

ICAO JOURNAL

NEWS AND DEVELOPMENTS FROM THE INTERNATIONAL CIVIL AVIATION ORGANIZATION - VOL.70 - NO.3

PARTNERSHIPS FOR PROSPERITY

ICAO'S 2015 **WORLD AVIATION FORUM** SETS THE STAGE FOR A NEW ERA OF GLOBAL AVIATION DEVELOPMENT IN SUPPORT OF LOCAL PROSPERITY AND THE UN SDGs

ALSO IN THIS ISSUE:

2015 ICAO COUNCIL OFF-SITE PUTS FOCUS ON TRAINING
HARMONIZING PASSENGER RIGHTS GLOBALLY
NEW MANUAL ON CHILD RESTRAINT SYSTEMS
WORLD LEADER INTERVIEW - CAPT MARTIN CHALK, IFALPA
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ICAO Council Information accurate at time of printing

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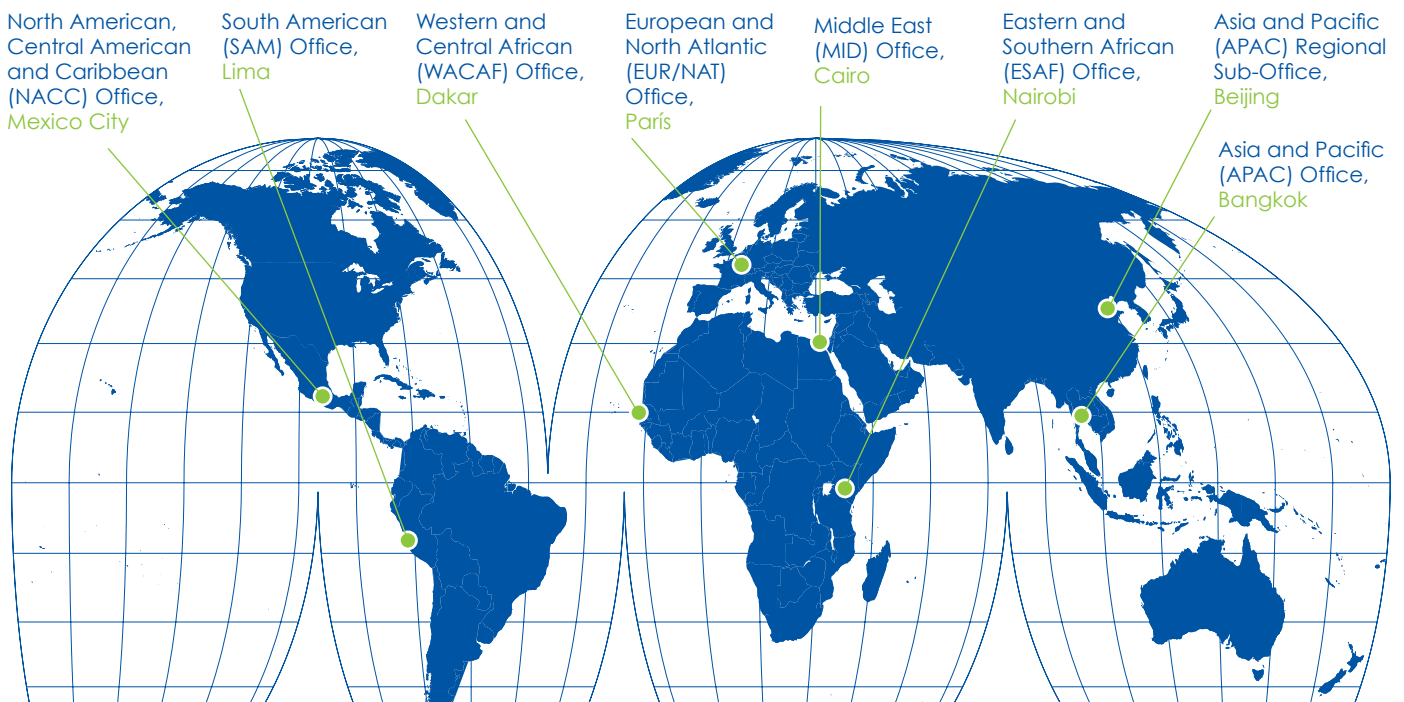
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President: Mr. Farid Zizi

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ICAO's Global Presence



We're working hard to make sure there's

NO COUNTRY LEFT BEHIND

when it comes to global aviation standards

Because all ICAO Member States should have access
to the benefits of safe and reliable air transport services



ICAO



Dr. Olumuyiwa Benard Aliu

WORKING TOGETHER TO ENSURE NO COUNTRY IS LEFT BEHIND

✈ A foundational priority enshrined in the Convention's preamble, and which is fully in-line with the goals and objectives of ICAO's upcoming World Aviation Forum, is that international air transport services should:

"...be established on the basis of equality of opportunity and operated soundly and economically."

This underlying principle has served States and air transport very well throughout the long history of our sector, and its inherent spirit of inclusiveness and cooperation has been invaluable at every turn to the realization of our remarkable global network.

But it has also been recognized lately that some major reprioritization was required if the full promise and potential of this guiding principle would continue to be fulfilled. This was precisely why ICAO took action in embarking on its *No Country Left Behind*

campaign at the end of 2014, mainly due to revelations emerging from our auditing programmes for aviation safety and security oversight (USOAP/USAP).

These indicators demonstrated to us that international civil aviation Standards and Recommended Practices (SARPs) were not being as effectively implemented in some States as in others, a discrepancy which speaks directly to our core responsibility in ICAO to foster greater global harmonization in civil aviation.

EFFECTIVE, HARMONIZED SARP IMPLEMENTATION SUPPORTING SUCCESSFUL AVIATION DEVELOPMENT

As the entire United Nations system now embarks toward the ambitious Agenda 2030 and the 17 Sustainable Development Goals (SDGs) adopted in New York in late September of this year, it is important that States and the donor/development community recognize the increasingly fundamental importance of global air transport connectivity to the basic economic aspirations of modern businesses, societies and States.

But in order to access and benefit from global connectivity, States must first commit to taking all actions necessary to ensure that ICAO SARPs and policies for aviation safety, efficiency, security, economic development and environmental performance are fully reflected in their local legislation, and suitably reinforced with realistic financing, facilities and skilled personnel as necessary.

ICAO's reorientation to better coordinate and, where appropriate, directly provide the assistance States need to realize these goals, is precisely what *No Country Left Behind* is designed to encourage and raise awareness on. States need to realize we are their partners on this journey, and that we can all be more effective by working together to draw the connections between aviation's priorities to safely manage the projected doubling of our network's capacity by 2030, and the world's priorities aimed at eradicating poverty and raising levels of general prosperity and opportunity for all.

In taking note of the Agenda 2030 Preamble of late, I was very encouraged that it similarly stresses that: *"As we embark on this collective journey, we pledge that no one will be left behind."* This common thread in Agenda 2030 and *No Country Left Behind* is an important first step in helping States and development stakeholders foster a new understanding on the role of aviation in fostering global connectivity and sustainable development, and IWAF2015 will be the next step ICAO takes to ensure this message is suitably reinforced at the highest levels.

ICAO, in addition to the many Ministers, experts and other high-level speakers and panelist we are assembling for IWAF2015, will be highlighting the value of partnerships and the basic need for these partners to speak the same language. Together we must identify and pursue concrete objectives supported by strong business cases and dependable returns on investment.

Lastly, the title of this editorial reflects the Council's recent

“But in order to access and benefit from global connectivity, States must first commit to taking all actions necessary to ensure that ICAO SARPs and policies for aviation safety, efficiency, security, economic development and environmental performance are fully reflected in their local legislation, and suitably reinforced with realistic financing, facilities and skilled personnel as necessary.”

Decision on the theme for International Civil Aviation Day, which as of 2015 will now be in place for a four-year period (2015-2018). This new approach to determining a longer-lived theme recognizes that our sector requires significant time and commitment on behalf of all its participants to drive substantive change, while the theme itself highlights the historic ability of civil aviation to employ cooperation and consensus in the service of air transport progress.

The adoption of the SDGs in 2015 marks the beginning of a new and very important journey for humanity, and IWAF2015 similarly denotes the beginning of a new era and a renewed commitment to the Convention's Preamble for global civil aviation.

ICAO will do its part to set a course to address the shared priorities before us, and we will look forward to States and development/donor organizations working more closely with the civil aviation community in the years ahead, joining us on the path to true global peace and prosperity in our time. ■




ICAO WORLD AVIATION FORUM
23-25 NOVEMBER, 2015
MONTREAL, CANADA

LANDMARK WORLD AVIATION FORUM TO ADDRESS SUSTAINABLE DEVELOPMENT CHALLENGES

This November, States' Ministers and high-level officials from international and regional organizations, civil aviation bodies, industry and financial stakeholders, as well as representatives of several United Nations partner organizations, will gather at ICAO Headquarters for the first-ever ICAO World Aviation Forum.

This event will serve as a unique opportunity to further harness aviation's vast potential for stimulating economic growth in a manner consistent with the vision of the United Nations 2030 Agenda for Sustainable Development, as well as ICAO's *No Country Left Behind* programme goals.

 In 2014, the total economic impact of aviation reached some 3.5 per cent of GDP or 2.4 trillion U.S. dollars, while supporting the employment of 58.1 million people. More than half of the world's 1.1 billion tourists crossed State borders by air to reach their destinations, a figure which rises to 80 per cent for various small island states, while air freight represented 34.6 per cent of world trade by value.

Noting these figures, it becomes very clear that aviation plays a significant role in fostering sustainable economic development, and yet despite this clear economic significance only 2.6 per cent of global funding for infrastructure and services (2005-2015) was earmarked to support aviation development.

ICAO Council President Dr. Olumuyiwa Benard Aliu said, "Civil aviation needs more advocates around the world who understand and appreciate its positive impacts and who work in concert with ICAO to drive the funding and political will necessary to take full advantage of what air transport has to offer cities, States and regions. And indeed all across ICAO today we are working with greater determination than ever to generate this political will, so that nations in need may pool resources, participate more fully in regional

coordination efforts, earmark voluntary funds, and reap the benefits of improved aviation capacity.”

“The ICAO World Aviation Forum,” he added, “will complement this work and be a very important event with respect to how ICAO, and most especially our Regional Offices, continues to serve and assist our Member States. It will help to ensure that ICAO becomes a more vocal presence in United Nations development conversations, and that States, development and donor agencies, financial institutions, and other UN agencies begin to more clearly recognize the important role of air transport in fostering greater opportunity and prosperity wherever aircraft fly.”

Confirming the importance and timeliness of the IWAF, its speakers and panellists already feature a number of State Ministers of Transport for Civil Aviation, Tourism, Infrastructure and associated areas, Deputy Prime Ministers, UN agency Under-Secretaries-General and other Chief Executives. Also confirmed are Airports Authority Chairpersons, Airport CEOs, the Directors General of the International Air Transport Association, Airports Council International, and the Civil Air Navigation Services Organisation, Export-Import Bank and Development Bank executives, European Commission representatives, and many others.

Aviation development encompasses a wide range of infrastructure, human resources, training, and related capacity-building activities. The ultimate goal of these efforts is to realize a safe and efficient air transport foundation in a given State, one which is consistent with ICAO’s Standards and Recommended Practices (SARPs) and Strategic Objectives for the global air transport network.

Recognizing the importance of aviation development to ICAO’s global mandate and the new UN Sustainable Development Goals (SDGs), ICAO has begun to more actively engage States and donor/development stakeholders and to map its work against SDG deliverables. In this respect the Organization not only serves an essential coordinating role, but it also provides States with the planning and monitoring tools they need to develop practical and effective business cases supporting dependable socio-economic returns from air transport investments.

The regional support structure of ICAO, led by its seven Regional Offices, is the primary mechanism through which ICAO oversees and assists in the effective implementation of SARPs, as well as ICAO policies and guidance material. According to Dr. Aliu, ICAO will use the IWAF event to “put on display new SARP implementation tools, as well as other initiatives to assist States with the development of more pragmatic and effective air transport investment business case scenarios.”

The ICAO World Aviation Forum will precede by one week the start of the 21st Session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC), otherwise known as “Paris 2015,” which aims to achieve a legally binding and universal agreement on climate.



“The ICAO World Aviation Forum will be a very important event with respect to how ICAO continues to serve and assist its Member States.”

- ICAO Council President,
Dr. Olumuyiwa Benard Aliu

“A positive outcome at COP21 will be crucial to encouraging ICAO Member States to make further progress at ICAO’s 39th Assembly next year on reducing emissions from international aviation, including the agreement on a realistic and effective global market-based measure for international aviation,” said Dr. Aliu.

ICAO Secretary General, Dr. Fang Liu, said ICAO “needs to engage and promote synergies to realize more effective climate action. Aviation is learning from other sectors as well, and sharing our own experiences and best practices where applicable.” ■



ICAO WORLD AVIATION FORUM SESSION AND PANEL TOPICS

- *No Country Left Behind* Goals in the Context of the UN Sustainable Development Goals (SDGs) and Aviation Investment Paradigms
- How Safe and Reliable Air Transport Delivers Important Economic Benefits to States
- High-level Dialogue on the Inter-sectorial Collaboration and Aviation Strategies for the SDGs
- Global Investment and Aviation Development Perspective
- Contributing a Safe, Secure and Sustainable Global Aviation System Towards the Achievement of the SDGs
- Methodologies and Tools: Building Better Business Cases for Air Transport Development
- Evolving ICAO’s Regional Support
- Case Studies and Success Stories: Aviation Driving Local and Regional Prosperity
- Tying it all Together and Putting Words into Action

ICAO AND THE UN SUSTAINABLE DEVELOPMENT GOALS

ICAO's current Strategic Objectives are strongly linked to 13 of the 17 United Nations Sustainable Development Goals (SDGs). ICAO is fully committed to work in close cooperation with States and other UN agencies to support related targets, and is supporting

		ICAO STRATEGIC OBJECTIVE				
UN SDG		SAFETY	CAP/EFF	SEC/FAL	ECON DEV	ENV
1	NO POVERTY End poverty in all its forms everywhere					
2	ZERO HUNGER End hunger, achieve food security and improved nutrition, and promote sustainable agriculture					
3	GOOD HEALTH AND WELL-BEING Ensure healthy lives and promote well-being for all at all ages					
4	QUALITY EDUCATION Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all					
5	GENDER EQUALITY Achieve gender equality and empower all women and girls					
6	CLEAN WATER AND SANITATION Ensure availability and sustainable management of water and sanitation for all					
7	AFFORDABLE AND CLEAN ENERGY Ensure access to affordable, reliable, sustainable and modern energy for all					
8	DECENT WORK AND ECONOMIC GROWTH Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all					

ICAO SG MAKES STRONG CASE FOR AVIATION AT UN SUMMIT












"ICAO is here to underscore the role of air transport in connecting the world, generating sustainable prosperity, and transforming lives," ICAO Secretary General Dr. Fang Liu stated in addressing the Plenary Session of the United Nations Sustainable Development Summit at UN

Headquarters in New York City, from 25–27 September. "Our goal is to ensure that governments in every region of the world understand that safe, rapid, and reliable global connectivity is essential to realizing the ambitious and visionary 2030 Agenda." ICAO has mapped its current Strategic Objectives for global civil aviation against 13 of the 17 Sustainable Development Goals (SDGs) which comprise the 2030 Agenda (see chart).

these goals as an official observer on the Inter-agency and Expert Group on Sustainable Development Goal Indicators.

Supporting each of the coloured blocks in the chart below is a substantial list of ICAO programmes which address each SDG.


Complete details are available on the ICAO website –the online chart features additional content on each SDG via an interactive matrix: <http://www.icao.int/about-icao/aviation-development/Pages/SDG.aspx>

9	INDUSTRY, INNOVATION AND INFRASTRUCTURE 	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Yellow	Blue	Grey	Purple	Green
10	REDUCED INEQUALITIES 	Reduce inequality within and among countries	Yellow	Blue	Orange	Purple	Green
11	SUSTAINABLE CITIES AND COMMUNITIES 	Make cities and human settlements inclusive, safe, resilient and sustainable	Grey	Grey	Grey	Grey	Grey
12	RESPONSIBLE CONSUMPTION AND PRODUCTION 	Ensure sustainable consumption and production patterns	Grey	Grey	Grey	Purple	Green
13	CLIMATE ACTION 	Take urgent action to combat climate change and its impacts	Grey	Blue	Grey	Purple	Green
14	LIFE BELOW WATER 	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Grey	Grey	Grey	Grey	Grey
15	LIFE ON LAND 	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Grey	Grey	Orange	Grey	Green
16	PEACE, JUSTICE AND STRONG INSTITUTIONS 	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Grey	Grey	Orange	Grey	Grey
17	PARTNERSHIPS FOR THE GOALS 	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Yellow	Blue	Orange	Purple	Green

The week prior to the UN Summit, ICAO and the World Tourism Organization (UNWTO) announced the Medellín Statement – a new joint strategic statement which highlights the global importance of air transport and tourism to improving the socio-economic prosperity of States and regions, and to realizing the new UN SDGs.

“ICAO has been proactively working with the international community to address the challenges of rapidly expanding air traffic, which is now projected to double by 2030,” Dr. Liu told the UN Summit. “To foster this projected growth in a sustainable manner, and produce inclusive and productive employment, aviation must have coherent policies with tourism, trade, and other transport sectors to further improve connectivity and modernize infrastructure.”

AVIATION TRAINING: RESPONDING TO STATE AND INDUSTRY NEEDS

 The projected need for future skilled aviation personnel has made expanded training capacity a key priority under ICAO's *No Country Left Behind* initiative. This past June, at the annual ICAO Council Off-site Strategy Meeting (COSM 2015), participants from the Council's 36 Member States, senior ICAO personnel, and other key stakeholders refined an extensive list of proposals into a sharply focused short list of new ICAO training priorities.

"Successful implementation of the COSM 2015 recommendations will ensure that this critical challenge to global civil aviation is addressed, opportunities for training and capacity-building are optimized, and that *No Country is Left Behind* in implementing ICAO Standards and Recommended Practices," said Dr. Olumuyiwa Benard Aliu, Council President.

Key objectives identified by the meeting include:

1. Establishing a long-term strategy to **ATTRACT YOUNG TALENT** to aviation and to meet global aviation workforce needs
2. Developing a **ROADMAP OF GLOBAL DEMAND** for capacity-building and training needs of States
3. Pursuing **STRATEGIC PARTNERSHIPS** with UN specialized agencies, international financial institutions, and donors
4. Conducting a Global and Regional **TRAINING NEEDS ASSESSMENT** and identifying the priorities and identifying training needs during SARP development, Global Plans, PANS, and Programmes
5. Providing training institutions and Member States with a **LIST OF REQUIRED COMPETENCIES** for the implementation of relevant SARPs and training programmes

Facilitated by Professor Paul Dempsey, Director of the McGill University Institute of Air and Space Law in Montréal, Canada, the 78 participants at the COSM 2015 began their deliberative process by reviewing the preliminary results of the Survey on the Needs and Expectations of ICAO Member States, which had been initiated through a State Letter in March 2015 from the Chairman of the Strategy Planning Group (SPG), Javier Garcia Soruco (Representative of Bolivia).

Of the nearly 100 responses to the survey, representing about half of ICAO's membership, 96% identified "Training of Personnel" as the area where ICAO could better assist States to build capacity. "Attracting New Professionals" was listed by 67% and 61% advocated "Retraining of Experts."

Survey: "96% identified 'Training of Personnel' as the area where ICAO could better assist States to build capacity"



Additional information provided for the Off-site discussions included detailed inputs from ICAO's Bureau of Administration and Services (ADB) and the Global Aviation Training (GAT) office on current policy and activities, as well as "one concrete idea" submissions in response to the State Letter.

One evaluation of the Off-site called it "a forum for reflective thought and robust discussion in an informal setting, which supported tangible outcomes."

After gaps and opportunities were identified, the participants were sub-divided into breakout groups which used two structured analytical tools – SWOT (Strengths, Weaknesses, Opportunities and Threats) and PEST (Political, Economic, Social and Technological) – to develop a detailed list of training and capacity-building factors. Among the dozens of highlighted comments: "States need to show political will to improve training and capacity-building" ... "the role of aviation and its contribution to the economy is not recognized in a majority of the States" ... "Need to attract more talent to the industry and promote aviation programmes in universities" ... (strength) "ICAO's role/status as a global authority and its reach to promote training" ... "New SARPs equal new training needs/demands" ... "Need for both global and regional approaches."

In total, 42 actions were listed, and by anonymous vote of each participant's five top-priority actions, a Top Ten of common priority items were identified (see box, page 12). Based on these priority items, some of which were combined, the SPG invited the Council to request of the ICAO Secretary General to present business cases (including actions, timelines, and resource implications) in the 207th Session of the Council in March 2016 for these recommendations:

Recommendation A:

Develop senior management briefings for Member States and ICAO Partners to highlight the importance of aviation as a driver for economic development and to ensure that training programmes and capacity-building offered to Member States are linked to that development.

Recommendation B:

Engage in a resource mobilization programme to support assistance to Member States for capacity-building.

Recommendation C:

Provide training institutions and Member States a list of required competencies for the implementation of relevant SARPs and training programmes.



Council President Altu (left) welcomes the ICAO Council Representatives and ICAO HQ and Regional Directors to the 2015 ICAO Council Off-site Strategy Meeting, which for 2015 focused on aviation training. The two day meeting featured intensive breakout sessions (right) and produced important recommendations now being assessed and acted on by the ICAO Secretariat.

Recommendation D:

The GAT Office should ensure the implementation of comprehensive data-driven and competency-based methodologies for the design, development, and delivery of training in aviation and the assessment of effectiveness of ICAO training courses.

Recommendation E:

Organize workshops and symposia addressing the implementation of an ICAO Training Policy and assistance to Member States in implementing their human resources development and planning strategies.

Recommendation F:

Ensure training components in Technical Assistance (TA) and Technical Cooperation (TC) projects are consistent with priorities identified through the ICAO audit programmes and provide sufficient guidance to Member States for their implementation, including customized solutions, developed business case and integration, when possible, of activities that could be carried out by regional organizations to support their Member States.


Each of the recommendations includes additional detail on associated main activities.

The Strategy Planning Group, which coordinated the off-site programme, is comprised of the Representatives of Australia, Bolivia, Burkina Faso, Canada, Portugal, Saudi Arabia, and the United Emirates, along with the Representative of China in his capacity as Chairperson of the Working Group on Governance and Efficiency (WGGE). In addition to the 36 Member States on the Council, COSM 2015 included representatives from the European Union (EU), Airports Council International (ACI), and the International Air Transport Association (IATA), then-Secretary General Raymond Benjamin, incoming Secretary General Dr. Fang Liu (who took office in August), Air Navigation Commission President Farid Zizi, and the senior management team of the ICAO Secretariat, including Regional Directors. ■

TOP TEN PRIORITIES FOR TRAINING AND CAPACITY-BUILDING

1. Long-term strategy to attract young talent to aviation
2. Roadmap of global demand for capacity-building and training needs of States
3. Civil Aviation Authority human resource toolkit for a universal, consistent database of training needs
4. Strategic partnerships with UN specialized agencies, international financial institutions, and donors
5. Enhance training coordination within ICAO and enhance training cooperation outside of ICAO by "matchmaking" States with compatible needs
6. Global and Regional Training Needs Assessments
7. List of required competencies for implementation of relevant SARPs and training programmes
8. Demonstrate that aviation is a driver for economic development in other sectors
9. Articulate and promote the training role of ICAO
10. Identify training needs during SARPs development, Global Plans, PANS, and Programmes

A FRAMEWORK FOR AVIATION SECURITY CAPACITY BUILDING

 Threats to civil aviation are real, serious, and continually evolving. No State is immune from risks. Civil aviation remains a prime target for terrorist plots because of its high visibility, the massive and long-lasting negative impacts on global travel and trade, and the undermining of the sense of security, both domestically and globally.

The objective of ICAO's assistance and capacity-building programme is to help ICAO Member States in need of assistance to build and strengthen their ability to meet obligations for civil aviation security (AVSEC) under the Chicago Convention, most notably Annex 17 and relevant sections of Annex 9 (including security of travel documents): prevent unlawful interference with civil aviation, provide timely and effective responses to attacks and attempted attacks, and assure the safe and efficient movement of people and goods.

The Aviation Security Assistance and Capacity-Building Strategy was developed to guide implementation of ICAO's mandate to lead and coordinate global efforts to strengthen civil aviation security. The implementation of the strategy helps fulfill the specific commitments set out in Assembly Resolution A37-17 and the ICAO Comprehensive Aviation Security Strategy (ICASS) – Strategic Plan of Action 2011-2016. The strategy constitutes a significant renewal and redirection of ICAO's programme of support to States, focusing on helping States address their AVSEC deficiencies, achieve compliance with AVSEC Standards and Recommended Practices (SARPs), and establish sustainable and effective security and oversight regimes.

In delivering on its assistance and capacity-building commitments through *No Country Left Behind*, ICAO is guided by these key concepts and principles:

- **Risk-Focused:** address priority AVSEC deficiencies and vulnerabilities
- **Sustainable Results:** establish viable and effective ongoing security regimes and oversight systems
- **Proactive:** reach out to States at the first indication of serious need
- **State Commitment and Sovereignty:** success requires States to accept primary responsibility for their own AVSEC obligations, and that their ultimate authority and responsibility must be respected
- **Partnerships:** committed to strong and meaningful collaboration with all relevant parties as a necessary condition for success
- **Mutual Support:** dedicated to maximizing opportunities for collaboration and sharing on initiatives of mutual interest and benefit
- **Flexibility:** avoiding unnecessarily prescriptive solutions, open to alternative means of achieving the desired results

- **Continual Improvement:** responsive and adaptive to evolving needs, priorities, and circumstances.

The Aviation Security Assistance and Capacity-Building Strategy encompasses:

- **Assessing a State's aviation security needs** together with the appropriate authorities of States in a holistic manner followed by ICAO helping States to help themselves implement compliance measures. *In 2014, eight needs assessments were conducted for States.*
- Structured **Aviation Security Improvement Plans (ASIPs)** that use a multi-phase methodology and assistance tools tailored to the State's specific needs. *In 2014, 10 new ASIPs were initiated. Another 15 States were already actively engaged in the implementation of an ASIP.*
- **Ad hoc assistance** - 10 States received ad hoc assistance in 2014 in the form of classroom training and/or on-the-job training while many others sought and received guidance on aviation security matters from ICAO's Regional Offices and Headquarters.
- The **Aviation Security Training Centres (ASTC)** network, which now comprises 29 members, delivering training to AVSEC personnel using ICAO Aviation Security Training Packages (ASTPs) and workshops. *In 2014, ASTCs hosted 43 training events, benefiting 562 participants from 104 States.*
- ICAO is developing and making available **aviation security standardized training packages and workshops.**
- **Support to projects** conducted under ICAO's Technical Co-operation Programme, such as Cooperative Aviation Security Programmes (CASPs).

The 7 ICASS Strategic Focus Areas

1. Address new and existing threats
2. Promote innovative, effective, and efficient security approaches
3. Promote the sharing of information amongst and within Member States to raise awareness of threats and AVSEC trends
4. Promote global compliance and establish sustainable AVSEC oversight capability of States
5. Improve human factors and security culture
6. Promote development of mutual recognition for AVSEC processes
7. Emphasize the importance of security amongst States and stakeholders.

For further information on AvSec support to States, visit the **Implementation Support and Development (ISD) - Security Section on the ICAO website:** <http://www.icao.int/Security/isd/Pages/default.aspx> ■

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“FOSTERING THE CONVERSATION”

AN INTERVIEW WITH STEPHEN CREAMER, DIRECTOR, ICAO AIR NAVIGATION BUREAU (ANB)



Third in a series of interviews with ICAO leaders

Stephen P. (Steve) Creamer saw an opportunity as a young man to become an air traffic controller by volunteering for service in Alaska. He not only fell in love with the wilderness setting, spending two decades there, the adjacency to airspace covering Canada, Iceland, Russia, and Japan led to him becoming a specialist in international operations. Later he served as the U.S. Federal Aviation Administration’s Director for Europe, Africa, and the Middle East. He also spent four years as the U.S.-nominated representative on the ICAO Air Navigation Commission.

In April 2015, Creamer became Director of the ICAO Air Navigation Bureau (ANB), succeeding Nancy Graham, who retired after leading the ANB for eight years. The ANB is part of the Secretariat, reporting to ICAO Secretary General Dr. Fang Liu.

ICAO Journal editor Rick Adams spoke with Director Creamer at his Montréal office.

You received a rather quick baptism in several major initiatives even before formally taking on the Director’s role.

I retired from the FAA on January 2nd and attended the High-Level Safety Conference as appointee in February. I also participated in both the ICAO/UNOOSA Aerospace Symposium and Remotely Piloted Aircraft Systems Symposium in March, serving as Nancy’s senior advisor.

I was involved in the deliberations in March on the conflict zone repository database, working with the President [Dr. Olumuyiwa Benard Aliu] as he adjudicated the consensus in the Council.

Then on March 24th, the Germanwings accident happened. We had to address that and look at the ICAO response. In this case, we had Standards and Practices in place associated with events like that, and it was really going to be a matter, once the investigation was done, of looking at how well the States had implemented those.

The ICAO conflict zone database was launched the day after you officially moved into your office, April 2nd. How is that operating thus far?

We’ve posted around 40 notifications to airmen (NOTAMS) that States have published regarding other countries’ airspace – areas very narrowly defined where conflict may be occurring between two armed parties.

Before we publish, we go through a very rigorous set of steps. ICAO can’t publish it unless the State asks us to. If a State asks us to publish something, we check to make sure they have publicly posted the information on their own because we don’t want ICAO to be the first place for the public to see it. Secondly, we ask them to tell the



“15-minute tracking doesn’t solve the whole problem.”

If you look at the NOTAMS in place today over Iraq, Syria, Turkey, and other conflict zones, they don’t all say the same thing. You have to discern what your risk is from the picture that you create for yourself. So it’s an ongoing challenge. I don’t think that conversation is over.

There’s also a new aircraft tracking website.

What’s the status of the Global Aeronautical Distress and Safety System (GADSS) concept of operations announced at the Safety Conference?

We’ve been working a lot on the proposed Standards for normal tracking, distress tracking, flight recorder enhancements, and search-and-rescue. We’ve got a group trying to fuse the technical requirement with operational practices that will enhance our response to an incident like Malaysian 370.

It’s on a pretty fast track. A Standard for normal tracking will be presented to the Air Navigation Commission this fall, and then we’ll take it to the Council. That would be for adoption about a year later in November 2016.

The distress tracking Standard will follow in the spring for review by the Commission. The applicability date would probably be a little longer because it’s technically a little more challenging.

Other than the 15-minute normal aircraft tracking which was announced in February, what other guidance might States expect?

That 15-minute tracking doesn’t solve the whole problem. So we have another initiative, the Normal Aircraft Tracking Implementation Initiative (NATII), designed to evaluate all the operational procedures required to coordinate action should tracking not be normal. If there’s an anomaly or abnormality or a loss of track, then what steps do you take and how do you take them.

We have procedures in place today where air navigation service providers are supposed to be in contact with the search-and-rescue centres and initiate alerting and then begin search, should alerting not be successful in locating an aircraft. A lot of that has to do with conditioning people to take steps earlier than they might otherwise take them, to reach out and exercise assets in military radar or in other arenas that they might not have access to themselves, and then to coordinate all that activity amongst the States.

State they are going to publish information about that they are doing it so that ICAO is not the first party to tell that State. So we’re not in the middle.

We send a notification to the State that will be affected by the NOTAM and give them 72 hours to respond to us that they have no objection, that they object, or that they have additional information that may be pertinent. And we will publish the objection and/or the additional information. All of that goes on our website and is available to the public.

In at least one case, the State has come back and said we think the information published is too restrictive and we would suggest an alteration. And then we have facilitated a conversation between the two States, and the original publishing State changed their NOTAM as a result of that conversation. That conversation is what we’re trying to foster, that the two States would talk and both of them would publish compatible information in the beginning and lessen the confusion for the operator.

The database is supposed to be a one-stop opportunity to look at the information. It’s designed to allow States to publicly post their information in a place that’s available to the entire public, not just to the operator community. This is still very much in a prototype format. That will continue through the first year of operation. Then we’ll make decisions about what we want to do beyond that.



I think we'll go further and say that, beyond the implementation of normal tracking, these steps will be necessary for coordination between the airline, the air navigation service provider, the search-and-rescue authority, and the military to ensure that the appropriate outcomes are derived from all of this action. That's going to take a

lot of implementation training and oversight in the various regions to make sure that the components are all picked up and implemented correctly.

How about equipment aboard the aircraft itself?

The fleet itself will not be fully equipped, I wouldn't expect, for a couple of years. And some portions of the fleet, because of the expense, may have to be waived or deferred a little bit longer than the applicability date.

In the end, we may get a solution through the satellite ADS-B (automatic dependent surveillance – broadcast) network that will allow tracking with new technology fairly soon and without too terribly much expense.

Remotely piloted aircraft are very much in the news with increasing reports of near misses with aircraft. How is ANB addressing RPAS?

For the small vehicles, we're not feeling there's a need for international standards because there's not going to be an international flight from one State to another. However, it's an international manufacturing market so there's some view that we need to help with providing public awareness material and training best practices so the user community understands the hazard it represents to the rest of aviation. That they're actually part of the aviation system and there are rules that need to be followed when you fly your home remotely piloted aircraft and film your videos.

If you get above 30-40 pounds and you go up to the 500-pound range, you've got a class of vehicle that may not fly internationally but it could. It's going to incorporate design features that need to be internationally agreed upon because the technologies will become ubiquitous to our infrastructure.

I was in Singapore watching a demonstration of essentially autonomous vehicles flying a pre-designated route and then automatically avoiding each other. They also demonstrated a "non-cooperative vehicle" essentially being acquired by a control authority and landed. We would need to sort through what that looks like and create some standards for that.

There's a lot of energy being devoted to this, and if we're not into the design conversation early many of these designs will be formulated and evolved and funded and tested without necessarily having the international consensus around what their outcomes should be or what the policies should be that drive them.

The things you can do with a vehicle that doesn't have to accommodate a human being are very different from what we have today. All of that requires that we are able to make digital connections to devices.

And that brings us to cybersecurity.

We're worried about protecting the integrity of the aviation safety systems that are a part of any component in the airspace system. There are a lot of smart people in each segment of the industry who have taken steps to mitigate their risk for their portion. If you look at Vendor A's air traffic control system, their systems are well protected from cyber intrusion. They've got fault tolerance and the ability to do self-healing and all the things that are necessary within a system like that.

But an airplane has a different set of vendors, a different set of architectures. Or an airport is establishing an infrastructure specifically for its need. So no single element of the industry can tackle the whole problem. We know that for that information sharing to continue on the logarithmic increase that we'd like, we have to address this risk. And so we have some smart people advising us on what steps ICAO should take and that's going to be a big portion of our work coming up in the next triennium.

THE ANB MANDATE

The ANB manages two of ICAO's five strategic objectives: Safety and Air Navigation Capacity & Efficiency. This work is carried out within a Policy and Standardization framework of ICAO's 16 Annexes as well as Safety and Infrastructure Monitoring, Analysis, and Implementation. The ANB also develops and maintains the *Global Aviation Safety Plan (GASP)* and the *Global Air Navigation Plan (GANP)* and leads ICAO's efforts related to crises and contingencies.

Programme domains include:

- Accident investigation
- Aerodromes
- Aeronautical information
- Air traffic management
- Aviation medicine
- Dangerous goods
- Integrated infrastructure management
- Integrated safety management
- Flight operations
- Meteorology
- Performance-based navigation (PBN)
- Remotely piloted aircraft systems (RPAS)
- Universal Safety Oversight Audit Programmes (USOAP)



It's early days, but what are your thoughts on ICAO's role in commercial space activities?

We have created a learning group comprised of regulatory and industry representatives, co-sponsored between ICAO and the UN Office of Outer Space Affairs (UNOOSA). One place we have found common cause in these early

days is developing the ability to share information with the aviation community about the hazard from space debris that might be coming down into the airspace where aviation is operating. As the number of satellite objects continues to grow, that will become more and more of a risk.

Launch activity is not governed by our airworthiness or certification rules generally but it has to be segregated from most of our aeronautic activity because it's so high-energy. It can't be controlled in the same way. It goes up and leaves our domain and generally isn't a problem.

Recovery activity is much more problematic. Near-term recovery activity can be prescribed to low-traffic-density airspace, sometimes offshore, sometimes in a part of a country where there's just not that much aviation activity. But as the number of operations increase that will change. We'll have to do a better job of managing and getting the trajectories inbound. That will become even more of an issue if we get to the point where somebody's doing sub-orbital where they're launching in one location with the idea they want to be destined for somewhere else.

“We’re looking at what we can do to enhance the implementation of Standards in the States.”

The ANB has a great deal on its agenda. What changes might we see under your leadership?

We're trying to develop a three-year tempo for the way we operate. The Aviation System Block Upgrade (ASBU) cycle operates in five-year blocks. We're going to amend that at the next cycle to every six years so it's in line with the Assemblies. We did a plan in 2013. In 2016 we'll do a mid-plan update. In 2019 we'll republish the entire plan. So both the *Global Air Navigation Plan* (GANP) and the *Global Air Safety Plan* (GASP) follow that tempo.

“Dr. Liu’s objective is for us to connect to the rest of the UN development community.”

Monitoring and oversight for safety implementation is ongoing, and we're looking at what we can do to enhance the implementation of Standards in the States. We have a tool by which we can produce the information on all of the States in the system in real-time, essentially showing where a State is in relation to other States of similar size or similar situation.

We're enhancing that briefing to take into account the economic model, the marketplace of that State. We can say to States: in an aviation marketplace similar to yours, the average of import and export of aviation activities is at X level and here is where you're at in your State. We can evaluate the findings in your USOAP audit – and based upon your situation, which ones we think would have the most benefit for you in reducing the risk of accidents and in promoting the economic benefit for your country.

That's our objective: to get to where we can actually model that in a fundamental way so after we've run an audit and we have a corrective action plan we can recommend that a State do these things in your plans first for the greatest effect. These changes in our tools will improve the effective implementation of the safety standards, not necessarily hitting an aggregate benchmark as much as making sure that the most important standards for a particular situation in a State are being addressed. We can more proactively assist the Regional Offices and the States in resolving their problems faster and where they can take advantage of someone else's learning.

So this is ANB's operationalization of the *No Country Left Behind* concept?

Yes. Dr. Liu's objective is for us to connect to the rest of the UN development community, to be part of the UN Sustainable Development Goals solution set, and for that to be a big part of how we deal with the *NCLB* mandate. We can give the analysis to our economic development partners in the UN and the international investment community. As they're developing transportation infrastructure or economic recovery models for States, they can include their regulatory oversight for aviation safety as part of that.

The Bureau has been very forward-leaning over the last eight years. A lot of change was introduced and we're continuing with those changes focused on the fundamentals, making sure that our organizational coordination and the quality of our work is at the highest possible level. ■

“DOING THINGS IN THE RIGHT ORDER”

AN INTERVIEW WITH CAPT. MARTIN CHALK, PRESIDENT, INTERNATIONAL FEDERATION OF AIR LINE PILOTS' ASSOCIATIONS (IFALPA)



Third in a series of interviews with world aviation leaders

IFALPA is a federation of pilot and flight engineer groups from nearly 100 countries worldwide, indirectly representing over 100,000 aviation professionals. Member organizations, limited to one per country, range from the small Association Luxembourgeoise des Pilotes de Ligne to the 50,000-strong Air Line Pilots Association (USA).

The mission of IFALPA is to be the “global voice of professional pilots” and to promote the highest level of aviation safety worldwide. Their leadership and subject experts have been active on numerous ICAO committees and working groups.

Captain Martin Chalk, who flies the Airbus A380 for British Airways, was elected as IFALPA's 18th President during the Federation's 70th Conference held in April in Madrid, Spain. Capt. Chalk was previously President of the European Cockpit Association, 2005-2011. He has been a representative to the British Airline Pilots' Association (BALPA) since 1992.

“I worked with IFALPA as an expert representative from one of its member associations for many years. But I have only worked within IFALPA in the last 18 months,” Capt. Chalk noted.

“I bring something which is both a handicap and a benefit. I have less grounding in the IFALPA way, which I think gives me the challenge of having to learn it, understanding why things are done the way they are done at the moment, but also the benefit of being able to see it with fresh eyes, an ability to bring fresh perspective to the organization's work.”

ICAO Journal editor Rick Adams spoke with Capt. Chalk at IFALPA's Montréal headquarters.

“I've got a very strong strand in my thinking around doing things for the right reasons.”



You served in the Royal Air Force, followed by more than a quarter century as an airline pilot. What provoked your passion for flying?

I'd always had an interest, as most boys do, in flying and machines and anything that looked exciting. When I was 13 or 14, my parents bought me a 'taster flight' at a local airshow at Exeter airport, and from that moment the idea of leaping into the sky in an airplane has always fascinated me. To this day, I still get a thrill out of flying and in particular the more human aspects of flying now.

What attracted you to work with BALPA early in your airline career?

My parents were passionate about education. So I'm grateful for that. My mother was very strong on doing the right thing. Not doing the easy thing. So I've got a very strong strand in my thinking around doing things for the right reasons, not necessarily trying to get away with the easy.

I was just coming off one of the oldest airplanes I've ever flown, the Hawker Siddeley 748, moving to the Airbus A320, which at that time was an ultramodern narrowbody. The technical difference was a shock, and I was impressed by the approach that the Association took: not that progress be resisted but progress was to be embraced, to be shaped, formed. I was really drawn to an organization whose reason for being was in part to improve people's approach to aviation in all its facets – industrial, technical, safety, and in its public perception.

How would you characterize IFALPA?

The most striking thing for me is the level – depth and breadth – of technical and professional knowledge of the people within this

organization. I personally would contend it is the most well-endowed organization at the global level in terms of its knowledge of the industry. Clearly that is biased towards the operational knowledge side and we would contend we have the deepest knowledge of operational issues and those allied to it; how you use the air traffic system, how you use the ground environment.

What do you see as major challenges for the organization?

I think the challenges come from the way the industry is so dynamic. Every 20 or 30 years, our industry seems to completely reinvent itself and approach the operation in a new way.

The changes are not being helped, I think, by the aviation industry losing its fastidious thought processes. We have made commercial aviation safe because we have put an enormous amount of structured thinking into all of the processes that build the airplane, that set its operational standards and its operational procedures. And then we have enormous amounts of discipline within that structure. The people are very, very professional and they adhere to those standards and they adhere to those processes. We turn an extraordinary event into a commonplace, daily, and more importantly a very, very safe event.

Do you think the industry is in danger of losing some of that discipline? For example, IFALPA was critical of the release of cockpit voice recordings from Germanwings flight 4U9525.

We're certainly in danger, I think, of losing some of the processes that underlie the way that we improve safety. For example, doing things in the right order. When a pilot on a flight is presented with a challenge, they first seek to acquire all the information they need; they'll then diagnose and finally address the challenge. And they do that in a very open way, speaking to all the people that might be useful in terms of providing them with a good picture of the challenges they are being presented with. So that all feeds through in a variety of ways into our current aviation systems.

ICAO Annex 13 [Aircraft Accident and Incident Investigation] is a good piece of work, but people don't adhere to it. With regard to the recent Germanwings accident, I think the authorities should reflect on whether they followed the spirit of Annex 13. The media appetite today for information has caused us to forget that we need to keep in mind the victims of potential future accidents, which we can and must avoid, and therefore save those victims from ever being victims; as well as the victims of the current accident being investigated, because their family and friends want to know exactly what happened as their primary motivation.

The way that Annex 13 is currently being progressively abused by authorities that feel the heat of media pressure more than the heat of doing the right job, doing the right thing, I think that doesn't help us. It discourages the real fact-finding that underpins the enormous gains that we've made from proper investigation of accidents and incidents. And also damages our desire to want to be more proactive and gain information from parts of the industry



in order to learn before the “holes in the cheese” line up so that we can prevent accidents ever happening in the first place.

How about the two-person cockpit and medical issues raised by the Germanwings tragedy?

We would argue there have been so few such incidents that have resulted in negative outcomes that it really isn't worth a headlong rush to knee-jerk reactions. We really ought to wait for the investigators to do their usual thorough job and see what they recommend as appropriate.

We are not convinced that two people on the flight deck is the best reaction. It only addresses the problem from one perspective and it introduces challenges in other perspectives, for example, from a security point of view. You have to ask yourself whether an untrained cabin crew member – untrained from a pilot's perspective; they're clearly trained to do their job – but from a cockpit perspective they are untrained, whether they are going to be in any way effective.

The effort must be to understand the system, and to understand the system you must have those who are working within it feel unthreatened by normal reporting. We do not believe in a non-punishment system. We believe in a system which is just. If people act with gross negligence or malicious intent, we have no resistance to that resulting in a properly followed disciplinary process. However, there must be a “safe” way for colleagues to raise a flag and seek the support mechanisms to come into play when a pilot has medical challenges. They must not feel they're letting down a colleague and delivering them into a punitive system which does not care for their health and well-being; but

just for its own system protection. Any system like this has to care for both the aviation system and the individual's welfare.

What is IFALPA's relationship with ICAO?

Our relationship with ICAO is generally very, very positive. Our technical committees, which reflect the technical committees of ICAO, have developed deep and mutually supportive relationships. We are always grateful that ICAO gives us as wide and deep an access as they do, to their technical thinking and their preparations for what they're seeking to achieve. And we're always determined to provide them the most thoughtful and professional inputs as we possibly can, right across the safety and technical areas.

When you talk with line pilots, what issue concerns them most?

He or she would say that the increasing level of competition is putting pressure on their ability to do a professional job. At one end it is causing them to be more productive and that's fine so long as it doesn't cross the line into being fatiguing. At the next level it's asking them to be quicker and less thorough in turnarounds and preparation, etcetera, because the competitive pressure is always to keep costs low. Professional pilots will always seek to balance the need to have their employer be competitive with the obvious and overriding need for us to do our job well to keep their particular operation safe.

How concerned are they about drones, remotely piloted aircraft systems (RPAS)?

There's a lot of concern at the moment about RPAS and clearly this is a challenge right across the industry.

The technology has accelerated the sophistication of RPAS and at the same time the costs have tumbled and their availability exploded. We are concerned that the regulatory environment swiftly catches up with the reality. It's a real challenge for regulators, and we are working closely with ICAO and all of the national governments – but we feel that there is a need to think clearly and to act quickly before there is a tragic incident. A tragic incident will mean that the clarity of thought will be clouded by the media scrum.

We would like to examine with the industry whether an RPAS operator is a pilot. We think so. We think the fact that they are not located on the airplane is not relevant to their role and we think the same sort of rigor in training is necessary for the remote pilot as for the on board pilot. It doesn't matter to the people underneath the flight path of an aircraft whether the pilot is on board or not. They still expect it not to affect their safety. ■

“the heat of media pressure ... discourages the real fact-finding”



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RESEARCH DEMONSTRATES FEASIBILITY OF GLOBALLY ACCEPTABLE KNOWLEDGE EXAMS FOR PROFESSIONAL PILOTS



DR. MANOJ S. PATANKAR, FRAeS

He is a Professor of Aviation Science and the Executive Director of the Center for Aviation Safety Research at Saint Louis University. He has directed numerous research projects in aviation safety over the past 20 years and has authored more than 50 publications. He holds academic credentials in aviation, safety, business, and education, as well as professional credentials in flight and maintenance domains.



CAPT. PETER J. WOLFE, FRAeS

He is Executive Director of the Professional Aviation Board of Certification (PABC). Capt. Wolfe's 40-year career included over 18,000 military and commercial airline flight hours. He is active with ICAO's Next Generation of Aviation Professionals (NGAP) and International Pilot Training Consortium (IPTC) initiatives, as well as the Aviation Accreditation Board International (AABI).

✈ An international research project recently completed by the Center for Aviation Safety Research (CASR) at Saint Louis University in the U.S., in collaboration with the Professional Aviation Board of Certification (PABC) and several international industry partners, demonstrates that it is feasible to develop an entirely new type of pilot knowledge exam that can serve as an industry best practice.

Funded by the U.S. Federal Aviation Administration (FAA), the CASR-PABC research project began with an identification of key features that would facilitate global acceptance, developed a job task analysis for the approach phase of flight, created a bank of exam questions, and field-tested the resulting exam.

The same methodology can be used to develop a full-scale job task analysis and exam for identifying gaps in a pilot's technical knowledge, thereby enabling airlines and corporate flight departments to provide targeted remedial training to ensure that their new-hire pilots are fully prepared to enter their employers' Indoctrination and Type Rating courses.

Ultimately, this full exam has the potential to gain acceptance by global Civil Aviation Authorities (CAAs) as an alternative means of compliance for their professional pilot licensing exams. In turn, this will make it easier for CAAs and pilots to convert foreign pilot licences, facilitate global workforce mobility, and enhance the production of well-prepared *Ab Initio* pilots for entry into the profession.

A PERCEIVED KNOWLEDGE GAP

A 2011 ICAO report (*Global and Regional 20-year Forecasts: Pilots, Maintenance Personnel, Air Traffic Controllers*, Document 9956), supports the rationale for this CASR study: "...if one analyses the performance expectations of an MPL [Multi-crew Pilot Licence] holder without the benefit of supplemental training, it is probable that the majority of current airline

transport pilot (ATP) knowledge exams fail to validate the necessary knowledge competencies to proceed with indoctrination to an international air carrier.”¹

While the air transport industry is widely regarded as the economic engine of society, a professional pilot workforce constitutes a key element in enabling the delivery of reliable air services. The quantity and quality issues of professional pilot preparation represent safety concerns as well.

The perceived gap between the minimum knowledge requirements specified by national regulators and the needs of the industry is further complicated by a lack of resources available for most national regulators to analyse the knowledge requirements and upgrade their standards accordingly. While ICAO and some CAAs are upgrading their training standards, these efforts will not overcome the deficiencies identified by the 2011 ICAO report, nor will they help to deliver an eventual common global standard for pre-employment training of our professional pilot workforce.

A concept has therefore been proposed for developing and operating a new generation of knowledge tests that keep pace with the rapid and continuously changing industry needs while helping States and operators to meet the minimum safety standards set by ICAO and adopted into local State civil aviation regulations. The CASR Study was designed to evaluate the proposed development process and its potential to support the creation and maintenance of a common global standard for the knowledge and competency testing of aspiring professional pilots.



PilotFlight Academy photo

THE 4-PHASE CASR RESEARCH PROJECT

Essential Characteristics of the Standards Exam

A foundational step in the study identified essential characteristics for the proposed knowledge examination. It was agreed that to achieve global acceptance this exam must be:

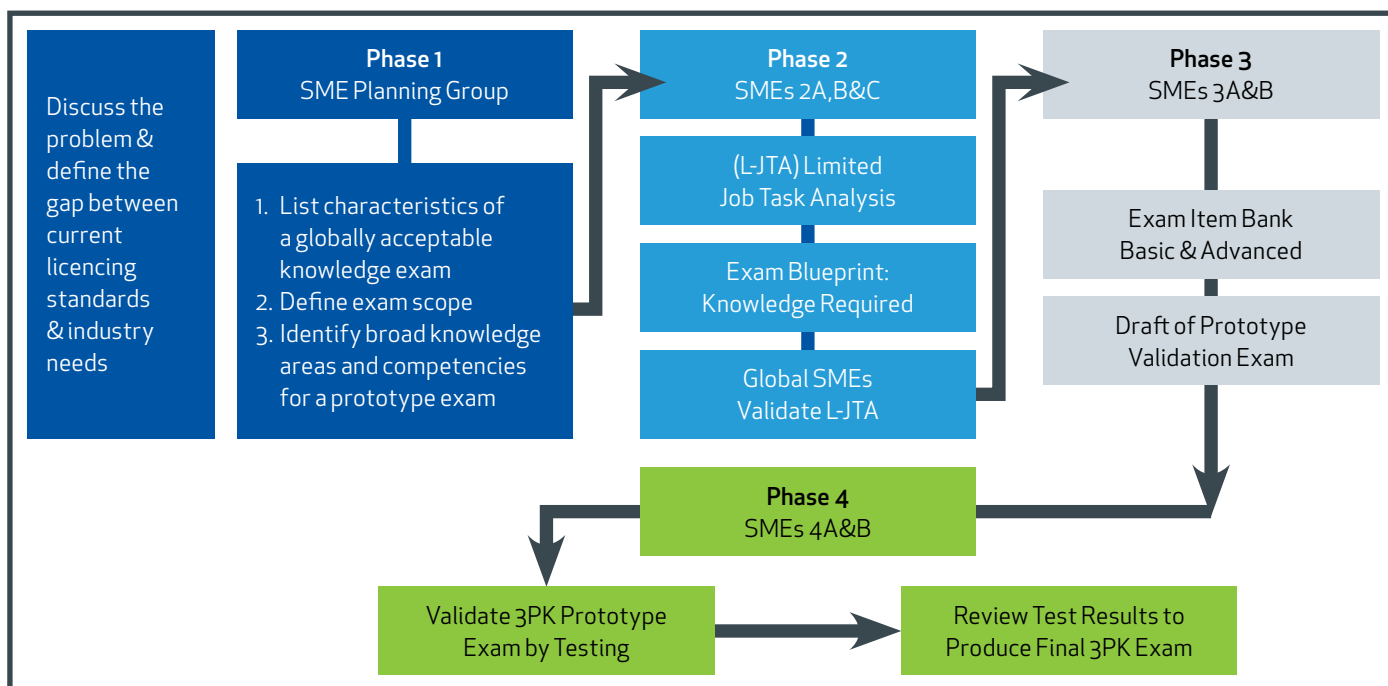
1. Stakeholder-defined through collaboration with regulators, trainers, airlines, pilots, insurers, and the public.
2. Equivalent to or more rigorous than the regulatory requirements of prominent CAAs.
3. Globally transportable.
4. Supportive of high training standards rather than training standardization.
5. Generic in content, focused on underpinning knowledge, regardless of aircraft type, aircraft operator, or region of operation.
6. Delivered using computer-based testing methods.
7. Designed to ensure that the standards and exam are kept current and comprehensive.
8. Capable of assessing core knowledge, skill, and competency across subject areas.
9. Able to assure that pilots can apply their knowledge during common operational events.
10. Fair, effective, and secure at all times.
11. Presented, taken, and answered *only* in English.
12. Compliant with accreditation requirements defined by the International Standards Organization (ISO) for testing of high-stakes professionals.

Phase 1: Planning for Development of the Prototype Exam

In Phase 1, Subject Matter Experts (SMEs) defined the purpose, scope, features, and functions to be incorporated in the exam and its supporting elements. The *Limited Job Task Analysis (L-JTA)* for this study restricted the operational scope of the standards and exam to the *Approach Phase* of a commercial or business jet aircraft flight. The Approach Phase is defined as, “starting 150 to 200 nm from landing while cruising to a top of descent point, through the descent and approach, and concludes at Decision Height or Minimum Descent Altitude, when a Go-Around or a Missed Approach is declared or the aircraft is in the flare to land.”

Phase 2 – Development of the Limited Job Task Analysis (L-JTA)

Phase 2 was conducted by three sets of SMEs: SME Group 2A used the DACUM (Developing a Curriculum) process² to develop a list of key tasks and subtasks and to define the requisite underpinning knowledge in each topic area. Then they created an exam blueprint that defines the overall structure of the test with relative weightage for each topic area so the exam would proportionately correspond to the criticality of each task. SME Group 2B reviewed the draft L-JTA and the exam blueprint via an online survey. Out of 738 responses from across the world, 681 responses were usable. SME Group 2C used the survey results to create the final L-JTA document and associated exam blueprint.



The Knowledge Examination Prototype Development Process

Phase 3 – Development of the Prototype Exam

In Phase 3, SME Group 3A used the L-JTA and blueprint to develop 273 basic exam questions. SME Group 3B then met to develop questions that tested for higher levels of knowledge and used more advanced question designs. In addition, they reviewed all questions developed by SME Group 3A and edited them as needed for clarity and accuracy. Ultimately, the two groups developed over 300 viable questions that fully complied with the blueprint depth and diversity requirements to ensure that the exam would actually measure what it intended to measure.

Phase 4 – Validation of the Exam

In Phase 4, 50 active professional pilots were recruited (SME Group 4A) to sit for the exam. The electronic exams were delivered using a secure server and IT network while the paper exams that were used relied on traditional physical security measures.

Participating pilots completed demographic surveys to qualify as beta testers for the exam. All held at least a Commercial Pilot Licence (Certificate) and Instrument Rating or higher levels of licencing. Sixty (60) percent, or 30, had either a full Air Line Transport Pilot Licence (ATPL) or a “frozen” or Restricted/R-ATP (with the written test completed, awaiting accumulation of sufficient flight experience to qualify for the practical and oral portions of the exam). Forty-three (43) of the 50 participants had multi-engine ratings; and five were authorized as either Type Rating Examiners or Instructors. Thus, the overall sample was expected to have substantial technical knowledge and a good experience base.

A separate group of six pilots (SME Group 4B) also took the exam and were then taught the standard-setting process that qualified them to serve as judges in evaluating exam results. This group then set the passing score for the exam.

This CASR research project was concluded in June 2015 and has paved the way toward further development of a comprehensive global exam.

ENHANCED PILOT PREPAREDNESS AND WORKFORCE MOBILITY NEEDED

Widely differing CAA knowledge test standards pose a significant barrier to the mobility of our global professional pilot workforce. To meet the steadily growing global demand for new professional pilots, they must be able to move more easily across national boundaries. Having a common global standard for knowledge testing will greatly simplify licence conversion and reduce the pilot shortage in States that lack sufficient pilots to fill their staffing needs. In States where conditions exist that require unique knowledge standards, CAAs would only need to require that pilots pass a “differences” exam covering those unique subjects in order to convert pilots’ licences so they can work for operators in that State.

STANDARDS & TESTING ALSO SUPPORT THE LATEST SAFETY IMPROVEMENTS

One of the key advantages of a global standard setting and testing process is that it will be required to keep pace with the latest safety and operational requirements and best practices, including:

- A. The eight (8) core competencies developed by the International Air Transport Association's Training and Qualification Initiative (ITQI)³ and published in ICAO Doc 9995, the *Manual of Evidence-Based Training (EBT)*:
1. Communication
 2. Aircraft Flight Path Management – Manual Control
 3. Aircraft Flight Path Management – Automation
 4. Leadership and Teamwork
 5. Problem Solving and Decision Making
 6. Application of Procedures
 7. Work Load Management
 8. Situational Awareness
- B. De-identified and aggregate input from Safety Management, Event Reporting, IATA's Operational Safety Audit Systems (IOSA), Line Operations Safety Audits (LOSA), and other similar measures that support ICAO's Evidence-Based Training.
- C. When adopted, the International Pilot Training Consortium (IPTC) recommendations to transition from the traditional hours- and event-based assumptions of competence to more objective and meaningful competency assessment measures will also be incorporated into the standards and testing.

THE PABC TEST/TRAIN CONCEPT: AN INDUSTRY BEST PRACTICE

The stakeholder-developed and stakeholder-operated test has been described as an *industry best practice*. The proposal at present is for the full test to be collaboratively developed by SMEs from across the industry and regulators from several CAAs to serve four functions:

- A. Assure that newly licensed CPL/IR pilots are well prepared to enter ATP-level Indoctrination and Type Rating courses provided by airlines and business operators.
- B. Identify any gaps that new hire pilots may have that should be remediated before they enter their employers' courses.
- C. Provide pre-employment training providers and CAAs with copies of the new standards.
- D. Provide them with aggregate and de-identified information on common deficiencies found in new hire-pilot trainees.⁴

The overall process promises to significantly enhance the preparedness and mobility of the pilots needed to support the global professional workforce.

CONCLUSIONS

The CASR research project sought to demonstrate the feasibility of developing a scalable prototype of a competency-based knowledge examination that is relevant, current, and comprehensive. More than 700 subject matter experts from around the world participated in the development and validation of this exam. A distinguishing factor of this research was its foundational limited job task analysis, and the resulting exam offers a level of quality that promises to convince individual



CAAs of its validity, fairness, reliability, and security.

The methodology demonstrated in this project can now be applied to developing a full job task analysis and a comprehensive knowledge exam. Airlines and corporate flight departments will benefit by the exam's identification of gaps in their new-hire pilots' knowledge and the closing of those gaps through remediation that enhances the employer-provided training and the overall safety and growth of the air transport system. The insurance industry could be an invaluable partner in this effort by providing financial incentives to companies that embrace this exam as a gap analysis tool and fund any identified remedial training needs. Eventually, if such an exam is recognized by the CAAs, it will provide a relevant, reliable, and secure knowledge exam at a significant cost savings to those CAAs.

The insurance industry could be an invaluable partner in this effort by providing financial incentives to companies that embrace this exam as a gap analysis tool and provide proactive, customized training.

Detailed reports are available on the CASR website:

<http://parks.slu.edu/research/centers-labs-facilities/CASR/> ■


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NEW ICAO MANUAL ON INFANT AND CHILD SAFETY RESTRAINTS



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 The safest way to secure an infant or small child on board an aircraft is in a dedicated seat with a State-approved child restraint system (CRS), appropriate for that infant or child, according to guidance material recently published in ICAO's new *Manual on the Approval and Use of Child Restraint Systems* (Doc 10049).

"Proper use of occupant restraints is one of the most basic and important factors in surviving an accident. It is not possible for a parent to physically restrain an infant or child, especially during sudden accelerations and/or decelerations, unanticipated or severe turbulence or during impact," stated ICAO Council President, Dr. Olumuyiwa Benard Aliu.

Based on work conducted over a two-year period, the ICAO Cabin Safety Group (ICSG) concluded that the use of CRS provides an equivalent level of safety for infants and children as is afforded to adult passengers wearing seat belts. Therefore, the ICAO manual, developed via the ICSG, promotes the use of CRS and assists States and airlines with implementation.

The new ICAO manual contains guidance for States to develop regulations and approval processes enabling the use of CRS. It also provides guidance for airlines when identifying CRS for use on board an aircraft, recommended content of relevant policies, procedures, and training programmes, as well as guidelines for managing change through their safety management systems (SMS) to allow the use of CRS on board their aircraft.

The State is responsible for determining which CRS's are suitable for use on board its operators' aircraft. Prior to allowing the use of CRS on board, the State should develop a clear process for the approval of changes in policy and procedures by airlines and determine actions that should be undertaken to maintain or enhance the expected levels of safety performance while implementing any changes. Information on the types of CRS approved by the State should be communicated to the travelling public via the State's relevant website or through other means (for example, the operator's website).

ICAO Standards related to seats and restraints are found in Annex 6 – *Operation of Aircraft, Part I – International Commercial Air Transport – Aeroplanes*. The standards state that "an aeroplane shall be equipped with ... a seat or berth for each person over an age to be determined by the State of the Operator."

There is no internationally harmonized approach to the approval, acceptability, and use of CRS on board the aircraft. Certain States have regulations on CRS; others have recommendations on their use. Most States recommend that all occupants be restrained. However, there are variations in the types of CRS that may be used on



board an aircraft and in their effectiveness. The current situation raised concerns among safety experts.

Many States allow for a “cut-off” age when determining who is entitled to a dedicated seat. This is usually two years of age. Therefore, according to many States’ national regulations, infants can be lap held with or without a supplemental restraint (such as a supplemental loop belt).

Ultimately, Doc 10049 facilitates the widespread use of CRS globally and provides guidance related to requirements for seats and restraints found in Annex 6 to the *Convention on International Civil Aviation*.

UNRESTRAINED INFANT DEATHS

The issue of CRS use on board aircraft dates back decades. In July 1989, a DC-10-10 experienced a catastrophic engine failure and crashed near Sioux City, Iowa in the U.S. More than 100 passengers and one cabin crew member were fatally injured. Two out of the four lap-held infants aboard were projected through the cabin during the impact sequence. One infant was found by a passenger, the other died. A third infant became airborne but was caught by his mother. The United States National Transportation Safety Board (NTSB) analysis of this accident included an evaluation of cabin survivability issues, including child seat restraints. Some of the safety issues raised in the NTSB report related to cabin safety, including CRS. The report urged that infants and small children be required to be restrained in child safety seats appropriate to their height and weight.

Earlier that same year, in January 1989, a B737-400 suffered a major thrust loss and impacted a field near the embankment of a motorway while attempting an emergency landing at East Midlands airport in the U.K. Of the occupants, 47 passengers died and 74 others, including seven crew members and one infant, sustained serious injuries. Among the recommendations issued by the Air Accidents Investigation Branch of the United Kingdom was the need for CRS to be used on board aircraft.

More recently, in December 2012, a Fairchild SA227-AC Metro III crashed while attempting to abort a landing in Sanikiluaq in Canada’s far-northern Nunavut territory. The two crew and six adult passengers, secured by their seat belts, suffered injuries ranging from minor to serious. A lap-held infant, not restrained by any device or seat belt, was fatally injured. In its report, the Transportation Safety Board of Canada (TSB) recommended the development of age- and size-appropriate CRS for infants and young children travelling on commercial aircraft and recommended mandating their use to provide an equivalent level of safety compared to adults.

CHILD SAFETY RAISED AT THE ASSEMBLY

The discussions leading to the new ICAO manual on CRS began at the 38th Session of the General Assembly, held in 2013. The Technical Commission of the Assembly reviewed a working paper on CRS, presented by the United States. The paper advocated establishing Recommended Practices encouraging air operators to use CRS appropriate to each child’s size and weight. It also called for recommendations and guidance on the use of different types of devices. A working paper presented by the International Transport

Workers' Federation (ITF) also addressed CRS. The paper proposed development of guidance for regulations related to CRS and the elimination of exemptions for infants who presently could be carried in an adult's lap. It also called for guidance on the identification and use of such devices.

In view of the discussion during the Assembly, the Technical Commission agreed on the need to develop harmonized provisions

addressing CRS and requested the Council of ICAO to develop appropriate provisions to address this issue. The ICAO Cabin Safety Group was tasked with developing guidance for the approval and use of CRS on board aircraft. The ICSG is an international joint industry-regulatory group composed of cabin safety experts from civil aviation authorities, airlines, aircraft manufacturers, and international organizations, which serves as the expert group, providing advice to ICAO on cabin safety-related matters.

CANADA TSB ADVOCATES MANDATORY CRS ON AIRCRAFT

Following the investigation into the 2012 crash in Sanikiluaq, Nunavut, Canada's Transportation Safety Board (TSB) recommended in June 2015 that "Transport Canada must work with industry to develop age- and size-appropriate child restraint systems for infants and young children travelling on commercial aircraft, and mandate their use to provide an equivalent level of safety compared to adults."

"We think where suitable systems exist they should be mandated," TSB Chair Kathy Fox said. "And if they don't exist, more work should be done to develop suitable systems that are appropriate for the age and the weight of the child, and they should be mandated for use."

The U.S. National Transportation Safety Board has called for similar action for many years, thus far without success.

Fox told *ICAO Journal*: "We recognize there are some limitations with some of the child restraint systems currently available. For example, in Canada any car seat that's approved is also approved for use in aircraft. But the car seat may not fit all aircraft types because of the width or pitch of the seat. Some countries allow the 'belly loop,' which fits around the adult guardian and then can be used to restrain the child, but the belly loop is not approved in either Canada or the United States."

Many airlines encourage parents to use child restraint systems, but it isn't mandatory so children under two can be held in the parent's lap and don't require a separate seat. "Airlines have very strict procedures around not holding purses and laptops on a lap during takeoff and landing or when there's turbulence. Carry-on bags are required to be safely secured under the seat in front of you or in an overhead bin. And yet it's okay to hold a 10-kilogram baby on your lap. We think that's a disconnect that needs to be changed," Fox added.

Jan Brown, who was the lead flight attendant on the 1989 Sioux City crash, said the mother whose child died in that accident "obviously couldn't hold him – he just went off like a missile." The mother said to her later, "They told me to put my baby on the floor, and I did, and he's gone." Brown lamented, "Everybody else is safe with a seatbelt, but babies are expendable? We can say put them on the floor and hope for the best?"

Brown has testified before the U.S. House aviation subcommittee, a White House Aviation Safety Commission chaired by Vice-President Al Gore, and the NTSB. She said one politician told her, "If a baby cries, you want to hold him." Brown's response: "I'd rather hear a baby cry than never cry again." She called the new ICAO CRS manual "a ray of hope."

TSB Chair Fox noted, "Children are not of an age where they can provide informed consent, and the fact that the airlines are able to offer a financial incentive [i.e., not purchasing a separate seat for the child] may be one reason parents take them up on it, but it's really not fair to the children. We believe that all children should be afforded the equivalent level of safety to that of adult passengers."

Parents don't have to wait for regulations, Fox advised. "Many times when I fly I see parents leaving their car seat at the checked baggage counter, and there's no reason why they shouldn't be bringing them on board and using them with young children. We also think that airlines can take action by making sure that their staff are adequately trained to know how to assist parents who want to bring these devices on board and to make sure that sufficient time is given to install them."



“... elimination of exemptions for infants who presently could be carried in an adult’s lap.”

- International Transport Workers’ Federation (ITF) paper

SCIENTIFIC STUDIES PROVIDE ANSWERS

In order to develop the best possible guidance material on CRS, the ICSG turned its attention to scientific studies on the topic. Studies to note on this subject include:

- FAA – The Performance of Child Restraint Devices in Transport Airplane Seats (conducted by the Civil Aerospace Medical Institute - CAMI, published in 1994)
- ATSB – Child Restraint in Australian Commercial Aircraft (conducted by Human Impact Engineering and Britax Childcare Pty Ltd., published in 2006)
- EASA – Study on Child Restraint Systems (conducted by TÜV Rheinland Kraftfahrt GmbH, published in 2008)

Research on CRS concluded that infants and children are at higher risk of sustaining injuries if they are not properly secured in a suitable device that has been approved for use on board the aircraft. The use of certain types of devices, not specifically designed for use with an aircraft seat, is detrimental to an infant or child’s safety. Studies

demonstrate that such devices do not provide the same level of safety as CRS approved for use on board aircraft or that provided to other passengers who occupy their own seats.

RAISING PUBLIC AWARENESS

Educating the travelling public on the need for CRS is a big part of the issue. The ICAO manual on CRS contains guidance for the development of public information campaigns that focus on the benefits of using such devices on board aircraft. Such campaigns can help parents understand the safety reasons for, and importance of, using CRS. Their goal is to promote the use of CRS, whether compulsory or voluntary.

The ICAO Manual on the Approval and Use of Child Restraint Systems (Doc 10049) is now available to States in English on the ICAO-NET at: <http://portal.icao.int/>

Copies of the scientific studies can be obtained from the ICAO Cabin Safety Library, at: www.icao.int/cabinsafety



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REGULATORS & INDUSTRY: ESTABLISHING A COLLABORATIVE RELATIONSHIP TO ENABLE PERFORMANCE-BASED REGULATION

The UK CAA journey so far...

 The relationship between the Regulator and its Regulated Industry is always complex. After all, it is the role of a Regulator to ensure that Industry is adhering to agreed rules and has adequate and reliable safeguards in place. However, this somewhat simplistic reason for existence doesn't have to drive how the relationship between the Regulator and Industry works in practice. It is to be expected that Regulators may naturally perceive themselves as different and, on occasion, separate from Industry, creating a 'them and us' relationship. This directive relationship can be sub-optimal for many reasons.

To successfully implement Performance-Based Regulation, the UK CAA advocates a relationship built on collaboration.

On its journey to Performance-Based Regulation (PBR), the UK Civil Aviation Authority (UK CAA) learnt it is essential to rethink the relationship between Industry and the Regulator. After all, it is in everyone's interest to keep aviation safe.

In 2011, the UK Government launched the 'Red Tape Challenge' – a campaign aimed at cutting unnecessary bureaucracy through the introduction of 'better regulation' principles. Combined with the requirements of ICAO's Annex 19, this built the ideal catalyst and framework for the initial step towards PBR. Both of these developments required the UK CAA to rethink its engagement with industry.

There are many different types of relationships between Industry and its Safety Regulator. These are typically described as being one of the following:

- Directive
- Engaged
- Collaborative

In a 'directive' approach, the Regulator traditionally uses its power to enforce its views upon Industry, resulting in a one-sided, minimalistic Industry engagement. Meanwhile, in an 'engaged' relationship, the Regulator may also promote Industry's ability to have its own voice. Rather than just telling Industry what to do, an effective Regulator needs to be able to listen and consider.

However, to successfully implement PBR, the UK CAA advocates a relationship built on 'collaboration', which, in addition to listening to Industry also promotes the joint ownership of actions, where appropriate. This doesn't mean the Regulator has to sacrifice its authority. Instead, the Regulator and Industry work together to achieve the highest safety assurance.



Before this can take shape, the UK CAA believes it is essential to be aware of the strengths and weaknesses of the existing relationship. If the current relationship does not match key requirements, corrective actions may be required to establish a cross-functioning, collaborative partnership.

Moving towards PBR is an evolution rather than a revolution. It is essential that all stakeholders and participants are fully bought-in to the concept.

The Regulator needs to learn to adopt a collaborative approach and enable itself to listen to Industry and jointly consider options – it is only then that a true joint partnership can be established. The benefits of a Joint Partnership create a new level of transparency



between the Regulator and Industry, benefiting all aviation participants to increase safety. This transparency results in higher levels of trust without breaking down the clear line that exists between the Regulator and its Regulated Industry.

The UK CAA recommends starting the journey to PBR in partnership with Industry. A defined goal must be agreed and all parties should recognise that not all answers may be immediately available. A collaborative approach will allow Industry and its Regulator to establish a common vision and embark on a joint, shared journey to achieve this. At the very heart of all this lies the fact that PBR is not about the Regulator in isolation becoming a better Regulator. The purpose of PBR is to increase aviation safety by both the Regulator and Industry identifying the highest priorities and allocating resources accordingly. Transformation to PBR cannot be enforced upon Industry – instead, it can only be successfully achieved through collaboration/engagement with all stakeholder participants.

From the very outset of the UK transition, a clear mandate from Industry was essential to ensure future buy-in and to continually validate the UK CAA's approach. The UK CAA suggests a good starting point is to arrange for the Regulator and Industry to meet and discuss future safety strategy together. The UK CAA achieved this essential first step by arranging a conference where the Regulator shared its plans to move to PBR and sought Industry opinion. Industry's feedback was taken into account and the UK plans to implement PBR adjusted accordingly. This enabled a common vision between both parties, with both the Regulator and Industry working together to agree on the best approach to achieve desired outcomes.

An essential part of moving to a collaborative approach is the Regulator's realisation that it will be required to play different roles in its engagement. However, it still needs to be ensured that the Regulator's authority is not compromised. It is, therefore, essential that Industry recognises which role the Regulator is playing at each phase of the engagement. In its efforts to achieve this, the UK CAA established a joint platform that is co-lead by Industry and the Regulator. This enables a safe environment that promotes free-flowing exchanges and ensures overall commitment to the transition to PBR.

Sharing long-term plans that detail how participants will transition to PBR will also help increase the visibility of future opportunities from a strategic perspective and allow Industry to align strategic financial investments. A joint partnership approach will permit participants as a whole to be seen as speaking with a common voice, based on a common vision, strengthening safety performance. Work doesn't end there however. A true joint partnership requires all participants to be able to freely challenge each other. As an essential part of PBR, regular checks are required to ensure that this initial commitment remains at the same level, and everyone is still on the same journey.

Building a strong foundation is key to PBR. Building on it together is how transition will be fully integrated into all aspects of aviation safety. Once this collaborative relationship is built and matured, any upcoming issues can be resolved jointly in an engaged and shared manner, now that a suitable working platform/environment has been established. This approach underpins and is a key enabler to PBR, ensuring that the general public will be safe in the future as well as today. ■

Fig 1. The Collaborative Approach between the UK CAA and Industry to establish a shared vision to PBR.



For more information on Performance-Based Regulation and U.K. CAA assistance, please visit:

www.caainternational.com/pbr

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HARMONIZING PASSENGER RIGHTS – NEW CONSUMER PROTECTION CORE PRINCIPLES



FREDERIC MALAUD

As Air Transport Development Manager in ICAO's Air Transport Bureau, Malaud is involved in air transport economic regulation, focusing on air transport development, fair competition and passenger rights. He is admitted as a lawyer in Paris and New York, and qualified as a professional pilot and flight instructor.

✈ **New global core principles on air transport consumer protection have been established by the governing Council of the International Civil Aviation Organization (ICAO) and will now be considered by ICAO's Member States when they develop or review their applicable national regimes.**

The Core Principles represent an important milestone in ICAO's continuous effort to foster convergence in air transport economic regulation. Recognizing the dynamic nature of the air transport industry, the Core Principles will be a "living document," which may be refined and improved in the future in the process of implementation, based on experiences and feedback. Adoption of these Core Principles is a significant step toward regulatory and operational convergence and compatibility in this area.

The principles cover three phases of a customer's experience: before, during, and after travel.

BEFORE THE TRAVEL

- **Passenger information and education** - Passengers should have access to information on their rights and clear guidance on which legal or other protections apply in their specific situation (including the assistance expected, for example, in case of service disruption).
- **Product and price transparency** - Passengers should have clear, transparent access to all pertinent information regarding the air transport product that is being sought, prior to purchasing the ticket, including:
 - » Total price, including the applicable air fare, taxes, charges, surcharges and fees.
 - » General conditions applying to the fare.
 - » Identity of the airline actually operating the flight, as well as any change occurring after the purchase as soon as possible.

DURING THE TRAVEL

- **Passenger information on flight disruptions** - Passengers should be kept regularly informed throughout their journey on any special circumstances affecting their flight, particularly in the event of a service disruption.
- **Passenger assistance in cases of flight disruptions** - Passengers should receive due attention in cases of a service disruption, whether it results in the passenger not boarding the flight or in arriving at the destination significantly later than scheduled. This could include rerouting, refund, care and/or compensation where provided by relevant regulations or otherwise.
- **Massive disruptions planning** - Massive disruptions could include situations resulting from circumstances outside of the operator's control that are of a magnitude that result in multiple cancellations and/or delays of flights leading to a considerable number of passengers stranded at the airport. This typically covers events such as weather/meteorological or natural phenomena of a large scale such as hurricanes, floods, earthquakes, and volcanic eruptions, as well as political



instability, military conflict, or similar events which result in large numbers of passengers being stranded. Considering that passengers may find themselves in a vulnerable position in situations of massive disruptions, mechanisms should be planned in advance by airlines, airport operators, and all concerned stakeholders, including government authorities, to ensure that passengers receive adequate attention and assistance.

- **Access of persons with disabilities** - Without compromising aviation safety, passengers with disabilities should have access to air transport in a non-discriminatory manner and to appropriate assistance.

AFTER THE TRAVEL

- **Efficient complaint-handling procedures** - Passengers should be able to rely on complaint-handling procedures that are clearly communicated to them.



CORE PRINCIPLES	CONSUMER PROTECTION
BEFORE Travel	<ul style="list-style-type: none"> ■ Passenger Information and Education ■ Product and Price Transparency
DURING Travel	<ul style="list-style-type: none"> ■ Passenger Information on Flight Disruptions ■ Passenger Assistance in Cases of Flight Disruptions ■ Massive Disruptions Planning ■ Access of Persons with Disabilities
AFTER Travel	<ul style="list-style-type: none"> ■ Efficient Complaint-Handling Procedures

DEVELOPING THE CORE PRINCIPLES

As air transport developed, different regimes were adopted by States, but not always in a coordinated or uniform way. In March 2013 during the Sixth Worldwide Air Transport Conference (ATConf/6) and again in June 2014 at meetings of the Air Transport Regulation Panel (ATRP/12), the need for harmonization gave rise to ICAO’s mandate to develop common principles on consumer protection.

Account had to be taken of the different “philosophical” approaches on the subject. For example, while some States rely primarily on market forces, self-regulation and passenger education to best serve users, others have resorted to government regulation. Certain States have in place general consumer protection rules, not specific to air transport, but others may not have consumer protection rules at all. In view of these different approaches and practices, a fine balance was needed.

The Core Principles recognize that, while passengers benefit from a competitive air transport sector, they may also benefit from consumer protection regimes. In this area, competition is beneficial inasmuch as it offers more choice in fare/service trade-offs and may encourage carriers to improve their offerings.

The Core Principles also recognize that government authorities should have the flexibility to develop consumer protection regimes which strike an appropriate balance between protection of consumers and industry competitiveness.

And consumer protection regimes should take into account States’ different social, political, and economic characteristics without compromising the safety and security of aviation.

Finally, national and regional consumer protection regimes should reflect the principle of “proportionality,” allow consideration of the impact of massive disruptions, and be consistent with international treaty regimes on air carrier liability established by the Convention for the Unification of Certain Rules Relating to International Carriage by Air (Warsaw, 1929) and its amending instruments, as well as the Convention for the Unification of Certain Rules Relating to International Carriage by Air (Montréal, 1999).

ICAO encourages all Member States and concerned industry stakeholders to give regard to and apply the ICAO Core Principles in policy-making, regulation, and operational practices. A very encouraging sign is that the Core Principles are already used as a reference by some States when developing consumer protection regimes. Of course, ICAO policies and guidance will be adapted, complemented, and enriched in close coordination with interested parties for the benefit of States, air transport users, and other stakeholders.

To read ICAO’s Core Principles document on consumer protection: http://www.icao.int/sustainability/pages/eap_ep_consumerinterests.aspx ■

NEWS IN BRIEF



DR. ALIU EMPHASIZES NCLB IN SINGAPORE & MALAYSIA

Human resources development and the projected need for future skilled aviation personnel have made expanded training capacity a key priority under ICAO's recently adopted *No Country Left Behind* initiative. Capacity building and training development were high on the agenda as the President of the Council of the International Civil Aviation Organization (ICAO), Dr. Olumuyiwa Benard Aliu, conducted new missions to Singapore and Malaysia.

At the invitation of the government of Singapore, President Aliu delivered a keynote address to the 5th World Civil Aviation Chief Executives Forum. (The text of the address is available on the ICAO website: <http://www.icao.int/about-icao/Pages/aliu-addresses-messages.aspx>.)

Dr. Aliu also met with Lui Tuck Yew, Singapore's Minister for Transport and Second Minister for Defence, and other high-level government and aviation officials in various Ministries and the Civil Aviation Authority of Singapore (CAAS).

"Competent aviation professionals will continue to be in short supply, particularly in emerging economies. The talent pool is limited, and the shortage is worsened by competition with other industries for the same talents," said Minister Lui. "ICAO's *No Country Left Behind* initiative is a collaborative approach where

developed States assist developing States via training assistance and sharing of aviation knowledge and experiences."

The Civil Aviation Authority of Singapore (CAAS) has signed a new Memorandum of Understanding (MoU) with ICAO to expand and extend the Developing Countries Training Programme (DCTP) for another three years to 2019. The DCTP aims to help developing ICAO Member States build up human resources critical to the development of civil aviation by providing fellowships, scholarships, and specialized training programmes.

Singapore will contribute US\$2.25 million over the next three years for 300 fellowships and 10 scholarships. This is up from the US\$2.2 million in 2013 and an increase of 50 fellowships and four scholarships.

Later, in Malaysia at the invitation of its leadership, Dr. Aliu and Regional Director Mishra met with the State's Minister of Transport, Honourable Dato Sri Liow Tiong Lai, in addition to H.E. Dato Sri Azharuddin Abdul Rahman, Malaysia's Director General of Civil Aviation, and other high-level government and aviation officials. Training developments were an important aspect of these discussions as well, and the President took advantage of the occasion to welcome the Malaysian Aviation Academy as a recent addition in the ICAO TRAINAIR PLUS Programme.

Additional visits were made in Malaysia to its Department of Civil Aviation, the new Kuala Lumpur International Airport (KLIA2), the Langkawi International Airport, the Penang International Airport, and the Malaysian Flying Academy.



Photo left: ICAO Council President Dr. Olumuyiwa Benard Aliu (left) and Singapore's Minister for Transport and Second Minister for Defence, Lui Tuck Yew. Photo right: The TRAINAIR PLUS certificate ceremony with (left to right) Director of the Malaysia Aviation Academy, Dr. Manjit Singh Seva Singh; Arun Mishra, ICAO APAC Regional Director; Malaysia's Director General of Civil Aviation, H.E. Dato Sri Azharuddin Abdul Rahman; Malaysia's Minister of Transport, Honourable Dato Sri Liow Tiong Lai; Dr. Aliu.

ICAO LONG-TERM VISION FOR INTERNATIONAL AIR TRANSPORT LIBERALIZATION

Developed pursuant to the recommendation of the Sixth Worldwide Air Transport Conference (ATConf/6), as endorsed by the ICAO Council and the Assembly, and after consultation with States. Adopted at the Council's fifth meeting of its 205th Session.

We, the Member States of the International Civil Aviation Organization, resolve to actively pursue the continuous liberalization of international air transport to the benefit of all stakeholders and the economy at large.

We will be guided by the need to ensure respect for the highest levels of safety and security and the principle of fair and equal opportunity for all States and their stakeholders.

With the focus on liberalization of international air transport services, our major activities include:

- 1. Harmonizing global regulatory framework by developing policies and guidance** as those contained in the *Policy Guidance on the Economic Regulation of International Air Transport* (Doc 9587), *Manual on the Regulation of International Air Transport* (Doc 9626), and ICAO's *Policies on Taxation in the Field of International Air Transport* (Doc 8632);
- 2. Serving as a global forum for cooperation and concerted actions**, such as the sixth Worldwide Air Transport Conference on the Sustainability of Air Transport (ATConf/6, March 2013);
- 3. Providing practical solutions to address challenges of emerging regulatory challenges of global importance**, such as market access, air carrier ownership and control, consumer protection, competition, assurance of essential services, and trade in services;
- 4. Enhancing transparency of air transport through dissemination and exchange of information** on States' policies and practices, air service agreements, taxes, and industry trends and developments; and
- 5. Facilitating States' air services negotiations and business-to-business networking** among States, international organizations, aviation industry, tourism and other stakeholders (see ICAO Air Services Negotiation - ICAN - event).

CHAD SHOWS STRONG AVIATION RESOLVE



The Republic of Chad Secretary of State for Civil Aviation and National Meteorology, Haoua Acyl Ahmat Aghabach, has reiterated her nation's strong resolve for enhancing its air transport system. "Our country faces many challenges with regards to aviation safety and security. We are grateful for the capacity-building efforts being made by ICAO under the *No Country Left Behind* initiative and are fully committed to working with ICAO to establish effective safety and security oversight systems," she commented.

Major challenges facing Chad include compliance with ICAO Standards and Recommend Practices (SARPs), meeting the Abuja Safety Targets and ICAO AFI Plan objectives, aviation safety and security capacity building, and certification of the State's Hassan Djamous International Airport. Additionally, given the continued threat posed by terrorist groups in the region, Chad has appealed to ICAO for additional support in the areas of travel document security, training development, and security oversight.

"ICAO will be doing everything in its power to ensure that Chad will not be left behind where the benefits of safe, secure and reliable air transport are concerned," stressed Dr. Olumuyiwa Benard Aliu. "This is a basic priority for ICAO today under our *No Country Left Behind* programme, given the important socio-economic development links between access to international air transport and local prosperity." Dr. Aliu confirmed that ICAO will be sending an emergency expert team to Chad to assess the aviation security situation and will also continue to provide further project support to Chad through its Regional Office in Dakar, Senegal.

SG LIU FOSTERS NEW TIES WITH ETHIOPIA & AUC



ICAO Secretary General, Dr. Fang Liu (left), and the President of Ethiopia, H.E. Dr. Mulatu Teshome Wirtu, during her mission to Addis Ababa.

In one of her first missions as the new ICAO Secretary General, Dr. Fang Liu fostered new cooperative ties while raising aviation development priorities in Africa. Dr. Liu was accompanied by ICAO's Regional Director for Western and Central Africa, Mam Sait Jallow, and its Regional Director for Eastern and Southern Africa, Barry Kashambo.

During a visit to Addis Ababa, Secretary General Dr. Fang Liu commended the Federal Democratic Republic of Ethiopia for the growth of its aviation industry and the continuous improvement of its aviation safety oversight system – as determined by its recent ICAO Universal Safety Oversight Audit.

SG Liu paid a courtesy visit to the President of Ethiopia, H.E. Dr. Mulatu Teshome Wirtu, and had detailed discussions with the State's Minister of Transport, Workenhe Gebeyhu. She also visited Ethiopia's Civil Aviation Authority and Ethiopian Airlines facilities. The discussions focused on the status of the aviation sector in the State as well as its planned airport and air navigation infrastructure developments.

The Addis Ababa Bole International Airport passenger terminal is being expanded to accommodate 25 million passengers, four times the current capacity. The Ethiopian Airports Enterprise (EAE) is also in the site selection process for a new mega international airport in the vicinity of Addis Ababa. "We shall also build five additional regional airports. The plan is to make Addis Ababa a gateway to Africa," said



ICAO Secretary General, Dr. Fang Liu (left), with the Chairperson of the African Union Commission (AUC), H.E. Dr. Nkosazana Dlamini-Zuma.

Endris Argaw, customer service director with EAE.

Dr. Fang encouraged Ethiopia's government to consider further support to its aeronautical authorities, with adequate resources and capacity in order for them to be able to

oversee and manage the safe and efficient growth of its sector. She also requested that Ethiopia consider assisting neighbouring States in addressing their civil aviation needs.

Ethiopia's authorities expressed their State's strong commitment to continue to collaborate with ICAO and to provide the desired support to its aviation sector with respect to resources for capacity building and infrastructural developments, support for regional initiatives and programmes, and assistance to other States.

Director General of the Ethiopian Civil Aviation Authority (ECAA), Col. Wossenyeleh Hunegnaw, said the history of aviation development in Ethiopia dates back to 1920 when the first six French-made Patez aircraft were delivered to Ethiopia. The ECAA was established in 1944, the same year Ethiopia signed the Chicago Convention and became a founding member of ICAO.



Addis Ababa Bole International Airport expansion

SG Liu confirmed ICAO's commitment and readiness to continue coordinating and providing, where appropriate, the necessary technical assistance to Ethiopia and other African States in order to improve the general safety, efficiency, and reliability of their air services.

Dr. Liu also met with H.E. Dr. Nkosazana Dlamini-Zuma, Chairperson of the African Union Commission (AUC), and Mankopane Daniel Tshepo Peege, Representative of South Africa on the ICAO Council. Their discussions included an Action Plan for the implementation of the Memorandum of Cooperation signed by the two organizations in 2010, as well as various goals common to ICAO's current Strategic Objectives and the AU Agenda 2063. Skilled personnel training and technical assistance priorities were also high on the two leaders' agendas.

Additionally discussed was the concept of a dedicated Ministerial meeting to establish continental targets on aviation security, facilitation, and air navigation services; ICAO technical assistance for the establishment of an African passport; the counter-productive impacts of taxes and fees imposed on aviation; and priority support to the 11 African States that have declared commitments to fully implement the Yamoussoukro Decision toward the establishment of a single African air transport market.

FIRST ITP LAUNCHED IN SINGAPORE

The International Civil Aviation Organization has launched the first ICAO Training Package (ITP) developed by one of its newly established Regional Training Centres of Excellence (RTCEs). The new Personnel Licensing Management Course ITP was developed by the Singapore Aviation Academy (SAA). It is a blended course offered online and in the classroom environment and targets technical, managerial, and administrative staff involved in personnel licensing activities of civil aviation authorities and service providers. It enables participants to identify essential components and processes of a States' personnel licensing system for flight crew, air traffic controllers, and aircraft maintenance engineers.

The Director General of the Civil Aviation Authority of Singapore, Yap Ong Heng, reaffirmed Singapore's commitment to "work closely with ICAO to develop high quality and effective training programmes for aviation organizations and professionals, towards the advancement of civil aviation globally."

Activities of RTCEs are managed under the ICAO Global Aviation Training Office's TRAINAIR PLUS Programme. TRAINAIR PLUS serves as a cooperative network of training centres and is established in close to 70 Member States comprising more than 80 training organizations.

Training and capacity-building are also important pillars in ICAO's current *No Country Left Behind* initiative, which is seeking to ensure that all States can realize the full prosperity benefits of safe, reliable air services through the more effective implementation of ICAO's international Standards and Recommended Practices (SARPs) and policies.

YOUNG AVIATION PROFESSIONALS PROGRAMME IN 3rd YEAR

The International Civil Aviation Organization, in partnership with the International Air Transport Association (IATA) and Airports Council International (ACI) has launched the third consecutive Young Aviation Professionals Programme (YAPP). The programme provides career development opportunities in the Montréal civil aviation hub where the three global organizations are headquartered.

YAPP seeks young talented professionals who have advanced university qualifications, supplemented with a minimum of two years' professional working experience in aviation-related regulatory activities and/or in the aviation industry. The selected YAPP candidates will contribute to one or more of ICAO's Strategic Objectives, focusing on the inter-relationships between the work of ICAO and fellow IATA/ACI experts from the airline and airport industries, respectively. Selected candidates will report to ICAO Headquarters in Montréal in February 2016.

ICAO Secretary General Dr. Fang Liu said, "With aviation's links to socio-economic prosperity now more important than ever before, this programme serves as a unique means of fostering enthusiasm and awareness around the benefits of air transport in a new generation of young professionals."

"Young Aviation Professional Officers get to advance their knowledge and understanding of the global civil aviation system within a United Nations international regulatory body, as well as the airline and airport industries, and gain important insight into how these stakeholders work together to achieve lasting progress and truly global benefits for States and regions."

YEAR-LONG SERIES OF LOC-I WORKSHOPS

Pilots skilled in airline upset-recovery training are taking part in a year-long series of international educational workshops designed by ICAO to help reduce loss-of-control-in-flight (LOC-I) accidents, the leading cause of airline fatalities. LOC-I is often preceded by an aerodynamic stall or an upset in the aircraft's attitude.

ICAO held events in Istanbul, Turkey; Nairobi, Kenya; and Lima, Peru earlier this year. Clarke McNeace, vice president of flight standards for Aviation Performance Solutions (APS), said, "We discussed the aerodynamic, physiological, and human factors issues that should be talked about but are not generally talked about in airline training programmes."

Last year the new *Manual on Aeroplane Upset Prevention and Recovery Training* (Doc 10011) was published to guide airlines in setting up preventative training programmes.





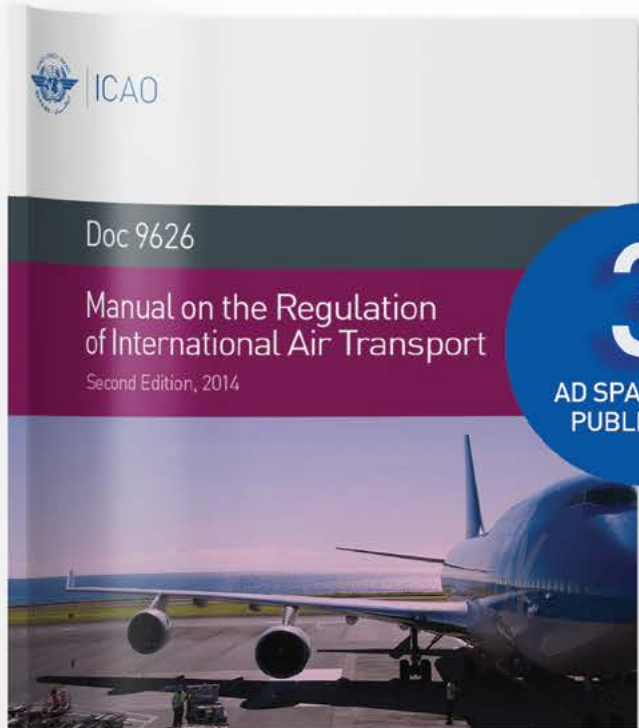
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