

The Linde Engineering Behaviour Based Safety Program – "BESAFE"

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The Linde Group's history spans over 130 years. From its beginning during the industrial age to the present technology era, this company's inventive spirit has resulted in advancement in innovative process and engineering solutions. Throughout its development, Linde experienced a decline in industrial accidents, which was the general trend for the industry, as laws and regulations legislated against poor standards and performance. The improving trend was further accelerated by advances in technology, board of directors' rule-making, and higher level of safety awareness by workers. Just like its peers and competitors, Linde finds its overall safety performance improving year on year, however, the rate of severe injury and fatality accidents has not reduced significantly. A different approach was needed to re-energise the effort and consider new, sustainable ways to improve our safety performance.

The Engineering Division of Linde has adopted a behavioural based safety approach through its BeSafe Program, which will lead the process of cultural change that engages the whole organisation in taking responsibility and personal ownership for safety. The Bradley Curve, effectively deployed by Du Pont, defines this cultural shift taking place over three stages, dependent, independent and interdependent. To reach interdependent stage, requires the organisation to move from a culture of control and compliance to one that allows greater freedom for individuals to control their own safety performance, given the right mix of skill development, process and performance goals.

The Linde Engineering BeSafe Program comprises of the following elements.

BeSafe Leaders – a group of committed senior managers that define the process and performance goals for their teams. BeSafe Leaders have undergone 2 day in person training with professional coaching trainers.

LeadSafe Coaches – operational managers and supervisors who have undertaken an e-learning program, consisting of a series of modules, called LeadSafe. The training involves video demonstration of coaching practice including post module exercises.

BeSafe Activities, Tools and Processes – is based on safety events and activities that promote visible leadership and active participation in and commitment to implementing safety standards at the highest level.

BeSafe Performance Indicators – are key performance indicators that measure the participation rates, performance and evolution of individual sites and the organisation as a whole. Data collected from monthly reports is used to recognise and reward high safety performance and participation.

The BeSafe Program promotes the right balance of Linde's Visible Leadership Competencies with a coaching style that will transform the organisation from the independent to interdependent stage on The Bradley Curve, a shift necessary to demonstrate world class safety performance.

1. Introduction

The Linde Group is a gases and engineering company with global operations. The company is based in Munich, Germany and has around 65,000 employees and is represented in more than 100 countries worldwide. The Linde Group Annual Report 2014 Building on Strengths stated that Linde generated revenue in the 2014 financial year of EUR 17.047 bn. (Linde AG, March 2015)

The Group comprises of three divisions:

- Gases Division
- Engineering Division
- Other Activities

The Group offers a wide range of compressed and liquefied gases and chemicals. Linde gases are used in industries and processes where oxygen, nitrogen, hydrogen, acetylene, carbon monoxide, carbon dioxide, shielding gases for welding applications, noble gases and high purity speciality gases are needed.

Linde Healthcare, a leading healthcare provider, supplies pharmaceutical gases, medical devices, services and clinical care that make a difference to the lives of patients in hospitals and their homes throughout 60 countries.

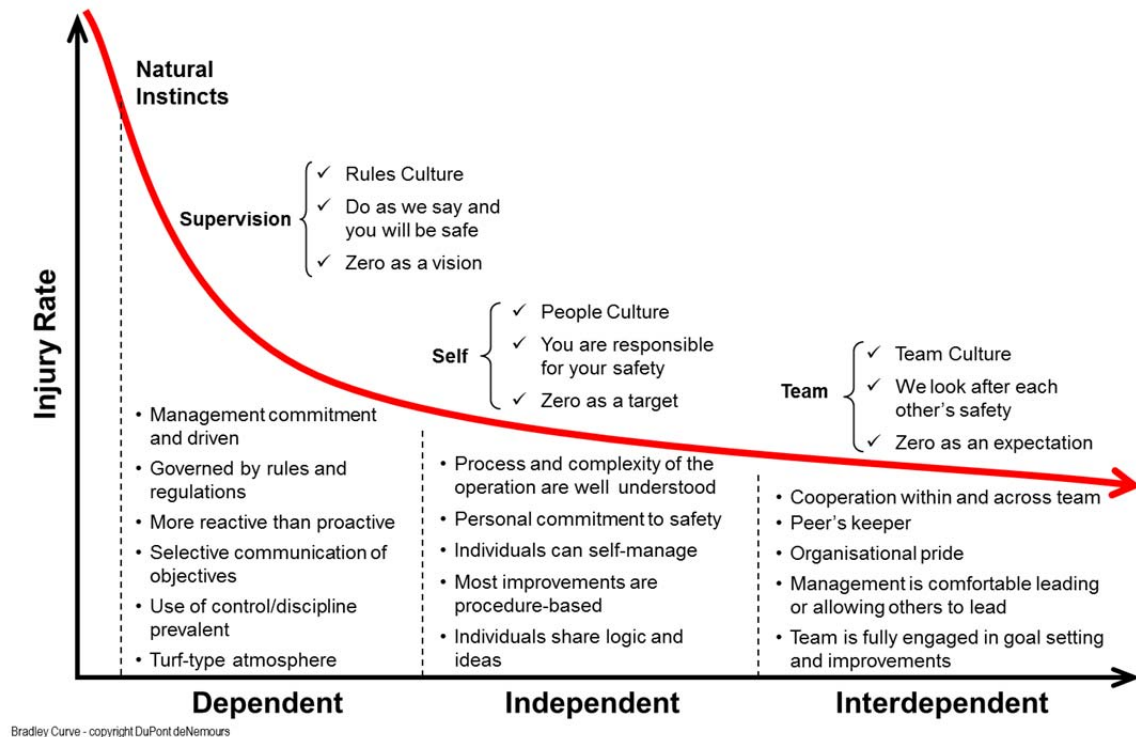


Figure 1: The Bradley Curve, is used by Du Pont since 1995 to describe a cultural shift to world class safety.

Linde's Engineering Division provides extensive process engineering know-how in the planning, project development and construction of turnkey industrial plants for the petro-chemical and chemical industries, refineries, fertiliser plants, pharmaceutical and electronics industries. The Engineering Division either supplies plants directly to the customers or the Gases Division, which operates the plant on behalf of the customer under a gases supply contract.

Linde draws on its findings of its research and development to continuously move into new markets and improve processes and plant technology to recover air gases, to produce hydrogen and synthesis gases, to treat natural gas. The Linde Group pay particular attention to the environmental compatibility of its production processes. As at 31 December 2014, Linde technologies were protected by a total 2,783 patents.

In the 2014 financial year, the Group set a global target for occupational safety and environmental protection. Linde aims to reduce the number of accidents, particularly the accidents that result in a 'lost time injury', severe injuries and fatalities and any cases that potentially result in such outcomes. The Group is focussing on reducing production-related safety and transport safety incidents whilst increasing energy efficiency and reducing emissions from its plant processes.

In 2015, The Linde Group commissioned Du Pont Sustainable Solutions to conduct a Global Safety Assessment throughout all Linde divisions, starting with a Safety Perception Survey completed by its employees and contractors, then conducting various site and regional assessments, and finally concluding with implementation and monitoring of changes across a broad spectrum of safety that will achieve leading

safety performance and ensure the Group "Accelerate to Zero". A total of 44,302 employees and contractors participated in the survey, representing 68.9% of the Group's staff numbers.

From the many findings that are recorded in the final report, Du Pont assessed the safety culture of The Linde Group to be between "dependent" and "independent" stages of The Bradley Curve. It was concluded that moving into the "interdependent" stage will require a higher level of engagement and empowerment of the organisation, which relates directly to the leadership style, organisational competencies and taking personal ownership for safety. (Du Pont, The Linde Group 2015)

2. Road Map for Improvement

The Global Safety Assessment identified a number of themes which are common to the aims and objectives of BeSafe, namely:

- Strengthen (HSE) alignment and buy in
- Get the message to the people
- Establish beliefs consistent with the aspiration
- Increase operational discipline
- Build competencies for safety
- Lead effectively in safety

Past experience has demonstrated that a change process must be challenging and supportive, and also rewarding. After researching several 'off the shelf' behavioural based safety programs offered in the United States, Great Britain and Australia, Linde Engineering decided that existing programs do not comprehensively address the findings and recommendations of the Global Safety Assessment Report, and conflict with operational requirements because the programs involved in person attendance workshops. A different approach was required and this was achieved by combining the principles of coaching with Linde's Visible Leadership competencies.

Linde Engineering partnered with Performance Consulting International (PCI), an established coaching training company based in London, UK, to design, develop and deliver the training component of the BeSafe Program.

PCI was founded by Sir John Whitmore over thirty years ago, who used coaching concepts from the sports arena and further integrated tools of transpersonal psychology to develop a coaching model that is now offered widely throughout the business world. Simply speaking, a coach trained in this model will invite the coachee to reframe life as a developmental journey, to see the creative potential within each problem, to see obstacles as stepping stones, and to imagine that we all have a purpose in life with challenges and obstacles to overcome in order to fulfil that purpose (Whitmore, 2009).

The coach's questions will seek the coachee's awareness of their 'self', their human tendencies and filters that may block the potential for non-judgemental decisions and responses; recognition of their own social and emotional intelligence and that of others; and to raise enquiries by curiosity rather than by teaching or giving directions. The foundation of coaching is based on co-creating agreements whereby coach and coachee set out with the intention to create a supportive and challenging learning environment.

The coaching training is built on proven scientific methods, underpinned by specific skills such as asking powerful questions and active listening. The skills are practised according to a structure called GROW which stands for Goal ('What do you want?'), Reality ('Where are you now?'), Options ('What could you do?'), Will ('What will you do?'). The opportunity to practice the skills presents in everyday engagements on site during the conduct of workplace inspections, toolbox talks, safety training, incident investigations and risk assessments.

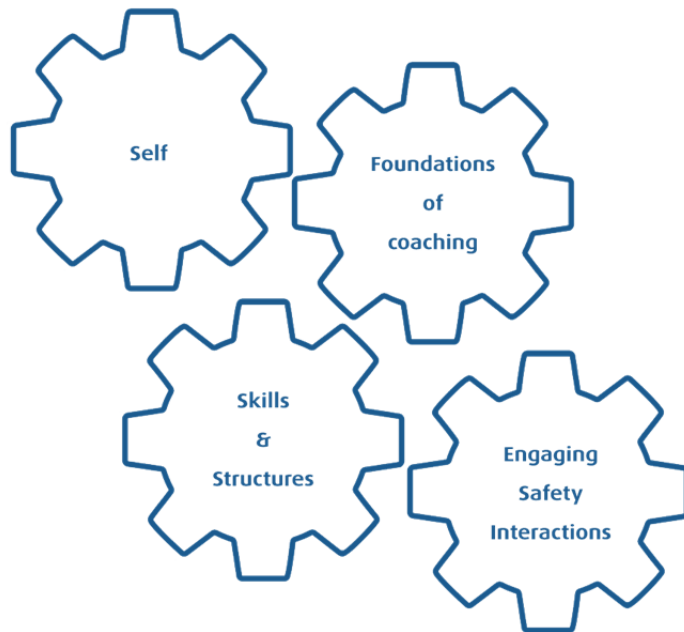
3. Linde's BeSafe Program

3.1 BeSafe Leaders

The first essential step to introducing a business wide coaching approach is to strengthen the alignment of senior management and achieve their buy-in. We had to help them become clear about what is required from the change and what it involved to ensure they are fully committed to seeing it through. This required an investment in their time by attending a two day workshop which we called BeSafe Leaders workshop. The coaching competencies covered in the BeSafe Leaders workshop helps senior managers prepare them with an authentic coaching style that engage their teams at a level that is deeply motivating; develop awareness and responsibility; effective goal and action setting; and, feedback and accountability. Their involvement as BeSafe Leaders will provide visible, genuine leadership.

By February 2015, 42 BeSafe Leaders were trained in Europe, USA and Asia. They are senior managers ranging from a member of the Linde Engineering board of management, heads of the construction and

manufacturing arms of the business and their direct responsible managers who will ensure the coaching competencies are further distributed and drive engagement and empowerment of people throughout their organisations. They are necessary to support the process of culture change and we are continuing to train more senior managers to fulfil this role as the program gains traction and expand throughout other parts of the organisation.



SELF	FOUNDATIONS OF COACHING	SKILLS & STRUCTURES	ENGAGING SAFETY INTERACTIONS
<ul style="list-style-type: none"> • Human Tendencies • Filters • Emotional & Social Intelligence • Non-judgment • Curiosity 	<ul style="list-style-type: none"> • Co-Creating Agreements • Maximize Potential • Reduce Interferences • Raise Awareness • Generate Responsibility • Grow Self-Belief • Support & Challenge 	<ul style="list-style-type: none"> • Asking Powerful Questions • Active Listening • Feedback • GROW 	<ul style="list-style-type: none"> • LeadSafe Engagements • Workplace Inspections • Toolbox Talks • Safety Trainings • Incident Investigations • Risk Assessments

Figure 1: Illustrates the interconnection between 'self' and the practice of coaching in a safety context.

3.2 LeadSafe Coaches

LeadSafe Coaches are operational managers and supervisors who have a direct influence on the safety of their personnel through their decisions and engagement with staff. LeadSafe Coaches use coaching methods to communicate safety vision, safety messages, aspiration, discipline and standards in their day to day operations. LeadSafe Coaches have many opportunities to apply their coaching skills to hold effective toolbox talks, increase two way communications in HSE meetings, encourage valuable feedback in risk assessments, identify underlying beliefs that are obstacles to improved safety performance during safety dialogues, incident investigation or process safety reviews.

LeadSafe Coaches receive training through a series of e-learning modules, each approximately one hour duration and translated in various languages. The modules contain video rich content that demonstrate the coaching principles and methods by practical examples using the language and emotional connection relevant

to the target audience. Expert content is provided by PCI, the same messages that are delivered to BeSafe Leaders during the two day workshops are also passed on to LeadSafe Coaches to ensure the expectations and behaviours are aligned with the desired change.

Post module exercises are prescribed after each module to strengthen the learning and gain practice in the coaching skills. BeSafe Leaders are assigned a group of LeadSafe Coaches in offices, construction sites and manufacturing plants to monitor the progress and ensure the learning is sustained through scheduled meetings, either in person or by video conference. The meetings provide an opportunity to define, discuss, clarify and align the leadership competencies that are needed to support a culture change.

3.3 BeSafe Activities, Tools and Processes

BeSafe activities, tools and processes are used in the practice of coaching and GROW is a primary example. GROW stands for Goal, Reality, Opportunity and Will, and it could be effectively used in a number of situations where a desired safety outcome is achieved by goal setting, action planning and problem solving. When we adopt a traditional management style to achieve this aim, we rely on telling people what to do, whereas by using a coaching approach we rely on gaining feedback that enriches the opportunity for unleashing the potential of the desired outcome.

For example in Module 3, we demonstrate a coaching approach to a safety dialogue, commonly referred to as a LeadSafe Engagement to differentiate it from any other form of communication. LeadSafe Engagements may be performed at any time an opportunity arises, either when an unsafe behaviour is observed or it could be observing people working safely. GROW helps managers and supervisors to prepare for LeadSafe Engagements by asking powerful questions that raise their awareness and generate responsibility, provide challenge and support, expose any interferences, unleash the individual's or team's potential, raise their self-belief and commit to action.

GROW is applied in other safety applications such as toolbox talks, incident investigations and risk assessments. When managers and supervisors planned, prepared and delivered toolbox talks according to GROW, it allowed two way communications, the message was delivered and feedback was received that ensured the message was understood. By adopting a coaching mindset, managers leading an incident investigation or conducting a risk assessment are aware of their human tendencies and filters and listen with an open mind. They use powerful questions that ask for commitment to action, or allow freedom to make decisions or asking for ideas rather telling people what to do, listening and showing empathy, offering help and support, being open and approachable.

3.4 BeSafe Performance Indicators

A document has been distributed throughout the organisation that describes the goals, features and expectations of the BeSafe Program. The document describes the requirement for each organisation to establish BeSafe targets that strengthen the alignment, at the same time increasing operational discipline and building on the coaching competencies. The targets include the integration of activities such as LeadSafe Engagements, management-led toolbox talks, risk assessments and incident investigations. Individual project sites, manufacturing plants and other participating entities report their involvement in the BeSafe Program on a monthly basis and the data is centrally collected and analysed. The commitment and participation of each site in BeSafe is demonstrated by aggregating points for each activity performed in the month and indicating a single score on a dashboard. This indicator is displayed during monthly performance reviews and communicated to the highest level of management in Linde Engineering.

The BeSafe Performance Indicator is used as criteria to select leading sites for a business award scheme. This provides an incentive for individual sites to be engaged and strengthens the program effectiveness.

4. Conclusion

The Group's HSE strategy defines programs to drive improvement in the safety culture of the organisation and the implementation of the BeSafe Program within the Engineering Division contributes towards the achievement of the overall aims of the Group. There is a risk however, that program goals and objectives will be missed unless managers and supervisors are fully engaged by demonstrating visible leadership and taking personal ownership for safety. The role of BeSafe Leaders is integral in ensuring engagement by LeadSafe Coaches in their learning and the fulfilment of the BeSafe Activities, This is achieved by maintaining scheduled contact during team meetings, video conferences and individual coaching giving the opportunity for the BeSafe Leader to support and challenge LeadSafe Coaches on their progress.

The impact of the BeSafe Program will finally be felt by workers on construction sites, manufacturing plants, process plants and any other participating employee within the organisation. The Linde Group employs a large number of contractors whose safety is as important as that of Linde employees. The benefit of a consistent

HSE culture with strong visible leadership and personal ownership must result in a significant reduction of at risk behaviours and conditions. This effort does not rest with a limited number of people, it is achieved by the interdependent relationship which is demonstrated by The Bradley Curve. Du Pont, who designed The Bradley Curve, describes the interdependent stage as follows (Du Pont, 2015):

"Teams of employees feel ownership for safety, and take responsibility for themselves and others. People do not accept low standards and risk taking. They actively converse with others to understand their point of view. They believe true improvement can only be achieved as a group, and that zero injuries is an attainable goal"

By combining coaching skills and Linde's Visible Leadership competencies, the effectiveness of the BeSafe Program will result in the safety dialogues to take place that will raise the awareness and generate responsibility. Accountability will become inherent in HSE meetings because powerful questions will be built into the conversations that indicate high levels of support and motivate people to the challenge of achieving safe outcomes. The potential of a wider range of options could be explored during risk assessments because managers and supervisors will actively engage the feedback from their staff and listen to their input with open minds. Managers encourage two way communications when leading toolbox talks, raising workers' self- belief because their voices are heard and their suggestions are valued. The management of consequences from an incident will be enriched when a leader of the investigation, held into the causes of the incident, applies a coach like attitude and seeks learning opportunities rather than limiting the corrective actions to punitive measures.

By adopting a coaching approach, the Group aims to have a consistent HSE culture in place by 2017 where at risk behaviours are not tolerated by management and employees alike.

How will we know? Simply...by the BeSafe Dashboard indicating high level of engagement throughout the organisation, and most importantly a further reduction of lost time injuries and recordable incidents.

References

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Du Pont, The Linde Group, 2015, Global Safety Assessment Report 2015, unpublished
Whitmore J., 2009, Coaching for Performance – Growing Human Potential and Purpose, The Principles and Practice of Coaching and Leadership, Nicholas Brearley Publishing, London UK