

Llanbury Consulting

'RISK' - The big picture

Business Aviation Risk Portfolio

EBACE Safety Workshop

23rd May 2016

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Llanbury Consulting Ltd

Purpose Driven

Leave you *inspired for the possibilities*
and *equipped for the pitfalls*
of a Business Aviation Risk Portfolio

EASA proposed Key Safety Risk Areas for Bus Av

- **MAC/Airprox - ATM:** the business aviation sector routinely carries out significant amounts of flying in uncontrolled airspace and such aircraft regularly use smaller airports. This exposes business aviation operators to a potentially greater risk of airborne collision compared to airline operations. Work on MAC/Airprox will be taken forward within the EASp through further risk assessment involving a wide range of industry Stakeholders.
- **SCF-NP:** from a technical point of view, non-powerplant component failures continue to feature in accidents and this remains an area of focus for future safety activities.
- **Runway Excursion:** a significant number of business aviation occurrences take place in the landing phase and runway excursions continue to feature as a safety risk. At a worldwide level, around a third of accidents involve runway excursions, making the situation in Europe significantly better than that at the global level.
- **Abnormal Runway Contact:** the occurrence category of abnormal runway contact includes a number of different types of events including hard landings, tail strikes and long landings. Often these are pre-cursors to runway excursions and in many cases are influenced by poor weather and other environmental factors.
- **Loss of Control - In-Flight:** while loss of control accidents rarely occur, the accident often result in fatalities. Therefore, understanding and controlling the risks leading to a loss of control will be an area of specific focus within the business aviation sector.

Business Aviation Risk Portfolio

What is in it for ME?

“At last the safety attention we deserve”

Spot Poll: **+ve** or **-ve** i.e **More** or **Less** ?

‘The wider industry, and particularly those in the *risk decision making seats*, can finally see what they need to be applying their attention to’

Business Aviation Risk Portfolio

What are the pitfalls of this?

“More statistics sending us chasing our tails”

Spot Poll: Statistics today **Help** or **Hinder**?

EASA Annual Safety Review 2014

“One of the main messages from the analysis of business aviation is that the high level of safety in this sector has continued to be maintained in 2014.”



EASA Annual Safety Review 2014

► **Table 8:** Business aviation fixed wing aeroplane fatal and non-fatal accidents and serious incidents last year compared to the 10 year average, all mass categories

	Fatal Accidents	Non-Fatal Accidents	Serious Incidents
2014	1	2	3
2004-2013 average	0.3	1.2	3.3

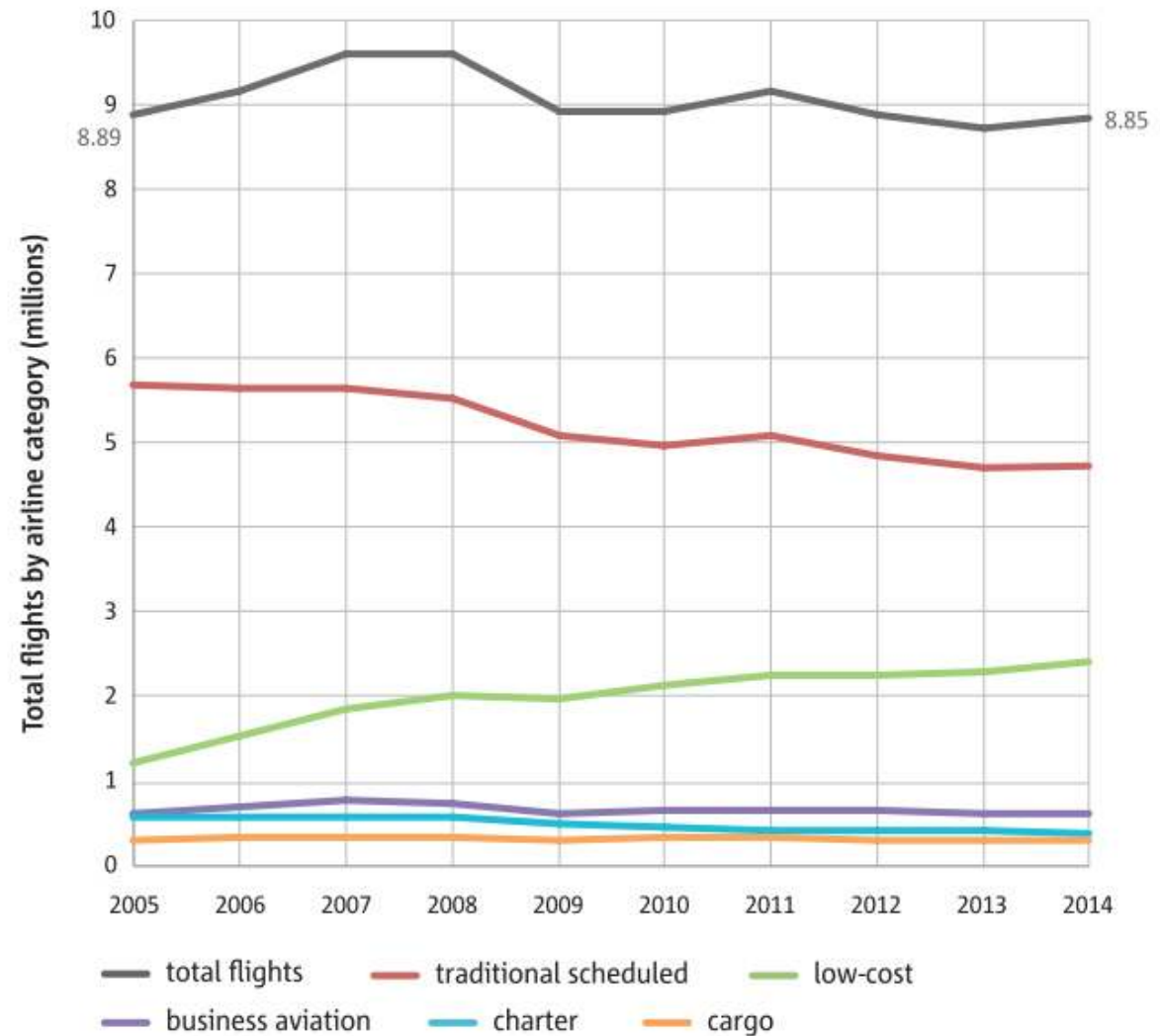
► **Table 4:** EASA MS CAT accidents per occurrence category

	Fatal Accidents	Non-Fatal Accidents	Serious Incidents
2014	1	26	66
2004-2013 average	1.2	22.6	78.1

European Aviation Environmental Report

Sector data from
European Aviation
Environmental
Report 2016

Figure 1.1



EASA Annual Safety Review 2014

10 year average data

Aviation Sector	Fatal Accidents	Number of flights	Flights per fatal accident
Bus Av	0.3	700,000	2.3M
Schd CAT	1.2	7.5M	6.3M

European Business Aviation no. of fatal accidents only $\frac{1}{4}$ of that of CAT

European Business Aviation flight nearly 3 times more likely to be fatal than Schd CAT

BUT surely... there are far less people involved...

“One of the main messages from the analysis of business aviation is that the high level of safety in this sector has continued to be maintained in 2014.”

EASA Annual Safety Review 2014

► **Table 9:** Business aviation fixed wing aeroplane fatalities, serious injuries and minor injuries last year compared to the 10 year average, all mass categories

	Fatalities	Serious Injuries	Minor Injuries
2014	4	0	2
2004-2013 average	0.4	0.4	0.5

► **Table 5:** EASA MS CAT number of fatalities and serious injuries

	Fatalities	Serious Injuries
2014	116	11
2004-2013 average	52.4	8.6

EASA Annual Safety Review 2014

10 year average data

Aviation Sector	Fatalities	No. flights	Flights per fatality	People carried*	People carried per fatality
Bus Av	0.4	700,000	1.7M	3.5M	8.7M
Schd CAT	52.4	7.5M	143,000	900M	17M

European Business Aviation fatalities less than 1% that of CAT

European Business Aviation twice the fatality rate compared to CAT

Using 2014 data only that rate goes to nine times!

“One of the main messages from the analysis of business aviation is that the high level of safety in this sector has continued to be maintained in 2014.”

Business Aviation Risk Portfolio

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Spot Poll: Statistics today **Help** or **Hinder**?

‘Wrong Priorities’

Wrong Priorities

Poor knowledge of the Risk

Wrong comparison - between issues & sectors

Pitfalls - Wrong Priorities

Poor knowledge of the Risk

Data ≠ Knowledge

Data + Interpretation = Knowledge

*Collection &
Organisation*

*Measurement &
Communication*

Pitfalls - Wrong Priorities

Wrong comparison

Between issues, sectors, organisations etc.

*Again knowledge is the key but this time also
'Common' knowledge*

'Common' Knowledge

'In even the simplest of data sharing exercises in aviation safety; comparing apples and pears is probably the biggest issue!'

Second: Duplication!

*Common European Risk
Classification Scheme
will help (**significantly**)*

*And furthermore the proposed
approach is good news for the BusAv
community*



Problems - Summary

**3Ds => Dis-benefit,
Disinterest, Difficulty**

Data Collection

How do I get enough of the right stuff from my employees?

Organisation of Data

How do I organise it to give me and others value?

*Without it
burying me!*

Measurement of Risk

How do I make it tell me something useful?

Communication for 'Risk Knowledge'

How do I turn it ALL into 'knowledge' in the minds of those making risk decisions?

**Turn things on their
head**

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*How do I turn it ALL into 'knowledge' in the minds of
those making risk decisions?*

Solutions - Turn things on their head!

1) Should we measure Performance or rather should we measure Knowledge?

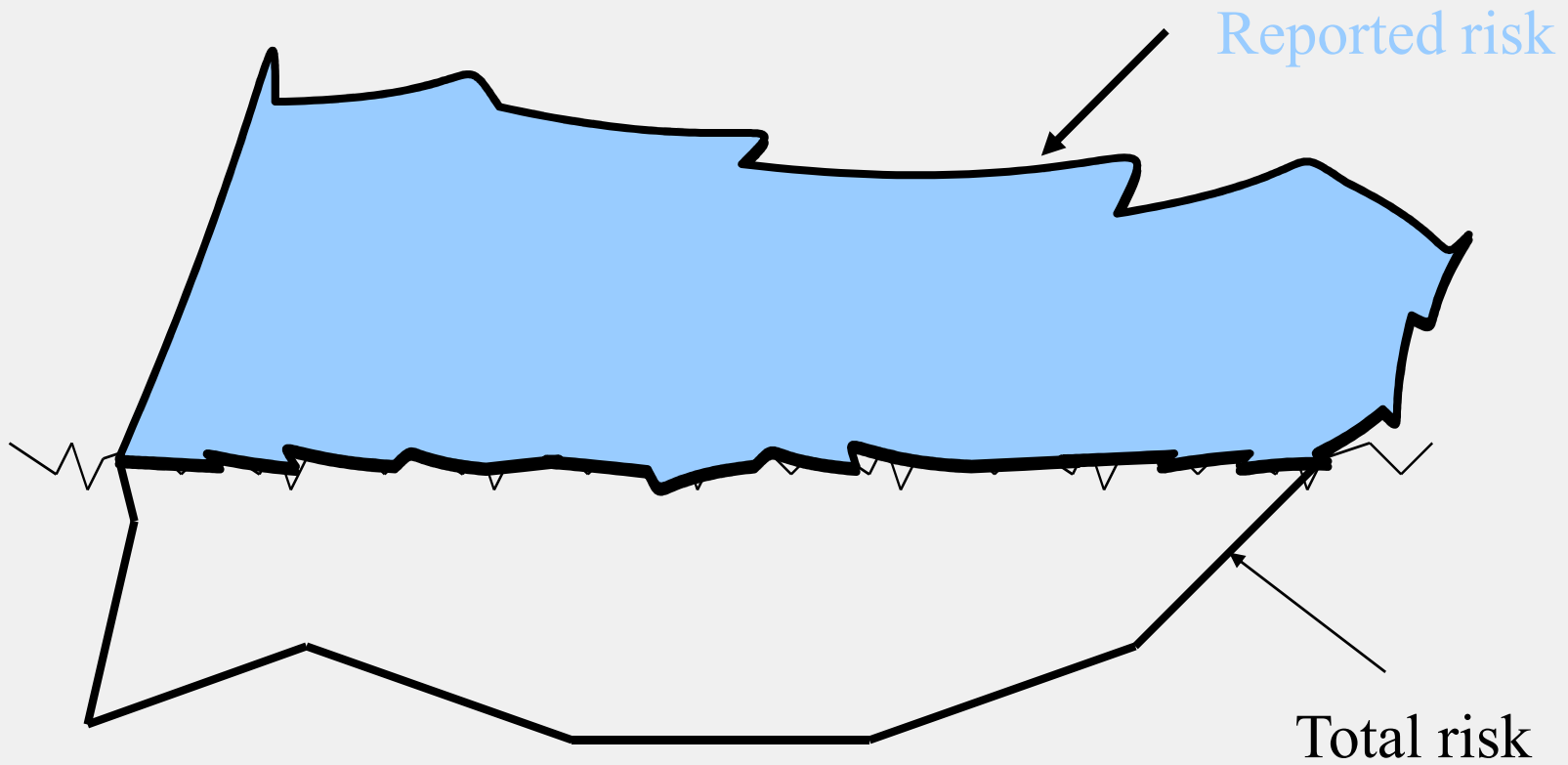
NOT

'How bad do you look?'

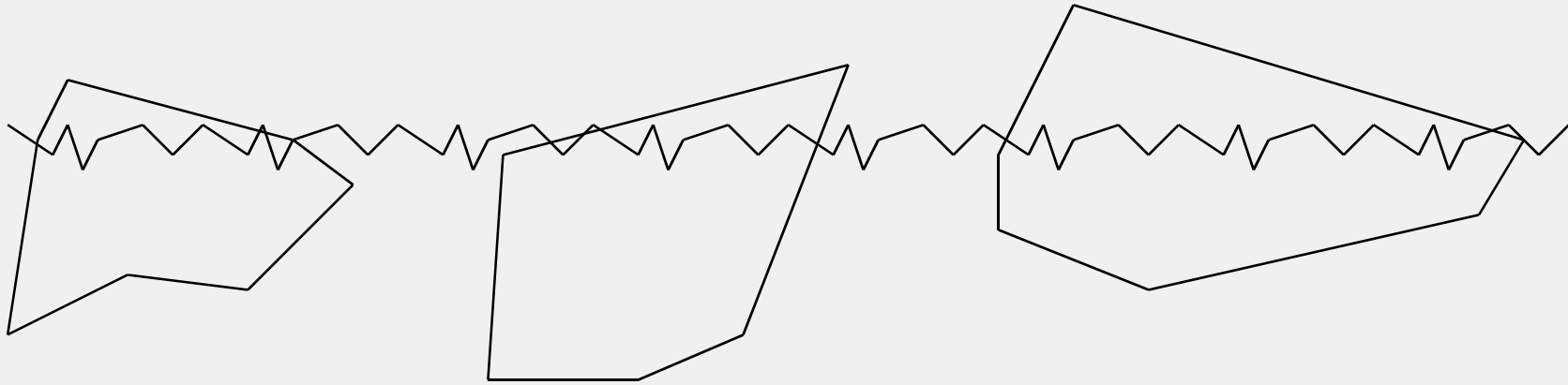
BUT RATHER

'How much do you know?'

Measuring Performance



Measuring Knowledge

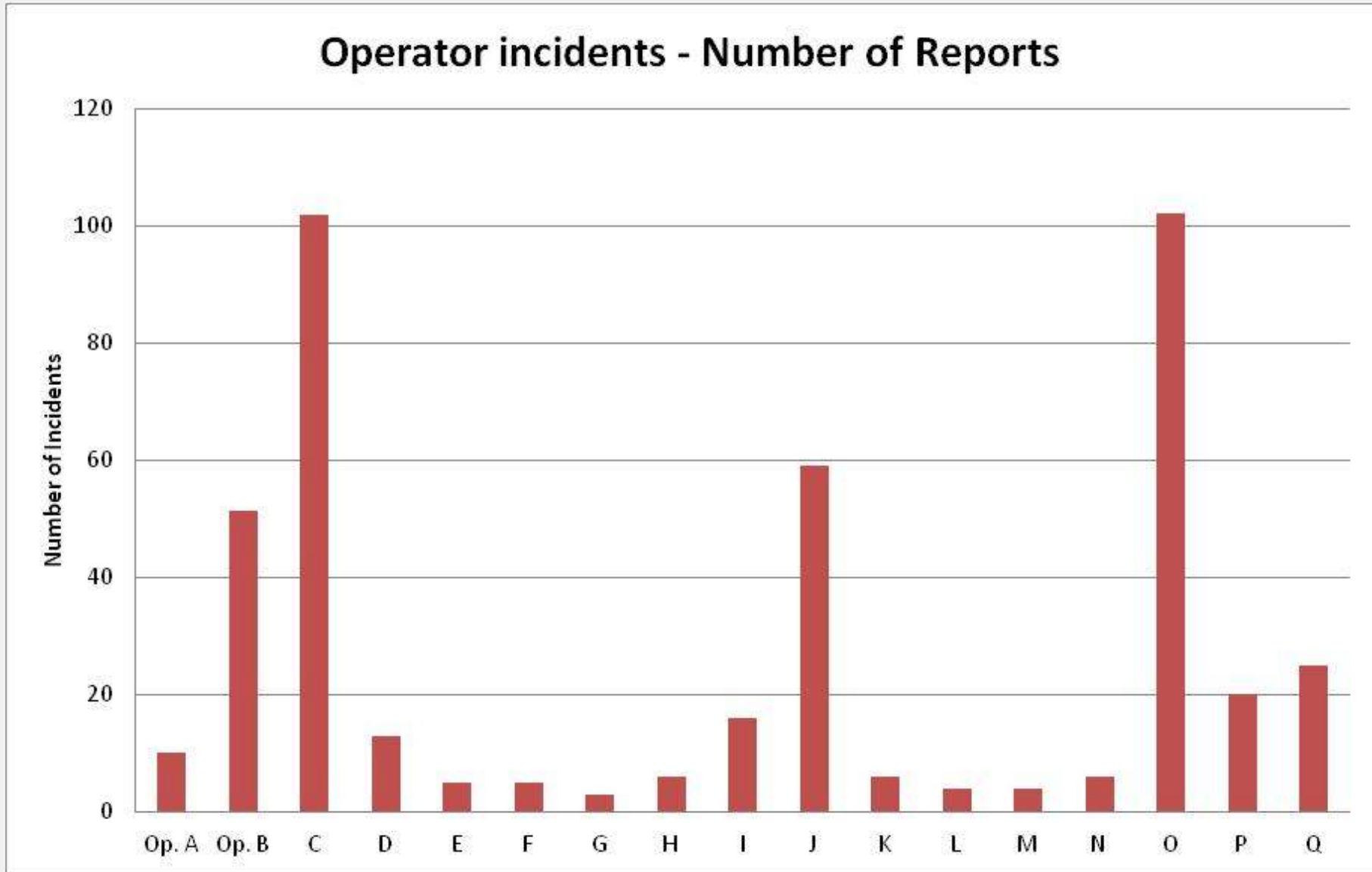


You don't know what you don't know!

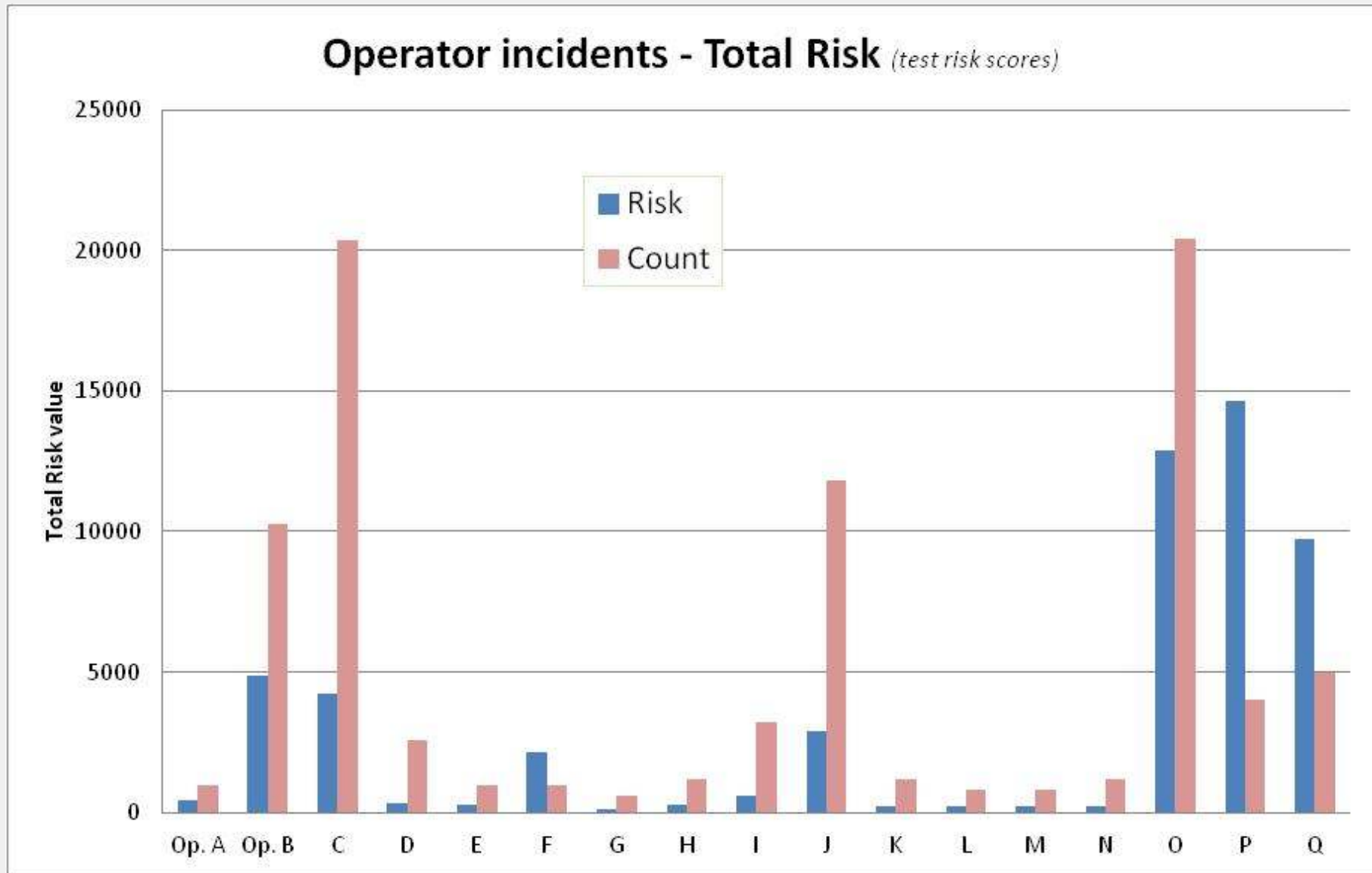


There are some "known unknowns" – [Rumsfeld](#)

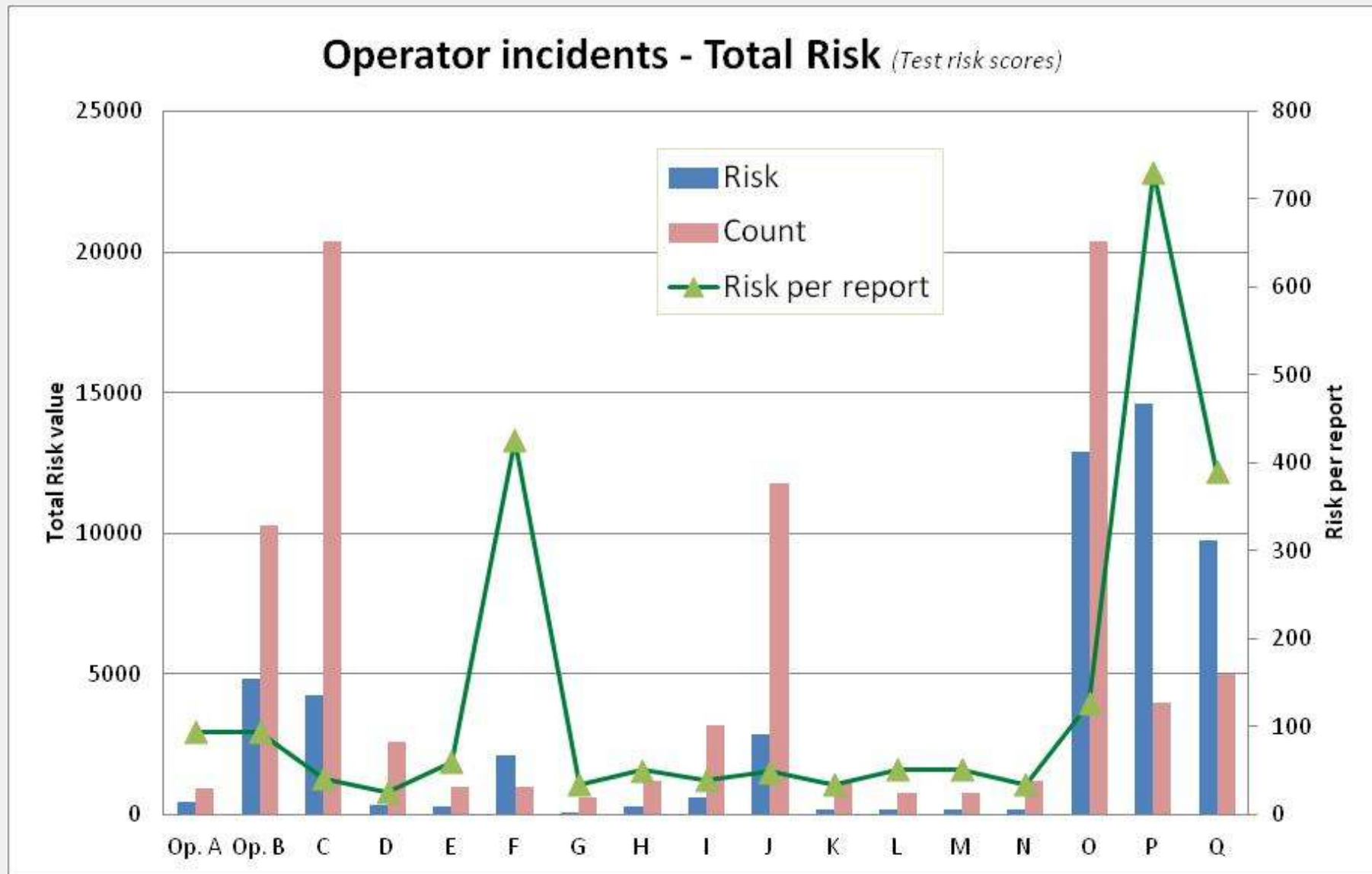
Measuring Performance



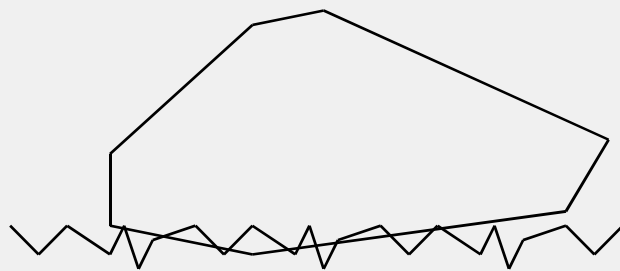
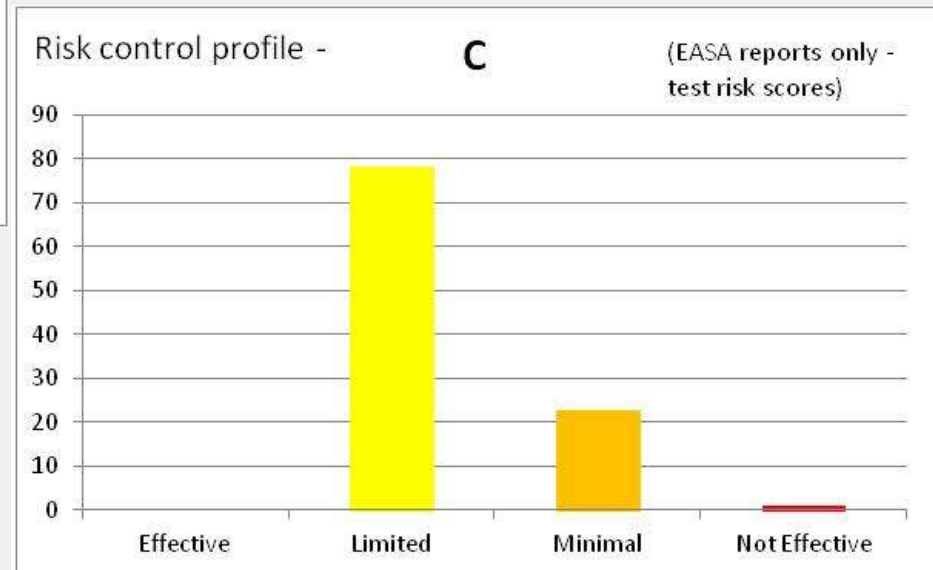
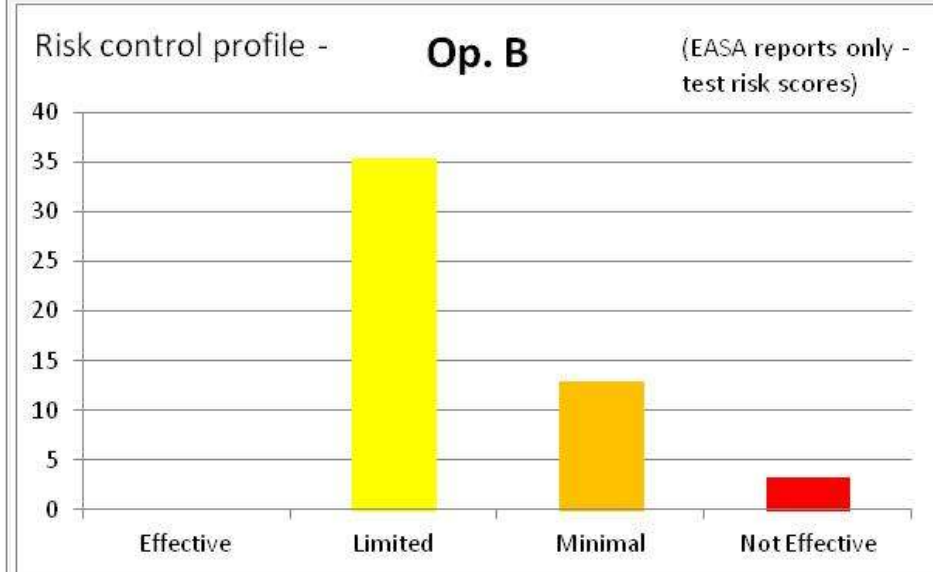
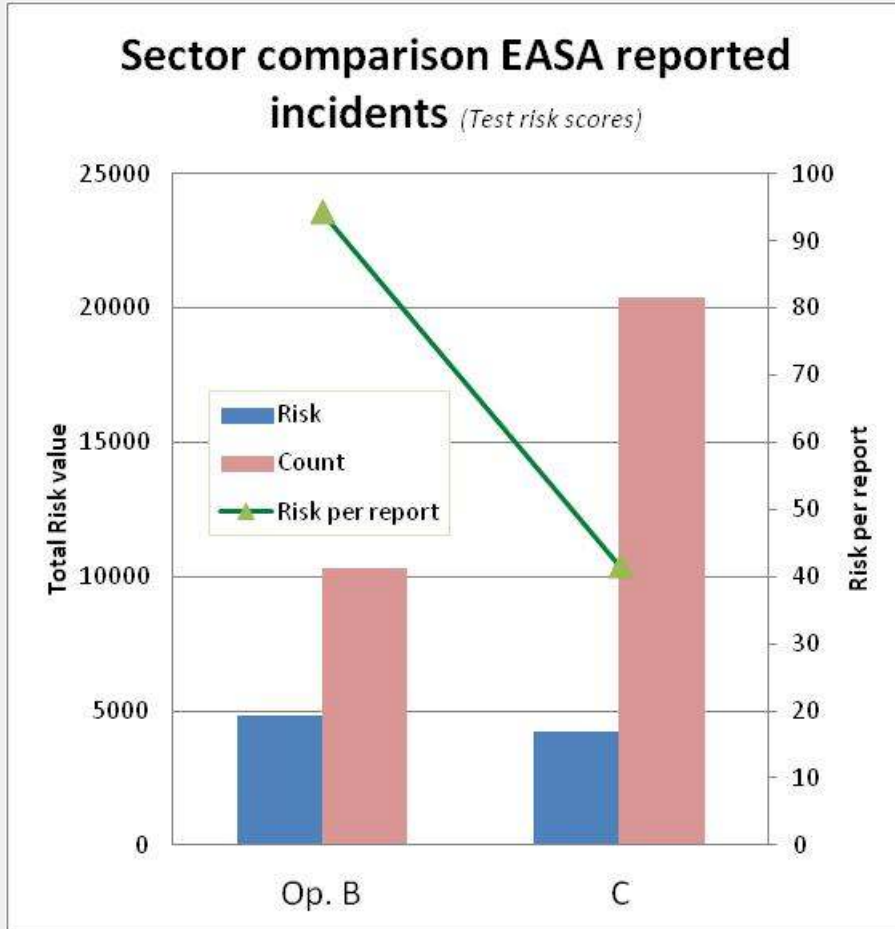
Measuring Performance



Measuring Knowledge



Measuring Knowledge



Solutions - Turn things on their head!

2) Should reporting be a giving exercise for the employee or a receiving one?

SO NOT

'I feed the safety machine because I have to'

BUT

'I share what is going on in my day as doing so I learn directly more about what is happening overall'

Avg. Facebook user:
**3 posts per day, 2.5 hrs
online per week!**

Solutions - Turn things on their head!

3) Do I employ more people to process the data or do I get the reporters to do it?

SO NOT

'They tell us what happened and we then work out why'

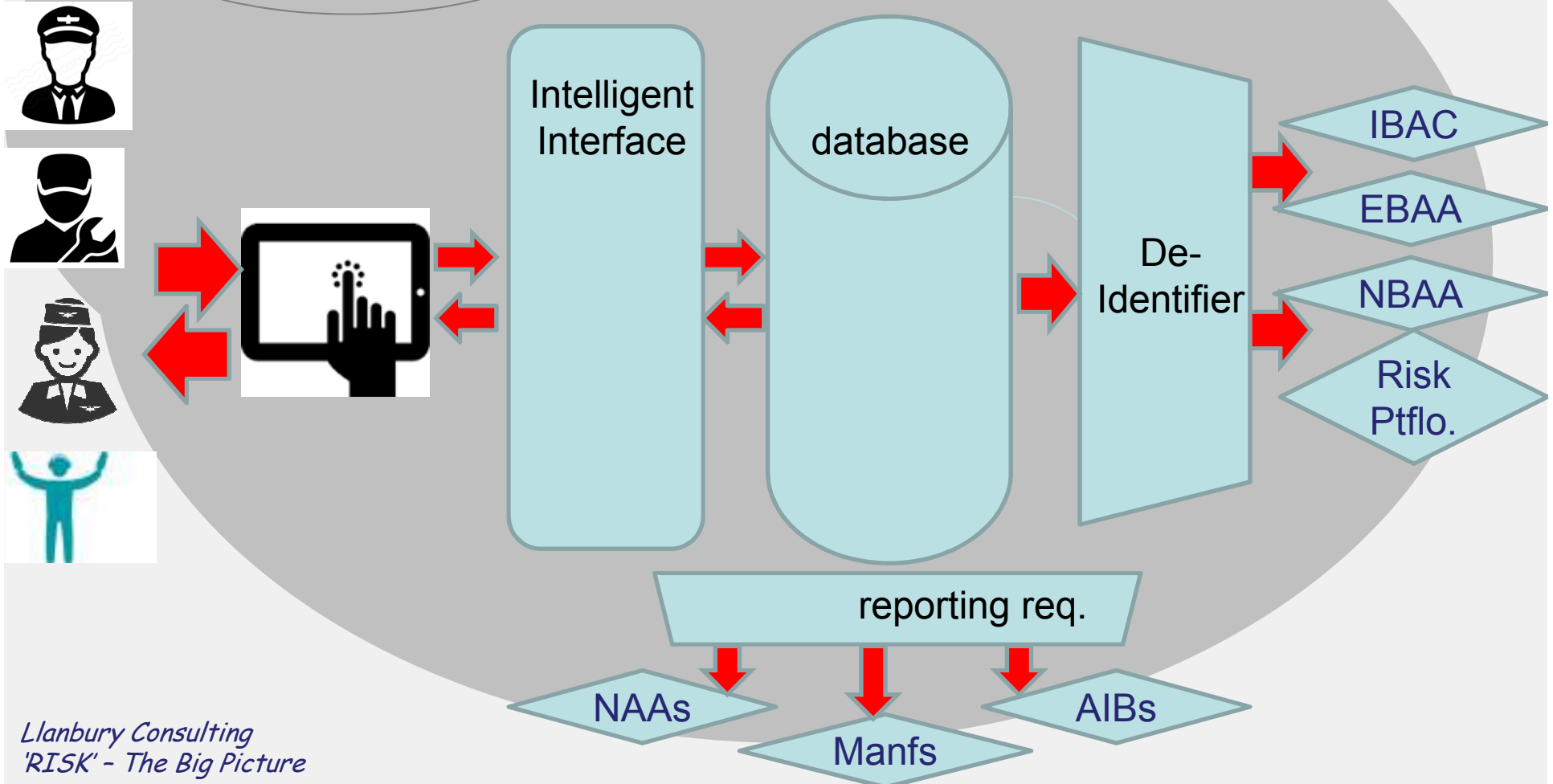
BUT

'As they engage with the system it shares 'our' knowledge so together they understand (and record) why it happened'

And how bad it was –
Risk Classification at source!

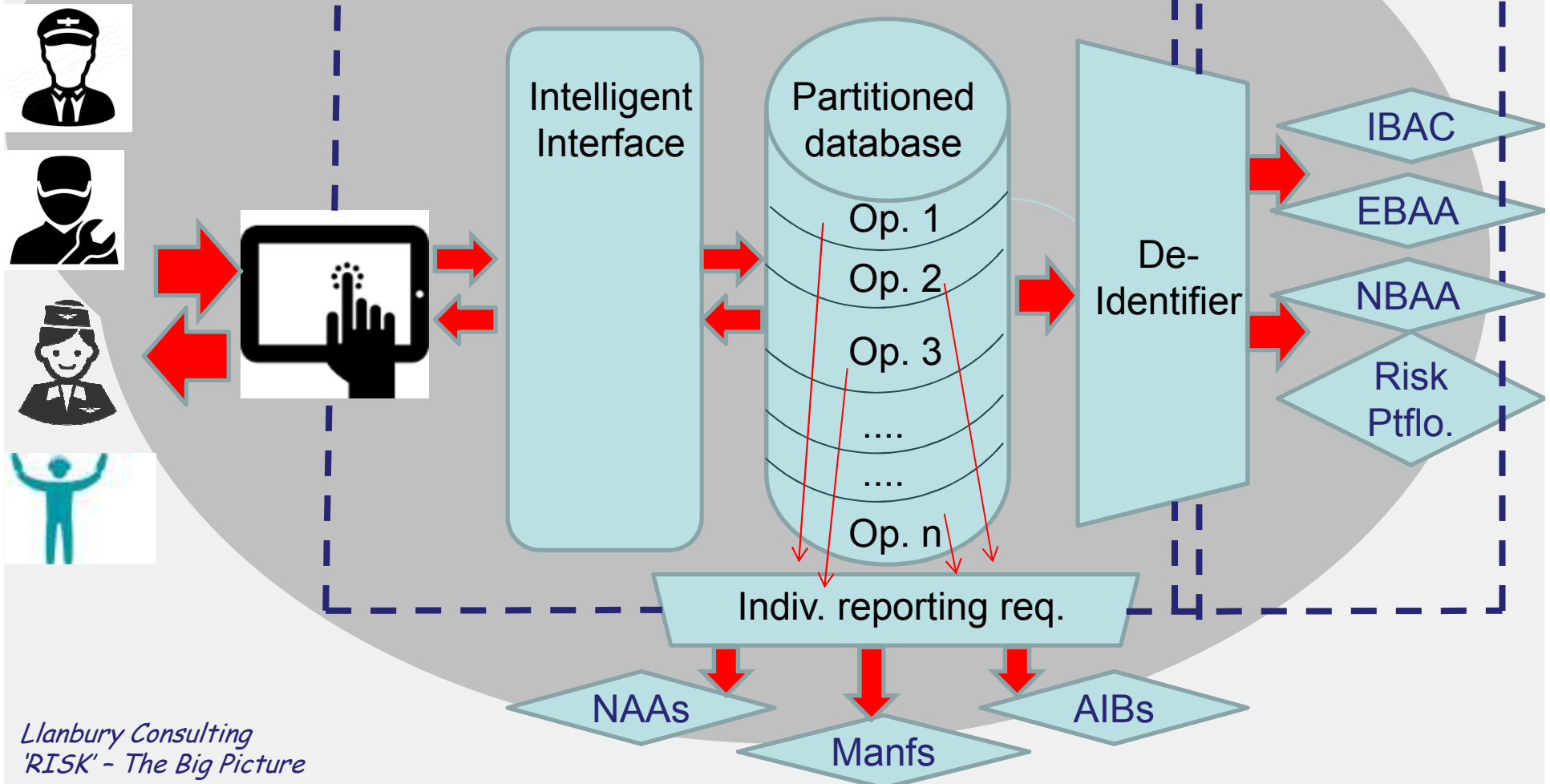
Solutions

**Remember
the 3Ds**



Here's a thought...?

**Thousands of Operators --
One investment – IBAC/EBAA/NBAA**



Questions and Discussion

Thank you

For further information:

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www.risk-thebigpicture.biz