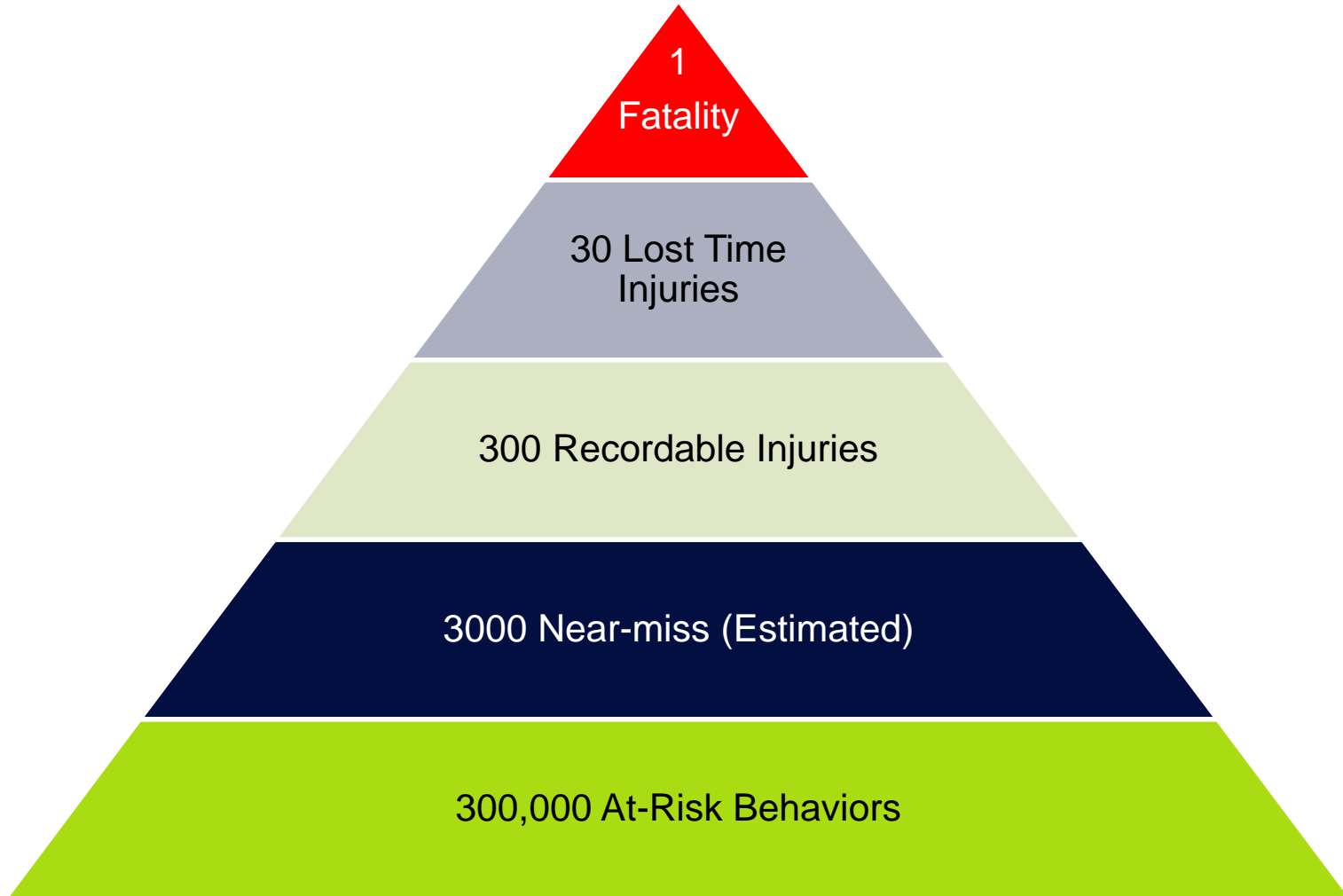


STRATEGIES FOR PREVENTING FATAL ACCIDENTS

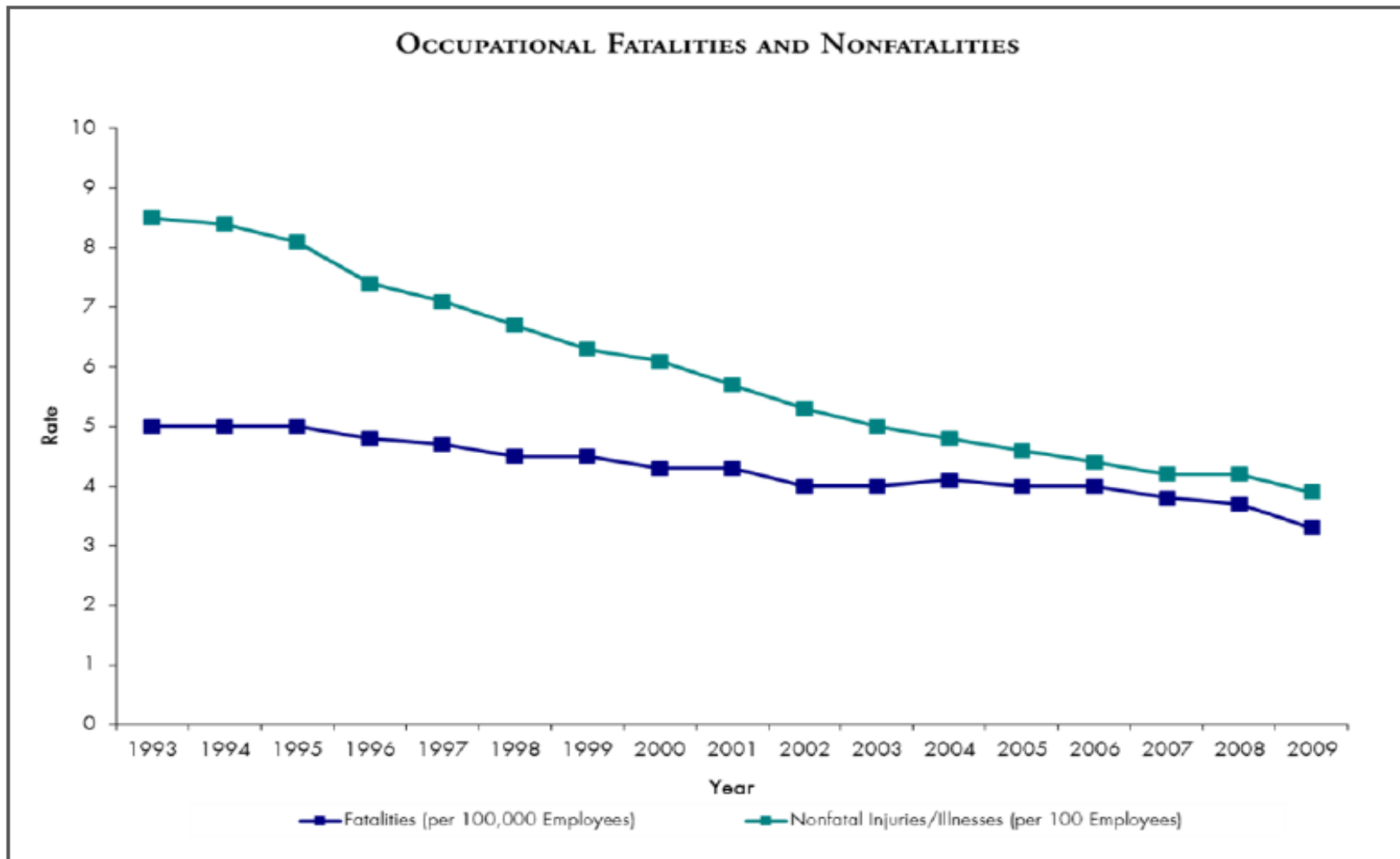
Kanwer Khan, CSP, CRSP, QEP, P.Eng.
VP – EHS&S



CLASSICAL INJURY PYRAMID



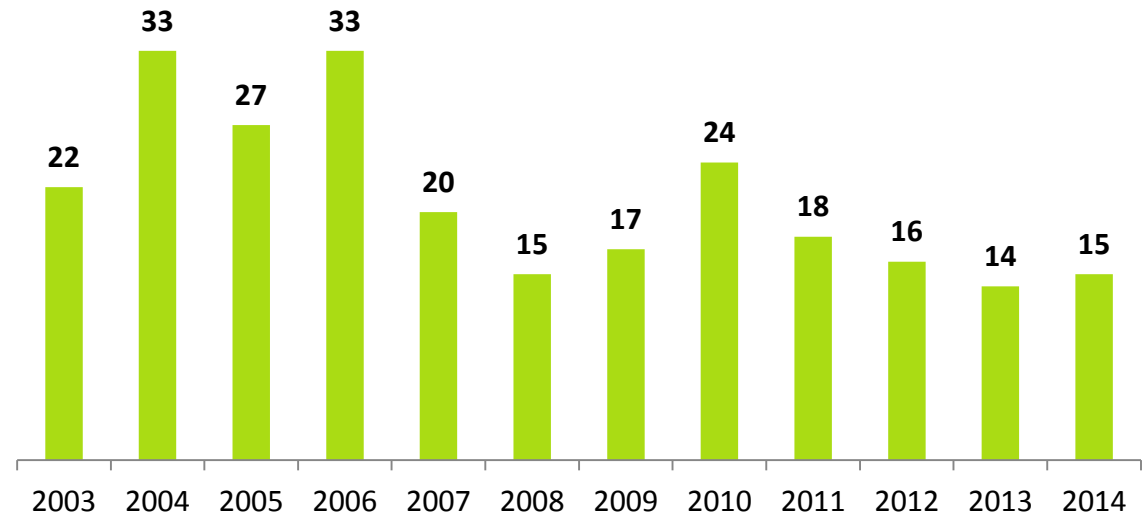
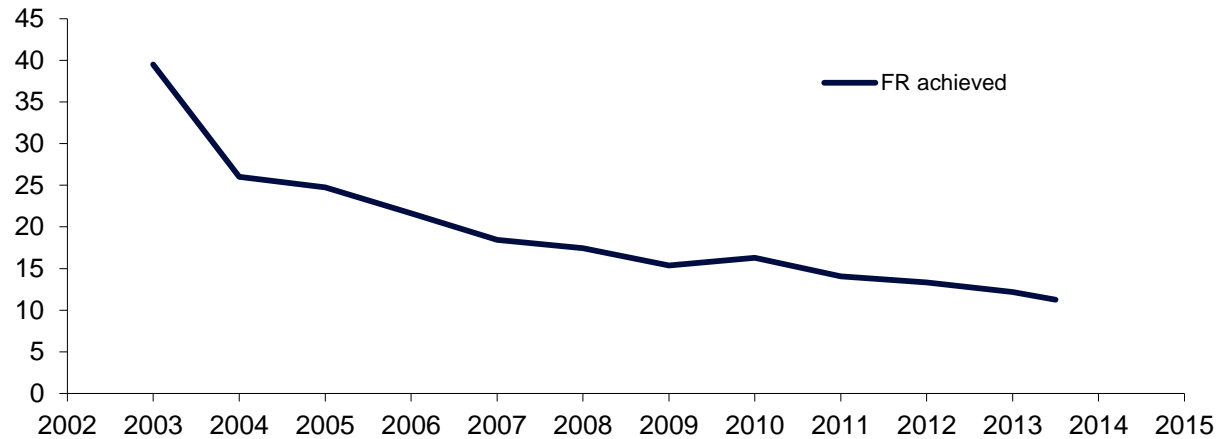
TREND IN FATAL & NON-FATAL ACCIDENTS INDUSTRY AVERAGE



Source: BST 2011 study

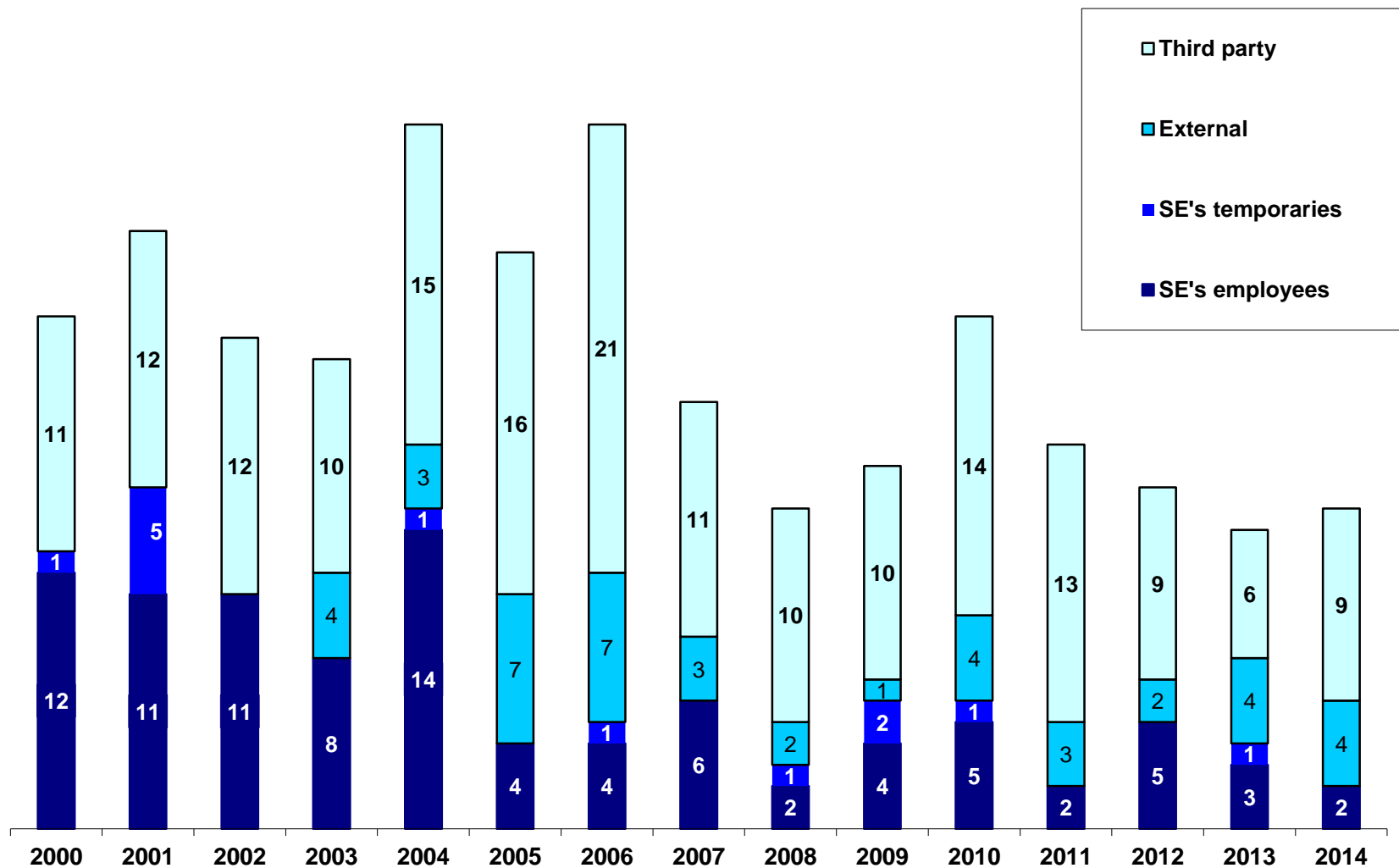
FATAL ACCIDENTS

In the last 10 years,
Frequency Rate
has reduced by
drastic 75%...

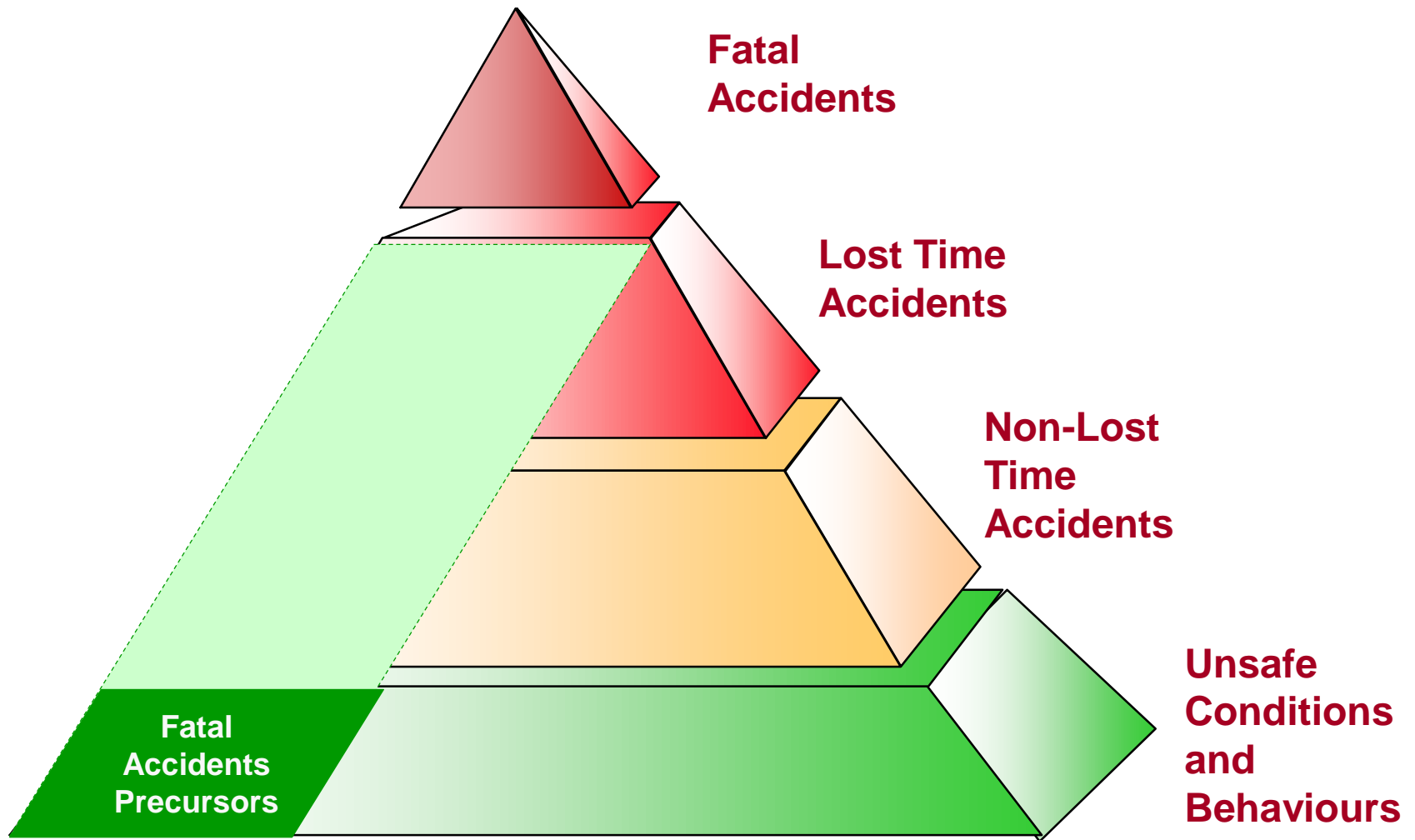


Number of
fatalities...

FATAL ACCIDENTS: NO MAJOR REDUCTION SINCE 2008



LIMITATIONS OF INJURY PYRAMID



Classical Bird's Pyramid

WHAT DID WE LEARN?

All fatal accidents were carefully analysed

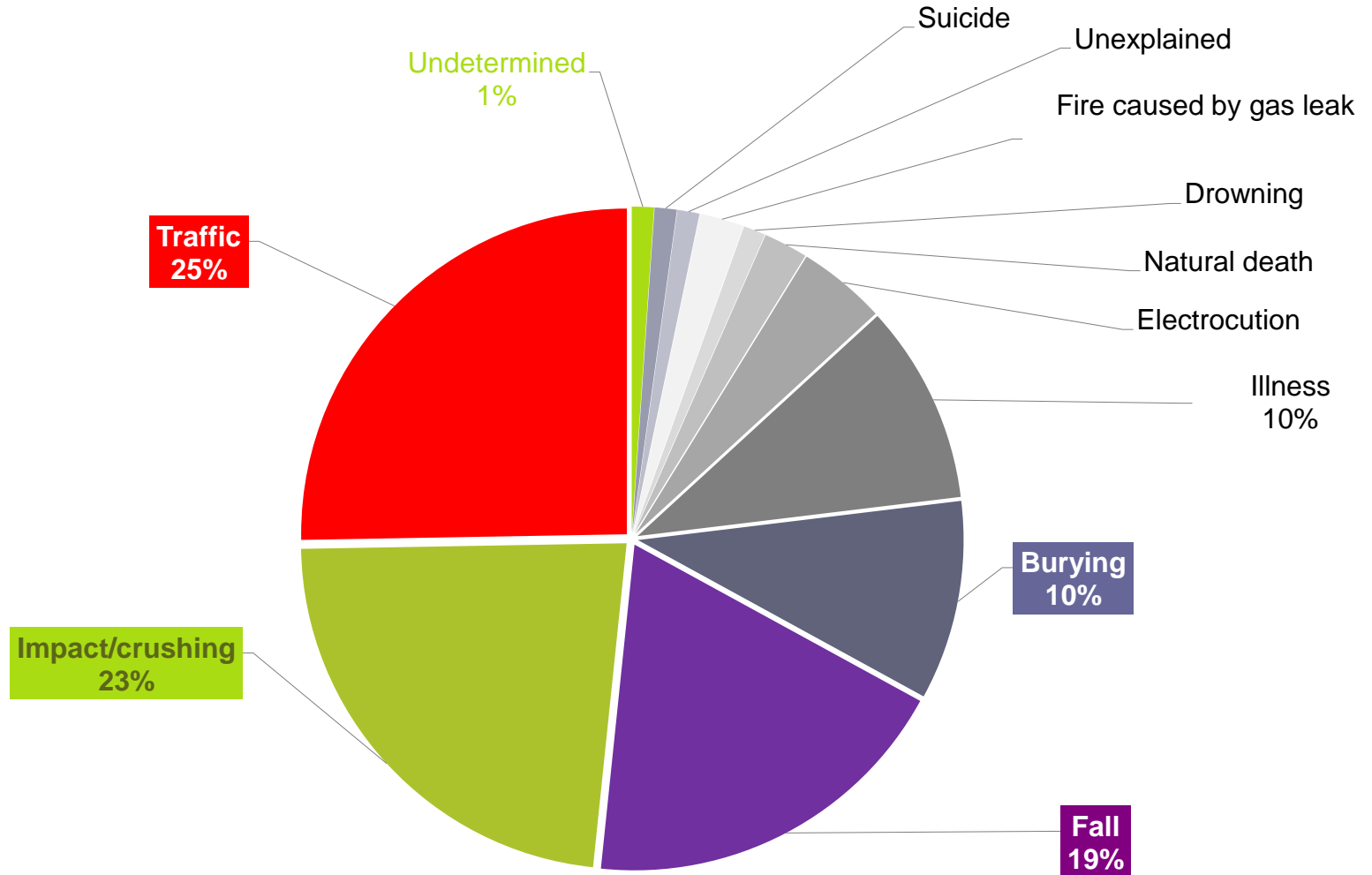
Conclusion: All of these could have been prevented

How? >85% OF Fatal Accidents could be prevented by following few basic rule



FOUR MAJOR CAUSES

Four causes account for 77% of fatal accidents



Fatal accidents (2008-2013)

All fatalities, including employees, sub-contractors and temporary workers

LIFE SAVING RULES

- After further analysis of accidents with potential of fatalities, 10 Life Saving Rules were selected.
- Our analysis indicate that if these rules were followed, over 85% of accidents with potential of fatality could be prevented.



LIFE SAVING RULES IMPLEMENTATION STRATEGY

- **Establish a set of Universal Core Rules;**
- **Promote individual and collective vigilance;**
- **React to every apparent discrepancy;**
- **Stop activity as soon as a rule is broken.**

OUR LIFE-SAVING RULES



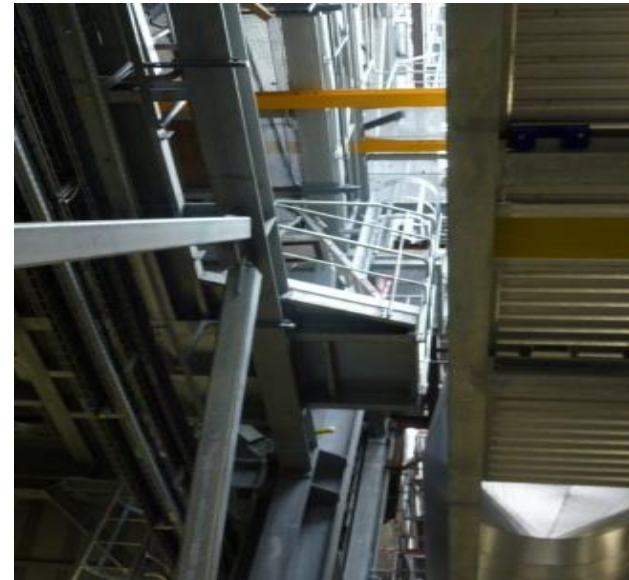
TARGET
ZERO FATAL ACCIDENT



DO NOT WALK OR STAND UNDER A LOAD



Fatal Accident – March 2013





STAY OUT OF THE PATH OF MOVING VEHICLES, PLANT AND EQUIPMENT



Fatal event – January
2013



CLIP ON YOUR HARNESS WHEN WORKING AT HEIGHT



Fall of a roofer, External Company



**ONLY ENTER A TRENCH IF THE APPROPRIATE
WALL SUPPORTS ARE IN PLACE**



Fatal event – April 29, 2011



TEST ATMOSPHERE BEFORE ENTERING A CONFINED SPACE AND MONITORED AS YOU WORK.



Fatal event - June 2004



DO NOT PERFORM HOT WORK UNTIL THE FIRE OR EXPLOSION RISKS HAVE BEEN ELIMINATED



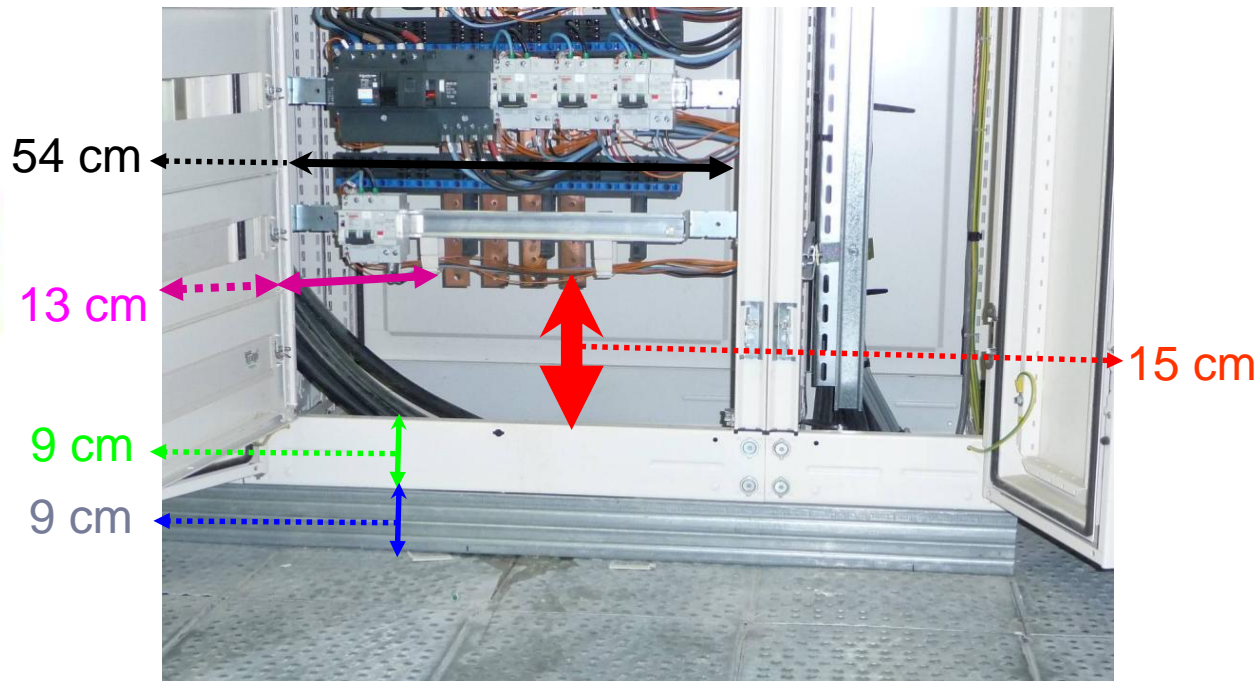
A fire broke out following a gas leak on a pipeline on the same site resulting in fatal accident



2011: 03 accidents (severe burns) by gas inflammation during works on gas distribution network



VERIFY THAT THERE IS NO LIVE ENERGY BEFORE STARTING WORK



Fatal event – July 2010



DO NOT HANDLE YOUR PHONE OR ANY OTHER COMMUNICATION TOOL WHEN DRIVING.





DO NOT DRIVE UNDER THE INFLUENCE OF ALCOHOL OR DRUGS



Fatal event - March 2006



SIGNAL, REDUCE SPEED, CHECK MIRRORS BEFORE TURNING OR REVERSING



2012 – Turning Cyclist.



Reversing Loader - 2011

OUR LIFE-SAVING RULES



Life Saving Rules



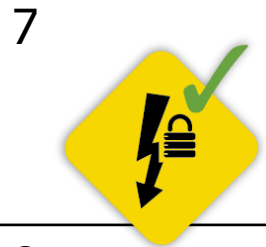
Do not walk or stand under a suspended load.



Do not perform hot work until the fire or explosion risks have been eliminated.



Stay out of the path of moving plant and equipment.



Verify that there is no live energy (mechanical, chemical, electrical, fluids under pressure, etc.) before starting work



Clip on and tie-off your harness when working at height.



Do not handle your phone or other communication devices when driving.



Only enter a trench if appropriate protection against collapse is in place.



Do not work or drive under the influence of alcohol or drugs.



The atmosphere must be tested safe before entering a confined space and monitored as you work.



When turning or reversing a vehicle; signal, slow down and check that nobody is in your path.