

Challenges to ATM Safety

PRC Safety Workshop

WebEx - 29th June 2020



Performance Review Commission

Agenda – morning session

Item	Time	July 2020 (09:45 - 16:30)	Ref.
	09:45	<i>Virtual registration (WebEx log in)</i>	
1	10:00	<i>Opening of the Workshop and introduction</i> <ul style="list-style-type: none"> ➤ Welcome ➤ Objectives of the Workshop ➤ Known regulatory and operational changes in the near future 	PRC Chair Background paper
2	10:30	<i>Discussion 1: The view of the ATM Stakeholders on the evolving ATM system and resulting safety challenges</i> <ul style="list-style-type: none"> ➤ Identifying future challenges ➤ What are the key risks ➤ What needs to be changed? ➤ Your experiences 	Presentation of Consolidated Views Discussion

Agenda – afternoon session

2	13:00	<p>Discussion 2: <i>The role of the new performance safety indicators and methodologies as drivers and barriers for keeping the system safe in the context of the new ATM system</i></p> <ul style="list-style-type: none"> ➤ What is “safe” in the future? ➤ What are the implications of not having correct indicators to measure the future performance? ➤ How future safety performance is to be measured? 	<p>Presentation of Consolidated Views</p> <p>Discussion</p>
3	14:30	<p>Way forward</p> <ul style="list-style-type: none"> ➤ Who – possible partnership ➤ What – top 5 research needs ➤ When – timeline ➤ How... 	<p>PRC Vice-Chair</p>
4	15:00	<p>Wrap up</p> <ul style="list-style-type: none"> ➤ What are the main challenges to ATM Safety ➤ Actions 	<p>PRC Chair</p>
<p>15:30 – end of workshop</p>			

Future safety challenges and key risks

Automation

New ATCO tools; training; human performance; loss face of key skills

Increased traffic

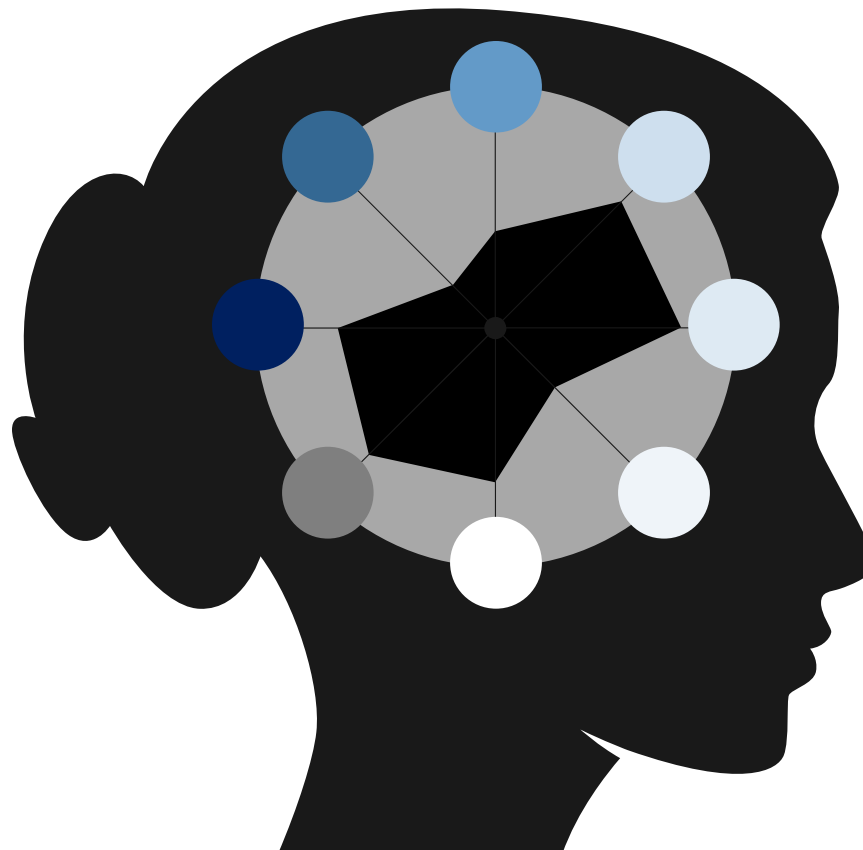
Impact on human performance; system working close to its limits; capacity

Cyber security

Information technology security; cyber treats

Big data

Over-reliance on AI/ML; lack fo data; weakk signals; Building indicators fed by big data; lack of good predictive indicators



System Thinking

Is there a need to implement alternative look on safety? We need paradigm shift in thinking

New entrants

Drones; RPAS; Space travel; U-Space; Urban Air Mobility

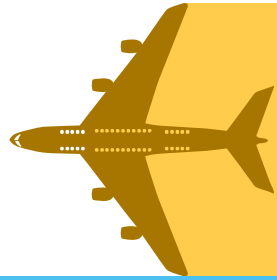
Digitalization

Uncertainty on the actual safety impact associated to large spread of ATM digitalization

Human in the new system

ATCO training; new ATCO tools; ATCO adaptation; dynamic work environment; the new roles and responsibilities; Inappropriate recognition of human roles in many novel ConOPS

What is missing (or not)?



01

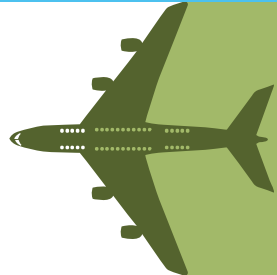
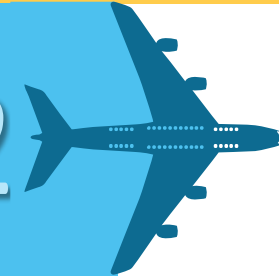
Future Safety

Perf. should be measured/assessed across the whole system; Do not limit measurement to throughput/output; Explore gaps between the “work as imagined” and “work as done”

“Old/new” and “wrong” SPIs

Can we/should we re-use existing SPIs?; Existing SPIs may be kept but enriched with additional ones; Implications of not having correct indicators; Cannot explain why system is improving; Continue doing “wrong” things right

02



03

Future measures

Need to drive the right behavior; change frequency to allow the impact on performance to be seen; anticipate the future; business intelligence; composite measures are needed

System thinking

Need to promote move from “safe productivity” to “productive safety”; a different approach to safety is needed.

04

