

# Future Vision of Narita Airport

## Interim Report (March 2023) Outline

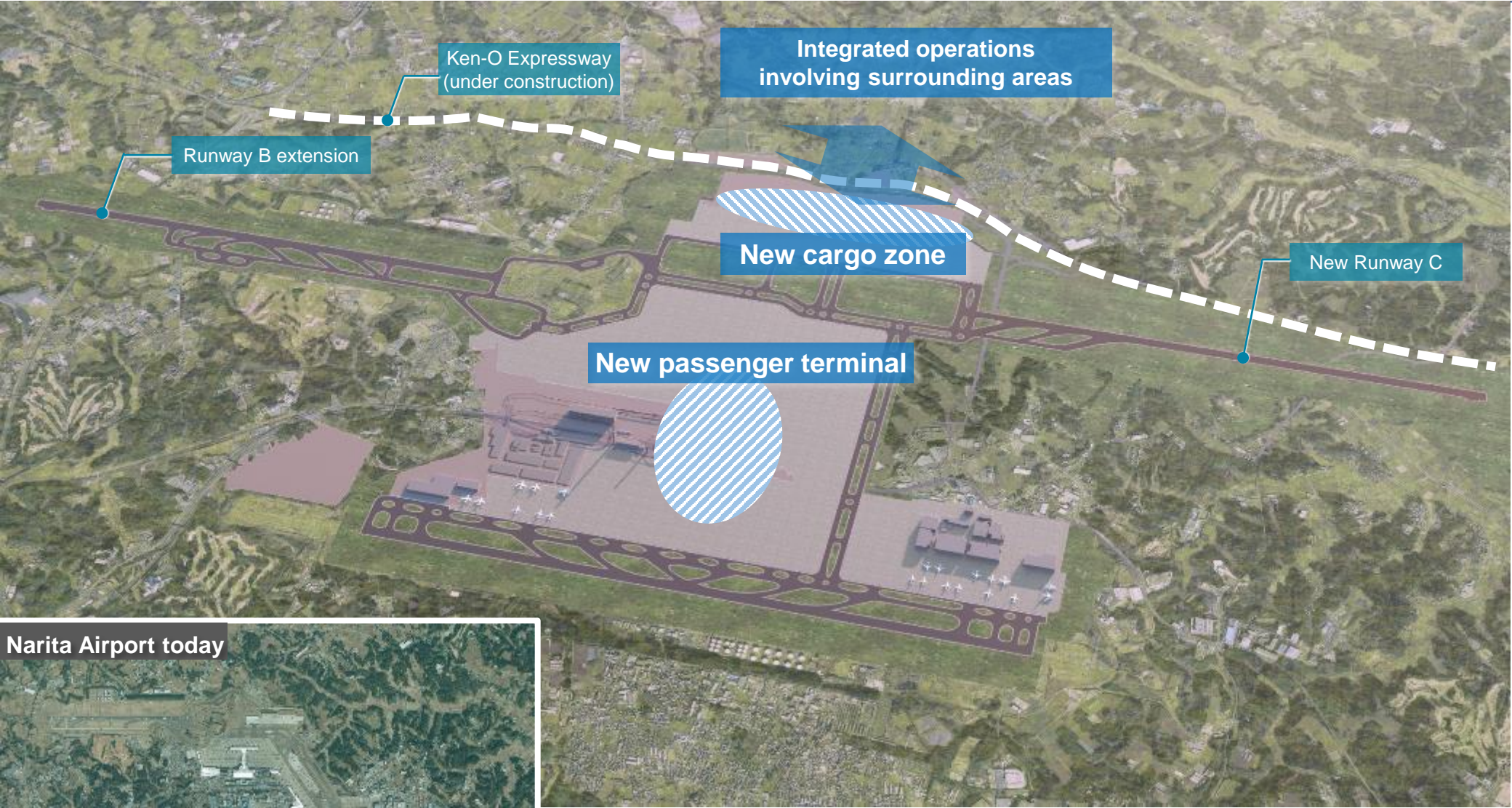
**Koh Terabayashi**  
**Assistant Manager**  
**Airport Planning Department**  
**Narita Intl Airport Corp.**



**Narita Airport**

Connecting Japan to the World

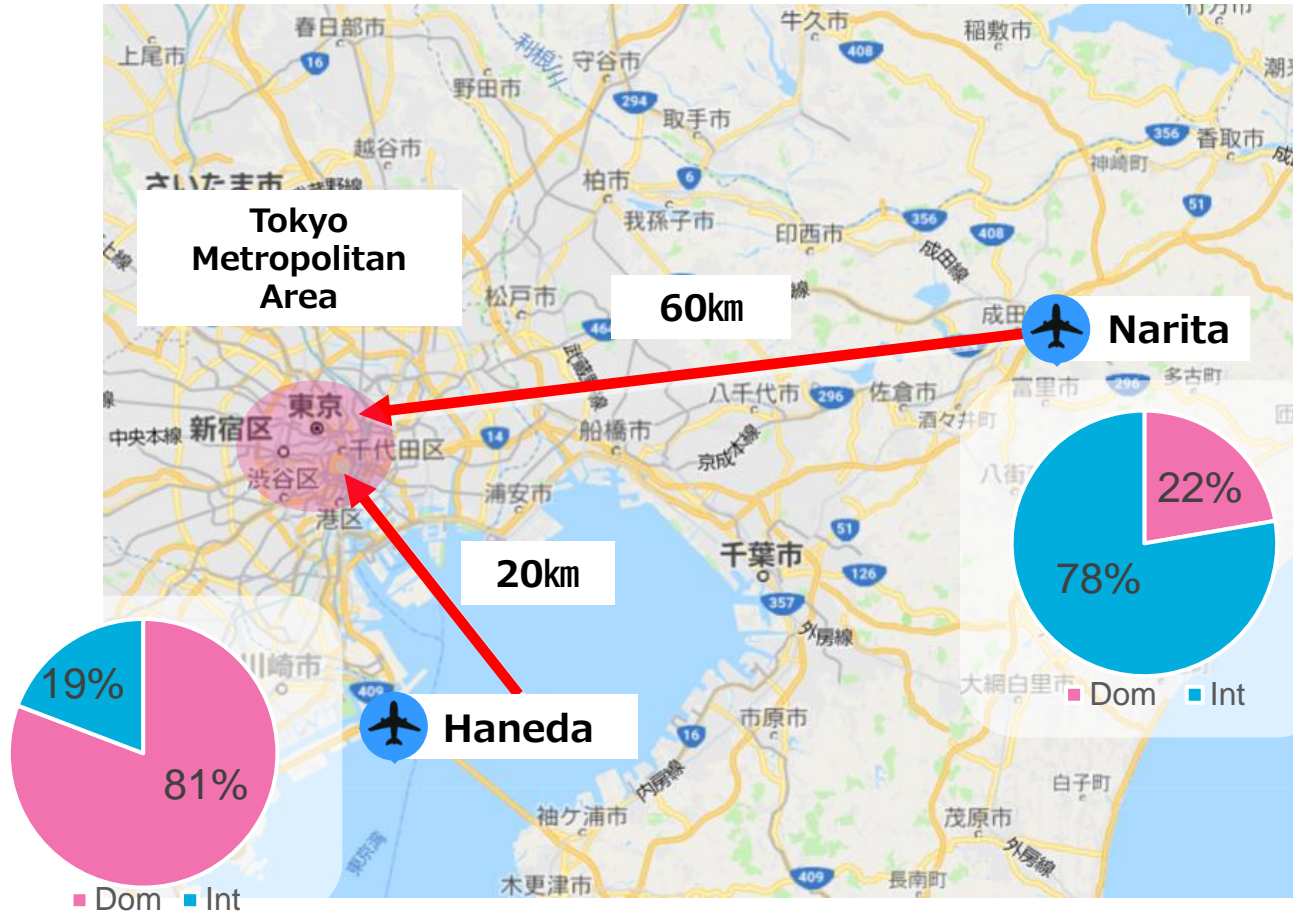
# Outline of Interim Report



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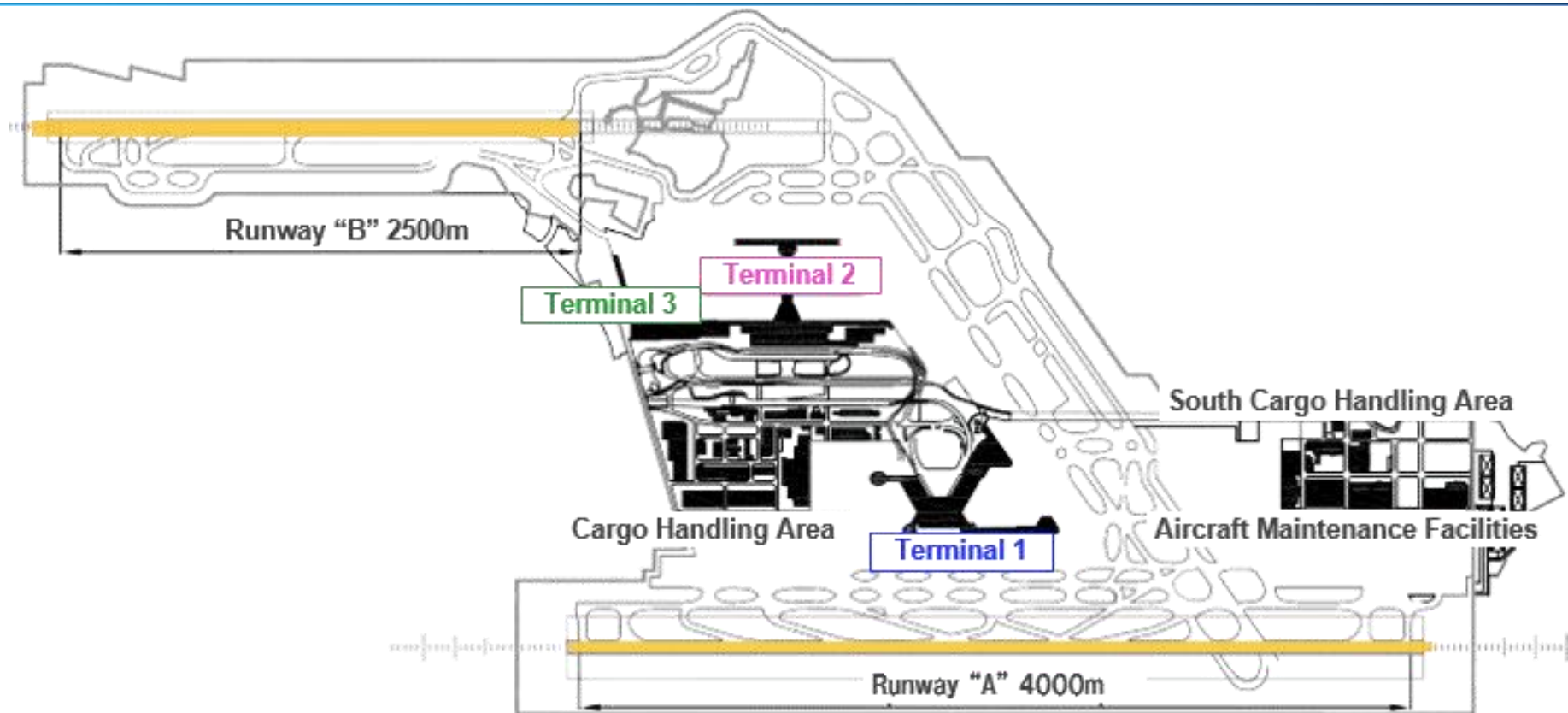
# Japan's Capital Region Airports

## Narita Airport & Haneda Airport



\* Pie chart: Percentage of arrivals and departures on domestic and international flights (FY2018)

# Overview of Narita Airport



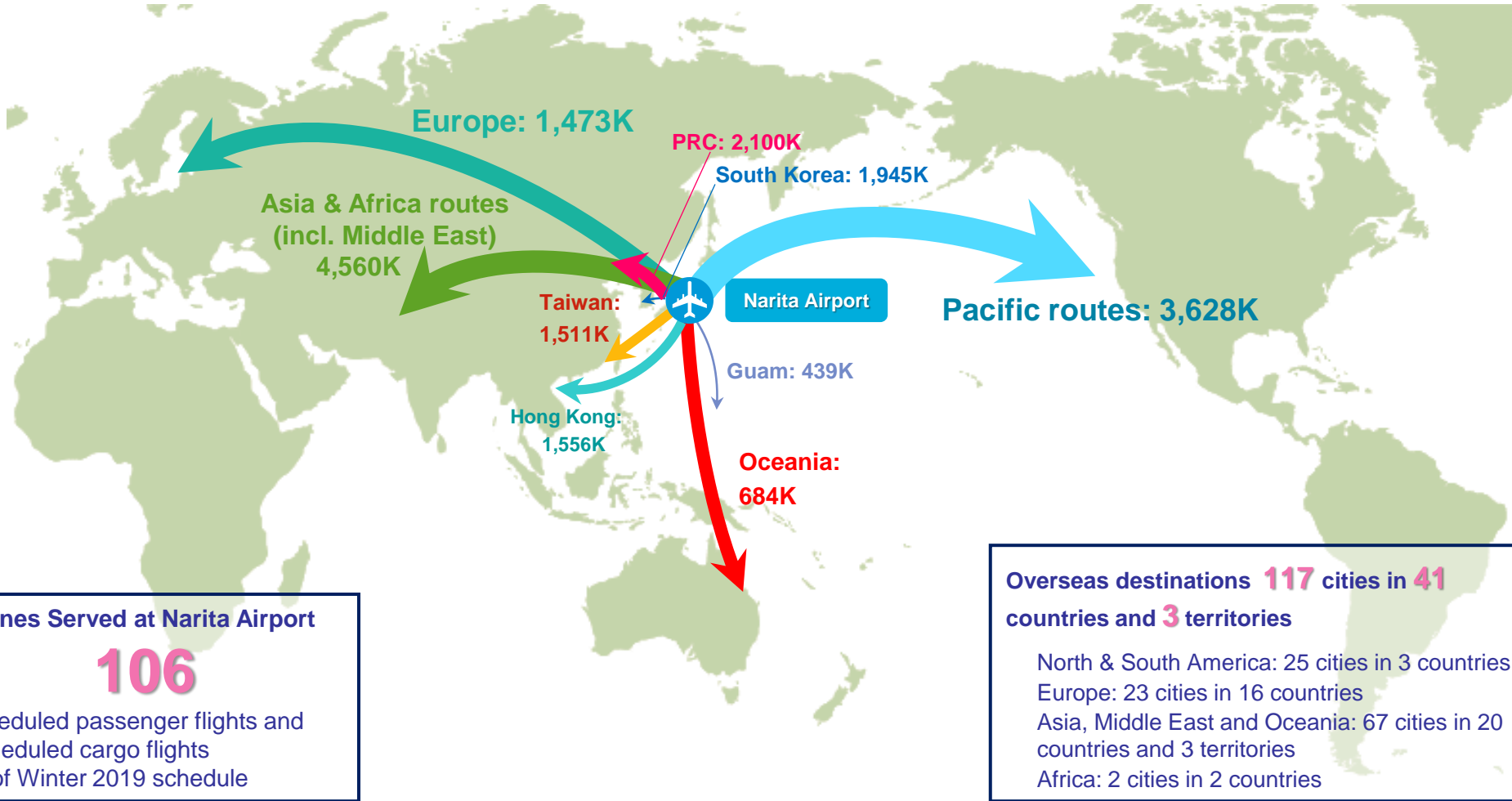
Site area	1,198ha	Passenger handling capacity	Terminal 1	25 million
Runways	Runway A 4,000m×60m		Terminal 2	17 million
	Runway B 2,500m×60m		Terminal 3	15 million
Aprons	Approx. 261 ha	Pipeline Length	47Km	
No. of stands	201	Tank capacity	287,000kiloliters	
BHS Length	26.5Km	Cargo capacity	2.4 million tonnes	
Operating hours	24 hours [Operation restricted between 0:00 and 6:00]			

# Airline network of NRT

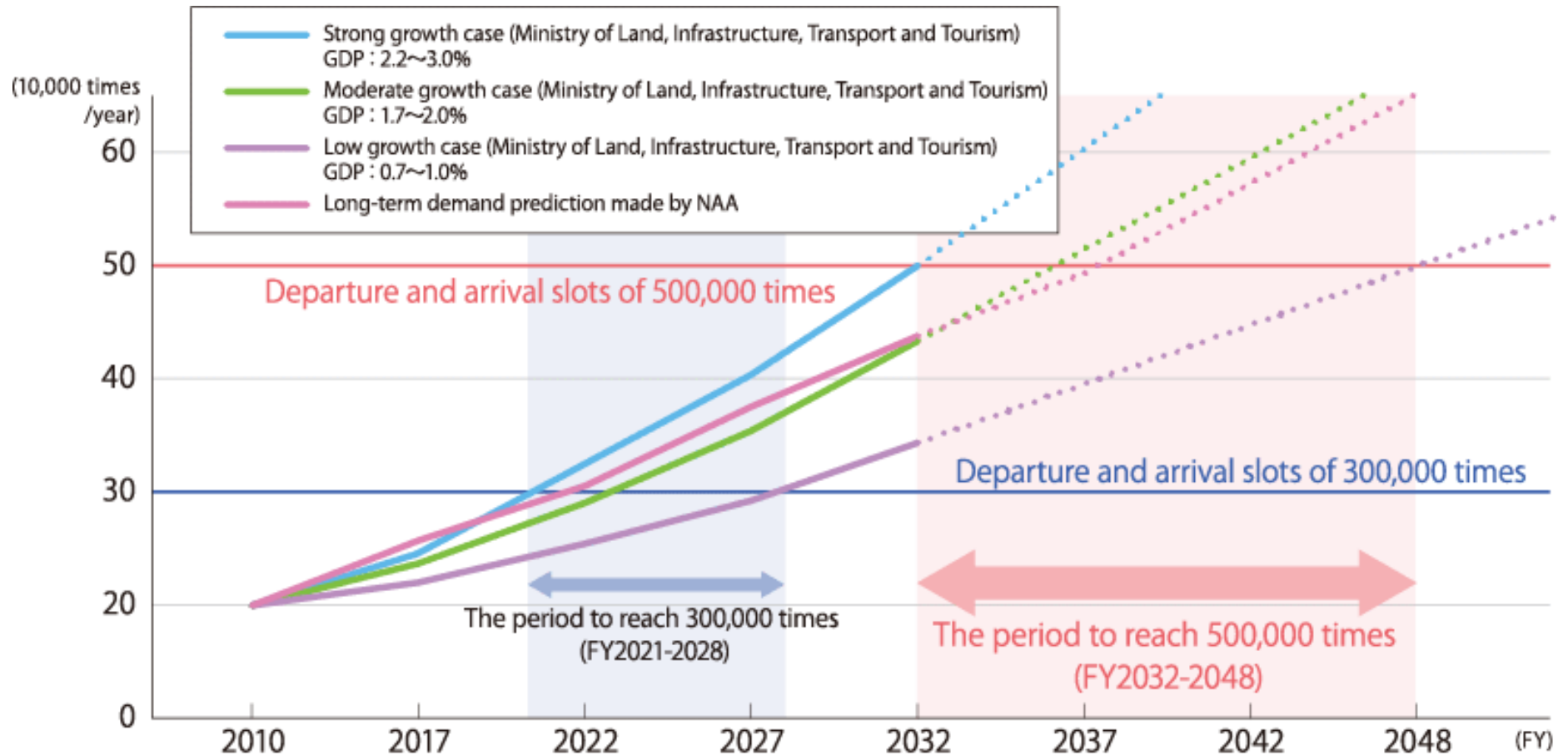
Narita Airport's Network (Including Transit Points)

Total of **140 cities** (117 overseas and 23 in Japan)

\* No. of cities accurate as of 22 Nov. 2019  
 \* No. of passengers on each route based on number of departing passengers in FY2018



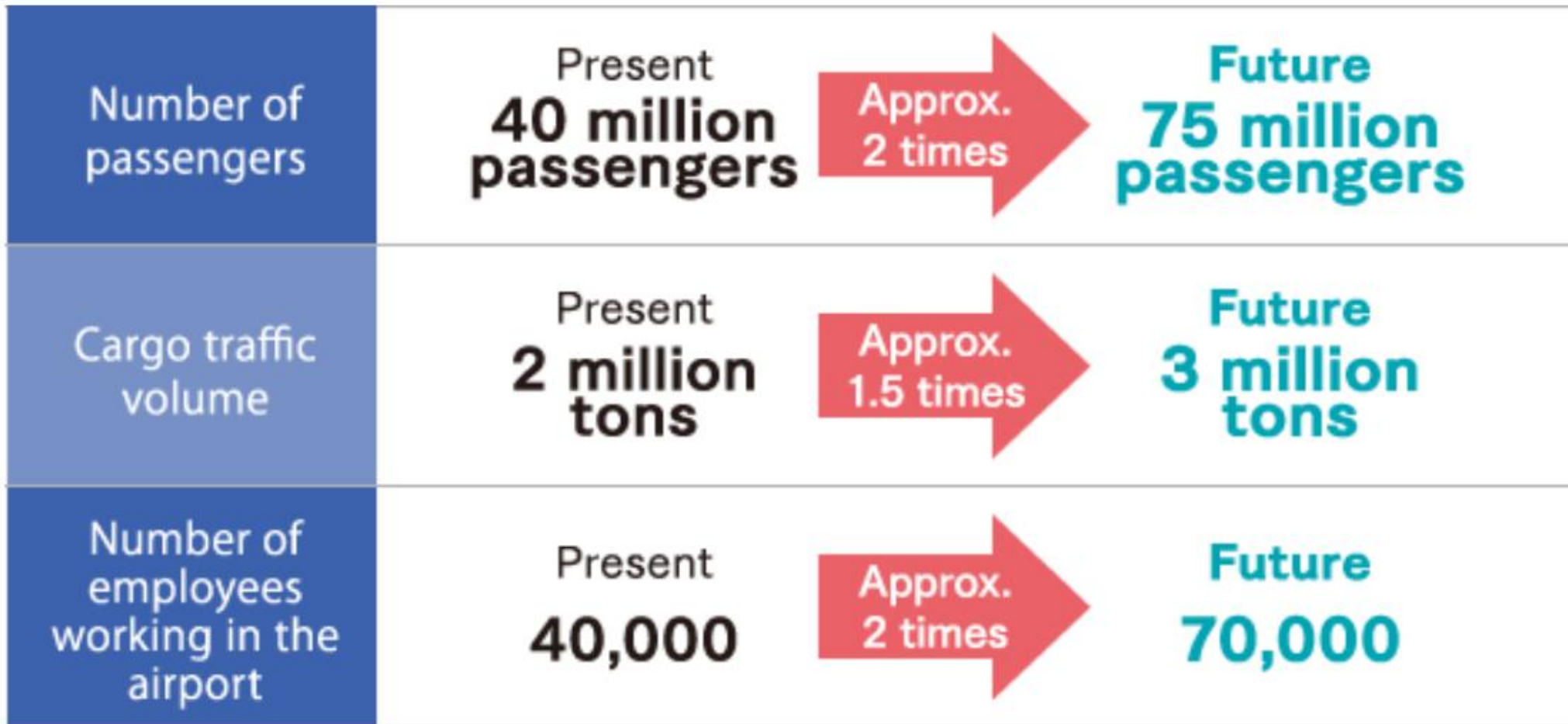
# Long-term demand prediction



※The number of arrivals and departures at Haneda Airport is calculated by deducting the late-night international flight restriction slot from the current arrival/departure slot of 447,000 times; the total of domestic and international commercial flights, and 39,000 times for flights over city center.  
 As the demand projection made by the Ministry of Land, Infrastructure, Transport and Tourism has been published only up to FY2032, the values for FY2033 and later years are calculated by using the same growth rate as the values before that.  
 ※We will continue to examine the projection of air cargo volumes based on the recent cargo trends.  
 ※Present results: Predicted volume for FY 2015 at this point.

Source: Demand prediction of Narita Airport presented by NAA at the four-party council in 2016

# Long-term demand prediction



Source: Demand prediction of Narita Airport presented by NAA at the four-party council in 2016

- **Capacity shortage**
- **Dilapidated facilities**
- **Changing needs**
- **Surface access**
- **Resilience to disasters**
- **Decarbonization**
- **labor shortages**
- **Local communities**

**etc...**

- Becoming an international hub airport with a diverse network linked to the rest of the globe by tapping into not only demand arising from its status as the port of arrival and departure for the Greater Tokyo area, but also transit demand generated by trilateral routes, especially those involving Asia, and by transit between international and domestic routes.
- Becoming an East Asian cargo hub airport with a diverse air logistics network in terms of both the number of routes and the number of flights by tapping into both direct shipment and trilateral transit demand and ensuring the airport is user-friendly for logistics operators.
- Ensuring speed, convenience, and reliability for users, and achieving accessibility with low congestion and an ample range of public transport services.
- Proactively striving to achieve government decarbonization targets.
- Building partnerships between the airport and local communities to implement proactive initiatives and secure employment, in order to ensure the integrated, sustainable development of the airport and local communities alike.

# The 5 Initiatives for Future Vision



**Construction of new runway and extension of existing runway**

**New cargo area consolidated air logistics functions**

**Consolidation of passenger terminals to "One Terminal"**

**Optimal surface access by various options**

**Integrated and sustainable development of the local communities and the airport**

# The 5 Initiatives for Future Vision



**Construction of new runway and extension of existing runway**

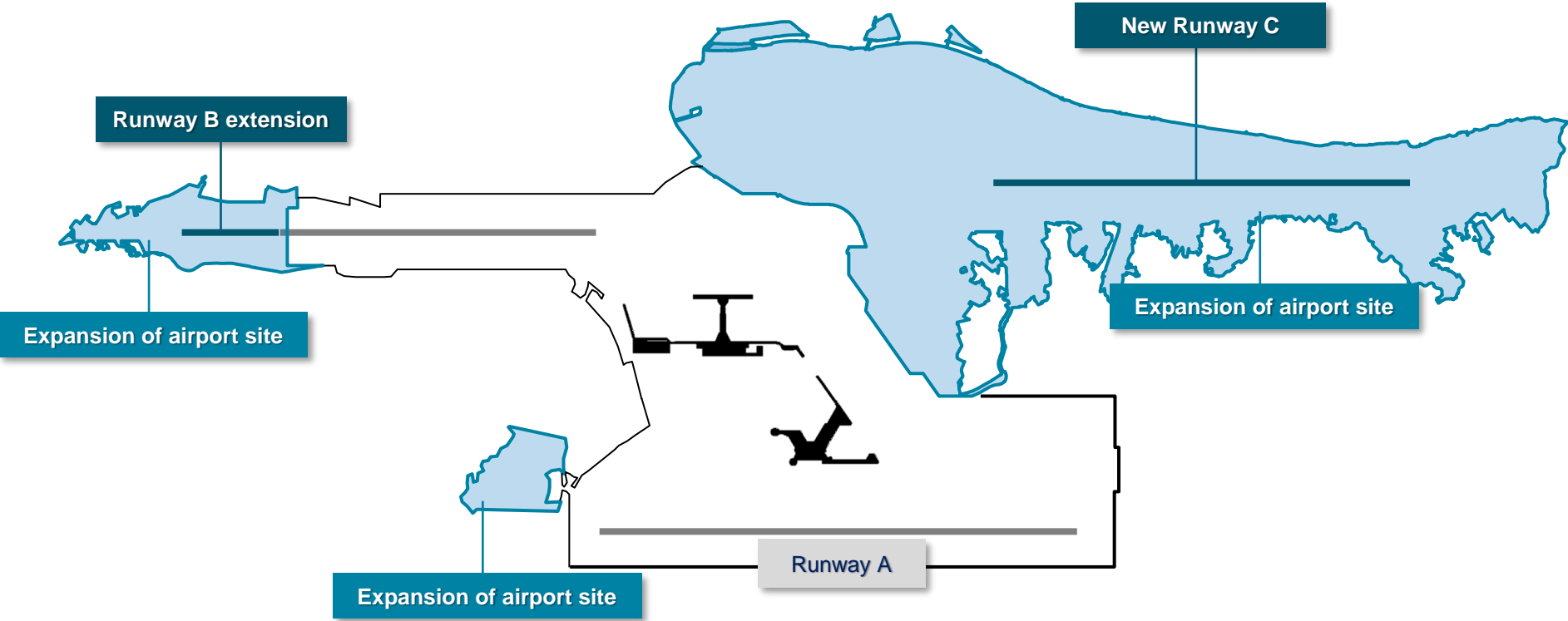
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# Construction of new runway and extension of existing runway



**Capacity of ATM**

300,000 → 500,000

**Runways**

Two runways	→	Three runways
4000m		4000m
2500m		3500m
		3500m

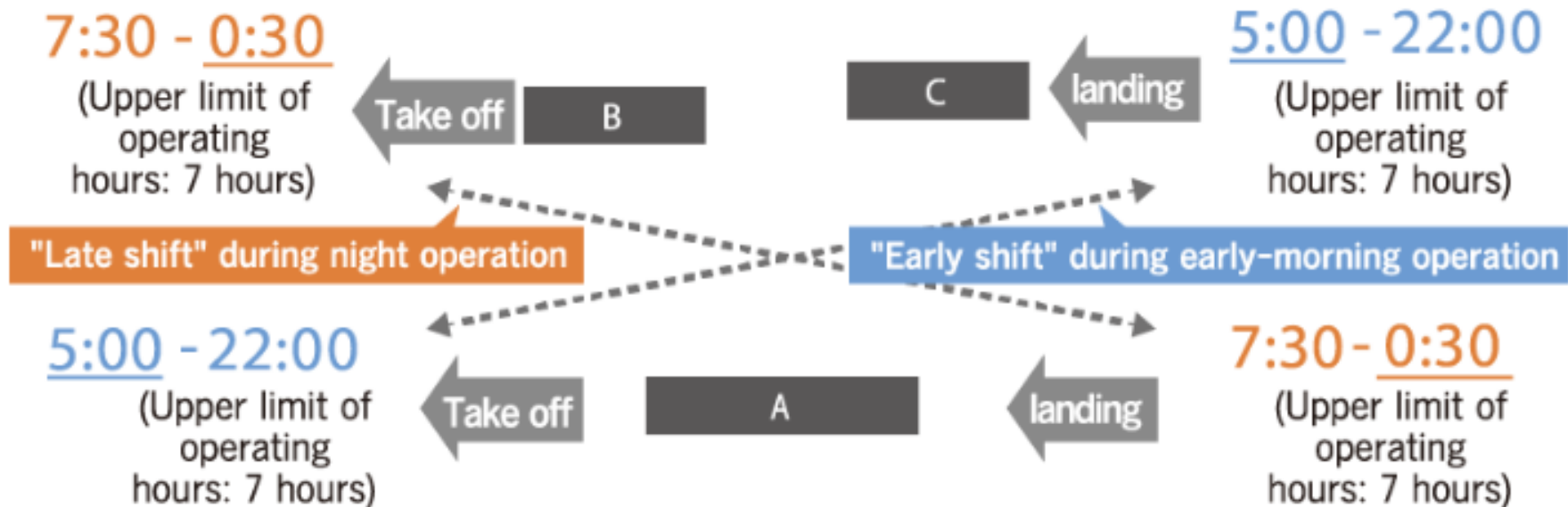
**Operating hours**

6 AM to 11 PM (17hours) → 5 AM to 0:30 AM (19.5hours)

# Construction of new runway and extension of existing runway

## “Sliding operation” system

Example when north wind is blowing (When south wind is blowing, the takeoff and landing operations become reversed.)



\* Flexible operation will be implemented between 12:30 AM and 1:00 AM.

**[Restrictions on the number of flights will be abolished for all Runways.]**

In the meantime, "Late shift" and "Early shift" should be interchanged on a periodic basis to level out effects of noise.

# The 5 Initiatives for Future Vision

Construction of new runway and extension of existing runway

New cargo area consolidated air logistics functions

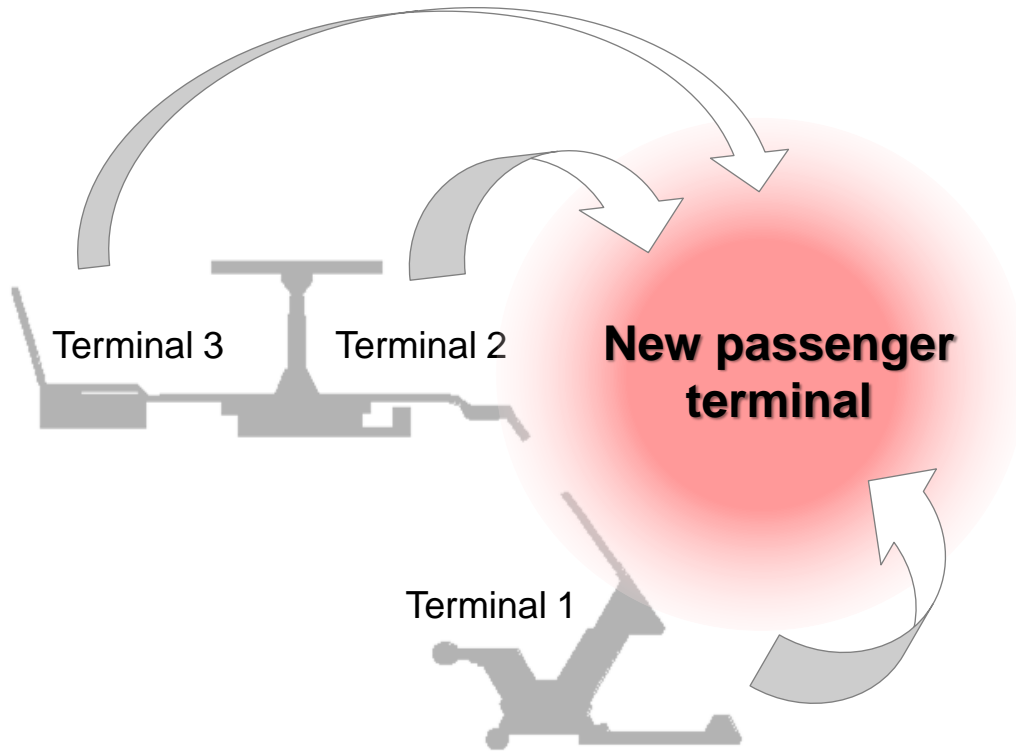
**Consolidation of passenger terminals to "One Terminal"**

Optimal surface access by various options

Integrated and sustainable development of the local communities and the airport

# Consolidation of passenger terminals to "One Terminal"

## One Terminal Concept



Simple and passengers friendly

High efficiency and flexibility

High convenience for transfer

Phased development and cost reductions

Addressing labor shortages

High productivity by cutting-edge technology

Resilience to disasters

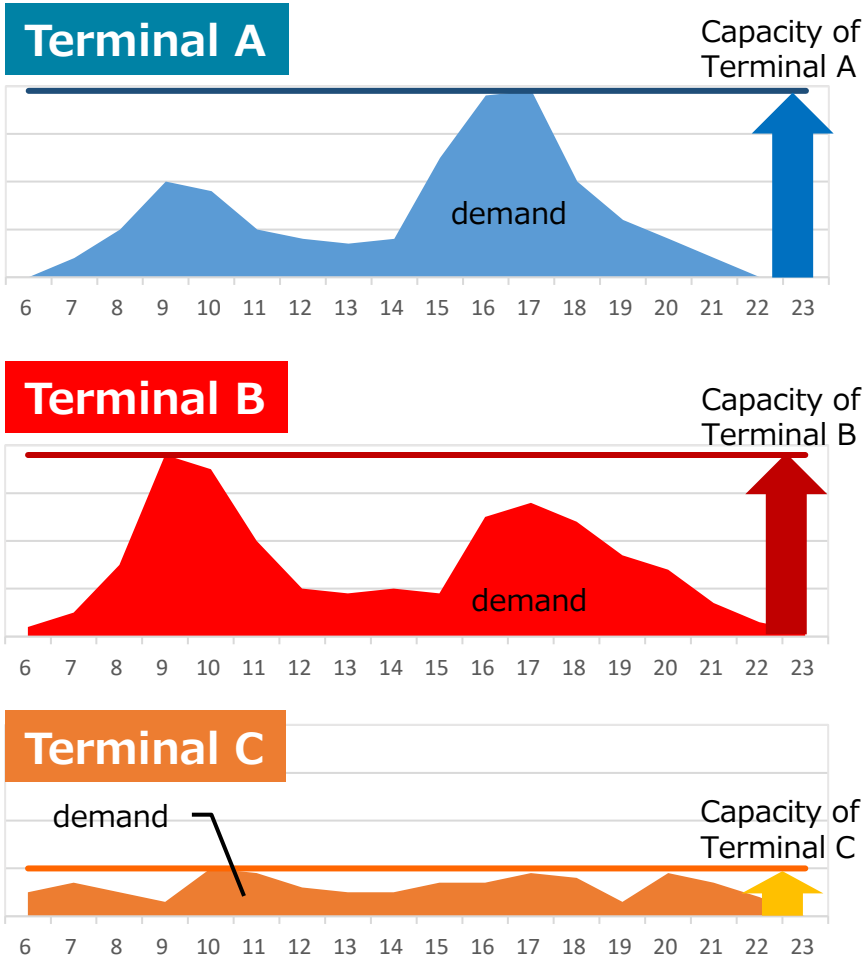
Reducing environmental impacts

Facilities for local citizens

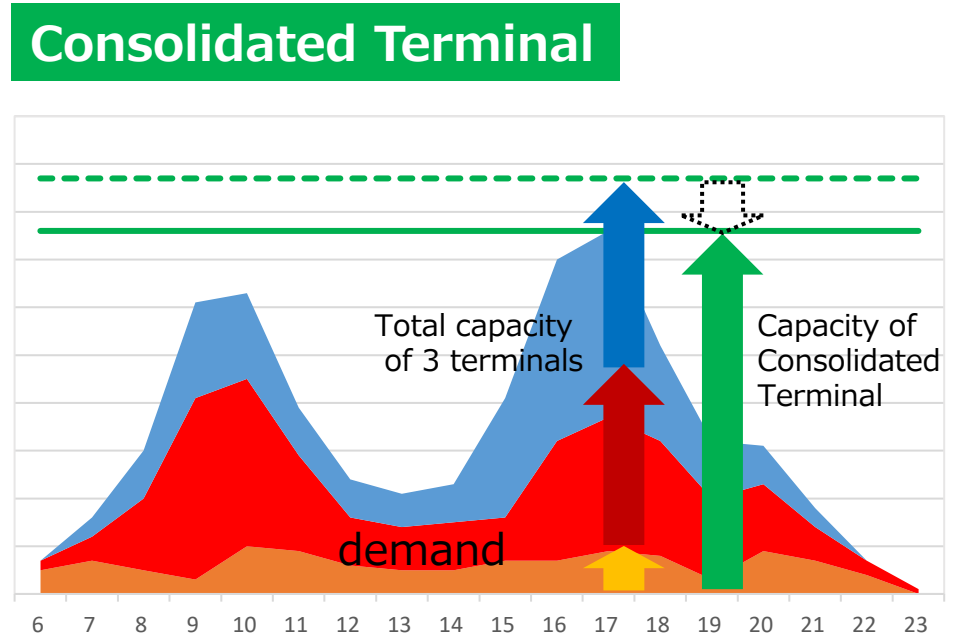
# Consolidation of passenger terminals to "One Terminal"

High efficiency and flexibility

## Unit terminals concept



## One terminal concept



# Consolidation of passenger terminals to "One Terminal"

## Phased development and cost reductions

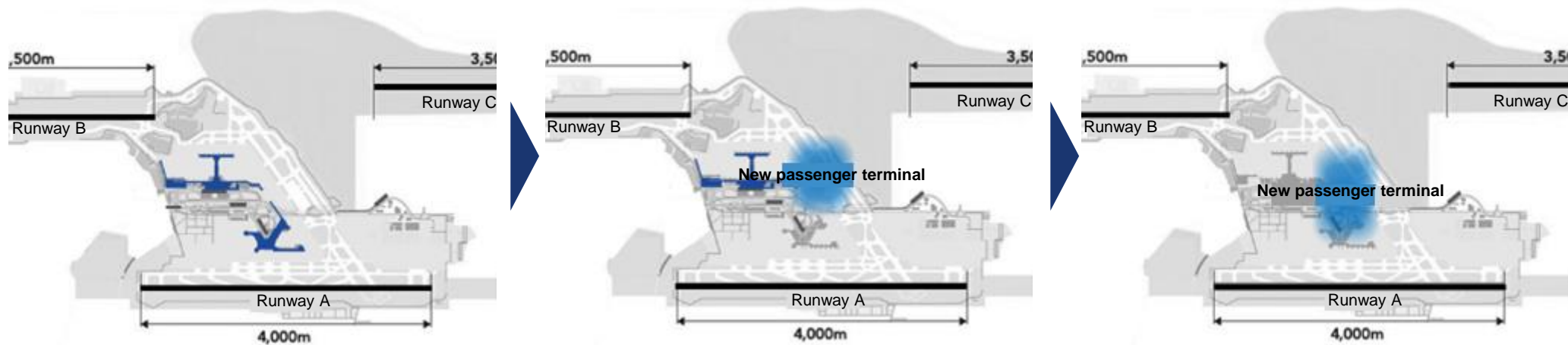
- Keep operation of existing terminals
- Construct new terminal step by step

## An example of phased development

Completed runway project

One Terminal Phase I

One Terminal Phase II



# Consolidation of passenger terminals to "One Terminal"

Illustration of new passenger terminal



\*Image for illustrative purposes. This image does not show the specific facilities to be developed.

# The 5 Initiatives for Future Vision

Construction of new runway and extension of existing runway

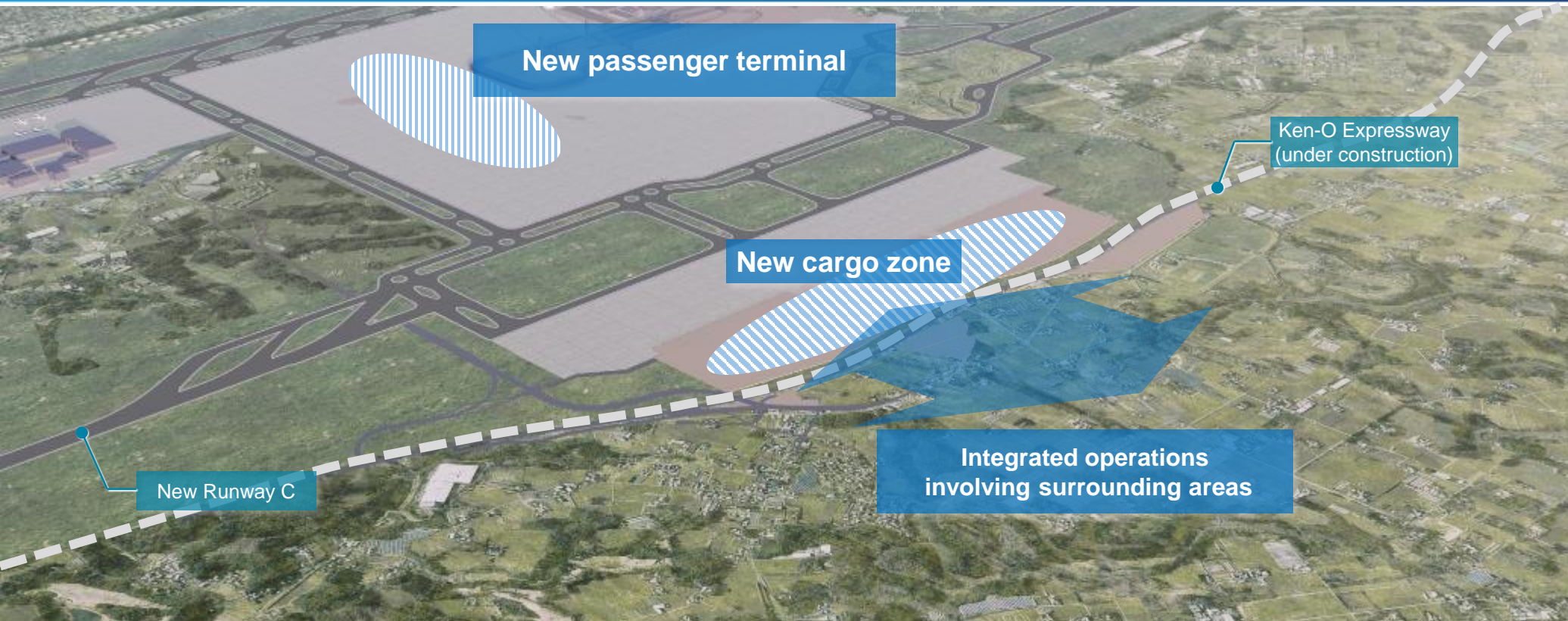
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# New cargo area consolidated air logistics functions



Connecting warehouses and forwarders' facilities

Integrated operations with adjacent logistics facilities

Smooth access with highway (Ken-O Expressway)

Capturing e-commerce demand

High productivity by cutting-edge technology

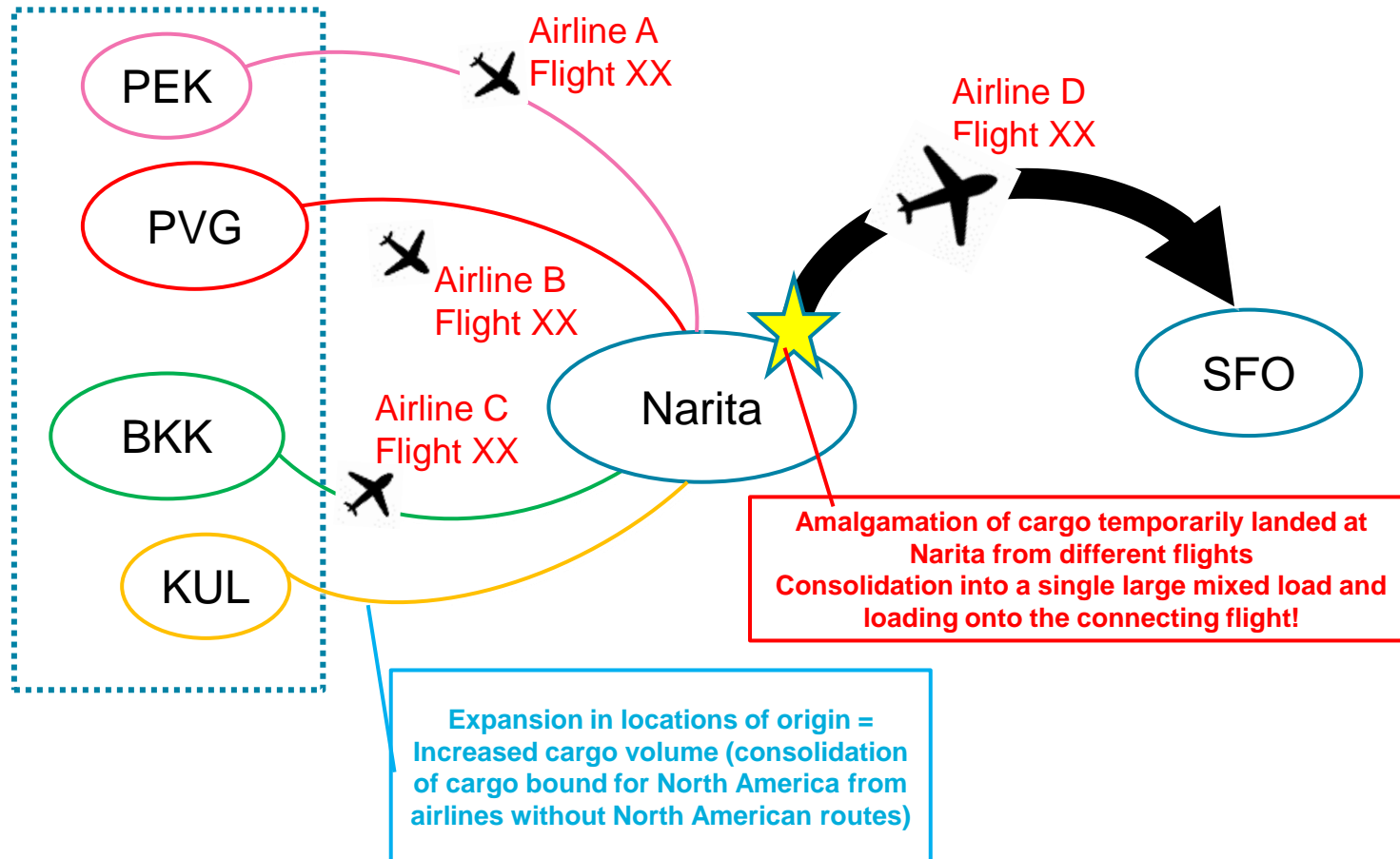
Reducing environmental impacts

Cost-reasonability

# New cargo area consolidated air logistics functions

## Institutional reform to be selected as a transit base

Transit procedures that allow forwarders to freely combine flights (illustration)



# New cargo area consolidated air logistics functions

## Creation of new demand through collaboration with the surrounding area

Narita Airport's cargo functions and collaboration with the community (illustration)



Source: Clockwise from left  
Hong Kong International Airport website, ENCO website, Kyocera website,  
YDC website, Narita City Wholesale Market website, Pratt & Whitney website

# The 5 Initiatives for Future Vision

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**Optimal surface access by various options**

Integrated and sustainable development of the local communities and the airport

# Optimal surface access by various options

**Fast**

**Cost-reasonable**

**Easy**

**Certainty**

**Frequent**

**Eco-friendly**

# Optimal surface access by various options

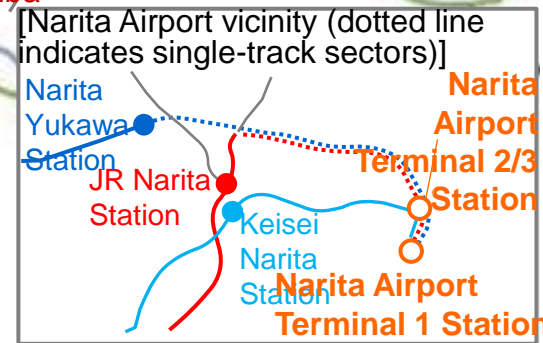
## Rail access

- NAA will take the lead in drawing up a vision for improving railway access and will promote this with stakeholders.

### Narita Airport's rail network



	Time Required	Services per hour
<b>JR Narita Express</b> Tokyo Station – Narita Airport Terminal 2/3 Station	51 minutes or more	Up to 3
<b>Keisei Skyliner</b> Nippori Station – Narita Airport Terminal 2/3 Station	36 minutes or more	Up to 3
<b>Keisei Main Line Limited Express</b> Ueno Station – Narita Airport Terminal 2/3 Station	70 minutes or more	Up to 3



# Optimal surface access by various options

## Buses, taxis and private hire cars

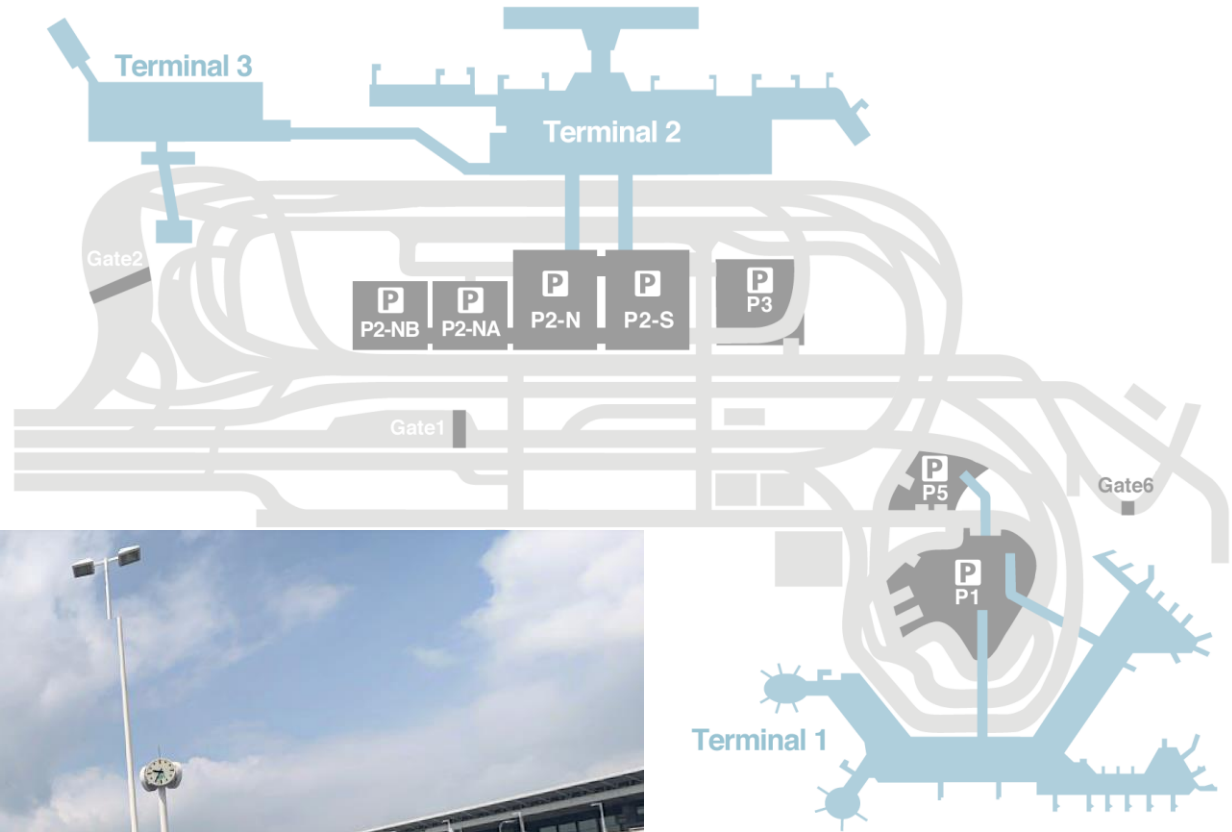
- NAA will expand the capacity of facilities, consolidate access functions, and give wide-ranging consideration to further measures to improve convenience



# Optimal surface access by various options

## Parking and forecourt

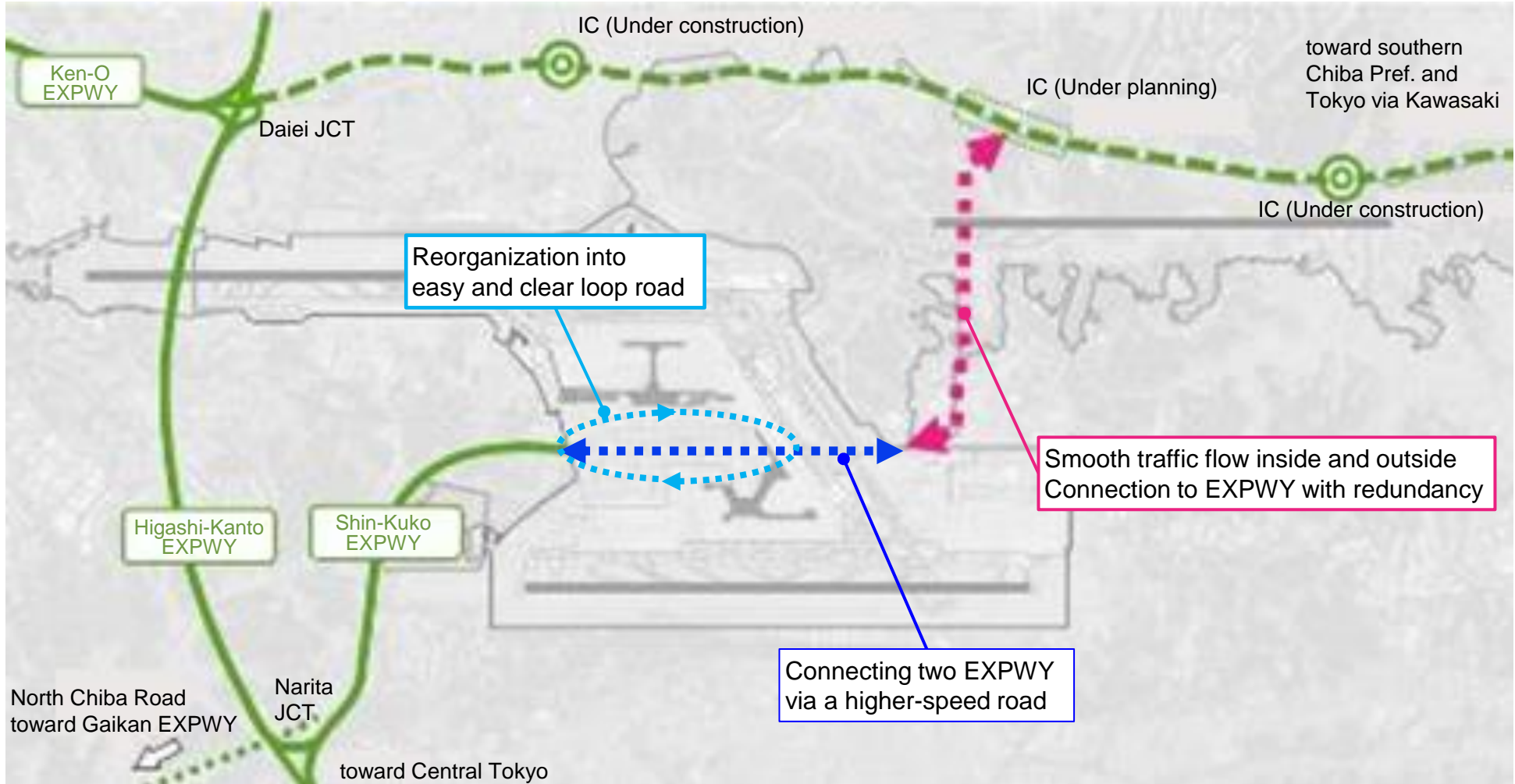
- Increase capacity to meet future demands.
  - Short-term
  - Long-term
  - For employee
  - P + R



# Optimal surface access by various options

## Road network within the airport

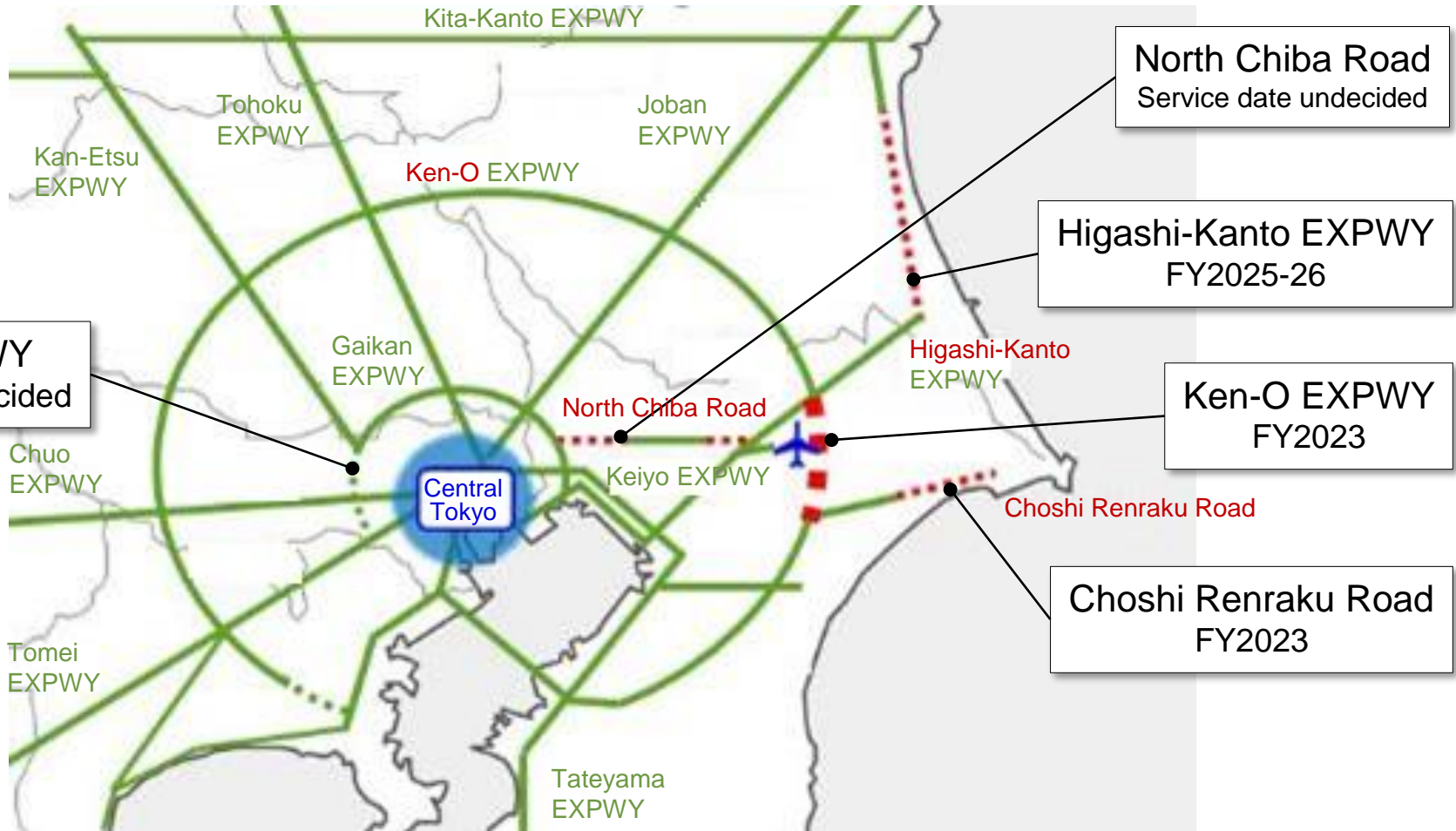
Illustration of the reorganization of roads within the airport



# Optimal surface access by various options

## Road network around the airport

### Wide-area arterial highways



## Implementation of cutting-edge technology

- It would be desirable for NAA and stakeholders to work together in proactively considering the potential for introducing advanced technologies

### <MaaS>



Source: [www.gov-online.go.jp](http://www.gov-online.go.jp)

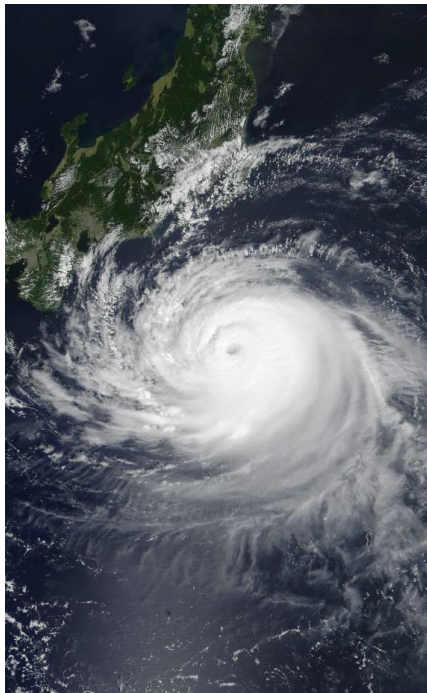
### <Urban Air Mobility>



## Enhancing access resilience

- Natural disasters are becoming more frequent and severe due to climate change
- It is important to realize disaster-resistant surface access by facilities and operation

Typhoon Faxai (15<sup>th</sup> Typhoon) September 2019



Typhoon Faxai



Suspension of rail



Heavy traffic jam in airport



Terminal congestion by passenger stagnation

# The 5 Initiatives for Future Vision

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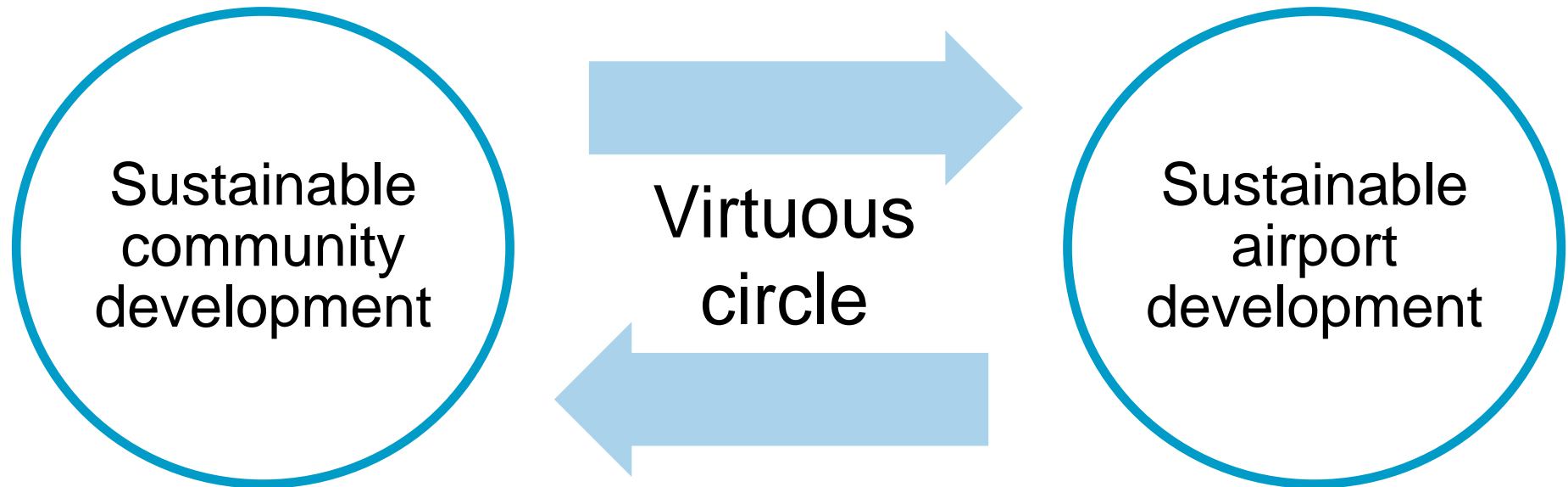
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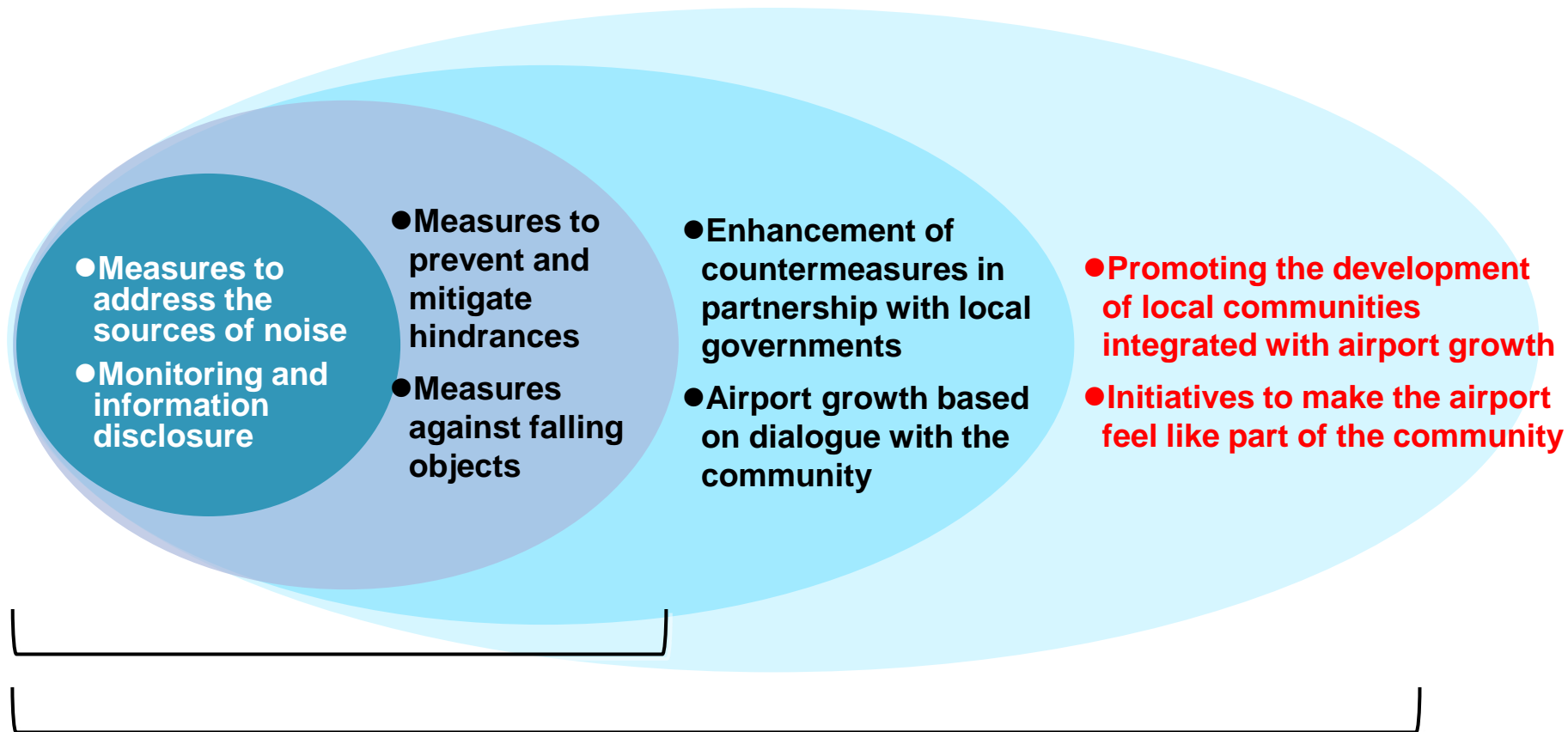
**Integrated and sustainable development of the local communities and the airport**

# Integrated and sustainable development of the local communities and the airport



**Achieving coexistence, mutual prosperity, and co-creation through synergies, resulting in integrated growth**

# Integrated and sustainable development of the local communities and the airport



Until now



From now on

Coexistence measures to respond to local requests  
**Neutralizing the negatives**



Proactive measures to contribute to the community  
**Turning a neutral situation into a positive one**

# Integrated and sustainable development of the local communities and the airport

## Expanding the economic cycle to encompass surrounding communities

- Stakeholders will work together to consider how to attract industry and establish industrial clusters around the airport, including e-commerce/distribution and processing hubs, equipment stock/maintenance hubs, and fresh produce export hubs
- We will consider the identification and creation of local tourism resources and content, along with the formation of a tourism zone centered on the airport, and the development of new community businesses



[Program of quintessentially Japanese experiences with an accompanying guide]



[Cycle tourism based on community partnerships]



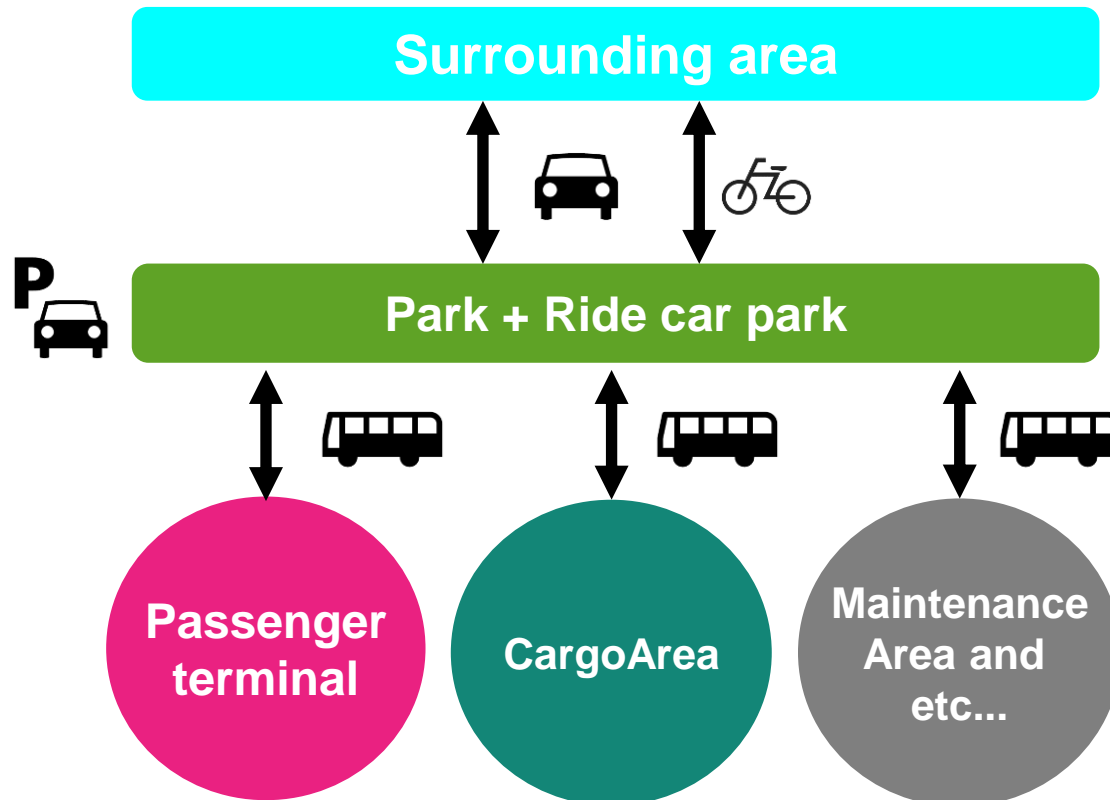
[Initiatives with business operators (Narita Airport Ale)]

# Integrated and sustainable development of the local communities and the airport

## Collaboration involving community and airport functions

- Considering locating some of the airport's functions to areas outside the airport.

### Ex. Park + Ride for employees



# Integrated and sustainable development of the local communities and the airport

## Proactive initiatives focused on local production for local consumption

- In partnership with local communities, we will undertake deliberations concerning proactive initiatives focused on local production for local consumption, including the use of local timber, with the objective of creating a sustainable society



# Integrated and sustainable development of the local communities and the airport

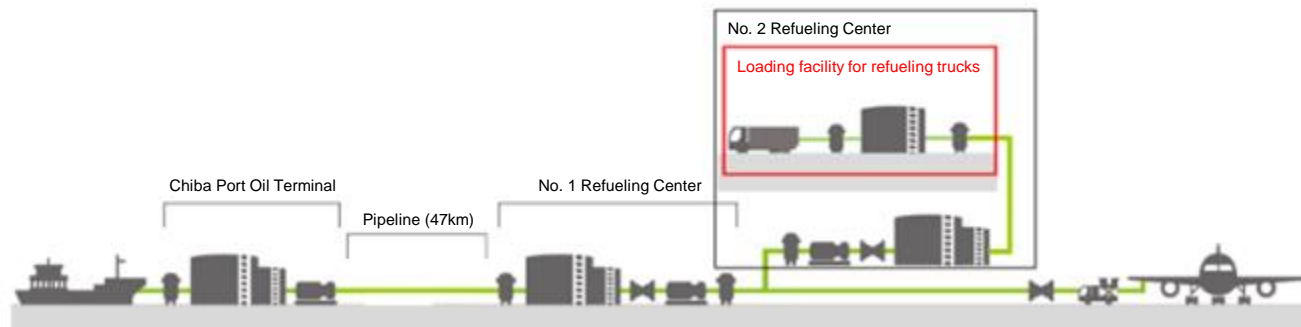
## Collaboration with the community aimed at decarbonization

- We will work with stakeholders on research concerning the possibilities for collaboration with local communities aimed at the airport's decarbonization, including the supply of renewable energy and sustainable aviation fuel (SAF) derived from local agricultural and forestry resources

## Examples of SAF use initiatives at Narita Airport



Experiment involving truck-based aircraft refueling

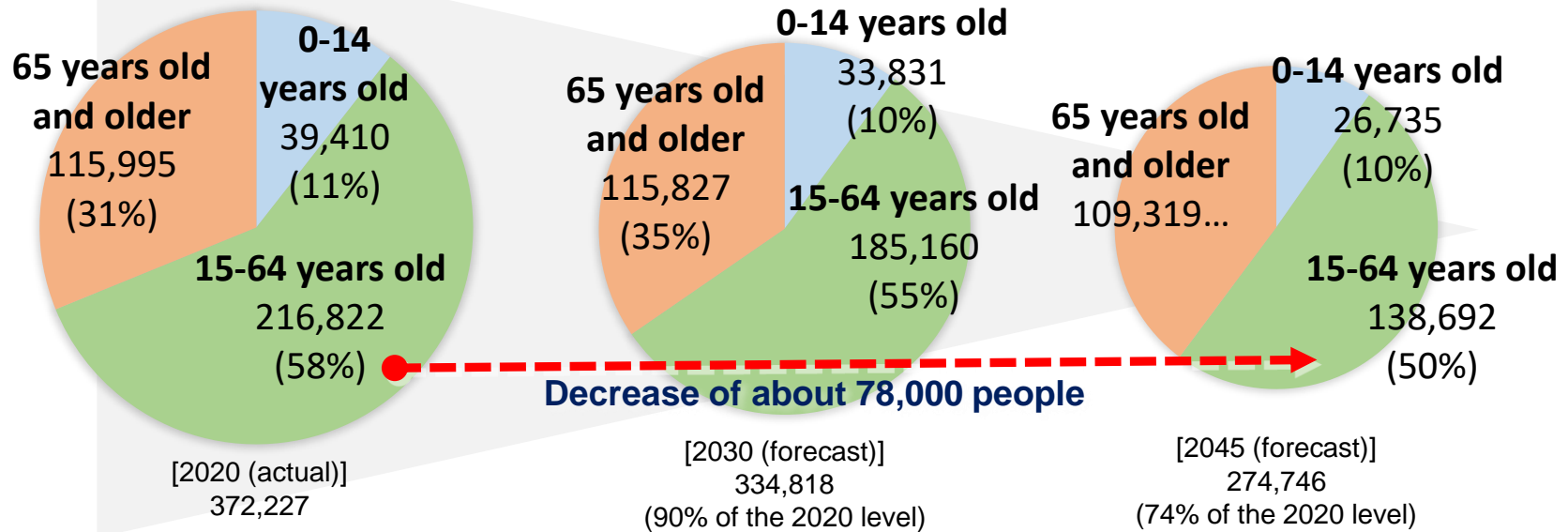


This marked the first time in Japan that a hydrant system had been used to fuel up an aircraft with SAF produced at a demonstration plant in Japan

# Integrated and sustainable development of the local communities and the airport

## Employment environment sustaining the airport

Projected future population of the area around the airport  
(9 municipalities in Chiba Prefecture)



\*Source: 2020 Population Census: National Institute of Population and Social Security Research, *Regional Population Projections for Japan: 2015-2045* (2018)

**Creating both attractive working environments and appealing residential communities will be essential**  
in order to secure airport staff as population decline progresses

# Integrated and sustainable development of the local communities and the airport

## Airport facilities as part of the community

- We will consider conducting research regarding the development of appealing communities by leveraging transport functions and airport facilities that local residents can visit to interact with the airport

Jewel Changi Airport, Singapore



A landmark commercial complex

Flight of Dreams, Chubu Centrair International



A commercial facility based on the theme of aircraft and the aviation industry

The Circle at Zürich Airport, Switzerland



A complex incorporating retail, hotel and convention center, and office functions

Munich Airport Center, Germany



A roofed open space that can be used for community exchange and events

Source: Clockwise from top left: Visit Singapore website, Chubu Centrair International website, myfamilytravels.com, Zürich Airport website

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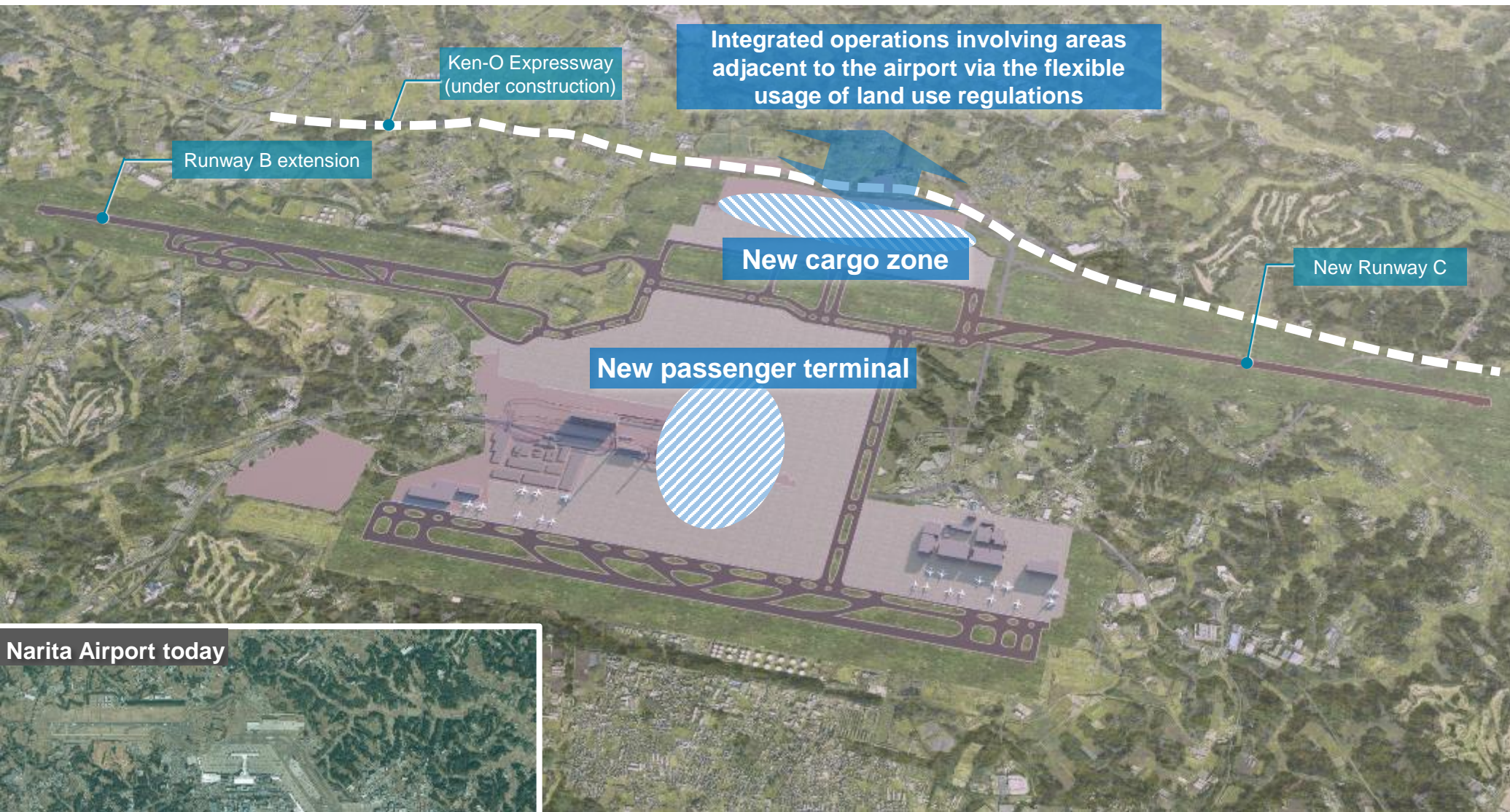
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