

# **Progress Report of Low-Carbon Model Town (LCMT) Project**

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# APEC Low-Carbon Model Town (LCMT) Project

LCMT Project was initiated in 2011 in response to Declaration at the 9<sup>th</sup> APEC Energy Ministers Meeting held in Fukui, Japan in 2010.

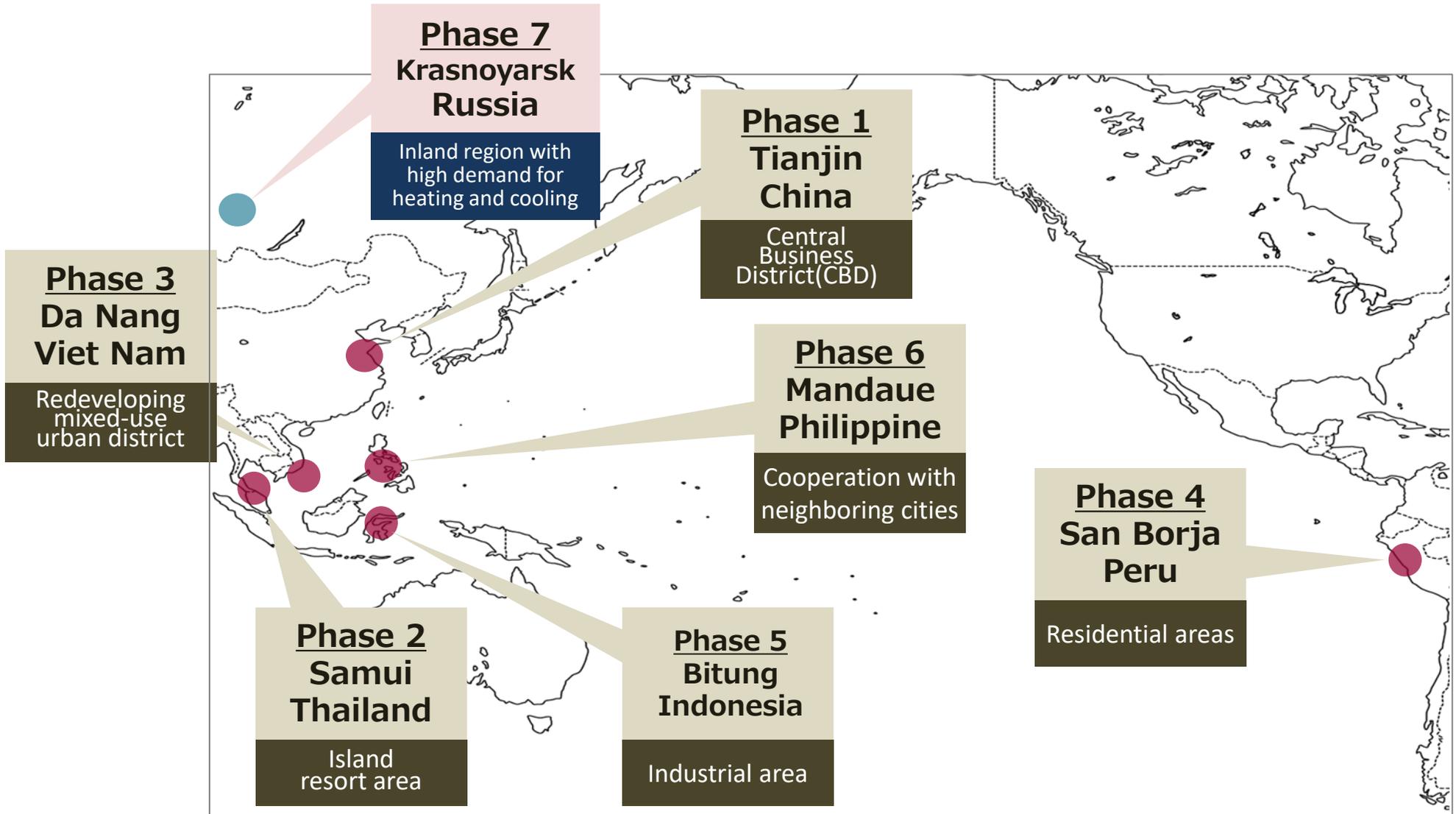
Background of the LCMT Project:

- Rapid urbanization and increase in energy consumption in the APEC Region
- Necessity of low-carbon measures in city planning to boost energy efficiency and fossil energy use

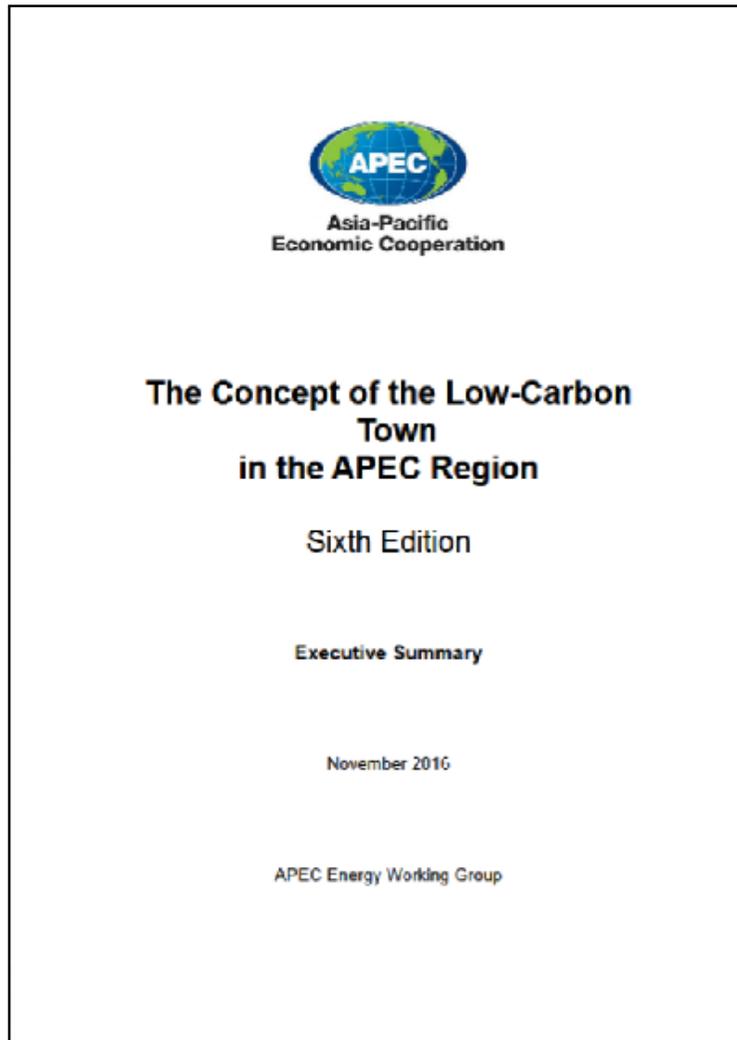
# Key Activities of LCMT Project (Phase 1-7)

1. Development and refinement of the “Concept of the Low-Carbon Town in the APEC Region (Concept)”
  - The Concept shows a basic idea/principle of a low-carbon town and provide guidance.
  - The APEC Low-Carbon Town Indicator (LCT-I) System has been developed based on the Concept.
2. Feasibility Study for a Case Town
3. Policy Review for a Case Town

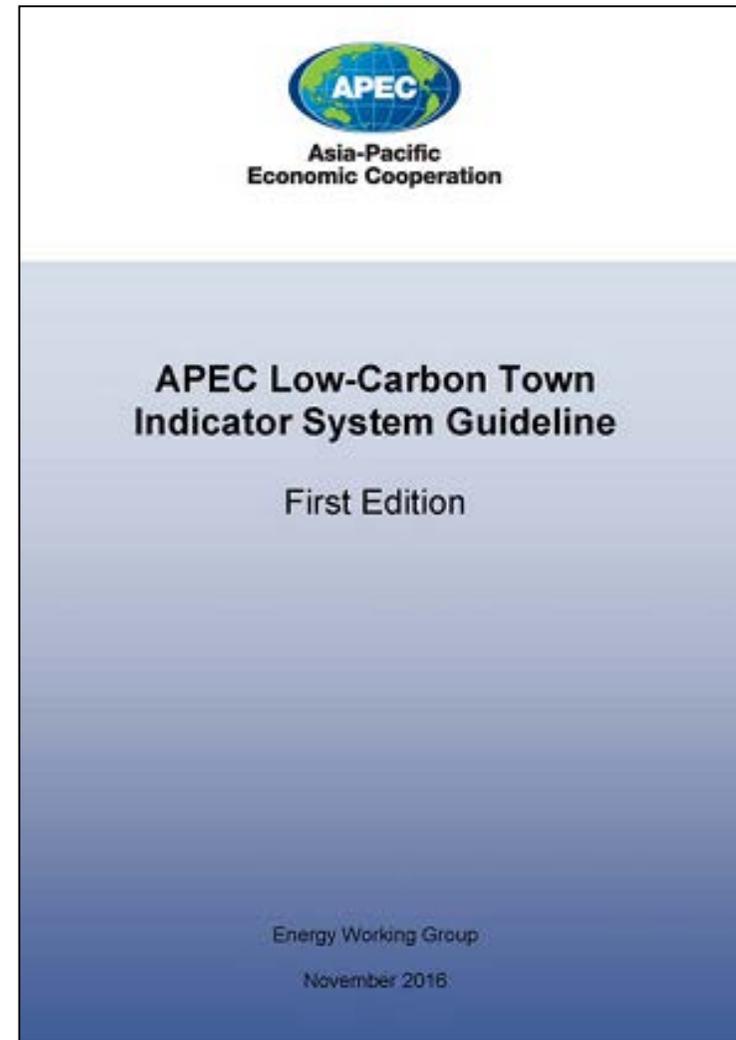
# Case Towns of Feasibility Study and Policy Review



# The Concept and the LCT-Indicator System



The Concept of the Low-Carbon Town in the APEC Region (Sixth Edition)  
[http://publications.apec.org/publication-detail.php?pub\\_id=1796](http://publications.apec.org/publication-detail.php?pub_id=1796)



APEC Low-Carbon Town Indicator System Guideline (First Edition)  
[http://publications.apec.org/publication-detail.php?pub\\_id=1797](http://publications.apec.org/publication-detail.php?pub_id=1797)

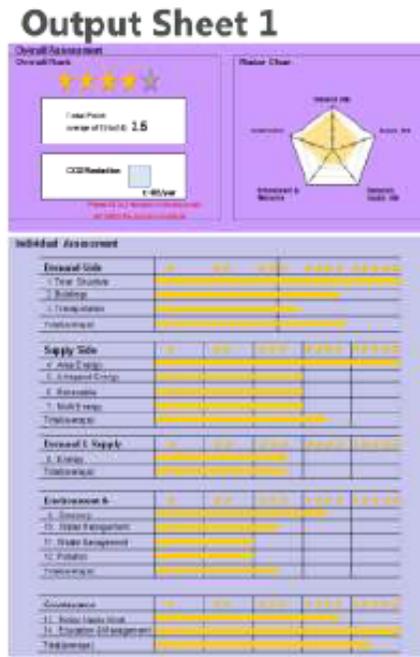
# Key Objectives of Dissemination Phase

- To disseminate the basic ideas and effective approaches of the Concept through utilizing the LCT-I System, which helps evaluate the progress and status of low-carbon development of various area in the APEC region;
- To provide Feasibility Studies of a specified area of low-carbon development projects selected as the LCT-I volunteer towns in the LCMT Project and identify how to improve the low-carbon development plans through the Feasibility Studies; and
- To share best practices and real-world experiences of low-carbon town design with planners and policy makers throughout the APEC region.

# APEC Low-Carbon Town Indicator (LCT-I) System

- Self-assessment tool designed as simple as possible considering the situation in developing economies
- Not for comparison with other towns/cities, but for monitoring the progress and showing the next step of low-carbon development
- Shared information with ISO/TC268 on Sustainable Cities and Communities

	Tier 1	Tier 2 (No. of Tier 3 indicators)
Directly Related	Demand	1. Town Structure (3) 2. Buildings (4) 3. Transportation (6)
	Supply	4. Area Energy System (1) 5. Untapped Energy (1) 6. Renewable Energy (1) 7. Multi Energy System (1)
	Demand & Supply	8. Energy Management System (3)
Indirectly Related	Environment & Resources	9. Greenery (2) 10. Water Management (3) 11. Waste Management (2) 12. Pollution (3)
	Governance	13. Policy Framework (4) 14. Education & Management (2)



(Source: The 14<sup>th</sup> LCMT-TF Meeting)

# LCT-I System Application by LCT-I Volunteer Towns

- Three LCT-I volunteer towns were selected for the LCMT Phase 7:
  - **Banda Aceh City, Indonesia**
  - **Hang Tuah Jaya City, Malaysia;** and
  - **Shah Alam City, Malaysia**
- Their self-evaluation results of the LCT-I System was presented by their representatives and reviewed by the experts
- Feasibility studies on LCT-I System assessment items identified to be improved will be conducted to support their ongoing efforts in low-carbon town development as a part of the activities in the LCMT Dissemination Phase 1



(Source: Banda Aceh City)



(Source: Hang Tuah Jaya City)

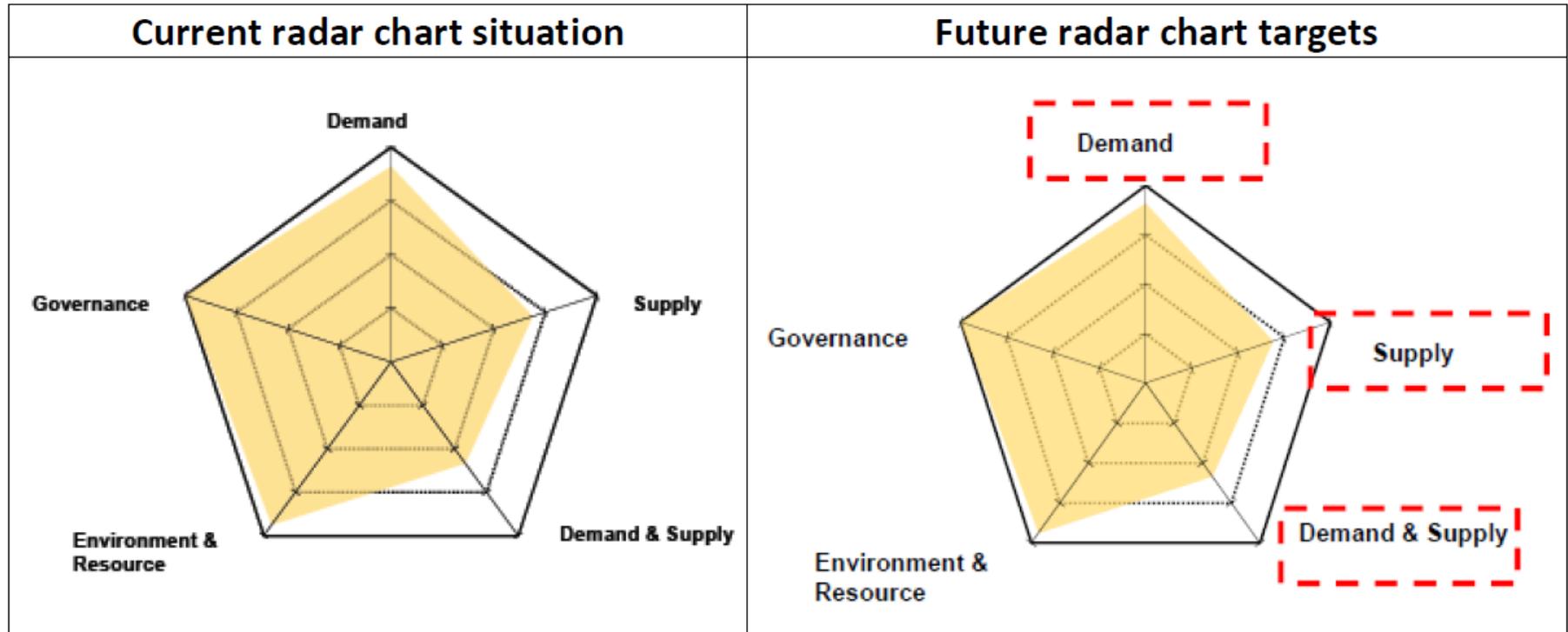


(Source: Shah Alam City)

(Source: The 14<sup>th</sup> LCMT-TF Meeting)

# LCT-I System Application by LCT-I Volunteer Towns

## LCT-I System Self-Evaluation Result of Hang Tuah Jaya City, Malaysia



(Source: Hang Tuah Jaya City, 2017)

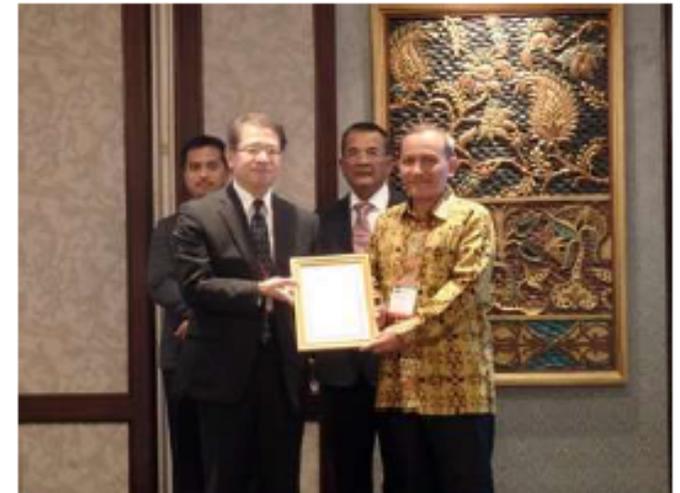
# LCT-I System Application by LCT-I Volunteer Towns

## Examples of the Recommendations for the LCT-I volunteer towns:

- Implementation of energy management systems
- Improved resilience and disaster risk mitigation by different energy sources
- More effect data or evidence would be better to estimate the energy saving benefit for low carbon city
- The target area is a compact central business district (CBD) with high-rise buildings to be added, ventilation and heat island issue will be the impacting factor for low carbon city

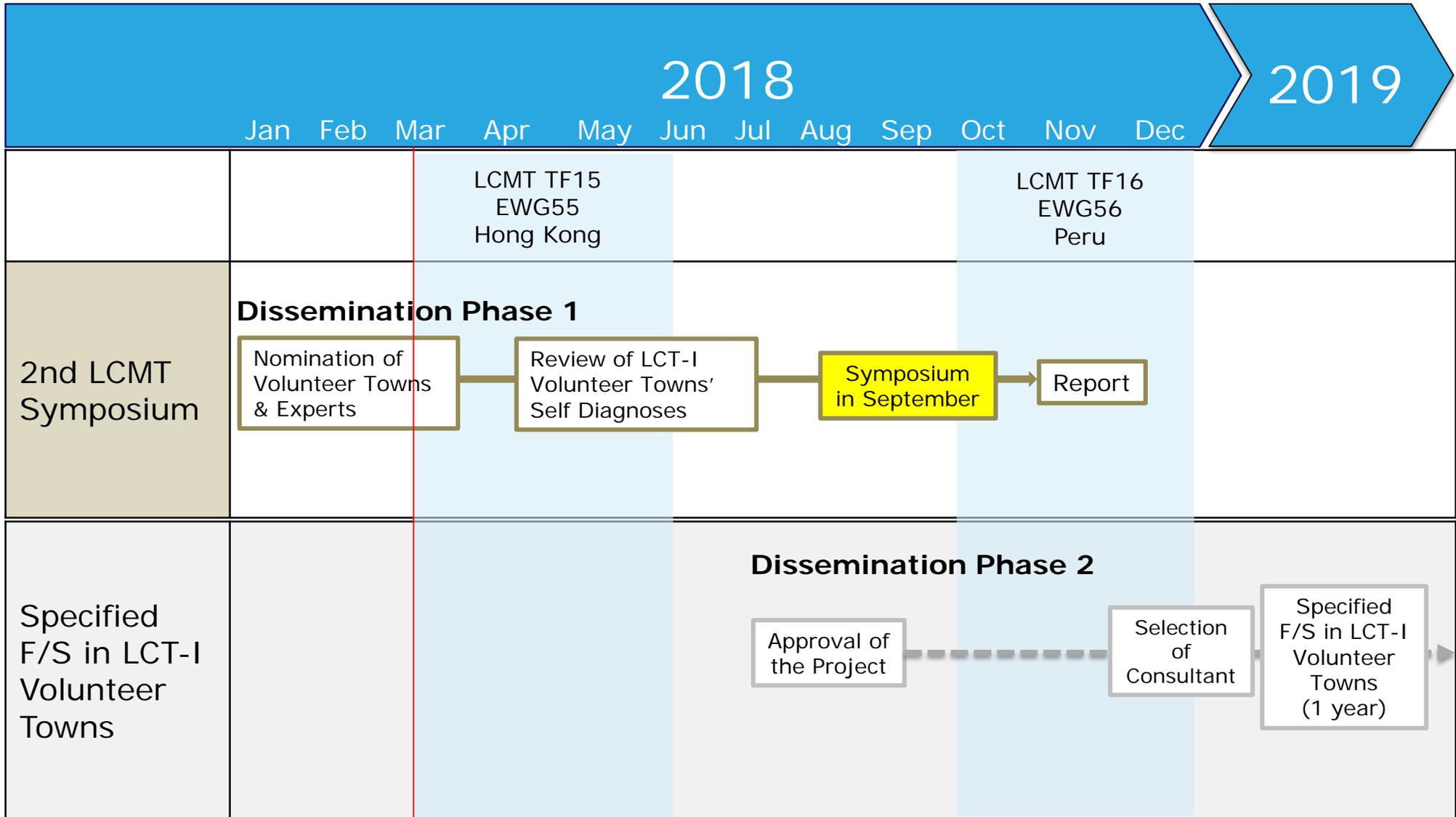
## Comments for the improvement of the LCT-I System

- Some indicators can only be applied to APEC advanced economies that have mature urban development and administration regulations
- Tier 1 categories have different number of Tier 2 items, which creates unintended weighting on Tier 2 scores onto Tier 1 result
- Misunderstanding of the indicator on Residential Use and Non-residential Use of Land (1.1.1.) is common



(Source: The 14<sup>th</sup> LCMT-TF Meeting)

# Schedule



# Objectives of LCMT Symposium

In principle, hold once a year in one of the previous LCMT case towns (The First LCMT Symposium was held in Jakarta on 14-15 September 2017). The Second LCMT Symposium will be held on 20-21 September 2018 in Da Nang, Viet Nam

## Objectives

- Share information on advanced LCT projects in the world including the previous LCMT case towns in the APEC region
- Promote the use and recognition of the LCT-I System as a tool to disseminate the LCT in the APEC region
- Explore possibility of utilising the LCT-I System to develop bankable low-carbon development projects in APEC developing economies
- Gather feedbacks from experts and delegates of LCT projects for the improvement of the LCT-I System

**Thank you for your kind attention!**