

# Global Safety Assessment

*An understanding of the global and regional safety needs  
Survey Results NACC and SAM Region*

*Mark Millam, Vice President, Technical  
Henry Gourджи, Director, Safety Strategy and Policy*

# Regional Aviation Safety Assessment: Data-Driven Analysis of the Impact of Pandemic on Global Aviation

**Data Analysis** for Tangible  
Insights

Gaining a **Dynamic Lens**  
on Regions' Safety

Region-Specific Safety  
**Metrics**



Regional **Best Practices**  
and Lessons Learned

**Information Sharing**  
Across Regions

Identify Gaps and  
Opportunities: Data-  
Driven **Recommendations**

# Data and information gathering

Statistical  
Review of  
Safety  
Information

Partners

Surveys  
Questionnaires  
Interviews

Workshops

Additional  
aviation safety  
issues

Validation

## Collection, interrogation and validation

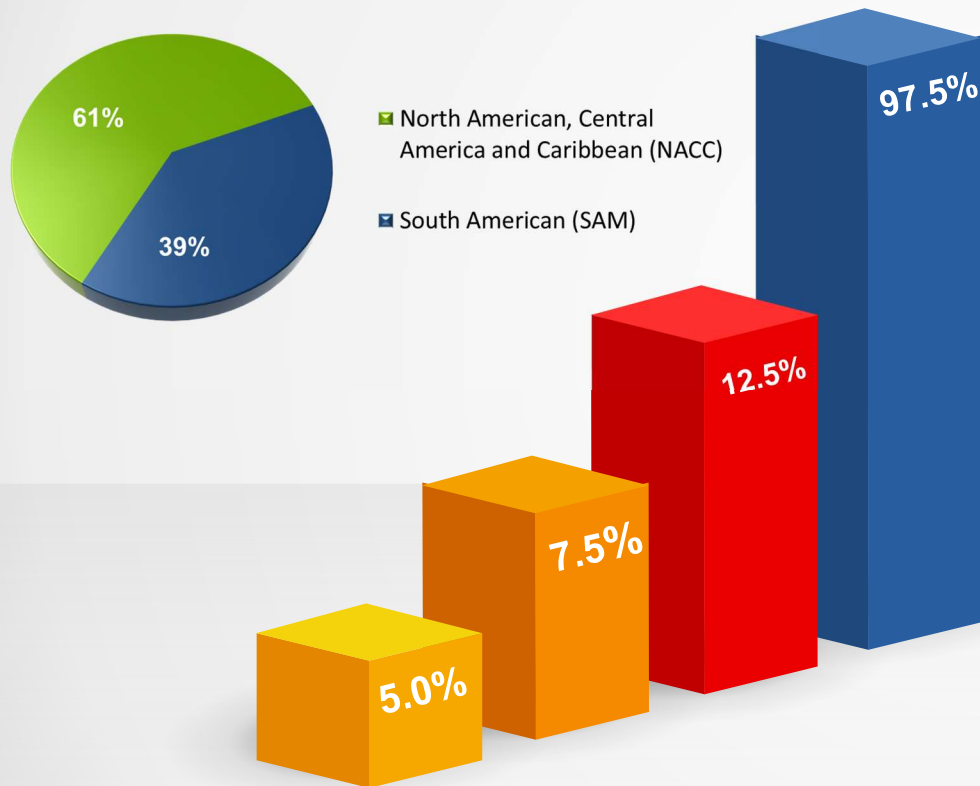
- Accidents and serious incidents of commercial air transport and business aviation- **fatality risk** and **contributing factors**
- **Partners** – ICAO, IATA, FAA, IBAC, airline associations
- Collection of information from operators through **surveys and questionnaires**
- Workshops to **drill down** further into the survey results and challenges encountered
- Additional aviation safety issues related to **unmanned operations**
- Internal review of all data collected for **quality and traceability**

# About the Survey

- an **anonymous online survey** concerning the impact of the COVID 19 pandemic on the aviation system which has caused significant disruption to the entire aviation sector and most organizations.
- The survey asks questions about the risk assessments and mitigations strategies that may have been put in place during this global pandemic.
- The survey was prepared in coordination with ALTA and distributed to its members, associate airline as well as non-members/associate airlines which participate at the ALTA Safety Committee.
- A total of 41 members completed the survey within a period of three weeks
- The Flight Safety Foundation is routinely involved in examining the state of safety in the industry and looking for methods to enhance safety for the benefit of countries across the globe. We expect to find safety areas of interest that will prioritize our activities and draw a closer focus to the work that must be undertaken to address hazards to flight safety.

# Survey Respondents -Breakdown

Regional location of survey respondents

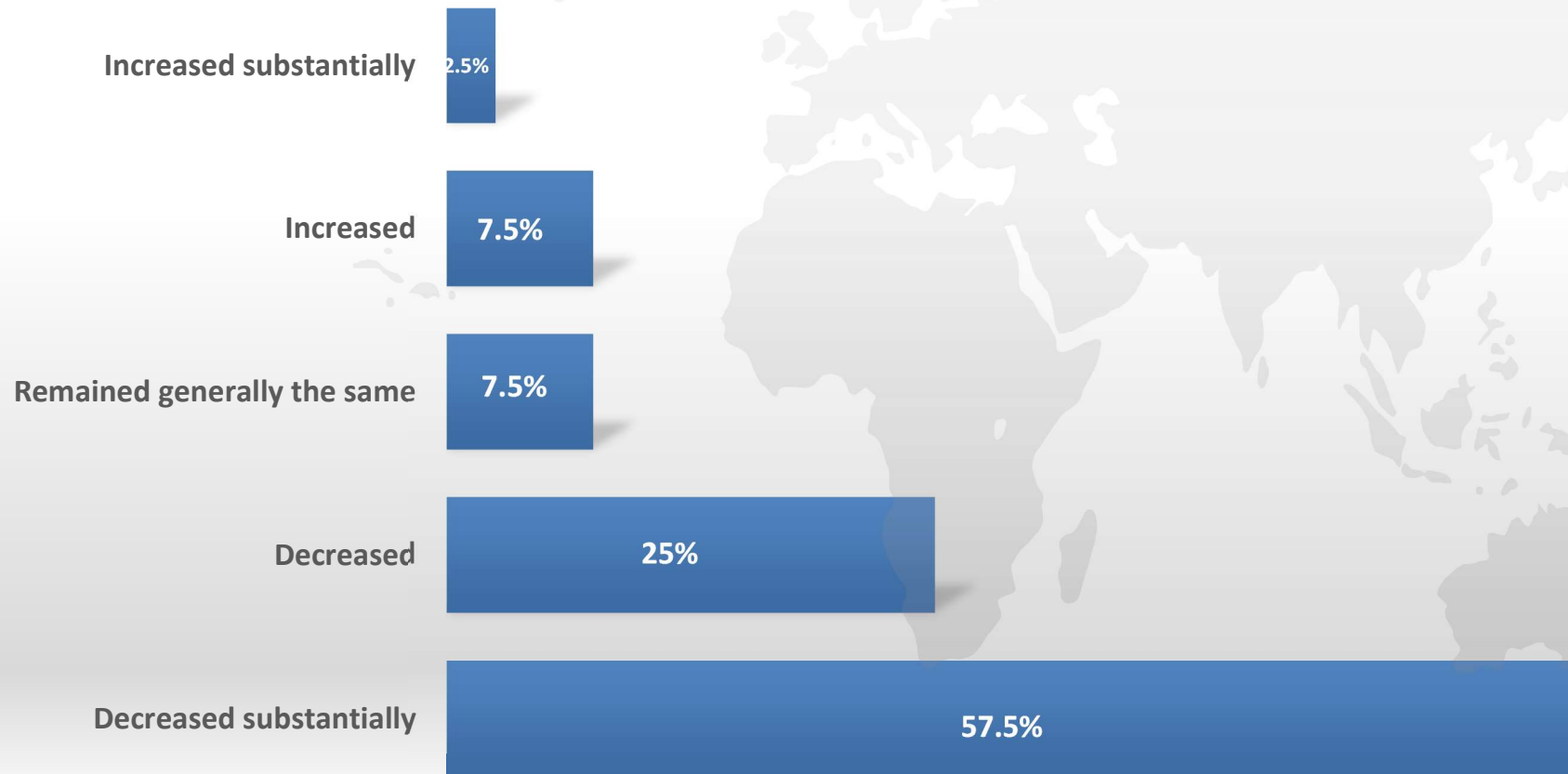


## Breakdown of Survey participants

97.5% Commercial/Passenger airline  
12.5% Cargo Airline  
7.5% Specialty Operations  
5% Business aviation

5% Business aviation  
7.5% Specialty Operations

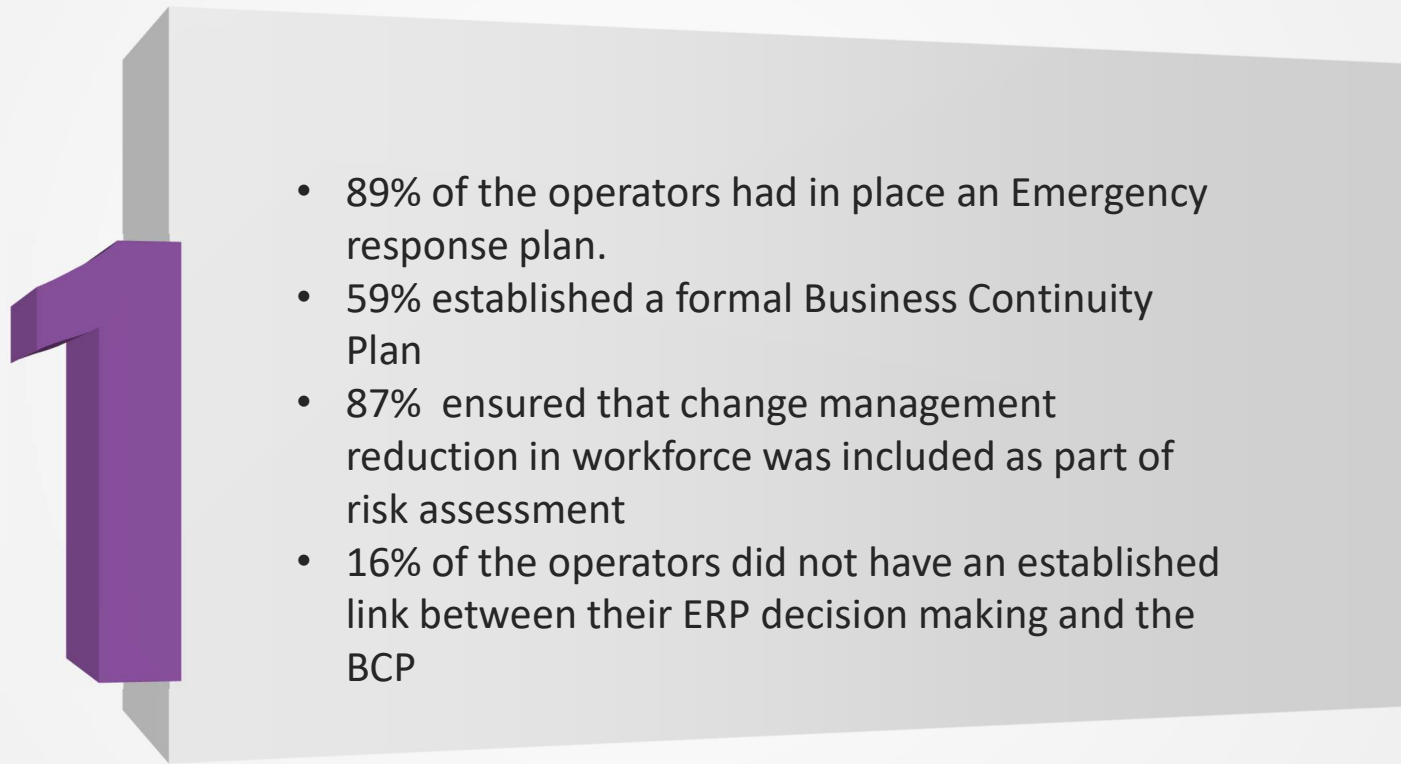
# Impact of the Disruption



# Top areas to further explore based on survey result

- 1 Business continuity / Emergency response plans
- 2 Safety Management Systems and Risk Assessment Process
- 3 Ability to Monitor and Hazards and perform and Risk analysis
- 4 Change Management Process
- 5 CAA and Industry Cooperation

# Business Continuity and Emergency Response Plans

- 
- 89% of the operators had in place an Emergency response plan.
  - 59% established a formal Business Continuity Plan
  - 87% ensured that change management reduction in workforce was included as part of risk assessment
  - 16% of the operators did not have an established link between their ERP decision making and the BCP

# Safety Management Systems and Risk Assessment Process

## 2

- Pretty much all operators have established an SMS and established a Hazard identification and Safety risk Assessment process. 85% updated their risk assessment due to the Pandemic.
- Top considerations when performing safety risk assessments were **Exposure to Infection** (70%), **Route Differences** (50%)
- 74% of the operators reviewed their risk assessment as required / weekly/or monthly
- Flight Operations- SOPs, 60% performed a risk assessment for each new SOP during the Pandemic

## Ability to Monitor and Detect Hazards and perform a Risk Analysis

A large, blue, 3D-style number '3' is positioned on the left side of the slide, partially overlapping a grey rectangular box that contains the main text.

- Most operators indicated they perform very well in normal safety SPI Monitoring as well as Safety Reporting Integrity
- 33% of the reporters did not Monitor and detect potential hazards for airports and Runway FOD Programs
- 20% did not consider differences in COVID risks by region, nation or cities

# Change Management Process

A large, 3D orange number '4' is positioned on the left side of the slide, partially overlapping a grey rectangular box that contains the main text.

- 37% of the Operators indicated that Change management process was applied across their entire company without exception.
- 60% of the operators felt that they managed to mitigate the risk of staff workforce changes during the pandemic well or exceptional.
- 64% felt that overall company processes and systems keeping pace with COVID related changes to operations was better than usual or exceptional

# CAA and Industry Cooperation

5

- The top guidance received by operators from their CAAs during COVID related to Pilot Medical Certificates, pilot proficiency checks as well as license validity. 18% indicated they did not receive or request guidance
- 65% of the operators received targeted exemptions, exceptions or alleviations related to the above
- 46% of operators requested and received exemptions to address in Cargo Cabin Solutions
- 31% of operators requested extensions to flight duty periods of which 70% were successfully granted.
- 63% of CAAs reduced their periodic inspections during the last 12 months of the Pandemic
- 37% of operators indicated that the level of communication between regulator and operator reduced during the pandemic.

# Other Insights

- The survey identified other insights related to OEM Consultation as well as Human Factors / Crew Resource Management which can be further reviewed in this presentation

# Human Factors / Crew Resource management



Operators encountered the following that may have adverse affect on individual and group performance and introduce additional safety risks

56% - Increase stress – due to nonstandard operations

52% - Increase Fatigue – returning to work following a long period of inactivity.

Constant alertness to ongoing fears and concerns around employment, infection, protection.

48% - Reduced knowledge and skills

44% - Increase distraction from tasks

32%- Breakdown in communications and alignment primarily due to change in SOPs related to health and operational procedures that may be country or operation specific.

**59% of operators indicated that they have a program to deal with Mental health**

**37% of operators indicated they had an increase of staff reporting mental health issues**

# Business Continuity and Emergency Response Plans

## Business Continuity Plan (BCP)

■ Responses

58.97%



YES



95% of those with a BCP had a mechanism in place to ensure safety hazards are shared at the appropriate level.

41.03%



NO



87% with no BCP ensured that Change management and reduction in workforce was included as part of risk assesment.

## Emergency Response Plan (ERP)

■ Responses

89.19%



YES



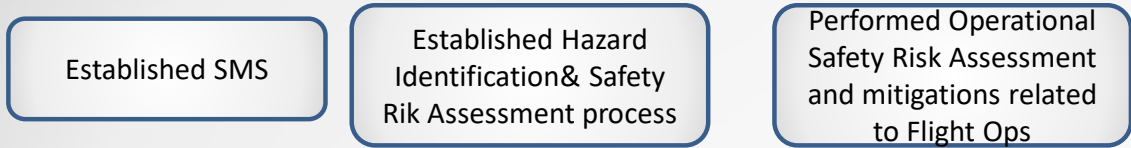
84% established a link between their ERP decision making and their BCP.

10.81%



NO

# Safety Management Systems- Risk Assessment Process



100%



97%



YES



83% of respondents updated their risk assessment due to change in operating environment during COVID.

86.5%

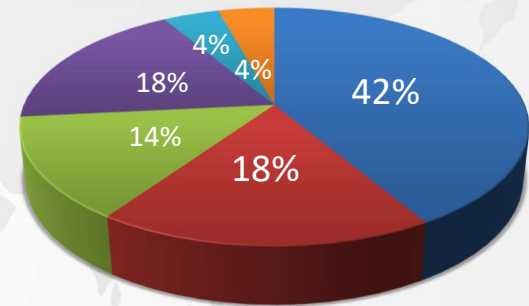


YES



**Top considerations**  
70% exposure to infection  
50% Route Difference

## Safety Risk Assessment review frequency



- As required
- Monthly
- Weekly
- Bi Annualy
- Once
- Never

# The Change management process applied to an organization



Across the company



Applied to new route changes



Applied to delays in previous planned safety improvement / implementation plans

- Fully documented and without exception
- Some independent assessment and analysis
- Only in consideration by the change designers
- Inconsistent

# Manage to mitigate the risks of staff workforce changes



Communications to all staff affected by the changes



Training of hazards expected during the crises



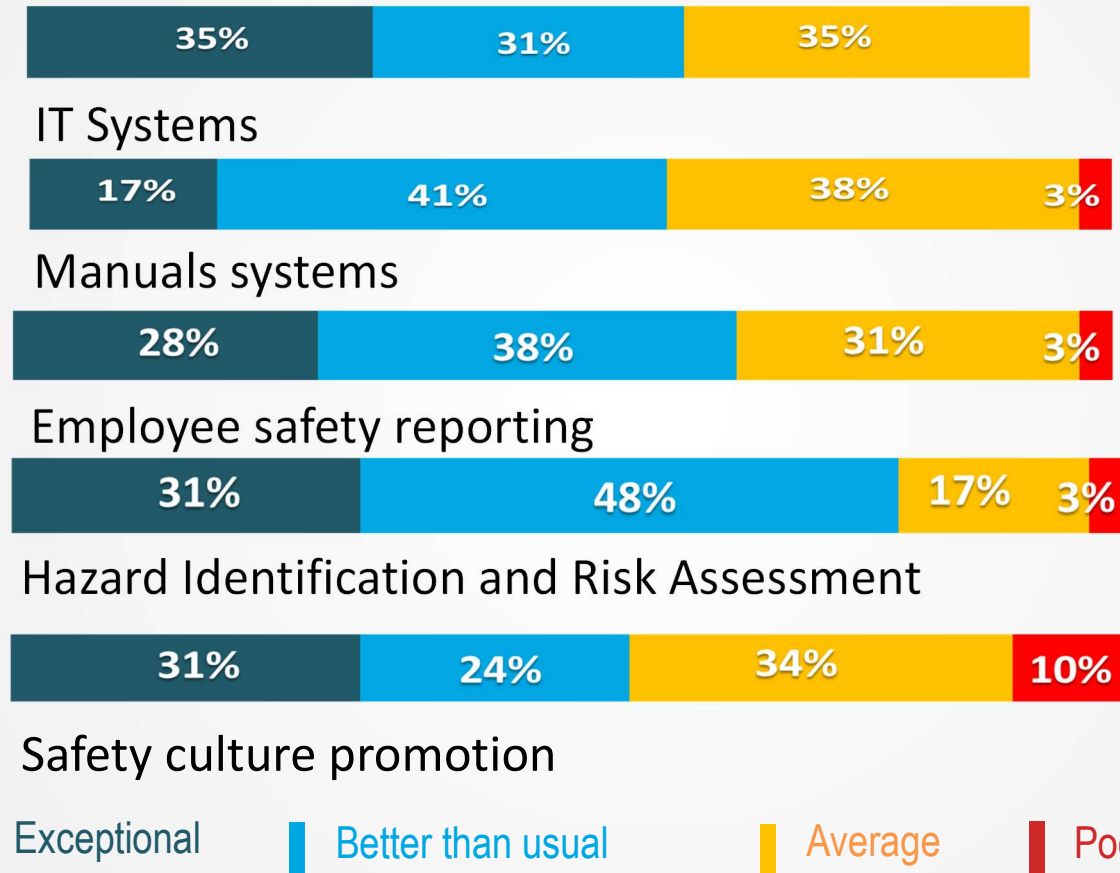
Utilization of all available training methods



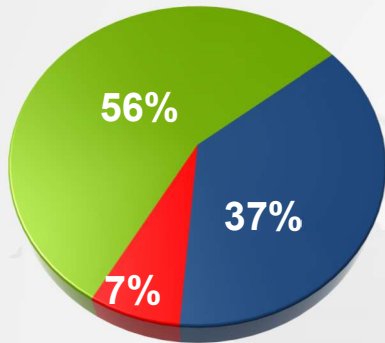
New risks of fatigue due to scheduled changes



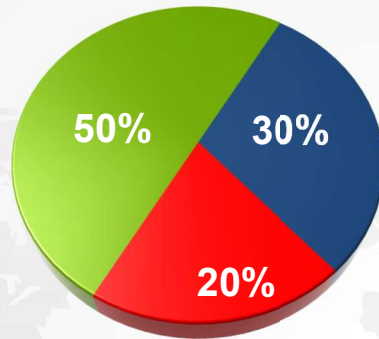
# How well have processes and systems kept pace with COVID related changes to company operations



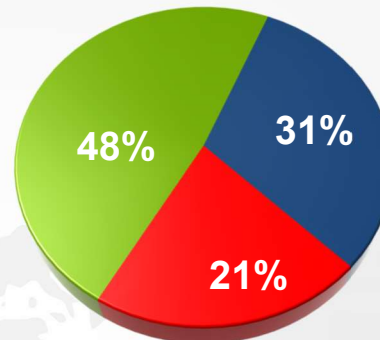
# Ability to Monitor and Detect Hazards and Risk Analysis during the COVID 19 Recovery



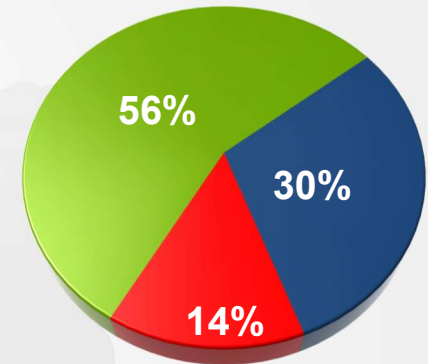
Monitoring special events attributed to COVID 19 Operations



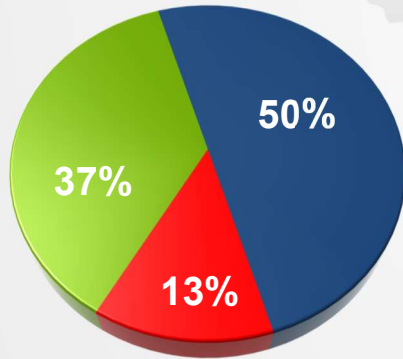
Understanding differences in COVID risks by region, nation, cities



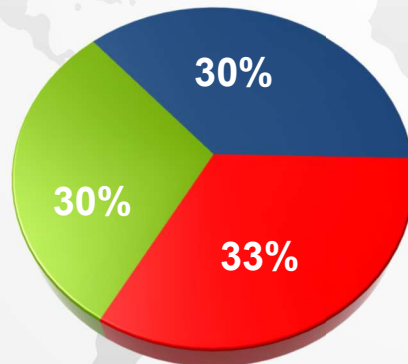
Quality audits of aircraft storage systems



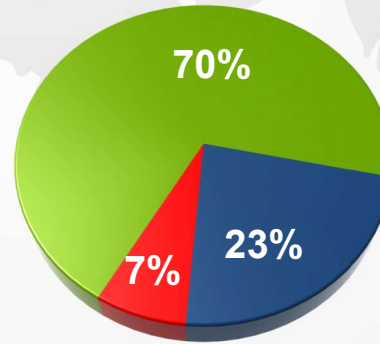
Quality audits on maintenance parts and service providers



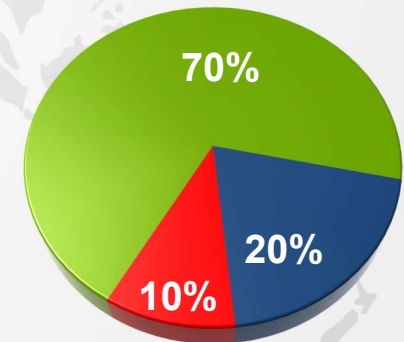
Non standard operations



Airport and Runway FOD Programs



Normal Safety SPI Monitoring



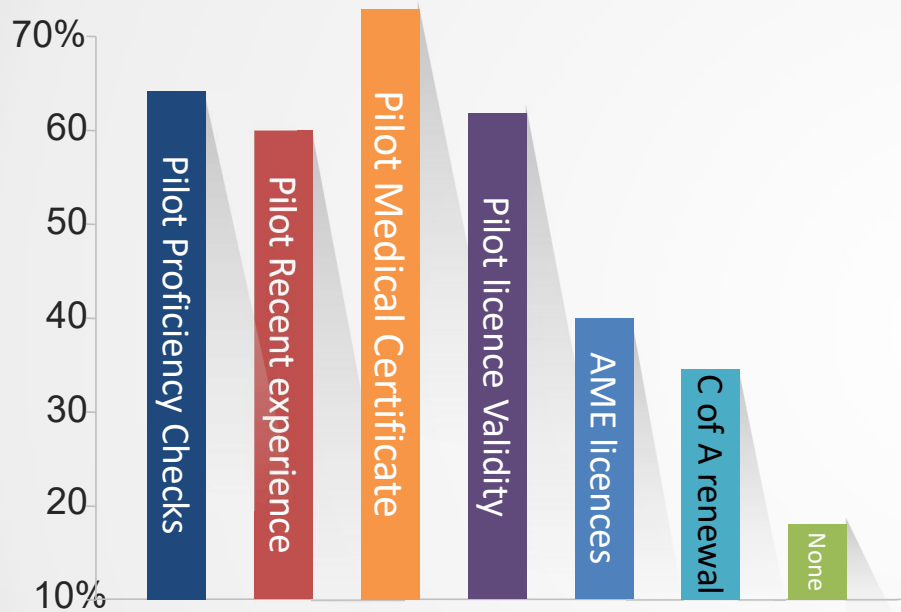
Safety Reporting Integrity

■ Routinely examine

■ When alerted about potential issues

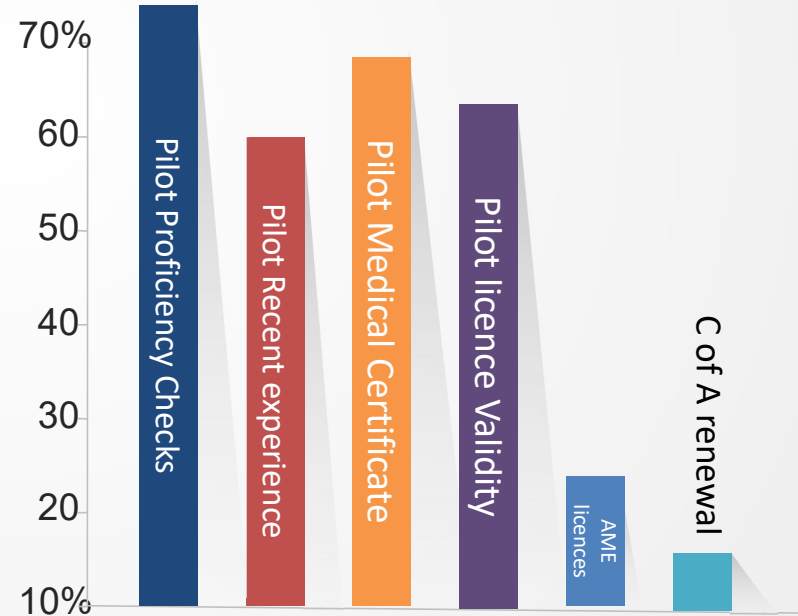
■ No data or information collected

# NAA and Industry cooperation



Level of guidance provided by NAAs for adapting flight operations, continuing airworthiness/maintenance and training in the “new normal” during COVID conditions

Level of targeted exemptions, alleviations, extensions issued by NAAs for adapting flight operations in the new normal during COVID



# NAA and Industry cooperation

Exemptions to address Cargo in Cabin Solutions

46%



100% of NAAs that received such requests were responsive to determine whether an acceptable level of safety can be maintained.

Adapt regulatory oversight

63%



63% of NAAs have reduced their periodic inspections during the last 12 months due to the Pandemic

Level of communication

37%



37% of the respondents indicated that the level of communication between regulator and operator reduced during the Pandemic.

# Industry Oversight Programs

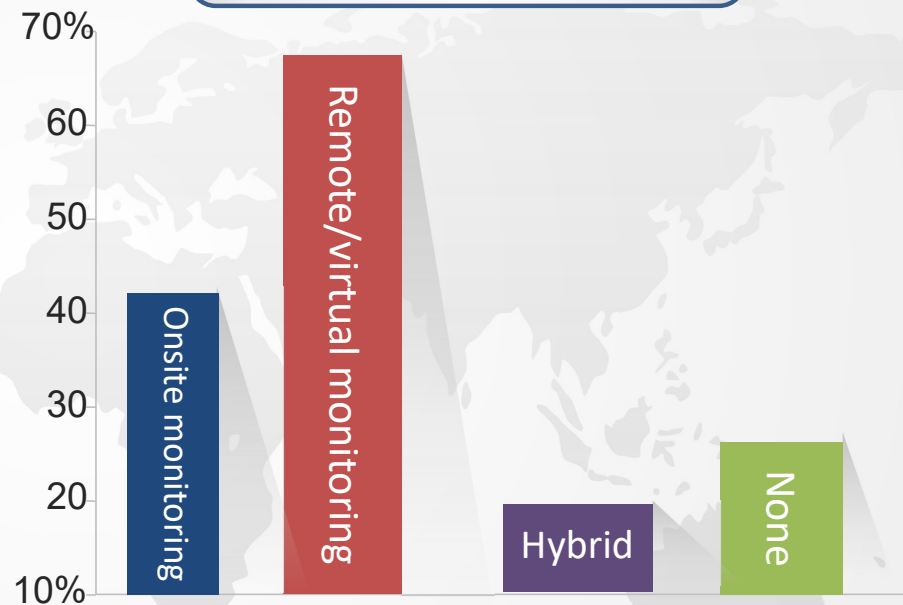
Participation in an industry audit program  
(IOSA,ISSA,BARs,IS\_BAO etc)

80%



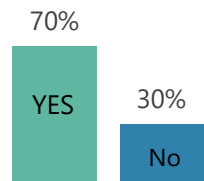
83% of the operators who are participating in an Industry audit program have indicated that the program has adapted well during the pandemic.

Monitoring activities provided during the pandemic

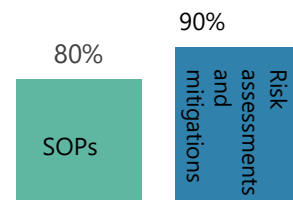


# Flight Operations- SOPs – Risk Assessments

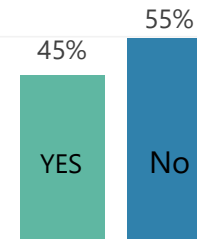
## phases for restart operations



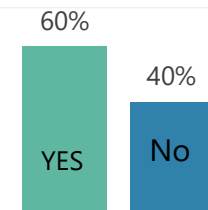
## Reviewed under each phase of restart Ops



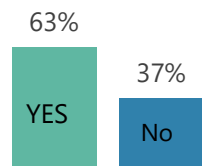
## SOP to address contingency measures for reduced air traffic



## Risk assessment performed for each new SOP during pandemic



## New SOPs formally established during pandemic



## Additional SOPs attributed to the Pandemic that were highlighted by operators

- Flight operational alert focus on special procedures
- On-Board passenger service has been minimized
- Boarding Process Disembark process, Healthy measures for airport operations
- Cleaning the aircraft after each use to prevent COVID-19
- Quality Manual
- Bio Safety Program
- Psychological status of personnel assessment
- SOPs were introduced gradually (methodically) allowing a smooth transition from total shutdown to reintroduction of service

# Flight Operations- SOPs – Risk Assessments

## 79% of Operators identified the Risk below:

79%



The extended absence of a significant number of flight deck crew can lead to diminished skills, less effective situational awareness and can lead to deviation from established SOPs. Additionally, as a result of the pandemic, crew will have to educate themselves with multiple temporary revisions to operational policies and procedures designed to operate in the current environment

## Mitigating Measures Introduced

- Several memoranda, periodic training redesign, periodic safety bulletins, specific FDM monitoring
- Increase training and communication, online training
- Increased FDA monitoring to identify hazards (non-standard SOPs/follow trends)
- Increase of surveillance/supervision
- Crew recency control
- Communication to flight crew to maintain Proficiency check prior to return to operations (SIM Session)
- Training and Sim
- Masks, Disinfection and gloves
- New Bio Safety Procedures- implementation of SOPs- RTS program- Training Program
- Personnel assessment
- Enhanced monitoring of data
- Primary COVID protection of crew. Retraining of skills

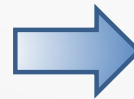
# Flight Operations- Duty Periods

Seek extension from the CAA  
to flight duty periods

31%



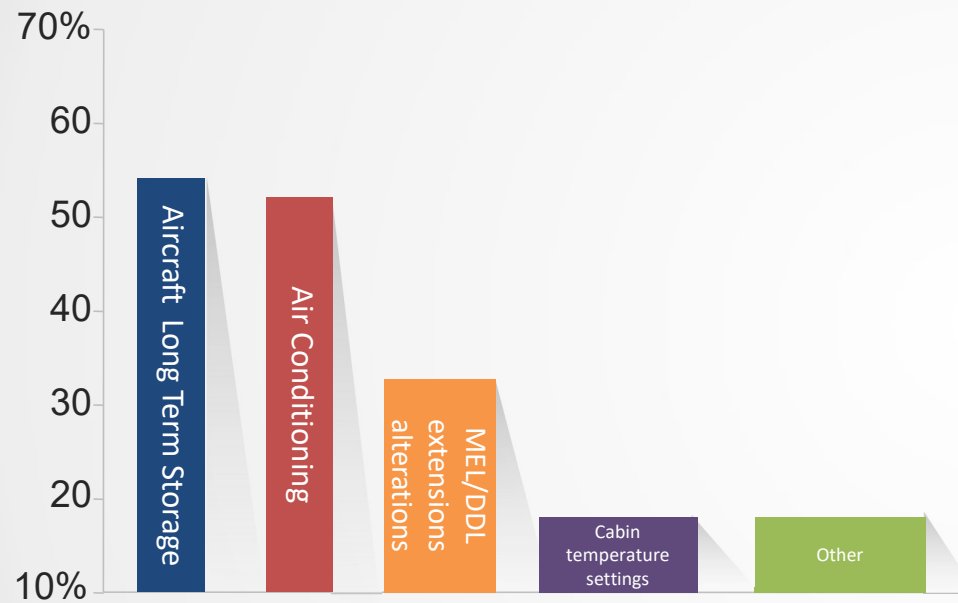
50% of those operators  
seeking extension flight duty  
periods had an approved  
FRMS or a means to manage  
fatigue risks.



74% of Operators developed a  
Plan to ensure Flight Instructors  
and Evaluators (IE) are fully  
recent and competent.

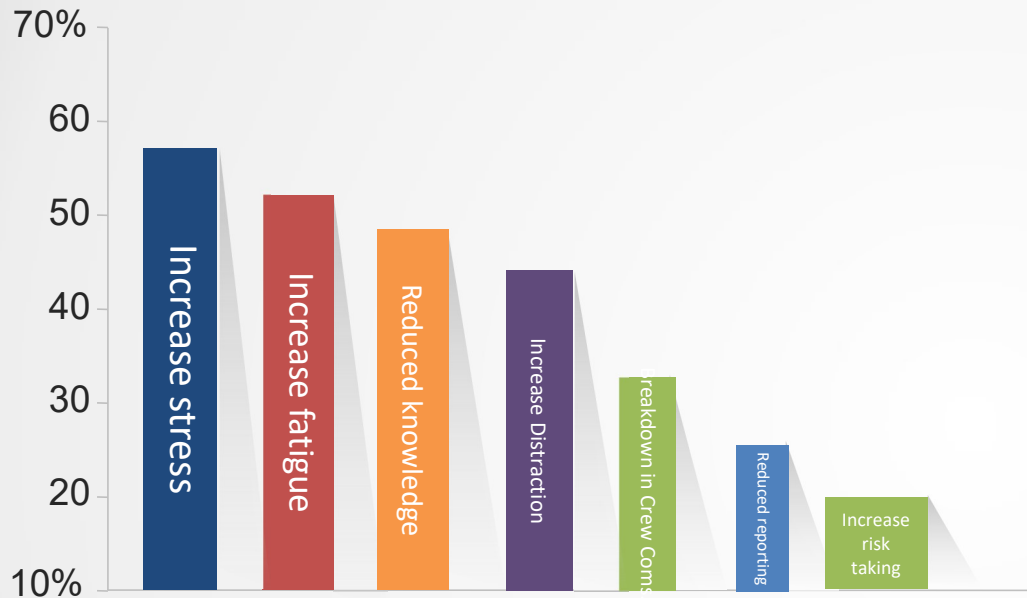
70% of the operators  
indicated that their CAA's  
were responsive to  
appropriately determine  
whether an acceptable level  
of safety can be maintained.

# Consultation with the OEM



Top areas consulted with the OEM during the Pandemic

# Human Factors / Crew Resource management



Program to deal with Mental Health

59%



Increase of staff reporting mental health issues

37%



Human Factor issues throughout COVID which require attention during crew training and onboard operations. Some may have adverse affect on individual and group performance and introduce additional safety risks

- 56% - Increase stress – due to nonstandard operations
- 52% - Increase Fatigue – returning to work following a long period of inactivity. Constant alertness to ongoing fears and concerns around employment, infection, protection.
- 48% - Reduced knowledge and skills
- 44% - Increase distraction from tasks
- 32%- Breakdown in communications and alignment primarily due to change in SOPs related to health and operational procedures that may be country or operation specific.
- 24% - Reduced reporting of non-conformities
- 20% - increase in risk taking

# Air operators network- airports

Increase in wildlife activity

57%



57% of operators have witnessed an increase in wildlife activity (birds etc.) due to recent static airport operations

Increase of substance and surface damage

26%



26% of operators have witnessed an increase of substance and surface damage during this period of inactivity

## Next steps

- The Foundation will work closely with ALTA to prepare a workshop for survey participants and its members to closely review the results of the surveys and confirm the gaps and challenges and provide guidance through best practices shared by participants and facilitators.
- The Foundation is performing a similar review in other regions and will analyze these results together with statistical review of safety information gathered from global and regional safety reports.
- A global assesment report will be prepared by Sept 2022

# Global Safety Assessment

*An understanding of the global and regional safety needs  
Survey Results NACC and SAM Region*

Thank you

*Mark Millam  
Henry Gourджи*