

USING THE BEST AVAILABLE TECHNIQUES TO CHANGE BEHAVIOUR IN THE CONSTRUCTION INDUSTRY

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This paper will describe the approach that has been taken to begin a behavioural change process in a large multi disciplined construction company. We will describe the preparation for change, the realisation that we had to do more than we were doing. That despite having robust systems and procedures in place serious accidents were still occurring. How we have used the Health and Safety Executive's climate survey tool and cultural maturity matrixes to benchmark our culture. Our research into the approaches that are delivering change in other industries. We will explain how the leadership of the company was engaged and how champions and coaches were selected to help lead change for the front. How a programme of training and awareness raising was implemented. How we have realised that our solutions need to be tailored to each individual situation. We will look at some case studies of how we have used different approaches with success. How we have reviewed our progress in our journey and our next steps in our goal that is Looking to an Incident Free Environment.

1 INTRODUCTION

Over three years ago Morgan Ashurst (at that time AMEC Construction Services) undertook a benchmarking exercise to compare its own approach to SHE matters against industries outside the construction industry.

After a decade of steady improvement it was realised that even with mature processes in place there was a 'step change' required to move the business to a higher level of safety performance.

This benchmarking exercise and the need for change was further catalysed by investigations into a number of incidents with high potential for harm, that showed although the 'paperwork' was in place it was the underlying human behaviours at various levels within the management team that had led to the incidents.

To this end a major component of the exercise was to look at various human behavioural approaches that were being used in both the Oil and Gas and Nuclear industries and what subsequently emerged as the 'hearts and minds' programme.

In addition to the approach, two fundamental leadership decisions were made and these were:-

1. To make sure that we not only addressed the prevention of incidents in the workplace, but also led a cultural change that is based on both working safe and being safe at home.

To this end the LIFE campaign and the LIFE mission was developed to meet the specific needs of our business.

This also includes our LIFE vision being built into our community engagement programmes through school visits and promotional material.



LIFE Mission Statement

“To create a company that believes no injury or occupational illness is acceptable and all members of the team are committed to living within an incident free environment”

2. The approach was to be intrinsic to the way we did things with absolute ownership to be within our organisation. Although investment was made in the development, launch and roll out, the real investment came from people, commitment and determination to succeed.

This paper focuses on the application of the ‘hearts and minds’ in our construction led organisation.

2 DEVELOPING A LAUNCH PLATFORM

Once the benchmarking exercise had been completed and the intelligence analysed and assessed, the next major piece of work was for our organisation to ask a few hard questions of ourselves and ascertain what level of maturity we were at.

There were a number of tools and techniques used to provide an assessment of where we were in terms of maturity. These included:-

- Use of the Health and Safety Executive’s (HSE) Health and Safety Climate Survey tool that was used to gauge the perception of both our own employees and those within our supply chain. The survey involved over 3,000 people across the business.
- Application of some of the tools available through the ‘Hearts and Minds’ programme. This included the use of the maturity matrices.
- A series of structured interviews were conducted throughout the business and this engaged a range of people from the Managing Director through to the construction operatives.

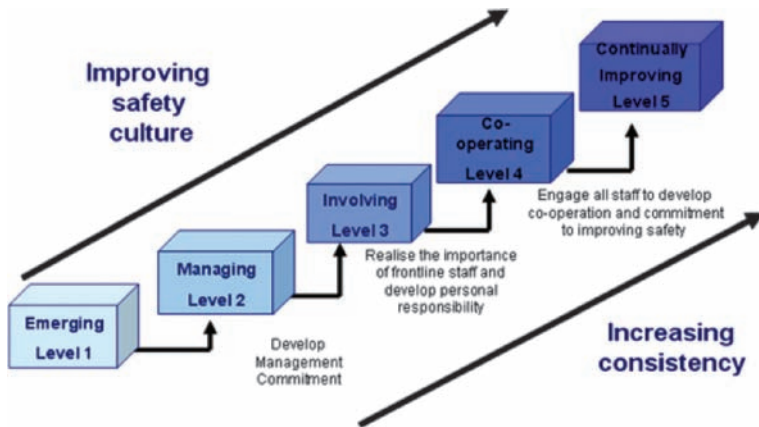


Figure 1. Maturity levels

On completion of the information gathering the data was analysed to identify the key issues and assess our perceived maturity. The key issues were highlighted as:-

- There was an inconsistency in our leadership and application of Health and Safety requirements across the UK business.
- Where performance was seen as 'lumpy' there was an apparent cycle of reactive management occurring i.e. quick intervention following an incident but insufficient resource in maintaining and improving standards.
- There were low levels of reporting of learning events (traditionally termed 'near misses') that were mainly driven by focussing on outcome (actual harm) rather than the potential.
- A distinct lack of understanding at various levels, in particular supervisory, as to the impact of behaviours and leadership styles on safety performance.

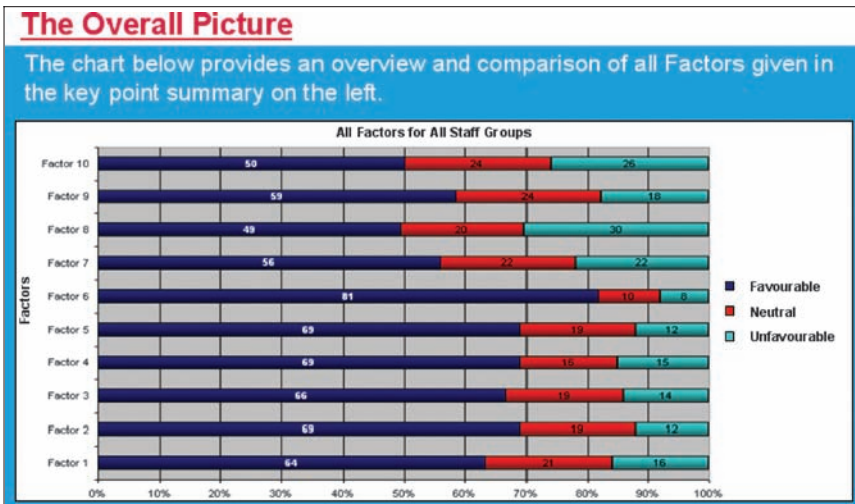
In considering these facts, by use of peer review forums etc, it was felt that by using the maturity level model (Figure 1) that the business was somewhere in between level 2 (managing) and level 3 (involving).

3 MOVING UP THE MATURITY LEVELS

On agreeing what level of maturity the business was at, the next major decision was to agree how we should improve our maturity and ultimately our level of SHE performance.

The main considerations being:-

1. The level of maturity we were at
2. The tools and techniques that were available to us



How are we going to move forward from the survey?

| Factor | Survey Finding | Proposed Follow up Actions |
|--------|--|---|
| 1 & 8 | Lack of involvement in developing processes. Not enough recognition for the contribution of H & S Committees etc. | Project Management/VOICE Consultation forum to be established to act as a consultation body. Guidance on best practice incentives to be developed. |
| 2 | Immediate bosses need to communicate H & S matters better. | Standardise the supervisors induction scheme across DPS. Hold ABC 'Safety Watch' workshops with supervisors. |
| 3 & 7 | Not enough checking by supervisors to ensure people are working safely. | Being progressed through the delivery of the LIFE/ABC programme. |
| 5 | There is a perception that workmates won't react strongly to rule breaking. | Operative ABC behavioural workshop in place and being rolled out across DPS through the introduction of LIFE Coaches etc. |
| 10 | Learning events (near misses). | Complete review of existing approach. Site visits to be carried out to discuss this issue, capture best practice, develop a framework for implementation. |

A big thank you to nearly 4,000 people who were involved with the survey and in helping us to develop real improvement actions that will get us nearer to our LIFE goal.

Figure 2. H&S climate survey results

- The organisation structure that needed to be in place
- A vehicle for actively changing the behaviour and approach to health and safety matters.

Points 1 and 2 have already been discussed and 3 and 4 were being developed in parallel, in conjunction with the intelligence that was emerging.

In relation to the organisation structure there was a framework agreed that would support the **Active Behavioural Change (ABC)** programme that was being developed following the benchmarking exercise. The structure was based around: -

- A sponsor who would lead and commit to ‘Looking to an Incident Free Environment’ (LIFE) and the **Active Behavioural Change Programme** that was being rolled out, forming the core element. This sponsor was the Managing Director. (See figure 3b)
- LIFE Champions who were embedded within the organisation (e.g. regional operational directors) to ensure that the behavioural change programme was given the leadership commitment and co-ordination at a high level.
- LIFE Coaches, these were individuals who had volunteered to become coaches who could facilitate workshops and thereby accelerate our programme into all corners of the business. In the majority the coaches were not SHE professionals but project managers, directors etc.
- A LIFE support kit that included:-
 - Various ‘training’ modules for ABC that are being organically developed as we are going through our journey. Forums that involved a full cross section of the business and included stakeholders such as clients and supply chain partners.
 - Tools that include LIFE induction packs, best practice SharePoint website, active maturity matrices, observation checklists.

4 ORGANIC DEVELOPMENT

When we started on our LIFE journey over 3 years ago one thing was obvious, this was, that the journey would either grind to a halt or take us somewhere where we did not want to go if we did not display the right leadership or provide full commitment and maintain and continually improve our approach as we matured.

A **Behavioural Assurance Model** was developed to identify the key values, checks, balances and measurement, arrangements that needed to be put in place to ensure continuous improvement (see below).

In relation to the measurement of our performance, a structured process was in place that includes:-

- Periodic reuse of the H&S Climate Survey.
- Application of the maturity matrix in each business unit to assess and gauge maturity levels, based on the outcome of LIFE assessments undertaken by the business improvement groups.
- Database of Learning Events and best practice that is shared across the business and industry.
- Engagement of others within and outside the construction industry. The main vehicle for this is the UK Behavioural Change and Worker Engagement (BCWE) forum that meets 3 times a year and is supported by a research project that aims to provide an evidence based approach and ‘toolkit’ to industry and in particular small to medium size enterprises.

Looking to an **I**ncident **F**ree **E**nvironment

MORGAN
Ashurst

LIFE Charter

John Moss

I am committed to putting safety first in everything we do and ensuring my team share that commitment.

John Hurley
Executive Director

John Moss
Managing Director
Design & Project Services

Active **B**ehavioural **C**hange

Looking to an Incident Free Environment
life
work safe home safe

Figure 3a. Example of managing director's personal LIFE charter

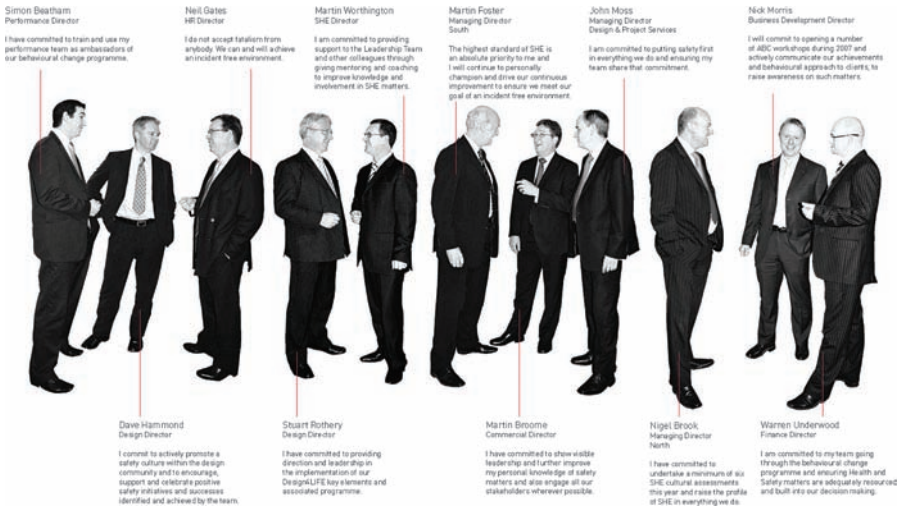


Figure 3b. Example of business leadership team LIFE charter.

- Tying into existing research projects and subsequent recommendations such as ‘Engaging the workforce’ undertaken through the Caledonian University.
- The use of LIFE improvement plans that were owned by the applicable business teams and used SMART principles to ensure they could be evaluated and used as a value adding performance tool.

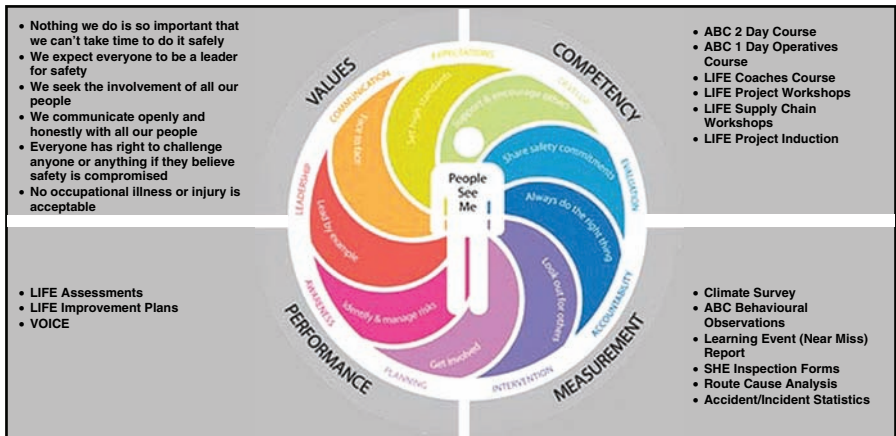


Figure 4. Behavioural assurance model (BAM)

The Behavioural Change and Worker Engagement Mission Statement

"To work together under a common purpose by developing a cohesive and pragmatic approach to behavioural change and worker engagement that will evolve through best practice and learning across industry with a view to changing the way we lead, plan, procure and manage work activities. With the collective goal of reducing the incidents that result in harm and personal suffering"

Figure 5. The BCWE mission

5 DESIGNING FOR LIFE

As part of the safety organic development, it was identified, that in addition to the operational focus we were applying across the business there would be a major opportunity to make safety considerations further up the decision making line to the design phase we engaged in our designers, process engineers etc in our LIFE scheme. This helped us to develop an intervention tool that would greatly enhance and ultimately add to our SHE improvement.



From this Design⁴LIFE was developed and included the 'design community' in our LIFE journey through a Design⁴LIFE improvement plan. The aim was to address the issues facing the design and the construction activities.

6 OUR SUCCESSES SO FAR

The success of the change in the behavioural programme for our business has been in continually being measured by a number of key performance indicators.

The first evidence is captured through LIFE talks, Leadership Cultural Assessments and LIFE surgeries. However some of the more scientific based and hard evidence comes through collecting performance data via a balanced score card, such as:-

- Less variability (indicator of re-active management) in our SHE incident performance.
- An increase of over 400% in our reporting of learning events (near misses).
- Better completion of annual Personal LIFE plans and carrying out of cultural assessment tours.
- Improvement in maturity levels based on the maturity matrix approach
 - Over 90% of projects achieving zero reportable accidents in 2006.

| | | LIFE ELEMENTS | | | | | | | | |
|----------------|----------------------------------|---|-----------------|----------------|---------------------------------|----------|-------------------------|---------------------|-------------------------|--------------------|
| | | Develop Encourage & Sustain Safe Behaviours | Self Evaluation | Accountability | The Right and Duty to Intervene | Planning | Personal Risk Awareness | Personal Leadership | Effective Communication | Clear Expectations |
| MATURITY LEVEL | Continuously Improving (Level 5) | | | | | | | | | |
| | Co-operating (Level 4) | | | | | | | | | |
| | Involving (Level 3) | | | | | | | | | |
| | Managing (Level 2) | | | | | | | | | |
| | Emerging (Level 1) | | | | | | | | | |

Figure 6. Example of maturity matrix

- Reduction in severity of accidents and days lost due to accidents.
- Improved margins of around 10% in all factors of the H&S Climate Survey. The biggest increase being in the factor for risk taking behaviours.
- Active engagement and involvement of some of our key stakeholders.
- Approaching 4000 people actively involved in our ABC programme.
- Transfer of knowledge across the construction industry via the BCWE forum.
- Recognition by our peer groups of the LIFE achievements through involvement, support and a number of industry awards.
- Real time case studies of improvements.
- Welsh Water Framework’s outstanding achievement of a 3 year period with zero reportable accidents.
 - *Through the personal commitment of the project team and the application of the LIFE tools and techniques to monitor and underpin safe working on site and improve performance the Welsh Water Framework has achieved a 3 year period with zero reportable accidents. With multiple construction sites across the south east of Wales effective communication is key and the project team achieve this by engaging the workforce and benefit from approachable and committed workers who are actively involved in decisions regarding safety matters on the project, where conversations about safety have become part of their daily life.*

- Positive Intervention by site employee prevents a potentially serious incident.
 - *One of our site employees whilst working on a project in the North West noticed that as a crane was being self erected, a vital component was missing. The individual felt concerned about this and challenged the crane operator. Unhappy about the response he received from the operator the individual felt comfortable to take his concern to a supervisor to ensure this issue was addressed. His concern was resolved and resulted in the crane operator being removed from site. The positive intervention of the individual in not being afraid to challenge an unsafe situation clearly prevented a potentially serious incident from occurring.*
- Use of the LIFE Talks approach saves dumper driver from injury
 - *The benefits of using the LIFE Talks 9 step approach, which is a simple proactive technique for observing and reinforcing safe behaviour and correcting at-risk behaviour was highlighted on one of our construction projects in Scotland. A machine operator was loading excavated material onto a dumper, when he observed that the dumper driver had remained on the dumper waiting to be loaded and was not wearing his seatbelt. Concerned for the driver's safety, the machine operator stopped the activity and approached the driver, using the LIFE Talks approach to have a safety conversation with driver and challenge him about his at risk behaviour. At the end of the conversation the machine operator had secured the drivers commitment to wearing his seat belt whilst driving and to stand down and away from the dumper during loading operations. A week later the dumper driver reported a learning event where the dumper he was driving went over uneven ground and the front wheel hit a soft spot. In this instance the driver was wearing his seatbelt, following the challenge on his behaviour the previous week which undoubtedly prevented him being thrown from the dumper and being seriously injured.*

7 CONCLUSION

The construction industry, by its nature of a constantly changing work environment and the processes that are needed to recognise this, is a difficult industry to achieve a consistent high level of SHE performance. Most of the major organisations are on some form of journey with behavioural change programmes which support the procedures and processes that have been put in place.

Flagships such as the construction of T5 at Heathrow have enabled a range of behavioural tools and techniques to be developed and used in the industry. Many approaches are emerging, however, in our case, the focus of this paper has been 'Hearts and Minds' that are supporting and raising the bar in terms of SHE performance.

The true benefits come as we begin to share our learning, good and bad, across the industry and create an environment on projects that supports positive interventions and the correct behaviours that ensure a 24/7, and fully inclusive approach to health and safety matters.