

December 6, 2014

The 4th International Forum on the “FutureCity” Initiative
Plenary session

Enhancing Resilience and the “FutureCity”

--Organization of Plenary session
and Breakout sessions--

Shuzo Murakami

Promotion Committee for the “FutureCity” Initiative Chair

Resilience Japan Promotion Council Director

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Development of discussion in the international forum

Keynote speech : Enhancing Resilience and the “FutureCity”
(Hiroto Izumi, Special Advisor to the Prime Minister)

Plenary Session: Enhancing Resilience and the “FutureCity”

Point (1) Soft and hard aspects of enhancing resilience
Point (2) Enhancing Resilience during emergencies and at normal times
Point (3) Enhancing resilience and creating new value

Breakout Sessions 1:
"Resilience of the city in the aging society"

Point (1)
Review of social infrastructure assessing and dealing with risk related to the elderly population as people vulnerable in the event of disasters
Point (2)
To those in charge of the regional efforts for the elderly

Breakout Sessions 2:
"Community and enhancing the resilience"

Point (1)
Creating a strong community during normal times
Point (2)
Community systems that function even during emergencies

Summary

On building national resilience

Basic objectives of national resilience

1. Maximum protection of human life
2. Maintaining the vital functions of the society and country without sustaining fatal damage
3. Minimize damage to public property and public facilities
4. Rapid recovery and reconstruction

What are strong territories and economic social systems?

1. Strength that does not allow fatal damage to livelihood, economy, or territory due to disasters or accidents
2. Flexibility to respond rapidly

What is national resilience?

⇒ National risk management, strengthening competitiveness

- Initiatives building national resilience as well as mitigating and preventing disaster create a strong and flexible country
- Strengthening Japan's industrial competitiveness, creating safe and secure livelihood, and generating the power of people to realize these points

Strengthening "the livelihood of the people," "the people," and "industry," at **normal times** and **during emergencies**, through balanced investments

Improving immunity



Improving resilience



References:
Resilience Japan
Preparatory Committee
Materials Promotion
Council
Resilience Japan
Promotion Council Website

National resilience structure

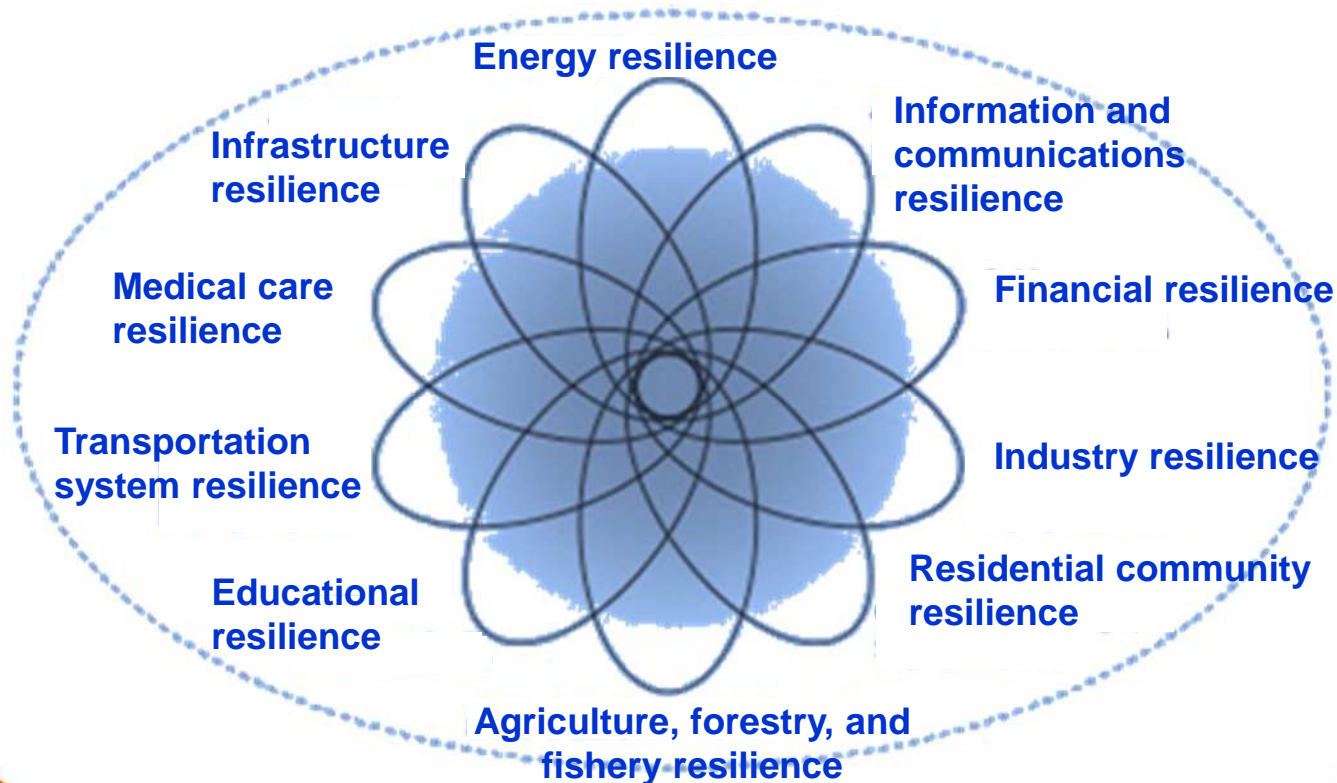
Hard and Soft

Normal Times and During Emergencies

Public Investment and Private Investment



Integration of diverse resilience desired



References:
Resilience Japan
Preparatory Committee
Materials Promotion
Council
Resilience Japan
Promotion Council
Website

Enhancing Resilience and the "FutureCity"

**National
resilience**



**Regional
resilience**



**Communities'
resilience**



Promoting the "FutureCity" initiative

Creating new value in the three areas of *Environment, Society, and Economy*

Revitalizing regions through economic and social system innovations

Realizing *Cities where everyone wants to live* and *Cities where everyone is vibrant*

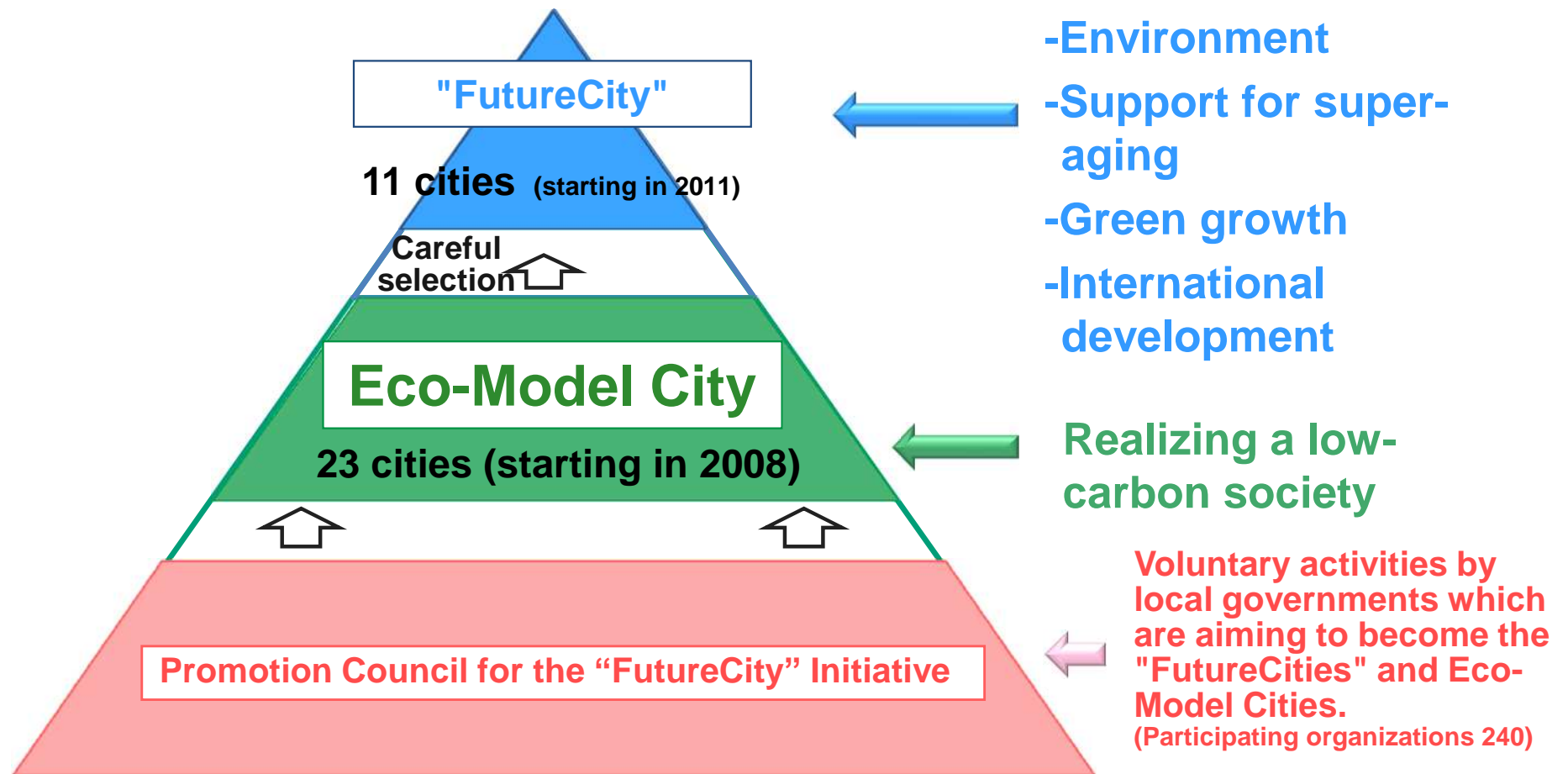


**"FutureCities"
and Eco-
Model Cities**

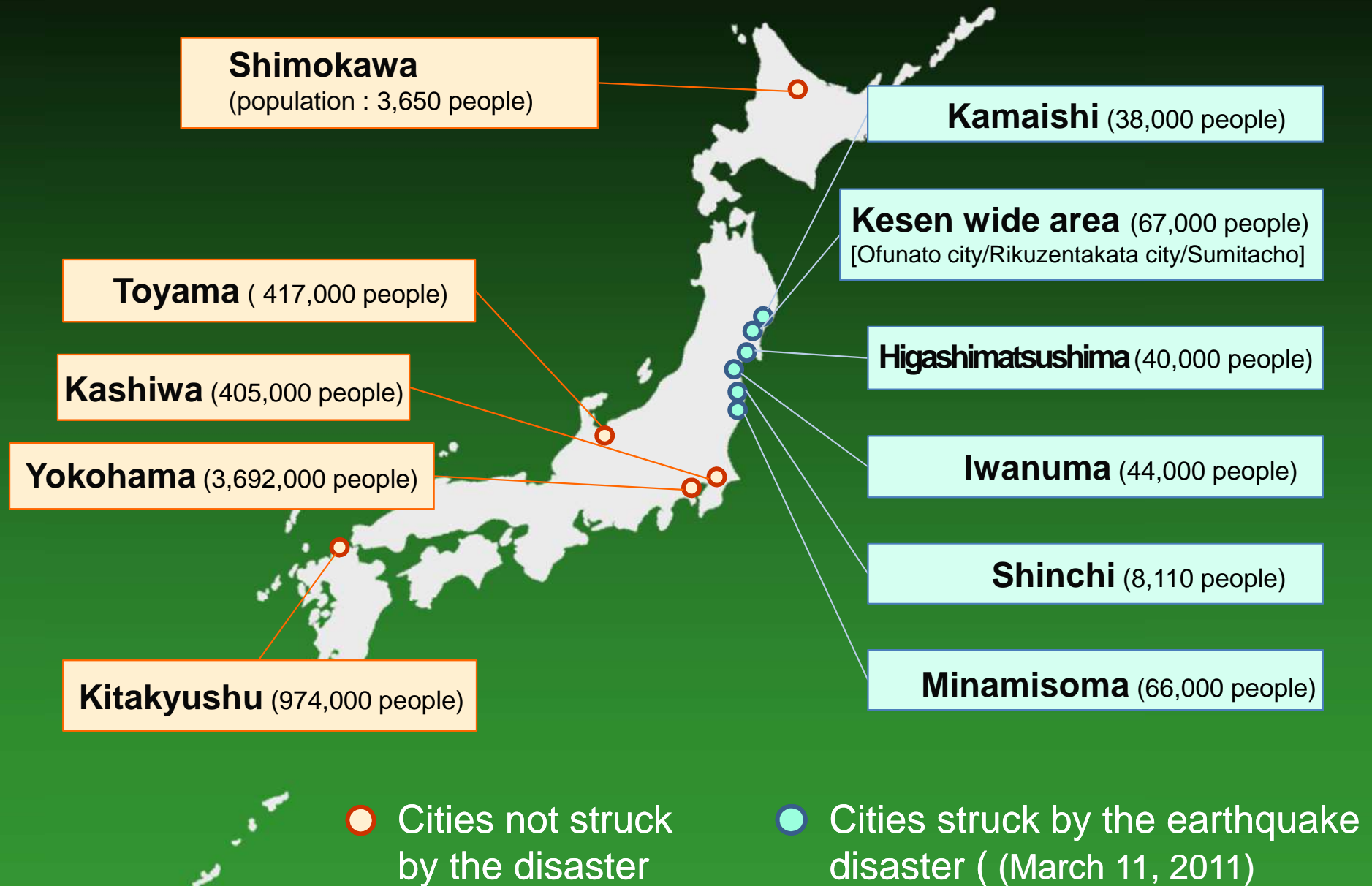


Contributing to national resilience improvements

"FutureCity" initiative



Selected "FutureCities" (11 cities, December 2011)



⇒ Conveying resilience improvement best practices in "Future Cities" within and outside the cities

Eco-Model Cities (13 cities + 7 cities + 3 cities)

【 Selected in 2008 13cities 】

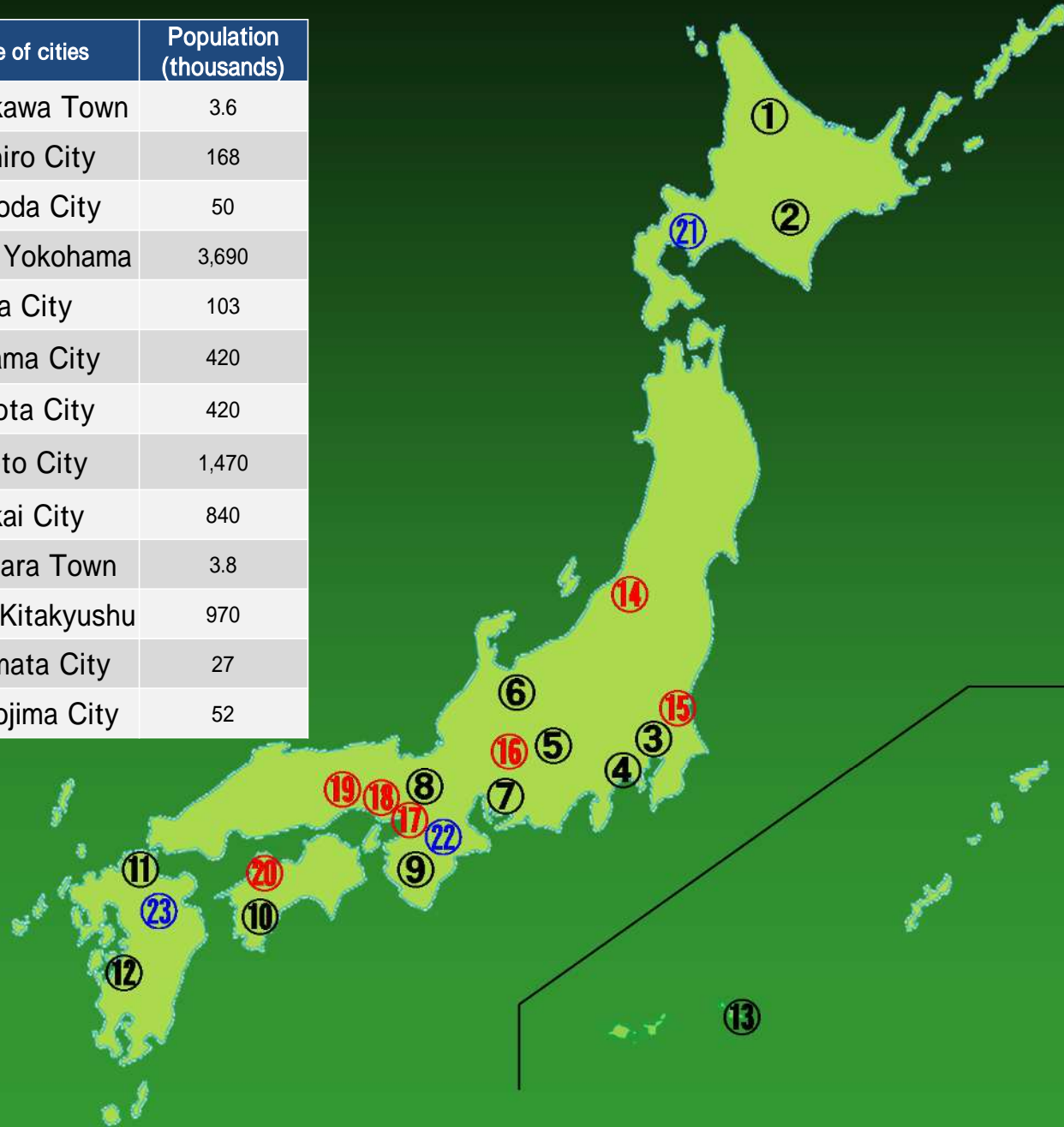
Name of cities	Population (thousands)
Shimokawa Town	3.6
Obihiro City	168
Chiyoda City	50
City of Yokohama	3,690
Iida City	103
Toyama City	420
Toyota City	420
Kyoto City	1,470
Sakai City	840
Yusuhara Town	3.8
City of Kitakyushu	970
Minamata City	27
Miyakojima City	52

【 Selected in 2012 7cities 】

Name of cities	Population (thousands)
Niigata City	808
City of Tsukuba	217
Mitake Town	19
Amagasaki City	451
Kobe City	1,542
Nishiawakura village	1.6
Matsuyama City	513

【 Selected in 2013 3cities 】

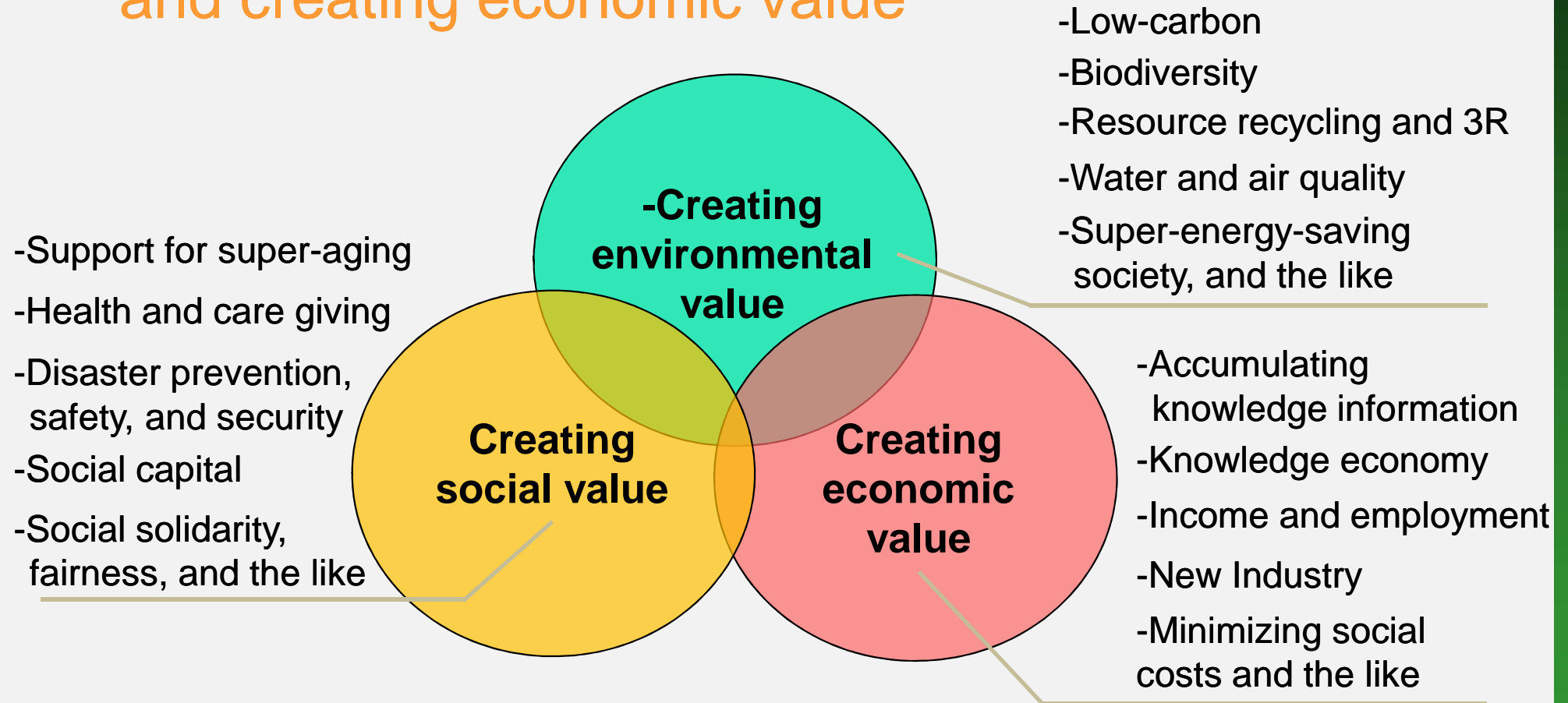
Name of cities	Population (thousands)
⑳ Niseko Town	4.8
㉑ Ikoma City	121
㉒ Oguni Town	7.9



➤ A variety of ambitious proposals towards a low-carbon society

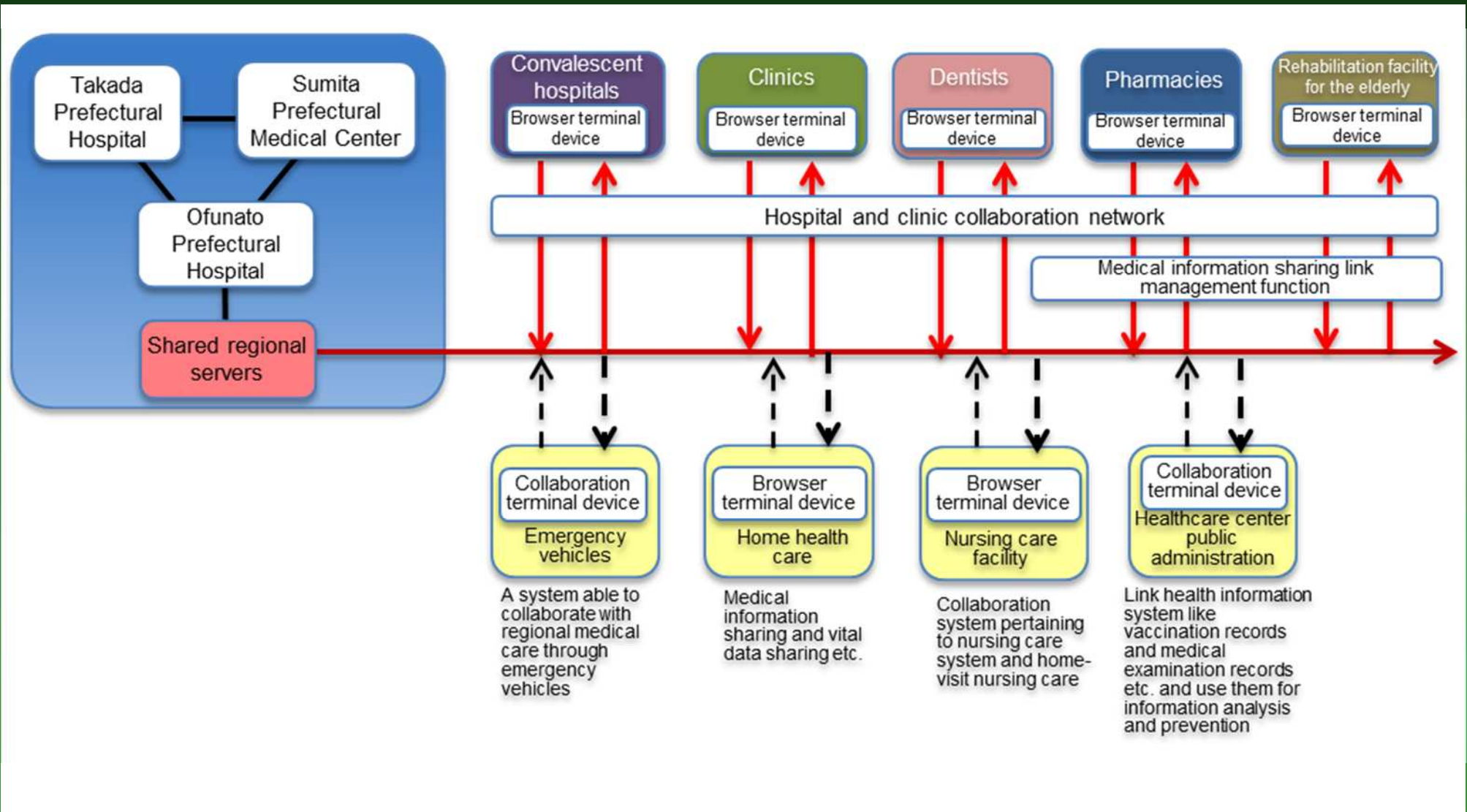
The "FutureCity" initiative and revitalizing the regions

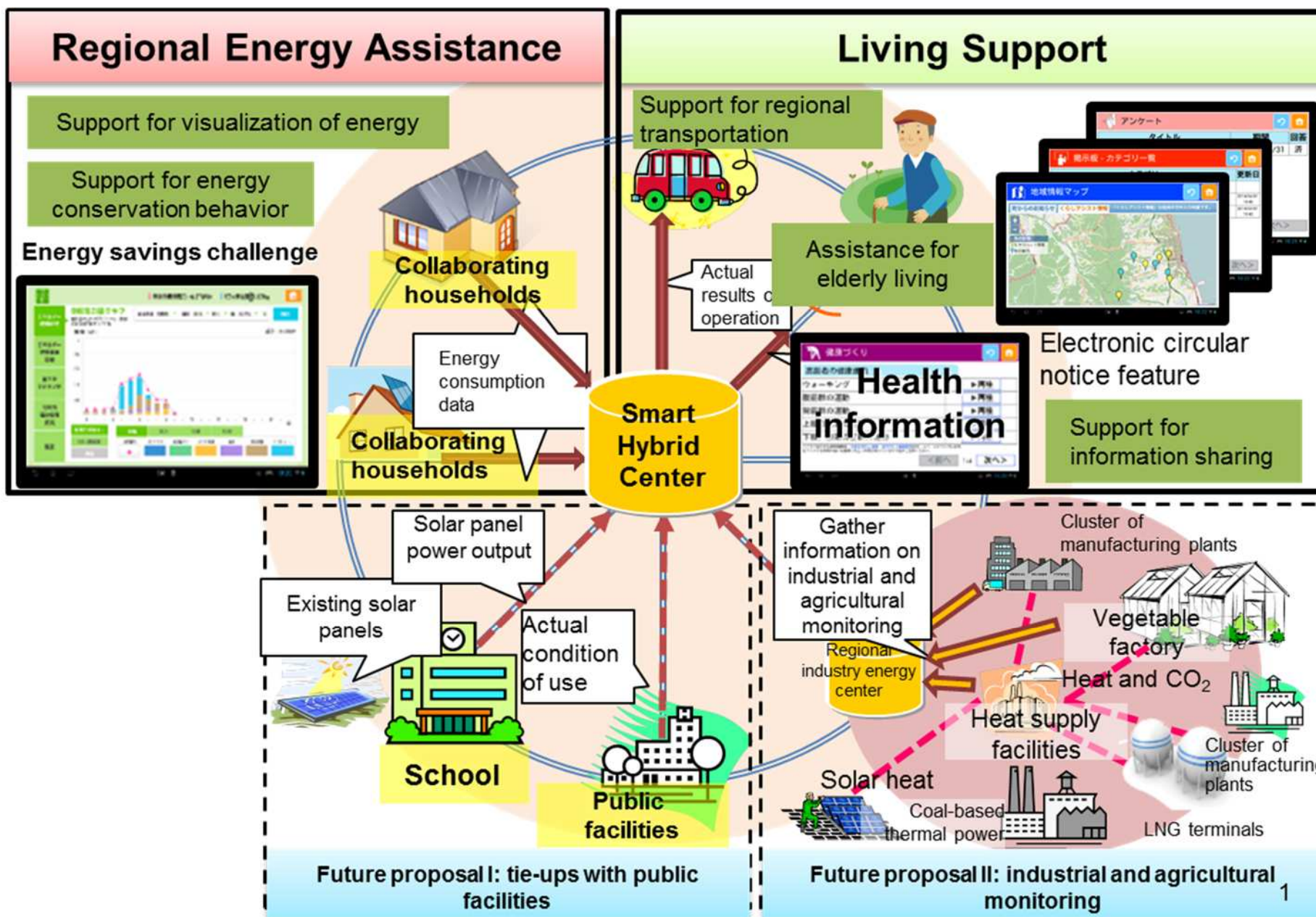
⇒ Creating environmental value, creating social value, and creating economic value



⇒ How to coordinate the value creation and the enhancing resilience?

Depiction of regional medical care collaboration network system





Area Energy Management System (AEMS)

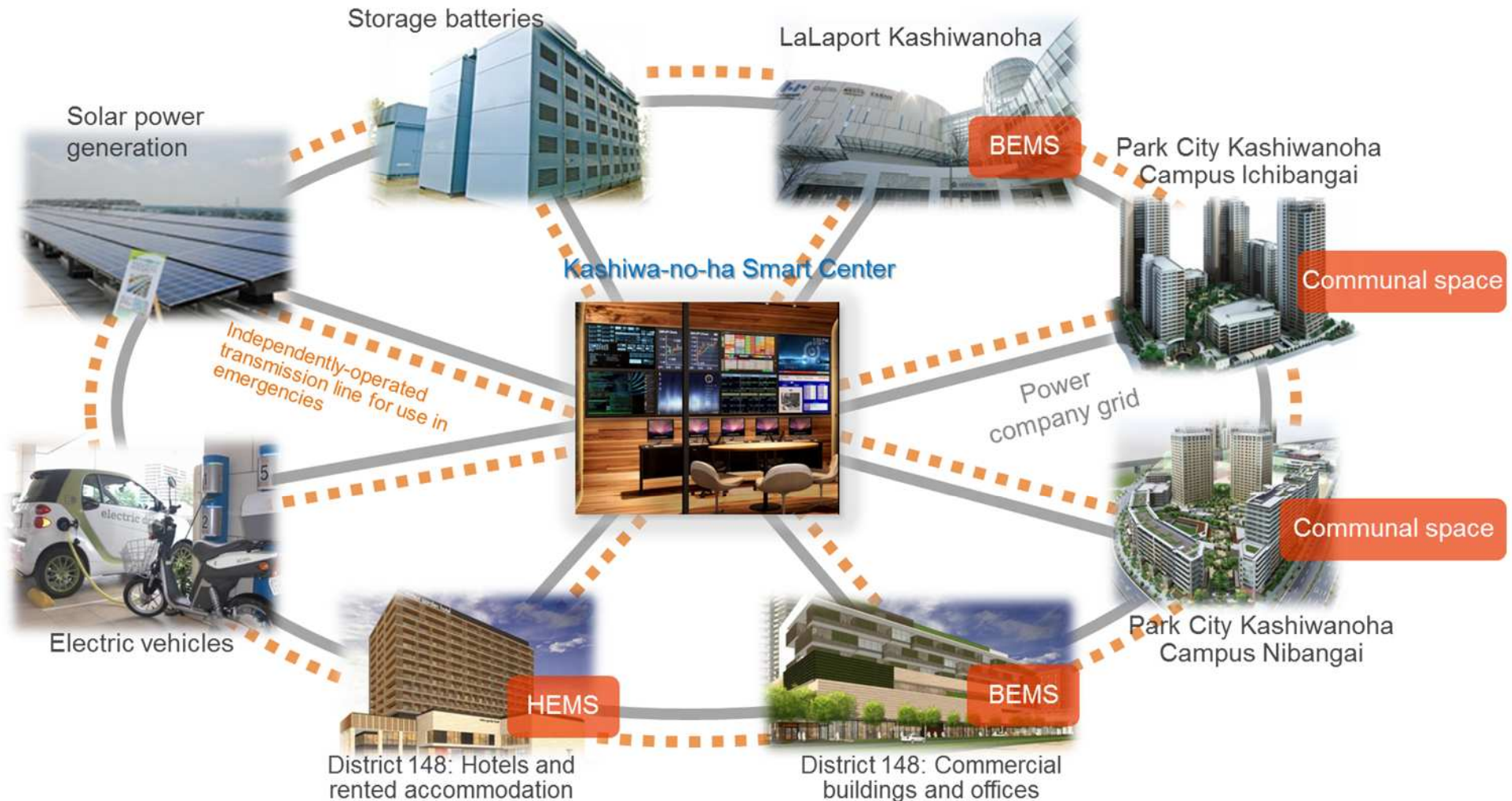
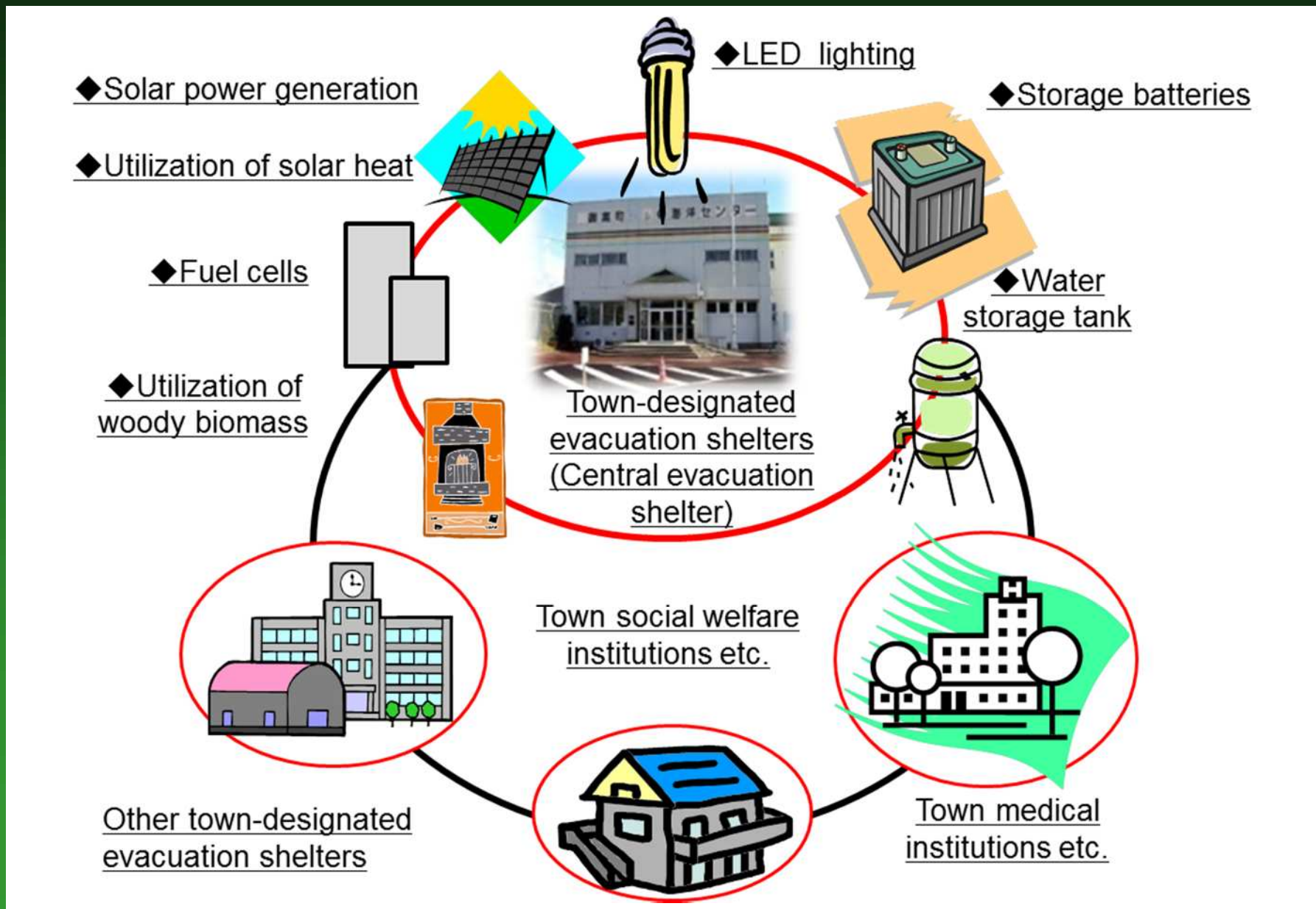


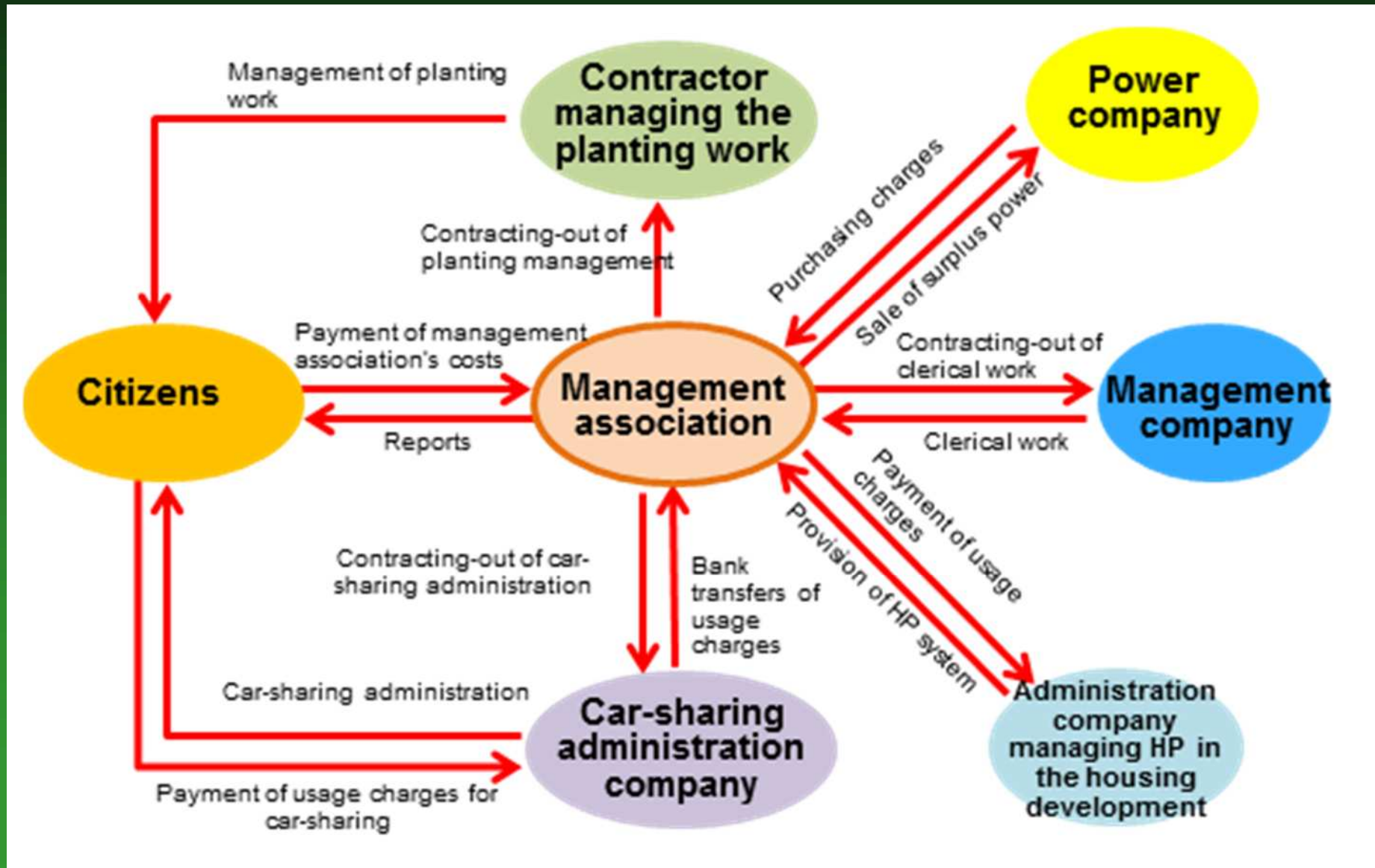


Image showing how Self-Sustained Evacuation Shelters are set up



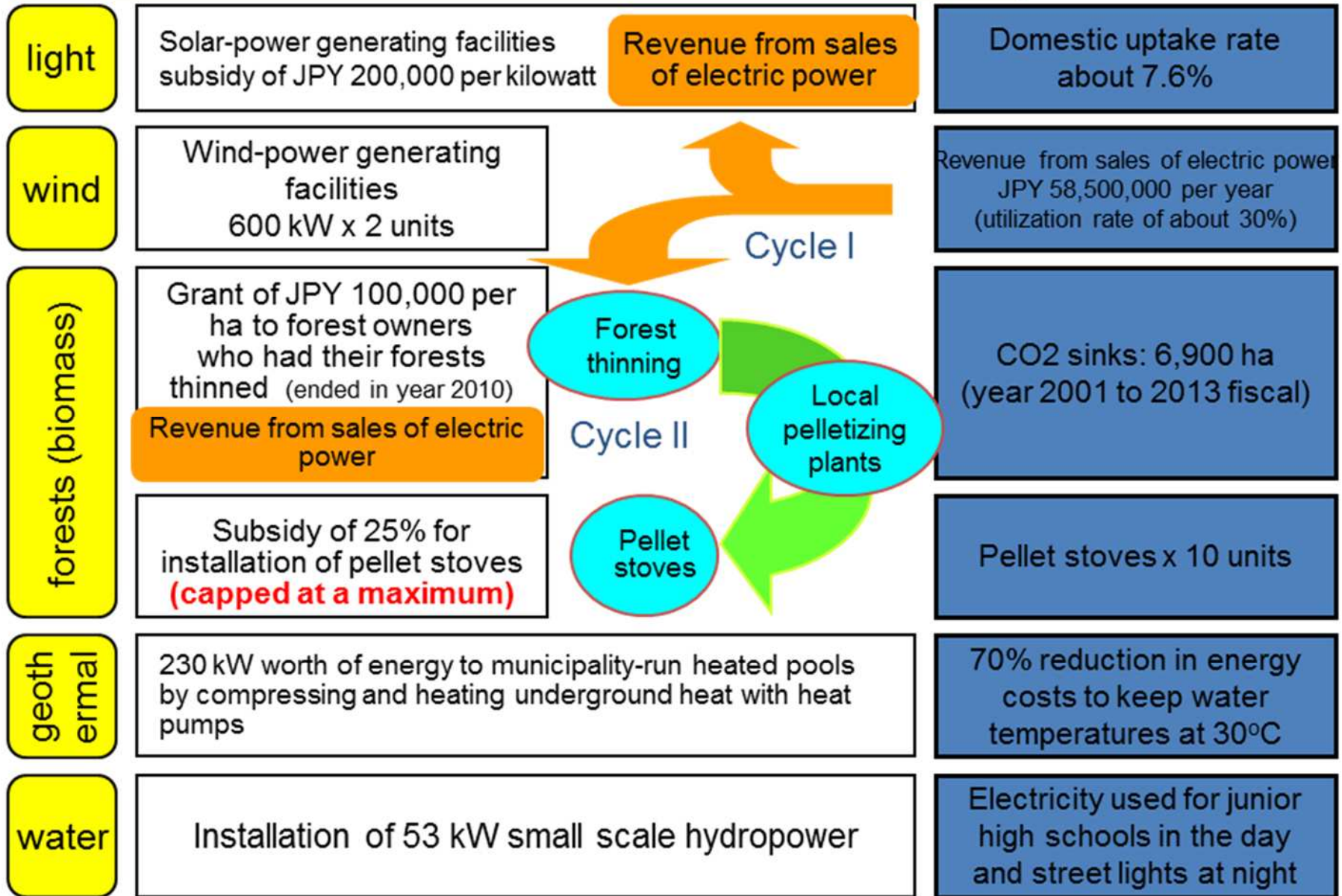


Schematic diagram showing how the independent, citizen-led city management process works





Best combination of renewable energy sources and the 2 cycles



Organization of all sessions (Shuzo Murakami, Chair)

1. Subject

Enhancing Resilience and the “FutureCity”

2. Objectives

- 1) Confirming the importance of enhancing resilience
- 2) Clarifying the responsibilities and new value creation needed to enhancing resilience
- 3) Taking in the above, further promoting recovery and reconstruction of the areas struck by the disaster

3. Points

- Point 1. Soft and hard aspects of enhancing resilience
- Point 2. Enhancing Resilience during emergencies and at normal times
- Point 3. Enhancing resilience and creating new value

Resilience in city systems

1. Concept of resilience

- ⇒ It applies to a broad range of matters.
- ⇒ Including climate systems, ecosystems, urban systems, public health, disaster prevention, security, financial systems, business organizations, human psychology and physiology, and the like

2. City resilience

- ⇒ The ability to maintain system functions in the event that the city system is threatened due to disturbance, stress, and the like, whether it occurs in normal times or during emergencies.

3. Disturbance and stress

- ⇒ From natural disasters—such as earthquakes, tsunamis, and heavy rains--to social and economic crises—such as economic recessions, low birth rate and aging populations, pandemics, international political developments, and the like.

Point 1: Soft and hard aspects of enhancing resilience

(1) Resilience in both soft and hard aspects is vital toward achieving the goals of the “Futurecity” initiative.

The function and appeal of the city comprise both hard urban infrastructure and soft social infrastructure.

What became evident through the Great East Japan Earthquake was not only the destruction of the hardware infrastructure, but also the severity of the destruction in the soft social infrastructure.

While there are technical prospects to some extent in the reconstruction of the former, it is not easy to indicate the prospects in the reconstruction of the latter, and the groping reconstruction efforts by officials is ongoing.

(2) Soft aspects of (social system) resilience and design related keywords

social norms, social cooperation (bonds) , community (neighbors and the neighborhood, neighborhood associations), Social capital, communication, diversity
Governance, safety and security, public order, network
Support for the aging society with the declining birthrate, comprehensive care service system , and the like

(3) Keywords related to hard aspects of (urban infrastructure) resilience and design

Lifeline (energy, water, etc.) , transportation systems, information systems
Disaster relief facilities, emergency medical services system
Residential, office, production facilities , and the like

Point 2: Enhancing Resilience during emergencies and at normal times

(1) Resilience during emergencies

⇒ The ability to recover at an early stage the functionality of systems that are no longer normal, as well as to minimize the impact on the system due to a disturbance

(2) Resilience at normal times

⇒ The ability to resist and withstand when the functionality of the system is at risk of being thrown off by a disturbance. Functions like those in the immune system of the human body

(3) Completion and cooperation in normal times, and during emergencies

⇒ In designing resilience, it is important to recognize the difference in the functions required for emergencies and normal times, respectively, as well as to build a complementary mechanism for mutual aid during operations.

Point 3: Enhancing Resilience and creating new value

(1) Maintaining resilience

- ⇒ Naturally, new responsibilities are called for in the city.
- ⇒ At the same time, however, this brings a new expansion of urban activities - including brand value improvement - to create new value in the city.
- ⇒ The market value is high in buildings equipped with emergency in-house power generators, for example, and rents can be set at rates higher than market price.

Innovative resilience design and management can create significant added value that outweighs the burden.

- ⇒ Minimizing the burden and maximizing the added value

Proceeding with all sessions (90 minutes in total)

1 Explanation of aims by the Chairman : 15 minutes

2 Presentations by panelists : Eight minutes each (Thirty minutes in total)

- 1) The Mayor of Higashimatsushima
- 2) Director of Urban Resilience, ULI (New York)
- 3) The Mayor of Banda Aceh (Indonesia)

3 Exchange of opinions : Twelve minutes each (Forty minutes in total)

- 1) Point 1: Soft and hard aspects in enhancing resilience
- 2) Point 2: Enhancing Resilience during emergencies and at normal times
- 3) Point 3: Enhancing resilience and creating new value

4 Summary : 5 minutes