

# The Air Cargo Sustainability Roadmap

Accelerating the transformation  
of air cargo



Fall 2021



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# Foreword

by Glyn Hughes, Director General of TIACA



One of the conclusions from 1st annual industry survey we ran in Q4 2020 was that **there is a need from the industry for TIACA to play a central role in the acceleration of the sustainable transformation of the air cargo industry.**

Raising awareness, uniting the industry towards common commitments and targets were amongst the top initiatives the respondents called upon TIACA to address.

I am pleased to say that we have already started down that path with the **annual Air Cargo Sustainability Awards**, launched in 2019, with the support of CHAMP Cargosystems, to encourage, promote and reward sustainable practices and innovations.

With over 100 truly excellent submissions so far 9 companies have been recognized as being inspirational and distinguished programs, including the 3 winners: Wings for Aid, PeliBiothermal and Nepal Flying Labs.

We have also gathered experts and passionate sustainability leaders in the **Sustainability Working Group** to come up with tangible guidelines and recommendations that benefits the entire industry.

We run regular **sustainability webinars** to raise awareness and educate our members and the broader industry.

We also **engage our industry partners to build a strong coalition of the willing** and

we passionately support industry initiatives such as the Women in Aviation & Logistics program, Fly Net Zero by 2050 and other programs focusing on next generation leadership.

Within this new document, the Air Cargo Sustainability Roadmap, we look at the great role air cargo plays in supporting the 17 UN Sustainable Development Goals (SDGs) and we provide tangible actions to help our members and the industry identify specific concrete actions they should be prioritizing to contribute to global sustainability targets and to be more sustainable companies for their employees, customers, partners and shareholders.



# Executive summary



Air cargo plays a vital role to sustain the world economy, inclusive growth, job creation and poverty reduction and supports social development, healthcare systems, biodiversity protection programs and global peace.

The critical role of air cargo has been visible from the early days of the COVID-19 pandemic.

This unprecedented crisis is also a **call for a change of pace and scale of transformation** initiatives to meet the pressing challenges our planet and societies face.

Each individual, company and sector should reflect and act to increase and amplify its positive impact and decrease and minimize negative one.

The air cargo industry has a responsibility to eliminate, minimize or compensate its negative impacts and is committed to reduce its environmental footprint through decarbonization and waste reduction programs.

Earlier ambitious targets were set, and many companies are leading the way with ambitious and inspiring initiatives. However, to meet internationally agreed targets such as the 17 UN Sustainable

Development Goals and the Paris Agreement, it is critical that all companies within the air cargo sector start or accelerate their sustainable transformation.

To help our members and guide the industry we serve and represent, we have identified **30 actionable priorities** they should focus their efforts and resources on.

These 30 priorities are addressing **8 key objectives**:

1. Decarbonize
2. Eliminate waste
3. Protect biodiversity
4. Support local economies and communities
5. Improve lives and well-being
6. Improve efficiencies and profitability
7. Attract, retain and develop employees
8. Build and nurture partnerships

Driving and achieving the sustainable transformation of air cargo require collective action from across the industry as well as individual commitments and demonstrated leadership.

Bold targets are important to drive actions and concrete achievements, but it is also important than ambitious long-term commitments such as net-zero operations are accompanied by short-term serious actions led by CEOs and leaders already in place. This should not be left to the next management to deal with.

**TIACA is committed to pursue its efforts to accelerate the sustainable transformation of the air cargo industry.**

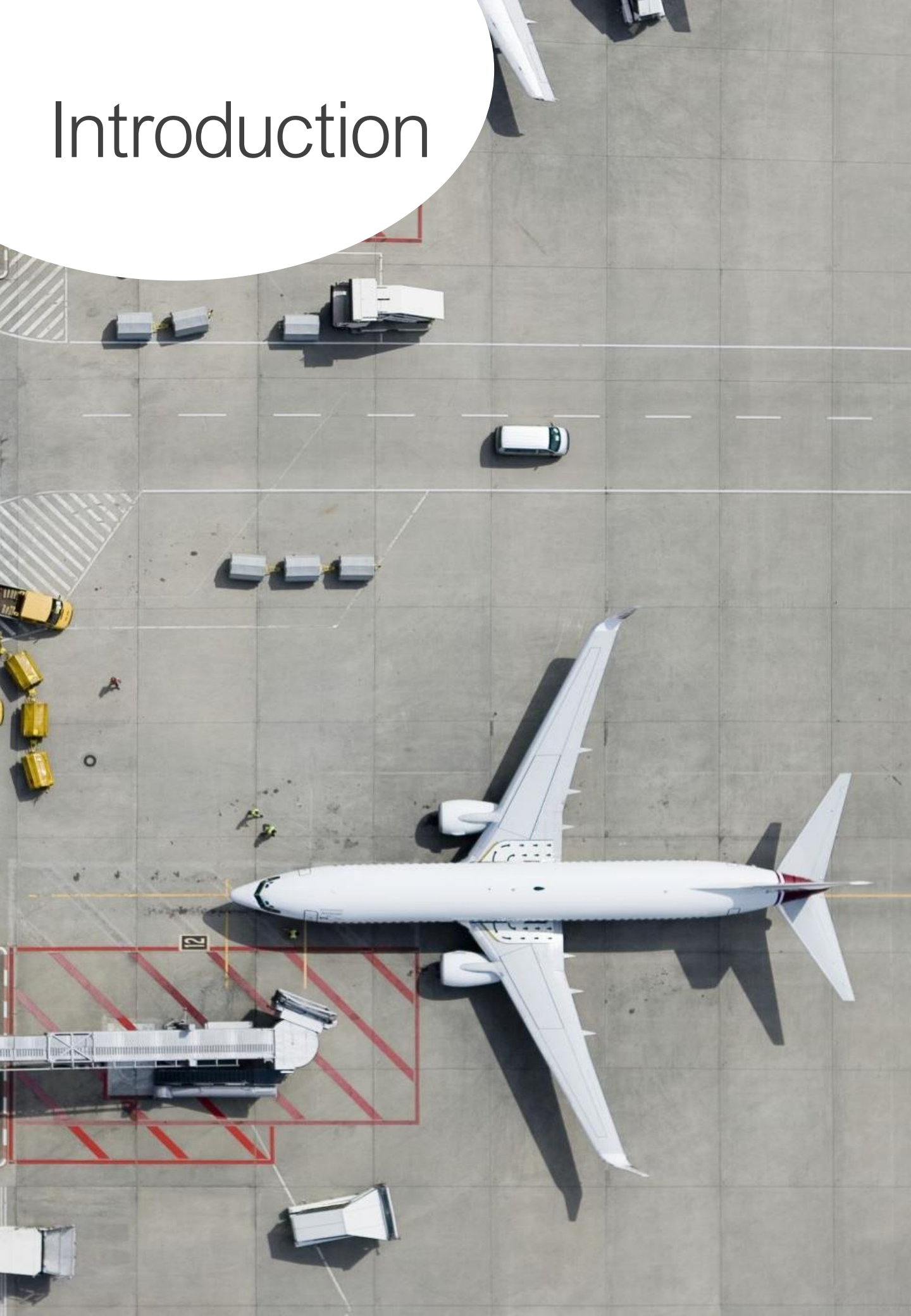
Specifically, we will :

1/ Engage all our industry partners, at global, regional and local levels, to commit to the 30 actionable priorities and collectively agree on relevant targets and timelines.

2/ Continue offering platforms to raise awareness, educate, share best practices through our online and in-person events, newsletters and members' Glue Up community.

3/ Investigate the opportunity to introduce a validation programs to help industry stakeholders to benchmark themselves, identify their priority areas of improvement and be recognized as good sustainable companies.

# Introduction



# Purpose



With less than 10 years to go to deliver the 17 Sustainable Development Goals (SDGs) defined by the United Nations in 2015, **accelerating the sustainable transformation of our world is everyone's responsibility**: governments, civil society, businesses, NGOs, and individuals.

The COVID-19 pandemic has regrettably had a slowdown effect on the progress made in achieving the 2030 promise. It is therefore critical to define a transformative recovery from COVID-19 crisis, relaunch ambitious actions, mobilize all businesses, as well as change the initial speed and scale of sustainable transformation initiatives.

In 2018, the Business & Sustainable Development Commission recommended that not only each individual company embark on its own transformative journey, but also that each industry detail its sectorial roadmap to further guide their players towards a collective shift to sustainable development, in line with the SDGs.

This is what TIACA aims at achieving through its Sustainability program and this roadmap for the Air Cargo sector.

As the unique international air

cargo industry association, TIACA is best positioned to bring all players together, define a common and coherent industry framework for business action and support its members to accelerate their sustainable transformation.

The objectives of this document are to:

## Establish the sustainability roadmap for the air cargo sector

- Describe how the air cargo sector contributes to the make the world sustainable today
- State a clear and ambitious vision of where the air cargo industry aspires to be and what it aims to achieve in relation to the SDGs
- Identify opportunities to maximize or generate positive impacts and minimize or eliminate negative ones and explore actions that organizations within the sector can take to accelerate the sustainable transformation

**Issue an urgent call to action to mobilize the entire sector** to drive

sustainable solutions to promote prosperity while protecting the planet.

**The time is now.**



# Objectives of a sustainability roadmap

## What

As per the guidance of the World Business Council for Sustainable Development (WBCSD), which developed the SDG Sector Roadmaps Guidelines, TIACA has undertaken the work of building the air cargo sector sustainability roadmap.

## Why

The objectives of such a sustainability roadmap are to:

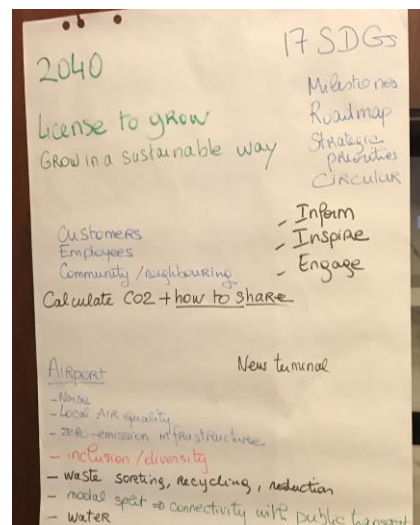
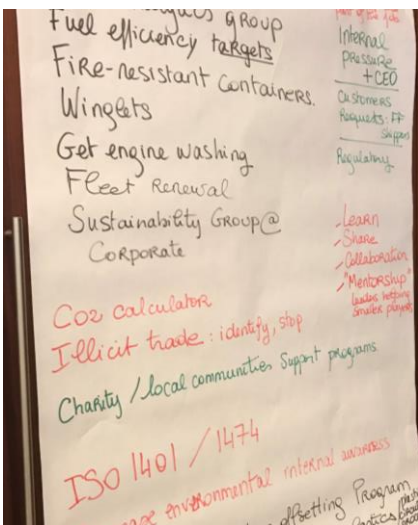
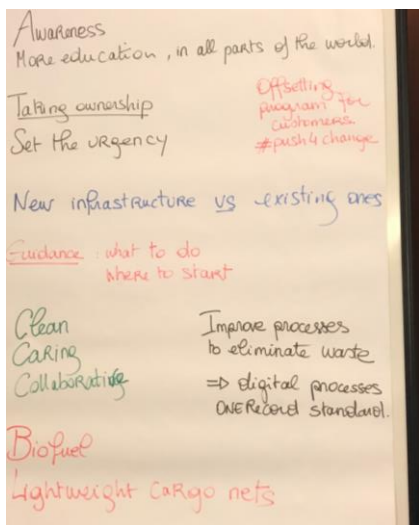
- **Articulate and enable a common sustainable vision** within our industry
- **Inspire all air cargo stakeholders**, regardless of business types, size and origin
- Encourage and accompany air cargo companies to **embed sustainability** within their corporate strategy

It is also the opportunity to **look beyond 2030**, especially

in the environmental agenda and commit to collective actions in line with the Paris Agreement and carbon neutrality by 2050.

## How

This roadmap is the result of the discussions, work and feedback from the industry, TIACA's Sustainability Working Group and Board of Directors, and has been facilitated by the consultants from Change Horizon.





# Defining sustainability

## Today, not at the expense of tomorrow

Generic definitions of sustainability embed a long-term notion as opposed to short-term views and plans: sustainability is therefore “the quality of being able to continue over a period of time”.

In 1987, the World Commission on Environment and Development defined sustainable development as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

## Multi-dimensional approach

While sustainability is very often understood and considered as environmentally focused, it is actually a holistic approach that considers **3 dimensions (ecological, social, and economic)**, recognizing that all must be considered together to find lasting prosperity.

Sustainability is the foundation for today’s leading global framework for international cooperation – the 2030 Agenda for Sustainable Development, adopted in 2015

by the 193 Member States of the United Nations (UN).

At the heart of “Agenda 2030” are the **17 Sustainable Development Goals (SDGs)** and 169 associated targets laying out a path over 15 years to end extreme poverty, fight inequality and injustice, and protect the planet.

“A dynamic process that guarantees the persistence of natural and human systems in an equitable manner” – IPCC (the Intergovernmental Panel on Climate Change)

## SUSTAINABLE DEVELOPMENT GOALS



# TIACA's approach to sustainability



TIACA's sustainability vision, established with the kick-off of its Sustainability program in the Fall of 2019, presents a **unique perspective of 3+2: doing good for the planet, the people and the business, enabled by innovation and partnerships.**

We believe it is not only required to work on decreasing environmental footprint, maximizing economic profitability and positive social impacts, but it is also essential to work closely with industry players to drive innovation across the air cargo supply chain, supporting the development of new technologies that contribute towards sustainable growth.



## TIACA's Sustainability program

With the launch of TIACA's Sustainability program in November 2019, we aimed at:

- Raising awareness & giving a higher sense of sustainability urgency
- Driving sustainability goals within the air cargo industry
- Uniting multiple stakeholders with shared commitments & global targets & one voice
- Calling for innovations and partnerships
- Helping organizations all size and everywhere to define their own sustainability strategies and action plan
- Celebrating individual successes and communicate on industry achievements
- Sharing best practices
- Supporting members to move from reactive to proactive strategies

# Program's timeline



2022

Mar

TIACA Executive Summit, San Francisco:  
2021 Air Cargo Sustainability Awards

Nov

TIACA Air Cargo Forum, Miami:  
2022 Air Cargo Sustainability Awards

- TIACA's Air Cargo Sustainability Roadmap
- Launch of the 2<sup>nd</sup> annual Air Cargo Sustainability Survey

Nov

2021

Apr

TIACA Air Cargo Sustainability publication:  
*Accelerating sustainable transformation of air cargo*

TIACA's Digital Air Cargo Forum:

- 3rd Sustainability4Cargo webinar
- Nepal Flying Labs and Peli BioThermal win the 2020 Air Cargo Sustainability Awards

Launch of the 1st annual Air Cargo Sustainability Survey

Oct

Dec

Sep

Sustainability4Cargo webinar:  
*Decarbonizing air cargo*

Sustainability4Cargo webinar:  
*Can we still afford to care about sustainability?*

Member Survey 2020:  
Sustainability listed as top priority for TIACA by its members

Jul

Feb

2020

Launch of TIACA's Sustainability Strategic Partnership program and Award, sponsored by CHAMP Cargosystems

Céline Hourcade appointed to design TIACA's Sustainability program

- TIACA's Executive Summit, Budapest:
- 1st Sustainability Working Group meeting
  - Wings for Aid wins the 1st Air Cargo Sustainability Award

Jun

Sep

Nov

2019

# Air cargo & the SDGs



# 17 goals set by the United Nations



Sustainability is the foundation for today's leading global framework for international cooperation – the 2030 Agenda for Sustainable Development, adopted in 2015 by the 193 Member States of the United Nations (UN).

At the heart of “Agenda 2030” are the **17 Sustainable Development Goals (SDGs)** and 169 associated targets laying out a path over 15 years to end extreme poverty, fight inequality and injustice, and protect the planet.





**1 NO POVERTY**  
End poverty in all its forms everywhere



**2 ZERO HUNGER**  
End hunger, achieve food security and improved nutrition and promote sustainable agriculture



**3 GOOD HEALTH AND WELL-BEING**  
Ensure healthy lives and promote well-being for all at all ages



**4 QUALITY EDUCATION**  
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



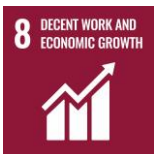
**5 GENDER EQUALITY**  
Achieve gender equality and empower all women and girls



**6 CLEAN WATER AND SANITATION**  
Ensure availability and sustainable management of water and sanitation for all



**7 AFFORDABLE AND CLEAN ENERGY**  
Ensure access to affordable, reliable, sustainable and modern energy for all



**8 DECENT WORK AND ECONOMIC GROWTH**  
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**  
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



**10 REDUCED INEQUALITIES**  
Reduce inequality within and among countries



**11 SUSTAINABLE CITIES AND COMMUNITIES**  
Make cities and human settlements inclusive, safe, resilient and sustainable



**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**  
Ensure sustainable consumption and production patterns



**13 CLIMATE ACTION**  
Take urgent action to combat climate change and its impacts



**14 LIFE BELOW WATER**  
Conserve and sustainably use the oceans, seas and marine resources for sustainable development



**15 LIFE ON LAND**  
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



**16 PEACE, JUSTICE AND STRONG INSTITUTIONS**  
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



**17 PARTNERSHIPS FOR THE GOALS**  
Strengthen the means of implementation and revitalize the global partnership for sustainable development

# Air cargo is critical to a sustainable world



Air cargo plays a vital role to sustain the world economy, inclusive growth, job creation and poverty reduction and supports social development, healthcare systems, biodiversity protection programs and global peace.

## Air cargo is a conduit for world trade

According to IATA, 61 million tonnes of freight were handled by air in 2019, accounting for USD6.5 trillion in value. It represents around **35% of the world trade value** in normal circumstances.

IATA forecasts that the value of international trade by air will rise to USD8 trillion in 2022.

According to a 2016 study conducted by Developing Trade Consultants, there is a strong association between better **air cargo connectivity** and higher total trade value: a 1% increase in air cargo connectivity is associated with a 6.3% increase in total exports and imports.

Countries with developed air cargo connections and smarter borders are more integrated into global value chains reaping the associated benefits, such as local income growth and poverty reduction.

Air cargo is the **modal choice** for high-value goods, high-density products, cargo requiring special handling like perishables, pharmaceuticals, live animals and oversized shipments. emergency supplies,,.

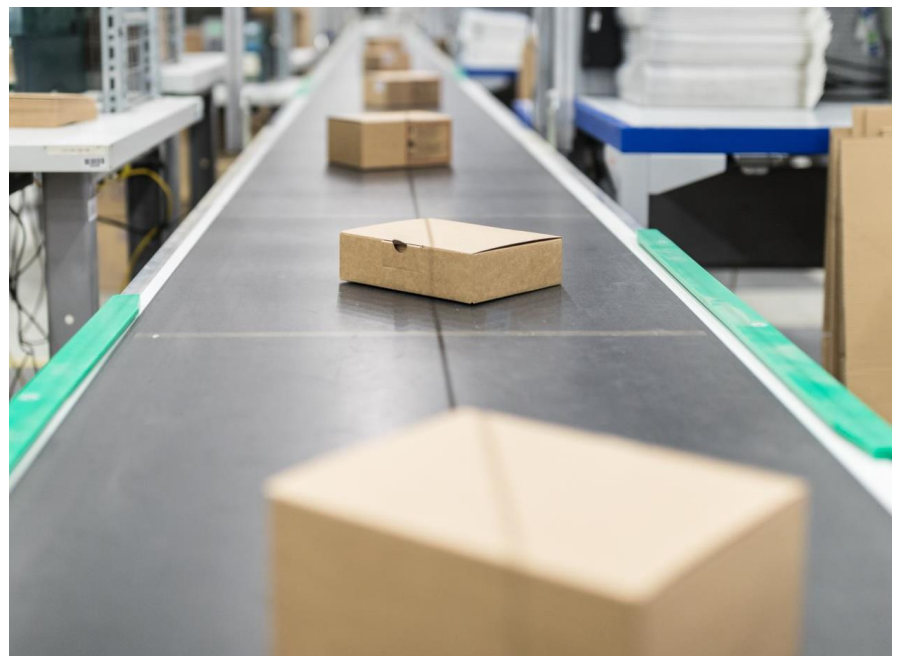
Air cargo is also a critical component of **e-commerce logistics** as it is estimated that 80% of cross-border e-commerce is transported by air.

## Did you know...?

In 2019, the income generated for countries by air cargo was 7.6 times greater than the total spend by inbound tourism:

- USD6'489 billion for international trade shipped by air
- USD850 billion spent by tourists traveling by air

Source: IATA



## Air cargo sustains local economies

Air cargo contributes to sustain local economies by creating jobs and economic prosperity.

It therefore contributes to reduce poverty and improve lives and well-being.

### Did you know...?

Air cargo flies over 160'000 tonnes of Kenyan flowers each year, sustaining 100'000 direct jobs and an estimated two million indirectly.

Flower exports generate income for around 4% of the Kenyan population and 1.1% of national GDP.

Roses grown in Kenya and sold in Europe produce 5.5 times fewer greenhouse gas emissions than those raised in the Netherlands, even taking into account air transport.

Sources: Kenya Flower Council, Fairtrade Foundation and BBC

## Air cargo saves lives

Air cargo is **the first responder in case of natural disaster** impacting the ground transport infrastructure, such as earthquake, hurricanes, flood.

It contributes to deliver essential goods, food, medical supplies to communities in need, in emergency mode as well as in regular mode for locked markets.

### Air cargo has been an ally in the fight against COVID-19

By transporting emergency products in the first months of the COVID-19 pandemic, such

### Did you know...?

46'400 special cargo flights transported some 1.5 million tonnes of cargo, mostly medical equipment, to areas in need during the height of the pandemic response.

Source: ATAG

as personal protective equipment (PPE), medical devices, pharmaceuticals and goods supporting stay-home policies worldwide, and by delivering COVID-19 vaccines worldwide, air cargo has been instrumental in helping governments, medical community and businesses fight this pandemic.





## Healthcare logistics rely on air cargo

Air cargo supports global immunization campaigns by efficiently transporting pharmaceuticals in a safe, secure, and temperature-controlled environment.

Air freight is also the fastest way of transporting pharmaceutical products.

## Air cargo is an ally to protect biodiversity

Live animals have been transported by air since the early 1930's. Airlines play an important role in carrying live animals by air, offering the most humane and expedient method of transportation over long distances.

Whether it is a pet, an animal transported for zoological or agricultural purposes, conservation or for any other reason.

Many airfreight specialists handling and transporting animals are also involved in continuous improvement programs focused on animals' safety and welfare as well as conservation initiatives, offering highly specialized transport expertise and dedicated chartered flights.

## Air cargo contributes to world peace and economic inclusivity

International transport corridors enable economic growth, regional cooperation and economic integration, contributing to increased

economic equality and political stability.

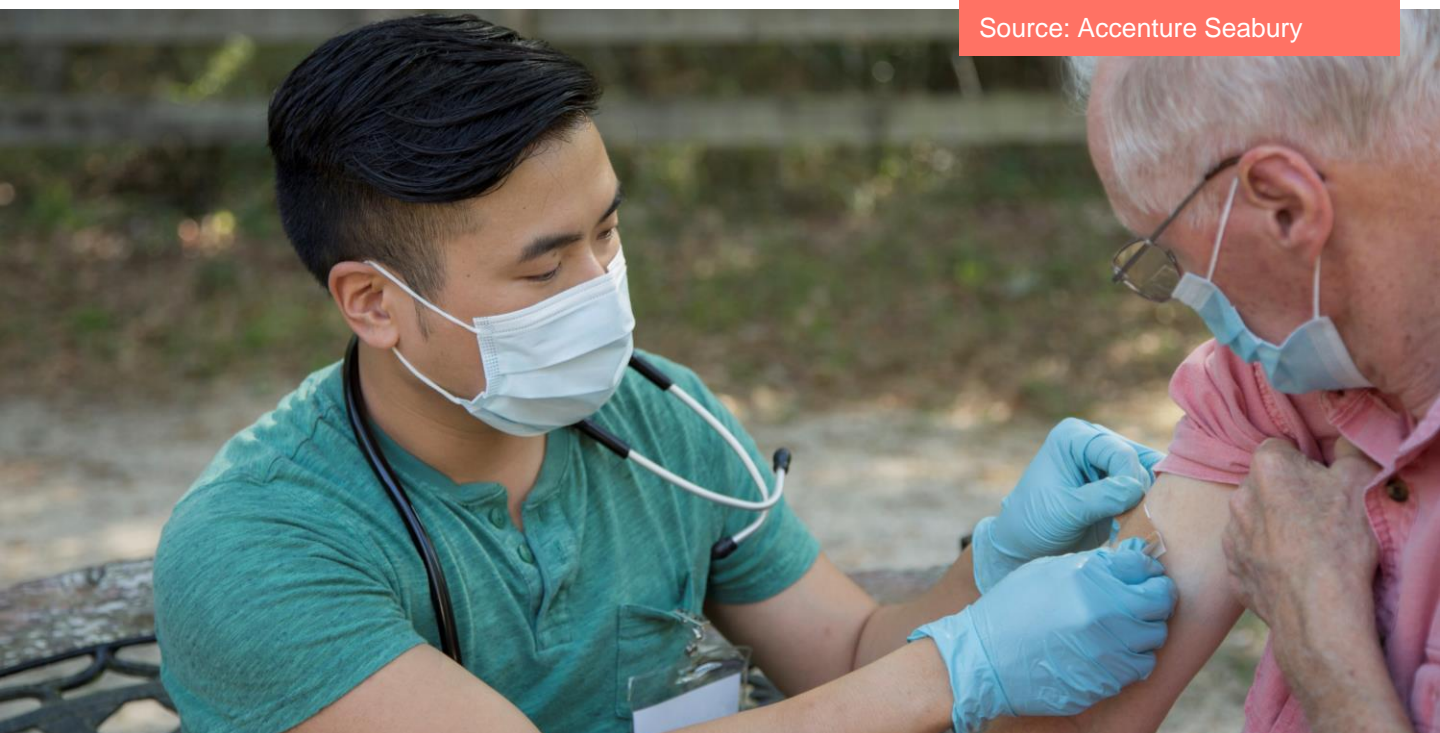
Integrated economies lead to integrated societies which improves global understanding and appreciation of what makes us all unique. This is the heart of what a peaceful community seeks to establish.

Air transport of people and goods is also essential for post-conflict stabilization and peace-building missions.

### Did you know...?

Pharmaceuticals accounted for up to 1.9% of all cargo volumes flown by air and contributed to 2.6% of the total airline cargo revenue already in 2017.

Source: Accenture Seabury



# Accelerating air cargo's sustainable transformation

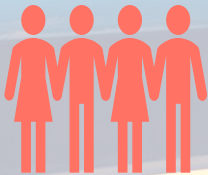


# 8 key objectives for a sustainable air cargo



## Environment

1. Decarbonize
2. Eliminate waste
3. Protect biodiversity



## Society

4. Support local economies and communities
5. Improve lives and well-being



## Culture & Leadership

6. Improve efficiencies and profitability
7. Attract, retain and develop employees
8. Build and nurture partnerships



# Decarbonize air cargo



Decarbonization literally means the reduction of carbon. Carbon emissions from air cargo comes from the fuel combustion to fly aircraft transporting cargo and ground vehicles used in the air cargo chain as well as from non-transport sources: building, heating and cooling, packaging, etc.

According to publicly available data from IEA, IPCC, ICCT, air cargo accounts for 0.5% of global emissions and 2.2% of total emissions from transport.

## Industry commitment and targets

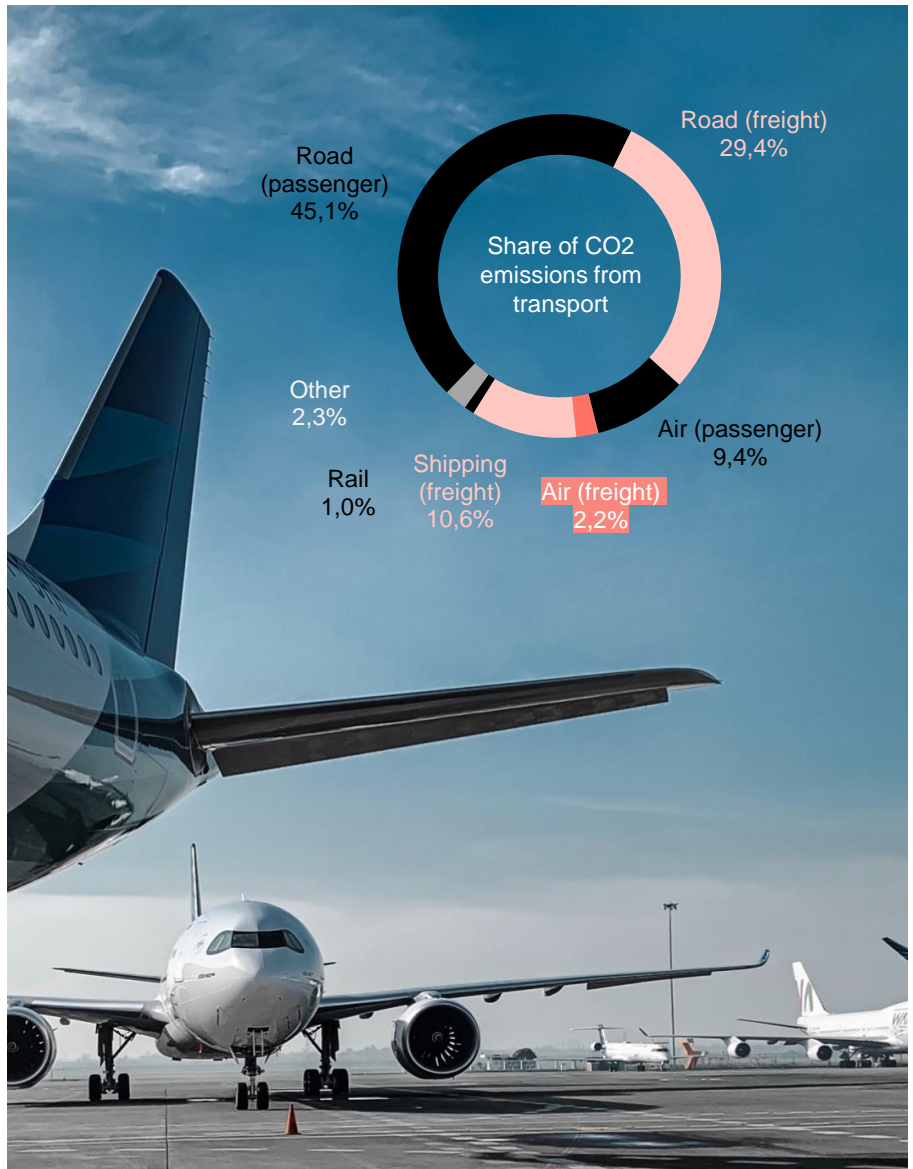
In 2008, the air transport industry set one of the first global, sector-wide, climate plans for any industry.

Three global and ambitious targets were set:

- An average improvement in fuel efficiency of 1.5% per year from 2009 to 2020
- A cap on net aviation CO2 emissions from 2020 (carbon-neutral growth)
- A reduction in net aviation CO2 emissions of 50% by 2050, relative to 2005 levels

In 2021, the collective air transport sector raised its ambition with a new long-term climate commitment:

Global civil aviation operations will achieve net-zero carbon emissions by 2050, supported by accelerated efficiency measures, energy transition and innovation across the aviation sector and in partnership with Governments around the world.



## A decade of actions and progress

Since the global commitment has been signed,

- The aerospace sector has spent over \$150 billion on efficiency research and development
- The world's first CO<sub>2</sub> standard for aircraft was adopted by ICAO
- Ten new and significantly more efficient aircraft types have entered service
- Airlines have spent over a trillion dollars on more efficient aircraft
- Over 300,000 flights operated by 45 airlines have taken off on sustainable aviation fuel (SAF) since 2016
- The international standard to measure the carbon footprint at shipment level (IATA RP1678) has been defined and adopted by ICAO and GLEC
- The first carbon pricing mechanism for a single global sector (CORSA) was adopted at ICAO
- Collaboration across the sector has driven efficiency improvements in air traffic management

## Did you know...?

CO<sub>2</sub> emissions from aviation have risen rapidly over the past two decades, reaching nearly 1 Gt in 2019, or about 2.8% of global CO<sub>2</sub> emissions from fossil fuel combustion.

Since 2000, commercial passenger flight activity has grown by over 5% per year, while CO<sub>2</sub> emissions only rose by less than 2% per year, thanks to operational and technical efficiency measures adopted by commercial airlines, including new aircraft purchases.

The energy intensity of commercial passenger aviation has decreased 2.8% per year on average.

Source: IEA



# Understanding carbon terminologies



**Greenhouse Gases (GHGs)** are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds. Water vapor (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>) and ozone (O<sub>3</sub>) are the primary GHG in the Earth's atmosphere.

The **Kyoto Protocol** deals with the 6 GHGs, considered to be the most potent and prolific - and thus the most significant: CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, sulphur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

GHGs are categorised into three groups ("scopes") by the most widely-used international accounting tool, the **Greenhouse Gas Protocol**:

- **Scope 1** covers direct emissions from owned or controlled sources
- **Scope 2** covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting entity
- **Scope 3** includes all other indirect emissions that occur in an entity's value chain.

**Carbon dioxide (CO<sub>2</sub>)** is the principal anthropogenic GHG that affects the Earth's radiative balance.

**CO<sub>2</sub>e (carbon dioxide equivalent)** is the universal unit of measurement used to compare the emissions of different GHG in reference to CO<sub>2</sub>. CO<sub>2</sub>e is obtained by multiplying the emission of a greenhouse gas by its Global Warming Potential (GWP) for the given time horizon. CO<sub>2</sub> being the reference gas against which other greenhouse gases are measured, it has a GWP of 1.

**Decarbonization** literally means the reduction of carbon. The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.

**Mitigation measures** in climate change are technologies, processes or practices that contribute to decarbonize. It includes all the actions that avoid, reduce, eliminate or compensate emissions, for example the use of cleaner vehicles and alternative fuels, the optimization of processes, the minimization of waste.

**Carbon-neutral growth** refers to a set of actions to "offset" growth.

**Net zero CO<sub>2</sub> emissions** are achieved when anthropogenic CO<sub>2</sub> emissions are balanced globally by anthropogenic CO<sub>2</sub> removals over a specified period. Net zero CO<sub>2</sub> emissions are also referred to as **carbon neutrality**.

**Climate positive** means that activity goes beyond achieving net-zero carbon emissions to create an environmental benefit by removing additional carbon dioxide from the atmosphere. **Carbon negative** means the same thing as climate positive.

**Climate neutral** refers to reducing all GHG to the point of zero while eliminating all other negative environmental impacts that an organisation may cause. Similar to **net-zero emissions**.

**Net negative emissions** refer to a situation when, as result of human activities, more GHGs are removed from the atmosphere than are emitted into it.



Decarbonizing air cargo is a transformative journey and more needs to be done to achieve the sector and companies' ambitious targets.

**Airlines**, through IATA, declared that the net-zero objective will be met through a combination of maximum elimination of emissions at source and the use of approved offsetting and carbon capture technologies:

- 65% usage of Sustainable Aviation Fuel (SAF), sourced from feedstocks that do not degrade the environment or compete with food or water
- 13% investment in new aircraft technology, including radical new aerodynamic and alternative propulsion

(electric or hydrogen) solutions

- 3% continued improvement in infrastructure and operational efficiency, with a particular focus on improved air traffic management
- 19% usage of approved offsets including carbon capture and storage technology

**Airports**, through their global and regional associations Airport Council International, have also committed to net-zero by 2050 and identified the following actions to help decarbonize their operations:

- Purchase renewable electricity
- Improve building efficiency

- Produce on-site thermal energy
- Transition to electric heating & cooling
- Transition to zero or low emission vehicles
- Adopt negative emission technologies such as nature-based carbon removal technologies

The **road transport** sector, through the International Road Transport Union (IRU), has identified five pillars to decarbonize their activities:

- vehicle technologies
- alternative fuels
- operational measures
- collective transport
- driver behaviour

For air cargo specifically, TIACA has identified 8 actionable priorities to decarbonize the sector:

1. Invest in and deploy SAF or other fossil-free energy
2. Upgrade fleets to cleaner aerial and ground vehicles
3. Transition to green buildings
4. Use effective offsetting mechanisms
5. Investigate and adopt carbon capture technologies
6. Reduce energy consumption in own operations
7. Optimize vehicle utilization
8. Reduce weight of vehicles and ancillary equipment

## Invest in and deploy SAF or other fossil-free energy

SAF is a liquid fuel currently used in commercial aviation which reduces CO2 emissions by up to 80%, according to IATA.

SAF can be produced from waste oil and fats, green and municipal waste, non-food crops, or from carbon capture. The air transport sector is committed to use SAF that are not competing with food crops or water supplies, nor is responsible for deforestation.

The air transport industry relies heavily on the success of SAF that can be produced in large quantity and commercialised at a competitive cost to achieve its decarbonization.

The scale up of SAF production will require that policies provide certainty for direct investments at the various early stages of development while also ensuring secure and steadily growing demand from airlines.

**The air cargo sector has an important role to play to encourage favourable policies by demonstrating the interest and commitment in flying on SAF by cargo airlines, freight forwarders and shippers.**

## Upgrade fleets to cleaner aerial and ground vehicles

For air cargo, fleets include traditional aircraft, trucks, lighter vehicles for road transport, ground service equipment, and unmanned aerial vehicles (drones).

**By transitioning to cleaner fleets, whether they are more fuel-efficient or they use fossil-free energy, companies in the air cargo sector will drastically reduce their CO2 emissions.**

Cargo fleets should use lowest emission energy source feasible:

- Electrification
- Solar
- Biofuels
- Hydrogen

Specifically, electrification makes sense today for ground vehicles and ground operations and will be an opportunity for light aircraft – manned or unmanned – and short-haul flights.

## Transition to green buildings

**Decarbonizing air cargo operations includes also the efforts to transition to green buildings: cargo facilities at airports, warehouses, airport terminals, offices.**

It is essential to integrate environmental aspects today for any new constructions and to plan the upgrade of existing buildings by embracing energy efficient and ecological technologies, specifically:

- Building design to optimize exposure to sun, wind, rain (positioning, panels providing shade)





- Solar panels and wind turbines to generate electricity
- Vegetation covering the building or growing nearby for a natural cooling effect, as an alternative to air conditioning and noise reduction
- Greywater retaining and rainwater capture
- Multi-zone building temperature control
- Use of geothermal or other clean source of energy

**It is also critical to increase of storage density at cargo facilities and warehouses and avoid whenever possible the construction of new buildings.**

## Use effective offsetting mechanisms

Carbon offsetting is a mechanism to compensate currently unavoidable emissions through investments in climate protection projects

**There are mandatory and voluntary carbon offsetting schemes that air cargo stakeholders should and/or could use today.**

In the case of aviation, the UN's CORSIA scheme (Carbon Offsetting and Reduction Scheme for International Aviation) aims to ensure any rise in international aviation emissions above 2020 levels are offset elsewhere. Note that considering

COVID-19 pandemic, ICAO has revised the baseline to 2019 levels.

## Investigate and adopt carbon capture technologies

Carbon capture and storage (CCS) is a process in which a relatively pure stream of CO<sub>2</sub> from industrial and energy-related sources is separated (captured), conditioned, compressed and transported to a storage location for long-term isolation from the atmosphere.

Despite current scepticism and lack of focus on CCS technologies, the Intergovernmental Panel on Climate Change (IPCC) states



that CCS will be critical to limit global warming to 1.5° C and that without the use of these technologies the target cannot be met. **Something that the air cargo sector needs to investigate and be ready to adopt .**

### Reduce energy consumption in own operations

Air cargo operations are as diverse as the number of stakeholders involved in the sector.

Optimizing them is a not only an opportunity to be more efficient, productive and profitable, but also to eliminate unnecessary sources of CO2 emissions and reduce energy consumption.

Examples of changes in operations resulting in reduced environmental footprint include:

- Flight operations
- Driving behaviours
- Fleet maintenance
- Workforce commute
- Slot booking at airports
- ULD built-up
- etc

### Optimize vehicle utilization

CO2 emissions in air cargo come mostly from fuel burn needed to power vehicles, especially aircraft and trucks.

Transitioning to cleaner energy and modernizing fleet should be complemented by the optimization of the vehicle utilization.

Here are examples of actions to optimize the utilization of air cargo vehicles:

- Consolidation and asset sharing practices
- Load optimization practices
- Reduction of empty movements
- Use of modular packaging and boxes

Asset sharing practices should also apply to containers and ULDs.

Such practices are also called “collaborative logistics”, that contributes to reducing emissions and waste but also improves efficiencies and overall profitability for transport operators.

### Reduce weight of vehicles and ancillary equipment

Adopting lighter vehicles and removing unnecessary weight for ULDs, pallets and other ancillary equipment means less energy needed to move.

Another opportunity to decarbonize by reducing weight, it to optimize the packaging: customizing it to the goods transported with the right size and right weight, without compromising the packaging efficiency to protect the goods and avoid wastage and damage.



# Eliminate waste



## Promote circular economy

The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as much and often as possible. In this way, the life cycle of products is extended.

In practice, it implies reducing waste to a minimum. When a product reaches the end of its life, its materials are kept within the economy wherever possible. These can be productively used again and again, thereby creating further value.

**In the air cargo industry, applying circular economy principles could be focused on these 3 main categories: aircraft, ground operations and packaging:**

The management of aircraft end-of-life includes 3 stages: decommissioning, disassembly, and smart and selective dismantling.

For ground operations, promoting circular economy could mean to:

- Improve maintenance and maximize repair of ULDs and ground vehicles
- Redesign the airport or ground handler's waste management system to have an efficient waste collection, sorting and onsite utilization

With increasing volumes of e-commerce, pharmaceuticals and fresh produces being shipped by air, it is also critical to look at how to optimize packaging used in air cargo to reduce carbon emissions, plastic usage, improve waste management, reduce product waste, optimize loading factors, etc.

Among the available solutions to industry's packaging challenges include switching to:

- Packaging made from renewable, recyclable or biodegradable materials, such as biopolymers
- Packaging that can be recovered to eliminate waste
- Prolonged packaging lifespan, with easy repairing and spare parts
- Sharing platforms and rent, share or lend multi-use packaging
- Proper disposal or recycling by well-trained teams

### The 9R framework

Smarter product use & manufacture	1 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product
	2 Rethink	Make product use more intensive (e.g. by sharing product)
	3 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
Extend lifespan of product & its parts	4 Reuse	Reuse by another consumer of discarded product which is still in good condition and fulfills its original function
	5 Repair	Repair and maintenance of defective product so it can be used with its original function
	6 Refurbish	Restore an old product and bring it up to date
	7 Remanufacture	Use parts of a discarded product in a new product with a different function
Useful application of materials	8 Repurpose	Process materials to obtain the same (high grade) or lower (low grade) quality
	9 Recover	Incineration of material with energy recovery

Source: Circular Economy: Measuring Innovation in the Product Chain, Potting et al. (2017)

CIRCULAR ECONOMY

LINEAR ECONOMY

## Eliminate single-use plastic and foam

Plastic waste is generated in a staggering 303 million tons a year and 75% of all plastic ever produced has become waste, according to National Geographic.

In air cargo logistics, the push for the elimination of single-use plastics should come from all players in the value chain: from shippers demanding their partners to provide sustainable packaging solutions to logistics companies investing in innovative pallet wrapping options such as:

- Multi-trip pallets lids
- Recyclable linear low-density polyethylene wrap



## Replace hydrofluorocarbons with natural refrigerants

Refrigeration in logistics is an essential part of the cold chain in prolonging the lifespan of perishable goods, especially food and pharmaceuticals.

However, hydrofluorocarbons traditionally used in air conditioning and refrigeration are potent greenhouse gasses producing thousands of times more CO<sub>2</sub> emissions per pound than their natural alternatives such as:

- Ammonia
- Propane
- Water
- Air
- Carbon dioxide

As the need for refrigeration grows globally, switching to natural solutions could be one of the most powerful and cost-effective tactics to mitigate climate change.

The opportunities for addressing the cooling and refrigeration in the air cargo include:

- Coolants
- Isothermal containers
- Insulated packaging
- Warehouses

## Improve water management and sanitation

In the air cargo industry, airports have an important role to play to ensure availability and sustainable management of water and improve sanitation.

Airports are encouraged to put in place responsible water consumption policies, water efficiency measures and practices that prevent hazardous and toxic waste into the water systems :

- Improve water stewardship technology by reusing grey water, rainwater, desalinated water
- Conducts environmentally-friendly de-icing operations, by using non-toxic de-icing fluid for aircraft and additive-free organic salt for the runways and taxiways
- Prevent any potential pollutant discharges, by separating water treatment lines for stormwater and for wastewater
- Production of water through condensation in air conditioning systems
- Reduce water consumption to maintain, operate and clean ground vehicles and aircraft, such as using the "dry wash" technique

## Improve operations & traceability to eliminate perishable waste

According to Food and Agriculture Organization (FAO), a third of the food produced for human consumption globally is lost or wasted somewhere along the food supply chain. Meanwhile, the world's population is predicted to reach 9.1 billion by 2050 and this will require an increase of 70% in food availability.

Food loss during the transport could be due to a lack of proper storage facilities, cold chain, adequate handling practices, infrastructure, packaging, etc.

It is key that the air cargo industry takes actions to reduce perishable loss and waste in its own operations by:

- Applying rigorous industry standards to handle, transport and deliver perishables
- Improving efficiency along the food value chain, particularly on packaging and distribution practices
- Investing in adequate infrastructure, such as cold storage facilities, cool chain dollies, active and passive containers, etc
- Continuously training and educating staff
- Implementing traceability using sensors and connected devices to monitor and manage sensitive cargo shipments in real time and be able to respond to deviations
- Developing or adopting modern data sharing solutions between air cargo stakeholders involved in the delivery of food, health products and other perishables
- Working to reduce food waste and food loss that occurs either through business operations or employee/consumer consumption and/or find ways to redistribute excess food



# Protect biodiversity



In today's modern world, carriage of live animals by air is considered the most humane and expedient method of transportation over long distances.

## Further enhance live animals' transportation practices

Ensuring animals' safety and welfare during transport is the main objective of the international standards and regulations described in the IATA Live Animals Regulations (LAR).

It is expected that every company involved in the handling and transport of live animals comply with the LAR to further reduce animal stress, injury or death during transport.

Continuous improvement programs, investments in enhanced facilities and staff training are underway and need to be adopted broadly by all transport specialists involved in the handling and transport of live animals.

## Combat illegal wildlife trade to protect endangered species

Wildlife trafficking is the illegal movement of wildlife and

wildlife parts or products across borders. Estimated to be worth between USD7 to 23 billion a year according to ROUTES, wildlife trafficking has become one of the most prominent forms of international crime globally.

Transportation is the backbone of global trade, and traffickers of wild animals and wildlife products rely heavily on the efficiency of air travel and cargo carriers to smuggle illicit goods. Companies from the transportation and logistics sector can therefore play a critical role in identifying and strengthening key risk points in the supply chain.

Since its inception in December 2014, the United for Wildlife Transport Taskforce has been working to facilitate

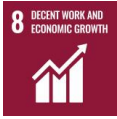
collaboration between the transport sector and law enforcement to prevent wildlife trafficking across the world.

Freight forwarders, ground handlers, airports, airlines, trucking companies can build defences against and disrupt the illegal wildlife trade with appropriate training for staff to detect smuggling attempts and assess which flight paths are most frequently used by wildlife criminals.

Air cargo stakeholders can sign the Buckingham Palace Declaration and join the USAID Reducing Opportunities for Unlawful Transport of Endangered Species (ROUTES) Partnership to further develop their awareness and capabilities in that area.



# Support local economies and communities



## Enhance connectivity to unlock new markets and create more jobs

According to a 2016 study conducted by Developing Trade Consultants, there is a strong association between better air cargo connectivity and higher total trade value: a 1% increase in air cargo connectivity is associated with a 6.3% increase in total exports and imports.

Local communities connected to the air cargo system benefit from job creation and local income growth. These connected areas become business magnets and economic catalysts.

Sustainable transformation of the air cargo industry means

the reduction and elimination of negative impacts as well as the increase and maximization of the good impacts.

Here are some ways to further enhance connectivity, unlock markets and create more jobs:

- Develop new affordable air cargo operations in locked markets and regions with poor or no ground infrastructure
- Partner with local governments to offer affordable transport services to rural areas and low-income urban neighbourhoods
- Support fair and affordable access to goods for people living in extreme poverty

There are enormous opportunities to explore with the development of unmanned cargo aircraft:

- Cargo drones could be added to airlines and integrators' fleets to be a cost-effective alternative to traditional bigger aircraft on thin routes
- Cargo drones could connect the hard-to-reach communities, when transport infrastructure does not exist or is not available (due to natural disaster or wars)
- Small drones offer new opportunities in the areas of first and last mile delivery of small packages, or specialized delivery solutions to transport emergency supplies in remote areas



## Combat illegal trade and smuggling of goods and humans

Apart from illegal trade of wildlife, transport operators must be vigilant and combat other trafficking:

- Human trafficking
- Drugs
- Counterfeit products (medical and non-medical goods)
- Highly taxed goods (tobacco, alcohol and energy products)
- Cultural heritage

To combat these illegal and harmful practices, air cargo stakeholders have an important role to play:

- Cooperation with business partners, customs, police, UN agencies, etc.
- Data sharing to size the issue and assess the levels of vulnerability
- Awareness campaigns amongst business partners and employees, especially front-line workers to identify, inform, stop and report
- Reporting mechanism and alert systems



**We have our #eyesopen**

WATCHING FOR THE SIGNS OF **24.9 million** victims of **Human trafficking**  
FORCED LABOR - ORGAN THEFT - SEXUAL EXPLOITATION

Aviation is the "business of freedom". Unfortunately, air services can also be misused by criminals who profit from the trade in humans. Our industry is committed to have its eyes open to do what we can to help governments and law enforcement to tackle this issue.

**Playing our part**

- Raise Awareness
- Encourage Reporting Hotline Development
- Create Partnerships
- Develop Airline Guidance
- Training for Airline Staff
- Mobilize the Industry

[www.iata.org](http://www.iata.org)



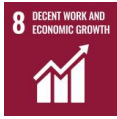
At industry level, the #eyesopen campaign developed by IATA and ACI to combat human trafficking should be replicated in the air cargo industry with trucking companies.

The principles of this

campaign as well as the work on combatting wildlife trafficking should also inspire the air cargo industry and overall aviation and logistics sectors to combat other forms of trafficking, by strengthening awareness, training and reporting efforts.



# Improve lives and well-being



## Reduce noise

Noise is generated by various air cargo operations:

- by planes taking off and landing at airports
- by trucks operated by road feeder services and freight forwarders

Air traffic noise is very often one of the major concerns for local residents around airports and it is causing adverse community reaction related to the operation and expansion of airports.

Limiting or reducing the number of people affected by significant aircraft noise is therefore one of ICAO's main priorities that led them to adopt the 4 elements of their "Balanced Approach to Aircraft Noise Management":

- Reduction of noise at source (technology standards)
- Land-use planning and management
- Noise abatement operational procedures, such as continuous descend or climb operations

- Operating restrictions, such as night curfews

With night flights being critical for air cargo, especially for express delivery services, airmail and the transport of time-sensitive products, it is important for the air cargo industry to ensure effective noise reduction measures are taken before the local regulators impose such curfew.

## Improve local air quality

Local air quality is affected by the emissions from aircraft, ground vehicles and activities at airports, as well as by trucks serving the air cargo business.

Technical developments since the 1960s mean today's new aircraft emit 50% less carbon monoxide and 90% less smoke and unburned hydrocarbons than those made 50 years ago.

Improving local air quality remains an important goal for the air cargo industry to improve the well being and health of their employees and of the local communities.

To reduce the air pollution cause by air cargo operations, it is critical to:

- Reduce emissions generated by the aircraft engines
- Eliminate emissions from ground vehicles and service equipment, by transitioning to electric vehicles
- Modernize the trucking fleet for less polluting vehicles
- Reduce road traffic and congestion around the airports, using smart technologies to book trucking slots for instance
- Improve airports' design with clean and efficient surface access options



## Develop innovative solutions to reach more people with healthcare and essential goods

Air cargo supports global immunization campaigns by efficiently transporting pharmaceuticals in a safe, secure, and temperature-controlled environment.

Air freight is also the first responder in case of natural disaster to deliver essential goods, food supplies, medical equipment, water, etc.

It is critical for all transport specialists involved in the handling and transport of healthcare products and emergency supplies to:

- Pursue with their continuous improvement programs
- Invest in enhanced facilities, new delivery ground and aerial vehicles
- Develop innovative and affordable solutions that are scalable
- Develop or adopt modern

data sharing solutions between business partners to gain efficiencies in the process

At industry level, we should also all work together to improve the overall coordination to deliver better and more emergency aid.



# Improve efficiencies and profitability



## Drive continuous improvement and operational excellence

Safety and security have been number one priorities for air cargo players, including regulators for decades. Air cargo players have strong safety and security culture, relying on high-quality and robust standards and procedures, operating in heavy regulatory frameworks.

With speed and reliability being the primary selling points of air cargo, driving continuous improvement and operational excellence is on



top of the priorities in the industry.

As a response to increasing customers' demand and expectations, the air cargo industry has invested heavily on certification and training programs, dedicated infrastructure, digital transformation, innovative packaging, and adequate containers demonstrating a strong commitment to excellence, continuous improvement, and customer satisfaction.

Through harmonized and robust standards, the industry strives to constantly improve operational excellence and unmatched quality and reliability, to comply with regulations, meet customers' needs and build long-term capabilities to absorb business growth.

## Accelerate digitalization

Long overdue, the digital transformation of air cargo is now considered as a must for a company's survival. A change compared to the last decade when "e-cargo" was officially considered as a priority but with insufficient actions to make it happen. The digital agenda was not high enough on leadership's radar

and left with the experts. It is no longer the case according to 2020 TIACA's Air Cargo Sustainability Survey with **61% saying they have a digital transformation plan in place. It is time for the other 39% to accelerate the pace!**

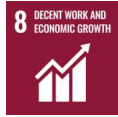
Industry standards, modern and robust, are now available; legacy players have transformed into digital companies and successful digital native companies are challenging the status quo and introducing modern practices.

## Invest and support innovation

Innovative technologies, business models and practices are important to increase efficiency, improve cost structure and reduce the environmental footprint of transporting goods by air.

A sustainable air cargo industry is safe, secure and digital ; relying on lean and efficient business processes and is continuously seeking to improve and adapt.

# Attract, retain and develop employees



## Invest in training and education

Traditionally, training and education are very important in the air cargo industry to maintain compliance in the area of safety, security and operational excellence.

However, according to 2020 TIACA's Air Cargo Sustainability Survey, **only 53% of airfreight companies have an action plan in place regarding training and education of their employees.**

To maintain safety, security and operational excellence, to accelerate digital and sustainable transformation programs, and to embrace innovative technologies and practices, it is essential for air cargo companies to invest in learning and development programs.

As most industries, air cargo will need to constantly adapt its workforce to new technologies, new demand, new markets, new expectations.

**Right-skilling, up-skilling, re-skilling are today and tomorrow's challenge and will require lifelong learning practices.** It is therefore important for air cargo

companies to:

- Develop the skills of lower paid workers to give them improved professional opportunities
- Collaborate with other companies and educational institutions to provide vocational training in order to develop a diverse talent pipeline including women, men and vulnerable persons, such as persons with disabilities, indigenous persons, and racial and ethnic minorities
- Launch training programs at the right time and with a defined purpose to serve company's strategic priorities and address the correct gaps and issues in the company
- Provide defined training programs to support career development within a company and reduce employee departures
- Develop coaching and mentorship programs to encourage exchange of skills and experience within the company

**At industry level, we need to have affordable, modern, harmonized and mutually recognized training.**

## Improve employee experience

Attracting and retaining talents requires to review the human resources practices and focus on improving the overall employee experience:

- Improve working conditions, including injury prevention, exposure to jet exhaust and hazardous substances, x-rays, adverse weather conditions
- Provide employees and their families with healthcare services and insurance, support for breastfeeding mothers
- Provide employee wellness program to prevent and reduce growing non-communicable diseases caused by industry specific working conditions
- Allow flexible working arrangements when possible, such as remote working or flexible working hours
- Create a positive work environment which supports mental health, creates a sense of belonging and a collective spirit and offers career development opportunities

## Advance diversity and inclusion

Diversity of a workforce is not only about increasing racial, national, gender, age or class representation: it is also about bringing different perspectives to decision making and work, to create value and gain business competitive advantage.

**Most of the air cargo stakeholders are serving a diverse set of customers and working with business partners across the globe. This is why diversity and inclusion make even more sense in air cargo for companies to stay relevant, be attractive, innovative and competitive.**

Key actions to support diversity and inclusion in the workplace include:

- Integrate diversity and inclusion into company's core values
- Setting up goals that are communicated and acting with transparency
- Educate teams on existing cultural differences and respect them
- Run educational campaigns within your company, including the leadership, to reduce unconscious biases
- Review the hiring process to ensure it is inclusive
- Establish policies that would build trust for minorities to share openly
- Run sponsorship and mentorship programs to provide exposure and career growth opportunities
- Capitalize on the talents of neurodiverse people, such as people with autism or dyslexia who are great at pattern recognition, memory and mathematics

## Promote air cargo as a career choice

The social and economic benefits that the air cargo industry delivers to the world became more visible than ever during the COVID-19 pandemic and the people working in this industry have been proudly named as heroes.

**There is a unique opportunity to build on air cargo's current visibility and popularity to promote air cargo careers at early age in schools and universities to attract young talents at the time of making educational choices as well as internship programs.**



# Build and nurture partnerships



## Support business partners

Driving and achieving the sustainable transformation of air cargo require collective action from across the industry as well as individual commitments and demonstrated leadership.

As for every transformation initiative, there are early movers and front-runners leading the way. To accelerate the overall sustainable transformation of the entire industry, we need to count on these front runners to lead, inspire and support their partners, suppliers and customers on their own journey as well.

**In the air cargo industry specifically, one example of business partners support would be to use the airport as the central orchestrator to unite the local air community on sustainable goals and practices.**

Local and regional associations could also organize sustainability events to align goals, share best practices and upskill people.

## Lead change through sustainable sourcing & procurement practices

Utilizing purchasing power to drive sustainability improvements is a powerful approach to convince companies you work with to tackle the sustainable challenges.

Here are some concrete examples of actions you can put in place:

- Embedding sustainability criteria into procurement processes
- Opening sustainability discussions hand in hand with commercial negotiations, including “this is not ok, you need to improve and act now”
- Asking for and analyzing suppliers’ sustainability performance data as a pre-requisite to any commercial relationship
- Establishing a supplier code of conduct with remediation and termination mechanism in place in case of non-compliance

## Contribute to the global picture through industry collaboration

The air cargo industry relies heavily on common standards, processes, and best practices built by and for the industry. While it is usually facilitated by industry associations like TIACA, it is made possible only with the contribution of individuals and companies ready to share their knowledge and experience.

Accelerating the pace and scale of the sustainability transformation of the air cargo industry requires the collaboration and contribution of experts and passionate sustainability leaders to come up with guidelines and recommendations that benefits the entire industry. There is no time to waste to win that collaborative race.

More than ever, it is time to join efforts, learn from each other, adopt best practices through global, regional and local coalitions of the willing.

# Our call to action



# 30 actionable priorities for air cargo



## 15 actionable priorities for the environment

<p><b>Decarbonize</b></p>	<ol style="list-style-type: none"> <li>1. Invest in and deploy Sustainable Aviation Fuels (SAF) or other fossil-free energy</li> <li>2. Upgrade fleets to cleaner aerial and ground vehicles</li> <li>3. Transition to green buildings</li> <li>4. Use effective offsetting mechanisms</li> <li>5. Investigate and adopt carbon capture technologies</li> <li>6. Reduce energy consumption in own operations</li> <li>7. Optimize vehicle utilization</li> <li>8. Reduce weight of vehicles and ancillary equipment</li> </ol>
<p><b>Eliminate waste</b></p>	<ol style="list-style-type: none"> <li>9. Promote circular economy</li> <li>10. Eliminate single-use plastic and foam</li> <li>11. Replace hydrofluorocarbons with natural refrigerants</li> <li>12. Improve water management</li> <li>13. Improve operations &amp; traceability to eliminate perishable waste</li> </ol>
<p><b>Protect biodiversity</b></p>	<ol style="list-style-type: none"> <li>14. Further enhance live animals' transportation practices</li> <li>15. Combat illegal wildlife trade to protect endangered species</li> </ol>

Supporting 7 UN SDGs:







## 5 actionable priorities for the society and local communities

<b>Support local economies &amp; communities</b>	<ul style="list-style-type: none"> <li>16. Enhance connectivity to unlock new markets and create more jobs</li> <li>17. Combat illegal trade and smuggling of goods and humans</li> </ul>
<b>Improve lives and well-being</b>	<ul style="list-style-type: none"> <li>18. Reduce noise</li> <li>19. Improve local air quality</li> <li>20. Develop innovative solutions to reach more people with healthcare and essential goods</li> </ul>

Supporting 9 UN SDGs:



## 10 actionable priorities strengthening the corporate culture and leadership

<b>Improve efficiencies and profitability</b>	<ul style="list-style-type: none"> <li>21. Drive continuous improvement and operational excellence</li> <li>22. Accelerate digitalization</li> <li>23. Invest and support innovation</li> </ul>
<b>Attract, retain and develop employees</b>	<ul style="list-style-type: none"> <li>24. Invest in training &amp; education</li> <li>25. Improve employee experience</li> <li>26. Advance diversity &amp; inclusion</li> <li>27. Promote air cargo as a career choice</li> </ul>
<b>Build and nurture partnerships</b>	<ul style="list-style-type: none"> <li>28. Support business partners</li> <li>29. Lead change through sustainable sourcing &amp; procurement practices</li> <li>30. Contribute to the global picture through industry collaboration</li> </ul>

Supporting 6 UN SDGs:



# TIACA's commitments



TIACA is committed to pursue its efforts to accelerate the sustainable transformation of the air cargo industry.

Specifically, we will :

1/ Engage all our industry partners, at global, regional and local levels, to commit to

the 30 actionable priorities and collectively agree on relevant targets and timelines.

2/ Continue offering platforms to raise awareness, educate, share best practices through our online and in-person events, newsletters and members' Glue Up

community.

3/ Investigate the opportunity to introduce a validation programs to help industry stakeholders to benchmark themselves, identify their priority areas of improvement and be recognized as good sustainable companies.

## Advocate

Speak on behalf of the entire air cargo industry with a united voice

Urge government action for relevant and supportive regulations

Promote the role of air cargo in global economic prosperity, supporting UN SDGs to regulators, business community and the general public

Partner with ICAO, WCO, WTO, WEF, UNCTAD, WB to support an inclusive and sustainable air cargo growth

## Support

Listen and respond to members needs

Provide tools and materials to help members achieve sustainable success

Introduce and enhance relevant and required programs

Hold annual sustainability survey and report findings

Facilitate member to member partnership success through our "Glue up" platform

## Recognize

Celebrate excellence through our Annual Air Cargo Sustainability Awards

Promote member success and achievement through "Members in the news"

Ensure the voice of the members is heard through our "Newsletter features"

Introduce accreditation programs to provide independent quality validation

Host global industry events to feature members success

## Showcase

Host successful Air Cargo Forum and Executive Summit events to provide vehicle for spotlighting member capabilities

Offer opportunities to members to showcase their best practices through our sustainability webinars

Lead the industry in supporting diversity and inclusivity programs

Support next generation of business leaders and innovators through enhanced TIACA membership

# Acknowledgements



## Authors and contributors

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Glyn Hughes, TIACA

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# CHANGEHORIZON

In charge of developing and running TIACA's Sustainability program since 2019 and committed to helping accelerate sustainable transformation of the air cargo industry.

At Change Horizon, we provide consulting services uniquely designed to help aviation and logistics companies measure and improve their environmental, social, and business impacts on the world.

We listen carefully to diagnose the key challenges and opportunities and tailor make ambitious but practical solutions. Our results are measurable and with a long-term vision to make sustainability an integral part of the corporate culture and realize the competitive advantage of your company.

## Sustainability solutions

Vision and projects

Strategy development

Industry perspective and global trends

SWOT analysis and assessments

Market analysis and feedback surveys

Change management

Stakeholder engagement and outreach

Employee engagement

Coaching and training

## Areas of expertise

Air cargo carbon footprint

Digital transformation

Innovation

Diversity and inclusion

Sustainability culture

Corporate reputation

Unmanned aviation

Value of air cargo

Partnerships