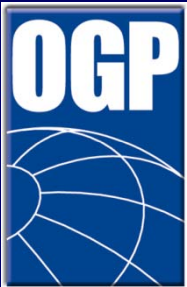


# Diving Statistics – A tool for improvement

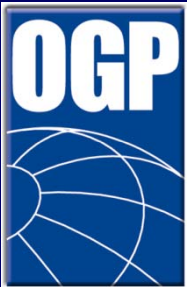
Nigel Lusby, Shell



International Association of Oil and Gas Producers

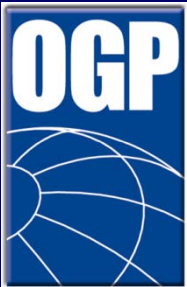
# Welcome

- Back ground to presentation
- Fatal Accident Rate Introduction
- Diving FAR – Historical UK
- Comparative values
- Industry figures
- Opportunity for improvement



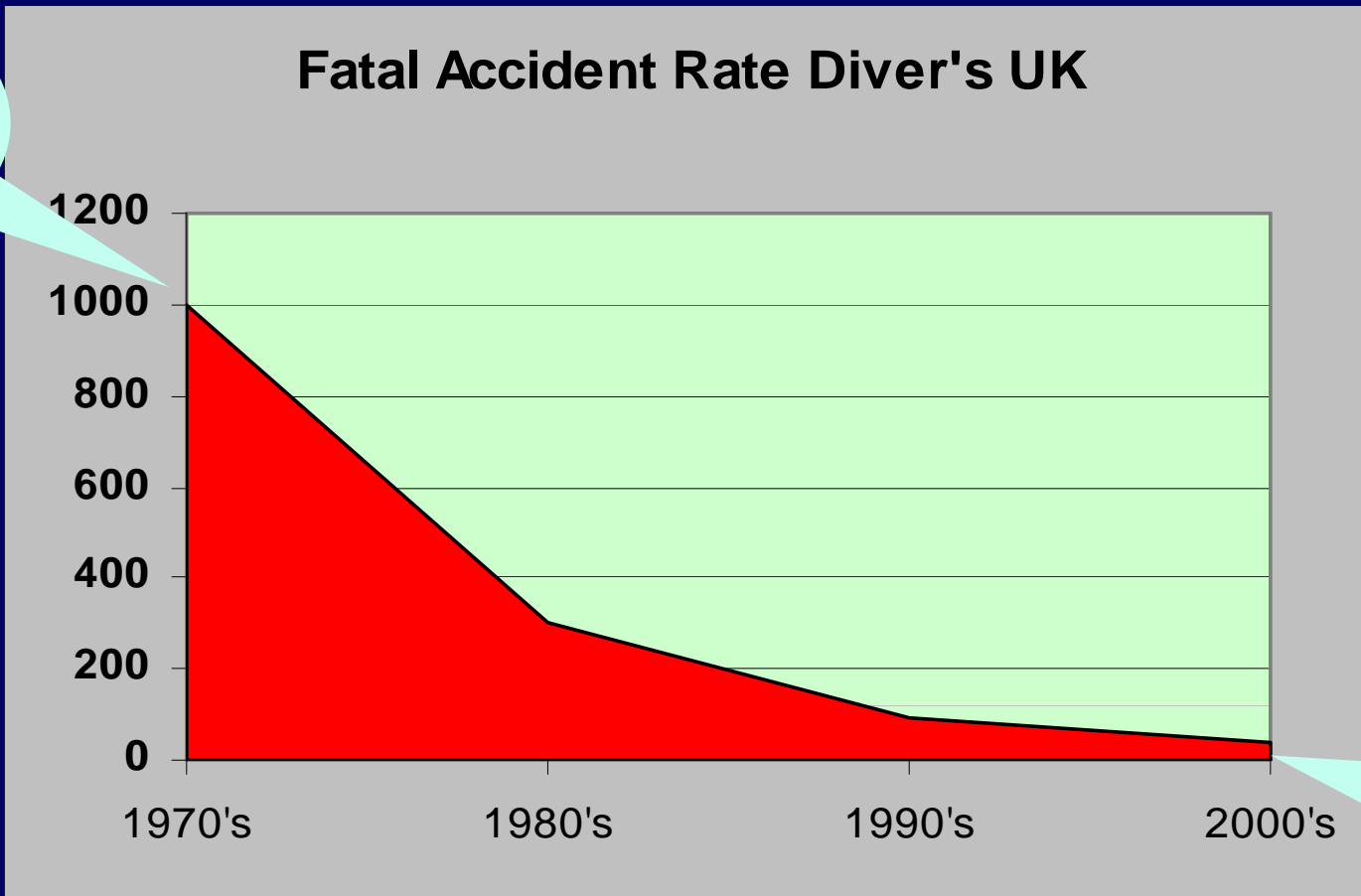
## Fatal Accident Rate

- Fatal Accident Rate (FAR) – Referenced to a working population of 100,000. ( UK HSE )
- Example 1 fatality with working population of 400 =  $1/400 \times 100,000 = \text{FAR } 250$ .
- FAR allows Fatal accident rate of different occupations to be compared and risk thresholds calculated

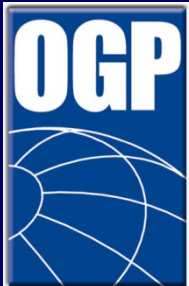


# Fatal Accident Rate – UK Diving History

1%  
workforce per  
annum



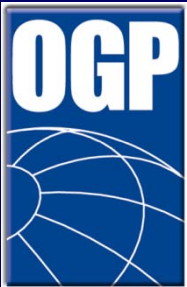
FAR 40 =  
8x  
construction  
5x Mining



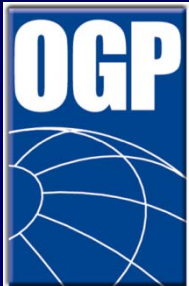
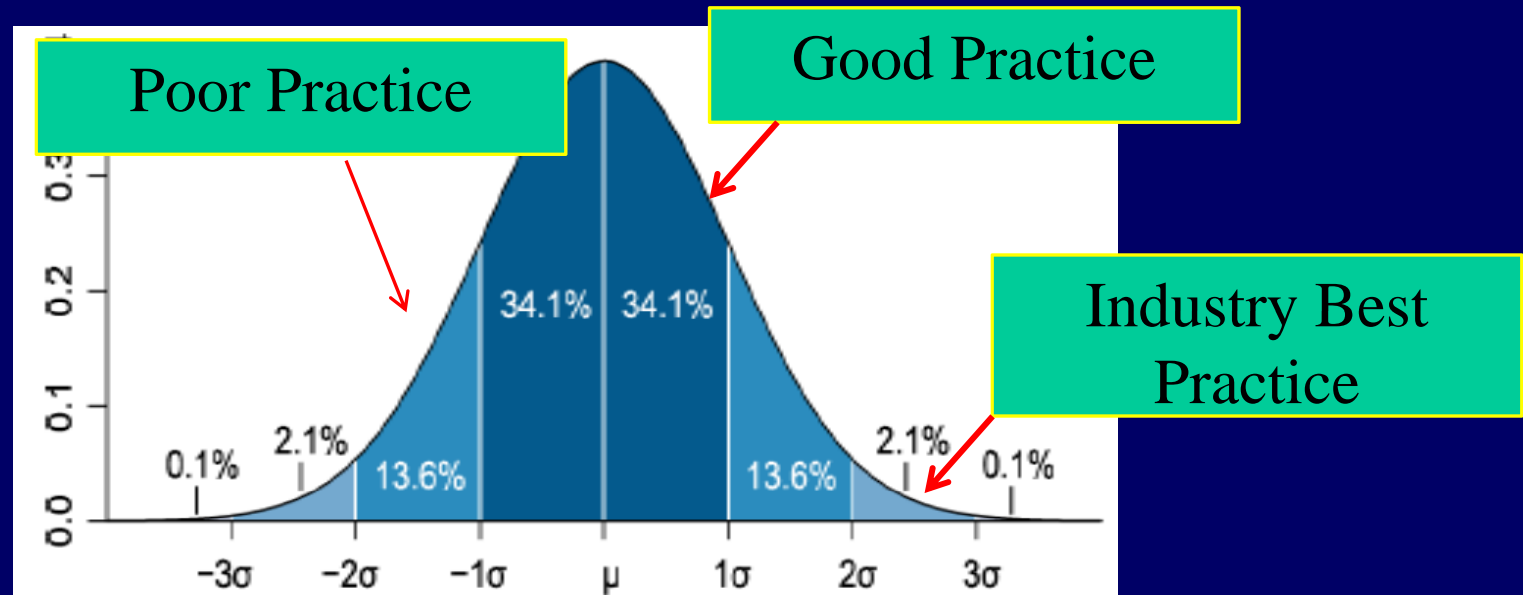
Industry Improvement

## Diving at Work Fatal Accident Rates 2006

All Workers in UK	1 per 100,000 per annum
Service Sector	0.1
Construction	4.6
Extractive Industries	8
Agriculture	10
Offshore Diver	39
Offshore Diver 1970	1000
Inland Diver	28 - 38
Cars	13
Motor cycles	72

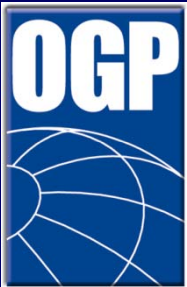


# Diving Safety – Normal Distribution



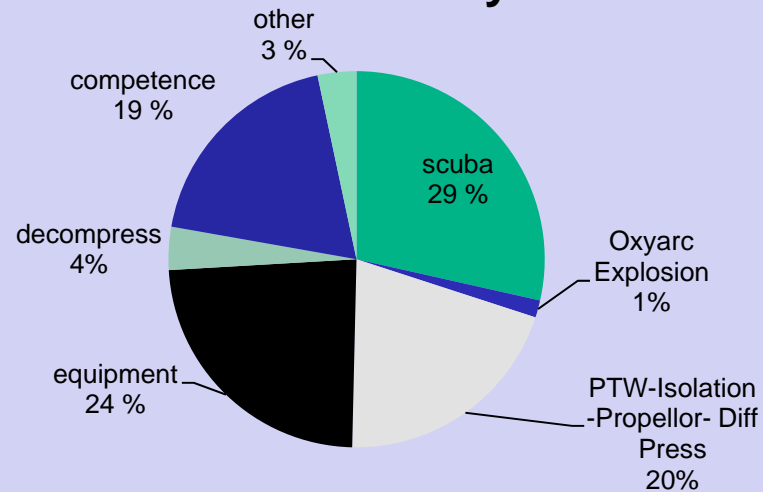
## Company X - FAR( capability 27 divers sat) 2009/10

<b>Roles</b>	<b>FAR</b>
Sat Diver (2009)	3700
Sat Diver (2010)	3700
Offshore Diver (UK) 2006	39
Offshore Diver UK 1970	1000
Cars	13
Motor cycles	72
Commando Afghanistan	1570
Final summit attempt K2	27000

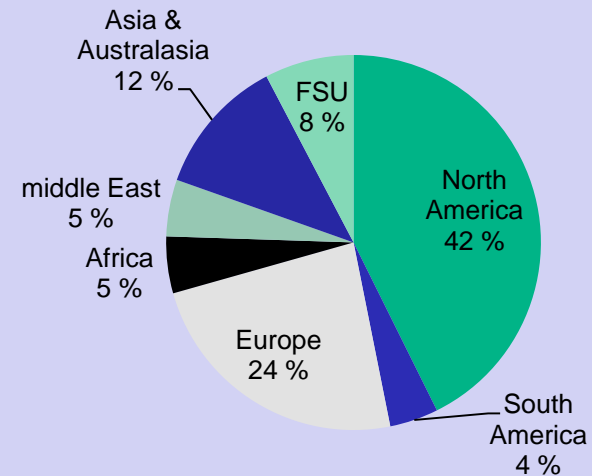


# Summary of Global Diving industry Inshore/nearshore fatalities 2000-2010

## Inshore Fatalities Key Factors



## Inshore Fatalities- Region

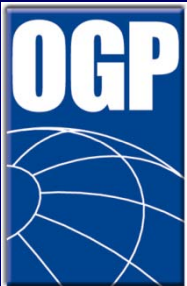


**124 Fatalities  
2000/2010**

Source Chesshire list

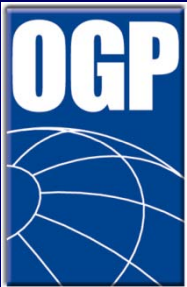
## Example - single major European port, the 5 incidents had been reported having occurred over the last 18 months

- Dive on a tanker at night. Tender comes up on divers umbilical and recovers hat and bailout. Diver has jettisoned his equipment and swam to the shore (established later). Port closed in while search is carried out for diver.
- Dive carried out following 30' decompression profile. Diver had worked at 60' for an hour and profile not adjusted for deeper depth. Diver collapses on deck after dive. Paralysis of lower limbs, tongue and visual disturbances. Type 2 decompression sickness, diver evacuated to chamber to ...hospital, 3 day treatment
- Diver carrying out propeller polish on Tanker – propeller starts while diver working and pushes him away – ripped shoulder and leg muscle
- Diver carrying out our hull scrub wearing Aga mask – tangle with hull scrub brushes/ loose rope and Aga locating straps (spider). Mask ripped from divers head. Diver makes it to surface – partial drowning and hospitalized ( 3 months off work)
- 3 bailout delivery whips blow off the mask on the same day.



## Importance of clear parameters

- Benchmarking, Control verification, learning, recalibration, assurance and advancement. Regional and activity hotspots
- Currently there is an opportunity to improve the data we collect and how we use it – outside the constraints of regulatory obligations
- It requires standardization and working with industry stakeholders.
- The process has started through the OGP diving subcommittee and the industry working group.



Thank You

