



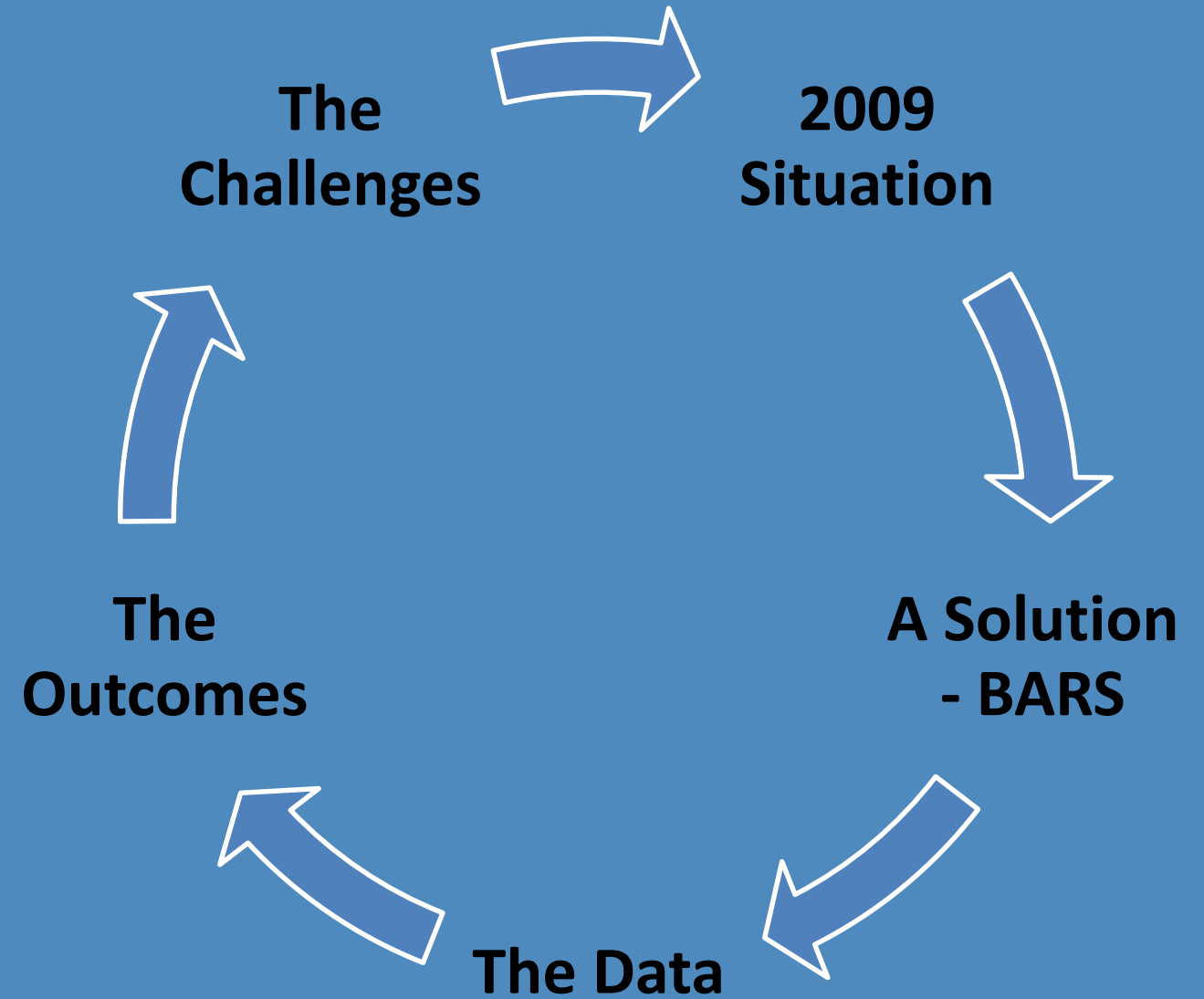
Safety in the Contract Aviation Environment

FLIGHTSAFETY.ORG / BARS

IASS72 – 2019 - Taipei

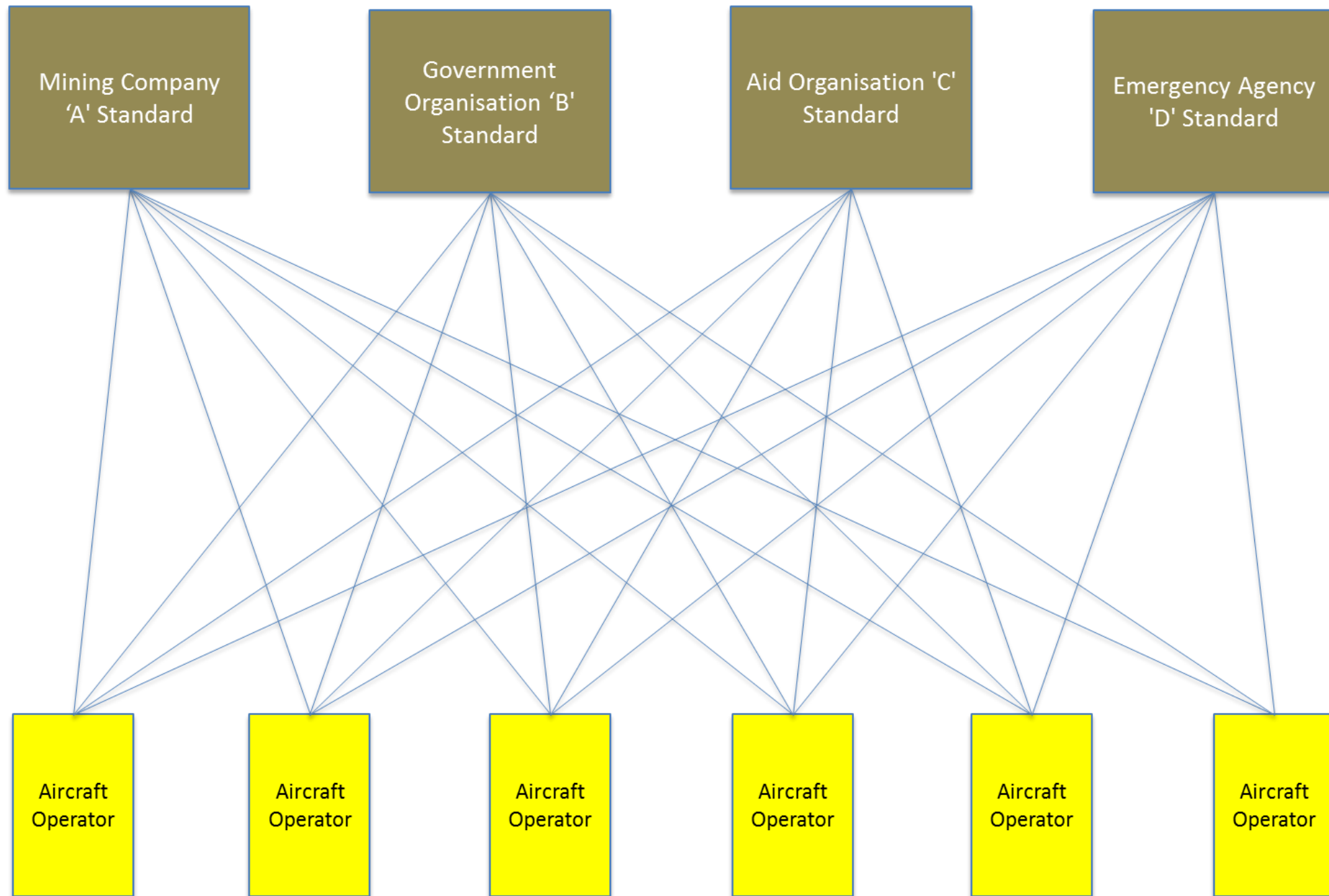
David Anderson
BARS Program MD

AGENDA

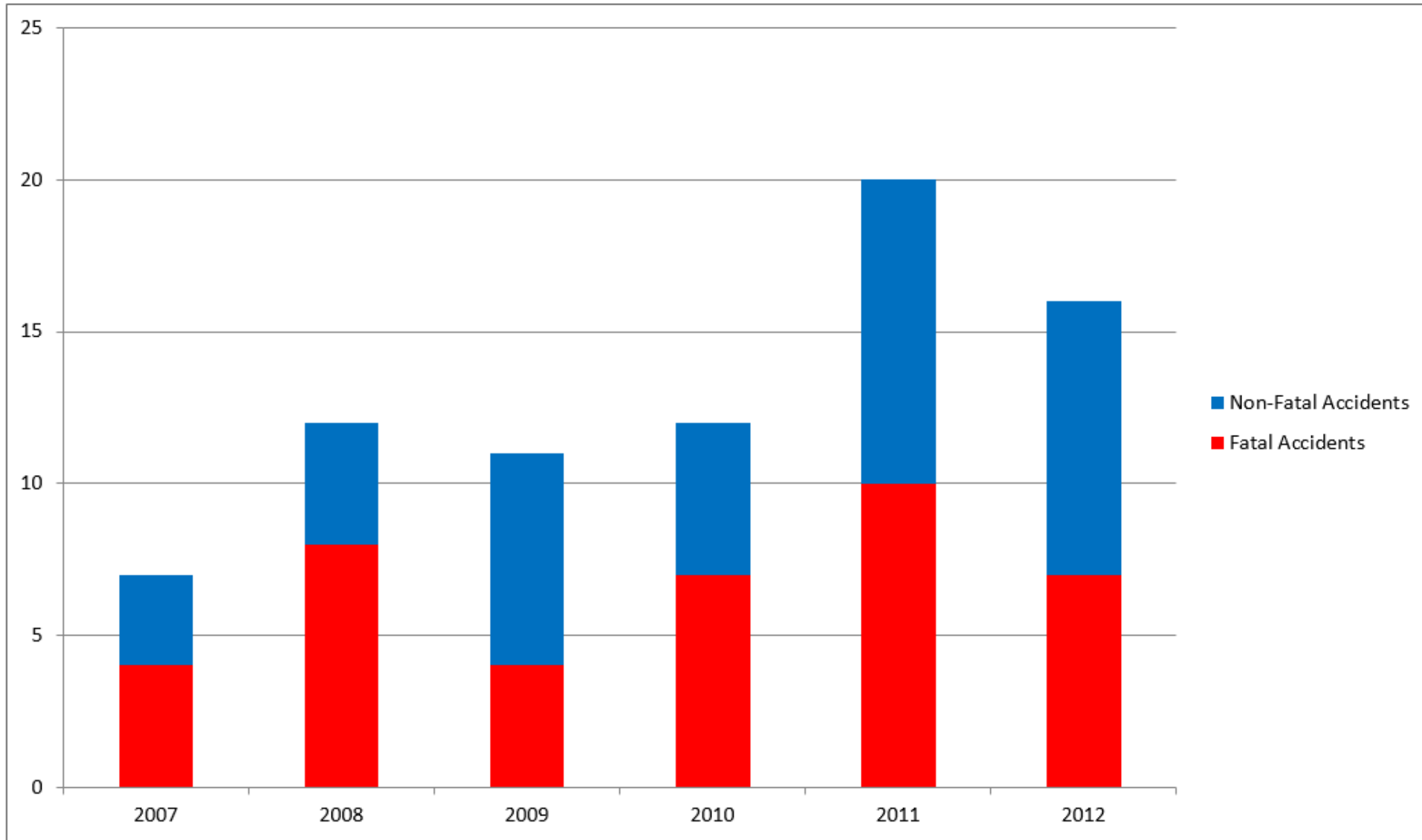




BARS Environment and Operations



Onshore Resource Sector Accidents

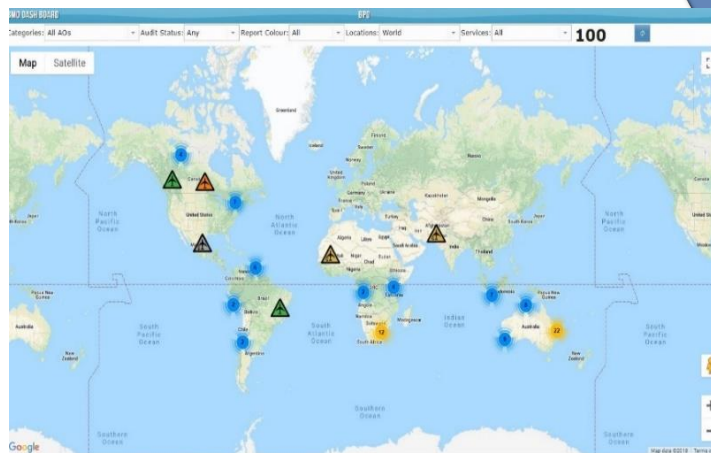
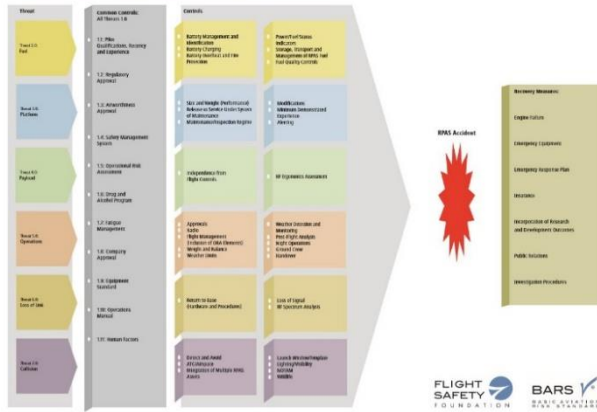


Onshore Resource Sector Accident Events – 3Q2012

AGENDA



BARS FOR RPAS OPERATIONS



BARS
B A R S
A V I A T I O N
P R A C T I C E

Auditor Accreditation Course

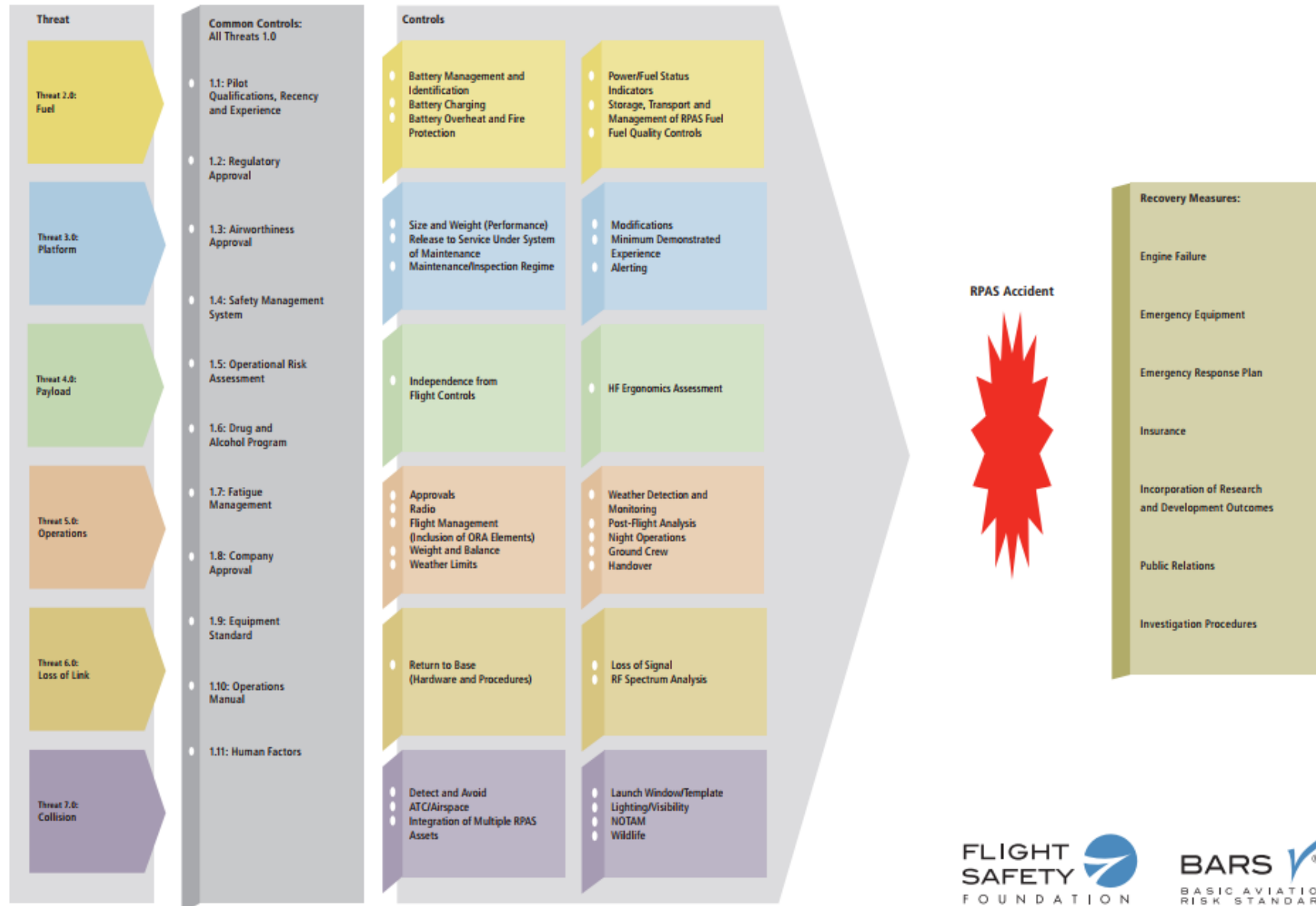
A great course to learn how the BARS Program works and how it can assist managing aviation safety in the contract environment.

Find out more:
[@flightsafety.org/bars/bars-auditor-training](https://flightsafety.org/bars/bars-auditor-training)
 or via email: bars@flightsafety.org
 phone: 1300 557 162

Phase	Common Elements: All Items 1-8	Options	
Item 1-3: Exit	1-1. Pilot Qualification, Training and Experience	4-1. Captain Management and Identification 4-2. Crew Resource Management and the Pilot Role	5-1. Aircraft Fuel Status and Alerts 5-2. Fuel Manager and Management of Fuel and the Empty Condition
Item 1-5: Partials	1-2. Airworthiness Approval	4-3. Air and Weather Performance Minimum Required Levels (Status of Maintenance and Operational Status)	5-3. Weather Conditions 5-4. Minimum Required Operational Altitude
Item 1-7: Payload	1-3. Safety Management System	4-4. Information from Flight Deck	5-5. ATIS/Enroute Information
Item 1-8: Operations	1-4. Operational Risk Assessment	4-5. Cockpit Resources 4-6. Factors of Risk (Human) 4-7. Human Factors 4-8. Weather Issues	5-6. Weather Outside and Weather 4-9. Human Factors 4-10. Human Factors 4-11. Human Factors
Item 1-9: Loss of Life	1-5. Damage Assessment	4-12. Cockpit Resources 4-13. Human Factors 4-14. Human Factors	5-7. Loss of Life 5-8. Human Factors
Item 1-10: Cabin	1-6. Operations Manual	4-15. Cockpit Resources 4-16. Human Factors 4-17. Human Factors	5-9. Loss of Life 5-10. Human Factors
Item 1-11: Cabin	1-7. Human Factors	4-18. Cockpit Resources 4-19. Human Factors 4-20. Human Factors	5-11. Loss of Life 5-12. Human Factors



BARS FOR RPAS OPERATIONS



The BARS Bow Tie Model – RPAS Operations



The BAR Standard Suite

Basic Aviation Risk Standard Implementation Guidelines



Version 7

Basic Aviation Risk Standard Offshore Helicopter Operations Safety Performance Requirements Implementation Guidelines



Version 3, December 2016

1.10: Maintenance Duty Time

Ensuring maintenance personnel are not impacted by fatigue.

The aircraft operator or approved maintenance organization must establish a fatigue management program to minimize the effects of acute and chronic fatigue amongst maintenance personnel. This must include maximum working hours, minimum rest periods and roster schedules. The requirement to conduct overnight maintenance must be reviewed by a Competent Aviation Specialist.

The safety of any aviation system is dependent upon all participants performing reliably and efficiently. As aircraft maintenance activities are routinely undertaken by technical personnel on a shift work system, it is important that these shifts are managed by a fatigue management program. This program should ensure that fatigue occurring during a shift or accumulated over a period of time due to the pattern of shifts worked and other tasks, does not endanger the safety of a flight.

The aircraft operator, or its contracted maintenance organization(s), must have fatigue management guidance for all maintenance personnel, which, as a minimum, meet the standards required by the responsible regulatory authority.



The aircraft operator or contracted maintenance organization(s) should provide fatigue management guidance for all maintenance personnel. This documentation should be in compliance with any associated regulatory guidance.

Records should confirm that aircraft maintenance personnel roster schedules, hours worked and rest periods are in accordance with any documented fatigue management guidance.

The Implementation Guidelines

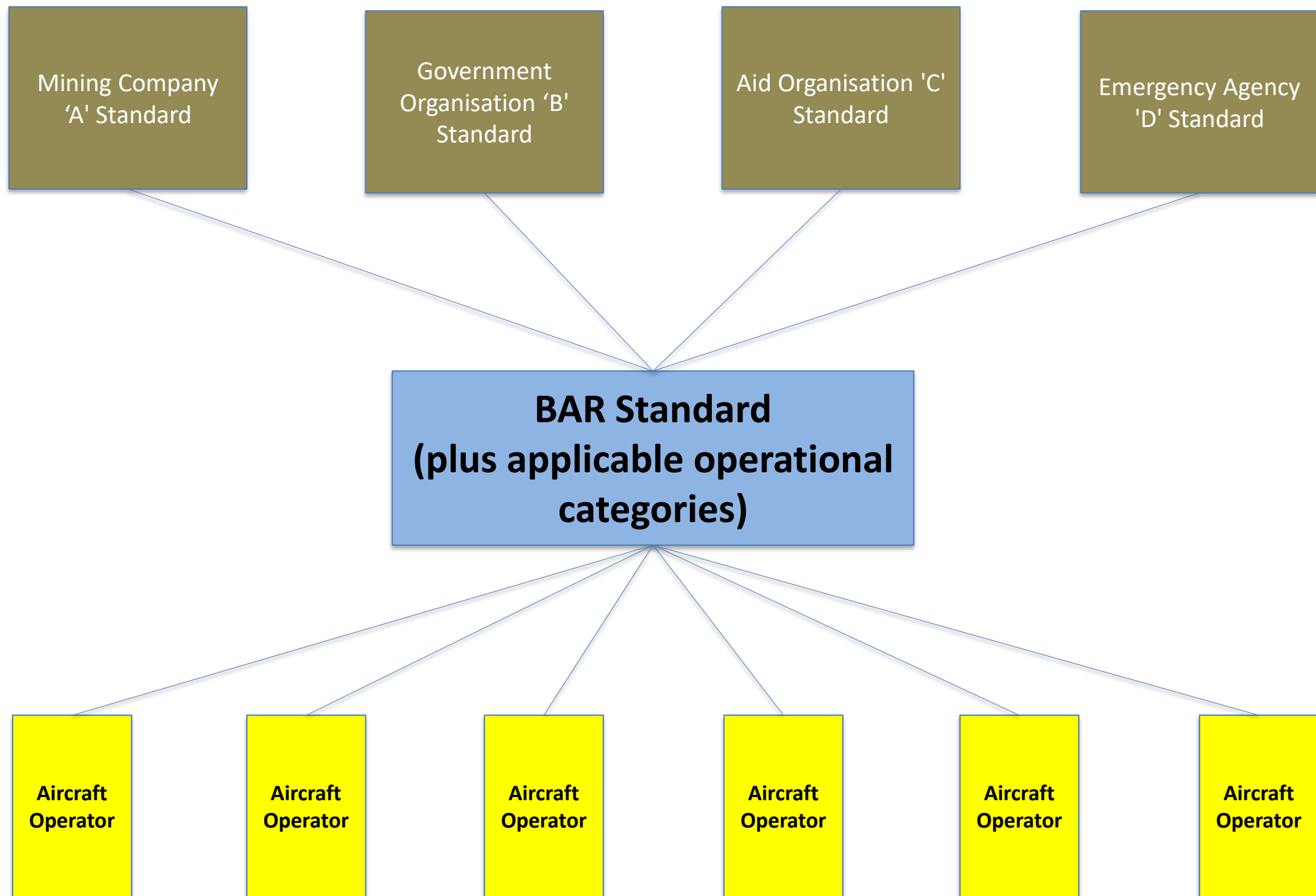
1. The Standard

3. Aviation Safety
Training Programs

2. Audit Program

4. Global Data
Analysis Program





Verify Design Effectiveness

Are Controls in Place?

Aircraft Operator/BARS Audit Protocol

FSF BARS AUDIT

- Safety Management systems
- Flight and Duty time (fatigue) management
- Flight Procedures
- Pilot and engineering training/recency
- System of aircraft maintenance
- Spare parts control



Validate Operating Effectiveness

Are Controls Effective?

Field Location/Risk-based

Operational Review

- Flight observations/procedures/crew-handling
- Passenger control/manifesting/weighing
- Weather reporting/flight planning
- Field-based refueling systems/flight tracking
- Helipad, helideck and airfield inspections
- Search and rescue, emergency response plan

FSF Accredited Auditor

Accredited Auditor and Registered Audit Company
Previous auditor qualifications
Objective, repeatable audits

INDUSTRY SUPPORTED

Competent Aviation Specialist

Company designated
Resource sector aviation operations experience
Documented, auditable operational reviews

COMPANY SPECIFIC

The Two Dimensional Approach to Oversight



BARS 
BARS AVIATION
RISK SPECIALIST

Auditor Accreditation Course

A great course to learn how the BARS Program works and how it can assist managing aviation safety in the contract environment.

Find out more:
[@flightsafety.org/bars/bars-auditor-training](https://flightsafety.org/bars/bars-auditor-training)
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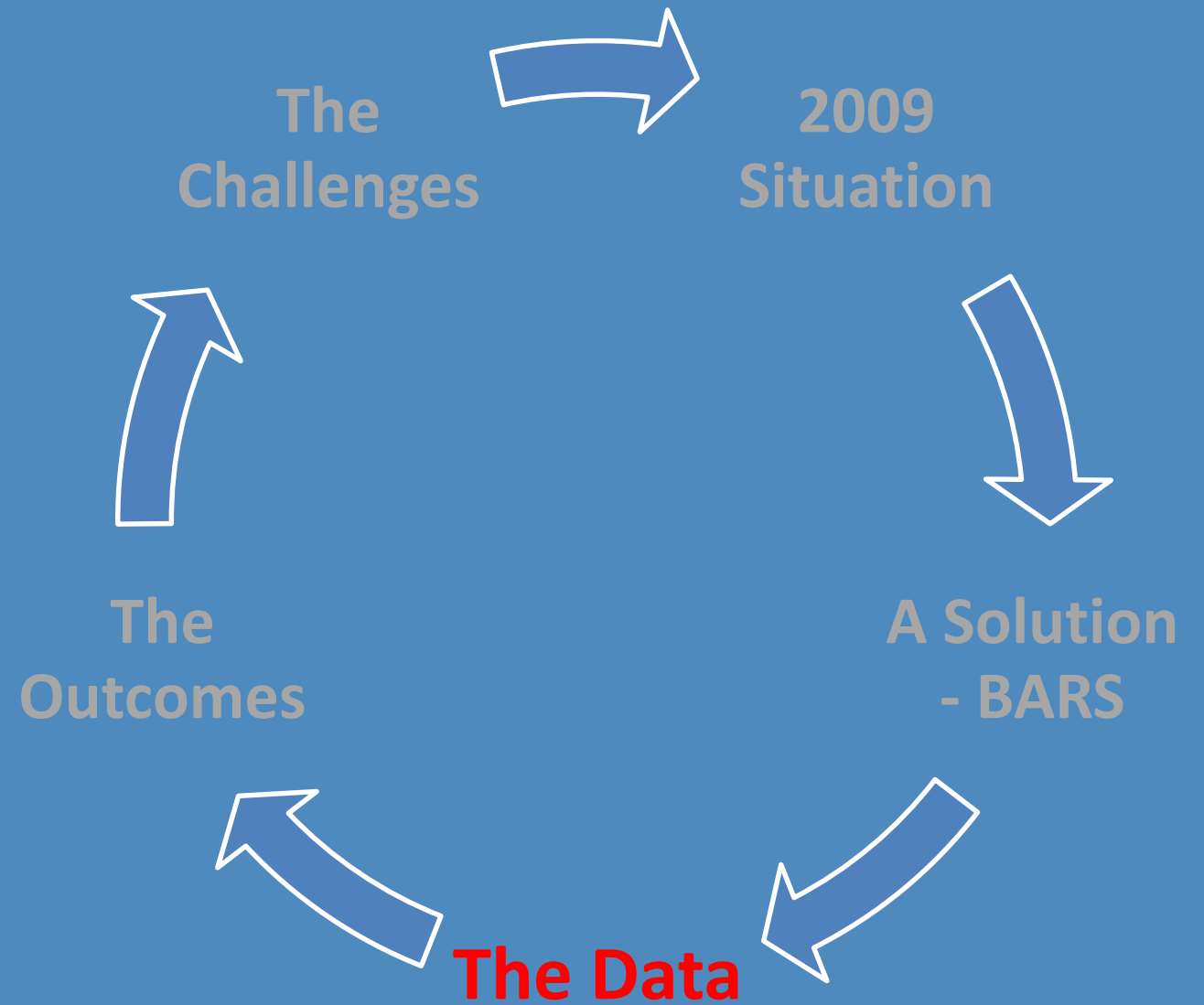


Airwork Group

**Helicopter Services
in Contract Aviation**

M i k e H a l l
C o m m e r c i a l D i r e c t o r

AGENDA



BARS Program Initiatives

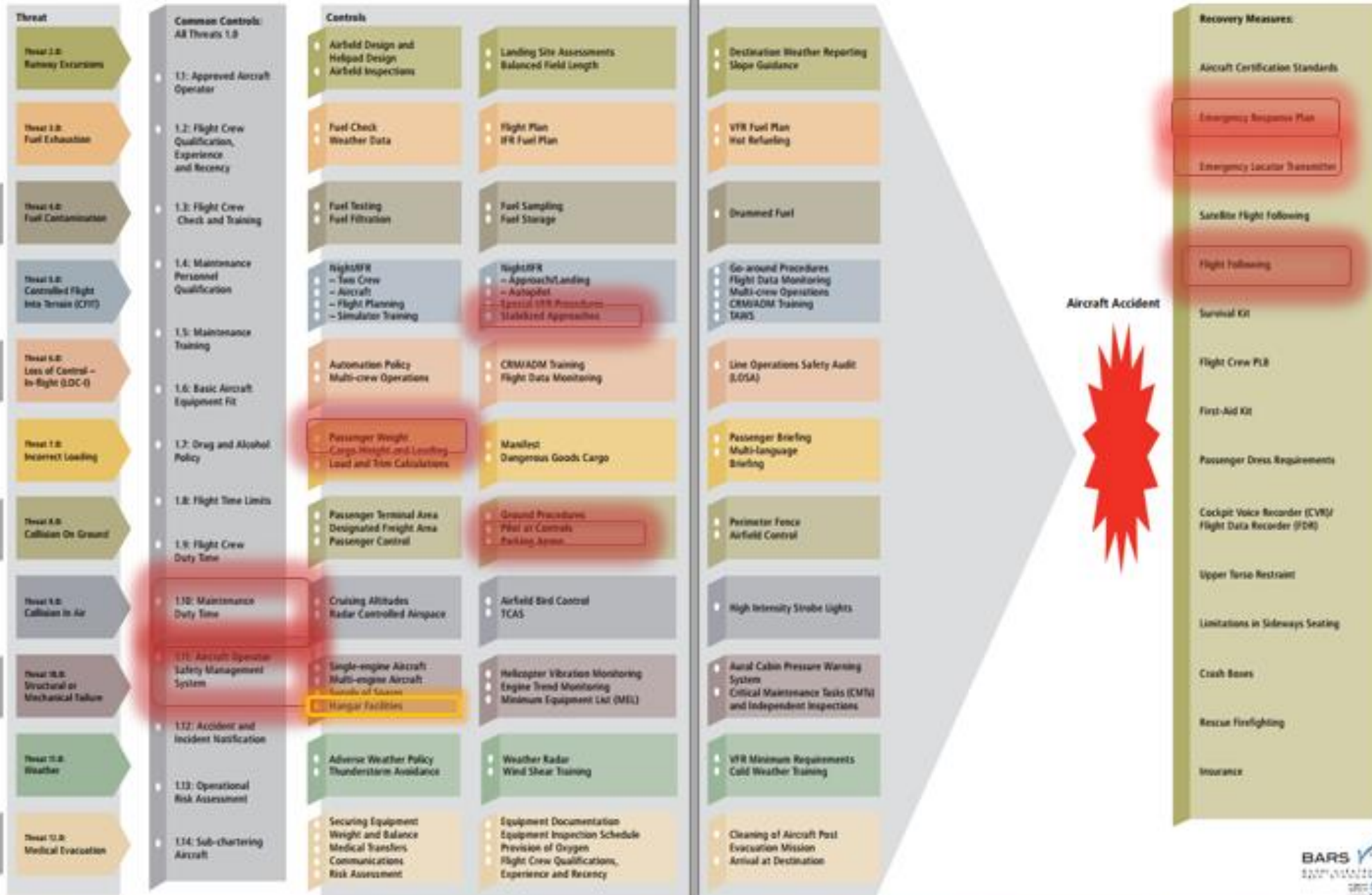
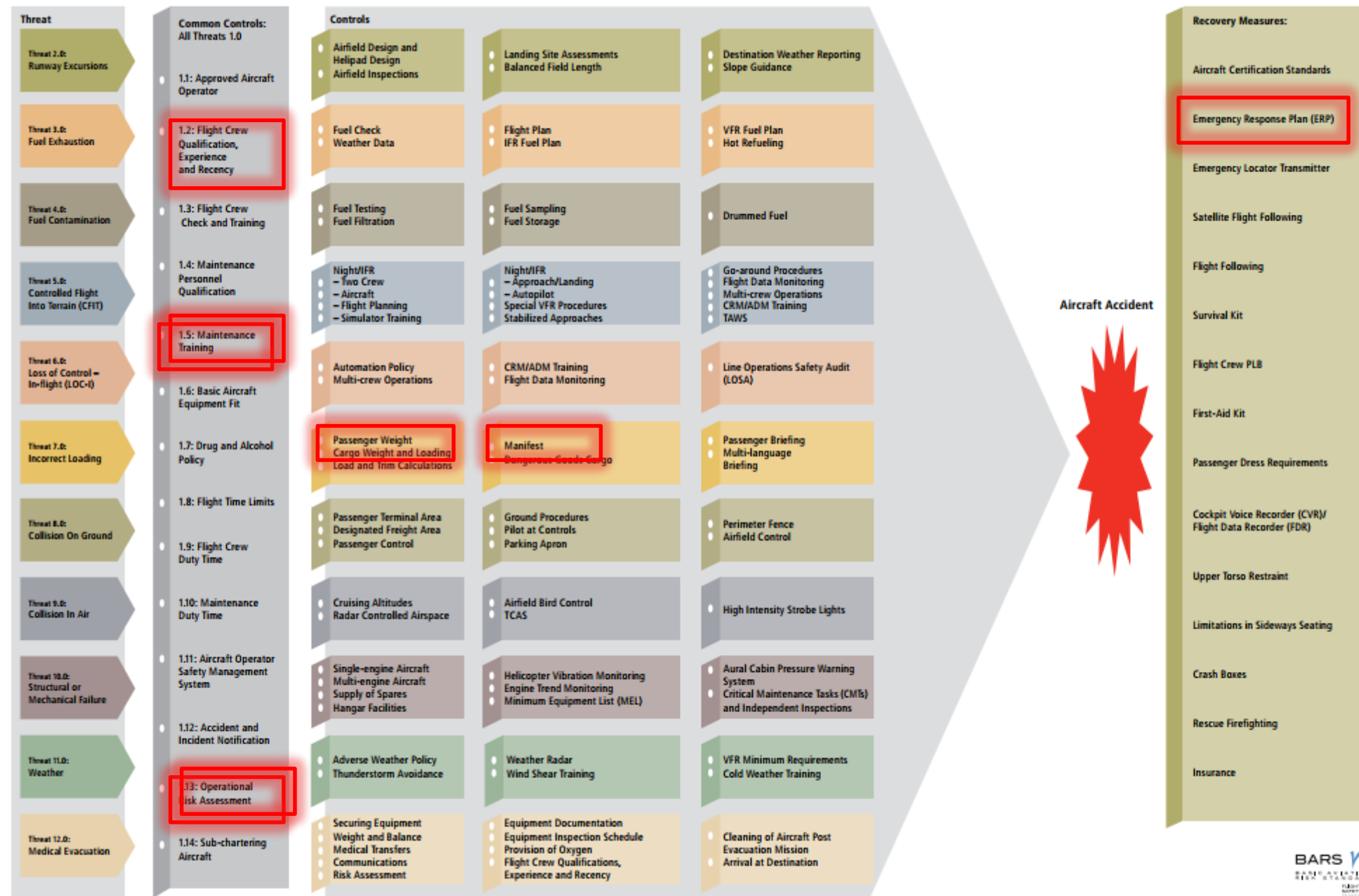


Figure 3: BARS Bow Tie Risk Model – Schematic of Aviation Risk Management Controls and Recovery Measures.



ICAO USOAP Effective Implementation Scores — BARS Exposed Countries 2015

Region	Country	USOAP						FAA	EASA
		Leg (66.62%)	Org (63.88%)	Lic (71.45%)	Opr (65.76%)	AW (72.75%)	AI (54.03%)		
Code	Code	Score	Score	Score	Score	Score	Score	Cat	BL
ASP	AU	77.27%	100.00%	82.72%	71.31%	76.80%	96.97%	1	No
SAM	BR	80.95%	93.33%	91.46%	80.95%	83.80%	95.83%	1	No
NAC	CA	90.91%	93.75%	97.62%	89.92%	96.81%	91.56%	1	No
EUR	CH	78.26%	85.71%	100.00%	93.75%	93.10%	91.49%	1	No
SAM	CL	95.45%	91.67%	97.40%	96.83%	97.76%	89.47%	1	No
WCA	CI	70.00%	46.15%	62.65%	59.52%	54.81%	44.33%	1	No
WCA	CD	57.89%	36.36%	24.05%	12.20%	43.64%	22.22%	1	Yes
SAM	CO	77.27%	81.82%	92.41%	88.80%	94.90%	72.92%	1	No
EUR	DE	60.87%	87.50%	98.81%	87.50%	97.00%	94.79%	1	No
ASP	FJ	57.14%	76.92%	69.14%	67.97%	67.57%	38.14%	1	No
EUR	FR	100.00%	100.00%	100.00%	98.37%	98.80%	96.91%	1	No
WCA	GA	61.90%	50.00%	21.52%	33.06%	34.55%	0.00%	1	Yes
EUR	GB	89.66%	87.50%	95.12%	86.67%	97.09%	84.21%	1	No
ASP	ID	77.27%	76.92%	83.54%	90.40%	98.17%	94.95%	2	Yes
SEA	KE	80.95%	76.92%	83.33%	71.43%	94.59%	41.84%	1	No
WCA	ML	68.18%	61.54%	50.00%	38.66%	79.05%	86.46%	1	No
ASI	MY	82.61%	64.29%	77.38%	84.25%	84.69%	33.33%	1	No
ASP	NZ	85.71%	100.00%	98.75%	86.29%	90.80%	68.75%	1	No
MEA	PK	54.55%	33.33%	66.67%	63.20%	41.38%	47.92%	1	No
SAM	PE	76.19%	69.23%	98.75%	88.98%	81.08%	60.42%	1	No
ASP	PG	86.36%	69.23%	28.21%	29.51%	71.68%	25.77%	1	No
EUR	PT	81.82%	71.43%	92.50%	87.50%	88.80%	73.40%	1	No
NAC	TT	90.91%	66.67%	76.06%	85.94%	95.37%	34.38%	1	No
SEA	TZ	28.57%	33.33%	54.84%	12.86%	57.26%	44.44%	1	No
NAC	US	81.82%	100.00%	93.59%	94.53%	96.94%	82.47%	1	No
SEA	ZA	81.82%	61.54%	94.94%	88.98%	94.97%	45.74%	1	No
SEA	ZM	71.43%	50.00%	71.43%	52.85%	86.11%	32.95%	1	Yes
Average		75.77%	72.78%	77.88%	71.93%	81.39%	62.65%		

Key:

	> 80%
	70% to 80%
	60% to 70%
	50% to 60%
	< 50% for USOAP or FAA CAT 2 or EASA Blacklist

AGENDA



BARS Program Initiatives

Control 20.2: Low Level Light

Ensuring flight crew situational awareness with regard to available fuel reserves.

When available for the aircraft type, a fuel low level warning light must be fitted.

Control 5.3: Night or IFR – Aircraft

Ensuring safety and redundancy for night and IFR flights.

Flights flown at night or under IFR must be conducted in a multi-engine aircraft.

Control 4.5: Drummed Fuel

Ensuring drummed fuel is handled in a manner that will not compromise fuel quality.

Aircraft operators who make use of drummed fuel in the course of their operations must have a procedure in place addressing the management and use of drummed fuel stock. The following performance requirements must be addressed:

Control 43.2: Transit Altitude

Eliminating the risks associated with low level operations when low level operations are not necessary.

Transit altitude must be above 500 feet above ground level.

Control 24.1: Weighted Lines

Ensuring helicopter systems cannot be fouled by unweighted lines.

The long-line must be suitably weighted if it is to be flown without a load attached. Implement pre takeoff checks which are designed to ensure flight crew involved in repetitive loads are aware of when the line is attached.

Flight Crew Qualifications – Competency Based Training

A4: CBT Program Overview

Pilot Category	Overview	Suggested Training Requirements and Outcomes		Suggested Duration	Competencies
E	Entry phase. The candidate is not yet type rated and may not necessarily have multi-crew or practical IFR experience.	<ol style="list-style-type: none"> 1. Completed pre-CBT simulator evaluation. 2. Technical Ground School. 3. All aircraft systems and flying training are to be conducted on either the aircraft, or combination of aircraft and simulator. 4. Instrument rating conducted on type. 5. CRM training. 6. Emergency Procedures training (including oxygen use, emergency and life-saving equipment, evacuation procedures, aircraft and passenger control/safety briefing and security training). 7. Operator Proficiency Check: clearance to progress to Cat D. 		<ol style="list-style-type: none"> 1. Defined sequences with simplified aircraft configurations and power settings. 2. Technical ground school program (includes FMS training if applicable) + initial flying training with TRI/TRE, including initial aircraft endorsement. Technical, operational, Flight Manual review, Operations Manual review, Dangerous Goods awareness. 3. Approximately 35 hours instrument time with TRI/TRE (may all be in simulator). Defined training syllabus – normally seven to eight simulator sessions of four hours plus final assessment. 4. Conducted in the simulator 5. CRM 6. Emergency Procedures 7. Minimum of two hours, with TRI/TRE. May be conducted in simulator. 	<p>Candidate must hold as a minimum: a CPL (A) licence with 1,500 hours total time, 500 multi-engine hours, 100 hours command time and ATPL theory at commencement.</p> <p>On completion, the candidate will have a type rating and Instrument rating, together with any additional legislative or contractual requirements.</p>
D	Line training phase commences.	<ol style="list-style-type: none"> 1. Line operations. Exposure to a representative sample of routes and instrument approaches as both Pilot Flying (PF) and Pilot Not Flying (PNF). Shall include night flying. 2. Discussions with LTC to include abnormal and emergency operations and performance related issues. 3. Line Check: clearance to progress to Cat C. 		<ol style="list-style-type: none"> 1. Focus on routine operations including exposure to a representative sample of routes and instrument approaches from co-pilot seat. A minimum of three of each type of instrument approach shall be flown as both PF and PNF. Minimum of 20 sectors with LTC. A sector shall be regarded as a flight between the departure and destination airfields, where all normal checklists are employed. 2. Normally conducted in cruise flight, but may be accomplished 1:1 with trainee and LTC in classroom environment. 3. With TRI/TRE. Four sectors, involving both administrative and flying duties as PF and PNF. 	<p>Consistent, safe handling.</p> <p>Cleared to line as a competent co-pilot.</p>

More Outcomes

—

The Small Operator Development Scheme



TAC Discussion Document 14-2019
BARS Small Operators Development Scheme

Submitted: David Anderson
Ver 2 - 30 Apr 2019

"Pursuing the continuous improvement of global aviation safety and the prevention of accidents"

BARS CASE STUDY 1
HELICOPTER CFIT IN ADVERSE WEATHER



BACKGROUND

Controlled Flight into Terrain (CFIT) is an accident in which an airworthy aircraft, under pilot control, is unintentionally flown into the ground, a mountain, a body of water or an obstacle. In a typical CFIT scenario, the crew is unaware of the impending disaster until it is too late. CFIT accidents frequently involve a collision with terrain such as hills or mountains during conditions of poor weather and reduced visibility.



The following is an example of a recent accident involving helicopter CFIT. At the time of the accident, the aircraft operator was not registered in the BARS Program.

After the descriptions of the accident and the official accident report findings and recommendations, the applicable BARS controls and mitigations demonstrate how a BARS safety risk-based audit of aircraft operators assist in minimising flying operations for the operator and contracting company.

DETAILS

On 3 August 2011, a Bell 412 HP helicopter was being operated on a scheduled charter flight by a company in the North Sulawesi province of Indonesia. The aircraft was crewed by two pilots and nine passengers, including two Australians and two South Africans. The report was low cloud and drizzle with higher peaks in the area covered by cloud.

Approximately 25km from the departure airport, the aircraft impacted terrain on Mo elevation of 2,283 feet. The aircraft was destroyed and there were no survivors.

An official investigation by the Indonesian National Transportation Safety Committee identified the accident as Controlled Flight into Terrain (CFIT).

Key findings from the report included that:

- There were no mechanical issues with the aircraft that would have contributed to aircraft impacted terrain in a relatively level attitude at high speed with all power normally.
- The flight was conducted under Visual Flight Rules (VFR) while the weather was marginal.
- The aircraft was not following a published VFR route.
- The aircraft was not fitted with a Flight Data Recorder (FDR) or Cockpit Voice Recorder (CVR) for the investigation team to ascertain the exact sequence of events that likely that the pilot inadvertently entered Instrument Flight Conditions (IMC) during poor visibility conditions.

BARS Case Study 001, Oct 2019

BARS CASE STUDY 1
HELICOPTER CFIT IN ADVERSE WEATHER



RECOMMENDATIONS

- Re-evaluate single pilot operations for long distance flights, particularly for extended overwater operations.
- Ensure pilot safety training specifically includes CFIT prevention and mountain flying training if applicable.
- Produce "Pilot Guidance" for VFR assigned route for each of operation base/ area, and have it positively controlled. And establish a local VFR procedure for each of operation area/base.
- Evaluate the requirement of two pilot operations for aircraft in regards to number of passenger carried, IFR and or long distance operations.
- Evaluate the necessity of CVR/FDR to be installed in aircraft certified to carry passengers.
- Re-emphasis for operators to produce/generate assigned VFR route for each of operation base/ area.
- Re-emphasis to operator to adapt the published circular regarding to pilot operations.

(Source: Accident Report KNKT 11.08.14.04)

BARS APPLICATION

BARS controls & defences applicable to this scenario that are examined in the BARS Case Study 001, Oct 2019

- Operational Risk Assessment
[BARS Common Control 1.13]
Ensuring all risks associated with aircraft operations are analyzed, minimized and controlled.
- Destination Weather Reporting
[BARS Control 2.6]
Ensuring flight crews receive accurate actual and forecast weather data to make informed decisions.
- Flight Plan Weather Data
[BARS Control 3.2]
Ensuring accurate weather data is used when calculating aircraft routes.
- Night or Instrument Flight Rules (IFR) – Two Crew Operations
[BARS Control 5.1]
Ensuring effective and safe operations in night and IFR conditions.
- Night or IFR – Flight Planning
[BARS Control 5.4]
Ensuring appropriate planning for the safety of night or IFR flights.

BARS Case Study 001, Oct 2019

BARS CASE STUDY 1
HELICOPTER CFIT IN ADVERSE WEATHER



- Night or IFR – Autopilot
[BARS Control 5.7]
Ensuring the maintenance of controlled flight is enhanced by the use of automation. An Autopilot or AFCS must be fitted for night or IFR flights.
- Terrain Awareness Warning Systems (TAWS)
[BARS Control 5.10]
Ensuring the accurate detection of terrain and adjacent obstacles so as to allow timely corrective action if necessary.
- Adverse Weather Policy
[BARS Control 11.1]
Establishing weather limitations consistent with the capabilities of the aircraft and the available rescue assets, are applied to each flight.
- VFR Minimum Requirements
[BARS Control 11.5]
Ensuring aircraft are operated safely when utilizing Visual Flight Rules especially in dynamic or marginal environments.
- Emergency Response Plan
[BARS Defence 19.2]
Ensuring adequate and appropriate SAR or emergency response procedures are up to date and tested.
- Cockpit Voice Recorder (CVR) / Flight Data Recorder (FDR)
[BARS Defence 19.10]
Ensuring appropriate equipment is fitted to an aircraft to aid in accident investigation and prevention.

The BARS Implementation Guidelines hold additional information for each of the controls supporting greater understanding of the design and intent of the particular item. For each control, a Safety Goal is also provided to assist in understanding the purpose of the control and a pathway for developing performance indicators.

The ICAO Critical Control Good Practice Guide describes a methodology for the identification and management of safety related controls that are essential for avoiding Materially Unwanted Events (MUE). For this event, Common Control 1.13 and BARS Control 3.2 are listed in the BARS Critical Control Performance Standards.

BARS Case Study 001, Oct 2019



BARS Case Studies - B412 Indonesia August 2011

BARS ✓
BASIC AVIATION
RISK STANDARD

WE ARE ACCOUNTABLE



CONTRACTED AVIATION CRITICAL CONTROL MANAGEMENT

BARS Program Initiatives



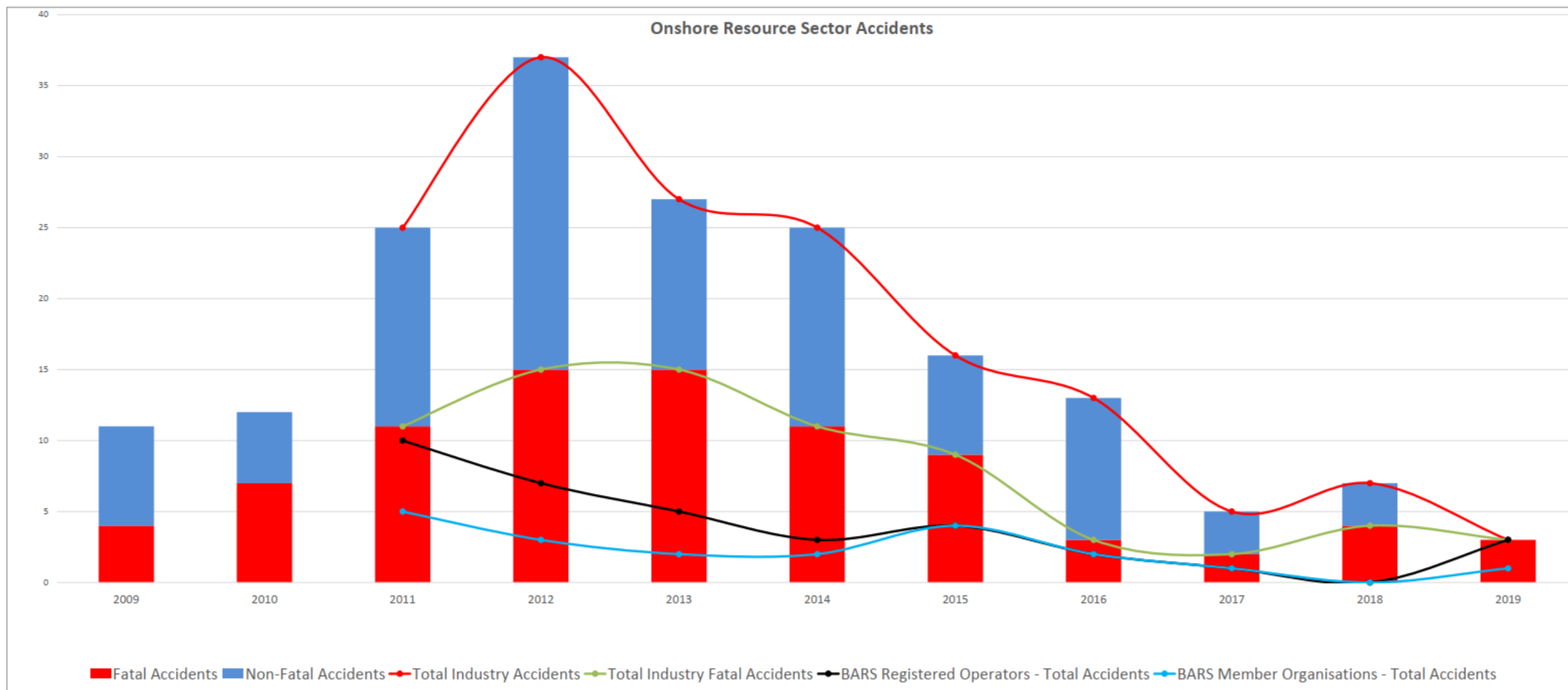
|Critical Control: **Personnel – Flight Crew**

Critical Control	Design Standard	Operating Standard	Verification Steps	Verification Approach			
				What - Limit?	Who – Execution?	When – Frequency?	Where?
<p><u>Scope:</u> All flight crew operating contracted aircraft for COMPANY.</p> <p><u>Objective:</u> To ensure COMPANY contracted aircraft are operated by flight crew who meet regulatory, OEM and contractual requirements</p> <p><u>Causes addressed:</u> Insert reference to COMPANY bow-tie causes (if used).</p>	<p>Design standard defined according to Version 7 of the Flight Safety Foundation Basic Aviation Risk Standard (BARS) dated May 2018.</p> <p>The design standard meets the control objective when following criteria are met:</p> <p>BARS 1.1 Approved aircraft operator</p> <p>BARS 1.2 Flight Crew qualifications, experience and recency</p> <p>BARS 1.3 Flight Crew check and training</p> <p>BARS 1.7 Drug and alcohol policy</p> <p>BARS 1.8 Flight time limits</p> <p>BARS 1.9 Flight Crew duty time</p> <p>BARS 5.5 Simulator training</p> <p>BARS 5.6 Approach/Landing Recency</p> <p>BARS Appendix 1 Flight Crew Qualifications, Experience and Recency</p>	<p>Operating standard required to be implemented to meet the design criteria is:</p> <p>Approved Flight Crew <i>List of flight crew approved for COMPANY contract.</i></p> <p>COMPANY documentation <i>Current, endorsed and approved.</i></p> <p>COMPANY Approved Aircraft Operator. <i>Listed as aircraft operator approved for COMPANY use</i></p> <p>Operational Risk Assessment (ORA) <i>Current and within annual validation for contracted flights.</i></p> <p>Technical Schedule <i>Contained in all written agreements and endorsed when necessary.</i></p> <p>BAR Standard. <i>Latest version in use and referenced in all documentation.</i></p>	<ol style="list-style-type: none"> 1. Confirm all known variations to BAR Standard are approved by COMPANY (if applicable) 2. Sample six flights of each contracted aircraft operator and confirm Flight Crew are on approved list. 3. Confirm COMPANY documentation is valid and current. 4. Review all aircraft operators used in the assessed period against aircraft operators approvals for COMPANY use. 5. Review the ORA for the aircraft operator and verify coverage of current activity. 6. Confirm aviation charters have written agreements that include endorsed technical schedules. 7. Confirm BAR Standard in use is the latest version and corresponds with all references in documentation. 	Flight crew qualifications, experience and recency meet the requirements outlined in BARS.	Control Owner	Quarterly	Critical Control Verification

Critical Control Performance Standard

**Energy Sector –
Powerline
Vegetation
Control**

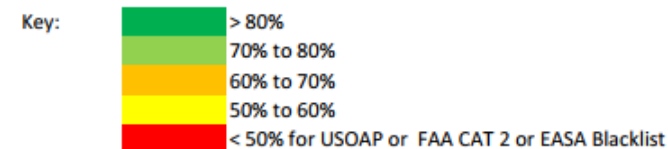




World Wide Accident Stats

ICAO USOAP Effective Implementation Scores — BARS Exposed Countries Feb 2019

Region	Country	Leg (67.54%)	Org (62.76%)	Lic (72.32%)	Opr (66.16%)	AW (74.45%)	AI (53.55%)	FAA	EASA	Last Mission Year
Code	Code	Score	Score	Score	Score	Score	Score	Cat	BL	
ASP	AU	80.95%	100.00%	85.00%	70.59%	84.74%	94.12%	1	No	2017
SAM	BR	95.24%	100.00%	96.30%	97.50%	97.70%	93.33%	1	No	2018
NAC	CA	91.30%	92.86%	97.62%	89.76%	96.77%	91.58%	1	No	2005
EUR	CH	87.50%	100.00%	100.00%	93.75%	93.10%	91.49%	1	No	2015
SAM	CL	100.00%	100.00%	100.00%	100.00%	97.76%	89.47%	1	No	2017
WCA	CI	95.24%	81.82%	75.00%	70.40%	75.00%	81.44%	N/A	No	2014
WCA	CD	55.00%	44.44%	25.00%	12.30%	43.64%	22.22%	N/A	Yes	2014
SAM	CO	77.27%	72.73%	84.38%	80.00%	83.44%	71.74%	1	No	2017
EUR	DE	81.82%	100.00%	91.58%	82.99%	86.34%	94.57%	1	No	2017
SAM	EC	85.71%	100.00%	96.20%	94.96%	88.89%	94.57%	1	No	2015
ASP	FJ	52.38%	70.00%	70.37%	69.60%	79.63%	44.09%	1	No	2017
EUR	FR	100.00%	100.00%	100.00%	98.37%	100.00%	96.91%	1	No	2017
WCA	GA	68.18%	50.00%	26.25%	35.83%	52.78%	5.15%	N/A	Yes	2016
EUR	GB	89.66%	87.50%	95.12%	86.67%	97.09%	84.21%	1	No	2009
ASP	ID	71.43%	69.23%	75.82%	87.31%	90.86%	65.00%	1	No	2016
EUR	IT	86.36%	91.67%	89.02%	90.32%	92.20%	91.30%	1	No	2017
SEA	KE	85.71%	58.33%	83.33%	75.91%	81.82%	49.51%	1	No	2018
NAC	MX	86.36%	70.00%	97.06%	96.80%	94.74%	80.65%	1	no	2012
WCA	ML	81.82%	76.92%	77.38%	72.65%	95.19%	90.63%	N/A	No	2015
ASI	MY	81.82%	76.92%	77.38%	84.13%	84.62%	33.33%	1	No	2016
ASP	NZ	86.63%	100.00%	98.77%	86.18%	90.80%	79.44%	1	No	2016
MEA	PK	90.91%	60.00%	97.40%	91.27%	81.37%	87.50%	1	No	2011
SAM	PE	95.24%	92.31%	97.83%	100.00%	92.68%	62.24%	1	No	2018
ASP	PG	86.36%	70.00%	49.35%	56.78%	82.88%	28.57%	N/A	No	2018
EUR	PT	95.45%	81.82%	95.06%	92.68%	99.19%	76.14%	1	No	2017
NAC	TT	95.24%	87.50%	90.14%	96.75%	99.06%	34.78%	1	No	2017
SEA	TZ	71.43%	66.67%	76.34%	45.26%	87.07%	54.93%	N/A	No	2017
NAC	US	81.82%	100.00%	93.59%	94.53%	96.94%	82.47%	1	No	2007
SEA	ZA	100.00%	100.00%	84.38%	81.56%	90.86%	89.11%	1	No	2017
SEA	ZM	81.82%	70.00%	83.10%	68.85%	87.96%	32.95%	N/A	No	2016
SEA	NA	70.83%	27.27%	64.63%	60.00%	73.64%	72.92%	N/A	No	2016
RUS	RU	72.73%	66.67%	60.42%	67.38%	80.68%	84.26%	1	No	2015
WCA	TD	80.00%	72.73%	40.24%	36.07%	81.55%	45.16%	N/A	No	2017
NAC	MX	86.96%	75.00%	97.06%	96.85%	94.84%	81.44%	1	No	2012
Average		81.50%	77.49%	79.68%	76.05%	85.92%	67.91%			



AGENDA



The Challenges

-

What next

- ☐ Diversity in aircraft and equipment
- ☐ Consistency of the NAA in providing oversight and support to the operators
- ☐ Data gathering and analysis
- ☐ Safety auditing consistent and of high quality to ensure appropriate outcomes
- ☐ Recruiting, training and holding skilled auditors
- ☐ Determining safety culture through an audit program

CONCLUSIONS

What activities should the Foundation or other agencies/organisations undertake to further the state of understanding in relation to the BARS Program:

1. Organisations who would directly benefit from participation in the Program
2. What further research could contribute to, or draw from, the BARS Program;
3. Which agencies/authorities would see a local benefit from further expansion of the BARS Program;
4. Where do you see the greatest need for a Program such as the BARS Program in your local region?

72nd annual

INTERNATIONAL AIR SAFETY SUMMIT

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Thank you

THANK YOU

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