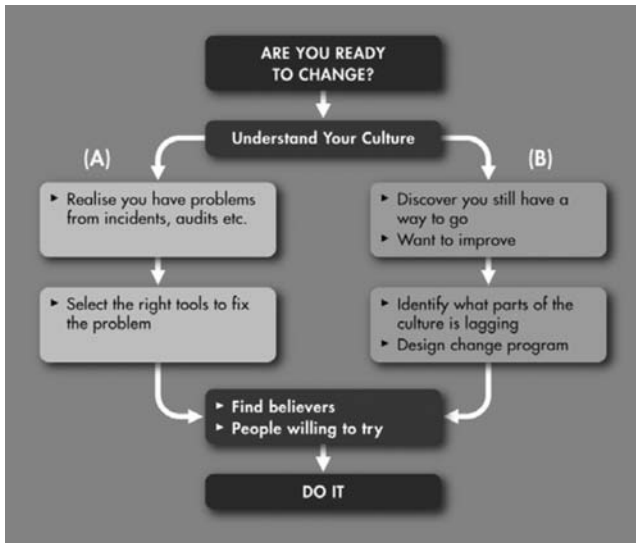
- “Yes, I fully understand what is expected of me”
- “I have the means, time and competency to do it”
- “You can count on me, and therefore you can hold me accountable”

To support our behaviours towards Personal Responsibility, specific tools and techniques are integrated into the Hearts and Minds toolbox.

**INDIVIDUAL CONSEQUENCES**

*I understand and accept that there is a fair system for reward and discipline.*

The journey to bring HSE-MS to life is about changing habits, adopting new proactive behaviours and instilling a new level of compliance. Showing appreciation and providing encouragement should continue. There also needs to be a clear formal link between actions and consequences to reinforce and reward the required behaviours and actions, and to discourage incorrect ones. Appraisal systems also need to reflect the aspired goals, rewarding those who deliver but with the appropriate mechanisms in place when coaching is needed. Unsafe acts at all levels must be dealt with immediately in a just, fair and transparent way.



**Figure 7.** Road map to Winning Hearts and Minds

Many companies already have tools to make individuals clear regarding what the personal consequences will be for their HSE behaviours and actions and such consequences should be applied uniformly. They provide a framework for holding all people accountable for their actions. Typically these include a range of positive (e.g. coaching, recognition, reward) and negative (e.g. criticism, discipline, dismissal) consequences.

#### PRO-ACTIVE INTERVENTIONS

*I work safely because I am intrinsically motivated to do the right things naturally, not just because I am told to, and make interventions and actively participate in improvement activities.*

This element is the very essence of bringing HSE MS to life, but it is also the hardest to achieve. This requires personal interventions to influence the behaviour of others and accept interventions by others. Intervention tools are accepted as part of a broader change process towards improvement.

There is a practical Hearts and Minds toolkit that provides a process and a set of tools to support most general HSE improvement programs as well as helping to solve specific problems commonly observed in operations. The tools are based on research and operational experience inside and outside Shell EP, and are designed to allow those who wish to improve to find their own best way forward. They are designed on a “by



you, for you” basis, without the need for consultants. Leaders at all levels can use these tools, and can act as facilitators for those they manage. They comprise:

### **BALANCE OF THE THREE ELEMENTS**

Weaknesses in any of these three key elements inhibit behavioural and cultural change. A balance of resources and efforts is required such that each element receives the necessary focus.

What will be the right action at the right time to achieve this balance will vary across the business as a function of differing levels of HSE cultural maturity and local issues and priorities.

However, Hearts and Minds methodology will focus on these three key elements and the supporting processes. The tools and techniques can be chosen from the Hearts and Minds toolkit.

### **THE FIRST STEPS ON THE ROAD**

Before setting out on this Roadmap to Winning Hearts and Minds, the question has to be asked: “Why Bother?” Only if leaders are personally motivated to make a difference to HSE performance, is this approach going to deliver results. Only then will people in the organisation truly change their perceptions of what is expected from them. Using the Hearts and Minds process will identify significant opportunities for improvement, so everyone involved, especially senior managers, must see the advantages and be prepared to commit to follow through.

The first steps are:

### **WHAT IS THE HSE CULTURE?**

The *HSE – Understanding your Culture* brochure will help identify the local level of HSE cultural maturity and help people to formulate their way forward. Once individuals know where they are on the culture ladder, and where they aspire to be they will begin to understand what personal behavioural changes have to be made to make it happen.

### **WHO SHOULD LEAD THE PROCESS AND HOW?**

Leaders committed to improvement should be champions and facilitators. They must understand that behavioural change cannot be *pushed* onto people. A lesson from experience is that there must be direction and coordination; but the people who drive and facilitate any program have to *believe* in the processes. Through their commitment to improve, a *pull* is generated whereby others want to participate, see the benefits, and themselves become champions. In more advanced HSE cultures the workforce will take the initiative, but whatever the cultural maturity, the journey is not easy. From the initial motivation, a

balance needs to be maintained between the 3 *Key Elements* so that the necessary support conditions exist to drive an overall cultural change.

#### ARE THERE SPECIFIC PROBLEMS?

A lot of information is out there in incident investigation reports, audits, reviews and field inspections and observations of what is happening. Typical issues are rule breaking, incorrect risk assessments, supervisors who are technically competent but short on personal management skills, ineffective contract HSE management. If the issues are known, specific tools can be selected from the list (Route A in diagram). Otherwise, descriptions of the culture dimensions can be used to identify specific improvement areas (Route B in diagram). The general tools from the list can be used for finding focus for change and planning how to make the *The Making Change Last* framework is essential to get everyone onboard from the start. (Please observe that colours in tool table, Figure 3, match with colours in Figure 7).

#### SPECIFIC FOCUS ON LEADERSHIP

Organisations look to their leadership for direction, priorities and coaching. Perceptions of the commitment of leadership towards HSE rather than just their intentions have a strong bearing on the actual behaviours and performance of that people in the organisation. The initiation of the 'Hearts and Minds' Roadmap lies with leadership teams. The commitment of management to HSE can be tested periodically by the 'Seeing yourself as others see you' appraisal technique which also helps management to improve their personal effectiveness.

#### SPECIFIC FOCUS ON SUPERVISION, CONTRACTORS AND CONTRACT HOLDERS

This group contains key players in building a strong safety culture because a lot of our serious incidents occur with contractors and involve an element of ineffective supervision. Their Hearts and Minds strategy should not differ markedly from the overall strategy and '*Understanding Your Culture*' is also for this group an appropriate first step, but another useful approach is for contractors to use this tool to appraise their clients commitment to safety. The contract holders are viewed as senior managers by their contractors and will benefit from the feedback they will receive on how their commitment to safety is perceived, by using '*Seeing Yourself As Others See You*'. The other tools are just as applicable for contractors and staff when specific issues are identified, such as weak supervision. Underpinning the above proactive interventions must be the same firm basis of, crystal clear expectations from the client, commitments from the contractor, and commercial consequences for delivery. Supervisors have most impact on the day-to-day behaviour of their teams. They therefore have to be '*believers*', demonstrating the commitment of top management and supporting and encouraging their staff when they want to use the tools.

## **CREATING BUY-IN**

Winning Hearts and Minds for HSE is about getting all to work safely not just because they have been ordered to, but because that is what they want to do. The art of good management is to get people to want to do what you may have already decided they should do. Help them to do so.

## **SUCSESSES WITH HEARTS AND MINDS TOOLS**

When the companies who are using Hearts and Minds tools and techniques are asked about the benefits there is no shortage of anecdotal evidence. However, all are quite rightly reluctant to directly link improvements in performance to the Hearts and Minds programme. It is still early days in the use of these tools and techniques. The effects are usually not immediate and during the introduction many other things can happen that have a positive (e.g. other safety initiatives) or negative (e.g. major re-organisations) influence on performance. However, there have been significant reductions in Total Reportable Case Frequency (TRCF) and high potential incidents in several organisations (ref. 9).

It is always possible to show improvements in performance when a new approach is introduced, this is a well known phenomena – *The Hawthorne Effect* – and is often how consultants convince companies to give them business. Short-term improvements are of no interest; the goal of Hearts and Minds is to achieve a lasting change, and helping develop organisations' level of HSE culture maturity. This means that across most areas of our business that are using this approach more time is needed to see sustained improvements as it is only during 2003 that a more systematic, strategy driven approach was developed building on the “pull” already generated in the organisation.

There is however one region that has been using these methods in a more systematic way for long enough to convince doubters that this work can deliver performance improvements. Within Europe, since 1998 there has been a systematic focus on the area of attitudes and behaviours of all in the company in order to build a stronger HSE culture.

Another measure of success is the enthusiasm for this approach that differs so much from approaches with mandatory changes used hitherto. The introduction of the tools through learning events and senior management workshops has resulted in requests from Shell companies and contractors for well over 40.000 brochures. Many requests are coming from other industries hearing about the approaches and wanting to apply them. From the parts of company and contractor organisations that have used the tools encouraging sounds are heard of far more attention to HSE and a reduction in the number of incidents, however, many of the people involved are careful in claiming that it is a lasting success (ref. 9,10). Time will tell. However, given the minor investments required to run the programme it is certainly delivering well in terms of a refocus on HSE.

## **AVAILABILITY TO THE INDUSTRY**

There is a growing realisation in the industry that the next improvements in HSE performance can only come through a focus on attitude, behavioural and cultural change. With this

realisation has come a drive to tackle this issue. As Shell's experience in this field dates back to 1986 the company has strived to share developments with the industry. This has been done through the Human Factors Task groups of the Oil and Gas Producers (OGP) and Energy Institute (EI; formally the Institute of Petroleum). Both bodies are promoting the Hearts and Minds tools and techniques to member companies. From the OGP and Energy Institute (ref. 11) web pages many of the Hearts and Minds materials are available to view or to purchase.

The wider availability of the material has led to interest within other oil and gas companies and outside this industry. The general framework shown in figure 2 is now appearing in many companies, sometimes with implications to how they do business. Other techniques are also influencing joint cross industry developments, for example the revised (2003) syllabus for supervisory skills training in the UK Continental Shelf draws heavily on the Hearts and Minds tool, "Improving Supervision". Outside the industry, the tools and techniques are being used by a diverse range of businesses. In the UK, the rail infrastructure operator and the National Health Service are introducing the "Managing Rule Breaking" and "Understanding Your Culture" tools. Outside of Europe, there is also growing interest in the aviation community, which shows the development turning full circle as the early days of research in the 1970s started with this community.

## CONCLUSION

Hearts and Minds tools are mature now and evidence is building up that they are effective, especially when used in the context of a sound HSE management system with attention to personal responsibilities and consequences. Within Shell the use of the tools is growing rapidly and also other industries are starting to see the value of the approaches presented in this paper.

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