

21131 **'The Big Ten in 10'****FM Conway** ① ② ③ ④ ⑤ ⑥**DESCRIPTION**

FM Conway has developed a risk management system 'The Big Ten in 10'; it is a direct reflection on the principles and the specific high consequence hazards identified in 'The Fatal 6'.

Like 'The Fatal 6', FM Conway risk profiled their business to identify the 10 high consequence hazards with the intention of eliminating, substituting or engineering out those risks in 10 years, hence 'The Big Ten in 10'.

The industry has historically focussed heavily on behavioural based safety systems, yet every year people are still killed and seriously injured with these numbers plateauing over the last 5 years.

FM Conway had a historical lagging indicator that would be enviable to many businesses

- 1 fatality nonculpable in 60 years of operations
- RIDDOR 0.14/100 000 average
- near misses reported increased from 350/yr. to 53 000/yr.
- TBT from 10 000 to 35 000/yr.

Despite these figures FM Conway was concerned that the risks of fatal or life changing harm were still present, lagging indicators showed nothing of what the future could hold and where the true fatal risks would lie in the business.

FM Conway implemented a new philosophy, requiring an entirely new system, new tools and a cultural step change that would deliver a new way of thinking; more solutions and processes compared to those that preceded it.

The starting point was an in-depth 'Risk Profiling Analysis' across the whole of the business. This involved a qualitative review of the accident data and workshops facilitated by the SHEQ team. The workshops were used to collect data from their operational teams and employees, critically identifying what they perceived to be the biggest risk to life and serious harm in their daily work activities

This was further evaluated by a group of safety professionals and discussed with professional trade bodies. Combining input from these three sources, FM Conway identified the 10 big risks which they committed to eliminate from their business, by substitution or engineering them out in 10 years! Creating "The Big Ten in 10".

These risks are analysed on an on-going basis by reviewing key data, a series of schedules monitoring activities such as Big Risk Audits, inspections, near misses, and automated reporting. The



data is fed into their Big Risk Barometers that show what the potential risk is versus what the actual risk is for each division and the business as a whole. <https://www.youtube.com/watch?v=WuW1LTack3U>.

What is uniquely different about FM Conway's approach is the report on each risk activity using recognised weak signals. These can be used to weight the risk potential for each activity across all divisions and ultimately the corporate risk. It negates the risk of judging your performance from lagging data, it allows the teams to drive the risk vehicle by viewing its future direction through the screen rather than the rear-view mirror, after an incident has occurred!

Having identified the Big 10 risks, the next step was to start the process of identifying the methodology that would allow the Big Risk teams to find solutions that would give fail-safe and multiple levels of sustainable controls to eliminate the risks.

These solutions were then mapped into a series of 'Leading' and 'Contributory' Indicators calculated to show an improvement frequency rate for each division across all Big Risk areas. Ultimately, these indicators were aligned to represent FM Conway's corporate dashboards' designed to dynamically drive improvement.

Every three years, each division is required to submit their Big Risk improvement plan to identify which activities can be targeted for elimination, substitution or the provision of engineering control to reduce risk; at the same time adjusting the next phase of 'Contributory' and 'Corporate' Leading Indicators to identify sustainable solutions as technology or the activity changes.

Some examples of the strategy in action are detailed below.

- A combination of safety critical controls has reduced the likelihood of a 'boom' being accidentally released during transit across our gully vehicles, eliminating 1,200,000 potential incidents annually
- Using CleverScan camera systems, 40 manholes can be fully scanned within a single shift, eliminating 30,000 physical confined space entries each year
- Using Auto-Stop Rader across FM Conway's fleet has resulted in a 90% reduction on the 25,000 pedestrian interactions involving reversing sweeper movements a previous MPA Award winner
- Introducing a platform step ladder with a handrail and a telescopic scaffold tower for working at height activities, has ensured a physical engineering control of 120,288 risks from working at height
- Implementing a new 'Donkey' slab lifter using a modified sack-barrow, significantly reducing strain and reducing 970,000 manual lifts annually (See entry on page 61)

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- We implemented a spray-bar system for applying water to the tipper body of asphalt lorries, removing 429,000 working at height activities annually
- Implementing dual-control cross-monitored design systems, eliminating the potential for over 600,000 isolation and guarding incidents each year
- Addressing risk at the design stage, FM Conway can provide solutions to prevent the potential of 37,000 incidents due to lack of and/or failure of temporary works.

'The Big Ten in 10' will evolve as new technologies and controls are developed to aid the health and safety processes.

To ensure a continuous process of improvement is maintained, employee forums have been changed to a Big Risk agenda where employees are engaged on Big Risk profiling and the frequency of Big Risk activities, developing and sourcing solutions.

Big Risk is an integral part of the design stage for work across the business, designers must consider the hierarchy of control when designing projects and plant improvements. All design drawing and specification includes the Big Risks that require additional controls.

FM Conway's training for employees has a focus on the Big Risks taking into account the training needs for each division and ensuring that training is specific to those needs. Setting leading indicators for each division drives the requirement to ensure each division has the right capacity to cover all of their identified Big Risks.

In summary, 'The Big Ten in 10' approach represents a major step forward in driving the elimination of fatalities and serious incidents that occur every year in industry. FM Conway's unique approach takes full advantage of digital and technological advances, providing physical, electrical and mechanical protection across their 10 Big Risk areas.

BENEFITS

- A fully integrated risk management system aligned with business processes and reporting systems
- Clear identification and focus on activities where an employee is most exposed to risk
- A system that is designed to completely eliminate rather than just manage risks
- Fail safe controls introduced where risk is not engineered out or eliminated
- Employees are fully engaged with the process
- Significant high potential risks have been eliminated from the business
- Enhanced the safety culture in business
- A safer environment for all.

TRANSFERABILITY AND DEVELOPMENT

- 'The Big Ten in 10' will continue to be developed. In particular, FM Conway are exploring the use of artificial intelligence and machine learning to improve the managing of risk associated with human factors.



FM Conway believe that health and safety professionals of the present will morph into risk engineers that promote and deliver a more proactive approach to risk management. Health and safety will need to further exploit the technology market to identify and develop innovative solutions that will allow people to fail safely.

- FM Conway is raising the awareness of 'The Big Ten in 10', both internally and externally, and monitoring feedback on its new approach. 'The Big Ten in 10' has been showcased at a number of high-profile events by Highways England with a view to introducing the philosophy into its own client/contract base processes.

It has also been shared with a number of organisations and clients, Transport for London, HS2, Osbornes, Costain and Supply Chain, LOTAG, Dyer & Butler, City of London, Connect Plus (including Balfour Beatty, Kier, Skanska).

- 'The Big Ten in 10' has been designed to be transferable. The 'Risk Profiles' and 'Leading Indicators' may be different elsewhere, however, the theory is the same and the approach can be widely applied. FM Conway has produced a standalone website that houses a plethora of information from the initial strategic document through to case studies and 11 animations to explain the principle of Big Risk and the controls that can be applied.
- <https://www.fmconway.co.uk/people-first/big-ten>