



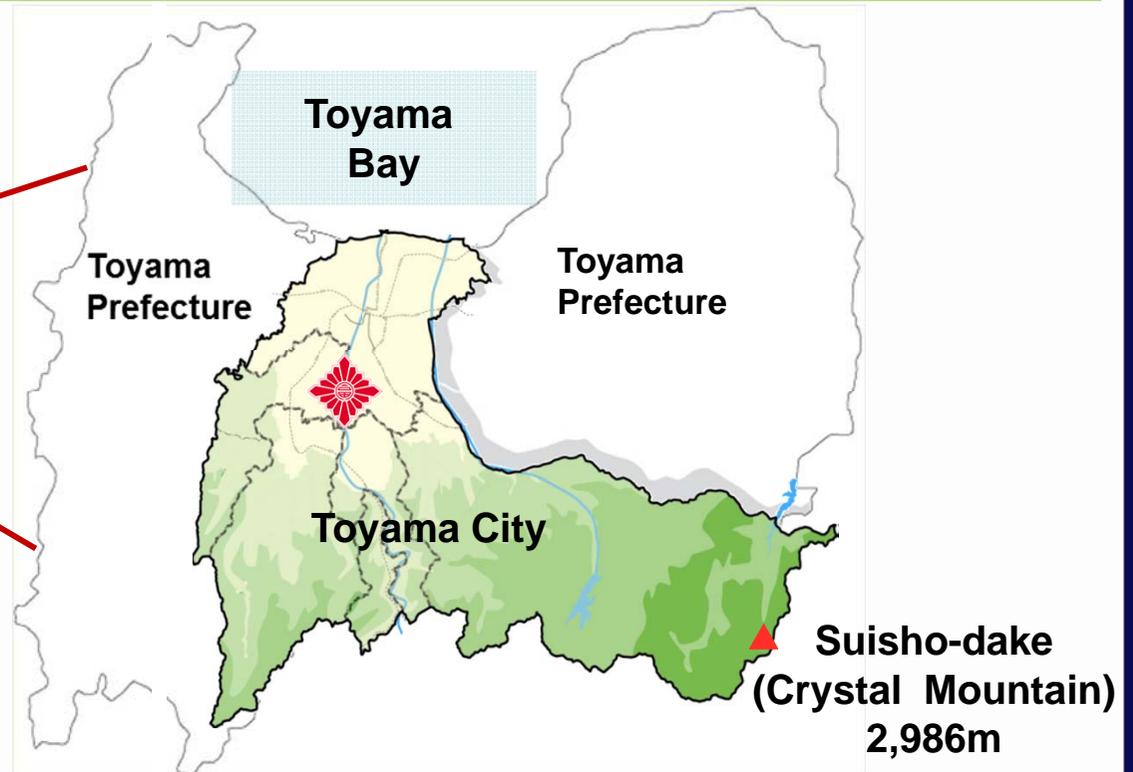
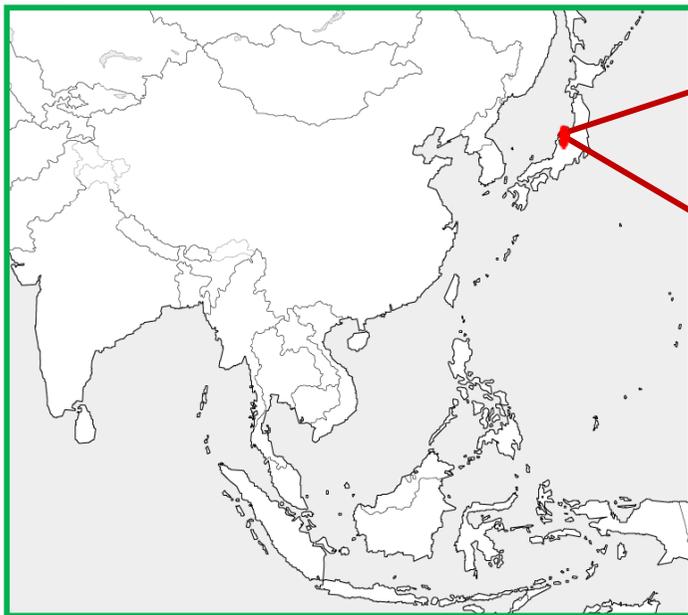
# TOYAMA: Creating a Compact City

**Mayor Masashi Mori**

# Toyama City



- Total Area: 1,241.85 Km<sup>2</sup>
- Population: 421,953 (2010)
- Number of Households: 159,151 (2010)
- Geography: Elevation gain from Toyama Bay to Suisho-dake (Crystal Mountain) 0 - 2,986 meters above sea level; 70% of area forested



**Challenges facing cities:** decreasing populations, rapidly aging societies, severe financial stresses, increasing administrative costs, increasing infrastructure maintenance costs, environmental degradation, and increasing CO2 emissions.

## Toyama's Vision for the Compact City of the Future

### 1. Establish a compact city based on efficient public transportation

- Revitalize public transportation
- Concentrate city functions in the center of the city and along the public transportation lines

### 2. Increase the quality and range of civic life amenities

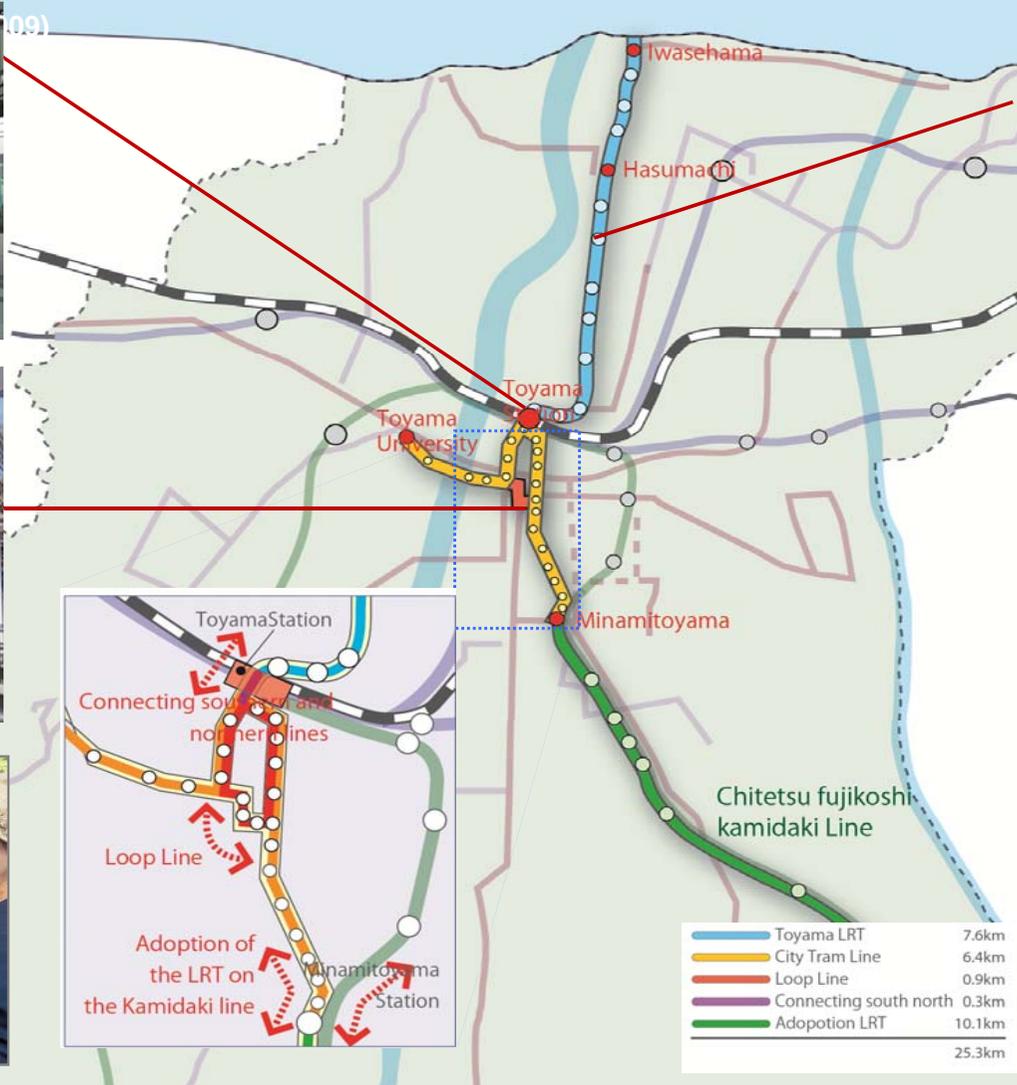
- Reduce automobile dependency
- Create more opportunity for the elderly to go out

### 3. Take full advantage of the city's strengths

- Nurture local industry - such as the pharmaceutical industry
- Increase the use of renewable energy
- Attract new businesses & create new industries

# Revitalizing Public Transport - Formation of the LRT Network

Developing an LRT network is a key to modifying the current automobile dependency and creating **a town with every city amenity within walking distance.**

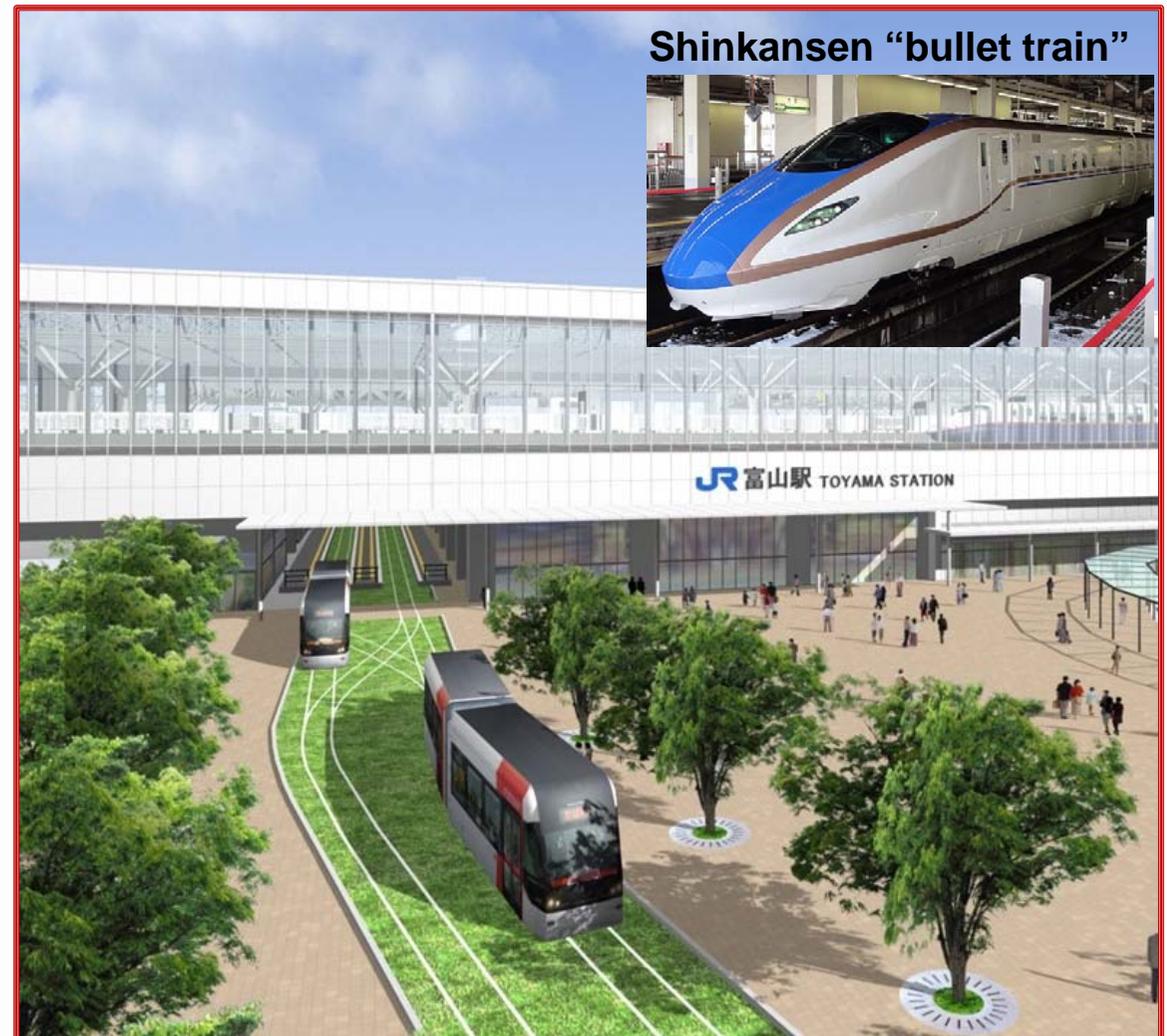


# Connecting the Bullet Train with North and South Tram Lines

**2013** Begin development of the south side of the mid town Japan Railways train station. The new Shinkansen (bullet train) station is elevated to facilitate the construction of tram lines underneath the station.

**2015** Begin operation of the new Shinkansen line (March 14, 2015). New tram stop under station at the south exit is put into operation.

**2018** Begin operation of the north side tram line under the elevated JR station. North and south tram lines now fully connected to the Shinkansen line.



Artist's Rendering of the South Exit of the New Toyama JR Station

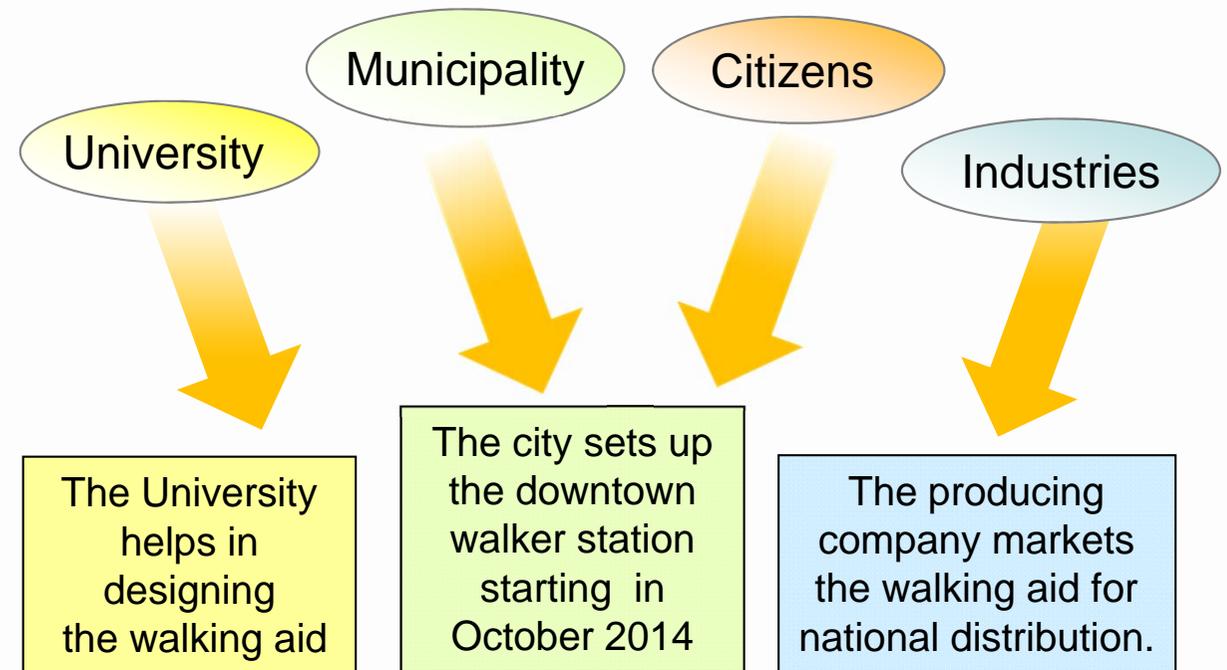
# Improving the Quality of Life for the Elderly

Toyama is establishing downtown pedestrian friendly areas where preventative care facilities are networked with city services so the elderly can live safely and comfortably, and can more easily get outside the home and meet with others.



## 3-year project collaboration with the University of Toyama

With citizen input, the city worked with the University and business to develop a walking aid/shopping cart placed in downtown areas for easy access.

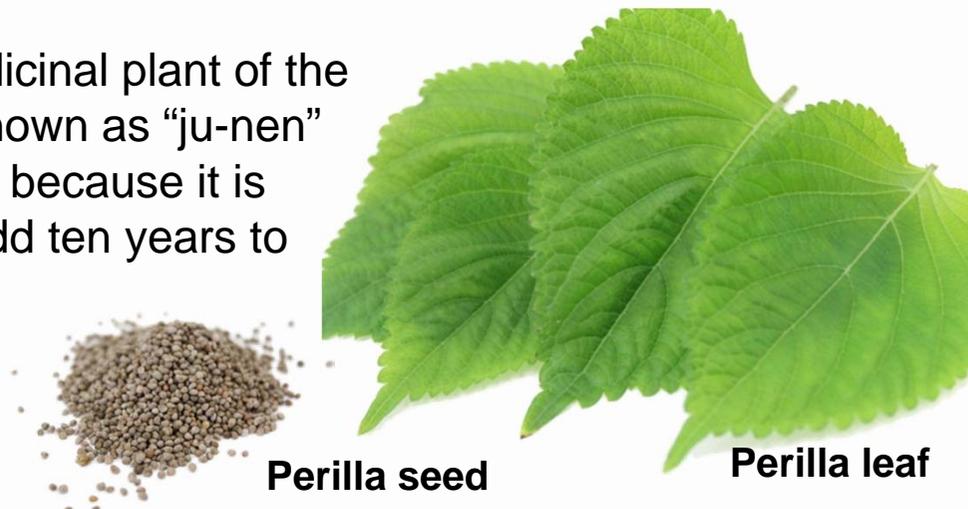


A prototype walking aid/shopping cart



A new agricultural industry is being developed inland in the rural foothills of the Northern Japan Alps where the population is both decreasing and aging. Here perilla, known as “shiso” in Japanese, is grown in hot houses using the heat from geothermal areas.

**Perilla:** a medicinal plant of the mint family known as “ju-nen” or “ten years” because it is believed to add ten years to your life.



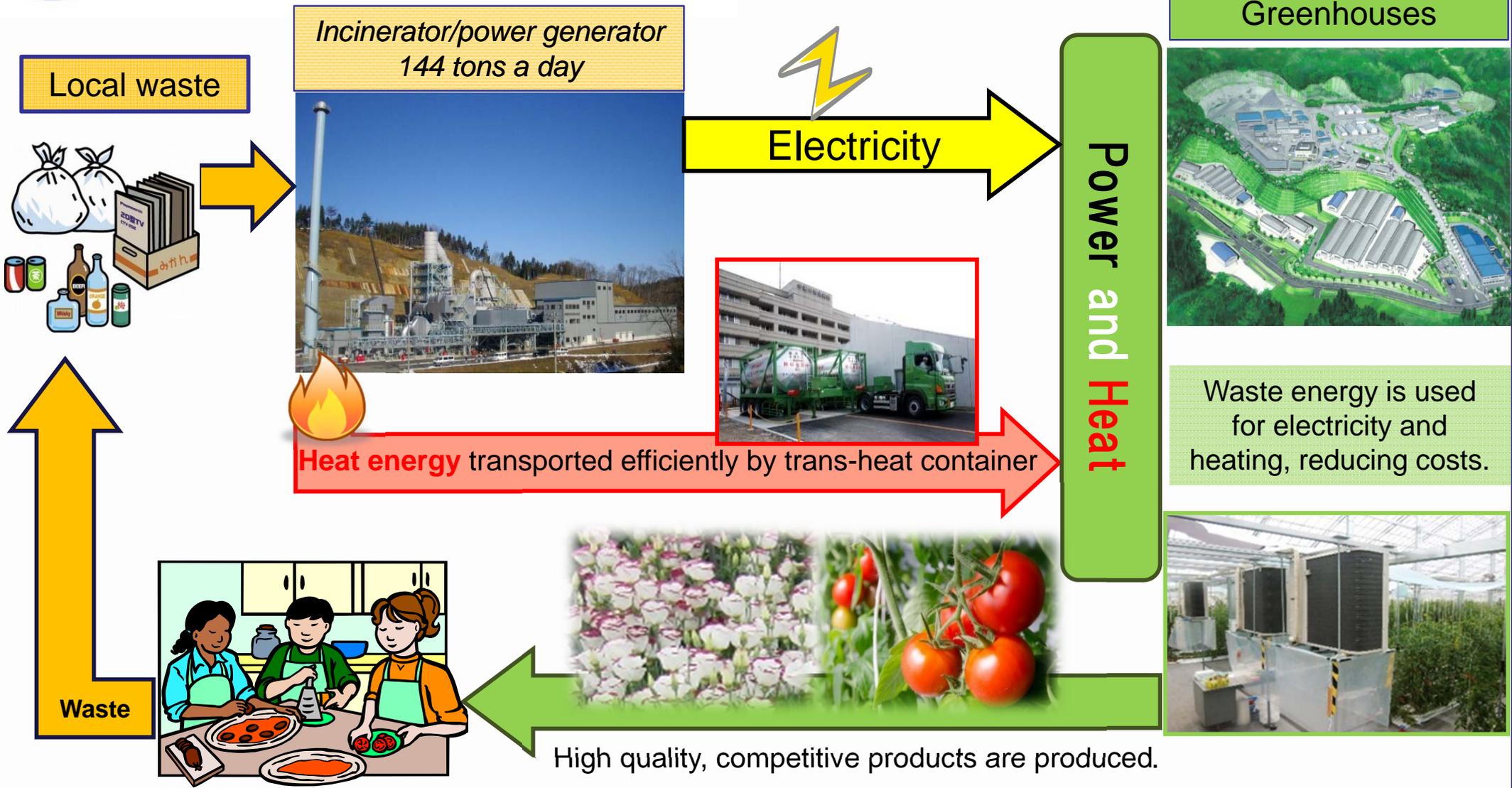
## Benefits

- Energy efficient heating
- Maintaining rural life through a new local industry
- Employing local senior citizens
- Enhancing a healthy and long life in the city by providing perilla to hospitals and for school lunches
- Utilizing abandoned arable areas

Hot house factory near Ushidake hot spring

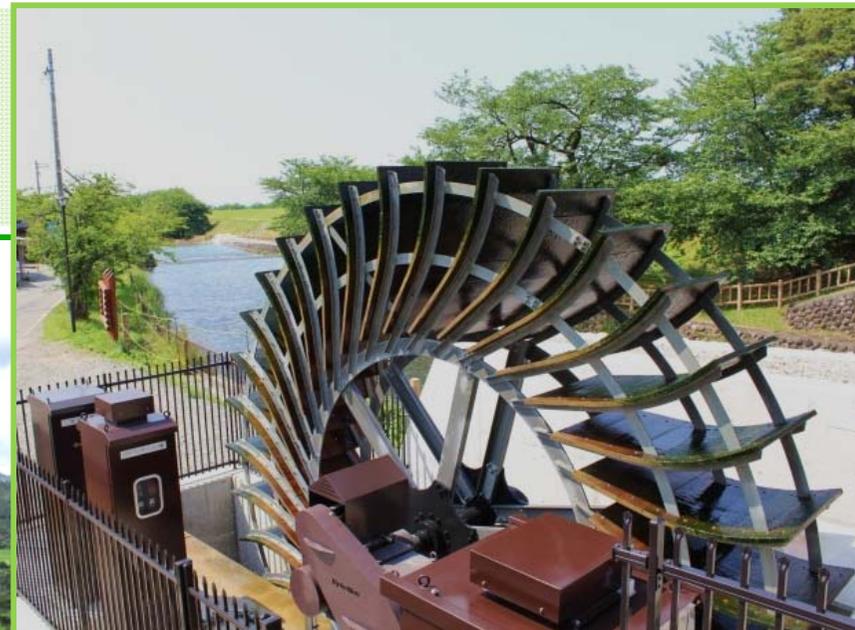


# Promoting Local Industries #2: Waste to Energy (WtE) for Agriculture



# Promoting Local Industries #3: Micro Hydroelectric Power for Agriculture

We are developing a self-supporting farming village model which utilizes small scale hydroelectric installations along agricultural water canals. The electricity which is generated will power agricultural EVs, and the surplus power sold for income. .



March 2014:  
Mayor Mori signing a micro hydroelectric project agreement with the Tabanan region of Bali

## City Assets

Abundant water  
Network of canals



## Problems

Access to electricity



## Technological Solutions

Micro hydroelectric facilities along agricultural canals

Rice centered  
Agriculture



Declining agriculture



Advanced farming technologies

# International Recognition



**2012** OECD recognizes Toyama as one of five cities, (along with Melbourne, Vancouver, Paris and Portland) with advanced “Compact City” policies.



**September 2014** Toyama is the only Japanese city selected for the UN initiative, **SE4All** (Sustainable Energy for All). Other cities include Iskandar (Malaysia), Copenhagen, Vancouver, Paris, Milano, Manila, & Warsaw.



Mayor Mori with Mr. Yumkella, the SE4ALL special representative of the Secretary-General, (center) and Mr. Horie, the Japanese ambassador for global environment (right) accepting SE4All Award in New York

SE4All UN Secretary-General Ban Ki-moon initiative for 2030:

- ① universal energy access
- ② double the rate of energy efficiency
- ③ double the share of renewable energy



PIONEERED BY THE  
ROCKEFELLER FOUNDATION



**December 2014** Toyama is the only Japanese city chosen for the **Rockefeller 100 Resilient Cities** initiative.

Other cities chosen in 2014 include Chicago, Montreal, Paris, London, Lisbon, Barcelona, Sidney and Singapore.

# Rockefeller Foundation Recognition for Resilience

In December 2014 the Rockefeller Foundation of New York chose Toyama as one of the world's 100 Resilient Cities which have a remarkable capacity to withstand and recover from the shocks and stresses facing modern cities.

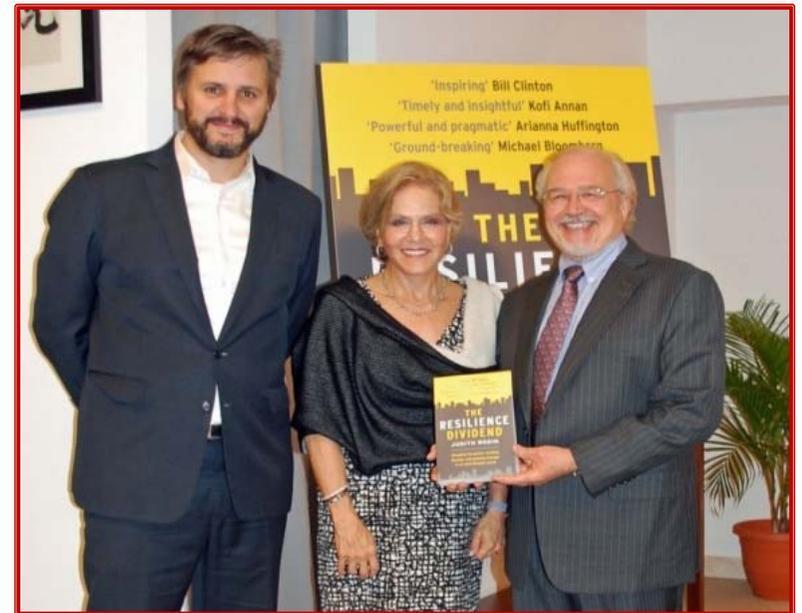
## Shocks and Stresses Facing Toyama

- Floods and landslides
- Population loss and aging population
- Aging infrastructure

## Measures to Meet These Challenges

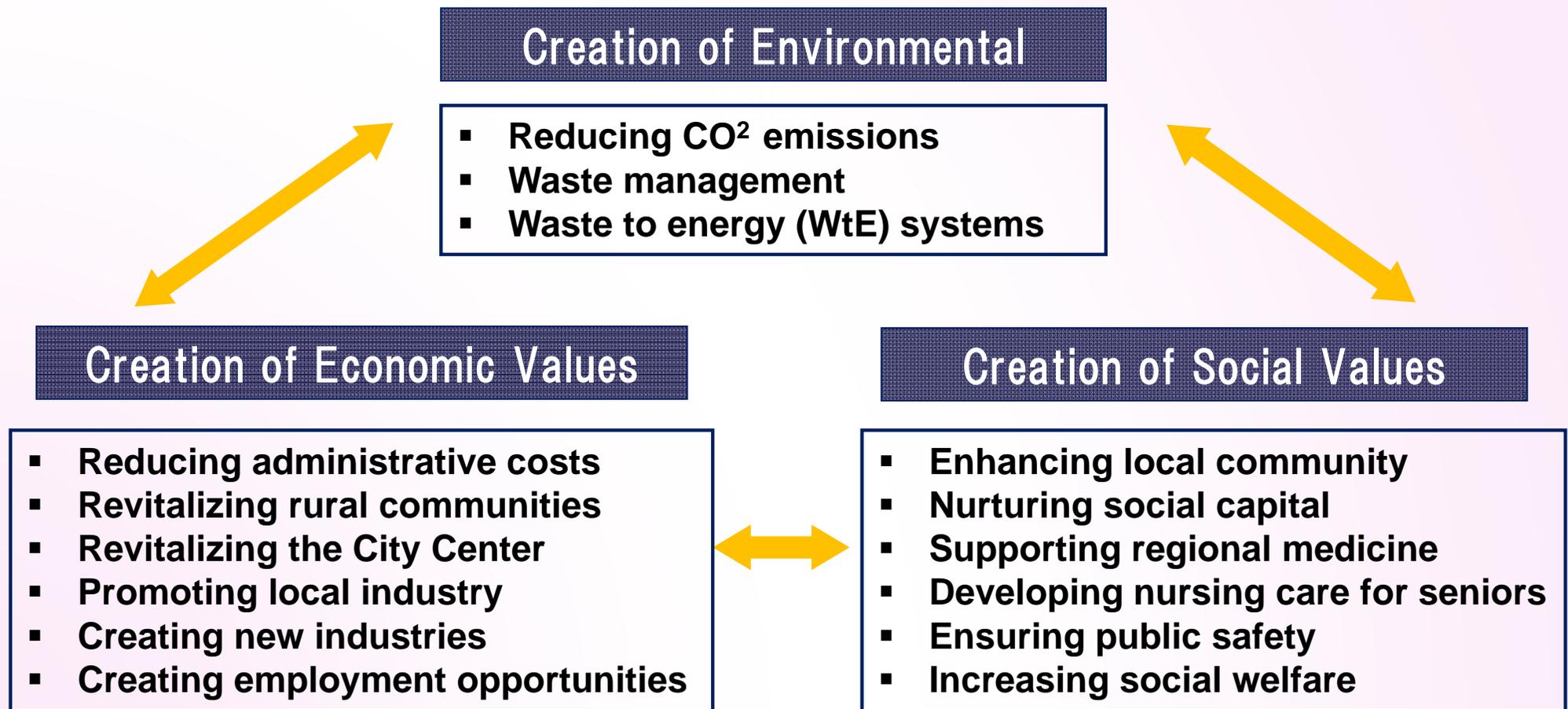
- Risk mitigation for natural disasters
- Revitalization of public transportation
- Revitalizing the City Center
- Replenishing social capital
- Enhancing medical and preventive care

*Achieving a sustainable and resilient city through ecological compact city policies*



Senior Policy Advisor Dr. Runzo-Inada (right) with Rockefeller 100 CEO Berkowitz (left) and Rockefeller Foundation President Rodin at the Resilience City Summit in Singapore.

# The Multiplier Values of Toyama's Compact City Strategy



***Creating a sustainable society with a harmonious balance between economic and social values and the environment.***