# DROPS Forum - Aberdeen

*Don’t blame gravity … striving to improve*

27 April 2017

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irata® International
Industrial Rope Access Trade Association

# Agenda

- IRATA International
- Work and Safety Analysis
- Dropped or falling objects
- Conclusions and “What next?”

# IRATA International

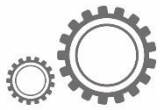
## A brief history

### 1986

The Industrial Rope Access Trade Association is formed by six companies, who provide Rope Access services to the North Sea Oil & Gas industry

### 1988

The instigation of the independently audited IRATA member, work and safety statistical data **(WASA Report)**



### 2010

The longstanding '*IRATA Guidelines*' document is replaced by the globally recognised "*International Code of Practice*" **(ICoP)**

The latest revision was released in August 2014 and is continually reviewed

### 2014

IRATA International published the revised Training Assessment and Certification Scheme **(TACS)**

The latest revision was released in October 2015 and is continually reviewed

### 2016

IRATA company membership grows to over 400 organisations, ranging from small family run businesses to large multinationals

# IRATA International

## Structure and key personnel

NOT FOR PROFIT
TRADE ASSOCIATION

### EXECUTIVE COMMITTEE


### COMMITTEE CHAIRMEN

IRATA International Chairman
IRATA International Vice-Chairman
Training Committee
Health & Safety Committee
Equipment & Standards Committee

### DIRECTORS
### GENERAL MANAGER & SECRETARY

### RACS CHAIRMEN
#### REGIONAL ADVISORY COMMITTEE

* Australia
* Middle East
* Benelux
* North Sea
* UK
* Mediterranean
* North America
* South East Asia
* South Africa
* D-A-CH
* Brazil
* Scandinavia

### UK HEAD OFFICE
### ADMINISTRATIVE SUPPORT

# IRATA International

## Association objectives

- Continuous pursuit of the highest safety standards for its technicians
- Continuous improvement of the training scheme
- To lead and encourage innovation within the field of rope access
- To maintain quality whilst growing internationally
- To promote the benefits of rope access to wider industry
- To support a global membership

# IRATA International

## Member companies

- Operator Member Companies ……. 187
- Trainer Member Companies …… 69
- Operator/Trainer Member Companies .. 148
- Associate Member Companies …… 29

- **Total IRATA Member Companies** ..... 433
  (April 2017)

# IRATA International

## Member companies by continent

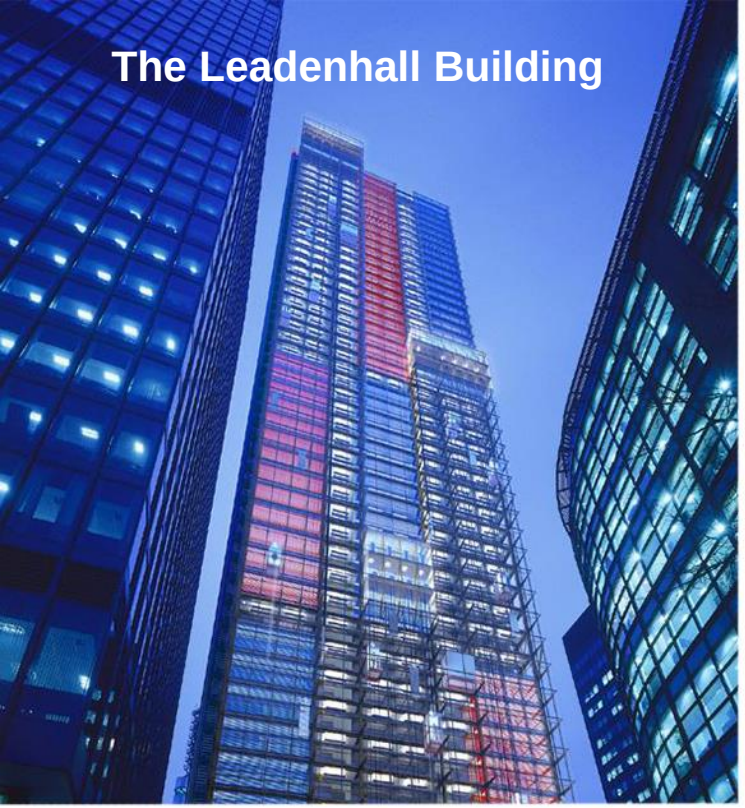
| | | | | | |
|---|---|---|---|---|---|
| 1 | North America | 27 | 4 | Africa | 21 |
| 2 | South America | 24 | 5 | Asia | 94 |
| 3 | Europe | 231 | 6 | Oceania | 36 |


# IRATA International

**Technician data** (June 2016)

- **Level 1**……..... 35,943
- **Level 2**…… 7,855
- **Level 3**…….... 8,675

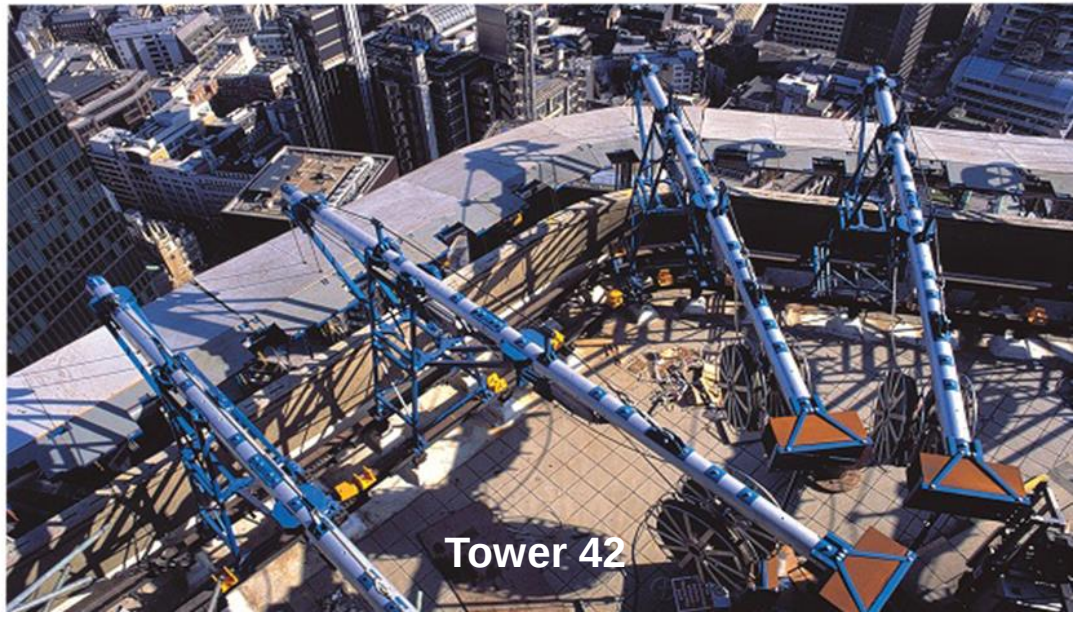
**Total active IRATA Technicians**… **52,473**


The Leadenhall Building


London Eye


Big Ben


Tower 42


Tower 42


30 St Mary Axe


DREGGEN

# IRATA International

## Work & Safety Analysis (WASA) 2016

# IRATA International

## Work & Safety Analysis (WASA)

- Started in 1989; independent review of data; annual report
- Members are required to submit incident data quarterly
  - Date and time;
  - Operative level(s), e.g. L1, 2, 3;
  - Place;
  - Part(s) of body hurt;
  - Primary cause, e.g. fall, slip, dropped object, etc.;
  - Days lost;
  - Consequences, e.g. major, over 7-day, dangerous occurrence, etc.;
  - External environmental factors, e.g. wind, rain, etc.;
  - Brief description of incident;
  - Remedial action.

# WASA 2016

## (for the year 2015)


Figure 1

# Accident Rate

**0.28**

**All injuries per 100,000 hours**

**560**

**All injuries per 100,000 workers**

**60**

**Reportable on-rope per 100,000 workers**

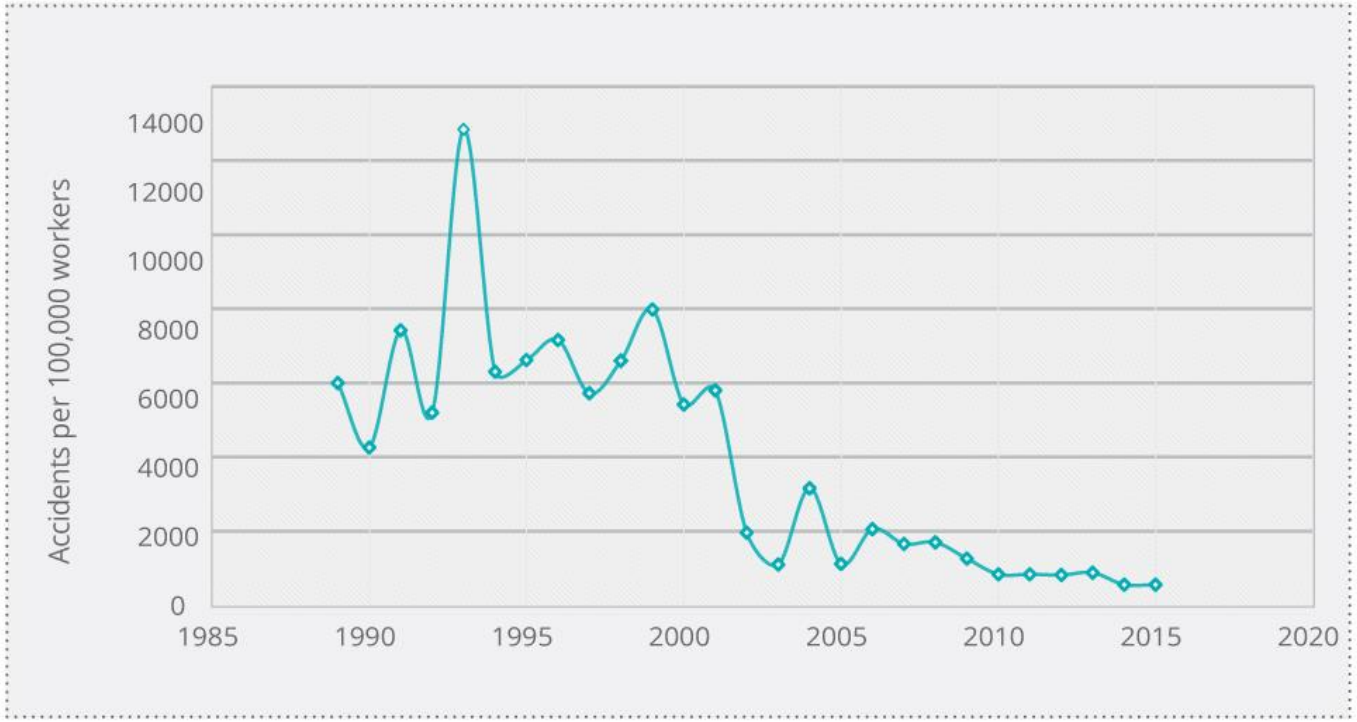
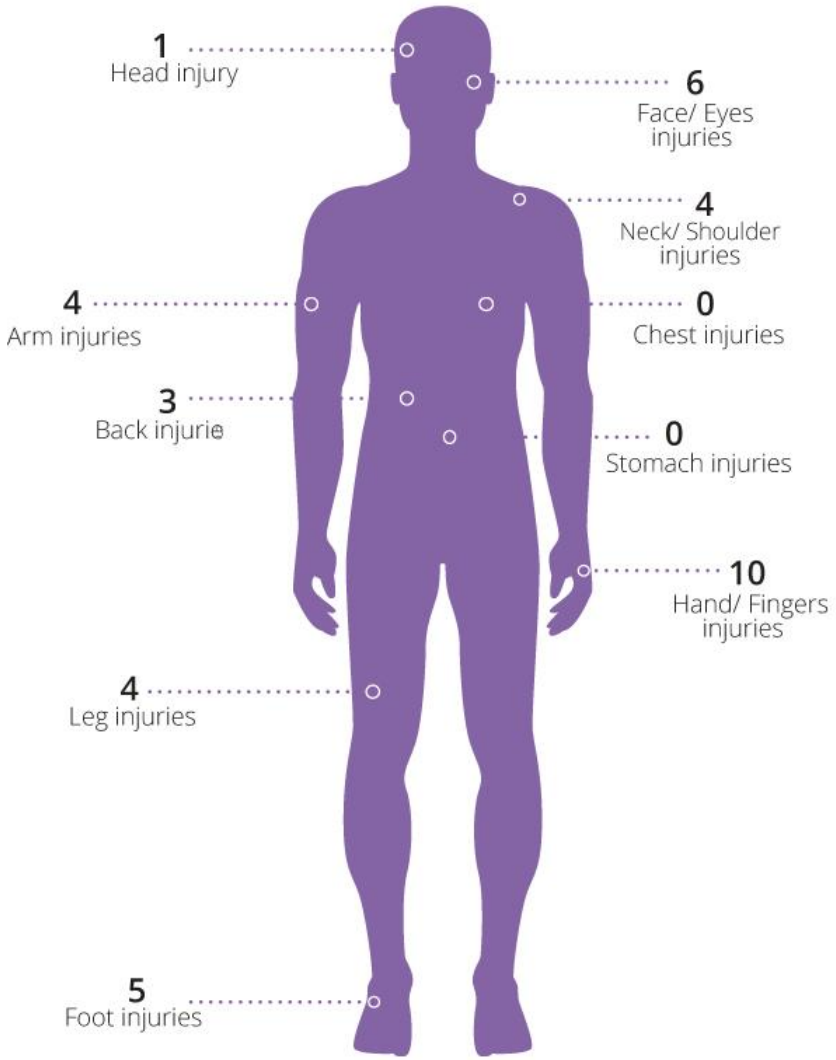



Figure 32

# Work & Safety Analysis 2016

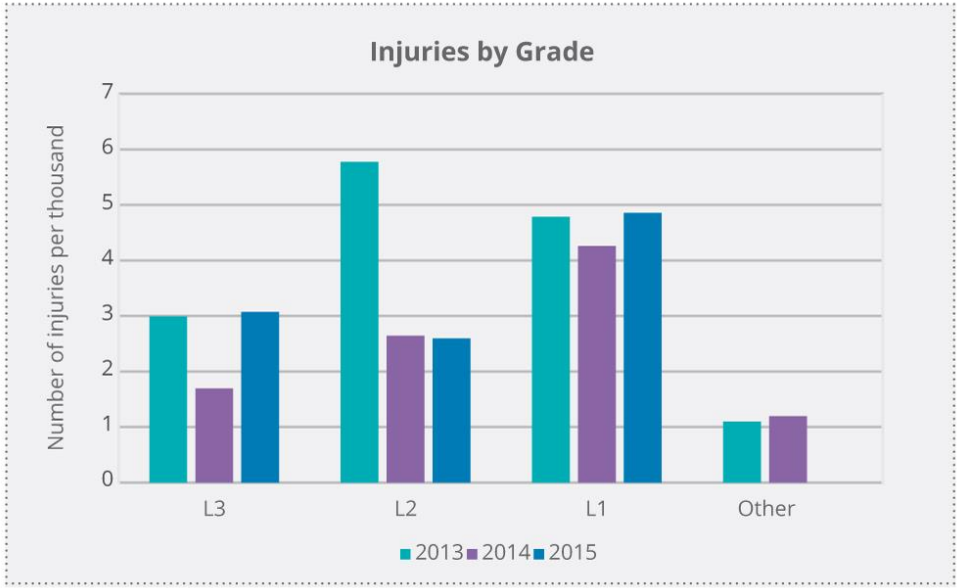
## Body Part Injuries




| Industry | Fatalities | Major Injury* | Serious** | Total including fatal |
|---|---|---|---|---|
| Agriculture, Forestry & Fisheries | 8 | 208 | 322 | 539 |
| Mining & Quarrying | 0.8 | 62 | 197 | 260 |
| Manufacturing | 0.6 | 106 | 381 | 488 |
| Construction | 1.9 | 142 | 277 | 421 |
| Service Industries | 0.2 | 58 | 196 | 255 |
| All Industries | 0.4 | 70 | 223 | 293 |
| **IRATA International** | **8** | **17** | **17** | **42** |

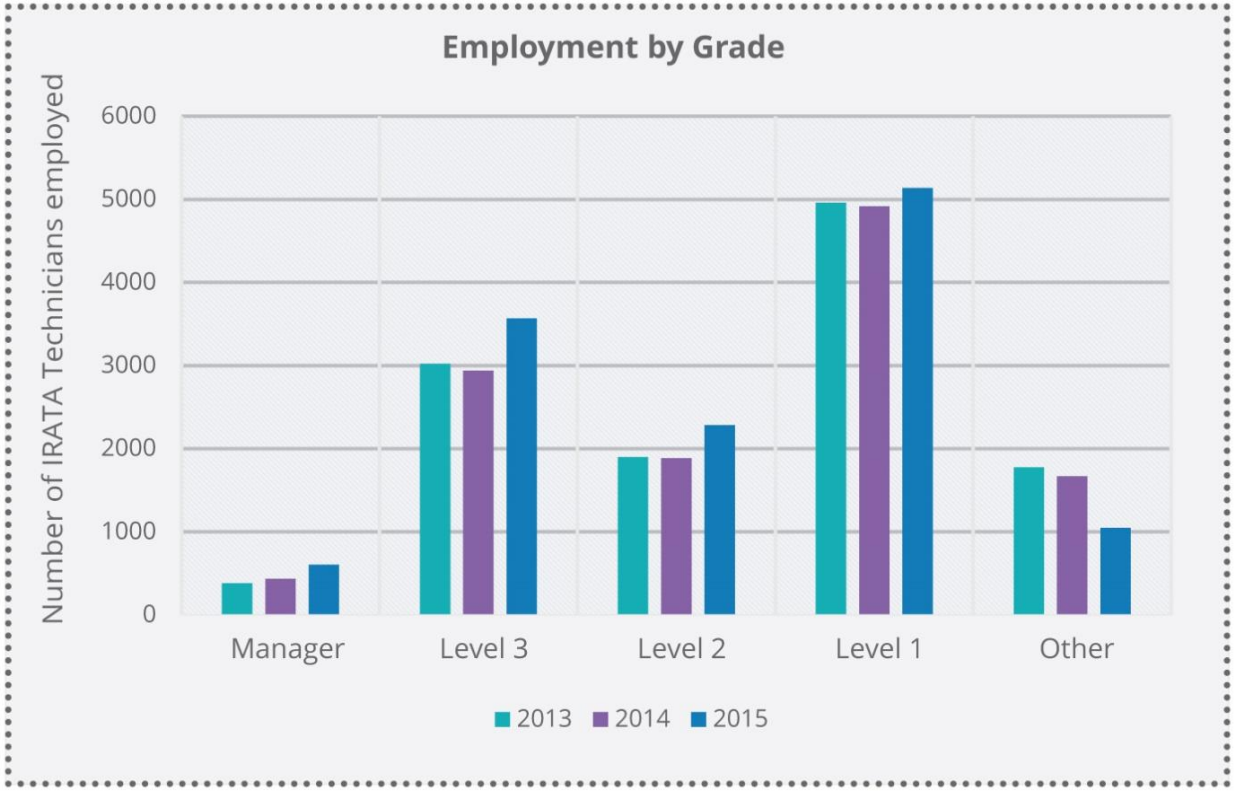
All figures are rounded per 100,000 Technicians

* Equivalent to RIDDOR Specified Injuries
**Over 7 Day injuries



# Employment Levels within IRATA Member Companies

| | |
|---|---|
| Managers | 603 |
| Level 3 | 3,569 |
| Level 2 | 2,282 |
| Level 1 | 5,137 |
| Other | 1,032 |
| TOTAL | 13,223 |




(Note that quarterly employment figures must be averaged)

Figure 2

# Summary of Hours Worked

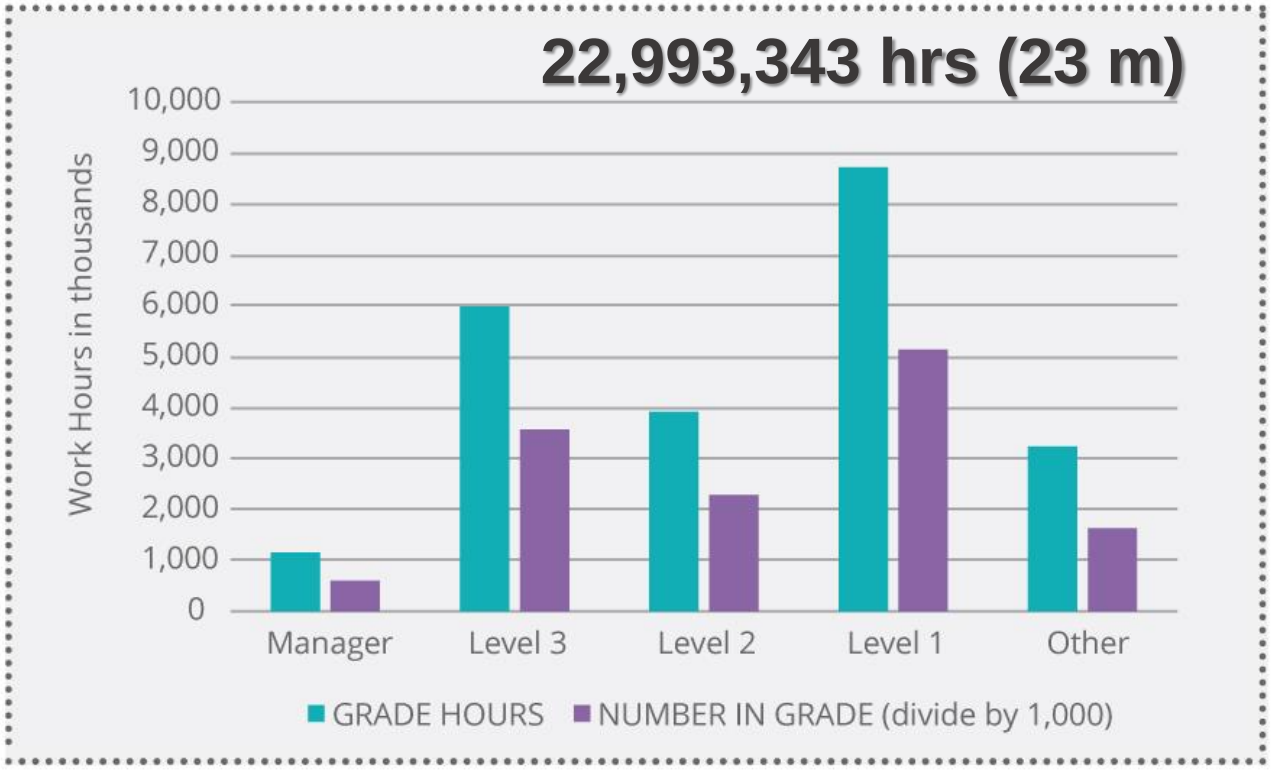



Figure 3

# Distribution of Work Hours

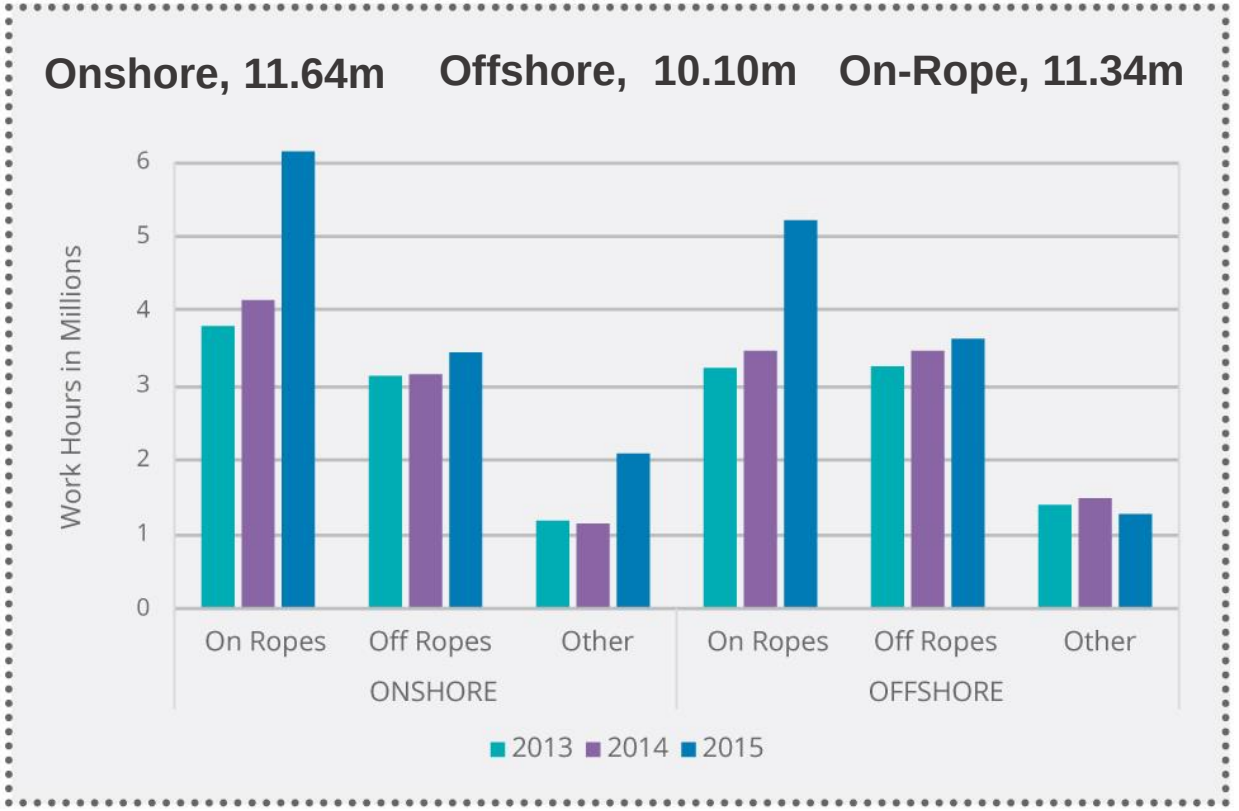



Figure 4

# Number of Accidents & Incidents Reported

| | |
|---|---|
| Fatality | 1 |
| Major | 2 |
| Over 7-day | 2 |
| Less than 7-day | 37 |
| DOs | 61 |

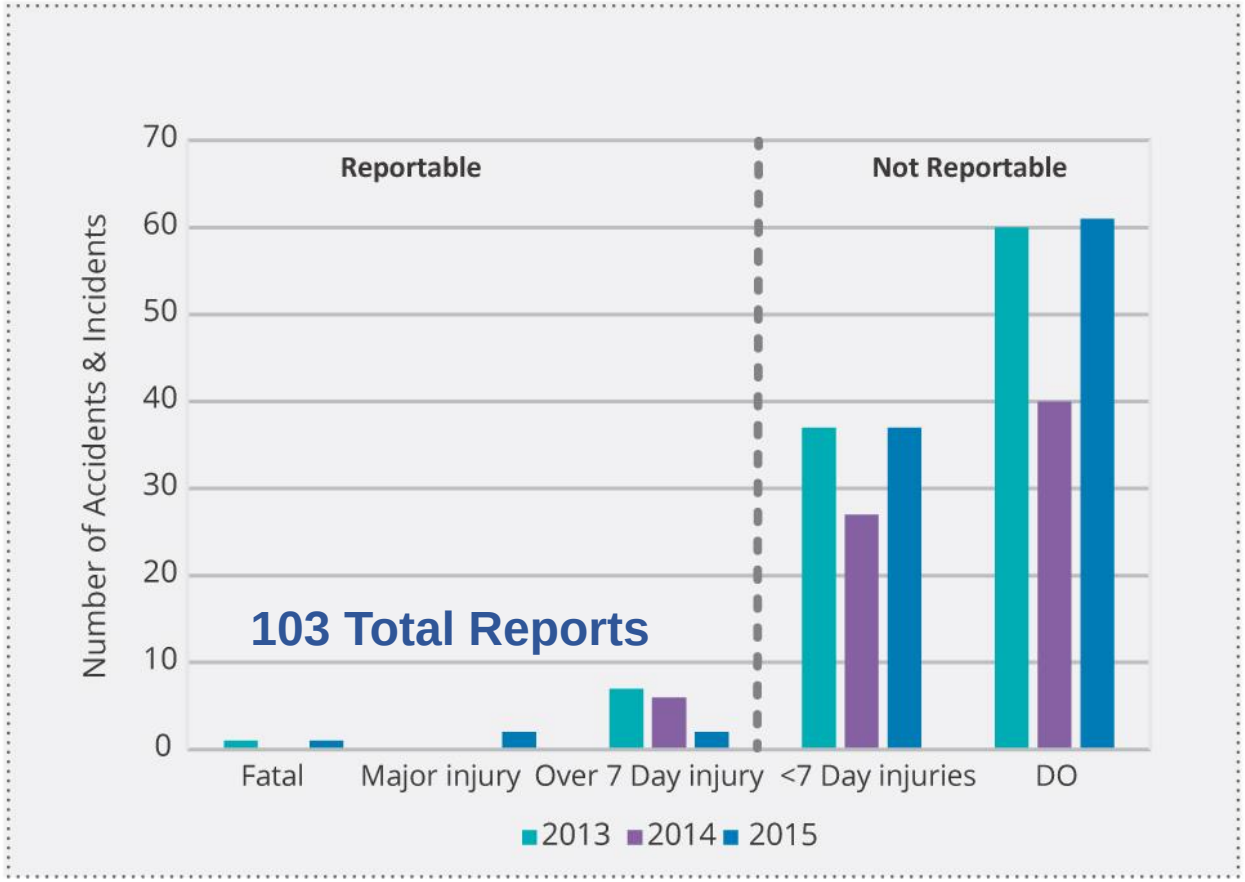



Figure 27

# Location of all Accidents and Incidents

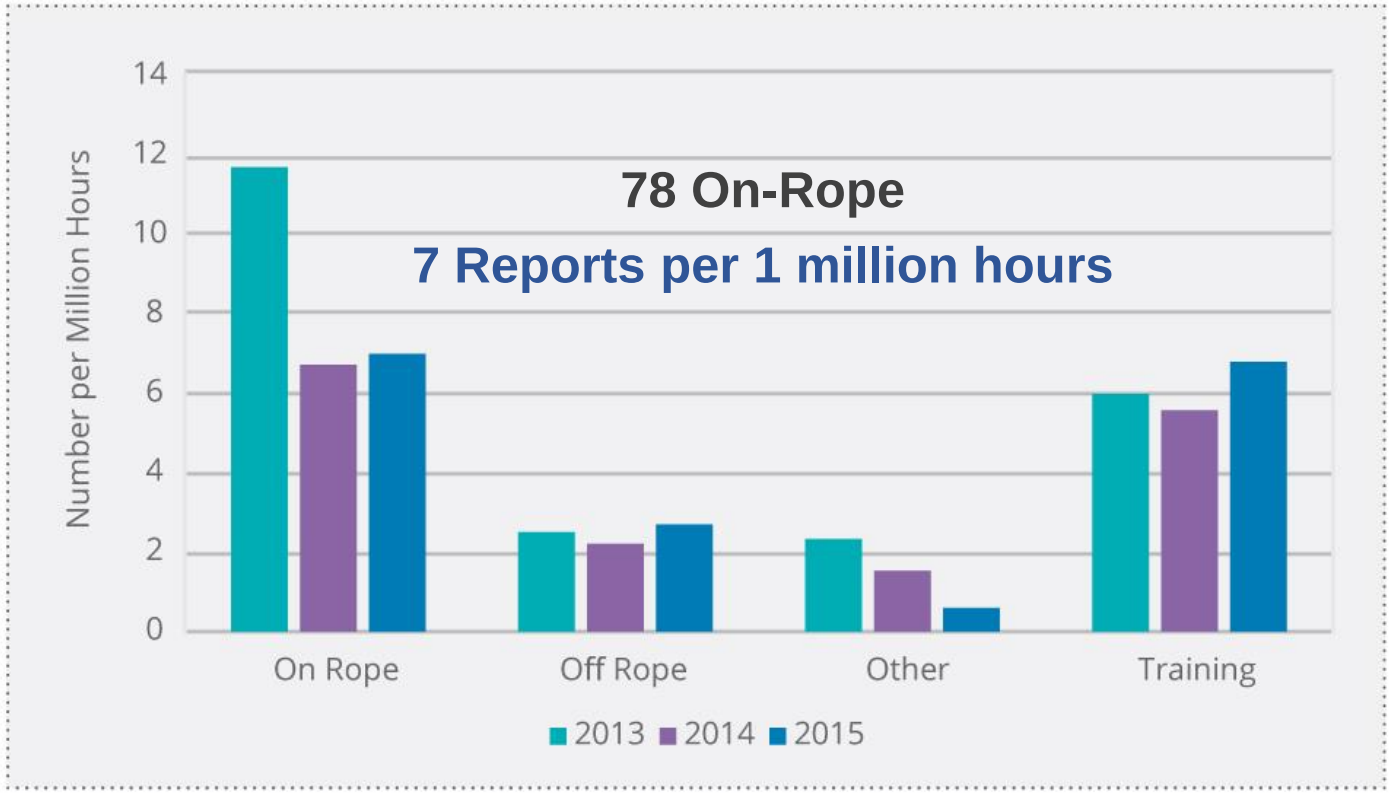



Figure 28

# Number of Injuries by Grade

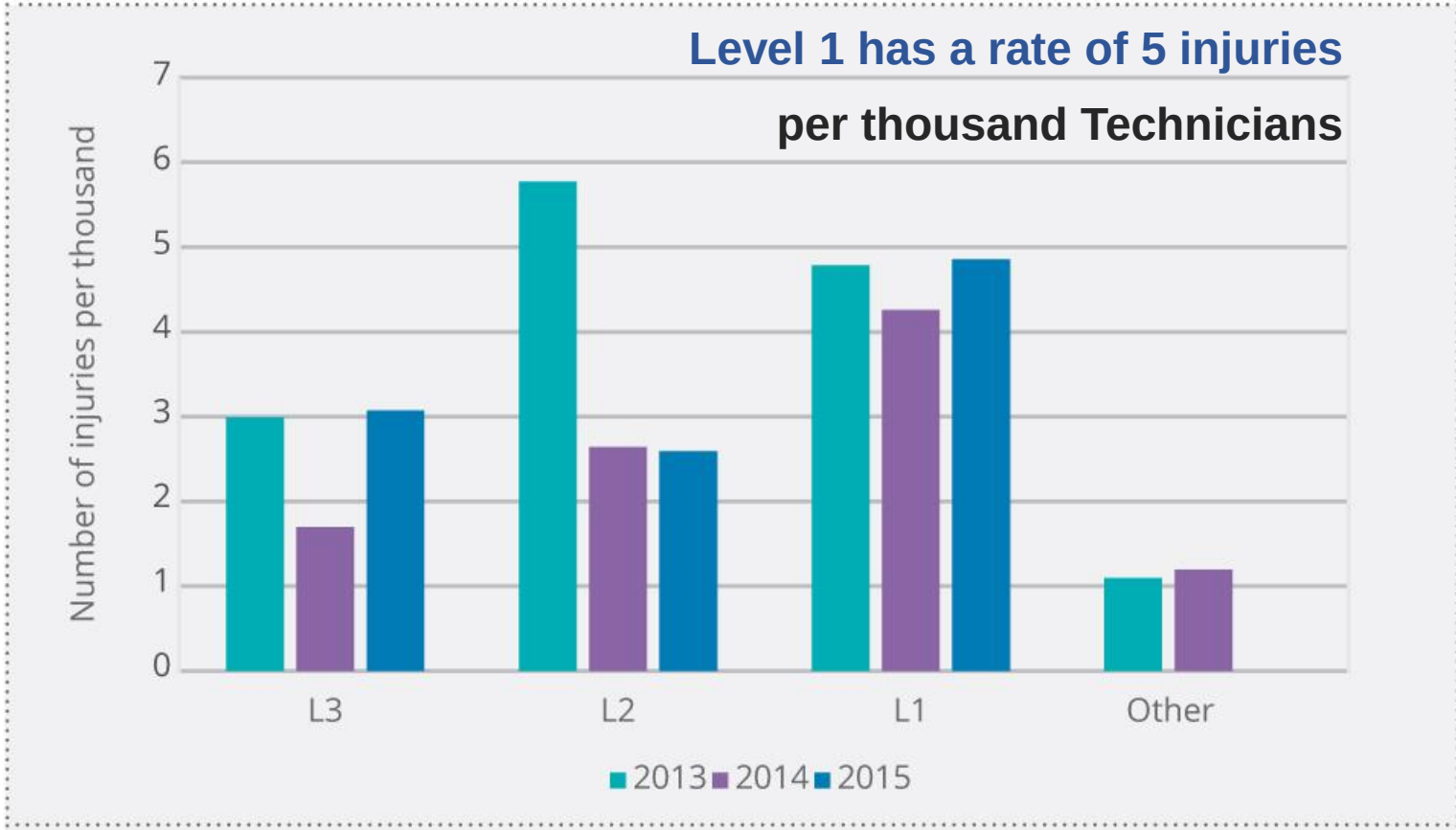



Figure 29

# Body Parts Injured

| | |
|---|---|
| **Hands/Fingers** | **10** |
| ▪ Handling Tools | 2 |
| ▪ Training | 3 |
| **Face/Eyes** | **6** |
| **Foot** | **5** |
| **Arm** | **4** |
| **Leg** | **4** |

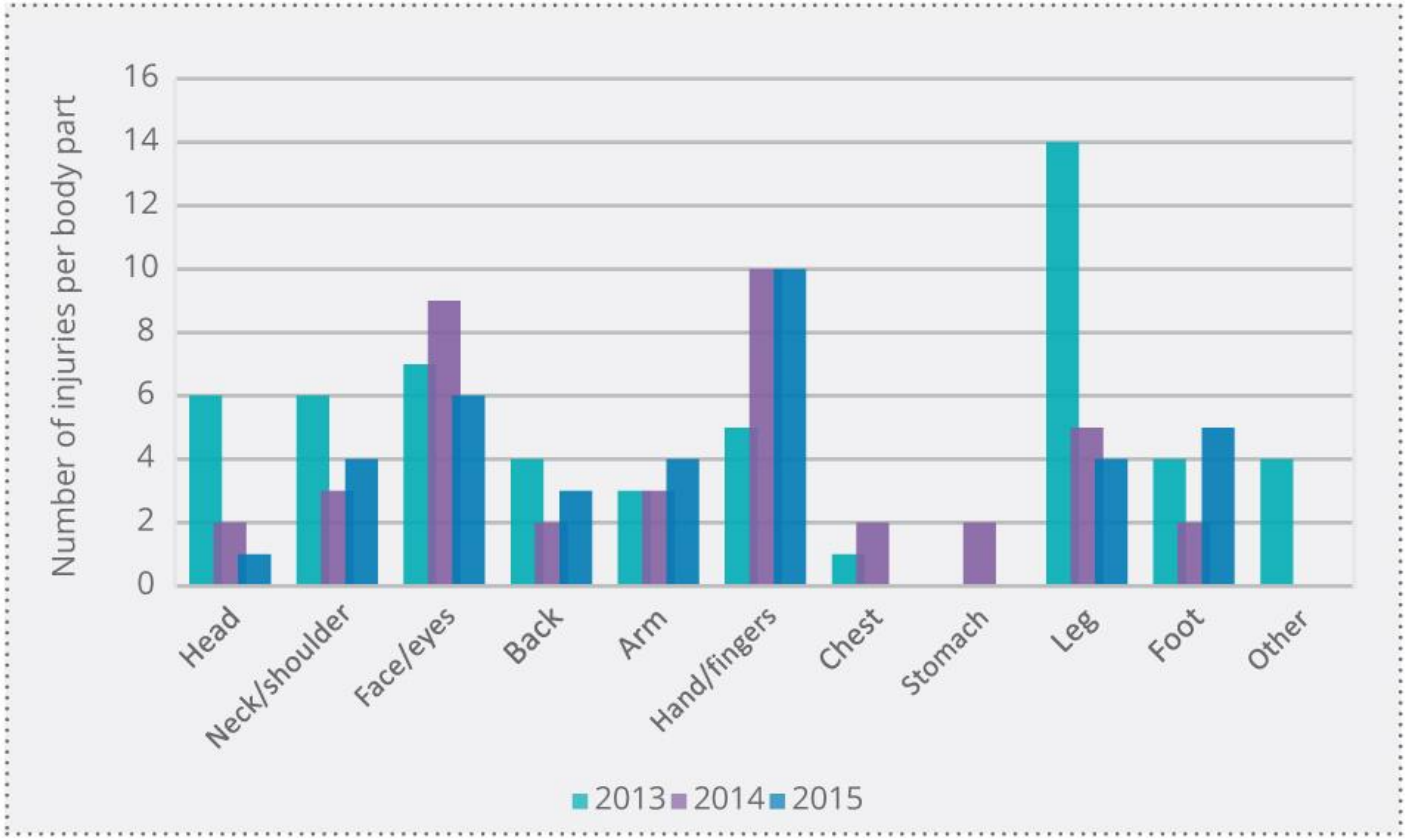



Figure 30

# Causes of Accidents and Incidents

## Consistently significant areas of concern:

- dropped objects
- handling tools/equipment
- failure or mal-operation of plant and equipment

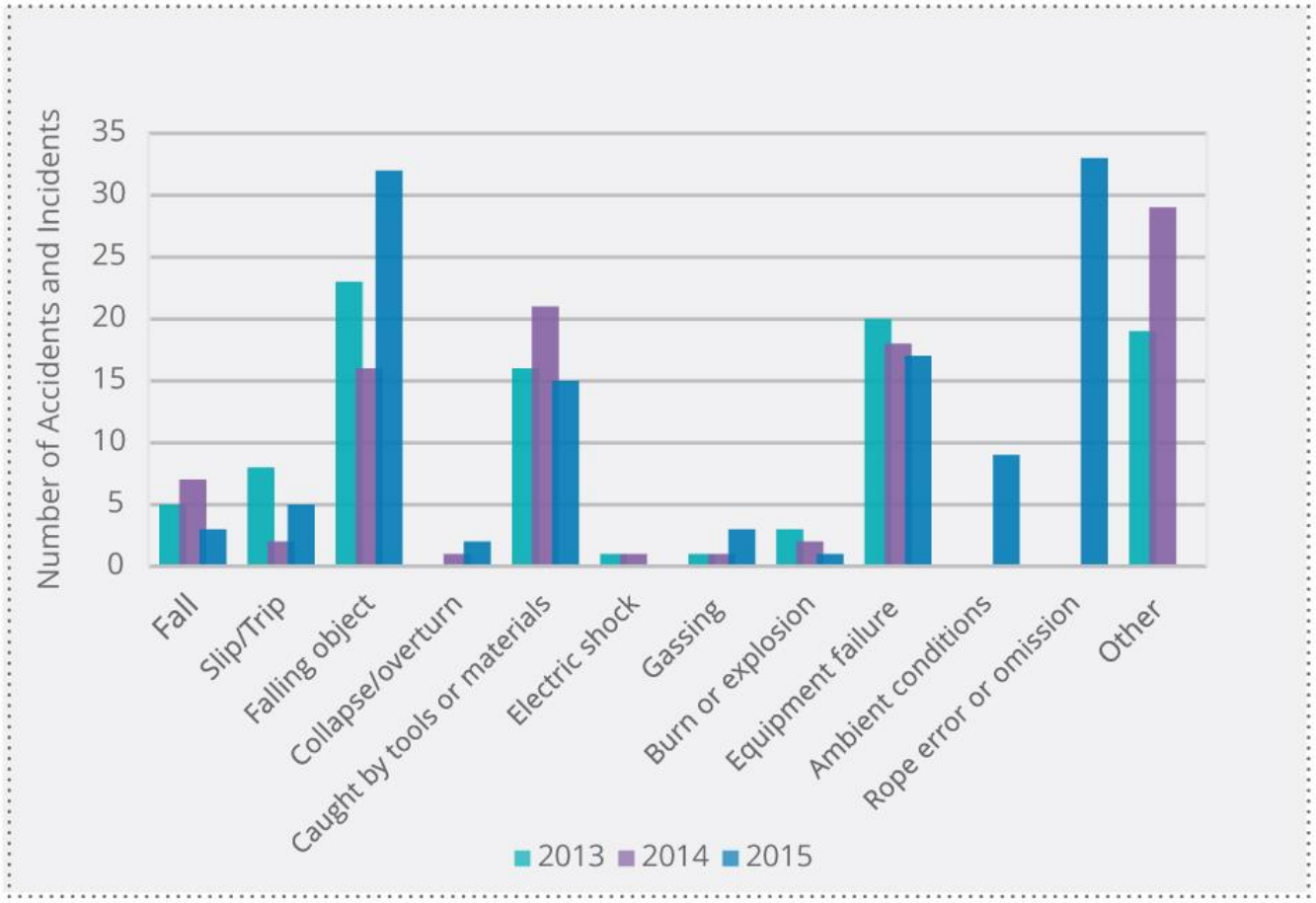



Figure 31

# IRATA International

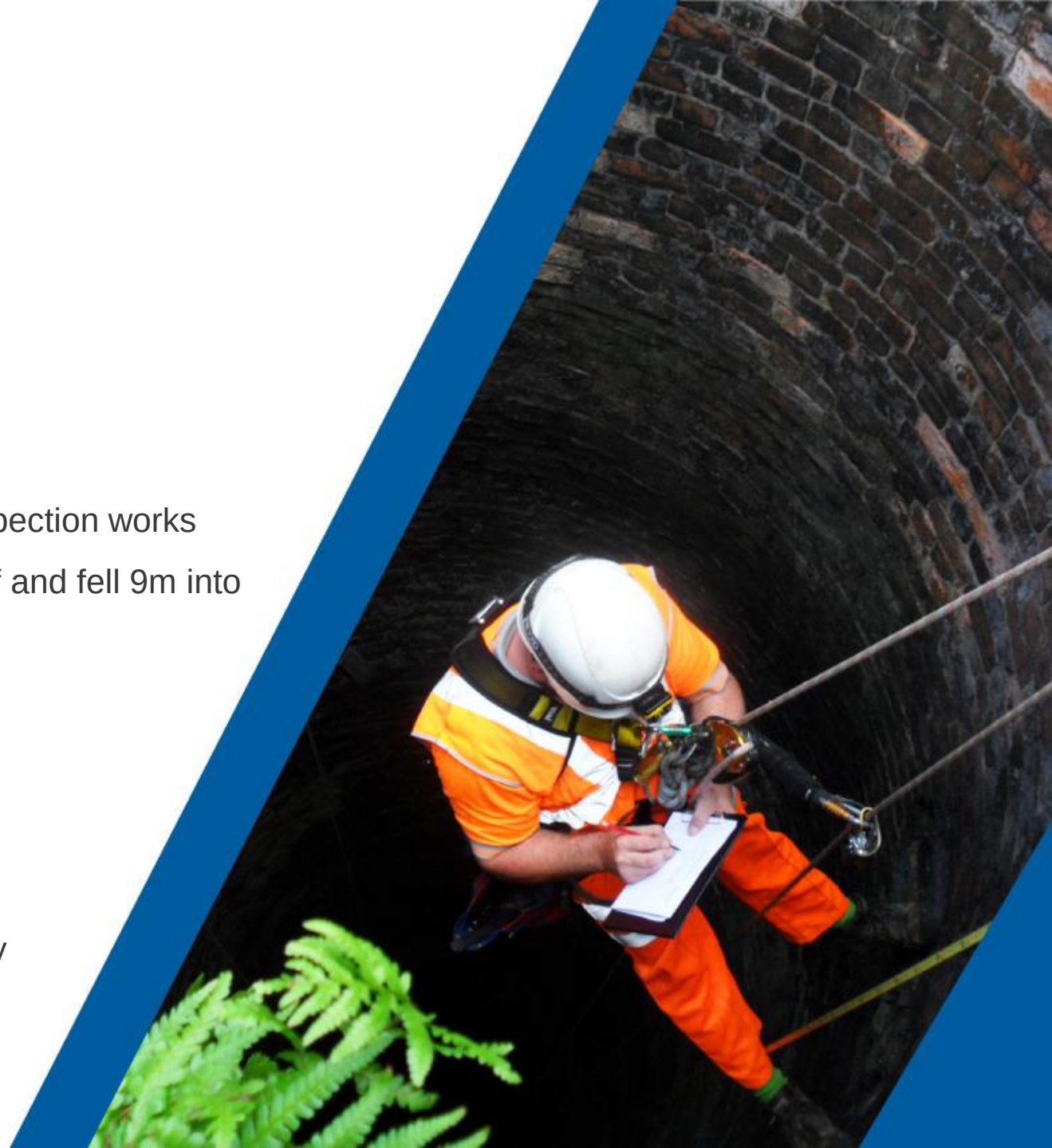
## Dropped and Falling Objects – 2015 and 2016

# IRATA International

## Dropped and Falling Objects

- What goes wrong?
- Analysis of incidents (2014 and 2015), 49

- Technician dropped an (unclipped) object during inspection works
- Whilst cutting sealant a scissor blade (22g) broke off and fell 9m into exclusion zone
- Whilst removing lights from a building the lightshade broke off and fell to the ground
- A small concrete block (refractory) came loose from circa 100 feet and struck the technician in the face; suffering a small cut below the eye under their safety glasses



# IRATA International

## Dropped and Falling Objects

- While tensioning bolts, the technician was transferring the tensioning head to another bolt and dropped it into the sea
- A technician let a karabiner to fall to the ground; no injuries
- A 2.1 metre section of pipe fell approximately 3 metres (No injury or damage occurred). The technicians thought that section was supported by a welded stool
- L1 heard his L3 shouting “below” – he looked up and was hit by an M10 screw nut (broken nose)
- Escape mask clip broke and fell into a tank

# IRATA International

## Dropped and Falling Objects

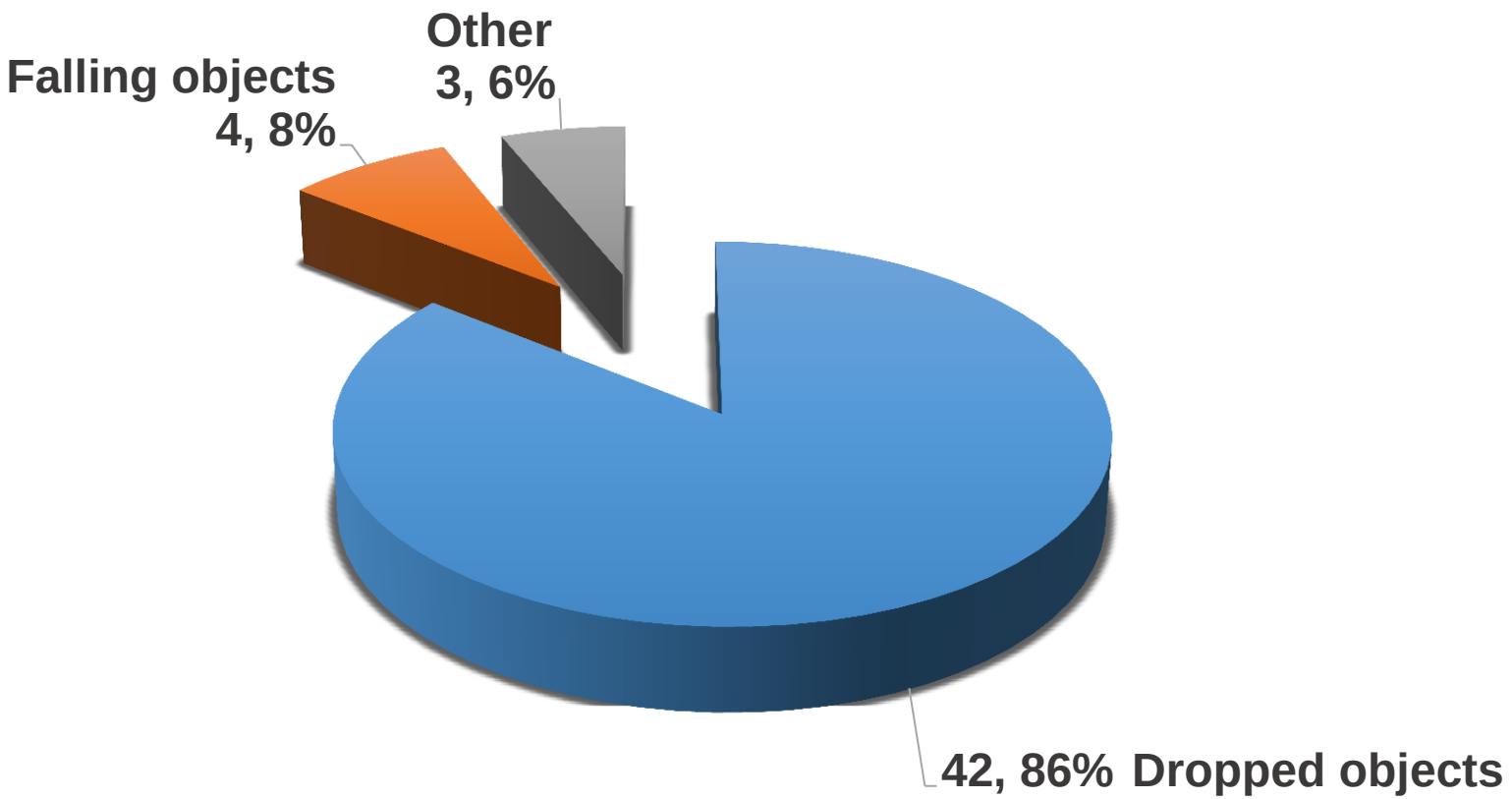
- While aid climbing a technician dropped a beam clamp into the sea
- A full battery slipped out of a technician's hand, and fell to the ground (and with an exclusion zone), whist he was replacing a flat one.  The battery fell to the ground
- Technician tried to place their backup device on the rope, when it slipped out of their hand and fell to the ground
- Technician clipped a multi meter to his harness.  However, the ring on the multi meter broken resulting in the meter being dropped
- The weld on a ‘home made’ tool failed, resulting in the head being dropped

# IRATA International

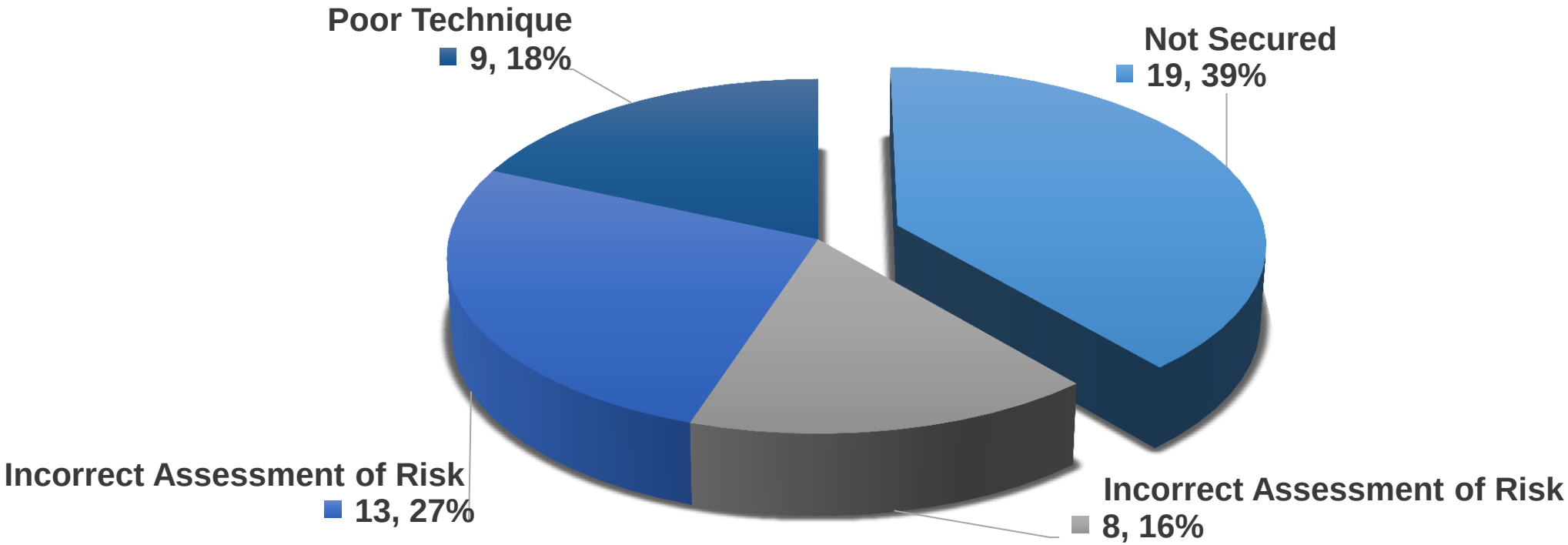
## Dropped and Falling Objects

- A scaffold clip was dislodging, falling 9m and just missing another technician by approximately 1 foot
- Technician struck by a small rock that was dislodged by either mesh or his ropes during his ascent
- A face shield fell from a half dome climbing helmet.  It did not fit securely to the helmet without being cable tied
- A falling rock passed through aperture in a protective mesh, striking a technician on lower edge of helmet and face causing significant fracture injuries and an eye injury (The risk of a rock fall had been highlighted in the task risk assessment)

# The Result of an Incident



# The Cause of an Incident



# IRATA International

## Conclusions …

- Actual dropped injuries are small
- The potential is great
- The year-on-year trend is persistent
- Low probability; high consequence
- The objective is a safe working environment
- There is a recognition that more should be done
- There is a willingness to ‘learn from failure’
- How can we draw upon the experience of others …

# IRATA International

## What next?

Look to:

- DROPS ‘Recommended Guidelines for the Safe Use of Tools and Equipment and Height’
  - Pre-planning (e.g. surveys, etc.)
  - Procurement of equipment
  - Inspection of equipment
  - Tethering of equipment
  - Storage
- Training and awareness
  - Global
- Campaign
  - Pitfalls?
- Sharing with others
  - Meetings
  - Alerts, etc. (veracity)

# Thank you for listening

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Industrial Rope Access Trade Association