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# “Eco-Airport” in Japan

**Civil Aviation Bureau (CAB),  
Ministry of Land, Infrastructure, Transport and Tourism (MLIT)  
Taizo Nishiyama**

**ICAO HQ, Montréal, Canada**

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# Contents

- About Eco-Airport
- Environmental initiatives at airports
- ASEAN-Japan cooperation



# What is Eco-Airport?

- Environmentally-friendly airport
- Voluntary environmental policy/measures at or around the airports
- Improvement of the country's image (an airport is the gateway to the country) -> Ecology
- Reduction of operation costs by saving energy at airports -> Economy

Double ECO



# Procedure of Eco-Airport

- The government formulates “Eco-Airport Guideline”
- The Eco-Airport Council of each airport formulates an annual Environmental Plan and takes initiatives

Actually, each airport has unique conditions (size, climate, location, etc.)



Large-scale



Off-shore



Mountainous site

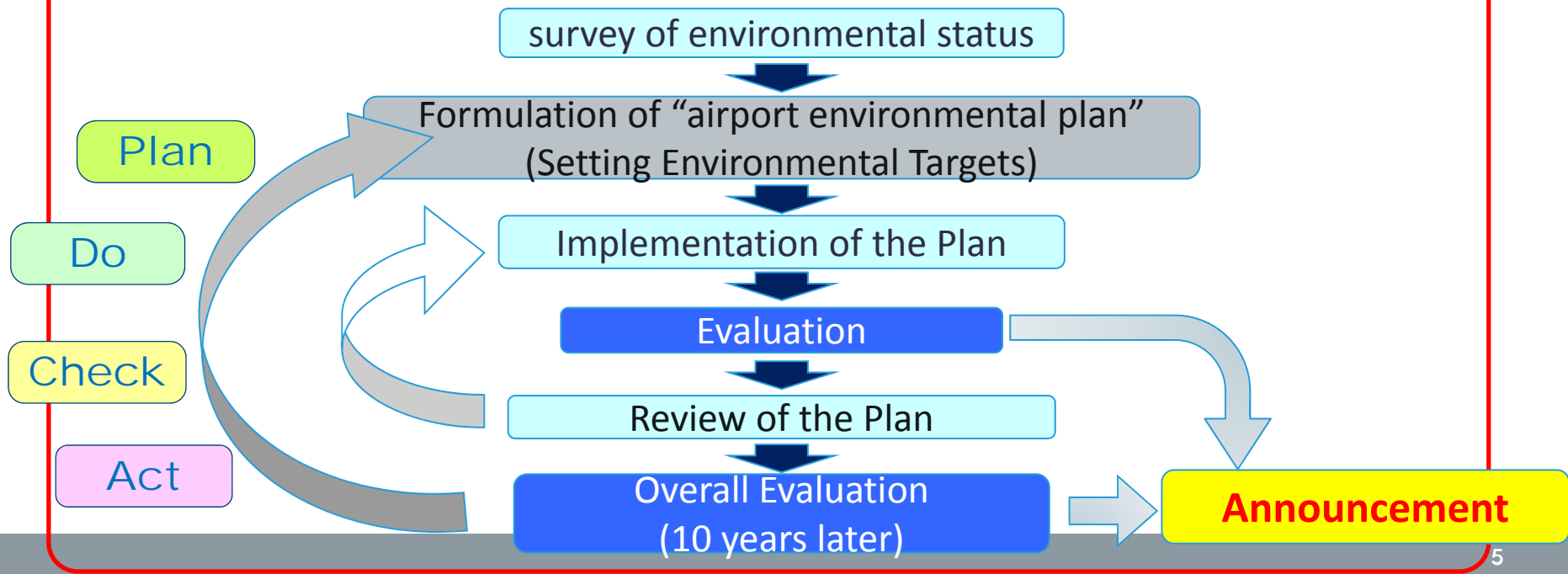


Snowbelt



# PDCA cycle

## The Eco-Airport Council of each airport





# Outcomes of sustainable initiatives

(exemplary case)

## Environmental target

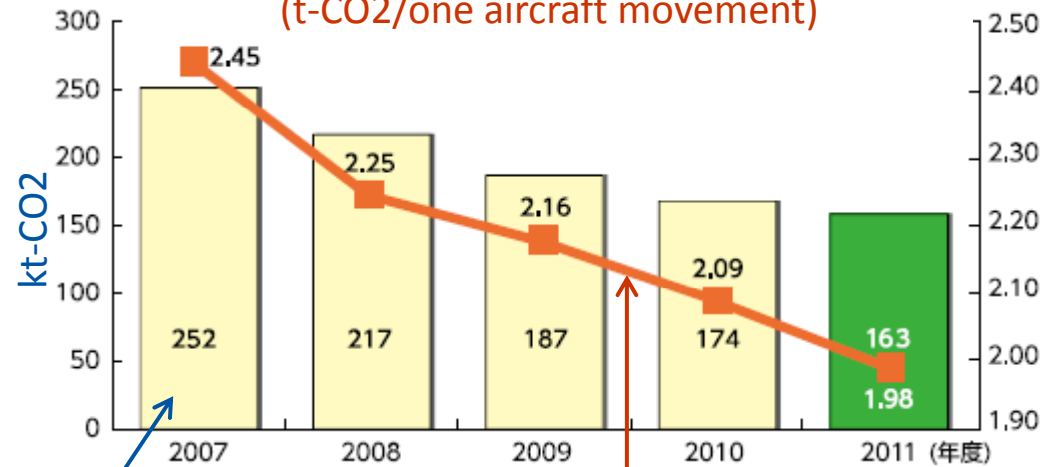
Reduce CO<sub>2</sub> emissions by 3% in total compared to that of 2007 by 2011



## Outcome

Reduced by 19% by 2011

Trends in CO<sub>2</sub> reduction  
(t-CO<sub>2</sub>/one aircraft movement)



Bars: Total CO<sub>2</sub> emissions

Lines: Basic unit of CO<sub>2</sub> emissions per one aircraft movement





# Initiatives toward Eco-Airport Guideline

Recycle plant



Glass clippings for use as fertilizer



Electric vehicles



Recycle and reuse of rain and kitchen wastewater



Rooftop greening



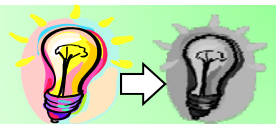
Ground power units



LED lamps



Solar panels



Turn off the lights when not in use



Less idling



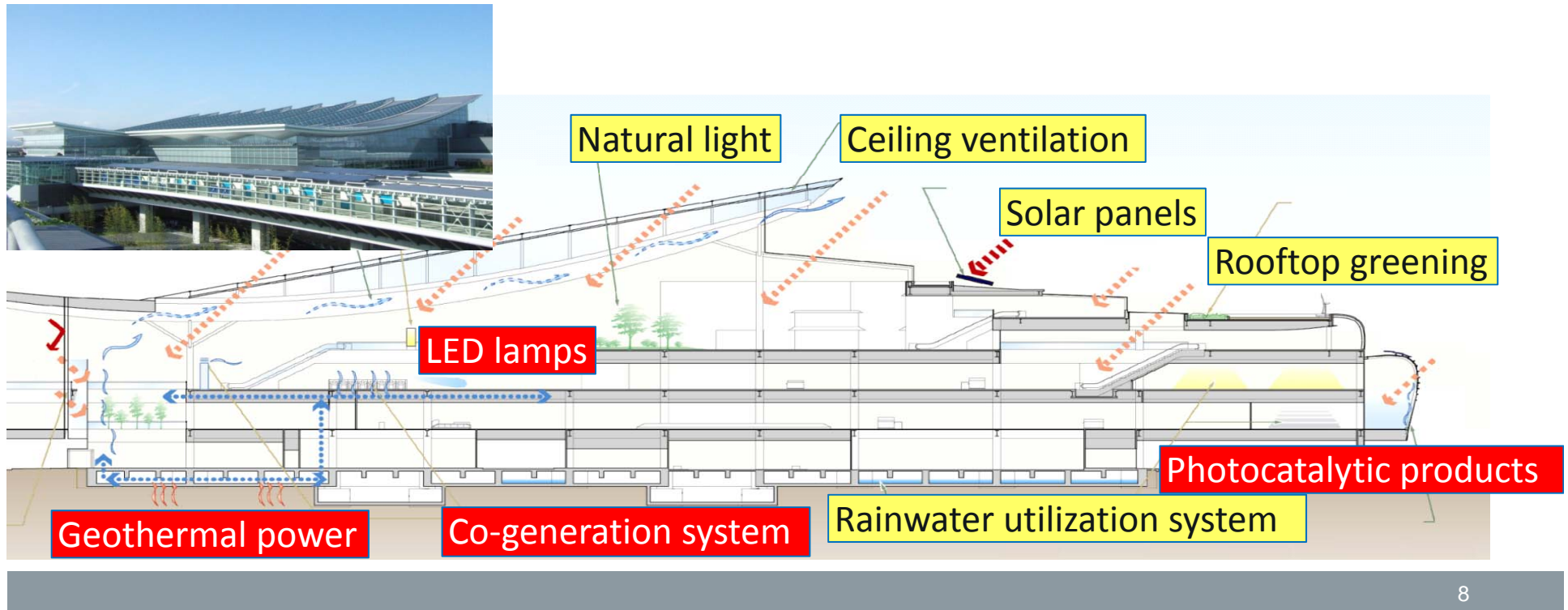
Water-saving



Recycling



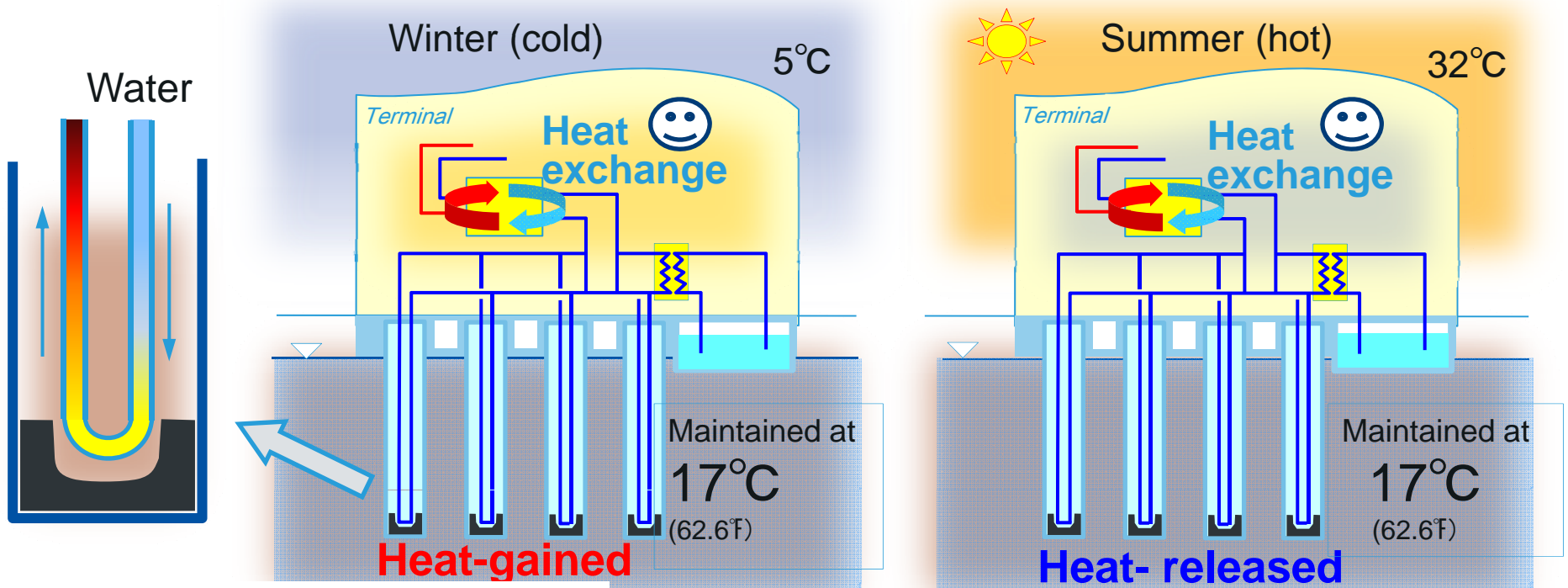
# Eco-technologies adopted in passenger terminal







# Geothermal air-conditioning system

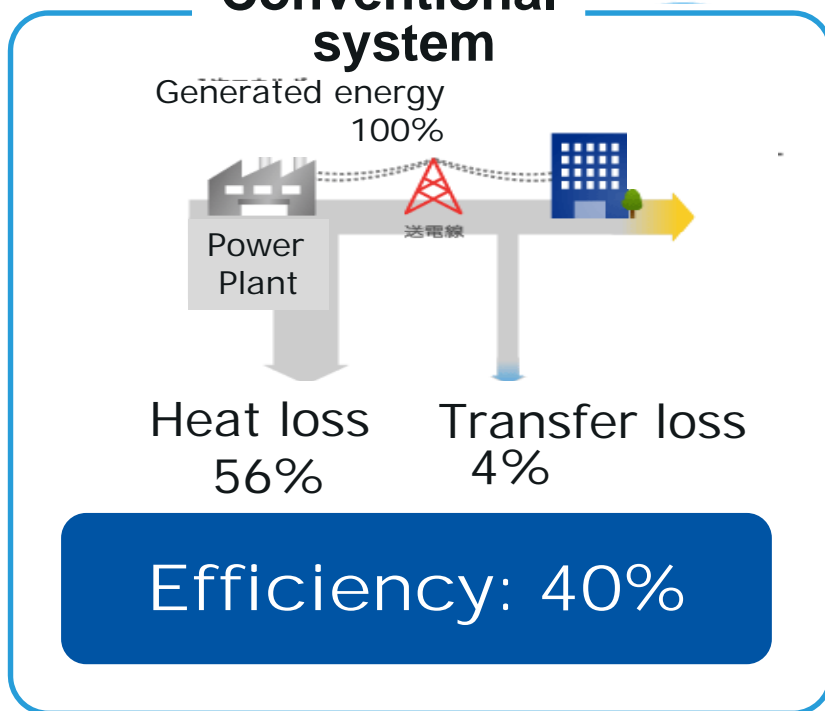


➤ Lower power consumption

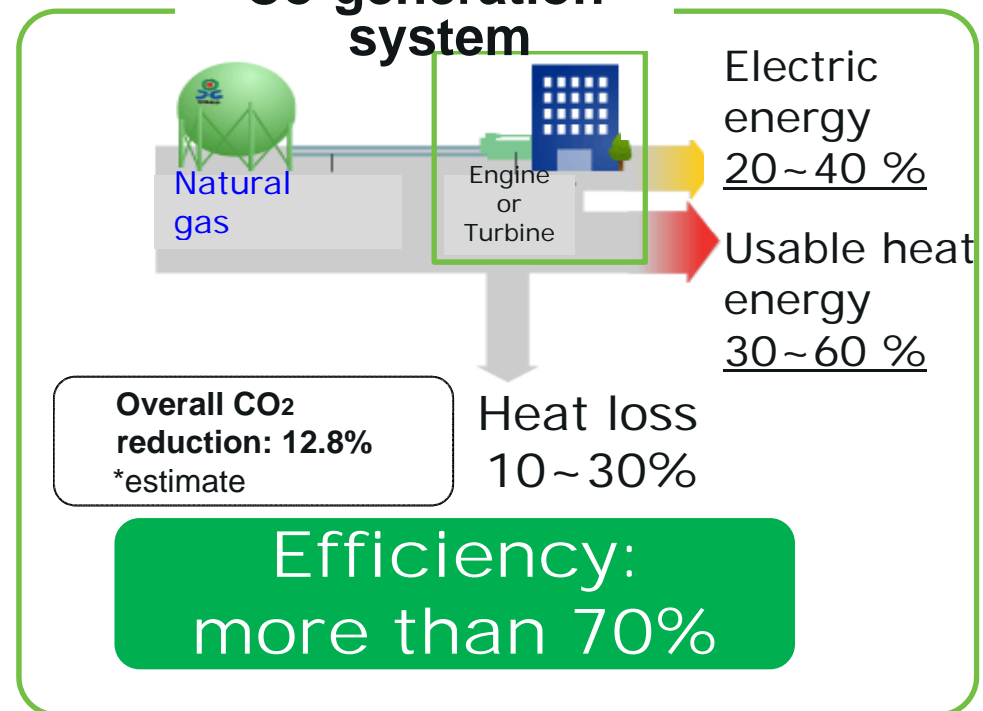


# Co-generation system in terminal

## Conventional system



## Co-generation system



➤ Lower power consumption



# Photocatalytic products

Japanese new technology for decomposition not only by **sunlight** but visible light

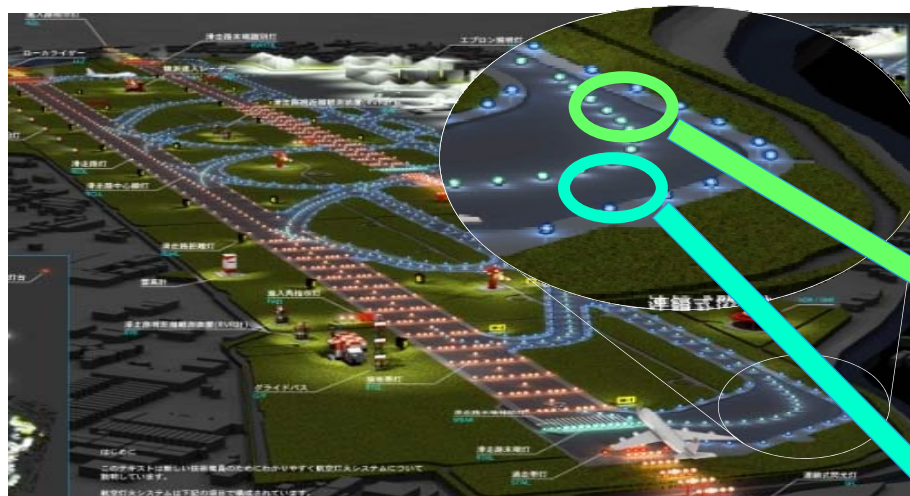
Adopted inside the building

➤ Lower maintenance costs





# LED lamps for airport taxiways



	Ordinary type	<u>New type (LED)</u>
<b>Taxiway centerline lights (buried type)</b>		
<b>Taxiway edge lights (above-ground type)</b>		

- Lower power consumption
- Lower maintenance costs





# Other initiatives

General waste segregation



- Lower power consumption
- Lower procurement costs



Use motion sensor lighting

Turn off the lights when not in use



Remove fluorescent lights



Turn off the lights frequently





# Regional contribution

Grass clippings for use as fertilizer



Education of environmental preservation

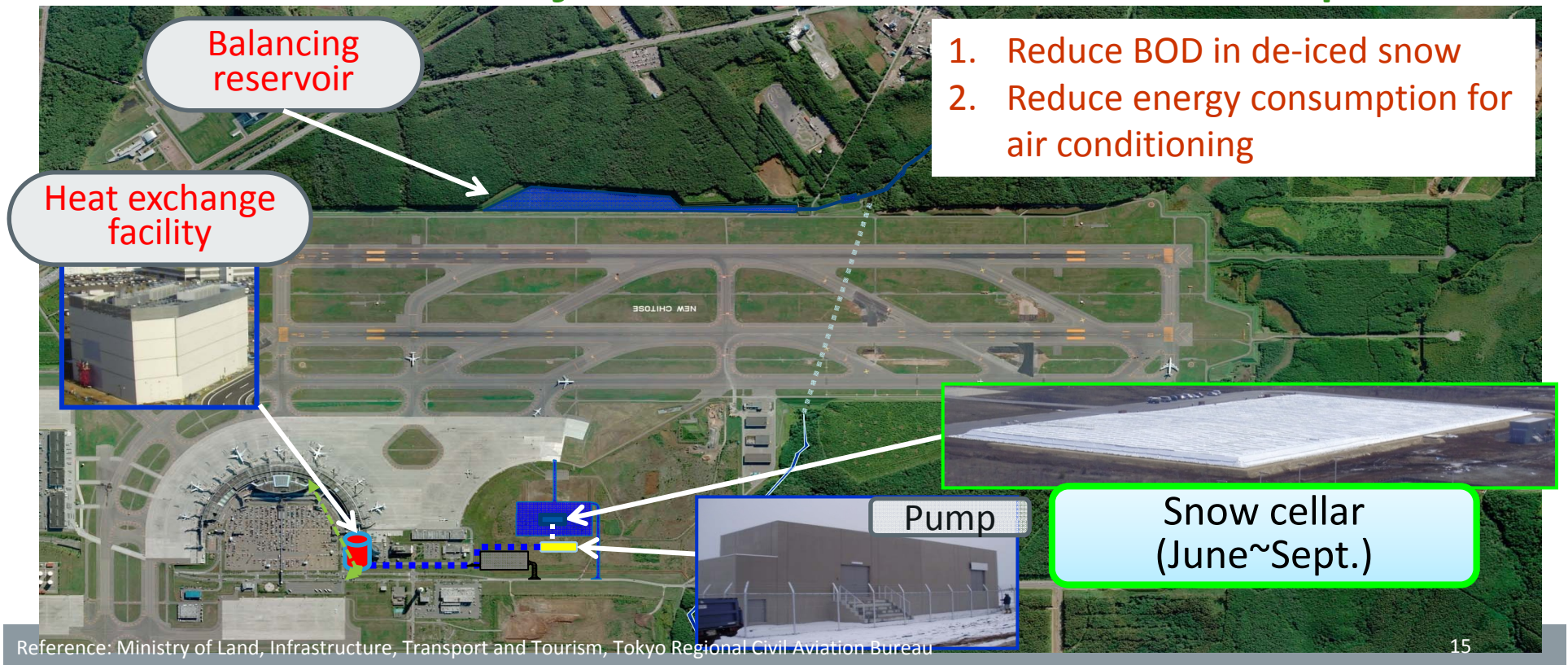


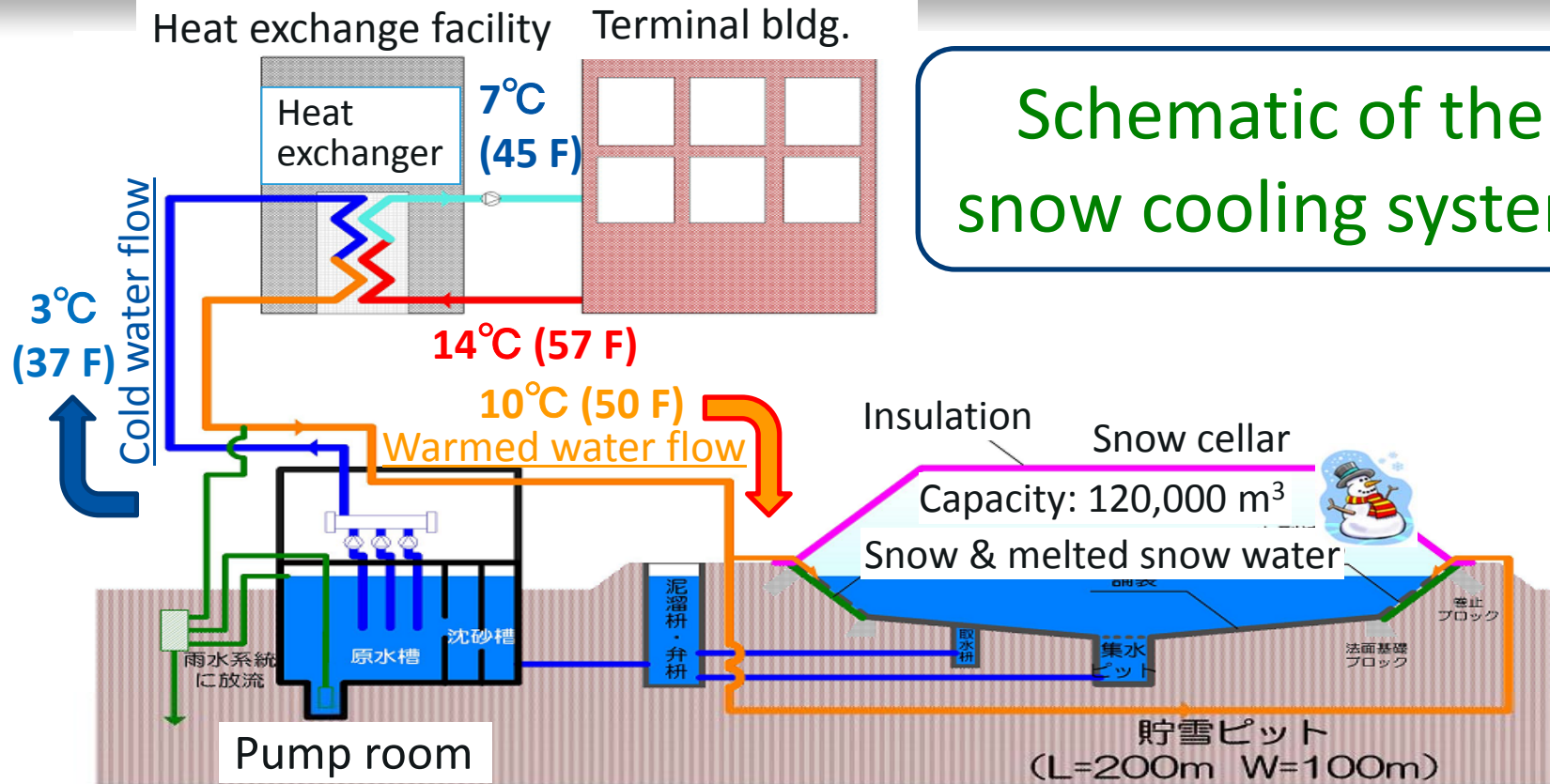
- Lower maintenance costs
- Better understanding & cooperation





# “The Cool Project” at New-Chitose Airport





Schematic of the snow cooling system

➤ Lower power consumption





# BOD Reduction in melting snow



De-icing  
(Deicing agent contains organic matter)



Snow cleared from airport surfaces is collected to be piled up mountain-high.



Melted snow water is stored in the balancing reservoir to reduce BOD.

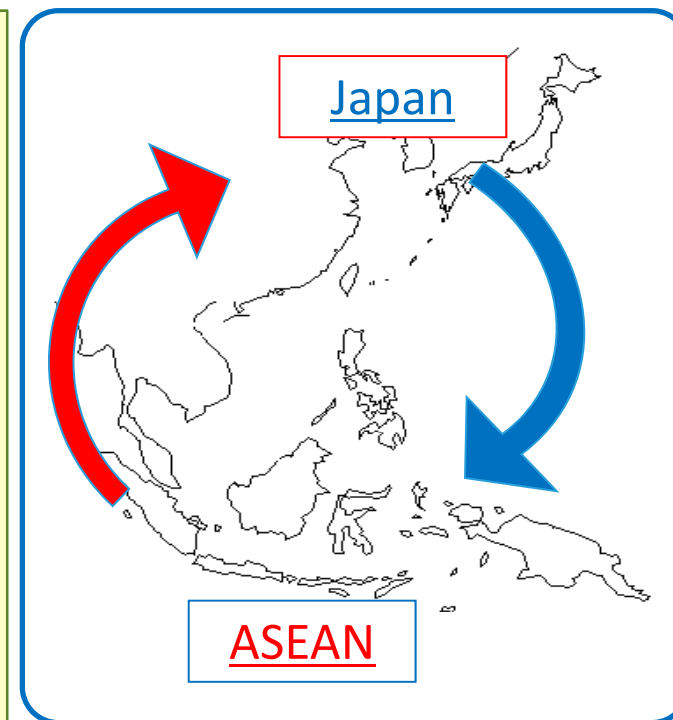
➤ **Lower environmental impact**



# ASEAN-Japan Cooperation

## History

- Endorsement of the ASEAN-Japan Eco-Airport Guideline at the 6th ATM+J held in Manila, the Philippines in 2008
- JICA seminar on Eco-Airport (The JICA Training Course 'Airport Development Planning Considering Environmental Impacts' )
- The follow-up course for the JICA's Eco-Airport Seminar (Hanoi and Ho Chi Minh)
- Questionnaire & field surveys on the progress of Eco-Airport





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*Thank you all for listening.*

