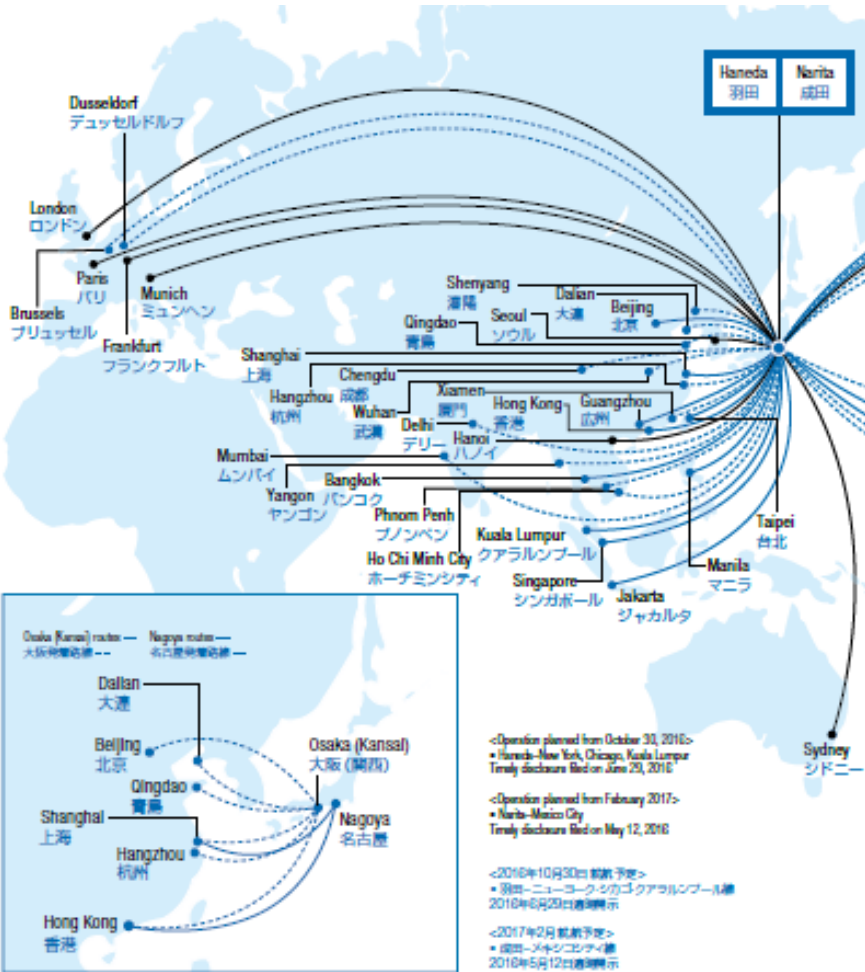


Current Status in Japan in preparation for CORSIA

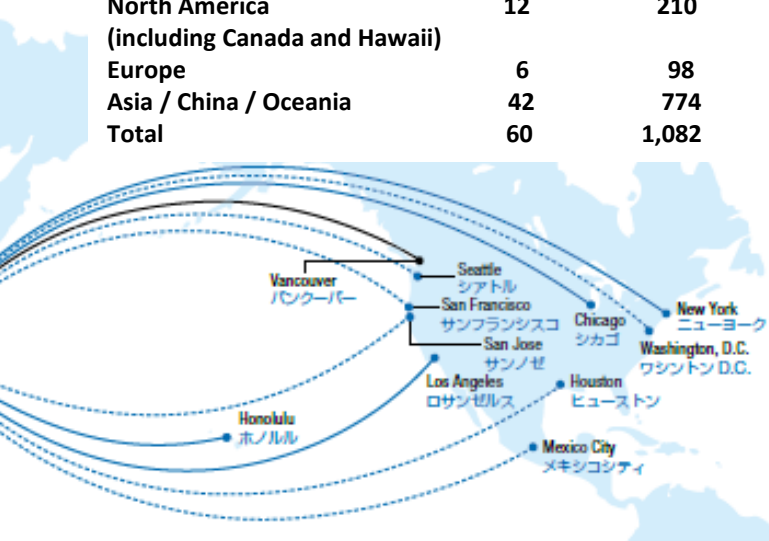
ANA-Operated International Routes

Haneda routes — Narita routes - - - Haneda / Narita routes —



ANA International Route and Flight Data (Excludes Cargo Flights, As of July 1, 2016)

	Number of routes	Number of flights per week	Number of cities in service
North America (including Canada and Hawaii)	12	210	10
Europe	6	98	6
Asia / China / Oceania	42	774	24
Total	60	1,082	40



Carbon Offsetting and Reduction Scheme for International Aviation 2017 JITI Aviation Workshop

Masao Hisano
All Nippon Airways

<Operation planned from October 30, 2016>
 • Florida-New York, Chicago, Kuala Lumpur
 Timely disclosure: Feb on June 29, 2016

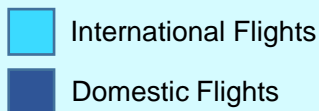
<Operation planned from February 2017>
 • Narita-Mexico City
 Timely disclosure: Feb on May 12, 2016

<2016年10月30日 就航予定>
 • 羽田-ニューヨーク-シカゴクアラルンプール線
 2016年6月29日 適時開示

<2017年2月 就航予定>
 • 成田-メキシコシティ線
 2016年5月12日 適時開示

1, ANA Group's Progress

Revenue Passenger Kilometers



1978
Opening of Narita International Airport



International: 2.7%

1987/3
Passenger Revenues ¥435.3 bn.

1994
Opening of Kansai International Airport

2001
September 11 terrorist attacks in the United States

2003
Outbreak of SARS

2000/3
Passenger Revenues ¥786.3 bn.

International: 26.1%

1999
Joining of Star Alliance, one of the world's largest global airline alliances



2008
Global financial crisis

2011
Great East Japan Earthquake



2013
Shift to a holding company structure

2016
ANA Group becomes airline group with Japan's largest network

2014
Expansion of international flight slots at Haneda Airport

Present (2016/3)
Passenger Revenues ¥1,201.2 bn.

International: 42.9%

ANA Group's Strengths



Introduced world's first Boeing 787 Dreamliner after participating in development, and accelerated deployment within our international services



Achieved "5 STAR AIRLINE," the world's highest rating from SKYTRAX for the fourth consecutive year

2013-2016



Core Management Resource
Brand Power



Promoting multi-brand strategy to continue being airline group chosen by customers



ANA is the No. 1 airline in Japan for both domestic and international services (Operating revenues, ASKs, RPKs, and number of passengers)



2、 CO2 Emissions in International Aviation

(Reference: IEA, CO2 Emissions from Fuel Combustion)

Fig 1, Total CO2 Emissions From Fuel Combustion (2013)

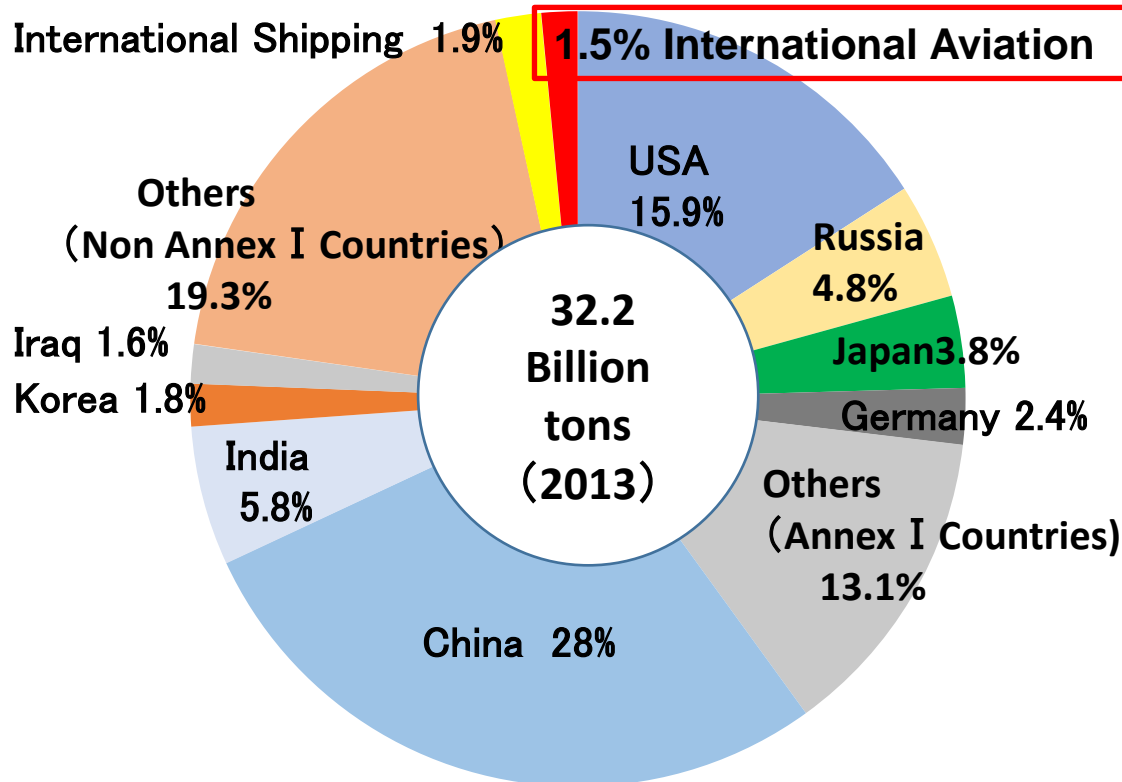
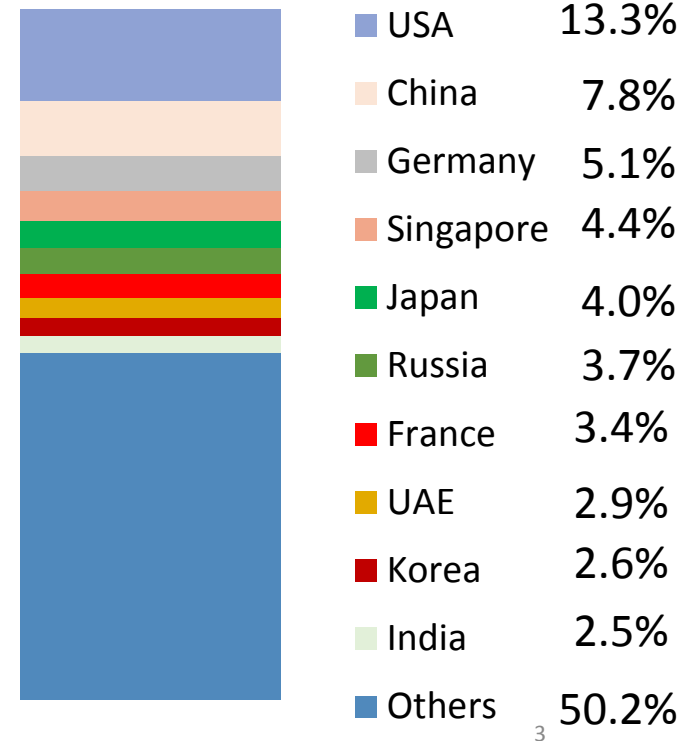


Fig 2, CO2 Emissions From International Aviation Bunkers, 490 M tons (2013)



3, CO2 Emission Trends From International Aviation

(Reference: IEA, CO2 Emissions from Fuel Combustion)

Fig 3, CO2 Emissions from International Aviation, 1971 to 2014

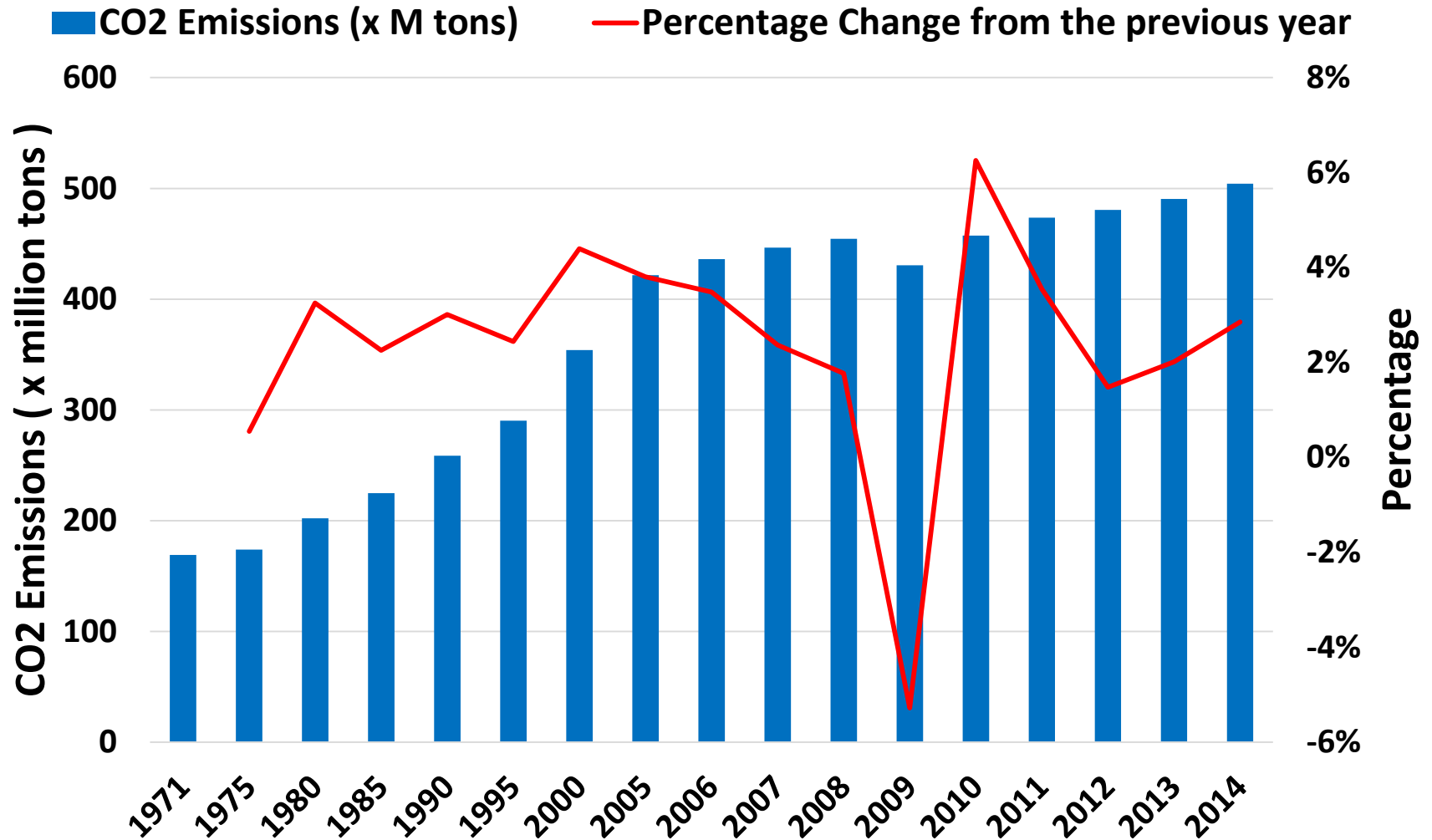
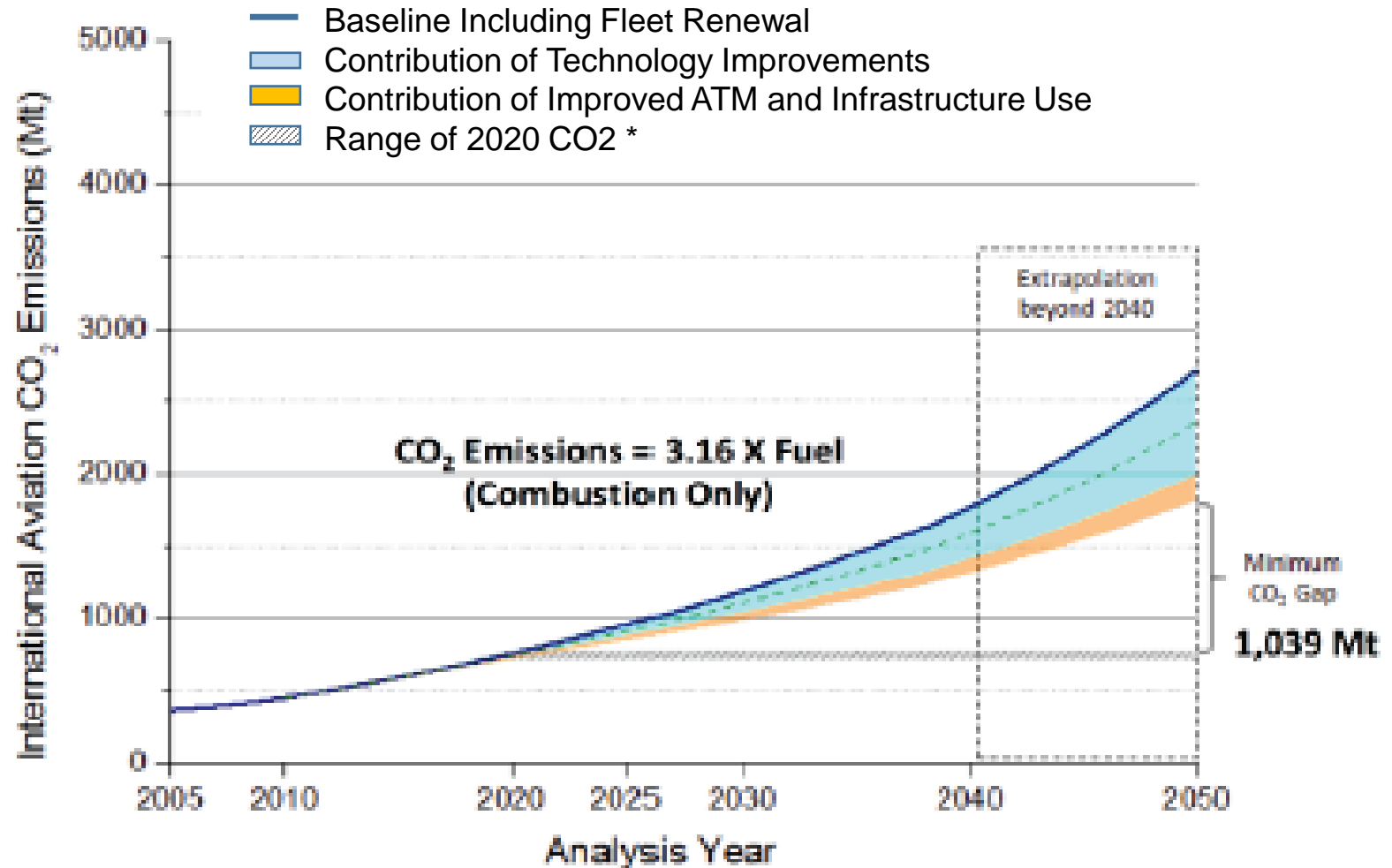


Fig4, CO₂ Emissions from International Aviation, 2005 to 2050

(Reference: ICAO Environment Report 2016)

*Actual carbon neutral line is within this range.

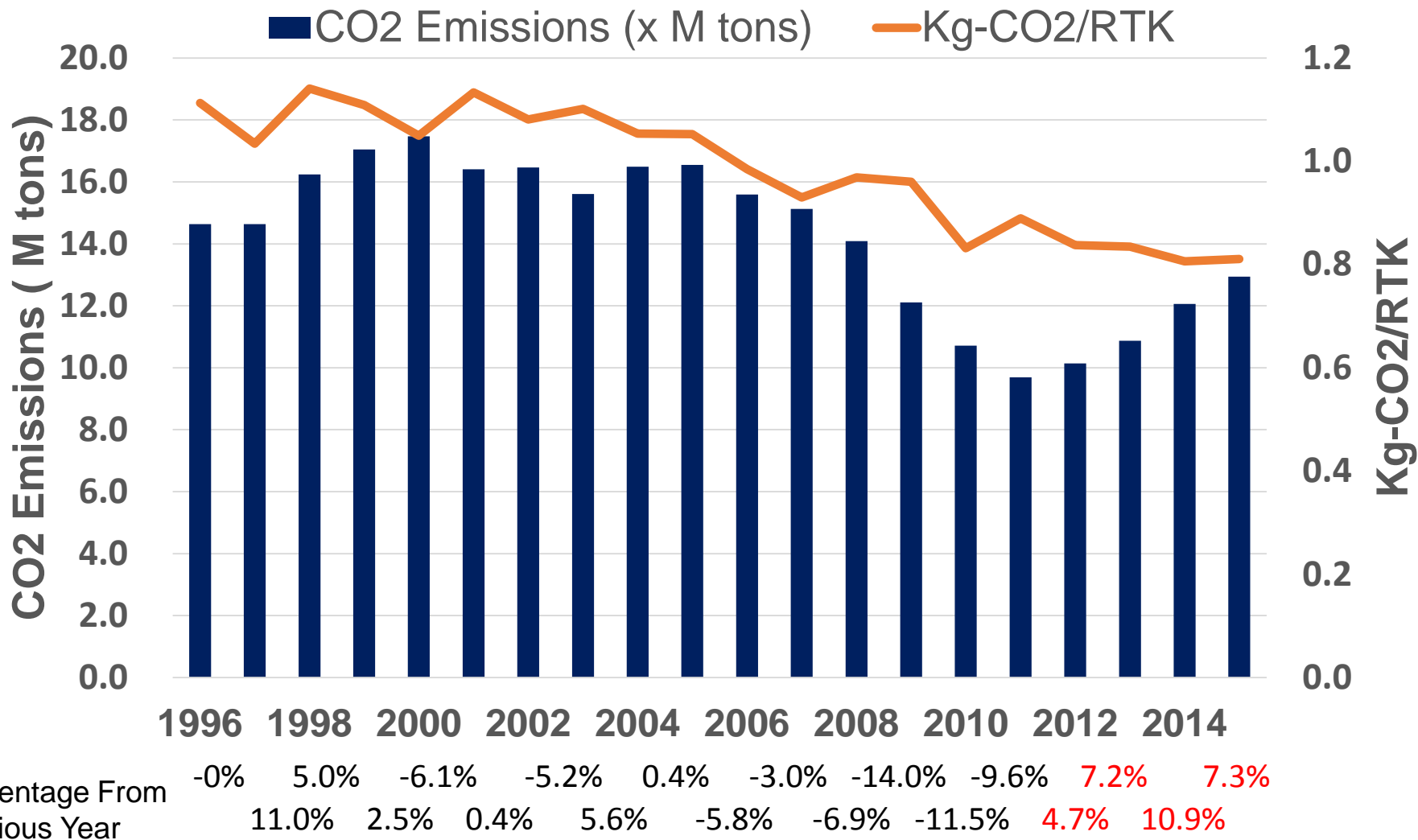
Dashed line in technology contribution sliver represents the “ Low Aircraft Technology Scenario”.
 Note: Results were modeled for 2005, 2006, 2010,2020, 2025, 2030 and 2040 then extrapolated to 2050



4, CO2 Emission Trends From International Aviation - in Japan(International Flights Only)

(From Greenhouse Gas Inventory Office of Japan)

Fig 5 , CO2 Emissions from International Aviation in Japan

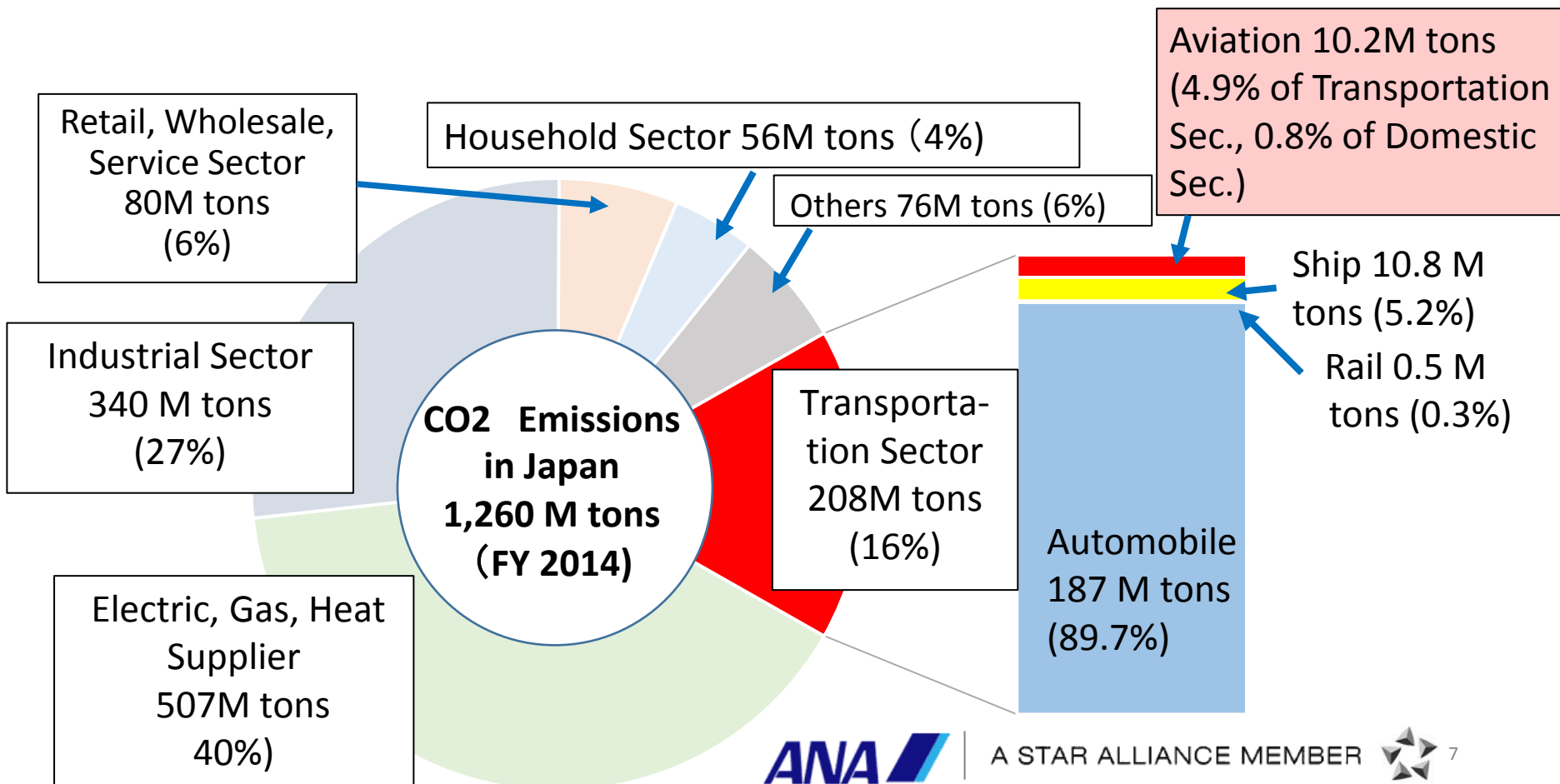


<Reference>

CO2 Emissions from Domestic Aviation sector- in Japan

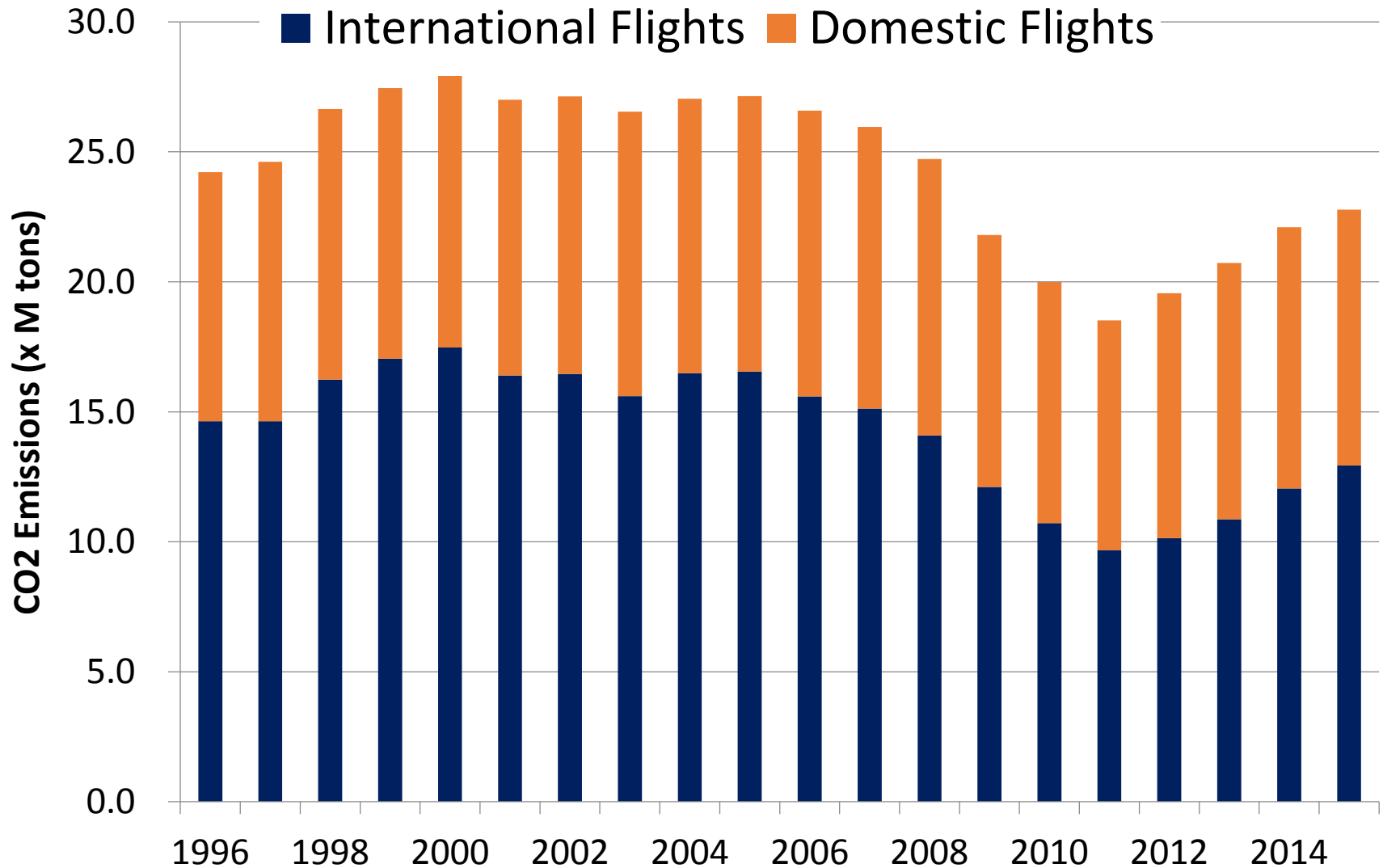
(From Greenhouse Gas Inventory Office of Japan)

Fig 6, FY2014 CO2 Emissions-Japanese Domestic Flights

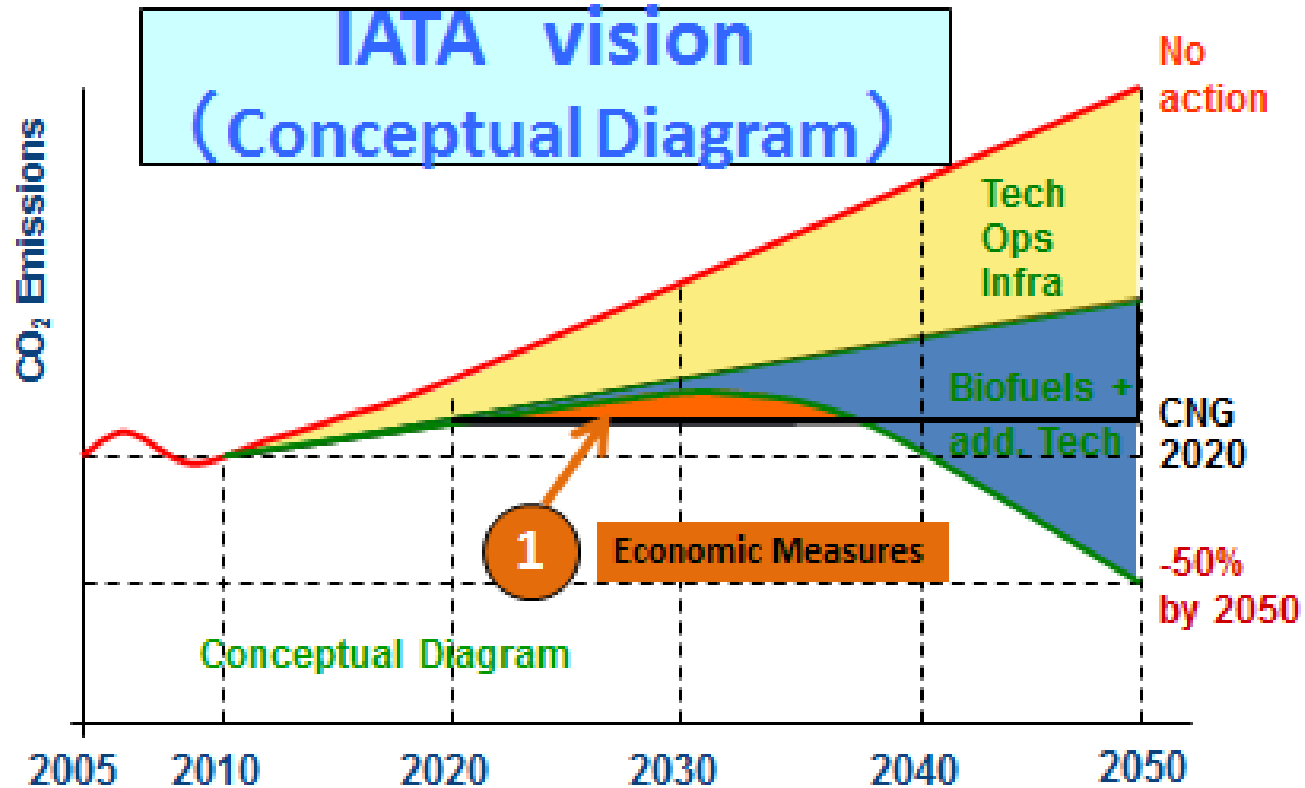


CO2 Emission Trends From Aviation Sector in Japan (Domestic + International Flights)

(From Greenhouse Gas Inventory Office of Japan)



5, An impact from the CORSIA in Japan

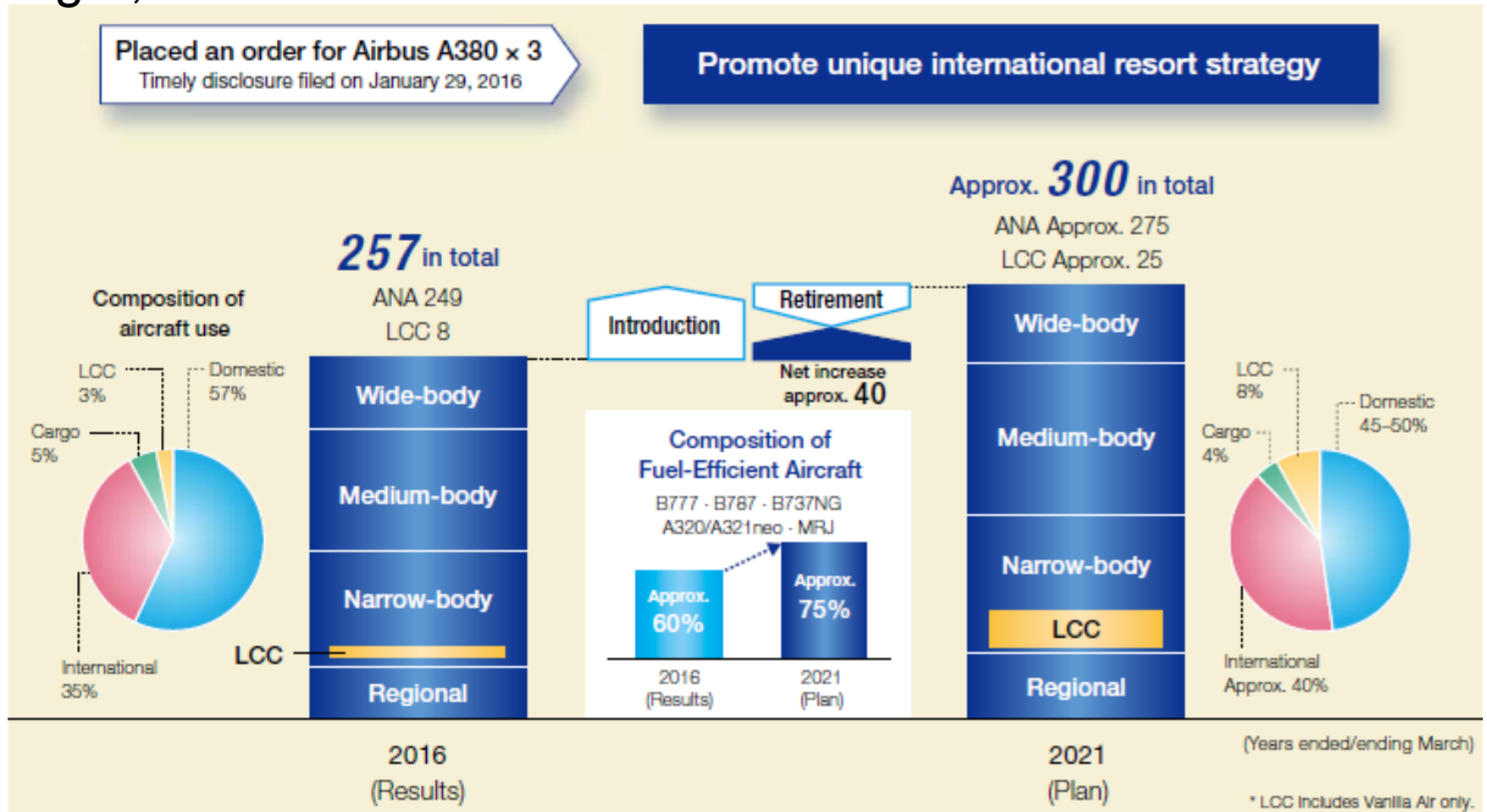


In order to reduce the cost of credits in future, an introduction of bio jet fuel which is almost equivalent to Jet A1 in cost is essential.

6, Fuel Saving from daily operation

Our three-year project of fuel saving: 10.7 M USG saving at the end of FY 2015

Fig 7, Positive Introduction of fuel-efficient aircraft in ANA fleet



7, Aims of bio-jet introduction in 2020 Summer Olympic & Paralympic Games

Global warming prevention act in aviation sector

- International GHG reduction target of aviation sectors
“Carbon neutral growth from 2020”



Commercialization of developed fuel production technologies”

- Commercializing bio-jet fuel which is developed through government support

+

Establishment of bio-jet “supply chain”

- Establishing supply chain that is consistent with International regulations

7, Aims of bio-jet introduction in 2020 Summer Olympic & Paralympic Games

**Initiatives for
Next Generation Aviation Fuel
(May 2014-July 2015)**



**The committee for
introducing bio-jet fuel in Japan
(Sep 2015~)**

Structure of “the committee for introducing bio-jet fuel in Japan”

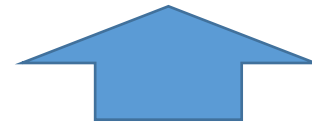
Plenary meeting (Generally open to the public)

Secretariats: MLIT, METI

Members: Scheduled Airlines Association of Japan, Petroleum Association of Japan, NEDO, airport fuel suppliers, oil distributors, bio-jet fuel developers, other related ministries and institutes



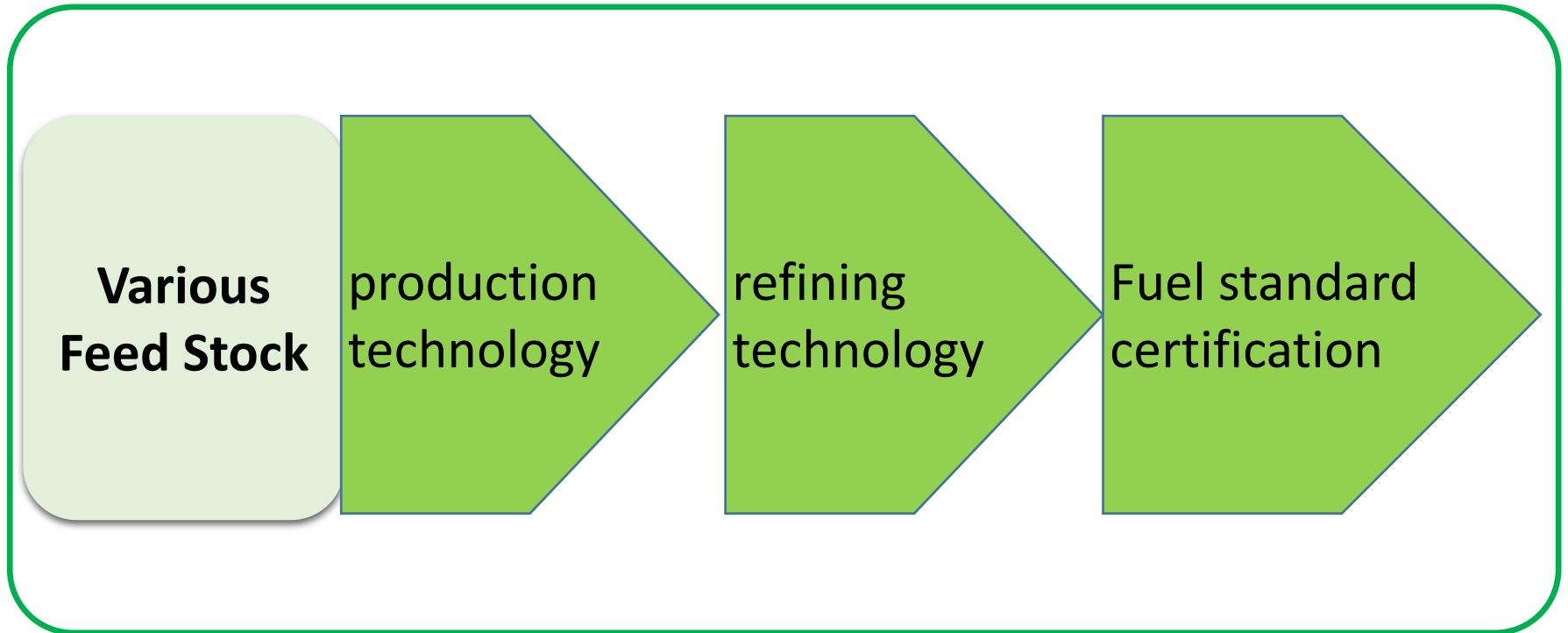
**“Supply Chain”
WG(Private)**



**“Fuel Production”
WG(Private)**

Purpose of “Fuel Production” WG

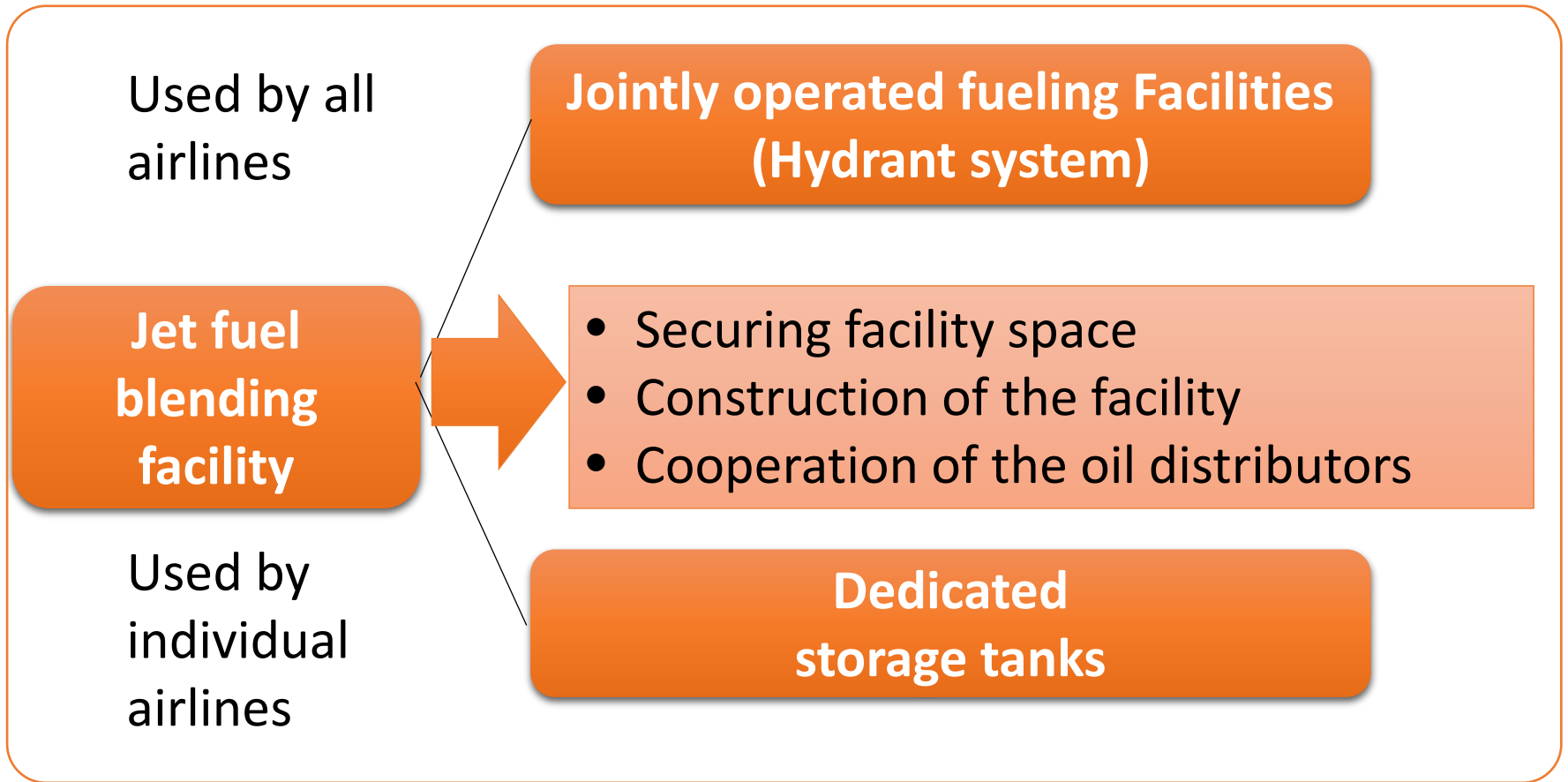
- Fuel standard compliance & Large scale production



It is expected that some amount of bio jet fuel will be sure to be produced in Japan by 2020.

Purpose of “Supply Chain” WG

- Fuel quality assurance & stakeholder cooperation



Airlines in Japan will start to gain understanding from all relevant parties using the hydrant system

8, Current Issues in Japan

In order to decrease the impact (cost) from CORSIA,

① to secure bio jet fuel
Quantity and price are not acceptable level.

② to secure credits approved by ICAO.
It remains less well-defined.

An aerial photograph showing a white ANA (All Nippon Airways) airplane with a teal stripe flying over a city and an airport. The city below is densely packed with buildings and a river. The airport features a long runway and taxiway. The text "Thank You!" is overlaid in large white letters across the center of the image.

Thank You!

空港写真提供：羽田空港再拡張D滑走路JV