

First steps to ZERO harm

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Abstract

In 2007, QR stepped up its efforts to reduce accidents and incidents involving its people, the environment it operates in and the communities in which it has an impact. The organisation set itself the goal of zero harm. In a business that employs over 14,000 people and operates in a national context, this is no mean feat.

This paper provides an overview of the first steps along this journey for QRNational Coal, a division of QR Limited, with a specific focus on its efforts to improve the personal safety of its staff. The following key points are discussed:

- overview of QR and the QRNational Coal business
- synopsis of QRNational Coal's safety culture and performance
- the DuPont strategy for assisting QR to achieve its goal of zero harm
- the use of 'transformational leadership' as a tool for employee engagement.

Introduction to QR and QRNational Coal

QR is a \$3 billion-plus a year business and one of Australia's largest integrated transport providers. On any day, QR operates more than 1,000 train services, moves more than 650,000 tonnes of freight and carries around 160,000 passengers to work, home, play and travel destinations.

QR sells three main products and services:

- freight and logistics services
- commuter and long-distance passenger services
- access to Australia's largest rail network covering about 10,000 kilometres.

QR's major products are supported by quality infrastructure, rollingstock and corporate services as well as assets valued at approximately \$10 billion. QR's success is built on the back of a multi-disciplinary workforce of more than 14,000 people in 500 locations. QR is proud to be one of the safest railways in the world.

QRNational Coal was established as a division of QR Limited in March 2007 and is recognised as a world leader in heavy haul, narrow gauge railway technology. In 2006–07, QRNational Coal hauled more than 176.9 –million tonnes of coal throughout Australia. This was up 8.6 per cent or 14 million tonnes from the previous year. QRNational Coal currently operates 500 coal train services on average per week in Queensland, with around 50 services per week in New South Wales. The total rollingstock fleet consists of 330 locomotives and 7100 wagons with projects currently in place to expand the rollingstock fleet.

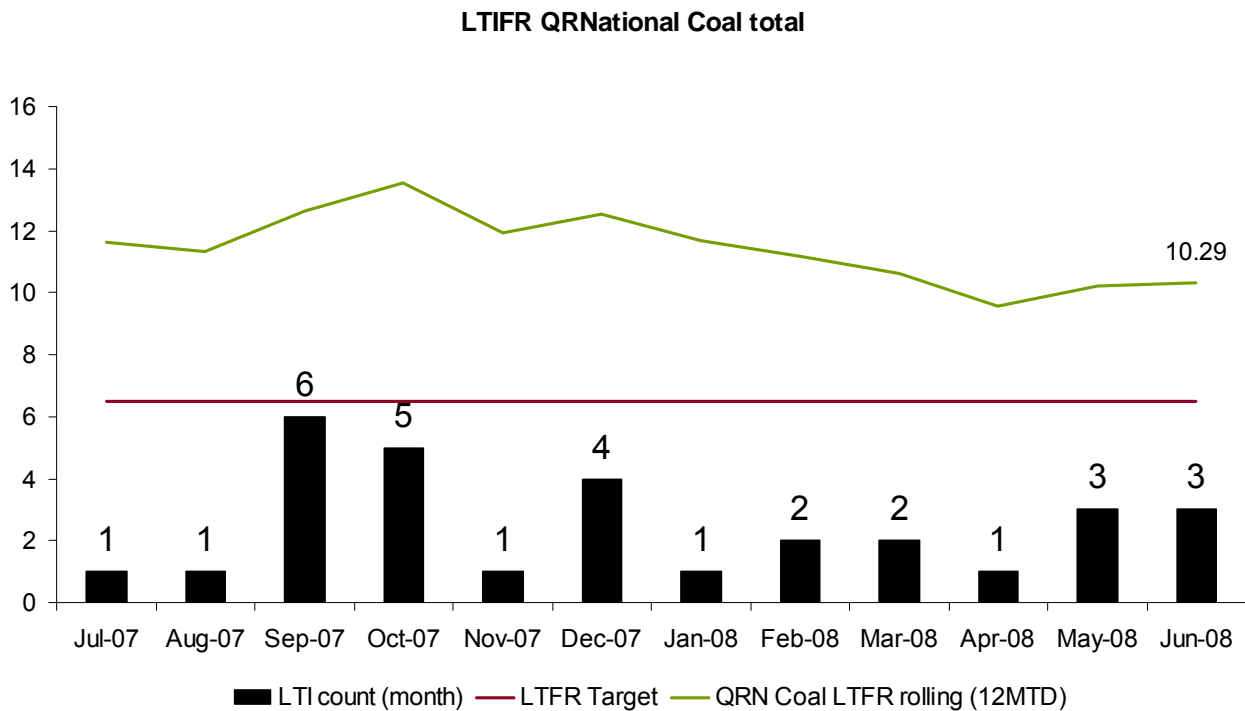
QRNational Coal employs just over 1600 staff with the majority of these comprising train crew and rollingstock maintenance crew.

QRNational Coal safety performance and culture

QRNational Coal’s safety performance is good by Australian Rail Industry standards, however we recognise that there is significant room for improvement.

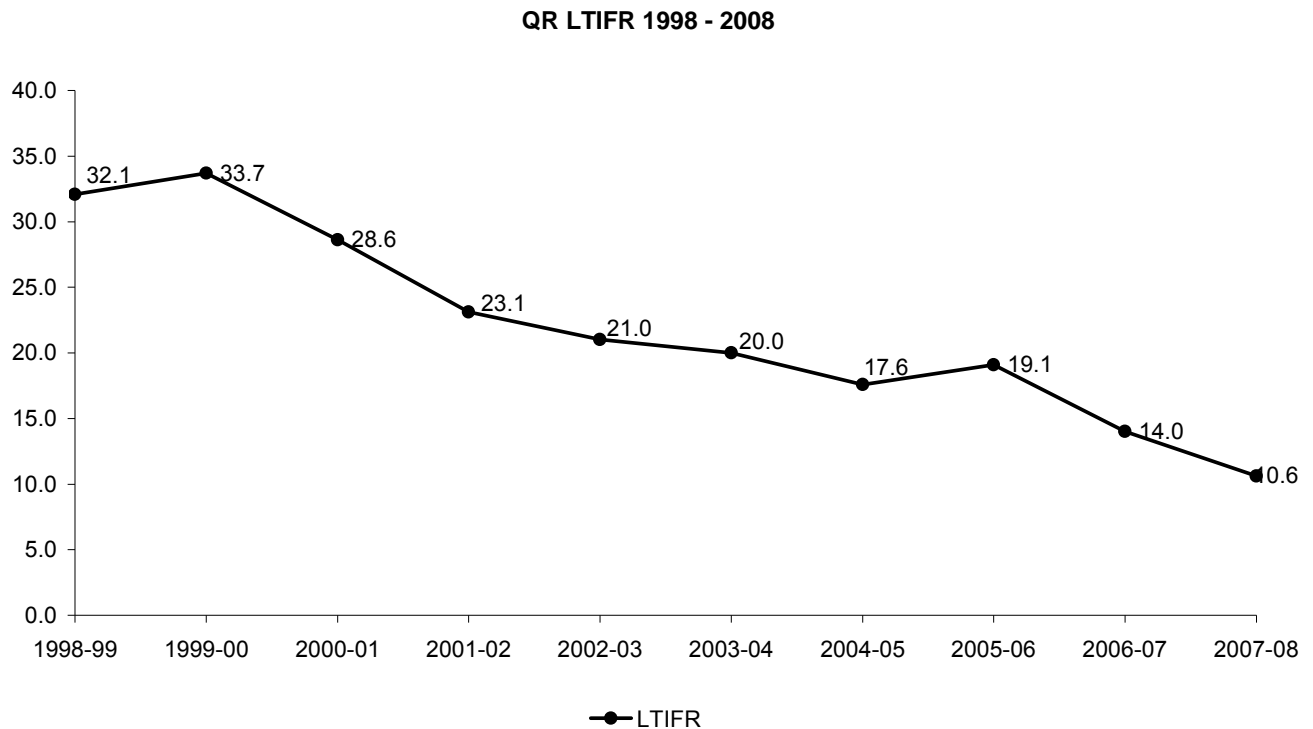
Many lost-time injury frequency rates (number of lost time injuries per million hours worked) (LTIFR) across the Australian Rail Industry are within the range of 30 to 70 LTIFR. Best industry practice is currently seen to be less than 15, however some rail operators have been able to achieve a LTIFR of less than 1. QRNational Coal’s LTIFR is currently 10.29 which represents a steady improvement over time, however not the step change we would like to see. Figure 1 below illustrates the LTIFR trend for 2007–08.

Figure 1: LTIFR QRNational Coal total



Due to organisational structural changes, longer term trend data is not available for QRNational Coal however Figure 2 below illustrates the improvements made in LTIFR for QR Limited over the past 10 years.

Figure 2: QR LTIFR 1999 – 2008



As Figure 2 illustrates, QR has made steady improvement over time however has sought the assistance of DuPont for a four-year period to help achieve the goal of zero harm:

- zero incidents
- zero injuries
- zero work-related illnesses
- zero environmental incidents.

Recent results from an organisation-wide safety culture survey conducted by DuPont have helped to clarify strengths and areas for improvement against four key assessment criteria:

- leadership
- operations
- process safety
- structure.

A summary of key strengths identified in the survey include:

- Senior managers recognise the importance of providing a safe workplace and believe good safety equals good business.
- Most employees acknowledge the stronger focus on safety.
- Many OHS Advisors are well utilised and respected by managers, supervisors and the workforce.
- Workplace health and safety committees are in place to provide opportunities for improvement and issue resolution.
- Hazards are reported and recorded on registers in many operations.
- Injury data is analysed and incident prevention plans are developed for some groups.

Some of the opportunities for improvement identified in the survey include:

- Senior managers need to undertake regular workplace visits.
- Mid-level managers need to take more ownership for safety.
- Many managers are unwilling or lack the skills to effectively manage poor performers.

- Employees believe that managers avoid rectifying problems that require substantial cost.
- Safety audits mainly focus on unsafe conditions; there is no systematic focus on behaviour.

QRNational Coal is working towards achieving a better safety culture by implementing a number of initiatives to drive higher levels of personal accountability for safety and to achieve greater engagement of the workforce around safety issues. Some of these initiatives include:

- Requiring staff to start every meeting with a 'safety share'. The idea of a safety share is to tell a story about a safety incident that has occurred, either at home or at work that others can learn from.
- Requiring senior managers to conduct planned job observations on a regular basis. A number of these observations have already identified opportunities for improving unsafe work practices and have resulted in a much greater 'leadership presence' within QRNational Coal workplaces.
- Encouraging greater reporting of near misses.
- Making physical changes in the workplace to engineer out safety hazards.

The DuPont strategy

DuPont has been engaged for a four-year period to share their expertise and coach QR leaders towards excellence in safety. Their approach consists of three main phases and each of these is summarised in the following table:

Phase	Purpose	Expected outcomes
1. Risk containment	<ul style="list-style-type: none"> • Identify and immediately correct high risk activities. • Create awareness and a sense of urgency. • Demonstrate commitment to transformation. 	<ul style="list-style-type: none"> • Reduce/eliminate high potential events • Engage leadership in containment activities • Impart knowledge to QR team on identification of high risks
2. Diagnostic assessment	<ul style="list-style-type: none"> • Understand current state of safety culture • Understand current state of safety management system • Identify/confirm opportunities for improvement and QR strengths through detailed data analysis 	<ul style="list-style-type: none"> • Create awareness and momentum for change • Gap analysis against DuPont's Essential Elements for Safety Excellence • Fine-tune the transformation strategy and plan
3. Transformation	<ul style="list-style-type: none"> • Achieve Zero Harm • Engaged workforce (pride in workplace) • Consistent operating cultures and discipline execution • Enhanced operating capability • Industry and market leadership 	<ul style="list-style-type: none"> • Build an integrated organisation that will lead and sustain transformation • Upgrade processes using business process mapping that will define the operating framework for Zero Harm. • Enhance the capabilities and skills of leaders, managers and employees • Develop a management information system that will ensure continued and sustained focus on safety performance

Transformational leadership

It has long been recognised that strong leadership commitment and employee engagement are crucial pieces of the safety improvement puzzle. QRNational Coal has taken some lessons from neuro science to assist it in achieving workforce engagement for the zero harm journey with the assistance of Peter Burow and his Neuro power framework.

Advances in brain imaging over the past decade have provided neurobiologists with new insights into how the mind develops and operates, particularly with regard to how someone either engages in or resists a particular change. Functional Magnetic Resonance Imaging (MRI) clearly shows that the brain likes to follow a particular series of steps to become 'engaged' or enamoured to a change process. It also clearly shows which parts of the brain focus on resisting change. Using this knowledge can be a powerful way to engage the workforce in a way that resistance to the change can be minimised and any improvement program can be set up for success from the start.

Burow (2008) describes six key phases of transforming business performance which are based on the principles of brain science and brain function. These are:

1. Build team loyalty through clear expectations, purpose and values (role clarity).
2. Encourage spontaneity, flexibility and creativity through freedom of expression.
3. Build enthusiastic discretionary effort through effective motivation.
4. Encourage team members to show empathy and inclusion through active listening.
5. Ensure team members have the resources and information they need to get the job done.
6. Create context and vision through a clear description of the end-game for the team.

These six steps align with the way our brains naturally 'engage'. You may notice that the traditional approach of many strategies which is to communicate the vision first is now the very last step in the process.

Burow (2008) describes business performance as being driven by:

- management: copes with complexity (i.e. goal setting, action plans)
- leadership: copes with change (i.e. create a vision, align people to that vision)
- transformational leadership: breaks down the resistance to change (i.e. assigning meaning to change through strategic conversations).

Each manager, leader and transformational leader in an organisation has a different role to play in achieving excellence in business performance, however all can use the six phases of transformation to engage their staff and achieve their end goals.

In practical terms, these six phases have been used as the basis for a series of activities within QRNational Coal to achieve engagement of the workforce for the zero harm journey. A significant amount of emphasis has been placed on clarifying people's roles for achieving zero harm and this has included workshops with the senior leadership team and line managers. Once people can see what their unique role to play in the journey is (for example, conducting planned job observations, encouraging near miss reporting, rewarding staff for demonstrating innovation with regards to safety improvement), the foundations are set for achieving the greater zero harm vision.

Cultural change takes time and it is early days in QRNational Coal's journey to zero harm. We are convinced that with the support of DuPont and a scientific model for cultural change, we have the right recipe for achieving excellence in safety.

Summary

- QR aims to be the safest railway in the world and acknowledges that a step change improvement is required to achieve zero harm.
- QR has engaged world renowned safety experts DuPont who will work with QR over a four-year period to drive sustainable and dramatic safety improvements.
- The three key phases of the DuPont approach include risk containment, diagnostic assessment and transformation.
- QRNational Coal recognises that leadership commitment and employee engagement are critical to the success of the DuPont program and are using a transformational leadership model based on brain science to drive a safer workforce culture.
- The neuro power framework offers an exciting new approach to achieving employee engagement and organisational transformation.