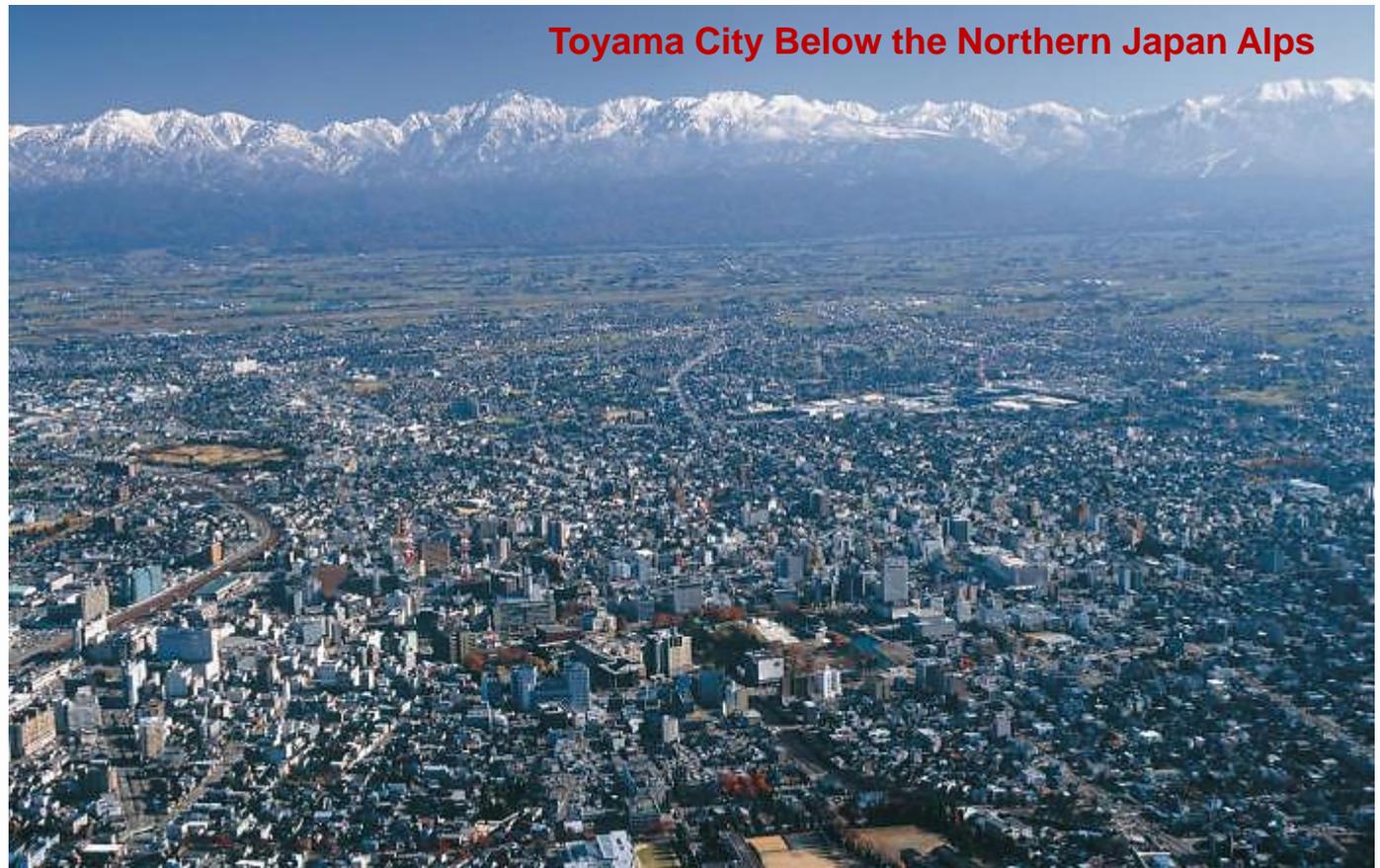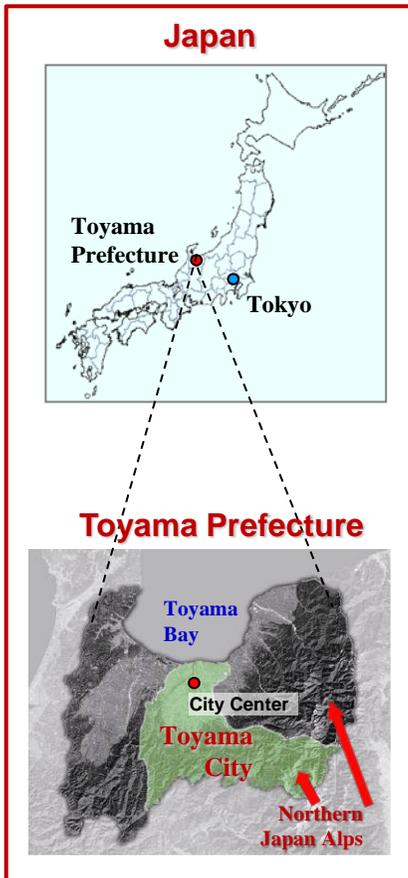# Toyama: a Future City for Today

Mayor Masashi Mori

Outline of Toyama City

・Population: 422,000 people (40% of Toyama Prefecture）
・Area: 1,242 square km (30% of Toyama Prefecture)
・Topographical diversity: 34 km from sea level at Toyama Bay
   to 2,986m at Mt. Suisho; 70% forested land.

Japan

Toyama Prefecture

Tokyo

Toyama Prefecture

Toyama Bay

City Center

Toyama City

Northern Japan Alps

Toyama City Below the Northern Japan Alps

The Future of Cities and Toyama's Compact City Solution

Challenges facing cities: decreasing populations, rapidly aging societies, severe financial stresses, increasing administrative costs, increasing infrastructure maintenance costs, environmental degradation, and increasing CO_2 emissions.

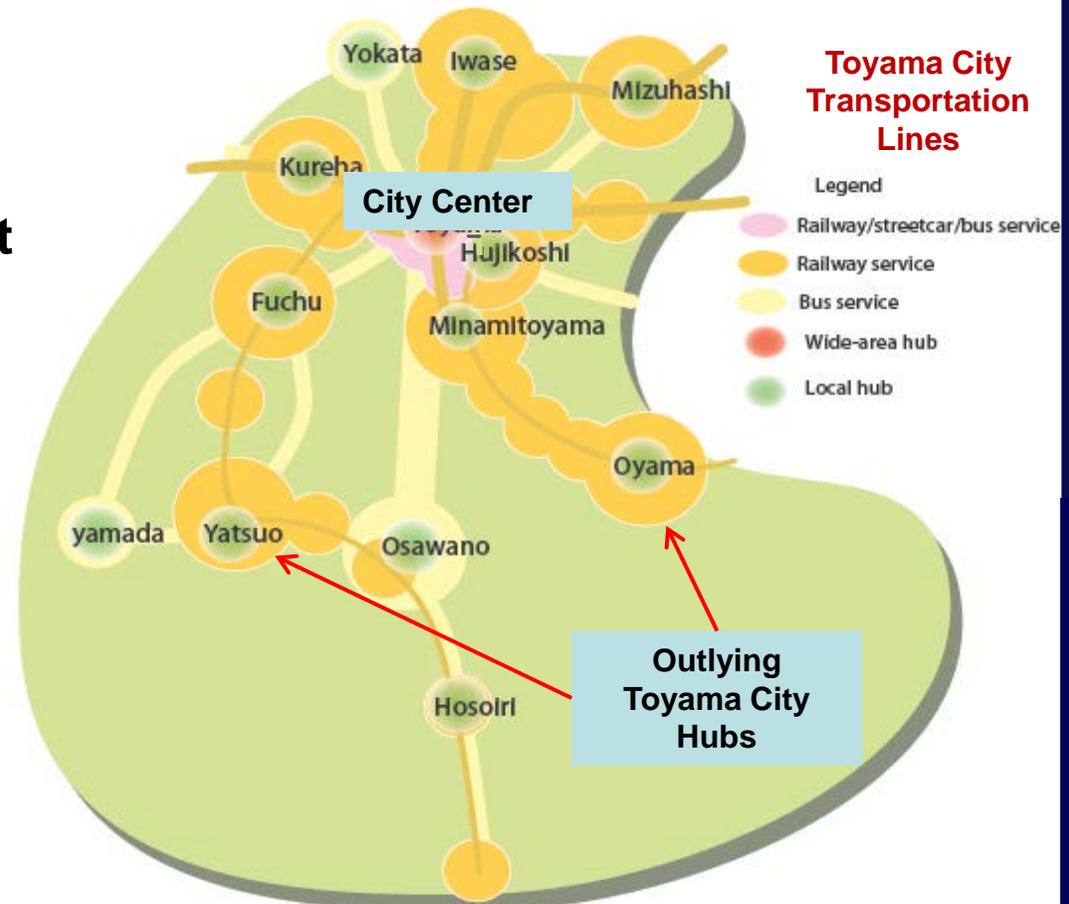## Toyama's Vision for the Compact City of the Future

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 – e.g. pharmaceutical industry; agriculture
- ➢ Increase the use of renewable energy
- ➢ Attract new businesses & create new industries

Steps to Creating a Compact City of the Future

Our goal, first announced in 2007, is to create a sustainable, compact future city which addresses the needs of our decreasing and aging society.

Three Pillars of Toyama's Compact City Strategy

1. Revitalizing public transport

2. Encouraging residents and business to relocate to zones along public transport lines and building city cultural facilities along these lines.

3. Revitalizing the city center

Toyama City Transportation Lines

Legend
- Railway/streetcar/bus service
- Railway service
- Bus service
- Wide-area hub
- Local hub

City Center

Outlying Toyama City Hubs

Yokata Iwase Mizuhashi
Kureha
Hujikoshi
Fuchu
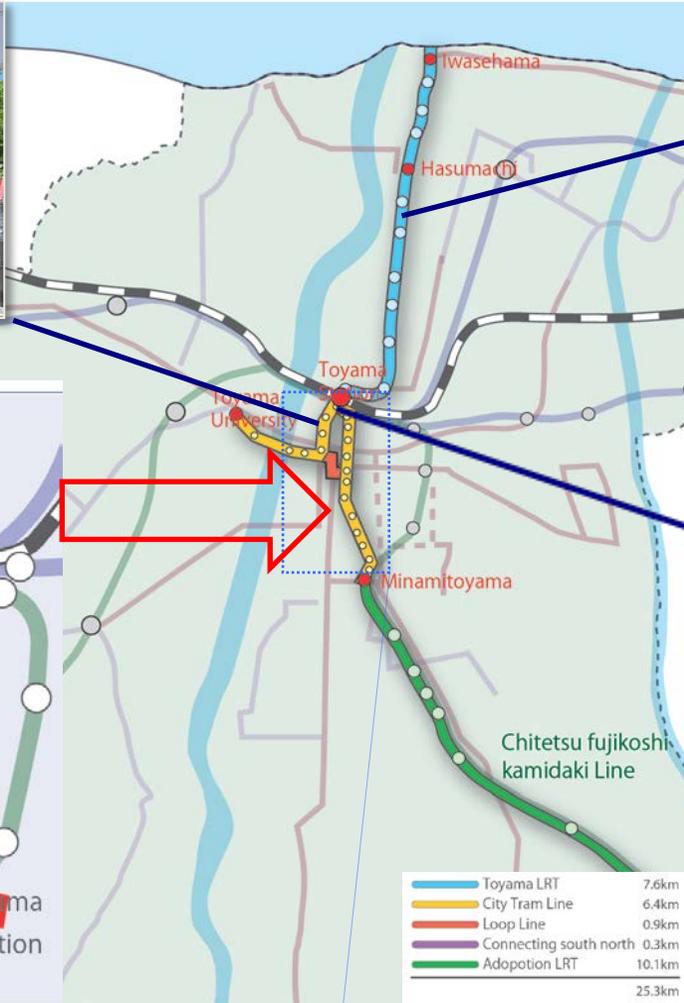Minamitoyama
Oyama
yamada Yatsuo Osawano
Hosoiri

Revitalizing Public Transport
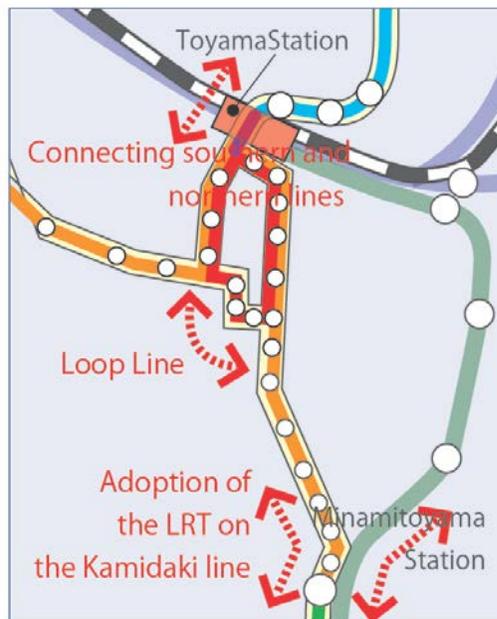## Japan's First LRT Network & PPP Tram Line

We are modifying the current life style of over-dependence on automobiles to create a town with every city amenity within walking distance.

Loop Line (Dec. 2009)

Toyama LRT (April 2006)

Trams Under Elevated Train Station

Toyama LRT	7.6km
City Tram Line	6.4km
Loop Line	0.9km
Connecting south north	0.3km
Adopotion LRT	10.1km
	25.3km

Connecting the Bullet Train with North & South Tram Lines

The new shinkansen "bullet train" station was elevated so tram lines can connect below the trains.
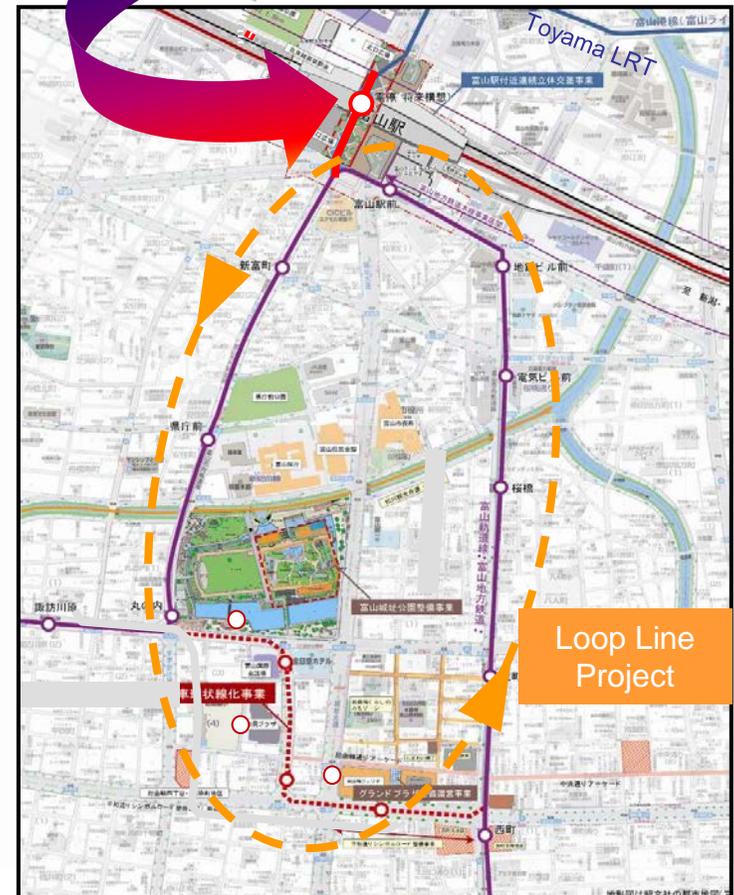
Shinkensen "bullet trains" enter the station at the top

North-South Tram Line Connection at JR Station

Toyama LRT

Trams pass under the station and exit at ground level

Loop Line Project

City Center and Public Transportation Residence Zones
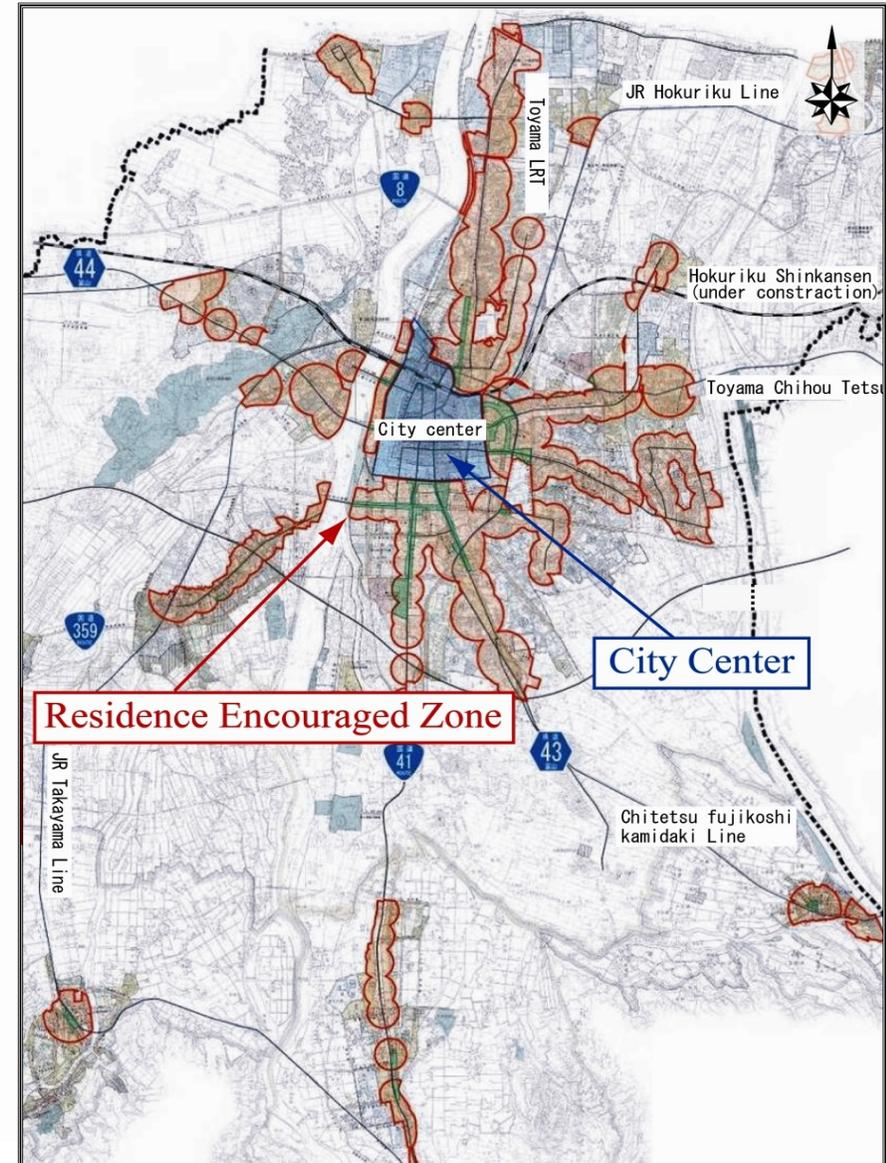
Residence Encouragement Zones

❑ **City Center Zone**
- **436 hectares in the urban core of the city**

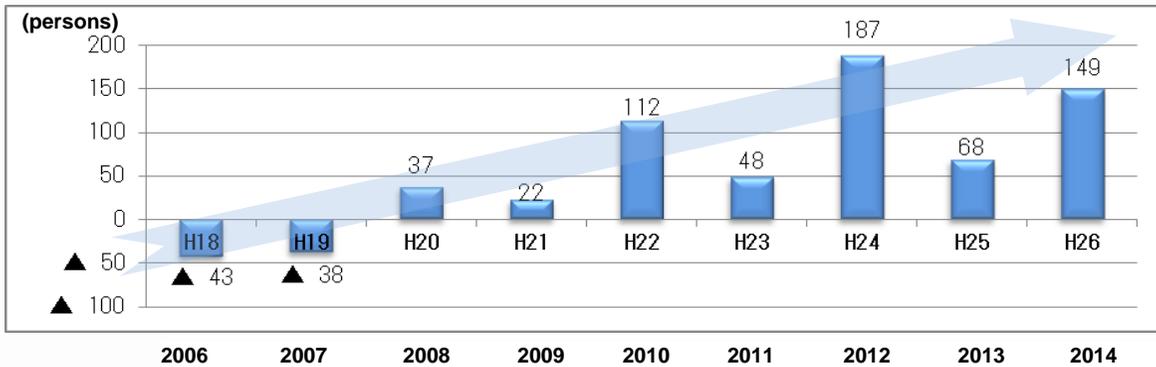❑ **Public Transportation Line Zones**
- **3,357 hectares**
- **Rail and tram line zones are within a 500 meter radius of rail and tram lines**
- **Bus stop zones are within a 300 meter radius of bus stops**

In 2015, 32% of the population is living in the residence encouragement zones, a 4% increase over 2005.
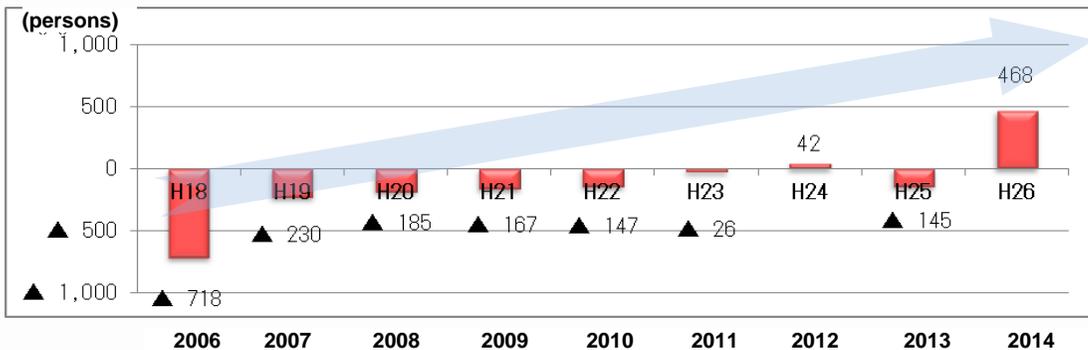
Shifting Population through Compact City Policies
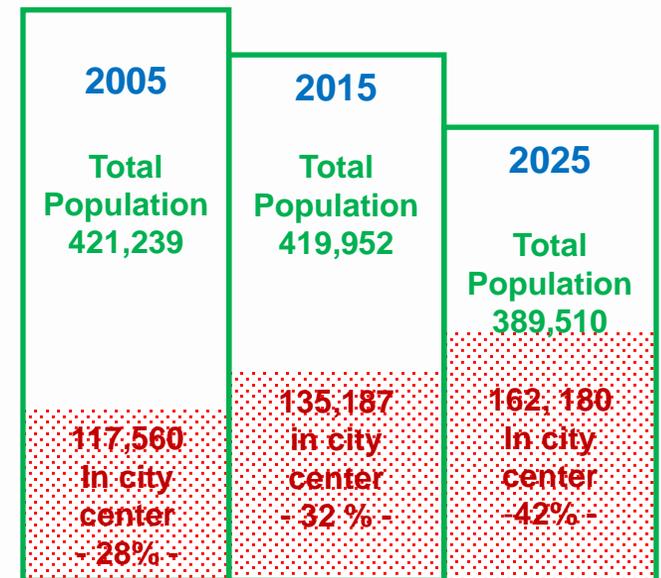
#1 Population shift back into the city center

#2 Population shift to transportation corridors

#3 Projected population shift totals

- ❏ **Green = Total city population**
- ❏ **Red = % of population in city center and along transportation corridors**

2005	2015	2025
Total Population 421,239	Total Population 419,952	Total Population 389,510
117,560 In city center - 28% -	135,187 in city center - 32 % -	162,180 In city center - 42% -

Decreasing Birth to Death Ratio but a Population Shift Increase

1. The total population of Toyama City has been decreasing, like the rest of Japan.
2. The population shift back into Toyama helps offset the decreasing birth to death ratio.
3. This results in a lower rate of population decrease in Toyama City compared to Toyama Prefecture and to Japan as a whole.

Change in Japanese Population January 1, 2014 to January 1, 2015)

	Population	Change	Rate of Change(%)
Japan	126,163,576	- 271,058	- 0.21
Toyama Prefecture	1,072,631	- 6,061	- 0.56
Toyama City	414,723	- 684	- 0.16

Demographic Changes in Toyama City Residents January 1, 2014 to January 1, 2015

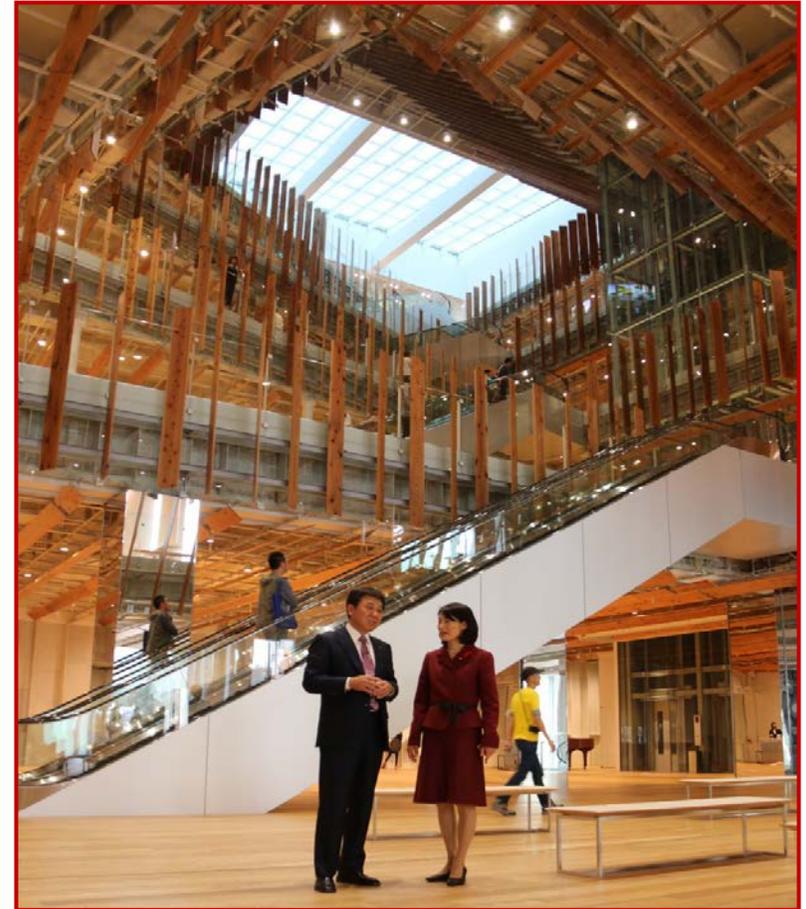| Births	Deaths	Number of people moving in	Number of people moving out	Population Change
3,265	4,500	11,342	10,692	- 585

Birth/death decrease = 1,235   **Population shift increase = 650**

Glass Art Museum and Library by Kengo Kuma

Designed by Japan's famed architect Kengo Kuma, Toyama's multiplex Glass Art Museum, Municipal Library, and private Bank opened in August, 2015. The largest glass art museum in Japan, the Museum houses a monumental installation by the renowned American glass artist Dale Chihuly.

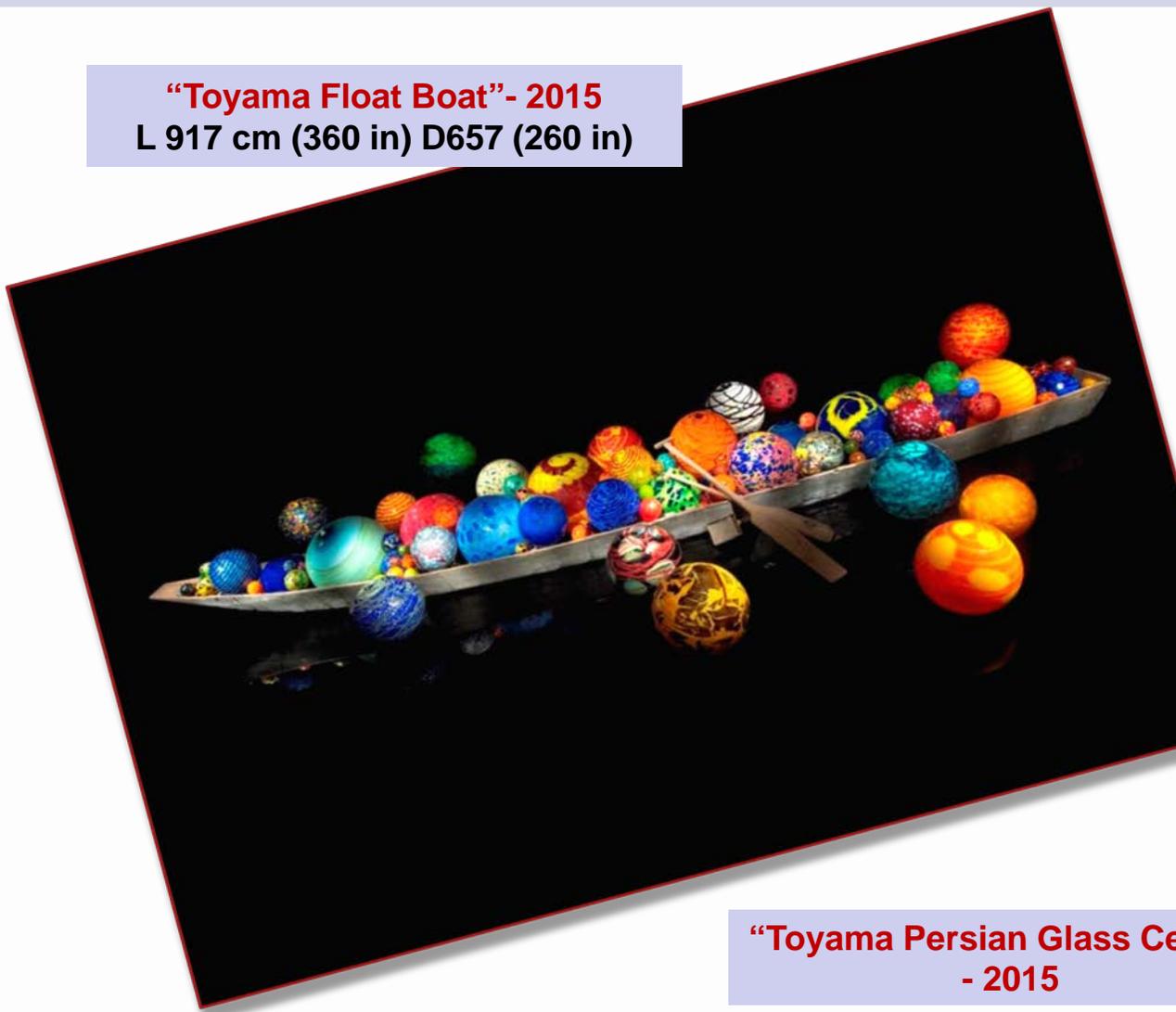**Exterior View**

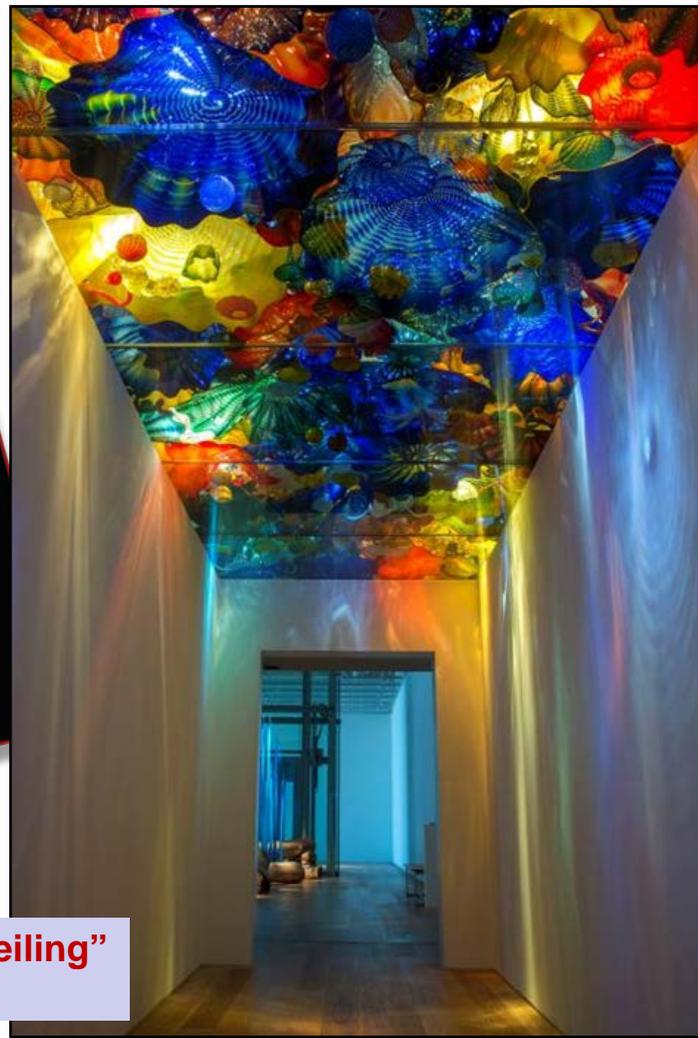**The Central Atrium**

Dale Chihuly Glass Installation #1

"Toyama Millefiori" by Dale Chihuly - **2015 H 280 cm (110 in) W 940 cm (370 in) D 580 cm (228 in)**

Dale Chihuly Glass Installation #2

"Toyama Float Boat"- 2015
L 917 cm (360 in) D657 (260 in)

"Toyama Persian Glass Ceiling"
- 2015

Promoting Local Industries #1: Egoma Perilla "6th" Industry

> **The National Economic Revitalization plan includes policies for developing agriculture as a 'sixth industry' where farmers increase the value of agricultural products by also processing and marketing them and engaging in agri-tourism.**

1. **Toyama facilitates re-cultivating abandoned farm land within the city limits for large scale farming of egoma perilla.**

2. **A Toyama company is developing a factory to produce 92 million egoma soft capsules annually designed to prevent oxidization of the fragile oil.**

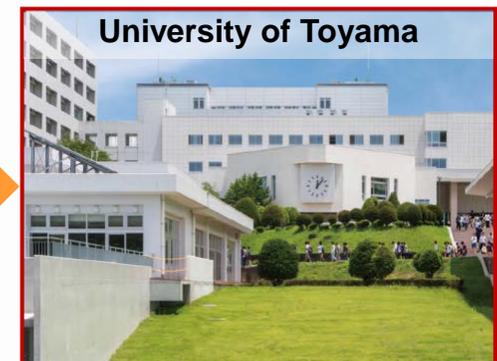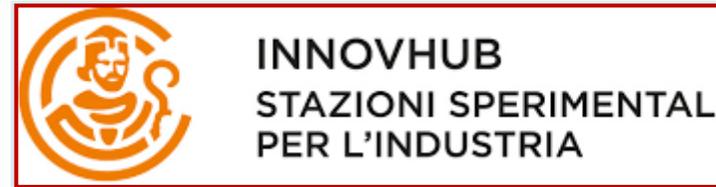**"Fish of the Field" Egoma Perilla**

Because egoma perilla, a member of mint family used in traditional Chinese and Japanese medicine, is rich in omega-3 fatty acids, it is sometimes called the "fish of the fields".

Joint International R&D Project Between Japan and Italy

In 2015 Toyama City concluded an agreement with the University of Gastronomic Sciences of Italy in Bra, Piedmont, to develop a new healthy oil combining olive oil and egoma. Working with the INNOVHUB Institute for cooking oils in Milan, this Environmental Future City Project will promote a 6th industry for egoma.

Mayor Mori (left) and Silvio Barbero, Vice President University of Gastronomic Sciences and Director of the Slow Food Association.

INNOVHUB STAZIONI SPERIMENTALI PER L'INDUSTRIA

Univ. of Gastronomic Sciences

University of Toyama

= quality olive oil with health benifits

Promoting Local Industries #2: 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.

Micro Hydroelectric Station on a Canal

Bali Island Rice Fields in the Tabanan Region

Mayor Mori signing a micro hydroelectric agreement in 2014 with the Tabanan region of Bali

Assets	Problems	Technological Solutions
Abundant water Network of canals	Access to electricity	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).

Mayor Mori with Mr. Yumkella, SE**4**ALL representative of the UN Secretary-General, and Mr. Horie, Japanese ambassador for global environment (right) accepting SE4All Award in New York

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

G7 Environmental Ministers Summit in Toyama

Toyama has been selected as the host city for the
G7 Environmental Ministers meetings of the 2016 G7 Summit in Japan.
Environmental Ministers from
Britain, France, Germany, Italy, Canada, the United States and the European Union
will discuss crucial environmental issues such as climate change and bio diversity.

May 15-16, 2016

Toyama City