



Supporting Airline Industry Achievement of Sustained Financial Health

IATA Financial Committee
2016





Introduction

In 2014, the IATA Financial Committee issued its first White Paper, “Supporting Airline Industry Achievement of Sustained Financial Health”. At that time, airlines were facing a difficult financial situation with poor profitability and a series of challenges preventing them from reaching financial sustainability.

The White Paper identified the causes of low profitability, and proposed a series of IATA-led actions to support addressing these causes with concrete actions and tangible results. The role of the IATA Financial Committee and its Working Groups was also renewed to better face such challenges.

The Financial Committee White Paper identified four main pillars that support the industry to achieve sustained financial health, each of them composed of a series of activities. The original four pillars of the White Paper were: Smarter Regulations, Value Chain Optimization, Innovation, and Efficient Processes.

At the World Financial Symposium 2015, a potential 5th pillar emerged from discussions with the industry: High Performing Airline Finance Organizations (HIPO). This theme was considered of paramount importance in the journey of airlines toward financial sustainability. To start looking at this topic, in 2016, the Financial Committee set up a Think Tank made of Financial Committee members, experts in Human Capital and organizations performance, and IATA. The Think Tank prepared the ground for HIPO to be discussed with the industry during the 2016 edition of the World Financial Symposium.

The activities of the Financial Committee are for the benefit of the whole industry. Therefore, before officially including HIPO as the 5th pillar in this White Paper, we wanted to make sure the industry supported this approach. This happened at the World Financial Symposium 2016, and we are now happy to publish this updated version of the Financial Committee White Paper, including its 5th pillar.

In this document, you will find an updated overview of the airline industry financial health. Airline profitability is improving, but there are still huge regional discrepancies, and the situation continues to be fragile. You will also be presented with the activities under each of the pillars, including a new set of activities under the 5th pillar of High Performing Finance Organizations.

We hope you enjoy the read and count on your continuous support to achieve Airline Industry Financial Health.

Michael Doersam

Chairman of the Financial Committee

Aleks Popovich

IATA SVP Financial and Distribution Services



The Challenge

Airline industry financial health today

In 2015 and the first half of 2016 the commercial airline industry in aggregate created value for its investors, as a sharp improvement in profitability took the return on invested capital (ROIC) above the industry average cost of capital (WACC), which is a measure of what investors could have earned by investing their capital elsewhere.

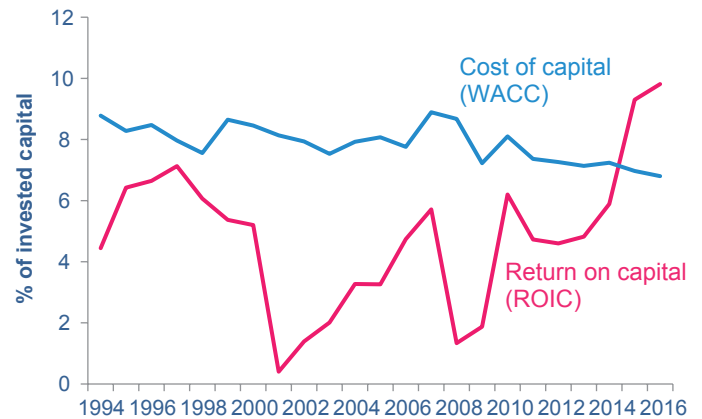
As chart 1 shows, this has been the first time for decades when the industry aggregate return on capital has been above its cost. In every other year the industry has not been able to generate a return on capital sufficiently high to reach what would be considered the minimum required in most other industries.

The difference between ROIC and WACC multiplied by the amount of capital invested in airlines shows the value in billions of US\$ to investors of investing in airlines, rather than other assets with a similar risk profile. This value might be retained for investment by airlines. This is not cash distributed to shareholders. But it does represent the potential value that accrues to investors, both equity and debt providers. So investors got a potential return of \$12-18 billion in both 2015 and 2016 as shown in chart 2. But that follows decades when on average investors lost \$20 billion each year. That is they could have taken the capital invested in airlines, invested in assets with a similar risk profile, and earned an average of \$20 billion more each year.

The manufacturers estimate that the airline industry will need to attract an additional \$5 trillion of new capital over the next two decades to pay for the aircraft required. It is hard to see how that can be achieved without the airline industry generating returns at least equal to its cost of capital. The experience of 2015 and 2016 should be the norm rather than the exception.

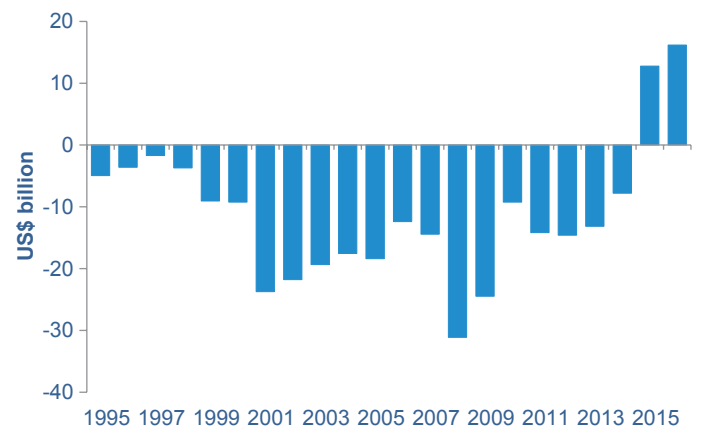
The good performance at the industry aggregate level hides substantial divergence by region. Value creation for investors is being driven largely by North American airlines, with some help from European airlines. Both of these regions generated ROIC in double figures in 2015. However, airlines in Asia-Pacific were only just covering their cost of capital in 2015 while airlines in Latin America were experiencing a deterioration in their already negative performance for investors as chart 3 shows. Clearly, the industry as a whole has not yet improved to a financially healthy position as measured by ROIC.

Chart 1: Return on capital invested in airlines



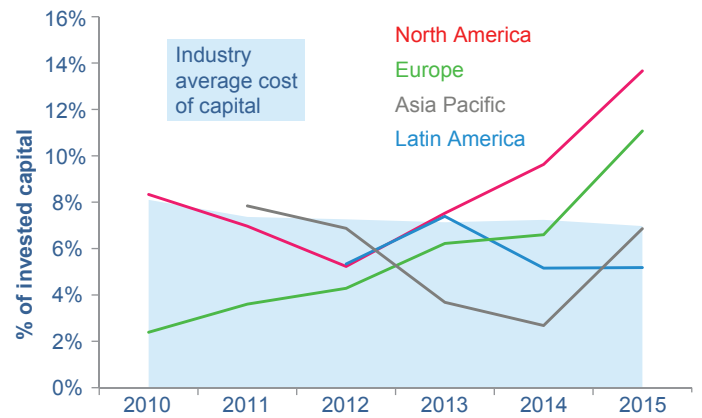
Sources: McKinsey data and IATA forecasts

Chart 2: Difference between investing in airlines and investing in similar assets elsewhere



Sources: McKinsey data and IATA forecasts

Chart 3: Return on invested capital by region



Sources: The Airline Analyst, McKinsey and IATA forecast



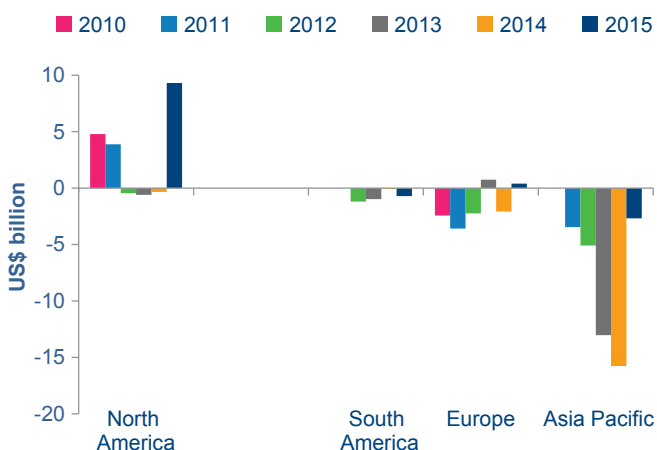
Another measure of financial health is free cash flow (FCF), the cash generated by the industry after allowing for capital expenditure. This was a relatively good 1.6% of invested capital in 2015 at the industry aggregate level. However chart 4 shows how skewed free cash flow generation is towards the North American airlines. Those airlines have been able to use this free cash flow to pay down debt, increase dividends and undertake share buy backs. That has not been possible in other regions, either because of heavy capital expenditure programs or less favorable cash generation from their businesses.

A third critical metric of financial health is the airline industry's balance sheet. Historically the industry has become highly leveraged, accumulating debt to finance aircraft purchases and losses. Balance sheets take longer to turn around and repair than the P&L or cash flow accounts. Even so a typical balance sheet metric used by the credit rating agencies, net debt adjusted for operating leases as a proportion of EBITDAR, has improved towards investment grade levels for airlines in North America. But there is an even wider spread of performance than for ROIC and FCF as chart 5 shows. Latin American airlines have ratios almost 3x higher than their North American counterparts and indebtedness is moving in the wrong direction.

North American airlines in 2015 can be said to have improved to a financially healthy position on all three metrics: ROIC above WACC, positive FCF and balance sheet metrics approaching investment grade levels.

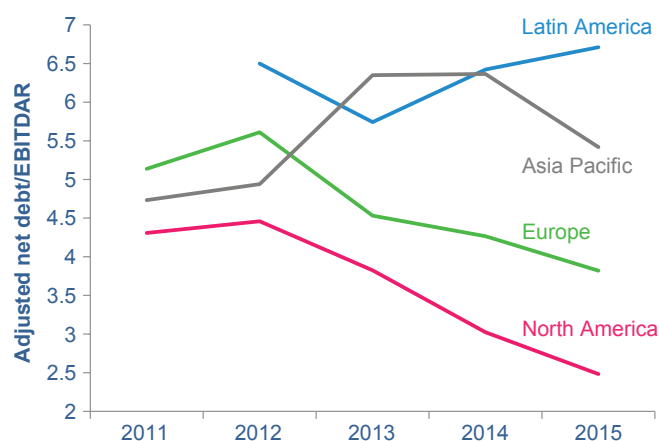
However, the rest of the industry is still far from getting there. European airlines are closest, generating good average ROIC, modestly positive FCF, and having an improving trend in its balance sheet. But Latin America is deteriorating. If we had the data, African airlines are also likely to be showing a deterioration. Asia-Pacific airlines improved in 2015 with ROIC equaling WACC but free cash flow is still negative and balance sheets remain heavily leveraged in aggregate.

Chart 4: Free cash flow by region



Source: The Airline Analyst

Chart 5: Adjusted net debt/EBITDAR by region



Source: The Airline Analyst



What factors have driven the recent improvement in financial health?

Low fuel prices are clearly associated with the 2015 and 2016 move into above cost of capital returns. But that's not the only cause of the improvement, which began several years before fuel prices fell. Chart 6 shows one way of looking at the recent improvement in the return on invested capital, the growing gap between load factors and breakeven load factors.

The gap between load factors (passenger and cargo) and breakeven load factors is a measure of the size of ROIC. The strong influence of low fuel prices in 2015 and 2016 can be seen clearly in the fall of the breakeven load factor. But that's not the complete story.

In 2013 and 2014 breakeven load factors were starting to turn down due to two emerging structural changes in the industry: a reduction of fragmentation in some key markets leading to important efficiencies; and the growth of ancillaries. Both of these supported yields relative to unit costs and so reduced breakeven load factors (B/E load factor = unit cost/yield).

Perhaps more importantly the first structural change, the reduction of fragmentation in key markets such as the US domestic and the North Atlantic, combined with a shock from the 2008 oil price spike and then the Global Financial Crisis (GFC). This changed the way airlines looked at adding capacity to markets, with a much more intense focus on getting the best return out of invested capital. As a result there was a step change in load factors after the GFC, and the industry has managed to keep load factors, and asset utilization more generally, at consistently high levels for the last seven years. Time will tell the degree to which

this behavioral change can persist, but there certainly looks to be a significant degree of structural change that could persist in improving returns on capital even if low fuel prices disappear.

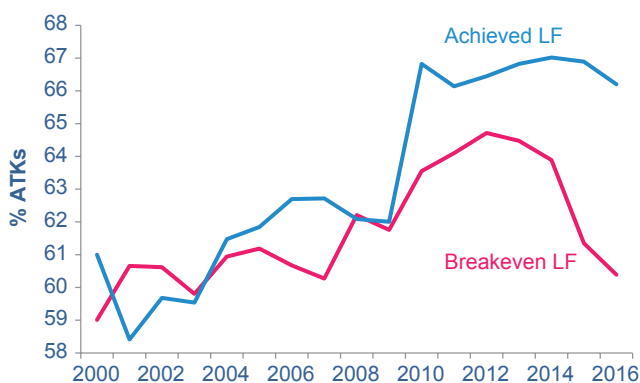
Another way of looking at the drivers of improved ROIC is to split return into its component parts of operating margin and capital productivity, but which we mean revenue as a proportion of invested capital (ROIC = adjusted EBIT/invested capital = EBIT/revenue * revenue/invested capital) as shown in chart 7.

Again the 2015 and 2016 influence of low fuel prices can be seen in the sharp rise in the industry's operating margin. Though that had started to rise earlier for the same reasons that reduced breakeven load factors.

Perhaps more importantly there is a trend improvement evidence in capital productivity. The industry is steadily increasing the revenue it is squeezing out of each dollar of invested capital. Part of that is sweating aircraft assets more intensively. Part is adding new ancillary revenue streams to the core airline product. Certainly the latter, and probably the former, would persist in improving ROIC even in a higher fuel price environment.

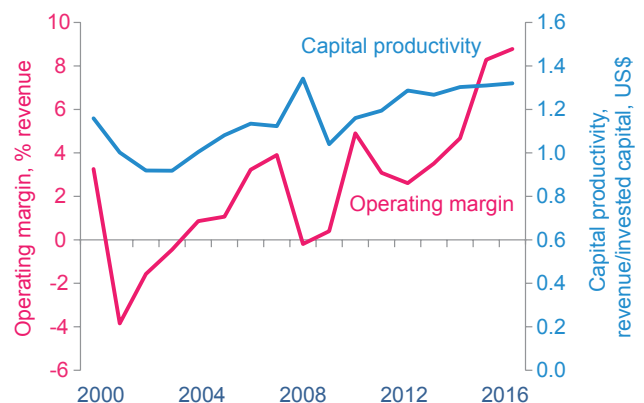
The question about whether the 2015 and 2016 above cost of capital return performance can be sustained is partly addressed by the analysis above. Low fuel prices may not persist, but there are what seem to be structural changes in industry structure or behavior and in product structure. But the regional differences remain. What should be commonplace or normal at or above cost of capital returns at the industry aggregate level are driven disproportionately by North American and part of the European industry. Other regions are not in a financially healthy position measured by P&L, cash flow or balance sheet metrics.

Chart 6: Breakeven and achieved weight load factor



Sources: ICAO data and IATA estimates and forecasts

Chart 7: Breakeven and achieved weight load factor



Sources: ICAO data, McKinsey and IATA forecasts



Why is the airline industry not financially healthy?

There are two approaches taken by business strategists (such as Prof Michael Porter) and economists (such as John Kay), one approach looking at the business environment in which the industry operates and the other looking at the individual airline's 'distinctive capabilities' and 'competitive advantages'. Both are useful. The first is helpful in understanding why this is such a difficult industry in which to make a normal return on capital. The second gives insights into why a handful of airlines have managed to consistently buck the trend and generate an above cost of capital return for their investors.

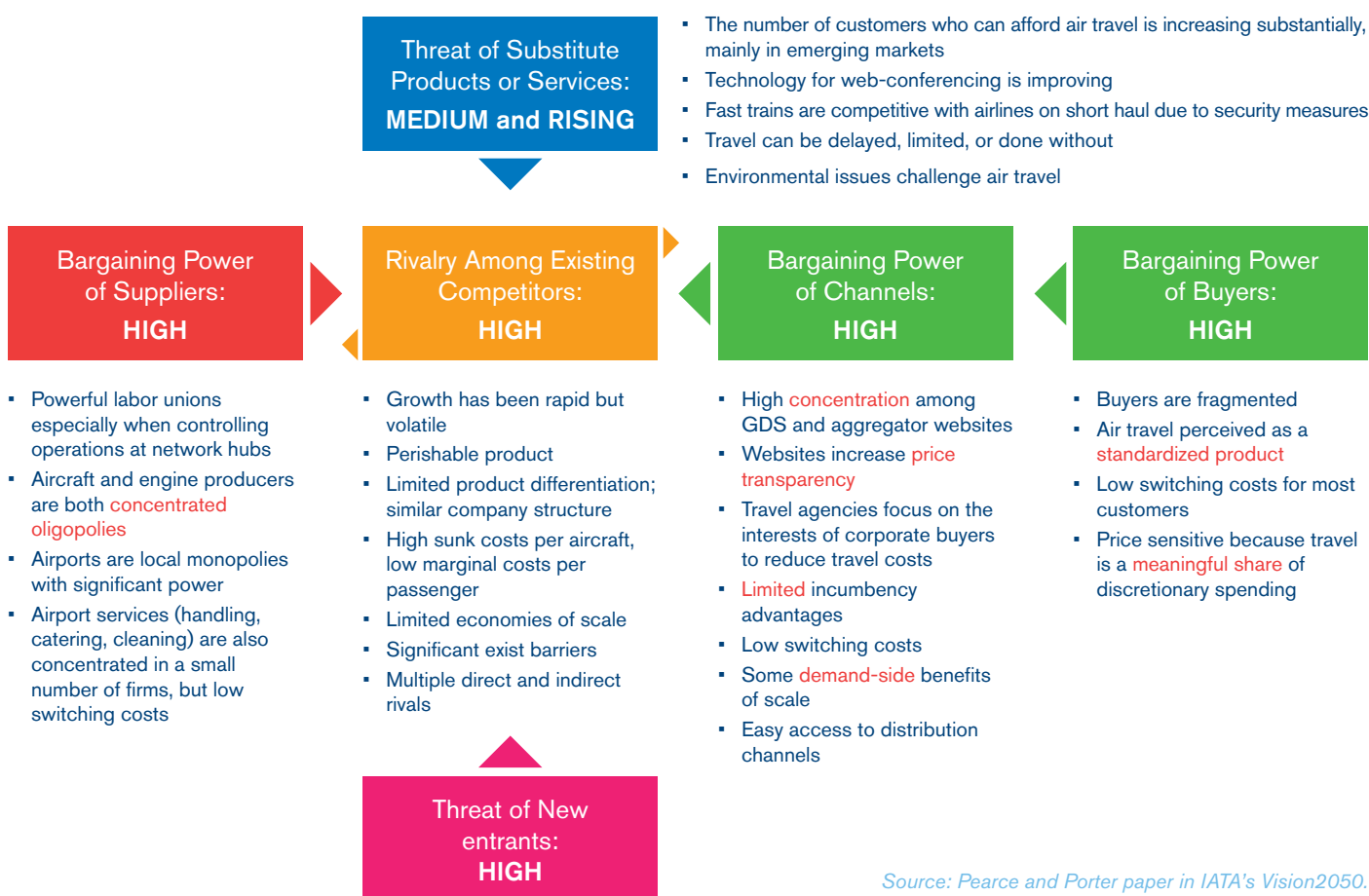
In 2010 and 2011 IATA worked closely with business strategy guru, Professor Michael Porter, to study the first of these approaches, the characteristics of the business environment in which the industry operates.

Porter's approach emphasizes five aspects of the business environment:

1. Rivalry among existing competitors – the threat from which he rates as HIGH
2. Threat of new entrants – also HIGH
3. Bargaining power of suppliers – HIGH
4. Threat of substitute products or services – MEDIUM and RISING
5. Bargaining power of channels and buyers – HIGH

It is clear from Porter's analysis that airline profitability is challenged on all sides. This explains why industry profitability overall has been so poor historically. Much of IATA's effort to help its members achieve financial health is focused on addressing these external business environment challenges. At least some of these business environment issues lend themselves to being tackled by the standard setting, global convening and advocacy capabilities of IATA.

Chart 8: Professor Michael Porter's view of the external pressures on airline profitability



Source: Pearce and Porter paper in IATA's Vision2050.
http://www.iata.org/pressroom/facts_figures/Documents/vision-2050.pdf

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The Five Pillars Supporting Airline Industry Achievement of Sustained Financial Health



Five Pillars
towards Sustained Financial Health



1. Smarter Regulations

Harmonizing the regulatory framework, making it more supportive and conducive to sustainable growth

Government policies towards the airline industry have changed significantly over time, but at different speeds, leading to a high degree of heterogeneity in terms of the policy environment airlines face across countries. Deregulation has been partial, leaving the airline industry fiercely competitive in some areas whilst lacking the freedom to react to the consequences of intense rivalry in others.

The increasing patchwork of regulatory responses to global policy issues, consisting of uncoordinated country or region-specific approaches, reduce the industry's ability to live up to the full potential of economic and social benefits it can provide.

Such an approach increases complexity and costs for the industry, which results in greater complexity and costs for consumers and businesses. As a global industry, global solutions are needed. Examples of key policies issues requiring a global framework are discussed under this Pillar.

In addition, the airline industry needs to address its image and perception with the public and governments and be more aggressive in exposing the market distortions that are constraining the industry structure and driving its poor performance, especially policies of governments.

1.1 Promoting the Value of Aviation

Vision

To achieve a positive image of our industry with consumers and key governments recognizing aviation benefits, to facilitate a stronger partnership between regulators and the aviation industry, as well as helping develop future sustainable transport policy. Change of mindset from regulators: from regulate to facilitate.

Where we are today

Aviation provides the world with the only means of transporting people and goods over long distances rapidly. In doing so it generates an almost inconceivable amount of social and economic 'value' to a wide range of stakeholders. It creates jobs and drives economic growth, it helps businesses get their people and products to markets, it fosters education and the understanding of different cultures, it facilitates humanitarian missions, it drives tourism, and it does something as simple as enable friends and families to stay connected. All of this should encourage governments to regulate aviation in a way that enables aviation to deliver such value, specifically with regard to government tax and regulatory policies, but this is often not the case, with airlines seen as a "cash cows" for governments.

IATA has therefore undertaken a global campaign to promote the value of aviation. The aim is to convince businesses and consumers to lend supportive voices to our efforts to persuade governments to nurture the aviation industry instead of inhibit it. The campaign has proven very useful in supporting the achievement of tangible results, amongst which:

- The ratification of the 1999 Montreal Convention by Guatemala (reflecting our 'consistency and coherence' smarter regulation principle)
- The withdrawal of a social security tax in Brazil (reflecting our 'fair and non-distortive' principle)
- The alignment of API/PNR requirements in Lebanon with global standards (reflecting our 'consistency and coherence' principle)
- The removal of a proposal to require disclosure requirements on maintenance regulations in Korea (reflecting our 'targeted at risk' and 'proportionality' principles)

Programs of work

Continue to implement the global 'umbrella' campaign through which we talk about the value of aviation as a way of addressing initiatives that limit aviation's ability to deliver such value. This could be when fighting the imposition of a new tax, a proposed new consumer rights rule or any other initiative that would cause operational and financial costs to the member airlines.

Implement regional value of aviation campaigns focusing on specific issues. In Africa, our campaign is focusing on the additional value that aviation could deliver if governments in the region enact policy that would facilitate greater intra-African air connectivity. In Asia Pacific and Latin America, we are focusing on the additional value that aviation could deliver if governments in the region enact policy that would enable infrastructure to be developed to meet the projected growth in demand. We also have a complimentary campaign in Latin America on the damaging effects of taxation in the region. Lastly, in Europe we are focusing on the additional value that aviation could deliver if governments in the region work together to enact policy that would facilitate the more efficient use of Europe's airspace.

The 2017 targets are:

- Africa: additional 6 states committing to join Single African Air Transport Market and minimum 6 new intra-Africa routes
- LATAM: statements of support from governments in 3 key markets
- ASPAC: improvements in 2 government policies, plans or regulations
- EUR: statements of support from 2 more States, commitment from at least 2 States to develop a National Airspace Strategy aligned with IATA recommended principles with at least one committing to improve business continuity.

We also take every opportunity to use our value of aviation arguments when lobbying for a smarter approach to regulation on a day to day basis on any topic where such arguments could be useful.

IATA Governance

- Industry Affairs Committee

1.2 A global market-based measure for aviation's CO₂ emissions

Vision

A single global market based measure to address CO₂ emissions from international aviation, in the form of a mandatory offsetting scheme from 2020 without a revenue generating element, based on offsetting emissions growth post 2020 only.

Where we are today

At the 39th session of the ICAO Assembly in 2016, ICAO's Member States adopted a global carbon offsetting scheme for international aviation. ICAO's Carbon Offset and Reduction Scheme for International Aviation (CORSIA) is the first global scheme covering an entire industrial sector. CORSIA is set to commence with a voluntary period (2021-2026) after which it will become mandatory. By the end of the ICAO Assembly, 65 states had already volunteered to implement the scheme from its outset, covering approximately 80% of CO₂ growth in 2021-2035. The global agreement at ICAO is the culmination of several years of intensive advocacy efforts by IATA, its member airlines and its industry partners.

Demonstrating our environmental responsibility is a key element of the industry's "license to grow." To address aviation's impact on climate change, the industry has agreed a four-pillar strategy, comprising new technology, improved operations, better use of infrastructure, and a single global market-based measure.

A global carbon offsetting scheme for international aviation is intended to be a complementary and temporary emissions gap-filler in addition to the basket of measures available to the sector. It is not intended to replace efforts to improve fuel efficiency through new technology and improved operational and infrastructure measures. Nor would the scheme make fuel efficiency any less of a day-to-day priority for operators.

In recent years, there has been a marked increase in the number of carbon pricing instruments, such as CO₂ taxes or emissions trading schemes, applied around the world. A similar proliferation of carbon pricing instruments on aviation would result in an unsustainable and costly patchwork of measures for operators and for governments. In our view, there is a significant risk that policy-makers would have used the absence of agreement in ICAO as a justification for the introduction of unilateral measures. In contrast, the implementation of CORSIA will obviate the need for existing and new economic measures to be applied to international aviation emissions on a regional or national basis.

Programs of work

As a next important step in the ICAO process, finalize the technical work which will produce the necessary mechanisms for the implementation of the CORSIA. Whilst good progress is being made on those issues and IATA is contributing actively to the discussions, we must be particularly vigilant to the business risks associated with potential restrictions on the availability of emissions units for compliance purposes under CORSIA.

Develop a business case to address the requirements for airline fuel and emissions data linked to the CORSIA in its voluntary and mandatory phases. The need for capacity building and support in the reporting of emissions has already been identified by both industry and government stakeholders. IATA member airlines have been reporting their annual fuel consumption using the Fuel Reporting & Emissions Database tool (FRED) since 2013. The experience gained by IATA in conducting the FRED reporting exercise has placed it in a unique position to support and facilitate MRV tasks under the future CORSIA. IATA is also organizing capacity building workshops in all regions to assist member airlines with preparing for the implementation of the CORSIA. A first series of workshop will take place in early 2017.

IATA Governance

- Environment Committee

1.3 Consumer protection legislation

Vision

To achieve convergence and compatibility of consumer protection regimes based on the industry core principles approved at the IATA 2013 AGM and the ICAO consumer protection policy guidance published in July 2015. Regimes should strike a balance between protecting passengers and industry competitiveness, and should be non-discriminatory towards aviation compared to other modes of transport.

Where we are today

Governments that have imposed passenger rights regimes typically include prescriptive provisions relating to passenger assistance and/or compensation in the case of denied boarding, delays, lost baggage, and cancellations. They can also mandate procedures to deal with passengers with reduced mobility, define how an airline can market its products, and what types of information must be provided to the passenger and how when things go wrong. There is a legitimate role for governments to regulate protections for consumers, but a patchwork of differing, uncoordinated passenger rights regimes is coming into force (over 60 countries with passenger rights regimes exist today) that are not aligned, harmonized, or mutually recognized. There can be three or more different regimes that can apply on a given itinerary, with different levels of trigger points for different levels of compensation. This is defeating the purpose of providing passengers with clear, transparent rights that they can count on. In addition, the cost of such a lack of harmonization is enormous. In 2012, the cost of the EU261¹ legislation was a US\$ 4bn annual liability to the industry. This cost could be increased to US\$ 12bn by 2017 if other countries were to adopt a similar regime.

In 2016, evidence of core principles being reflected exists in China, Costa Rica, Malaysia, and Aruba. We are also targeting the Arab Civil Aviation Commission guidelines and Brazil.

Programs of work

We will continue working on the four-pillar strategy that has proven successful so far, namely:

- Change the debate: inject a more balanced perspective into what is traditionally a defensive issue for the industry
- Greater convergence and compatibility: work to ensure countries follow the IATA principles (http://www.iata.org/policy/Documents/consumer_protection_principles.pdf) and ICAO policy guidance
- Avoid or delay damaging regulation: local advocacy campaigns in watch list countries
- Explore new opportunities: work with our members and partners to develop and deploy new advocacy approaches.

The target for 2017 is to demonstrate IATA's role in delaying damaging actions or aligning regulatory movements to the industry principles in 5 watch-list countries.

IATA Governance

- Industry Affairs Committee

¹Regulation 261/2004 is a European regulation establishing common rules on compensation and assistance to passengers in the event of denied boarding, flight cancellations, or long delays of flights

1.4 Unruly passengers

Vision

To minimize unruly passenger incidents on flights which will lead to a safer, more pleasant flight experience for all as well as major cost savings for airlines. This is to be achieved by:

- Airlines having effective policies and procedures to prevent and manage unruly passenger incidents.
- Governments ratifying the Montreal Protocol 2014² to ensure airlines have an effective legal deterrent.

Where we are today

Unruly passengers have become a significant daily operational issue for member airlines. Over 9,000 incidents (including assault, harassment, failure to follow safety instructions, and other riotous behavior) were reported to IATA in 2014 equating to 1 incident in every 1,400 flights. These incidents impact safety, disrupt the travel experience and plans of other passengers, cause operational disruption, and increase airline costs. Typical costs for diverting a flight to offload an unruly passenger are between USD\$ 6,000 and US\$200,000.

The major issue is that many unruly passengers do not face punishment because police and prosecutors do not have jurisdiction over offenses committed on aircraft registered in a different State. Often unruly passengers are simply released without punishment which has no deterrent effect.

Programs of work

A comprehensive approach is taken based on two themes that are detailed in the core principles on unruly passengers which were unanimously endorsed by members at the 2014 IATA AGM:

- **Prevention and Management:** Operational support materials to members to help them put in place policies and procedures to prevent unruly incidents and effectively manage them when they do happen.
- **Deterrence:** Advocate for revisions to the Tokyo Convention 1963 (TC63) (1) to ensure that legal gaps are closed and ensure that States have the necessary legal capabilities to deal with unruly passengers. IATA successfully lobbied for ICAO to revise TC63. The resulting Montreal Protocol 2014 was adopted in April 2015. 22 States must ratify before it comes into force with all remaining States ratifying thereafter. Global advocacy campaigns with governments calling for the ratification will be necessary. So far, six (6) have ratified MP14 with many others in the process of changing domestic legislation that will enable them to become Parties in the near future.
- The target for 2017 is to obtain MP14 ratification by 5 additional States.

IATA Governance

- Industry Affairs Committee

¹ The Tokyo Convention governs offences and other acts that occur on board aircraft in flight. It came in to force in 1969. This 50 year old Convention has served the industry well. However, a Diplomatic Conference was held between 26 March and 4 April 2014 to consider proposed revisions to the Convention to ensure that it is an effective deterrent to unruly behavior. The result was the Montreal Protocol 2014 which makes important changes to the original Tokyo Convention.

1.5 Security Regulations

Vision

To achieve effective, efficient and passenger-friendly security measures, enabling future passengers to proceed through security checkpoints with minimal inconvenience, establishing a sustainable security screening process that is better adapted to the predicted growth in air travel, continuously evolving threats, and passenger expectations.

To potentially remove some requirements for the screening of connecting passengers who have already been screened at their point of origin, based on a risk-based differentiation approach and thus maintaining the highest security outcomes while reducing connection times, improving quality of service and delivering significant financial benefits to the airline industry through cost reduction, cost avoidance and increased revenue opportunities.

Where we are today

Innovative screening technologies and processes are being tested and evaluated at a number of leading airports, and have demonstrated measurable benefits in terms of security effectiveness, operational efficiency and passenger experience. For example, proofs of concepts have demonstrated that 98% of passengers have expressed a satisfaction of 6 or above (on a scale of 10) for automated tray return systems, compared to 61% on traditional manual lanes. In term of efficiency, parallel divestment has the capacity of increasing the lane throughput by 20%. Staff efficiency has also increased. Several of the trial concepts are now permanently installed and fully operational, and while the initial uptake has been slow, we see a notable acceleration in global adoption worldwide.

In addition, one out of four passengers at the top 120 airports worldwide is a connecting passenger. This means that 325 million passengers are currently re-screened by obsolete and time-consuming security checkpoints during their connections; most of them could be drastically improved as demonstrated in some Smart Security trials at transfer points.

Programs of work

Test, evaluate and drive adoption of innovative technologies, processes and screening concepts in close cooperation with government regulators, screening authorities, airports, airlines and solution providers.

One Stop Security or Recognition of Equivalence: continuing advocacy with governments to encourage States to participate in exploring innovative concepts through operational trials and pilots, in order to facilitate agreements on recognition of equivalent, or lighter security measures at transfer.

1.6 Aircraft maintenance

Vision

To establish harmonized and modernized aircraft maintenance regulations, in order to simplify the approval and global acceptance of Approved Maintenance Organization (AMO, also known as MROs for Maintenance Repair and Overhaul).

Where we are today

The Latin American Civil Aviation Authorities has introduced a Working Paper for the ICAO Assembly on the “Recognition of Multinational Certifications”. The mutual recognition of AMOs is part of IATA’s ongoing active participation at ICAO’s Airworthiness Panel; the goal is to develop guidance for the mutual approval by 2020.

We are surveying other industry efforts to use as baseline in an audit concept that will significantly reduce aircraft maintenance related audits.

Programs of work

Continued active participation at ICAO’s Airworthiness Panel in promoting the harmonized acceptance of AMOs.

Facilitate an EASA-FAA³ Team to lay out what is needed for joint approvals in other states. There is already an example (TAECO⁴ in China) that can provide the blueprint for such activities.

Under the auspices of ICAO, initiate a global effort to harmonize aircraft maintenance and leasing documentation that will simplify cross border transfer of aircraft.

1.7 Flight training requirements

Vision

To harmonize the regulatory framework, creating a flexible, highly qualified workforce, and manage effectively the training costs and time to recertify.

Where we are today

Each region or country currently has its own prescriptive training programs that makes it time consuming and costly to transfer crewmembers from one region to another. Moreover training programs are too often based on hour requirements instead of focusing on the crewmember ability to cope with operational threats.

In order to unify the various approaches, IATA has issued guidance for Upset Prevention and Recovery Training to support operators, as well as guidance to enhance Monitoring skills (this guidance also answers to an ICAO job card).

The industry supports a less prescriptive competency-based training system as recommended under the IATA Training and Licensing Portfolio. Multi-Crew Pilot License (MPL) and Evidence Based training (EBT) guidance materials have been developed to support its implementation.

Cooperation among major industry stakeholders such as ICAO and IFALPA⁵ is essential to ensure the necessary collaborative industry-wide effort to increase industry acceptance and implementation of such programs.

Programs of work

Produce a Concept Paper for better integration of pilots’ core competencies and Threat and Error management model, and on a guidance for instructor standardization from initial training to continuous qualification.

IATA Governance

- Operations Committee

IATA Governance

- Operations Committee

³EASA -The European Aviation Safety Agency is the centerpiece of the European Union’s aviation safety system comprised of the Agency, the European Commission and the National Aviation Authorities (NAAs) FAA – The Federal Aviation Administration

⁴TAECO is a training center that acquired the HKAR-147, CCAR-147 and EASA Part-147 approvals in March 2002, September 2006 and December 2006 respectively. In addition, it has proved itself again to become the approved examination site for CCAR-66/HKAR-66/EASA Part-66 maintenance personnel licenses

⁵IFALPA: International Federation of Air Pilot’s Associations. In excess of 100,000 pilots in over 100 Member Associations around the world are currently in IFALPA Membership. Pilot Associations join IFALPA to become part of a worldwide pilots’ federation to have a voice at all of the world’s major aviation forums.

1.8 Ticket Taxes, Charges and Fees (TCFs)

Vision

To achieve greater harmonization of ticket TCFs and collection/remittance processes:

- Reduction of existing TCFs, avoidance of new TCFs or reasonable, cost-related TCF increases in consultation with airlines.
- Reduction in administrative cost of collection by reducing the number of different ticket TCFs through harmonization of the rules and industry-led standard practice for ticket TCF collection (including electronic reporting and standard audit requirements, where this is not currently the case), recognized by governments and airport authorities.
- Higher safety level of assurance to reduce number of legal cases and penalties due to unclear taxation environment.

Where we are today

The airline industry is seen as an “easy target” for revenue generation for governments, who regularly increase or introduce new ticket TCFs. Although they are levied on passengers on behalf of a government or an airport authority, they increase cost of travel and therefore impact demand and ultimately airline revenues. They also have a negative impact on the national economy of the countries that levy TCFs in the long term. Excessive airport and air navigation charges also distort the industry.

There are currently around 650 different ticket TCFs (of which some 230 are statutory government taxes) most of which are uncoordinated, changing constantly, and with different filing requirements, in many cases still manual, creating additional costs for airlines. Taking into consideration hidden administrative costs, there is a significant total cost of collection of these TCFs for the industry.

As part of the overall initiative to address TCFs, 75 complex TCFs were globally identified, a project team set up with a clear work program, goals and deadlines were established. Solutions associated with addressing these 75 complex TCFs include adopting a consistent approach to calculating value-based taxes, additional e-ticket/EMD data elements to pass along sufficient information to airlines and interline partners, and advocacy initiatives, amongst others. Sixty-seven percent of the total cases have now been approved and closed, with a further twenty percent that have been proposed for closure and are awaiting approval from the Financial Services Development Working Group (FinDev). An additional six percent of cases have solutions that have been presented for initial consideration to FinDev. The remaining cases are still in progress.

Programs of work

IATA will continue working on identifying solutions for addressing the remaining complex taxes and identify them.

Efforts are undertaken to mitigate the global tax burden and this includes reducing ticket taxes/charges/fees when and where possible. Some recent examples are the withdrawal of the Irish Air Travel Tax of EUR 3 per departing passenger as of 1 April 2014; the UK Air Passenger Duty was reformed resulting in cost reduction for airlines and their passengers starting in 2015; the Solidarity Tax in Cote d'Ivoire on departing international passengers was abolished and the Tourism Tax on departing domestic and international passengers was reduced by 50% in July 2016.

The possibility to look into the harmonization of TCFs, in particular governmental taxes will need to be further analyzed before being undertaken.

IATA Governance

- Financial Committee
 - Industry Taxation Working Group
 - Financial Services Development Working Group
 - Airports Working Group

1.9 Fuel costs

Vision

To achieve competitive, efficient and reliable supply of jet fuel to airlines:

- Full open access to fuel infrastructure, a competitive jet fuel market and a reliable supply of jet fuel at airports, at transparent prices.
- Eliminate duties and taxes on jet fuel, and remove or moderate unjustified or excessive fuel fees.
- Bio-fuels available as economically viable alternative to fossil based jet fuel.
- Efficiency derived from adoption of industry standards

Where we are today

Fuel costs represent 27% of airlines' operating costs, with most of the cost being in the price of the jet fuel molecule. Each additional cent per gallon of jet fuel costs the industry as a whole over US\$ 800 million.

Fuel supply markets controlled by monopolies or where competition is lacking can adversely impact airlines' fuel costs. Fuel concessions fees are an unjustified burden on airlines as they have no cost basis. Airports that apply such a fee are abusing their dominant position to boost their revenue collection at the expense of the industry.

Opaque pricing practices, excessive throughput fees and the imposition of taxes on jet fuel for international operations, in contravention of ICAO policy, also add to fuel costs. Jet fuel supply disruptions at airports can cause significant extra costs for airlines associated with the need to tanker fuel from other locations and delayed flights or cancellations.

Bio-fuels today are not economically viable competitors to fossil based jet fuel as they are still niche products but turning this situation around remains a worthwhile initiative.

Practices in the fuelling cycle are inefficient because of use of non-standard procedures or manual processes.

Finally, fuel prices remain a critical cost item, highly volatile and can easily erode airlines' thin profit margins. It remains a central topic for the industry to address.

Programs of work

The work to reduce the impact of fuel costs includes:

- Promoting open access to jet fuel infrastructure and competitive jet fuel markets at airports.
- Addressing unjustified fees, including lobbying for the regulation of concession fees. Opposing any form of taxation on jet fuel sold for international flights.
- Tackling the jet fuel price structure in many countries in order to bring transparency and ensure that cost items impacting the final jet fuel prices are cost-related.
- Ensuring that supply reliability issues are addressed with all stakeholders including the fuel suppliers, fuel infrastructure and service providers, the airlines and the airport, at all stages of the jet fuel supply chain.
- Lobbying for a political and legislative framework that incentivizes cost-effective production of bio-fuels. Co-operating with bio-fuels producers and supporting national and regional multi-stakeholders bio-fuels initiatives.
- Development of XML fuel data standards that cover the fuelling cycle from tendering/bidding to delivery of fuel and invoicing. With the four modules of the fuel XML data standards in place, future efforts will be on promoting the adoption of these standards by the industry to minimize manual data handling and improve accuracy and efficiency.
- Efforts to implement the IATA standard into-plane fuelling procedures which would save cost for airlines and the industry while improving safety.

IATA Governance

- Environment Committee
- Financial Committee
- Commercial Fuel Working Group

2. Value Chain Optimization

Optimizing the value chain, making it reflective of relative risks

Airlines are creating significant value to the economy and the entire value chain. However airlines earn the lowest returns whilst bearing the second highest level of risk, indicating imbalances in the value chain.

In competitive markets investors would expect to earn a higher return on investment if they face a higher risk or volatility or returns. That rule does not seem to apply to the air transport supply chain, as some of the sectors with the highest returns face the lowest volatility of returns. On the other hand, the airline sector earns the lowest return on capital yet faces the second highest volatility of returns or risk. This indicates that market forces are not working to allocate risk efficiently.

2.1 Aircraft Ownership Costs

Vision

To achieve a competitive OEM and maintenance spares market:

- Free and open competition in the OEM market and after-markets
- No barriers to entry for 3rd party suppliers
- Harmonized spare parts regulation
- Harmonized spare parts designations, with an industry-wide parts pooling service available

Where we are today

Aircraft costs represent 2-25% of total airline expenses. About half of this cost is related to financing the aircraft, lease payments, lease transfers, costs related to ownership of spare parts, tools, and insurances related to the above. The remaining half is attributed to the maintenance of the aircraft and its components. Even a reduction in total maintenance costs of 1% would lead to USD 800 Million annual savings at the industry level.

The limited number of aircraft components and engine manufacturers operate a pricing model whereby the airlines are locked in for a number of years, with maintenance and parts pricing escalations often well above inflation.

In 2015, the Competition Directorate of the European Commission (DG-COMP) began a review of OEM aftermarket practices, focusing on the CFM56 engine and a ubiquitous Honeywell APU. In March 2016, IATA filed formal complaints with DG-COMP relating to the two products to underscore the importance the airline industry attaches to this matter.

Programs of work

IATA will continue to support this initiative as required in the interest of its members

2.2 Airports

Vision

A more balanced customer-supplier relationship between airlines and airports with partnerships that benefit the entire value chain:

- Cost-efficient charges set up in consultation with the airlines.
- CAPEX aligned to airline needs, modularly expandable and agreed by the airlines
- Standardized procedures for ground operators and shared efficiency in airline auditing.
- Meaningful engagement of airlines in airport and air navigation charges consultations.
- a robust and effective economic regulatory framework is necessary for airports or providers with market power.

Where we are today

Airlines and passengers are estimated to have paid US\$ 92bn for the use of airport infrastructure globally in 2015, a 38% increase since 2007 in real terms. These charges are now equivalent to 13% of the cost of transport (excluding direct passenger taxes), representing a 3.4% point rise since 2007. The increase in the share of airport costs is explained by continued increases in airport costs as well as a drop in other operating costs, most significant of which has been the fall in the fuel price. On a per passenger basis, charges rose 11% between 2007 and 2015 in real terms. Conversely, airline yields per RTK over the same period fall by 24% and are 21% lower on a per passenger basis in real terms. Investing in appropriate infrastructure remains critical to driving productivity and economic development. The predicted investment in global airport infrastructure is estimated at US\$ 1.2-1.5trn between 2016 and 2030, requiring major increases in capital spending. Over this time period, more than twice as much of new capital will need to be channeled into the airport sector than is currently deployed. We need to ensure that those major airport expansion projects across the globe meet our members' needs in terms of functionality, affordability and do not result in inefficient infrastructure and unnecessary increases in charges. In addition, airport service shortfalls impact airline bottom-line and we are driving service level agreements at major airports to provide airports with a clear understanding of service levels required to meet airline needs in return for airport charges. Airports are, for the most part, monopolies which can arbitrarily raise their charges, resulting in excessive and unjustified profits and/or inefficient delivery of services. Strong, robust and independent economic regulation is required to give airlines sufficient protection against airports' potential abuse of their dominant position.

Programs of work

IATA pursues on-going advocacy efforts in order to reduce charges. The 2017 IATA Board targets are: reduce airport, ANSP charges, fuel fees, and taxes in 2016-2017 by US\$ 800m; reduce proposed cost increases by at least 27% on average in 2017-2018.

Other current areas of work include:

- Advocating for effective economic regulation of airports across the globe, including safeguarding ICAO's policies on charges to protect against airports' potential abuse of market power.
- Engaging in airport privatization processes from the outset to ensure protection of airline and passenger from potentially higher charges and inefficient infrastructure development or utilization
- Working with the EC on a stronger airport charges directive and aviation strategy in Europe
- Delivering key airport CAPEX alignment campaigns to ensure that major airport expansions meet our members' needs in terms of functionality and affordability. Monitoring capacity development (through our capacity monitoring database) to identify impending capacity constraints, avoid slot constraints and facilitate pro-active engagement with airports to ensure sustainable growth
- Delivering effective implementation of A-CDM (Airport Collaborative Decision Making)
- Driving efficiency and service level improvements and establishing the concept of service level agreements between airports and airlines increasing adoption of common procedures by airlines and outsourced ground operators, to reduce ground damage and airline auditing costs.
- Developing an Airport of the Future concept, which will assess airport related initiatives to determine which integrated concepts could potentially best benefit IATA members

IATA Governance

- Industry Affairs Committee
- Financial Committee
- Airports Working Group

3. Innovation

Enabling innovative and competitive customer centric products

One of the drivers of poor financial health is the commoditization of air travel. This is aggravated by indirect distribution channels currently encouraging competition on price and schedule alone. These channels do not cater for the product differentiation or personalized service that a 21st century consumer has come to expect. Today's customer expects increased options and à la carte service. However, customers cannot experience a seamless integrated journey of a consistently high quality if travel partners are not connected.

Under the Simplifying the Business (StB) program, IATA has launched a number of initiatives to start addressing these issues. The goal of these initiatives is to modernize airline retailing and to innovate along the whole airline commercial distribution process, from shop, to order to pay.

IATA is also exploring new areas that could potentially bring substantial benefits to airlines financial health. These areas are currently in exploration phase; should they prove viable, progress will be presented in future issues of this White Paper.



3.1 New Distribution Capability (NDC)

Vision

Industry adoption of the New Distribution Capability (NDC), providing airlines with the ability to differentiate their products across all distribution channels, i.e. bridge the gap between the direct and the indirect channels. Customers want more transparency and choice when buying products, they want to know the value of what they buy, not only the price. NDC will increase competition in airline distribution for the benefit of the consumer.

The NDC capability will enable further revenue generation, yield improvement through product differentiation, and cost efficiency arising from an open standard.

Where we are today

The NDC Program started in 2012 and IATA delivered the first set of official standards on 1 September 2015. It has taken nearly three years and the involvement of close to 100 representatives from Airlines, GDSs, IT Providers and a small number of Travel Agents to deliver a global standard.

At the end of October 2016, 27 airlines have deployed NDC and are using it for live transactions and the number is expected to grow close to 30 by the end of the year. Airlines are using NDC to deliver flights, ancillaries and rich content and 20 of the current deployments cover both Offer and Order Management which demonstrates airlines are very quickly grasping the benefits of the full NDC roll out. In June 2016, IATA launched the registry of certified airlines and IT providers that can deliver NDC-capable products. Today there are over 50 certified players (airlines, IT companies etc.).

Continuous innovation in NDC is supported by Hackathons and the newly launched Developer Portal, which are aimed at developing new technological solutions and facilitating their integration in the current airline systems respectively.

Programs of work

From now until the end of 2018, the NDC program will focus on:

Technical/ Standards

- Grow quality of standard based on feedback from deployments
- Align with Airline Industry Data model & Improve consistency of standard
- Provide architecture for payment process in an NDC world

Engagement

- Support airlines in deploying capability but also increasing volumes.
- Bring together Self-Booking Tools, TMCs and other resellers to support buy in & integration
- Align with other transformational projects: EasyPay & ONE Order

Innovation

- Continue to use NDC as a showcase for transformation and innovation through Hackathons and building a developer community

IATA Governance

- Simplifying the Business
- Passenger Services Conference



3.2 ONE Order

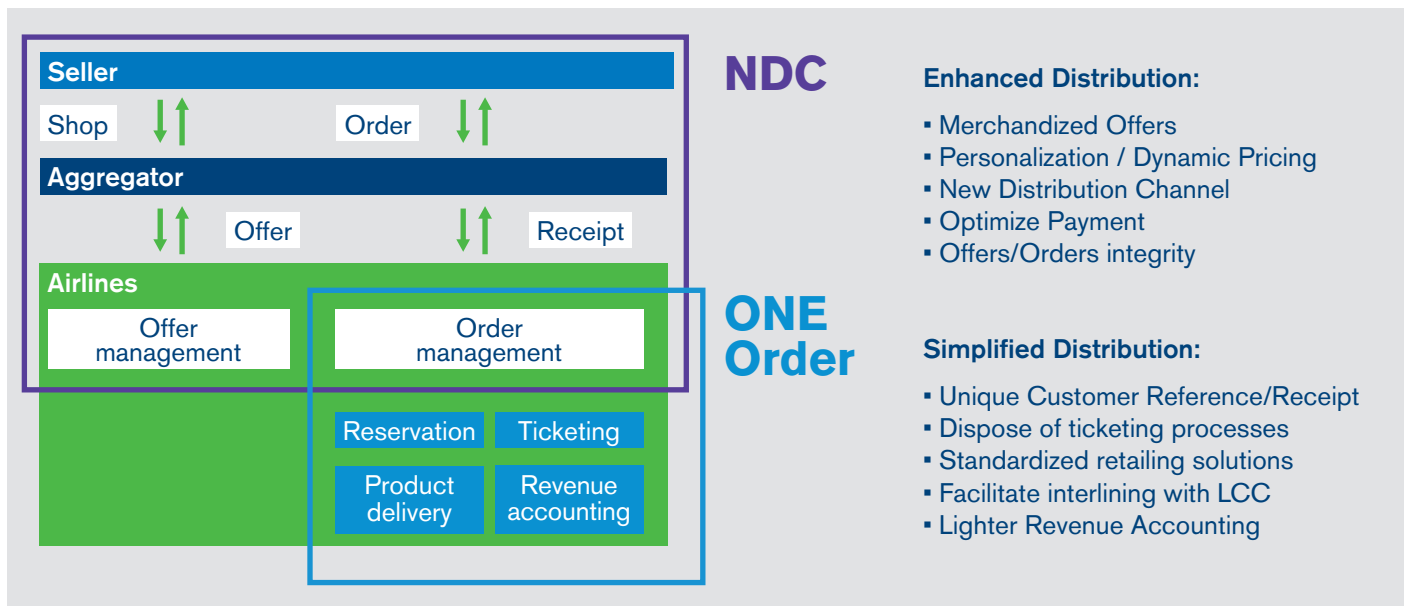
Vision

To move from the established industry booking and ticketing capability facilitated through the Passenger Name Record (PNR) and Special Service Requests (SSR) or Electronic Ticket (ET) and Electronic Miscellaneous Document (EMD) processes towards a ONE airline customer Order closer to e-retail solutions.

While NDC is increasing airline control and flexibility, ONE Order will substantially reduce the complexity generated from a paper based industry. Together those industry transformation projects are putting in place the long term framework of Enhanced & Simplified Airline Distribution.

The vision is articulated around **3 core principles:**

1. Customer oriented architecture
2. Efficient billing and real-time synchronization of relevant information between all parties
3. Simplified airline merchandising delivery



3.2 ONE Order

Where we are today

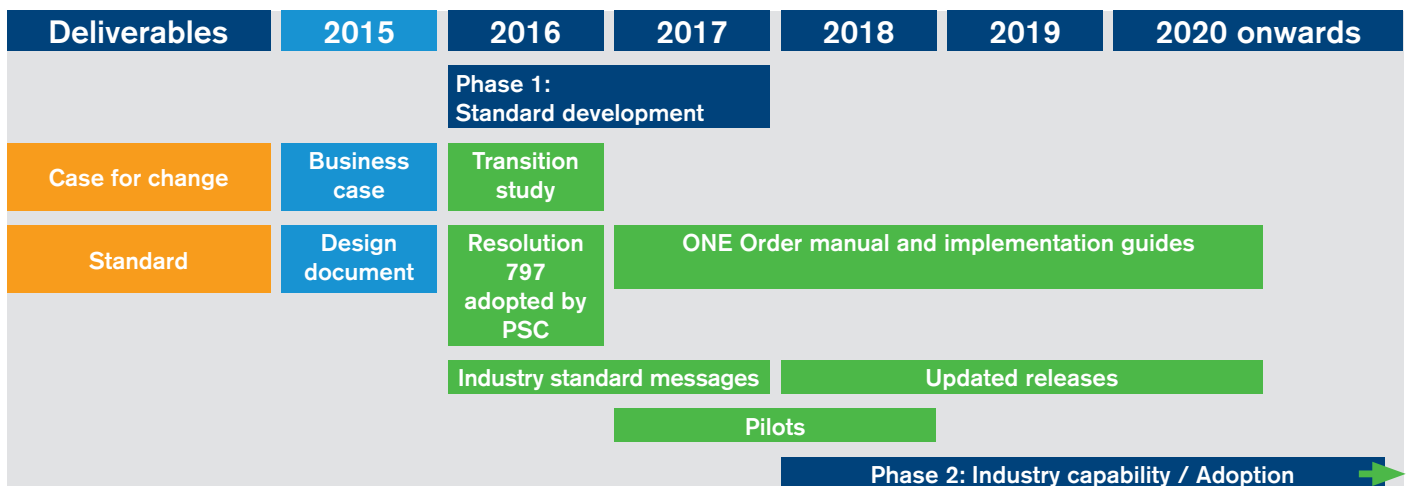
The IATA Board of Governors approved the project in December 2015, based on the results of an industry business case that proved that ONE Order will:

- Simplify airline processes and reduce costs through operational efficiency and better customer service
- Drive innovation and decrease long term IT costs by opening up a currently very limited airline PSS market to new vendors
- Facilitate the delivery and accounting of airline merchandising
- Facilitate interline opportunities with new model airlines (mainly ticketless Low Cost Carriers)

Whilst the benefits of ONE Order for airlines have been clearly outlined in the industry business case, its implementation for airlines has a strong impact in both financial and structural terms. To size this impact more precisely, a transition study toward ONE Order has been conducted in 2016 and the results will be published toward the end of the year. In 2016, the ONE Order resolution 797, including key principle and design landscape, was approved by airlines members. This validates industry alignment to work with Orders in the future.

Programs of work

After the adoption of the ONE Order foundation standard, the project will focus on the development of the first set of ONE Order industry standard messages and a number of pilots, following the roadmap below.



- IATA Governance**
- Simplifying the Business StB Steering Group
 - Passenger Service Conference
 - Passenger Distribution Management Group

3.3 Airline Industry Data Model

Vision

Successful implementation of any business strategy requires understanding of the information and the processes which underlie running of the business.

When two or more parties need to exchange data, such understanding has to be shared. This is why the use of common reference points such as industry data exchange standards, is integral to running any successful business.

The Airline Industry Data Model (AIDM) aims to become a single point of access to store:

- Industry-agreed vocabulary
- Data definitions and their relationships
- Related business requirements

To generate interoperable, faster and easier messaging standards.

AIDM will strongly support the industry standard setting process, accelerate it and make it more in line with the needs of a fast changing market.

Where we are today

The project to deliver the capability to operate the Airline Industry Data Model has been completed at the end of 2015. The repository is complemented with a comprehensive end-to-end methodology to guide standards development groups through the process of building a business case, documenting and modeling business requirements and associated data.

Programs of work

Several projects including One Order and Baggage XML already use the new methodology to develop messages. IATA is also pursuing an alignment of messages developed by the New Distribution Capability project to the AIDM. This will allow all future projects to re-use and further build on the key business concepts of Offer, Order or Service Item introduced by NDC and is critical for the delivery of One Order standards.

IATA will now proceed to develop a comprehensive road-map for emerging projects and alignment of existing messaging standards to the AIDM. This is to achieve faster the benefits provided by AIDM is terms of:

- Streamlined deployment of new standards
- Reduced IT complexity
- Increased consistency of definitions and format
- Faster and more robust development of new standards
- Using the model beyond development of schema standards

IATA Governance

- Simplifying the Business Steering Group
- Passenger Services Conference
 - Passenger and Airport Data Interchange Standards Board

3.4 Blockchain (exploration area)

Blockchain is a technology (secured public ledger) that can potentially disrupt many industries and the airline industry is no exception, with applications in distribution and finance.

In the airline distribution world, imagine that an order issued by a carrier is registered in a Blockchain and is transferred to the seller, the traveler, the authorities, the airport, the caterer, the Wi-Fi provider and all the subsequent involved parties, creating a single source of truth where parties can agree on terms and conditions during the entire end-to-end process.

In the airline finance world, Blockchain applications could fundamentally transform the operational model across the entire value chain. Potential benefits include:

- Accelerated cash-flows: faster than SWIFT
- Reduced banking fees: less intermediaries
- Enhanced security: harder for cybersecurity threats
- Enabled back-office simplification: single source of truth
- Enhanced privacy and confidentiality: enhanced identity management
- Automated business relations: smart contracts

In 2016, IATA conducted a proof of Concept aimed at establishing the impact of Blockchain on the worldwide transfer of funds. The preliminary results were encouraging, and IATA continues to explore the potential of Blockchain technology, including the potential creation of a supranational industry currency (IATA coin). For this, we will be conducting a pilot with the IATA Clearing House and aim at publishing the results during 2017.

4.1 Fuel Burn

Vision

Reduction in fuel usage per ASK (and reduced associated environmental emissions) through optimized routes, air traffic management, regulatory framework, and operational management through resolution of the top ten industry wide issues (infrastructure / airport / routes) that lead to reduced efficiency.

Where we are today

With fuel costs representing 27% of airlines operating costs in 2015, each 1% improvement in fuel efficiency across the industry can lower the fuel bill by around \$1.8 bn per year at current fuel prices.

Currently, the lack of modern Air Traffic Management infrastructure, systems and procedures causes restrictive route assignments that lead to additional fuel burn.

Programs of Work

IATA is working with industry partners to increase the industry's fuel efficiency and reduce associated environmental emissions and with individual airlines to ensure that they have a robust internal "fuel conservation program".

Initiatives include:

- Performance Based Navigation (PBN) workshops to engage ANSPs to provide access to more fuel efficient route structures.
- Efficiency workshops with more focus on potential fuel savings due to improved routing.
- Ongoing advocacy for access to User Preferred Routings as well as better climb and descent profiles.
- Promoting IATA-facilitated ATM operational improvement projects.
- Developing integrated software solutions for data driven approach for fuel management.

4.2 Purchase-to-pay

Vision

Enable airlines to use electronic invoice data in a common industry format, in order to decrease costs and increase control.

Where we are today

Airlines' purchase-to-pay processes are still subject to significant manual processes. Most invoices received by airlines are received in PDF via e-mail and over half of the core suppliers are still sending paper invoices.

Supplier-to-Airline e-invoicing project (SAI) is driving the adoption of standardized electronic invoicing data format of major industry suppliers. An Industry standard, IS-XML, has been developed, delivering machine readable invoices.

An airline Business Case has been prepared based on visits to a number of airlines. It displays the main categories of benefits: process automation and cost control. These also lead to further derived benefits, e.g. accuracy of direct operating costs accruals, faster financial reporting and management decision information.

Programs of work

The Airport segment has been selected as the first priority for supplier-to-airline e-invoicing. A number of airlines are engaging with selected airports and based on feedback, the future strategy of the project will be defined.

The target for 2017 is to have eight airlines and eight airports who are IS_XML capable and 10 airlines in the pipeline for 2018.

IATA Governance

- Financial Committee
- SIS Steering Group

4.3 Simplifying maintenance and ownership requirements

Vision

Achieve 100% electronic ownership and maintenance, records with acceptance of electronic / digital documentation for aircraft records and digital signature for tasks, approvals, etc.

Where we are today

Whilst the cockpit has now become paperless, maintenance processes are still principally paper-based. However, for the first time in 2017, ICAO manuals will make explicit references to electronic documentation and worldwide regulatory approval of e-records.

Programs of work

Agree on a 2020 target to achieve electronic documentation for newly delivered aircraft and aircraft maintenance work with all industry stakeholders.

Implement the IATA-developed industry standard to trace Life Limited Parts (LLP) for engines and other aircraft parts. Accurately tracking LLPs is essential for regulatory compliance and to ensure the commercial value of these parts is maintained.

Contribute to the development of the use of RFID technology as an enabler of tracking parts and tasks

4.4 Order-to-cash

Vision

Simplify and automate financial processes along the commercial airline distribution value chain, involving airlines, travel agents, customers, airline suppliers.

Where we are today

Airlines' financial processes were developed in the early days of the airline industry, based on the absence of IT systems, with large amounts of paper and special rules. The current industry processes and systems are now outdated and lack the flexibility required for the modern world. Changes in the industry provide opportunities to redesign and streamline Order-to-cash processes and simplify revenue accounting.

Programs of work

NDC and ONE Order are modernizing the processes behind airline distribution and order management that may drive simplification of financial support activities (see sections 3.1. and 3.2 of this paper).

Further to those simplifications, the Financial Services Development Working Group (FinDev) has been working on identifying the key drivers of airline financial back-office cost and their underlying reasons. Seventeen drivers have been identified. In September 2016, the Financial Committee endorsed the selection of 6 priorities:

1. Processes for Involuntary changes
2. Complex Taxes, Charges and Fees
3. GDS data quality issues
4. Changes in industry accounting rules
5. US Settlement Systems
6. Industry reference data

FinDev has integrated those priorities in its Work Plan and will report on progress accordingly.

IATA Governance

- Operations Committee

IATA Governance

- Financial Committee
- Financial Services Development Working Group

4.5 Settlement and credit risk management

Vision

To enable a modernized travel agent sales channel, recognizing today's travel agents business models, with significant cash flow acceleration and reduction in losses resulting from travel agencies defaults and internal cost of airline credit risk management.

Where we are today

The last few years have seen a major evolution in the airline industry distribution and settlement systems, such as:

- Globalization of many travel agents, Travel Management Companies or online travel agents (that now form the largest proportion of indirect sales).
- Smaller travel agencies are leaving the BSP and are acting through consolidators.

Even though limited in percentage, the unrecovered defaults still represent between US\$60m and US\$150m of airline losses every year. Increasing the remittance frequency is a double edged sword; on one hand it reduces the moneys at risk; on the other hand, there is a natural cash flow "tension" between travel agencies, their customers and the airlines, which if stressed beyond a certain point, is incentivizing the usage of credit cards as airline settlement. Airlines may risk swapping a potential credit loss cost with certain and significantly higher amounting of credit cards merchant fees. Actions to mitigate this risk are developed in further sections of this document.

The lack of adequate control for safer selling and of a timely provision of management information is a major cause of unrecovered defaults and actions need to be taken to address this issue.

Programs of work

IATA's vision 2023 is to expand the risk management reach and settlement services across the industry, while ensuring its operations are tightly integrated, competitively priced and complemented by a rich portfolio of reporting and financial management tools. From a distribution perspective, the NewGen ISS program aims to renew the BSP and Passenger Agency Program and make it more secure, flexible and customer-centric through the following four interconnected initiatives;

- New accreditation models,
- Remittance Holding Capacity, which establishes an individualized monetary limit for Agents' outstanding Cash sales (monies at risk),

- IATA EasyPay, a new pay-as-you-go payment method, (see section 4.5 of this paper on Payment Methods),
- Global Default Insurance, a new financial security type for agents.

In September 2016, the Passenger Agency Conference (PACConf) unanimously adopted Resolution text that will allow for the introduction of three of the four NewGen ISS pillars: the new accreditation models, IATA EasyPay and Global Default Insurance. Resolution text covering Remittance Holding Capacity will be submitted for PACConf adoption in 2017. The entirety of the NewGen ISS Resolution will be effective from 2018, with the exception of the section on IATA EasyPay, which is effective from January 1st 2017 and the text related to Global Default Insurance which is effective from March 1st 2017.

From a settlement perspective an ISS Business Plan 2017-2023 has been launched with following objectives and targets (using 2015 as a baseline):

- Safer funds: transformation of the BSP and Agency Program value propositions taking place under NewGen ISS lowering the unrecovered debt to 0.01% of gross sales by 2023.
- Faster cash: continue to accelerate sales cycles from our current 17.5 days to below 10 days.
- On time funds: provide an efficient service level ensuring on time settlement of 99.98% or beyond.
- Less expensive, reducing costs while increasing revenues. Initial estimations would indicate over 50% reduction in the operating unit fee from the 2015 base line by 2023.
- More relevant, by integrating the future NDC environment in the BSP. Additionally, a growth in participation from travel agents by including new accreditation models that would entice currently nonparticipant agents (at least 1,000 new agents).
- Customer centric: an integrated customer experience across all Distribution services

From a governance perspective, after the formation of an Agency Risk Management Airline Community and the creation of Information Management Reports in 2015, this year a new Financial Committee Working Group has been created, the Agency Credit Risk Management Working Group. The role of this new working group will be to act as an advisor on all matters relating to anticipating and responding to agent credit risk management issues. The Group will work closely with the Passenger Steering Group, which acts on behalf of the Passenger Agency Conference, the decision body governing the Resolutions.

4.6 Payment methods

Vision

To develop industry payment principles that are based on transparency, detection and consent, allowing airlines and travel agencies to agree bilaterally on the most adequate payment methods.

Where we are today

The world of payments has been seeing a number of new methods emerging in the last few years, and more are likely to emerge in the years to come. The airline industry is also impacted by these new technologies, which have facilitated sales on one side, but have highlighted gaps on the other, and some come at a higher cost.

In fact, the current systems do not provide the appropriate levels of controls to ensure the necessary transparency and security of all forms of payment. In addition to this, the current Resolutions governing payments between airlines and travel agencies are outdated and do not address the issues emerging with new forms of payment.

IATA's BSP is one current form of payment that respects the principles of transparency, detection and consent. IATA is also working on IATA EasyPay, a new, voluntary pay-as-you-go form of payment for IATA accredited agents to issue and pay tickets through IATA.

Programs of work

IATA EasyPay

This new and optional industry payment solution is based on an e-wallet model, whereby funds are secured at the time of ticket issuance, i.e. an agent may only use IATA EasyPay as a form of payment if the agent holds sufficient funds in its IATA EasyPay account. The funds will subsequently be remitted from the IATA EasyPay provider to the BSP and in turn settled to the airlines.

For airlines, IATA EasyPay represents a secure and cost effective form of payment. Funds are irrevocably blocked at the time of ticket issuance, and since this will operate as a private payment instrument, no chargebacks allowed. Airlines will also receive IATA EasyPay amounts within 48-72 hours following ticket issuance. In addition, IATA EasyPay transactions will be identified through a distinct form of payment type "EP", and will be fully transparent to airlines in terms of cost and liability.

Resolution text covering IATA EasyPay was adopted by the Passenger Agency Conference in 2016, and is effective from January 1st 2017. At this time, implementation activities are currently underway within IATA and with the three selected IATA EasyPay vendors to launch IATA EasyPay in the first wave of pilot countries during 2017.

IATA Governance

- Financial Committee
- Payment Methods Working Group

4.7 Fraud prevention

Vision

To eliminate global fraud in the areas of card payment, loyalty programs and cyber fraud.

Elevate the Airline Industry to be the world model of Fraud Prevention.

Where we are today

Airline ticket sale is an attractive ground for fraudsters and airlines have to contend with several types of fraud: "family or friendly" fraud, frequent flyer fraud, travel agency fraud, cross-channel fraud, 3rd party fraud, acceptance of stolen or counterfeit credit card account numbers, internal fraud, and theft of cardholder data from company systems. The airline industry is the most exposed to fraud, by the nature and value of its transactions.

Research conducted in 2015 showed that card fraud costs the industry around USD 1bn annually in lost revenues, averaging 0.3% of revenues paid by cards, with online fraud estimated as high as 1.7%. Card fraud also leads to increased merchant rates, costing an approximate additional USD 500m to the airlines. Finally airlines have to bear the cost of fraud prevention tools, manual processes, fraud dispute handling, and charge backs, as well as lost sales associated with declined purchases ("false positives"). A global long term strategy has been developed based on the Fraud Management key pillars: Measure, Prevent, Detect, React, fraud prevention being one pillar of the strategy.



The mission is to:

"Bring Industry partners together to implement common solutions in order to protect revenue against fraud".

The project activities are focused on the following key areas:

- Best Practices and Standards.
- Knowledge and Experience (including education and training).
- Business Intelligence, Technology, and Data (including fraud databases, tools and services available).
- Information Sharing, Collaboration and Support in the Supply Chain (including creation and participation to forums).

The key benefits of the initiative for the airlines have been determined as:

- Direct benefit: minimize financial risk by lowering the fraud rate and balancing sales vs. fraud loss
- Indirect benefit: minimize security risk through identification of organized crime

In 2016, the project has been centered mainly on "Card-Not-Present" (CNP) fraud for airline direct sales transactions, and has initiated some fraud prevention actions in the area of Frequent Flyer Programs (FFP), delivering:

- An initial set of best practices for CNP transactions.
- A first measure of the adoption progress using 2015 research results as baseline.
- The coordination of law enforcement initiatives such as the Days of Action.
- An additional research on topics such as 3D Secure or AVS use and efficiency.
- The facilitation and management of fraud groups and forums, including the creation of Canada fraud group and the annual FFP global workshop.

Program of work

Increase the level of maturity of the industry in fraud prevention for CNP:

- Evolve CNP Best Practices into CNP Standards and set KPIs for regular measurement of adoption.
- Evolve the current list of fraud contacts into a network of airlines' fraud champions.

Enable airlines to measure their fraud performance:

- Develop regional benchmark, expanding knowledge base, and enabling a consistent global industry measure of fraud performance.

IATA Governance

- Financial Committee
 - Payment Methods Working Group
 - Treasury Working Group

4.8 Treasury

Vision

Simple, fast, and efficient cash repatriation and payments, with FX conversion at the rate ticket was sold.

Where we are today

The issue of blocked funds is growing and a source of increasing concern for airlines around the globe. The total amount of funds blocked worldwide as of 31 December 2015 was estimated at USD 4.885 billion. This represents an increase of USD 848 million (i.e. 21%) over the 2015 year-end figure of USD 4.036 billion. In the past 12 months with an increasing number of countries where issues are faced. IATA, with the assistance of the Treasury Working Group, has developed a strategy to address the issue. The strategy is based on 3 main pillars:

▪ Collection of information

- Remittance of Foreign Balances Survey (RFB)
- Monthly Country repatriation survey & assessment
- Regular contact with airline treasuries and local financial managers

▪ Communication

- Currency Repatriation Monthly Report: includes a list of Countries where funds are already blocked, as well as watch list of countries where funds are not blocked yet, but where indicators point to a potential issue in the near future.
- Stakeholder forum: Regional forums involving all stakeholders affected by blocked funds in a particular region.
- Currency Centre

▪ Action plans

- Action plans per Country are included in the Currency Repatriation Monthly Report
- IATA developed early warning system on which the watch list of the Currency Monthly Report is built on. This system is built on the monitoring of financial and economic indicators.
- IATA has developed a toolkit for its Country Managers with guidelines for addressing the issue at every stage.
- IATA has a clear advocacy strategy in place to ensure appropriate stakeholder management both before and after blocked funds become an issue.

Programs of work

The focus will remain on prevention and cure of blocked funds.

From a communication perspective, in early 2017 a Currency Centre will be launched. This is an online platform that will present to IATA Members essential currency information and critical updates to help them dealing with blocked funds and assist them in the currency risk management.

IATA Governance

- Financial Committee
 - Treasury Working Group
 - Financial Services Development Working Group
 - Industry Taxation Working Group

4.9 Financial Reporting

Vision

To contribute to the development of high-quality accounting standards and consistent application of those standards within the Airline Industry through technical advice and guidance to IATA member airlines on new accounting standards and emerging issues in accounting and financial reporting.

Where we are today

The vision of global accounting standards is shared by almost every country in the world. The International Accounting Standards Board (IASB), as part of the global financial architecture intends to ensure that their International Financial Reporting Standards (IFRS) are capable of being applied and enforced on a globally consistent basis. At the same time, investors and companies worldwide will gain from full adoption of IFRS and the relevance, consistency and soundness of financial information. All of this will add to the integrity and efficiency of global financial markets. As of 2016, more than 100 countries require the use of IFRS by public companies, while most other jurisdictions permit the use of IFRS in at least some circumstances.

The notable exception with regard to adopting IFRS or an IFRS-based set of national standards is the United States. With the issuance of the new lease standard in 2016 by the IASB (IFRS 16) and the Financial Accounting Standards Board (topic 842), the two boards ended their convergence initiative with no indication that the US would adopt to allow adoption of IFRS. For airlines, the comparison between US GAAP and IFRS financial statements will require significant adjustments to make them comparable.

Programs of work

The program of work will include the following:

- Revise the existing Airline Accounting Guidelines to reflect the new and revised standards, and rebranding them as Airline Disclosure Guides that will focus on providing benchmark financial reporting disclosure guidance and examples that will help to enhance the quality of accounting and financial reporting. Guides on Hedging, Maintenance accounting, Aircraft acquisition cost and depreciation, and Segment reporting have been issued with guides for Revenue and Leases scheduled for completion in 2017.

- Provide technical advice and guidance to IATA member airlines on the following new accounting standards and emerging issues related to existing standards or proposed new or revised guidance:

- IFRS 9 – Financial Instruments with the focus on Hedge accounting
- IFRS 15 – Revenue from Contracts with Customers
- IFRS 16 – Leases

Of the 18 identified Revenue issues, 5 have been finalized with an additional 6 scheduled for completion by year end. The remaining issues and those identified by a sub-group on maintenance revenue are scheduled for completion in 2017. Of the 10 identified Leases issues, 6 will be in advanced stages of discussion with guidance drafted. All issues are scheduled to be completed in 2017, along with any additional issues identified. Hedge accounting guidance will be coordinated and issued through the Treasury Working Group.

- IASB engagement – have started directly engaging the IASB staff on Revenue and Leases issues and monitoring their consultations and work plan for industry relevant issues. The IAWG is working with the AICPA group on Revenue and they are engaging the FASB. We are looking to extend this engagement to influential regional/global accounting groups such as the EFRAG, ICAEW, ACCA, CPA Australia, AICPA and national bodies to add weight to industry views and ensure that the industry voice is heard.

IATA Governance

- Financial Committee
- Industry Accounting Working Group

5. High Performing Finance Organizations

In order to deliver at far greater speed the projects supporting sustained airline financial health outlined in the first four pillars of this White Paper, it is critical for IATA, the industry governance, and the airlines to become High Performing Organizations (HIPO).

As the Finance function plays an integral role in fostering financial health within the airline (by aligning the organization behind financial targets, for instance) and at an industry level, the adoption of HIPO is required across the entire ecosystem. For Finance to become high performing and be able to assume this critical role, it needs to embark on a journey that will take it from transactional management to value management. Value management enables the Finance function to be the airlines trusted guide to sustained financial health via activities such as decision support, business development, and enterprise risk management.

Being a HIPO is an advantage for both the individual airlines and the industry as a whole:

1. For the individual airlines: developing a team of value managers will help to attain financial sustainability. In fact, according to the Organizational Health Index, High Performing Organizations in the top quartile have a 3 fold probability of delivering return to shareholders, compared to organizations in the bottom quartile.
2. For the industry: having value managers in the airline Finance functions is a key enabler for a more efficient delivery of industry projects. This will be achieved via their active participation in IATA Working Groups, which in turn enables high performing delivery for the industry and for IATA.

The decision on whether or not and how to embark on the journey toward value management resides with each individual airline. IATA can play a critical role in identifying and monitoring the ingredients of a HIPO that will result in integrated functional excellence for Finance functions in the airline industry. IATA's role will be to continuously provide knowledge and tools, ensuring that future value managers are adequately equipped to implement HIPO in their own organizations and for the industry. In addition IATA itself will embark on this journey to transform into a HIPO organization, starting with its financial and distribution functions.

5. High Performing Finance Organizations

This paper will present 16 specific initiatives, grouped in five main areas of work that IATA can lead to support the development of High Performing Finance Organizations within the airline industry, as illustrated below:



A – Attract

- A1 - University Relationships
- A2 - Student placement for airlines and IATA
- A3 - New branding for aviation finance function
- A4 - Increase visibility of aviation finance jobs
- A5 - Sponsor top talents development path

B - Develop

- B1 - IATA Finance Academy
- B2 - Partnership with 3rd parties for leadership programs
- B3 - Specific industry qualifications (Certification)

C - Retention

- C1 - Program for industry contribution
- C2 - Recognition of high Academy program performers

D – Community

- D1 - Enhanced networking
- D2 - World Financial Symposium
- D3 - Industry project secondments
- D4 - Designing program content

E - Benchmarking

- E1 - Tailored financial efficiency benchmarks for members
- E2 - Best practices on state of the art finance functions operating models

Each of the 16 initiatives are at different maturity levels and will be implemented at different stages. We will provide visibility on progress in this and in future versions of the Financial Committee White Paper.

5.A Attract

Vision

The Finance functions in the airlines are as attractive to juniors and young graduates as other very well-known GAFA (Google-Apple-Facebook-Amazon) type companies.

Where we are today

Today airline Finance functions tend to be perceived more as controllers and costs cutters rather than value managers, and this image may have an adverse impact on attracting juniors and young graduates. Also, such prospective talent do not necessarily know how their profile can fit the needs of airline Finance functions. Finally, career development opportunities within the airline Finance function or in other business units like Revenue Management/ Optimization with strong analytical skillset requirements may be perceived as limited.

Program of Work

IATA will partner with selected Universities in the world to develop an attraction plan for their top students.

Initiative A1: University relationships worldwide

IATA, jointly with its airline members engaged in the Finance sector, will establish an overview of both existing and new University relationships worldwide, map out a criteria catalogue based on which such relationships should be decided, review its current geographical coverage and share a gap analysis with recommendations going forward. A second initiative will define the framework of activities in which IATA and its members would engage with these selected Universities and how the success of such partnerships can be measured.

IATA will also leverage on existing University relationships to identify how many of their finance/aviation graduates go work in airlines, and more specifically in the Finance function. When this is not the case, identify in which industries graduates chose to work and the potential reasons why.

Finally, a framework under the relationship model will be developed to identify Universities to work with to define areas of interest for the Industry or IATA for future Master Papers and the respective assistance to students in writing these documents, which should deliver a benefit to IATA and its members.

Initiative A2: Student placement for airlines and IATA

Develop a student placement framework with multiple options and opportunities based on the IATA Finance Academy offer (see Initiative B1) and on the feedback from Universities on what attracts students. Target Financial Committee member airlines to pilot this practice first.

Initiative A3: Branding and marketing strategy

Based on the relationship model outlined in Initiative A1, partner with Universities to understand what attracts Finance students in their choice for future careers. Develop branding and marketing strategies to position airlines Finance functions and similar opportunities in IATA. Different strategies will be developed according to the students' level of advancement in the academic program.

Include a benchmark study as required to assess the strategic approach and activities of other industries to successfully position the airline industry.

Initiative A4: Visibility for airline Finance jobs

Assess the current practices at an industry and IATA level and identify potential strengths and weaknesses including a benchmark assessment with other industries to understand how well positioned we are. Develop and implement a set of agreed joint activities with Partnership universities or other organizations like Online Portals or Recruitment firms. Such activities could include e.g. participation to selected career fairs or 'University Days', as well as open days at an airline or at IATA.

Initiative A5: Sponsored development path

This initiative intends to further develop the concept of placement as described in Initiative A2. It will be designed in more details once other initiatives deliver their first results.

5.B Develop

Vision

IATA's global education and talent management programs for airline Finance are internationally recognized, with the same level of prestige as the most highly rated business schools, leading to a certification for airline Finance skills, new opportunities and cost efficiencies for airlines in their training programs.

Where we are today

Each airline has its own development and training programs. Some themes are obviously common, however synergies are not exploited to their full potential.

Also, there is no formal certification for airline Finance qualifications at an international level, which makes the level of Finance professional across the airlines industry extremely varied and uneven.

Participation in Industry Working Groups is equally varied and uneven, and this hinders acceleration of delivery of industry priorities supporting achievement of airline industry sustained financial health.

Program of Work

Initiative B1: IATA Finance Academy

Develop the framework and content for a set of training programs specialized in airline Finance, which will support airlines in their journey toward value management. This will constitute the IATA Finance Academy. Diagnose the status of individual airline Finance training programs including 3rd party market offers that airlines currently provide or take part in to assess the gap between the current offer and the identified needs. Build a business case for developing airline Finance talent.

Initiative B2: Partnership with 3rd parties for leadership programs

Leverage the existing relationships with universities and other organizations engaged in such training or establish new ones as required and evaluate the possibility of having them deliver or co-deliver jointly with IATA the dedicated training programs of the defined framework by Initiative B1 above.

Initiative B3: Specific Industry qualifications (Certification)

The IATA Finance Academy is an industry-wide recognized qualification framework for airline Finance professionals with the same level of international recognition as those delivered by the most prestigious business schools. These standardized certifications should help airlines to better and easier assess qualifications of candidates during recruitment projects, compare qualifications against position needs and amongst applicants. Job advertisements of airlines could include such qualification standards to optimize candidate searches.

5.C Retention

Vision

Talent is inspired to stay in the airline industry. A strong and motivated industry community of talented Aviation Finance specialists delivering industry innovation with speed.

Where we are today

Talent is currently leaving the airline industry for multiple reasons including lack of career progression, non-adequate training and development opportunities, lower employer or industry attractiveness. This could lead to significant efforts and cost for the industry to identify new talents in the market, integrate new joiners into the organization and train them in airline industry specific standards like Revenue Accounting or Engineering related financial accounting. In addition this could impact airlines or IATA in delivering strategic projects or initiatives due to lack of resources.

No industry data are available to measure such potential talent drain and there is no clear understanding of the underlying reasons behind it. Airlines would not even know if talent at least stays within the Industry.

Whereas there is an undisputed aim to recognize high performers and contributors to the various work programs and initiatives under the Financial Committee, its Working Groups and within IATA at Industry level, there is no framework in place so far. For the first time, the Financial Committee recognized the outstanding contribution of a number of Working Group members during the 2016 WFS in Singapore.

Program of Work

Retention is an important element that has been identified as key in the journey toward HIPO. The activities described in the “Develop” section of this paper are also widely contributing to retaining talents and as such, they should be considered under that aspect as well.

Initiative C1: Program for industry contribution

IATA will continue its “Best Industry Contributor Award” program, a prestigious prize given to members of the Financial Committee Working Groups that have distinguished themselves in their contribution to the industry throughout the year.

Initiative C2: Recognition for Academy’s high performers

Similar to the ‘Industry contribution’ initiative, IATA jointly with the Financial Committee will develop an award for top IATA Finance Academy performers and for airlines distinguishing themselves for their active participation in the IATA Finance Academy.

This initiative can be further extended to student programs etc. based on the various initiatives described earlier.

5.D Community

Vision

Have a community of airline Finance professionals and talent and foster dialogue, exchange and collaboration on industry topics and projects to deliver industry innovation with speed.

Where we are today

There is currently no place, physical or virtual, where airline Finance professionals can exchange or have a dialogue on industry projects, trends and topics. There is also no program in place to share experience and contribute to the accelerated delivery of industry projects in an agile way. At an industry level, IATA is currently lacking the necessary resources to be part of Industry Working Groups which can deliver projects on behalf of the industry faster.

Program of Work

Initiative D1: Enhanced networking

Develop an online platform managed by IATA for the industry Finance community where members can share information, receive updates, participate to industry programs, Working Groups and their projects and initiatives. The platform will also be an opportunity to engage on content resulting from themes of the World Financial Symposiums before, during and after each event.

Analyze the need for wider and more-in-depth networking opportunities amongst Airline and IATA Finance staff, which could further promote and stimulate a HIPO environment.

Initiative D2: World Financial Symposium (WFS)

Develop a concept on how the existing regular WFS can be used to further promote and support the overall HIPO concept aside from a general progress update on the various activities as part of the regular program. This could e.g. include Partnership Universities and other organizations or invitation of students the industry or IATA are engaged with through one of the initiatives described in this section. Establish a 'HIPO booth' in the exhibition area at the WFS where information on HIPO can be displayed and exchanged with participants to create a further networking opportunity and forum to validate initiatives, showcase best practices and to collect new ideas.

Initiative D3: Industry projects secondments

Develop a program including the administrative framework at IATA level for airlines to identify and select talented staff to participate in IATA-led Industry projects for a limited period of time, on a secondment base. This would be seen and valued as an additional development opportunity for staff similar to other trainings or programs offered by e.g. Business Schools. It could be further used as an alternate placement opportunity on a career development path, due to the unavailability of in-house projects at member airline level.

In a second step, the program will be extended to Partnership universities under the HIPO concept with the offer for highly talented students to join industry projects and initiatives for a limited period of time. Students could also be engaged in conceptual or design studies as defined by IATA, the Financial Committee or one of its Working Groups.

IATA will qualify the project landscape in the short to medium term, as well as the related talent needed to support those project.

Initiative D4: Designing program content (e.g. Academy)

Linked to the 'IATA Finance Academy', design a conceptual framework how the Industry Finance community can support future program content and how this can be organized.

5.E Benchmark

Vision

An IATA industry benchmark for High Performing Airline Finance, based on comparison with other industries, enabling those IATA members who participate in the benchmark process to achieve improvement.

Where we are today

The airline Finance functions aim to reach organizational excellence and become value managers. However, today's criteria for airline organizational excellence are not universally defined, which makes it difficult for airlines to define the areas on which they should focus. Today, the industry Finance functions are typically allocating more time to transaction processing (currently at c. 65%) rather than to decision support (currently at c.12%).

Program of Work

Initiative E1: Tailored financial efficiency benchmarks

In cooperation with specialized consulting companies, conduct a survey of companies both within and outside of the airline industry to identify concrete management practices that drive optimum performance from an organizational health perspective.

Initiative E2: Best practices on state of the art finance functions operating models

Collect best practices of state of the art of Finance functions operating models across comparable industries. Identify the pre-requisite that a HIPO Finance function should have, in terms of people, process systems, and tools. Determine industry-wide pain points and issues (if any) that prevent it from being a HIPO. Is it because of the legacy systems and processes that airlines' Finance teams are not high performing?

This activity is strictly dependent to the engagement of IATA member airlines in the benchmarking exercise, in order to reach a critical mass enabling the establishment of a benchmark.

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