

## **The human factor is essential for success**

Five years ago, an Oil & Gas Industry body recognised that human factors was the 'next safety frontier'. Can we infer this frontier has neither been reached nor crossed? Some statistics:

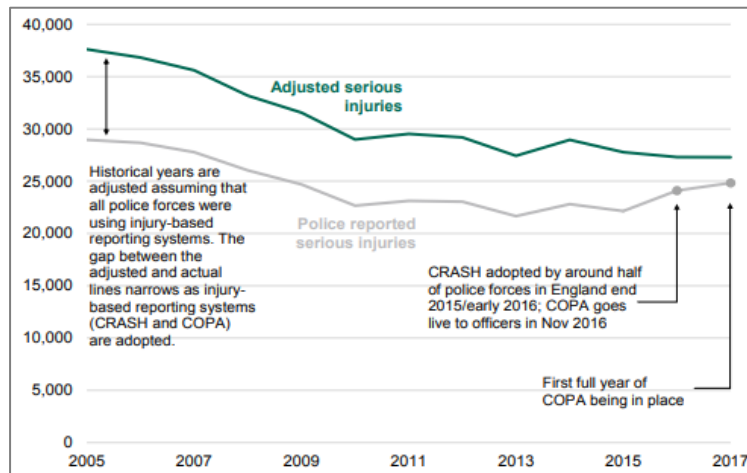
- 80% of incidents are attributed, "...to the actions or omissions of people." [hse.gov.uk/](http://hse.gov.uk/)
- £5.7 billion was lost to injury in the UK 2018 [hse.gov.uk/](http://hse.gov.uk/)
- Offshore installations rolling average of four major hydrocarbon releases per year OGUK H&S report 2019
- US Refineries – 44% of system failures are attributed to operational practices & procedures LMA OG&P Loss Analysis 2016
- An OSHA-recordable finger laceration that results in a restrictive-duty case costs \$75,000 IADC's Incident Statistics Program
- European Maritime reports 'Very serious casualties' has seen a 14.5% increase in the last five years EMSA report 2019
- Road transport incidents (LGV large goods vehicles) costs: £48.9MM in repairs & injuries & £2.8MM in lost work hours osha report 2020 ISSN 1831-9351

## **Technical proficiency alone is no longer enough**

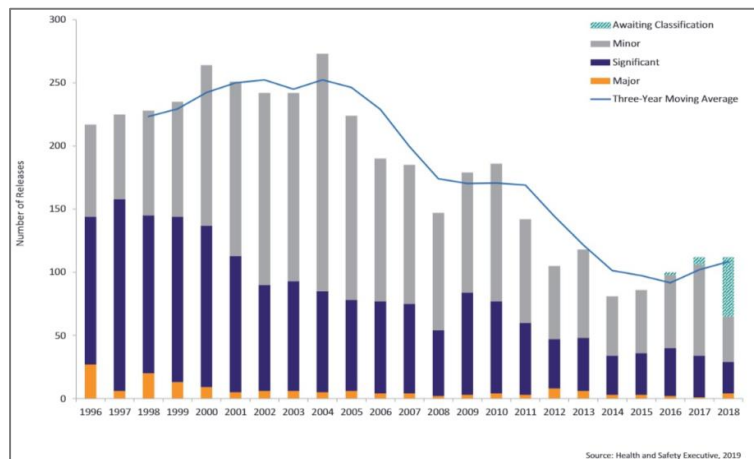
Let's look at the trends of incidents over the years in a number of different industries. It transpires that the trends are mirrored across the industries. Organisations invest heavily in management systems & traditionally plan to avoid things going wrong. They focus on technical resources, technical competence, automation and technical fixes above all else, but there are still significant numbers of failures or errors in operations, the root cause of which is primarily down to human

failures. The human factor is therefore essential for success.

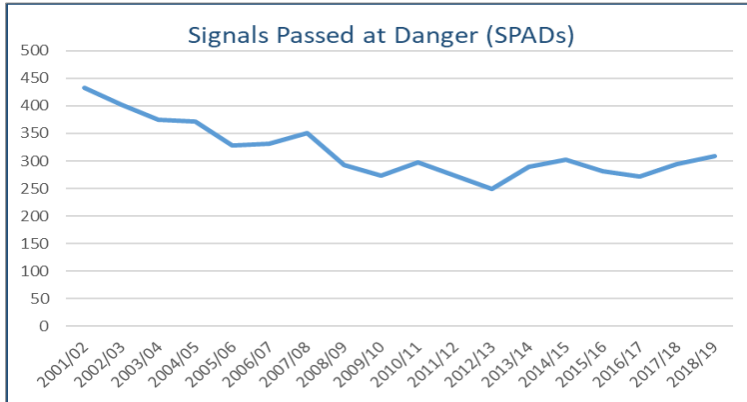
The need for human factors is even greater when we consider that there is more and more automation appearing in the oil and gas industry. Just because an aircraft has an autopilot does not mean that we ignore the human performance element of flying the aircraft. Despite the significant increase in automation, 50% of the training is focused on human factors.



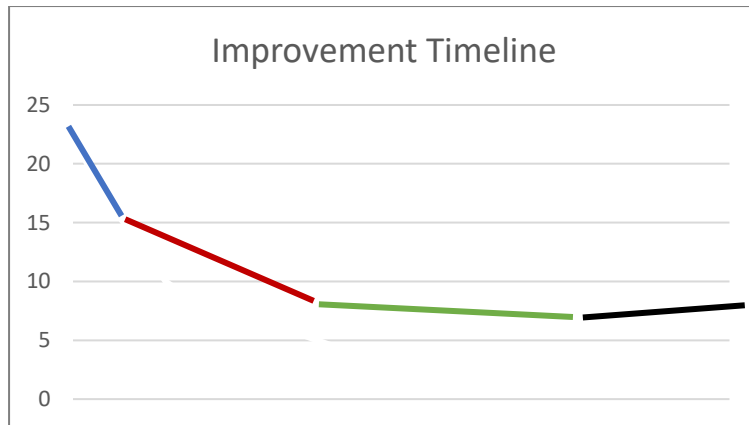
UK road traffic – Steady drop in incidents till 2014. Statistics have however plateaued, with no change in injuries in the past three years.



UK offshore process facilities – Hydrocarbon releases have dropped. But, there has been little change in the frequency in the last 10 years. There has been a year-on-year increase for the last five years.

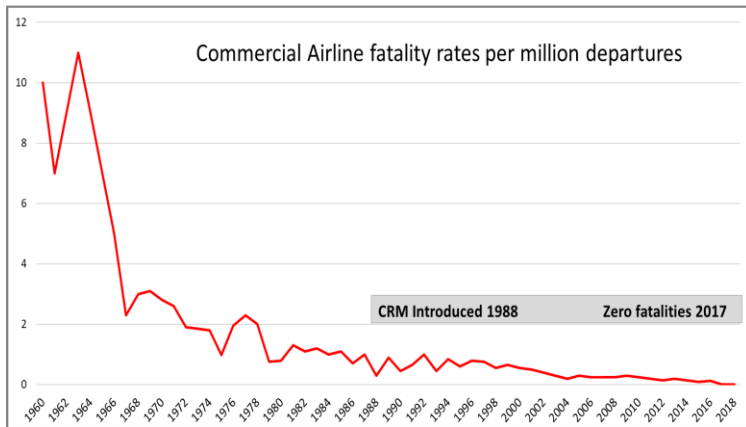


UK Rail Transport – We can see that the number of Train’s Signal Passed at Danger events dropped from 2001 to 2012. However, there has been a 24% increase in SPADs over the subsequent six years.

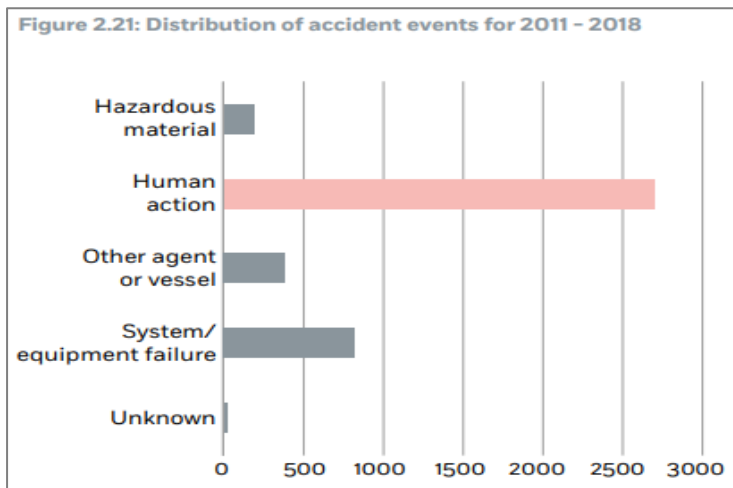


It is typical to see a graphed improvement trend as shown left. A steep improvement **line** is followed by a more obtuse improvement **line**. The improvement **line** then generally plateaus. It is at this point that the **line**, in many cases, begins to rise again. Testament to this analogy are graphed performance of a variety of industries – all which follow this trend.

If we change nothing, then the best we will ever get is the plateau. If there is no mechanism or program in place to change behaviours, then complacency can creep in to the culture.



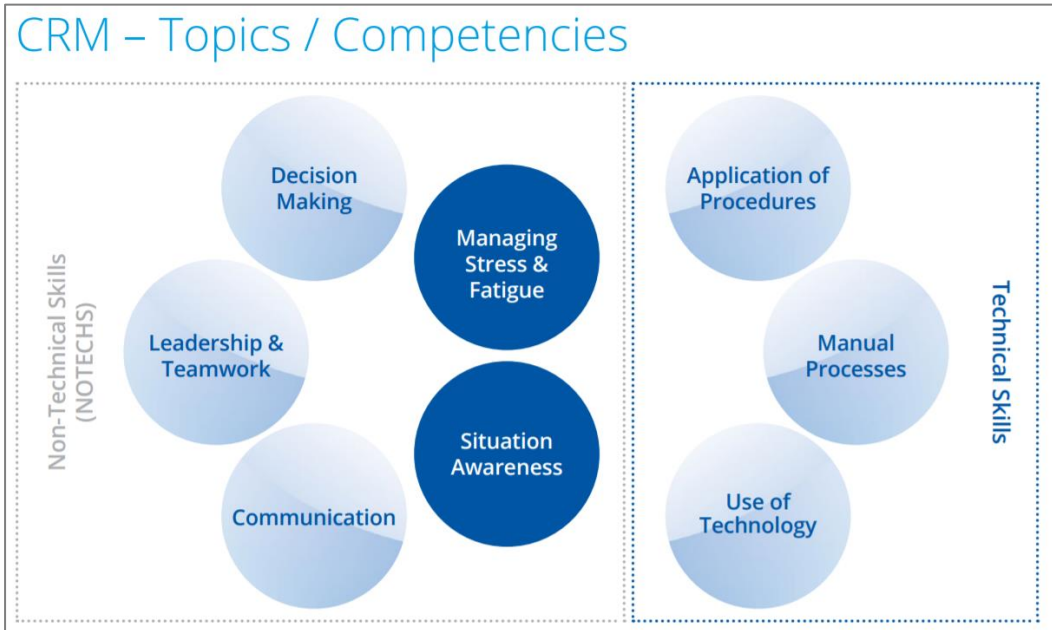
Here is a view of commercial airline incidents. The airline industry too plateaued and could not get that trend to drop. All of aviation's training was based on technical competencies. It wasn't until Kegworth in the 1980s that a sweeping change was made, whereby there was a transformation in training in that 50% was focussed on human factors and 50% on the technical aspects of flying an aircraft. In 2017, there were zero commercial airline fatalities worldwide – with aircraft activity at an all time high.



From a total of 4,104 Marine accident events analysed, it was noted during investigations:

- 66% were attributed to a human actions' category.
- Only 20% to system / equipment failures.

**What do we need to do that is different?**



**The key is fully integrating technical and human factors' competencies to prepare teams for operational challenges**

We should ensure that human factors' learning and lessons reach beyond the academic theory and thrive in the classroom. They also need to make it into the real world on the front line.

We know that front line behaviour will not change if guidance and encouragement stops once we leave the classroom. Language and behaviours have to be demonstrated and practiced in situ and individuals will need to see their superiors and peers applying these behaviours on a regular basis before they will feel comfortable doing so themselves.

With the right guidance and encouragement the appropriate HF language and behaviours will take root and eventually become part of everyday life, providing the desired performance improvements.

## **Results speak for themselves – Sharing case studies**

Salos has several case studies available to share if you want to see the powerful results and understand how we are integrating human factors with technical training in an immersive simulator environment and how we deliver human factors coaching at the coalface.

[www.salos-sunesis.com](http://www.salos-sunesis.com)

