

# Asset Integrity



The UK's updated  
approach to ageing  
plant

# Ageing Plant



RR509 – 2006

RR823 – 2010

AP DG – 2011...



# Ageing Plant

- 50% of European major hazard loss of containment (LOC) events due to mechanisms such as erosion, corrosion and fatigue.
- Between 1980 and 2006, 96 “major accident potential” LOC incidents reported in MARS attributed to ageing plant.
- 30% of all reported major accident LOC events.
- Overall loss of 11 lives, 183 injuries and over 170€m.

# Ageing Plant

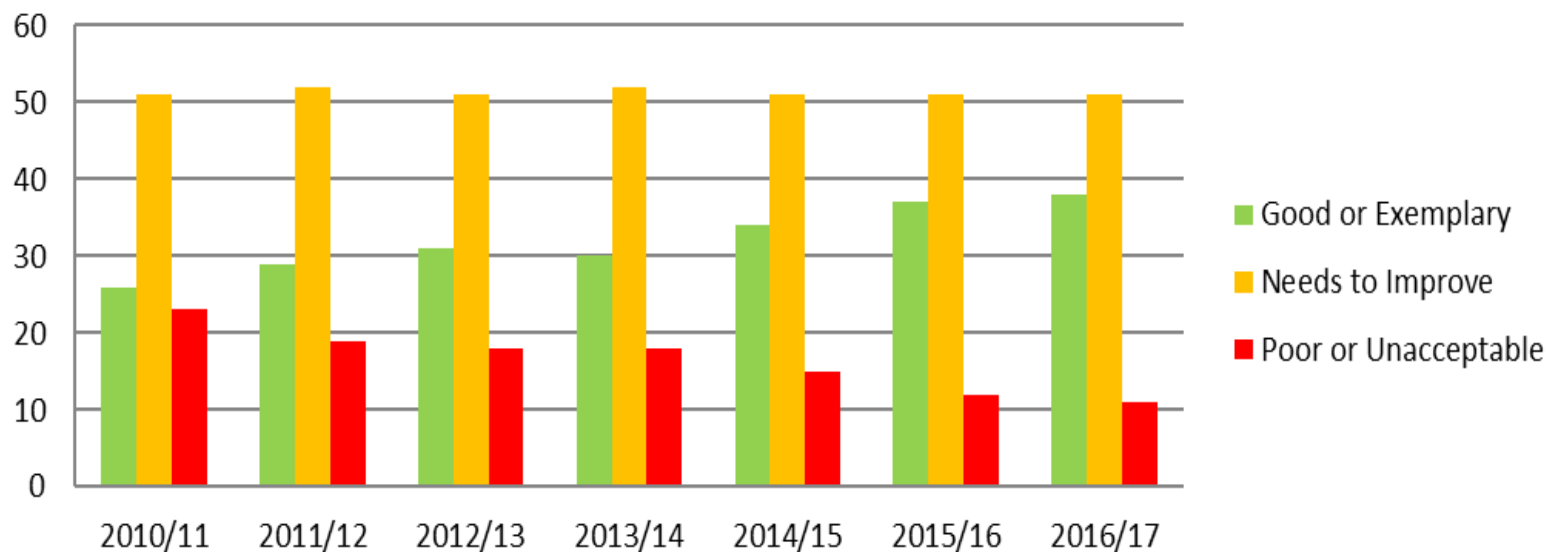
- 173 loss of containment incidents between 1996 and 2008 attributed to ageing plant mechanisms.
- 140 incidents, from RIDDOR events on COMAH sites between 2007 & 2013 associated with Ageing
- Mechanical failure responsible for 32 of (Worldwide) top 100 largest loss events in the hydrocarbon industries.
- financial impact in excess of \$10 billion.

# Ageing Plant

- Downstream petrochemical industries suggest 43% of losses due to 'Mechanical Integrity Failure'
- The remainder, maintenance issues (such as isolation) and failure of Safety Critical Devices were also of significance.
- Same source highlights that '...a major loss of integrity has few other layers of protection to prevent the loss'.
- Managing of ageing assets remains of huge importance.

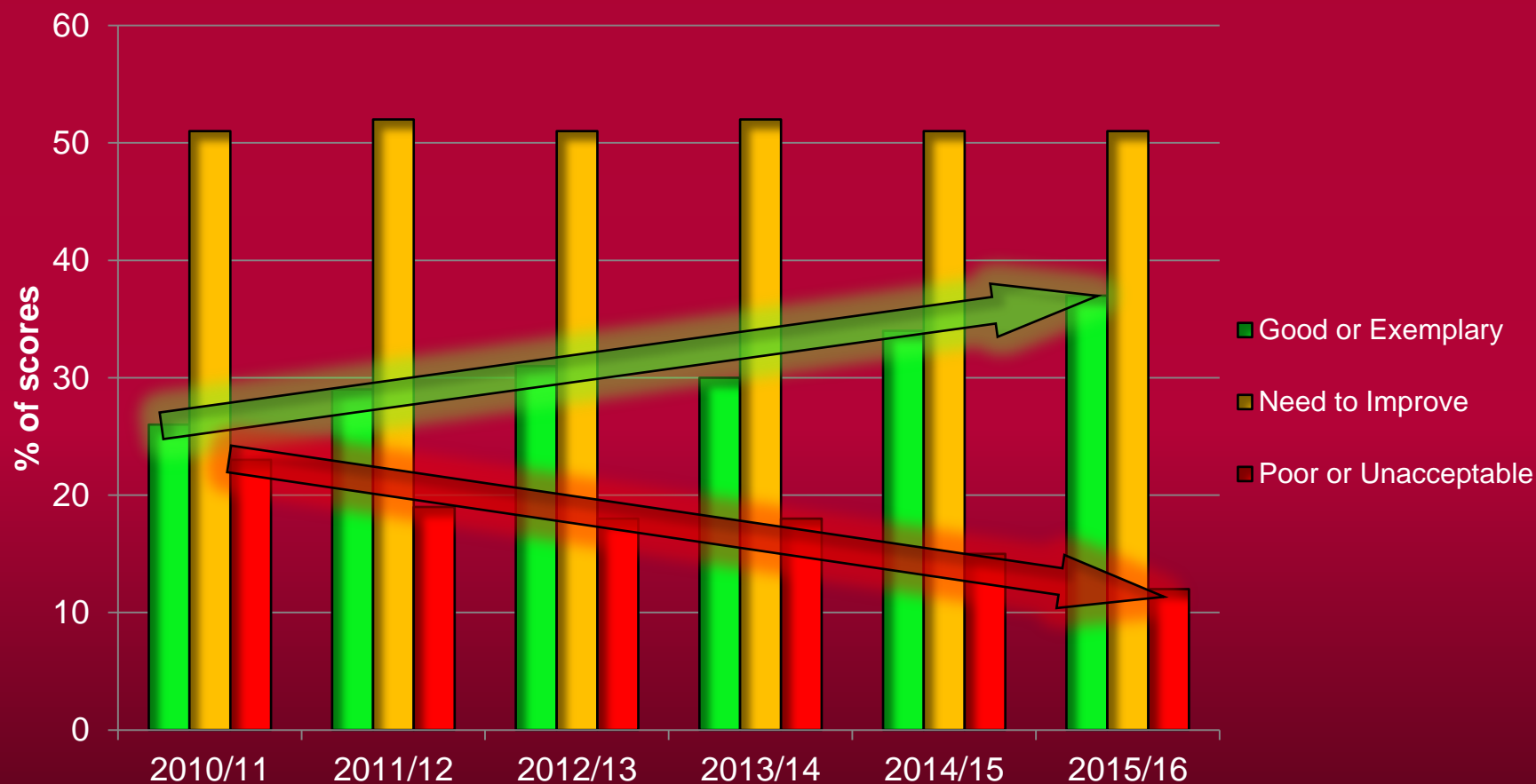
# Ageing Plant

Distribution of scores, by category, overall for each work year



# Ageing Plant impact

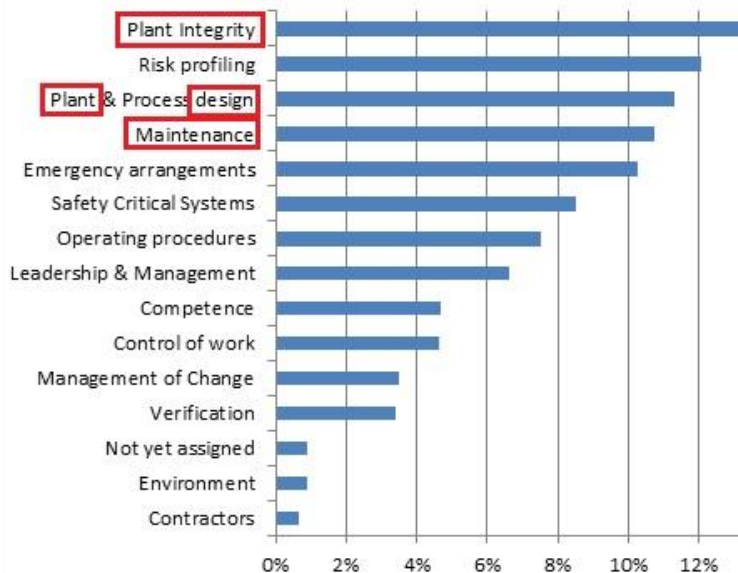
Distribution of scores, by category, overall for each work year



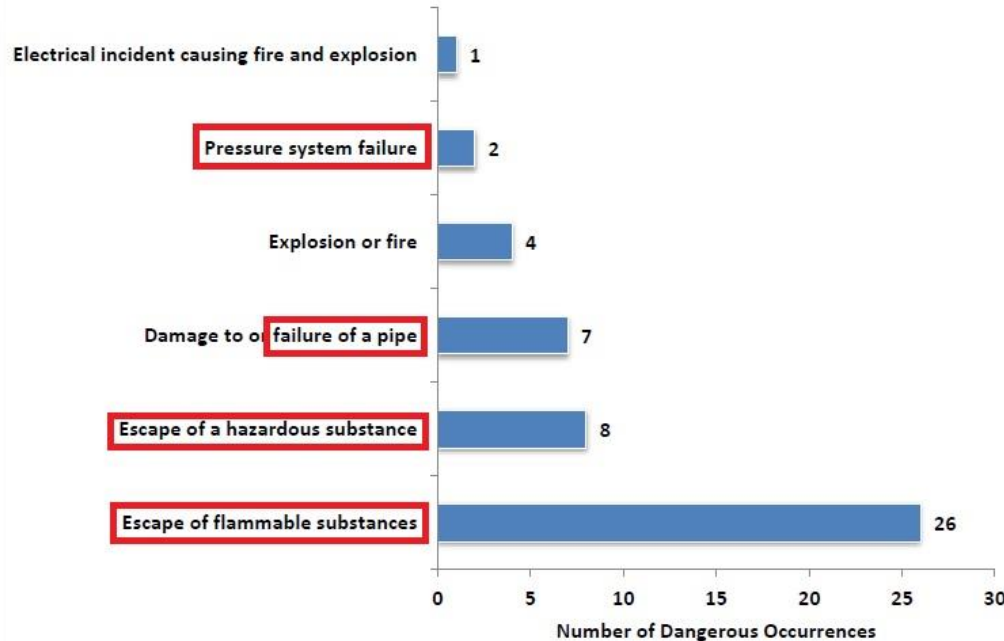
# Proactive & Reactive COMAH work:



### % Type of Actions Placed on COMAH Operators



### Figure 6 - Dangerous Occurrences at COMAH Sites 2016/17

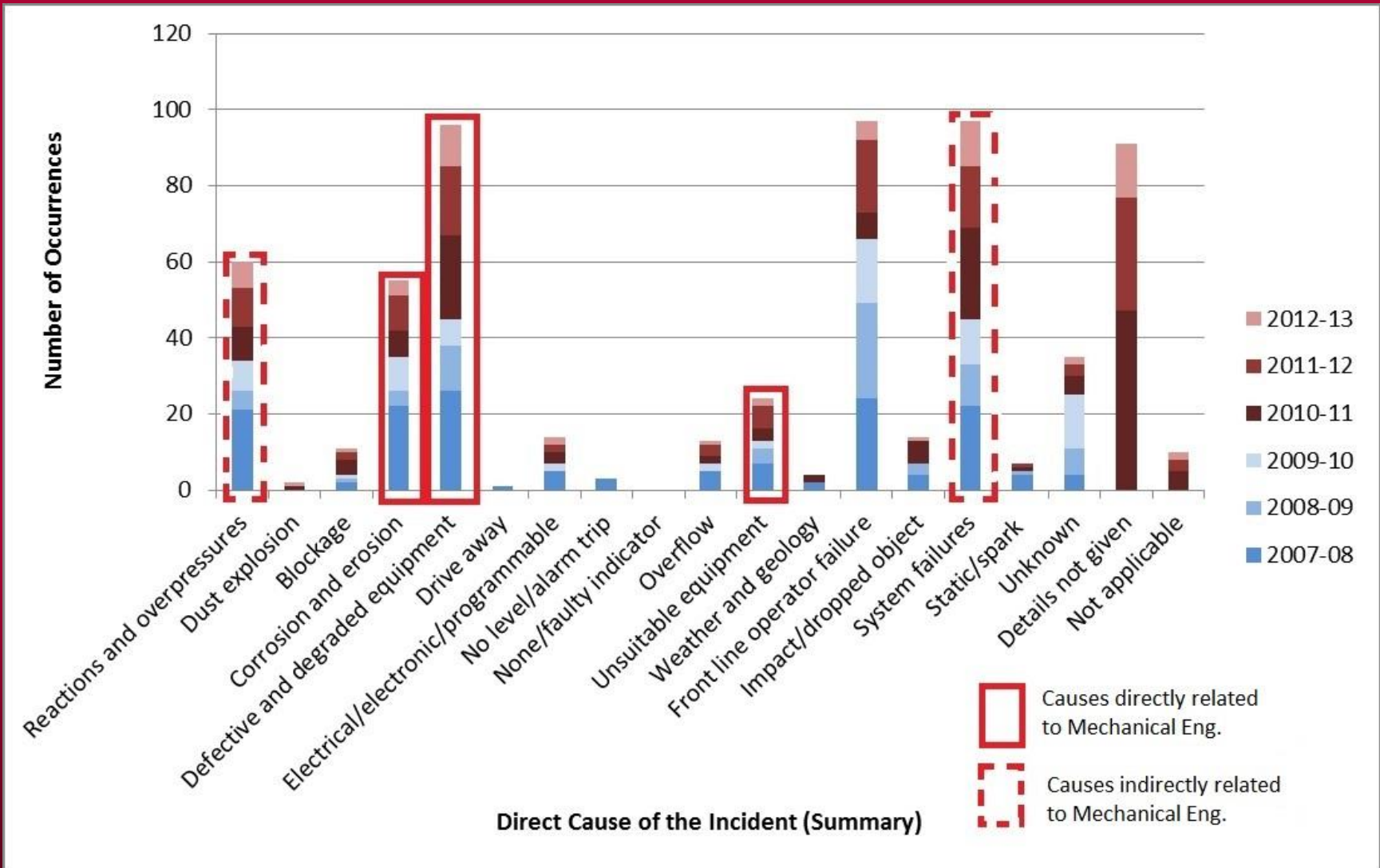




# What is missing?

- ESR report 2010:  
'...ageing plant... represents 28% of all reported 'major accident' loss of containment events'
- Lloyds LMA report 2016:  
'43% of the 100 losses analysed were due to Mechanical Integrity Failure'.

# Unpublished HSL report, 2015:



# Proposed changes

- Encompass more of what the discipline does:
  - Expand to include design & change;
- Align with other CEMHD initiatives:
  - PTS & Leadership;
- Rearrange to align more closely with Regulation:
  - PUWER & PSSR.
- Archive old Gap Analysis, replace with slimmer summary document – and no legacy items...

# Proposed changes

- The four criteria are as follows:
  - Integrity Management & Leadership
  - Initial Integrity & Design
  - Inspection
  - Maintenance

# Timetable

- Publish on website (April 2019)
- Internal database changes go live (Apr 2019)