



Creating Toyama City's Management Structure through the Compact City Strategy

~ Compact town development with a focus on public transportation ~

Masashi Mori, Mayor of Toyama City

Issues surrounding Toyama City



(1) Depopulation and super-aging society

(5) Increase in CO2 emissions

(2) Decline in public transportation by depending excessively on cars

(6) Similar public facilities due to the consolidation of municipalities

(3) Loss of the attraction of the city center

(7) Appropriate operation and maintenance of social capital

(4) Expensive administrative costs of managing the city

(8) Difference between the average life span and healthy life expectancy

To develop a centralized compact town along public transportation by revitalizing public transportation including railway tracks and concentrating various city functions along them, including residences, commerce, business operations, and culture.

<Concept image>

City structure comprised of bunches and skewers that Toyama City tries to create

Skewer: Public transportation with services above a certain level

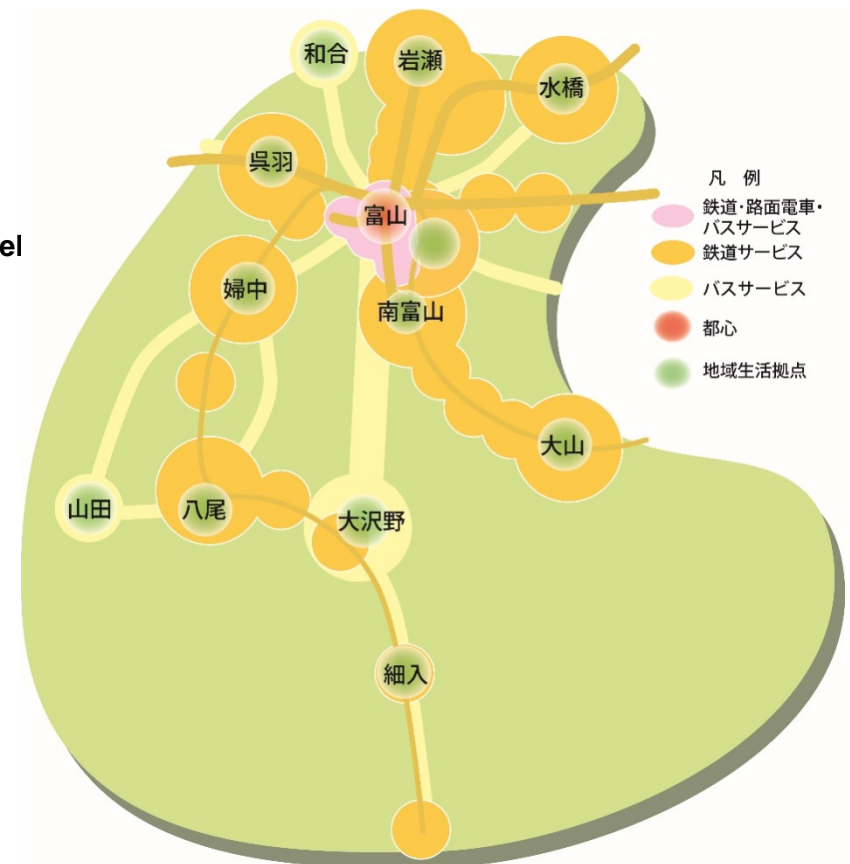
Bunch: Walking distances linked with skewers

<3 pillars for realization>

(1) Revitalization of public transportation

(2) Promotion of living in areas along railway lines

(3) Revitalization of the city center





Revitalization of Public Transportation

Revitalization of public transportation ~ Formation of LRT networks~



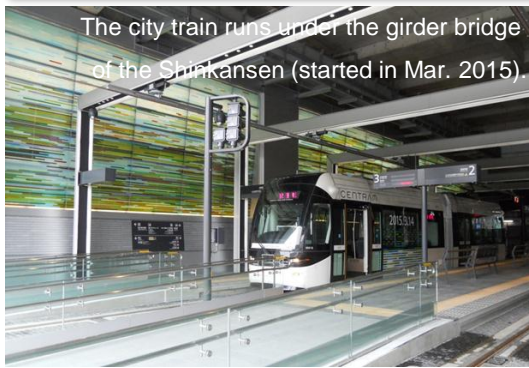
Review people's lifestyle that excessively depends on cars and create **towns where people can walk for daily life** by forming LRT networks.



Toyama Light Rail (opened in Apr. 2008)



City train loop line (opened in Dec. 2009)



The city train runs under the girder bridge of the Shinkansen (started in Mar. 2015)



Improvement of the Toyama Light Rail ~ Toyama Light Rail Toyamako Line (JR) ~



Effort to introduce the idea of **private management of publicly established** JR Toyamako Line, which was losing users, and revive it as the **first full-scale LRT system in Japan**.

<Overview of the rail>

- Opening: April 29, 2006
- Extended length: 7.6 km (rail line: 6.5 km, track: 1.1 km)
- No. of stops: 13
- No. of vehicles: 7 (2-car train)
- Time required: approx. 25 mins
(Toyamaekikita - Iwasehama)

<Improvements in operation service>

Operation intervals, building new stations, introduction of low-floor vehicles, barrier-free design, introduction of IC cards, placing attendants, etc.

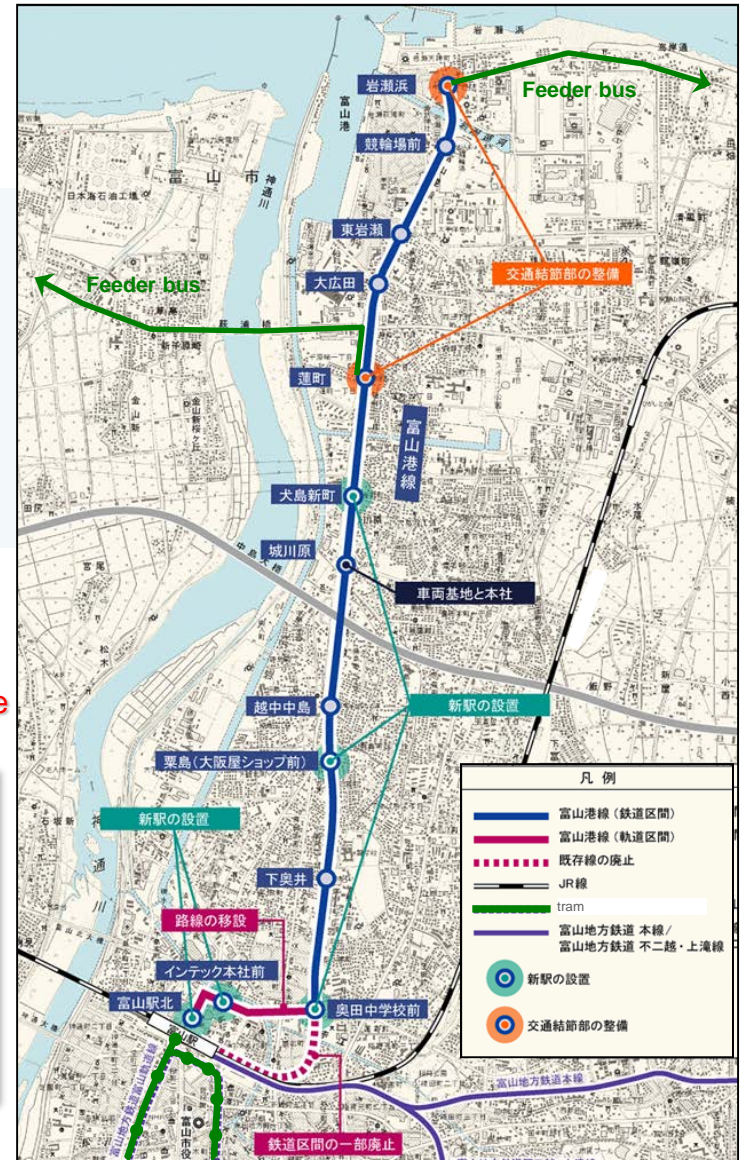
Revival as the 1st full-scale LRT system in Japan



▲Previous JR Toyamako Line



▲Toyama Light Rail (Nickname: Portram)



Improvement of the Toyama Light Rail ~ Overview of operation ~

Improvements in operation service

	Previous JR Toyamako Line		Toyama Light Rail
Frequency	Every 30-60 mins	→	Every 15 mins
Operation	5:00 – 21:00	→	5:00 – 23:00
Stations	9 stations	→	13 stations
Car Type	Train cars	→	Low-floor LRT Cars

Fare is set to 200 JPY for any trip

Lowering vehicle floors and building barrier-free stops



Placing attendants (from August 2010)



Feeder bus service



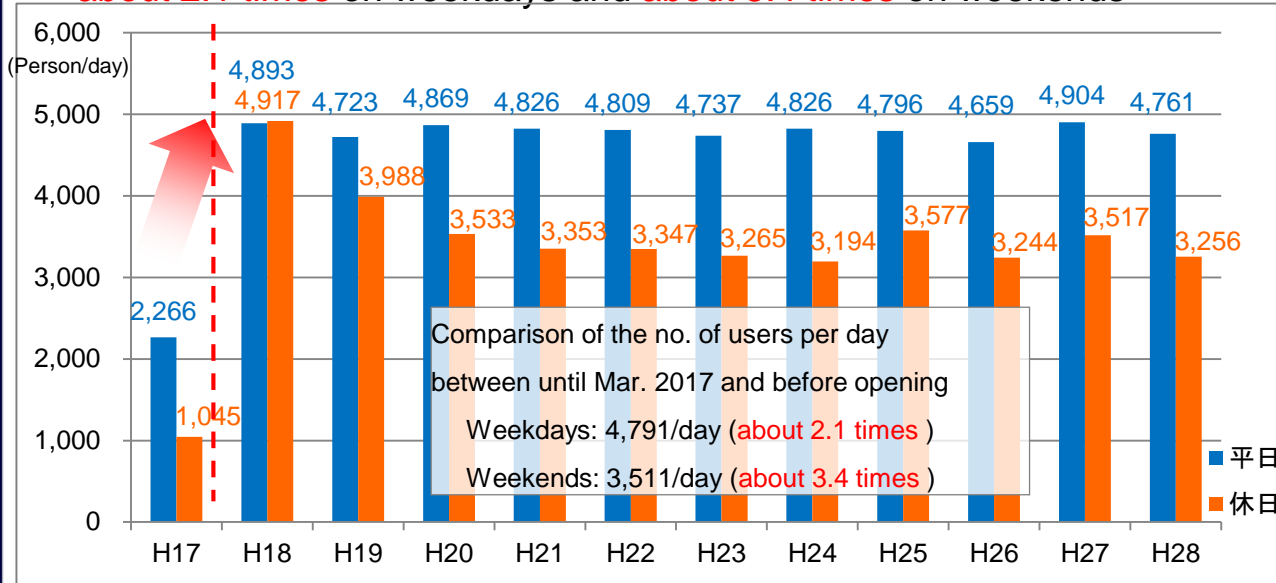
Effects of improving the Toyama Light Rail (Portram)

Opened in April 29, 2006



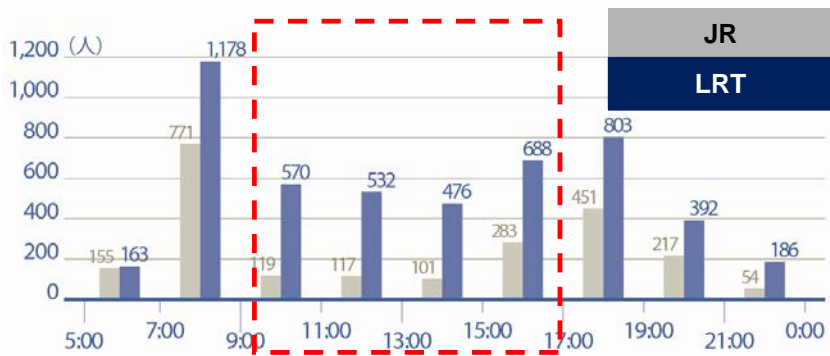
■ The number of users has increased drastically from before the opening of LRT:

about 2.1 times on weekdays and about 3.4 times on weekends

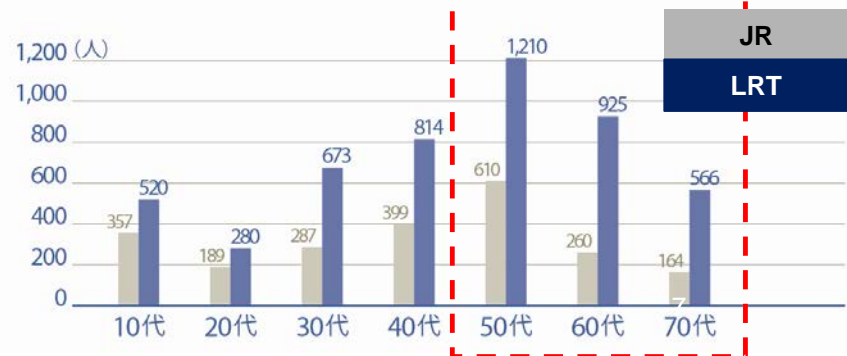


■ The number of elderly users on weekdays has increased. (Change in lifestyle)

Number of Users on Weekdays (by time, per day)



Number of Users on Weekdays (by age group, per day)



Questionnaire on the Toyama Light Rail



Questionnaire on Toyama LRT (Portram)

Kwansei Gakuin University, Department of Economics, Utsunomiya Lab
(Japan Transportation Policy Research Association, Low-Carbon Transportation Research Group)
(Toyama City, Transportation Policy Bureau)

Please circle your answers and send back in the attached envelope by January 23rd.

1. Please let us know any changes in your daily life because of the Toyama LRT.

1-1. Actions

a. More frequent shopping. b. More participation in hobbies and club activities. c. More participation in local festivals and events. d. More participation in volunteers, NPOs, local activities. e. More frequent entertainment such as watching plays and sports. f. More frequent trips outside. g. More opportunities to read books and magazines in the trains. h. Less use of private vehicles. i. Less occasions to use others' private vehicles. j. No significant change. k. Other (_____)

1-2. Interaction with Others

a. More frequent meetings with friends. b. More frequent meetings with family and relatives. c. Increased interaction with neighbors. d. More new friends. e. No significant change. f. Other (_____)

(Source: Lecture material "Transportation and Town Development in Regional Cities (January 13, 2016)" by Kiyohito Utsunomiya, Kansai University)

Has the Toyama Light Rail changed “your actions”?

Answers to the “Actions” section in the previous questionnaire on Toyama LRT (%)

[By age]	Total	By Age			
		<50	50-60	60-70	>70
% within non-blank entries					
Experienced some kind of change	54.3	64.1	46.3	52.6	56.8
Of the above, those who show active participation	(23.4)	(12.8)	(11.9)	(27.6)	(26.7)
No significant change	40.8	28.2	47.8	44.7	37.5
Other (none of the above)	4.9	7.7	6.0	2.6	5.7
% within collected answers					
a. More frequent shopping	10.4	7.7	4.4	9.7	13.4
b. More participation in hobbies and club activities	4.2	0.0	1.5	1.3	8.0
c. More participation in local festivals and events	5.7	2.6	1.5	9.1	5.9
d. More participation in volunteers, NPOs, etc.	1.1	0.0	0.0	0.6	2.1
e. More frequent entertainment such as sports.	15.3	10.3	8.8	20.1	15.0
f. More frequent trips outside	18.5	20.5	11.8	14.9	23.5
g. More reading books and magazines in the train	3.0	5.1	10.3	1.3	1.1
h. Less use of private vehicles	25.3	33.3	26.5	26.6	24.6
i. Less occasions to use others' private vehicles	9.3	10.3	10.3	7.8	9.1
j. No significant change	39.3	28.2	47.1	44.2	35.3
j. Other	8.5	15.4	13.2	4.5	8.6

The figure for “I actively participate in various activities now.” is the total number of respondents who chose any of b to e.

(Source: Lecture material “Transportation and Town Development in Regional Cities (January 13, 2016)” by Kiyohito Utsunomiya, Kansai University)

Has the Toyama Light Rail changed “interactions with others”?



Answers to the “Interactions with Others” section in the previous questionnaire on Toyama LRT (%)

[By age]	Total	By Age			
		<50	50-60	60-70	>70
					% within non-blank entries
Experienced some kind of change	30.1	27.0	16.4	27.9	38.2
No significant change	66.5	67.6	83.6	70.7	56.2
Other (none of the above)	3.3	5.4	0.0	1.4	5.6
					% within collected answers
a. More frequent shopping	20.0	20.5	5.9	18.2	26.7
b. More participation in hobbies and club activities	4.7	0.0	2.9	3.9	7.5
c. More participation in local festivals and events	3.6	2.6	0.0	4.5	4.8
d. More participation in volunteers, NPOs, etc.	6.2	2.6	7.4	5.2	7.5
e. More frequent entertainment such as sports.	63.3	64.1	82.4	67.5	53.5
f. More frequent trips outside	4.5	10.3	0.0	3.2	5.9

(Source: Lecture material "Transportation and Town Development in Regional Cities (January 13, 2016)" by Kiyohito Utsunomiya, Kansai University)

- The opening of the Toyama Light Rail has prompted relatively many people to actively participate in various activities.
 - ⇒ It has built social capital of **bonding** by which people meet with their friends and acquaintances more often.

- The elderly get involved with their families and relatives more often in addition to their friends and acquaintances, while having more problems with new acquaintances.
 - This suggests that high-quality public transportation builds social capital of **bridging** for the elderly.

- Many of relatively younger people responded “I use my car less often now”, while having more opportunities to meet with their friends and acquaintances and make new acquaintances.

(Source: Lecture material "Transportation and Town Development in Regional Cities (January 13, 2016)" by Kiyohito Utsunomiya, Kansai University)

City Train Looping Project ~ Improvement of Centram ~

To revitalize the city center and make the downtown area more accessible, some city train lines have been extended.

- First attempt to **separate infrastructure from operation** in Japan
- Improvement along with road space to create an attractive townscape

<Overview of the rail line>

- Opening: December 23, 2009
- Extension: approx. 0.9 km (loop line: approx. 3.4 km)
- Stops: 3 stops newly built in the extended section
- Vehicles: Introduction of new low-floor 3-car vehicles

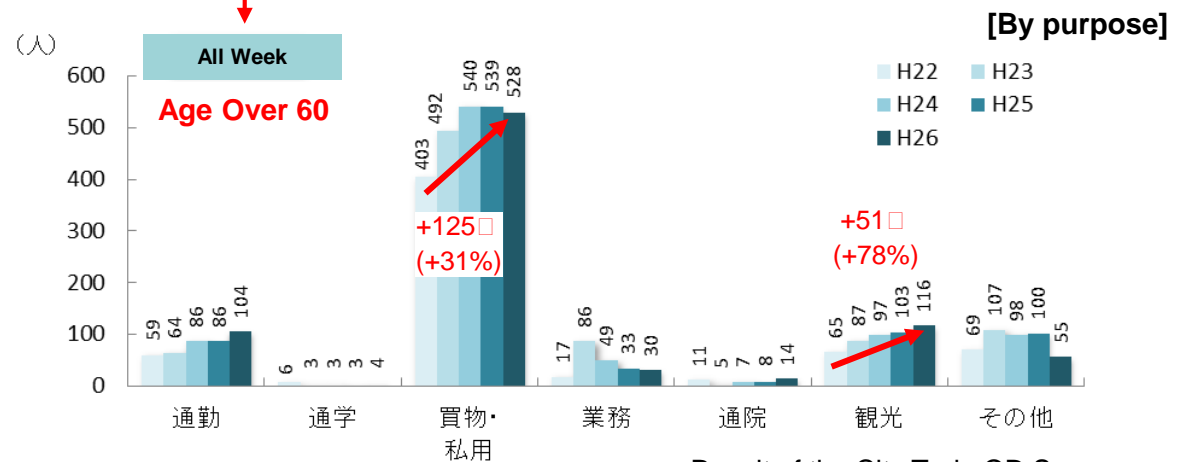
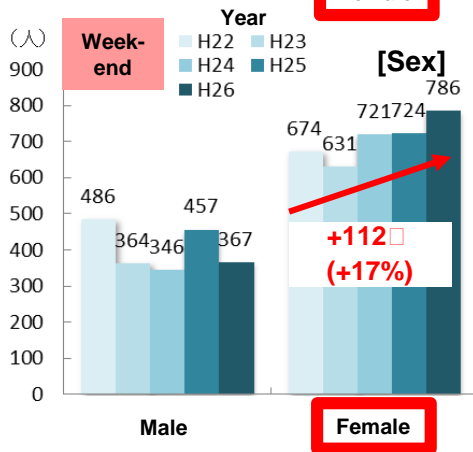
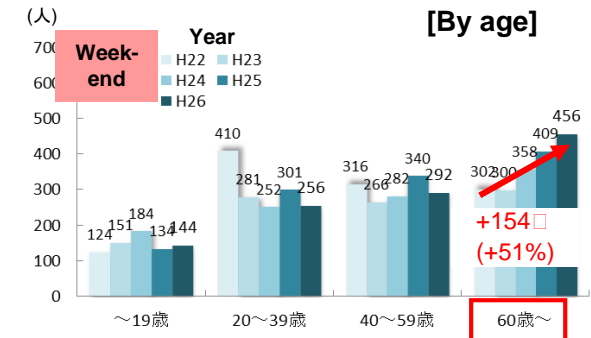
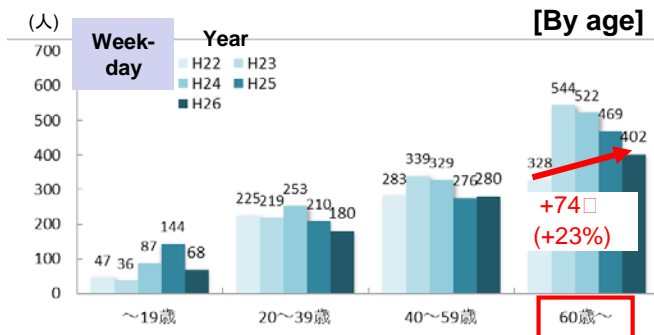
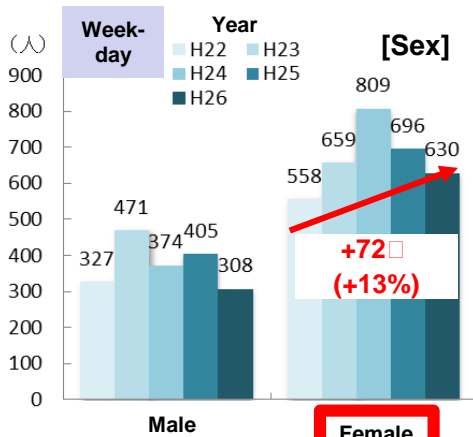


▲City train loop line (Nickname: Centram)

Effects of the City Train Looping Project

Attributes of loop line users (by sex, age, and purposes)

- **Approx. 60% of loop line users are female. Female users are on the increase.**
- **The number of users aged 60 or older (+23% on weekdays, +51% on weekends) has increased outstandingly. People aged 60 or older use the loop line more often for shopping, private use (+31%), and sightseeing (+78%).**



◀◀Result of the City Train OD Survey▶▶

Tram North-South Connection Project ~ Overview of the project ~



Form LRT networks by connecting the city train running in the south of Toyama Station and the Toyama Light Rail running in the north under the girder bridge of Toyama Station, concurrently with the development of the new section of the Hokuriku Shinkansen Line.

- **1st phase:** Lay city train tracks under the girder bridge of the Shinkansen concurrently with the opening of the new section of the Hokuriku Shinkansen Line.
- **2nd phase:** Connect the city train and the Toyama Light Rail concurrently with the elevation of existing tracks.

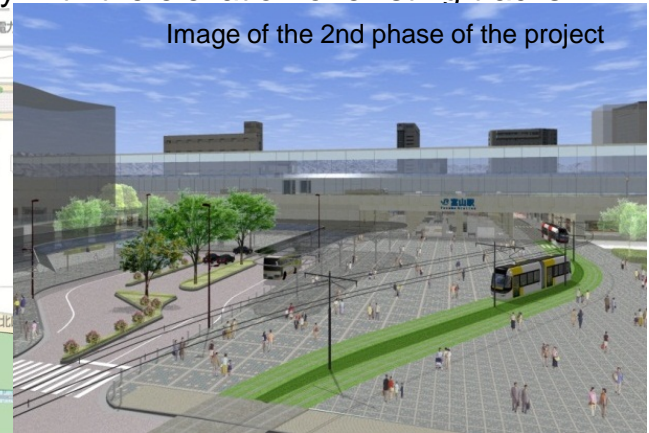
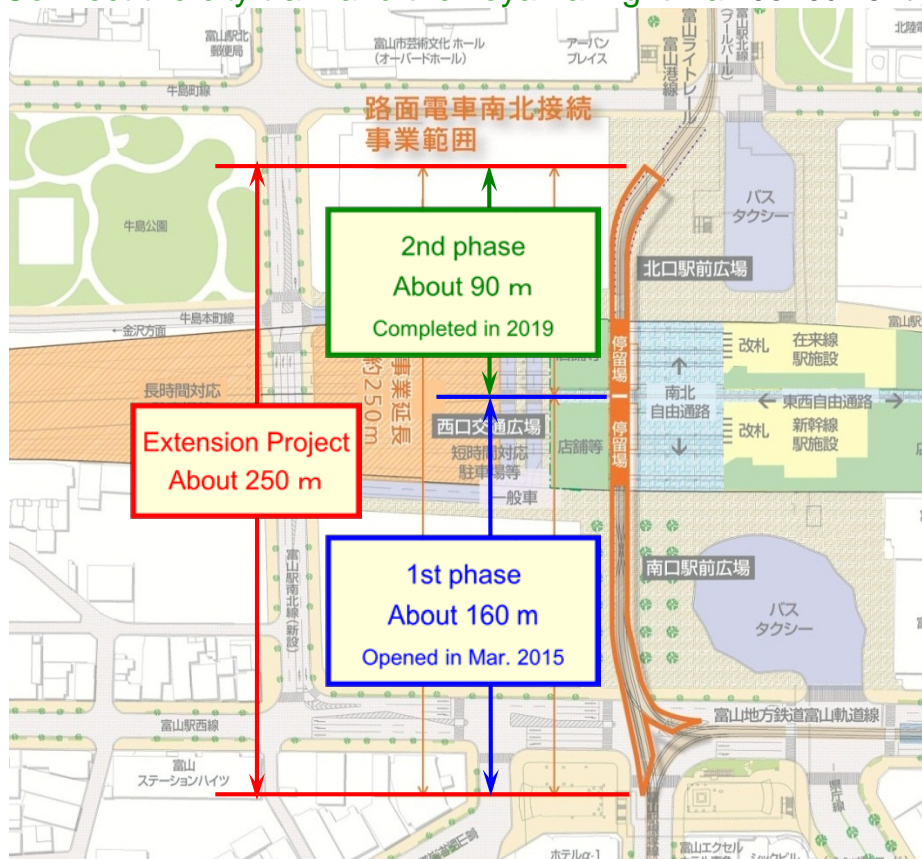


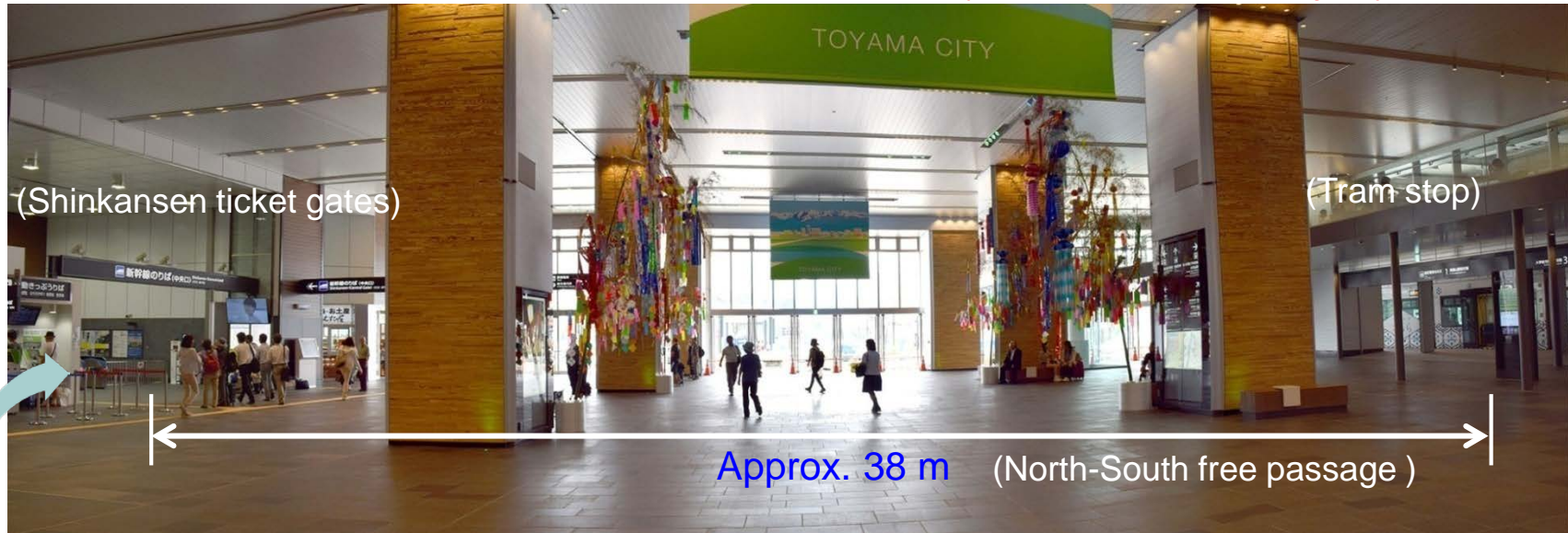
Image of the 2nd phase of the project



1st phase of the project

Tram North-South Connection Project ~ Building a convenience stop ~

Build a tram stop under the girder bridge of the Shinkansen (in front of the Shinkansen ticket gates)
(for the first time in Japan)



<Stop under the girder bridge>

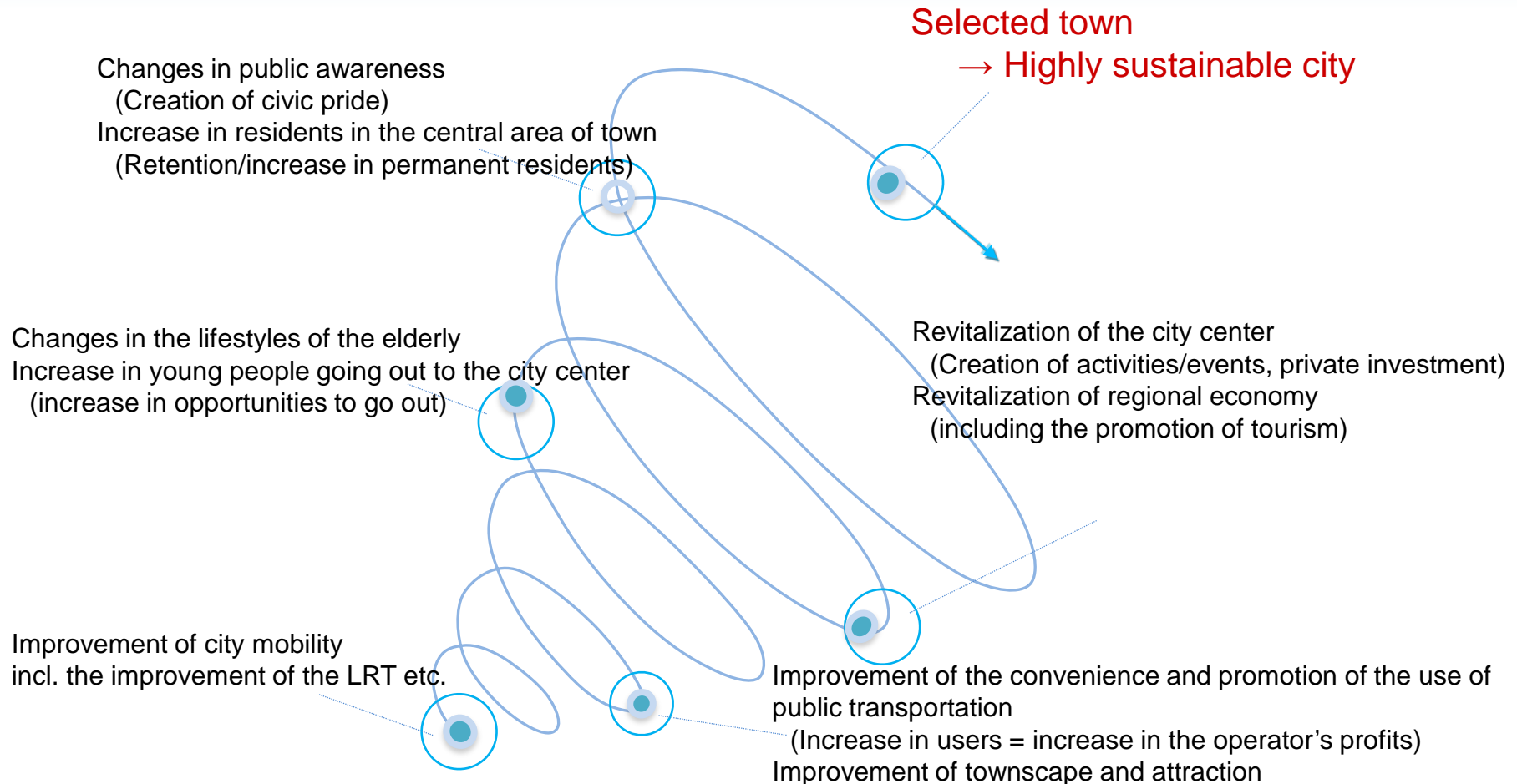
- Only about 38 meters from the Shinkansen ticket gates
(The tram is just in front of ticket gates.)
- Users can ride the tram even in rain or snow.
- It enables barrier-free access from the ticket gates.

⇒ Transit has been greatly improved.

Effects of improving the LRT in compact town development



A positive spiral is created, which influences and changes towns and people positively.





Promotion of Living along Public Service Railway Lines

Setting living promotion districts in the downtown area/along public service railway lines and the target no. of residents

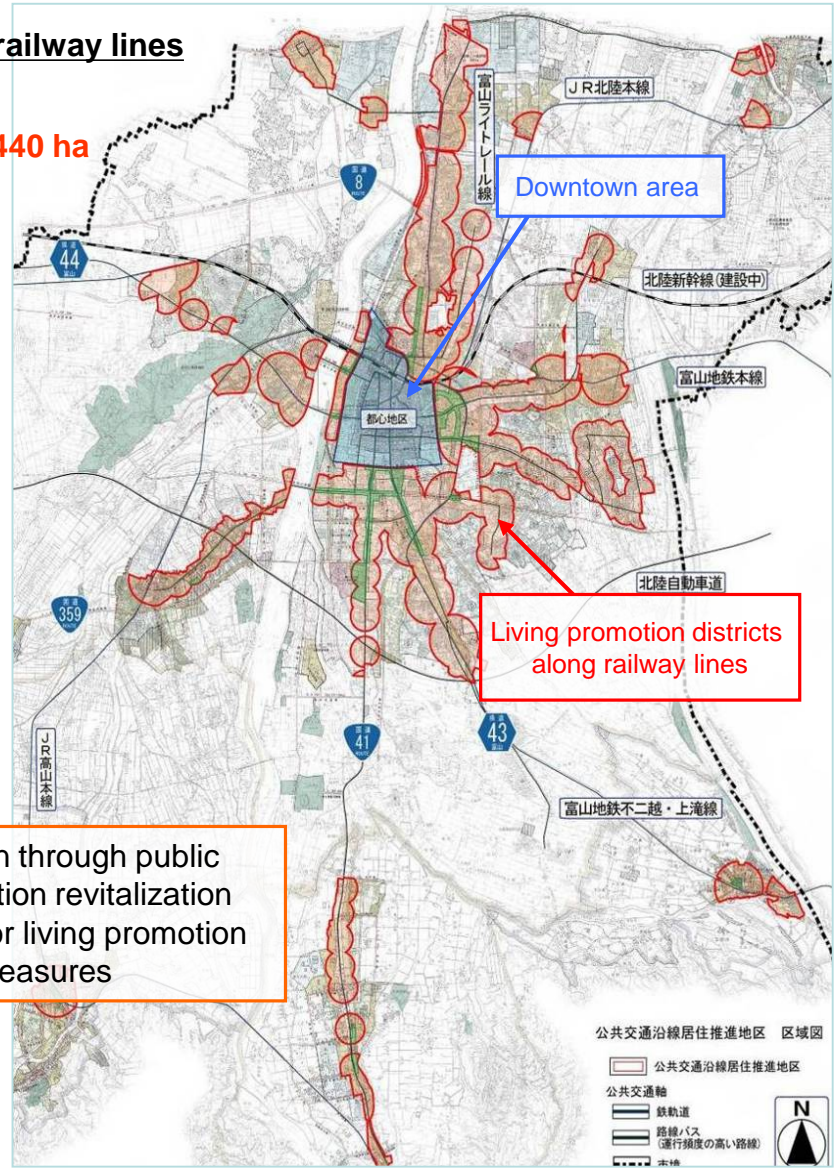
Setting living promotion districts in the downtown area/along railway lines

- **Downtown area: approx. 436 ha**
- **Districts for promoting living along railway lines: approx. 3,440 ha**

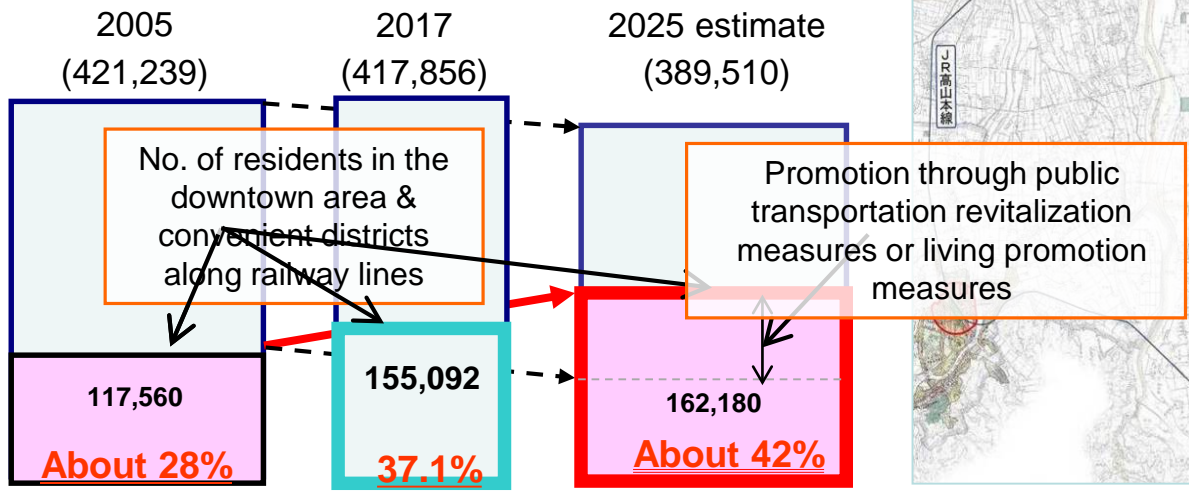
*Around 19 public transportation routes that start at Toyama Station

- Around railway and track stations (500-meter radius)
- Around bus stops (300-meter radius)

Offer a subsidy to high-quality housing constructors and citizens who plan to build or purchase houses in the living promotion districts in the downtown area and along railway lines.



<Target no. of residents in convenient districts along railway lines>



To promote living in living promotion districts along railway lines, offer a subsidy to high-quality housing constructors or citizens who build or purchase houses.

Support to constructors

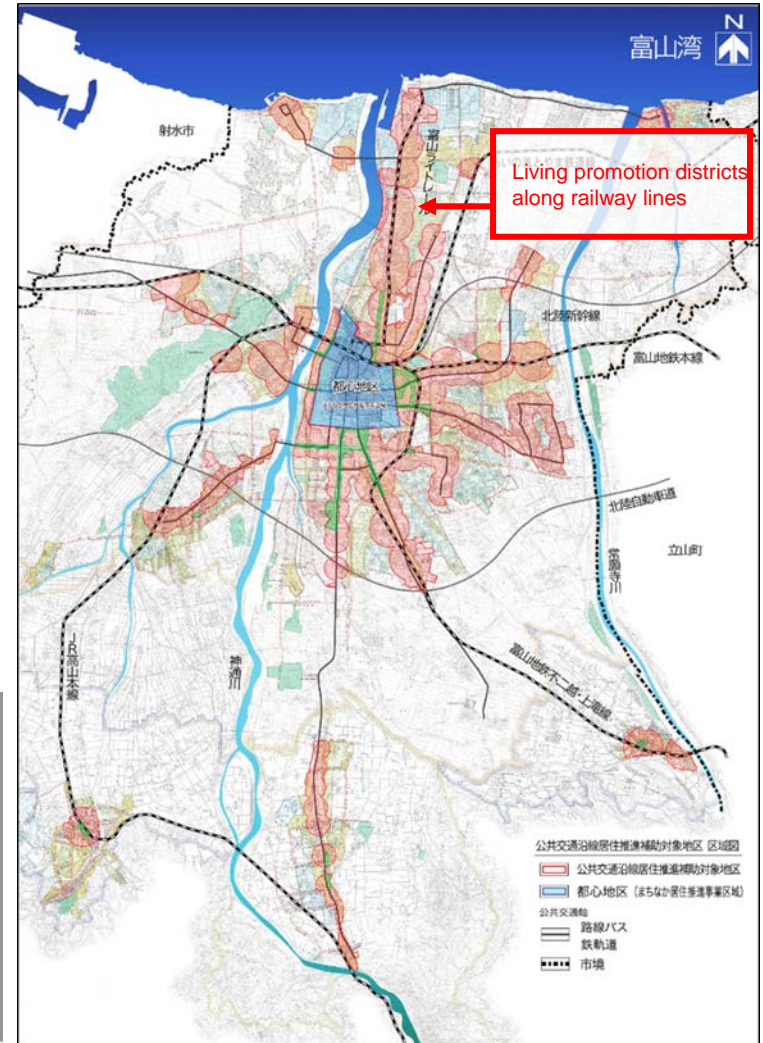
- (1) Subsidy for building residential complexes [¥350,000/complex] (¥700,000 until 2017)
- (2) Subsidy for building local quality rental housing (housing for the elderly with services) [¥700,000/complex]
- (3) Subsidy for building quality rental housing [¥700,000/complex]
- (4) Subsidy for developing housing sites [¥500,000/lot]

Support to citizens

- (1) Subsidy for building or buying detached houses/condominiums [¥300,000/unit]
- (2) Additional subsidy for housing for two generations [¥100,000/unit]
- (3) Additional subsidy for moving from other districts [¥100,000/unit]

Records (Oct. 2007 – Mar. 2018)

Total: 746 cases, 1,824 units

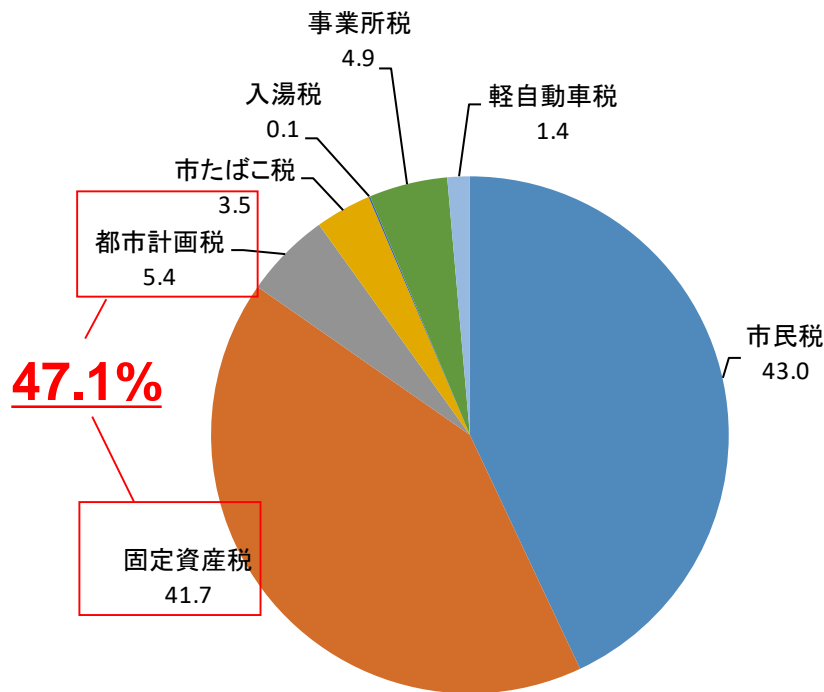




Revitalization of the City Center

Breakdown of Toyama City's city tax (Original budget in FY 2018)

[City tax: approx. ¥72.7 billion]



Breakdown of fixed asset tax & city planning tax by area (FY 2018)

Area	Percentage of area	Fixed asset tax + city planning tax
Urbanized areas	5.8%	75.2%
Of which, the city center	0.4%	22.4%
Others	94.2%	24.8%



Concentrated investment in the city center is also reasonable and effective in returning taxes to citizens.

Development of new event venues in the central commercial district



■ Building Grand Plaza Opened in September 2007

The city has developed a weather-resistant multipurpose square that functions as the center of events, considering the weather in the snowy cold region.

The square is used for events on 82.5% of a year (weekends: 100%, weekdays: 81.3%). (2017)



- Operated by:
Toyama City
- Construction period:
May 2006 – Aug. 2007
- Project cost:
approx. ¥1.52 billion
- Overview of facility area:



- approx. 1,400 m²
(65 m × 21 m)
- Ceiling height:
approx. 19 m
- Large video system:
approx. 277 inches

Flower Tram Model Project

《Flower Tram Model Project》

To provide a flowery, bright space and create a prosperous city with flowers, **exempt** passengers who ride the tram after purchasing flowers at the designated flower shops **from fares**.

○Period:

From November 2012

○Details:

- Users are given a free pass when purchasing a bouquet.
- Show the bouquet to a driver when getting off the tram and give the free pass.

○Flower shops:

26 shops in total along the tram line

○No. of users:

2013:	598
2014:	1,290
2015:	1,759
2016:	2,036
2017:	1,821



Citizen cyclist sharing system

The city has started a new community cycle system, in which citizen cyclists can rent a bicycle freely from 23 stations in the city center anytime throughout the year and return it to any station.

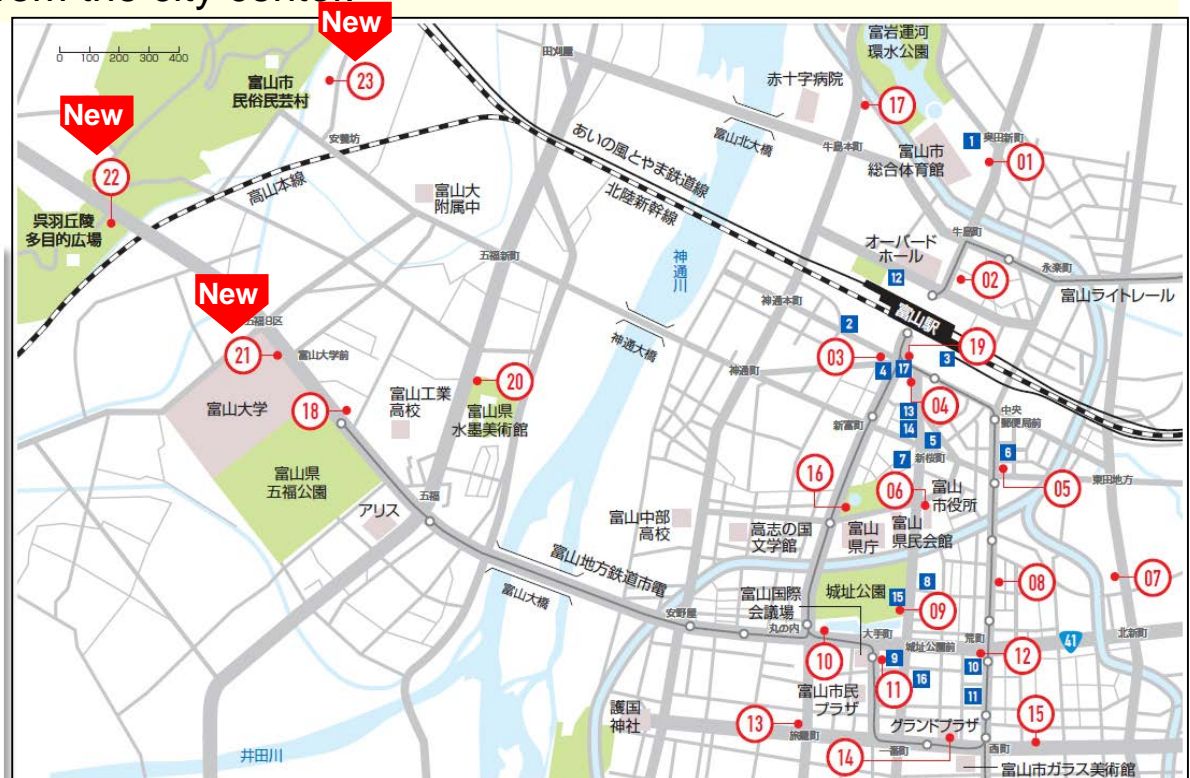
*At the end of 2017, three more stations were set up **on the campus of University of Toyama, in the Kureha Kyuryo multipurpose square, and in the Toyama Municipal Folk Craft Village.** This has improved access to the Gofuku District and increased convenience by allowing cyclists to travel more distance from the city center.

<Overview of the system>

○Service started: Mar. 20, 2010

○Operated by: Cyclocity Inc.

○No. of bicycles: 255



Toyama City *Machinaka* Tourist Information Center / Samurai Experience



The center provides experience services attractive to tourists, including wearing a Japanese armor and horse riding.

Opened in Toyama Castle Park in March 21, 2018

[Simple experience of *Kabuto* (helmet) and *Jinbaori* (surcoat)] available everyday at ¥500

[Real Japanese armor wearing experience] available on Sat, Sun, and holidays at ¥3,000

[Horse riding experience wearing a real Japanese armor] ¥3,500*

[Horse riding experience wearing a battle surcoat] ¥1,000*

[Feeding experience] ¥100* *April – November (3-5 times a month)



Toyama Kirari (complex comprising Glass Art Museum & the library)

(Opened Aug. 22, 2015)



コンパクトシティ富山
COMPACT CITY TOYAMA

The city has built a complex in the city center that offers Glass Art Museum and the Toyama City Public Library.

The transparent facade applied by delicate shading is open to the city.

The spiral passage feels warmth by using local timber and natural materials.



Toyama Kirari public facility **No. of visitors since opening: 1.85 million (as of March 31, 2018)**

Creating an attractive townscape

- Hanging baskets and banners have been installed to create a townscape.



Creating an attractive cityscape ~ Hanging flower baskets~





Face to Face Citizen Services

Town development responding to the aging population (Distribution of the elderly, 2017)

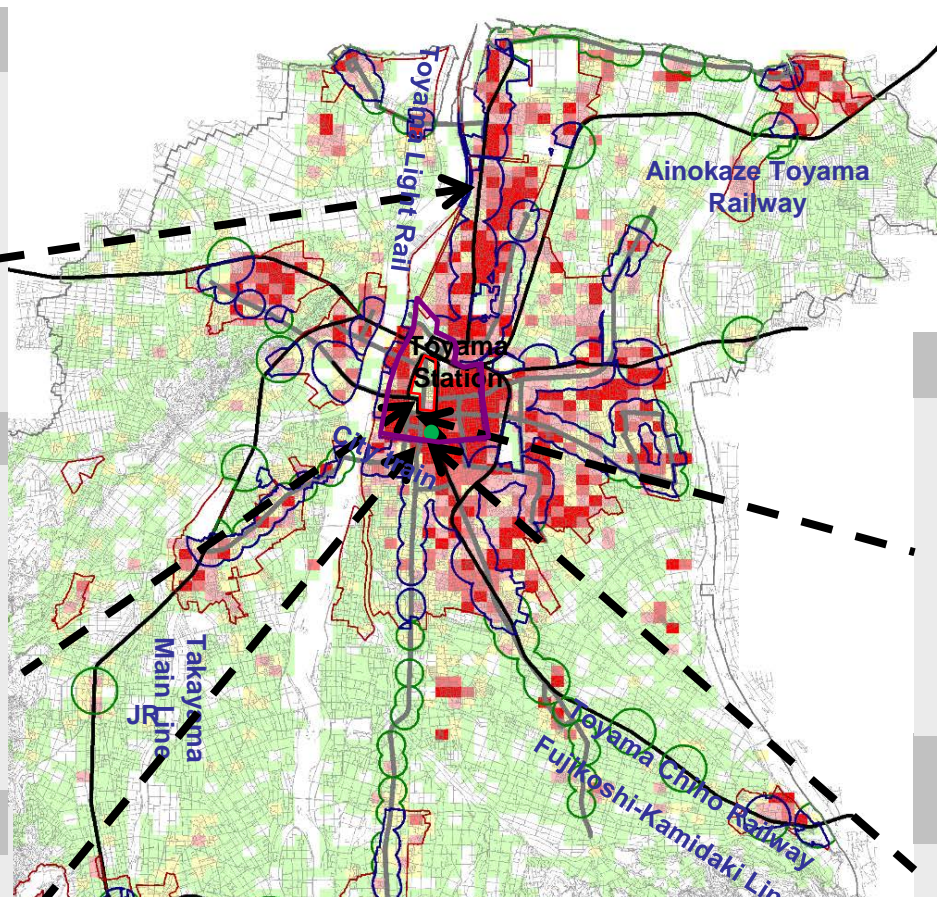
Toyama Light Rail



City train loop line



Aville



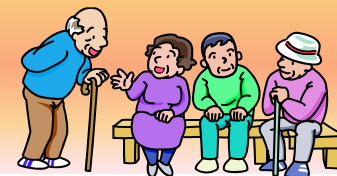
Grand Plaza



Kadokawa Care Prevention Center



“There are many elderly people in the city center.”

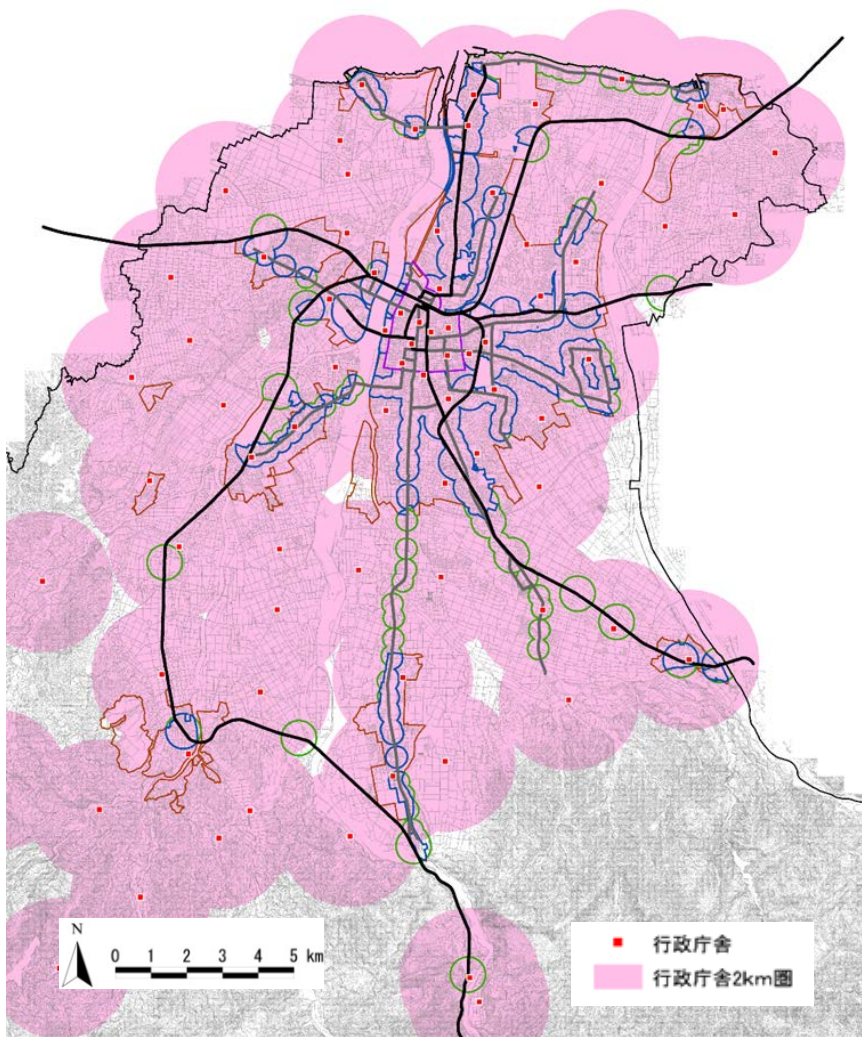


Analysis of city functions

~ Government offices: Proportion of the population within 2 km from the city hall ~



■ Approx. **98.9%** of citizens live within a radius of 2 kilometers from government offices*.



■ Proportion and population within 2 km from government offices

	Population within 2 km	Proportion (%)	Population
Toyama City	413,349	98.9	417,856
Downtown area and living promotion districts along railway lines	161,027	99.9	161,197
Downtown area	21,543	100.0	21,543
Living promotion districts along railway lines	139,484	99.9	139,654
Districts excl. the downtown area and living promotion districts along railway lines	252,322	98.3	256,659

(Calculated based on basic resident register information as of June 30, 2017)

*Government offices:

- (1) City hall: 1
- (2) Administrative service center: 4
- (3) Core district center: 2
- (4) District center: 73 Total: 80 offices

District center:

Located in almost every elementary school district, it functions as a local agency of the city, where Toyama City officials are stationed at. It issues various certificates, including issuing a copy of family register, resident registration, seal registration, resident's card, and a certificate of tax payment, provides administrative services, including pension programs and national health insurance, and provides administrative information. It gives support to local activities organized by various bodies including self-governing promotion bodies as it has community center functions.

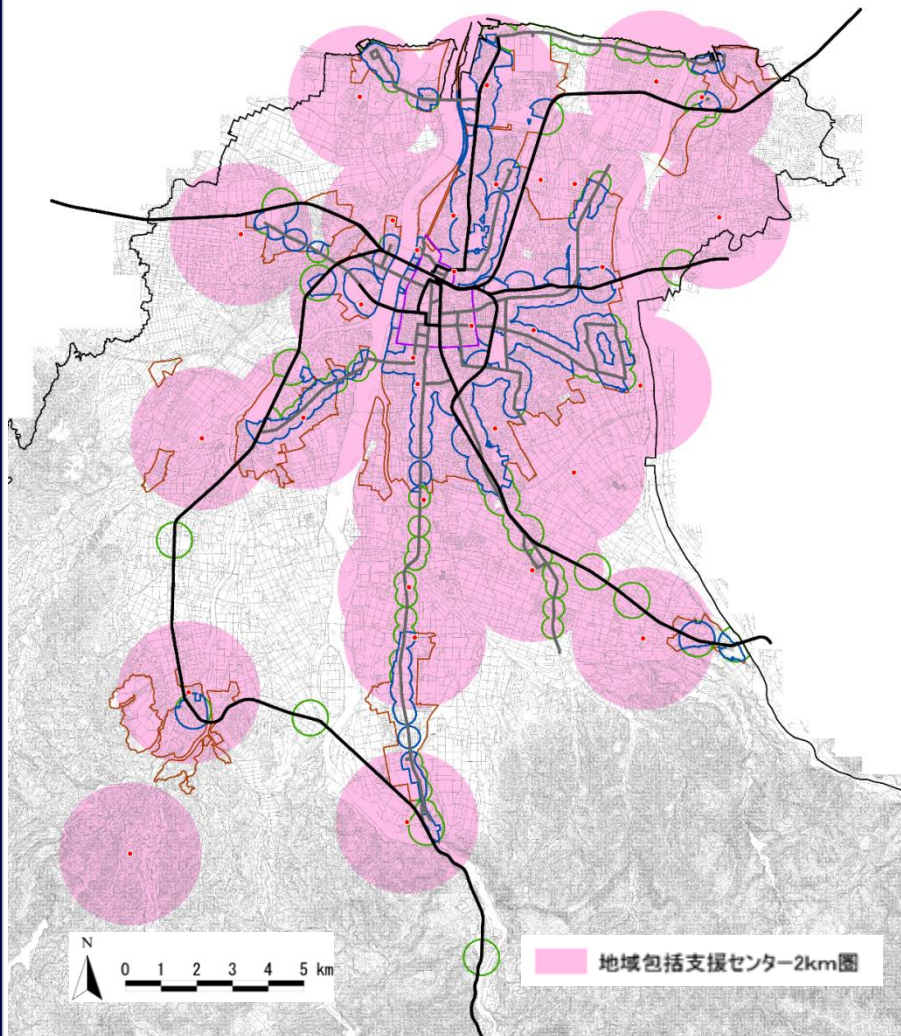
Analysis of city functions

~ Welfare: Proportion of the population within 2 km from community general support centers ~



■ Approx. **87.6%** of citizens live within a radius of 2 kilometers from community general support centers.

■ Proportion and population within 2 km from community general support centers



	Population within 2 km	Proportion (%)	Population
Toyama City	366,045	87.6	417,856
Downtown area and living promotion districts along railway lines	158,991	98.6	161,197
Downtown area	21,543	100.0	21,543
Living promotion districts along railway lines	137,448	98.4	139,654
Districts excl. the downtown area and living promotion districts along railway lines	207,054	80.7	256,659

(Calculated based on basic resident register information as of June 30, 2017)

No. of community general support centers: 32
(largest no. among core cities)

Community general support center:
Its establishment has been stipulated in the Long-Term Care Insurance Act. Community general support centers conduct comprehensive activities, including general consulting, the prevention of cruelties, and preventive care management, to improve local citizens' health, welfare, and medical treatment. At the centers, public health nurses, chief care managers, and social workers work together by utilizing their expertise.

Analysis of city functions

~ City community center: Proportion of the population within 2 km from city community centers ~



■ Approx. **98.9%** of citizens live within a radius of 2 kilometers from city community centers.

■ Proportion and population within 2 km from city community centers

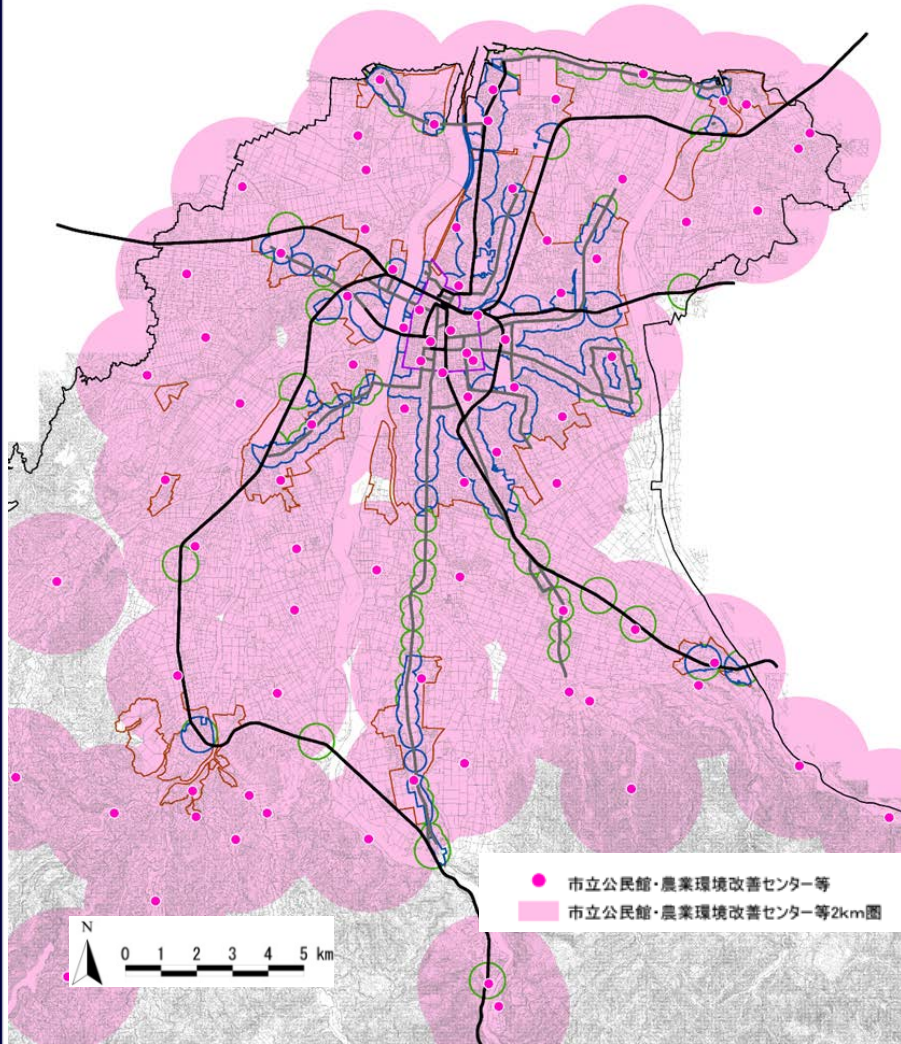
	Population within 2 km	Proportion (%)	Population
Toyama City	413,358	98.9	417,856
Downtown area and living promotion districts along railway lines	161,037	99.9	161,197
Downtown area	21,543	100.0	21,543
Living promotion districts along railway lines	139,494	99.9	139,654
Districts excl. the downtown area and living promotion districts along railway lines	252,321	98.3	256,659

(Calculated based on basic resident register information as of June 30, 2017)

City community center etc.:

- (1) Downtown area: 7
- (2) Districts along railway lines: 18
- (3) Districts along railway lines (non-use): 7
- (4) Other districts: 59

Total: 91



Analysis of city functions

~ Library: Proportion of the population within 2 km from libraries

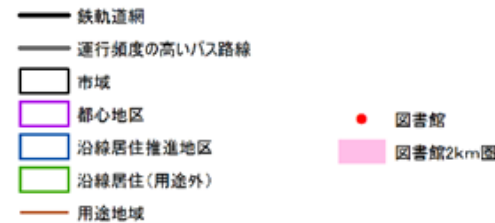
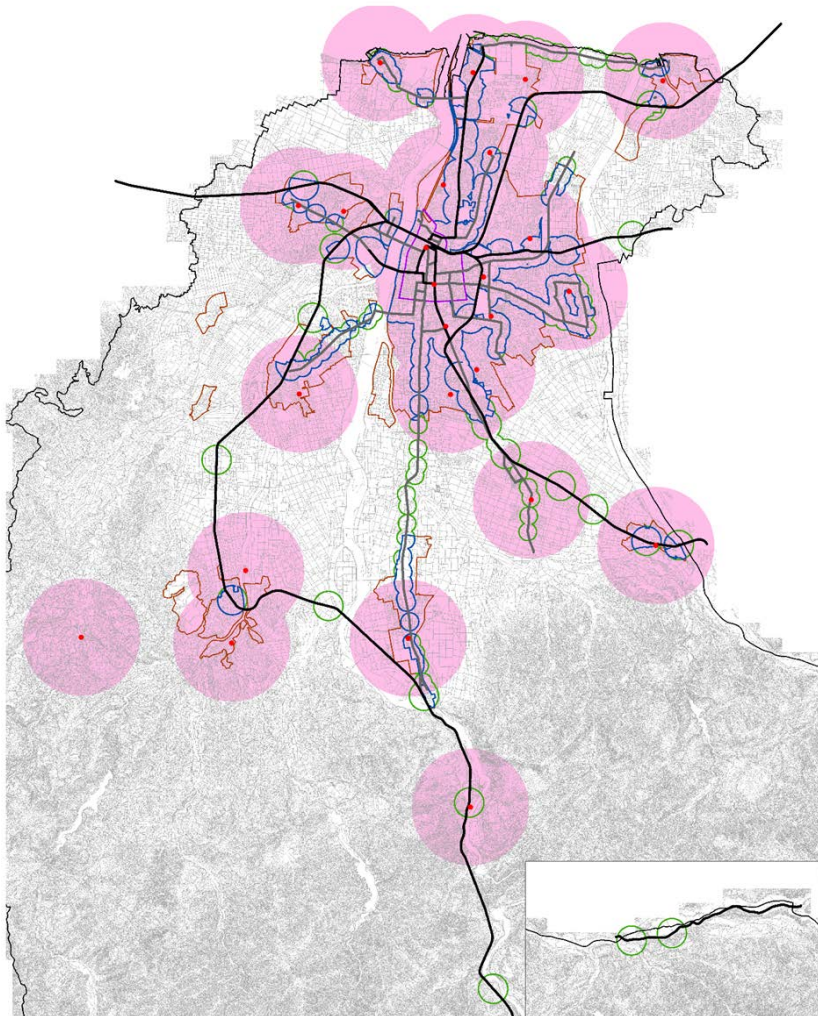


■ Approx. **80.3%** of citizens live within a radius of 2 kilometers from libraries*.

■ Proportion and population within 2 km from libraries

	Population within 2 km	Proportion (%)	Population
Toyama City	335,402	80.3	417,856
Downtown area and living promotion districts along railway lines	153,008	94.9	161,197
Downtown area	21,543	100.0	21,543
Living promotion districts along railway lines	131,465	94.1	139,654
Districts excl. the downtown area and living promotion districts along railway lines	182,394	71.1	256,659

(Calculated based on basic resident register information as of June 30, 2017)



*Library: (1) Main library: 1
 (2) Community library: 6
 (3) Branch library: 18 Total: 25



Effects of Compact Town Development

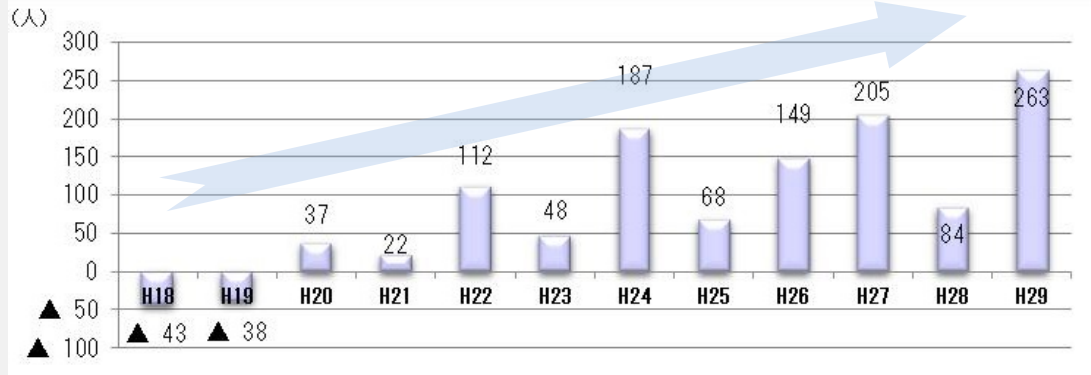
Effects of compact town development

~ Increase in people moving in ~



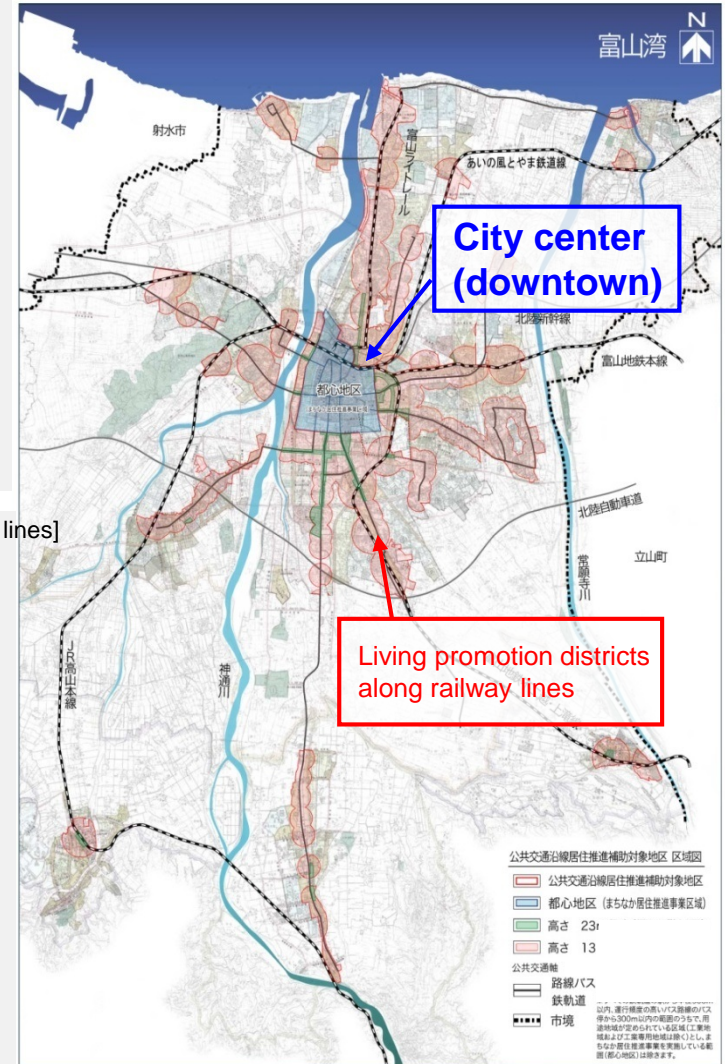
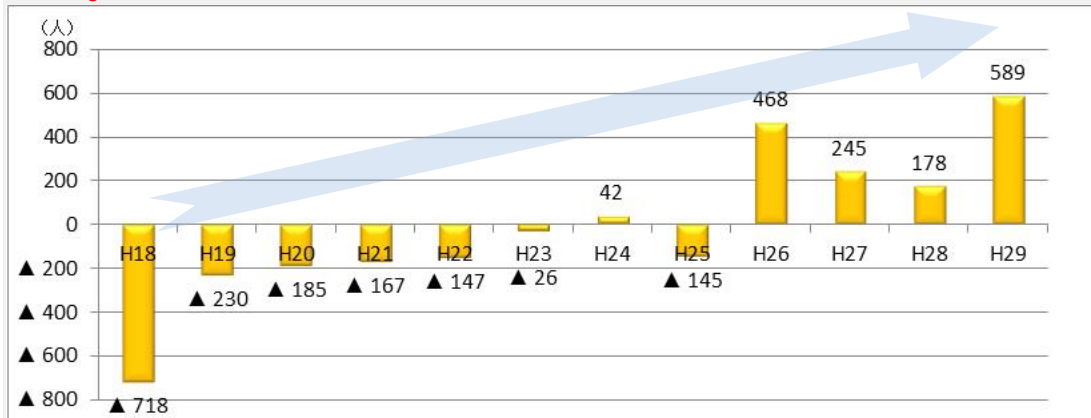
[Change in social increase/decrease (moving in—moving out) in the city center (downtown)]

People moving in has been outnumbering those moving out since 2008.



[Change in social increase/decrease (moving in—moving out) in living promotion districts along railway lines]

The number of people moving in still continues to exceed that of people moving out since people moving in outnumbered in 2018.



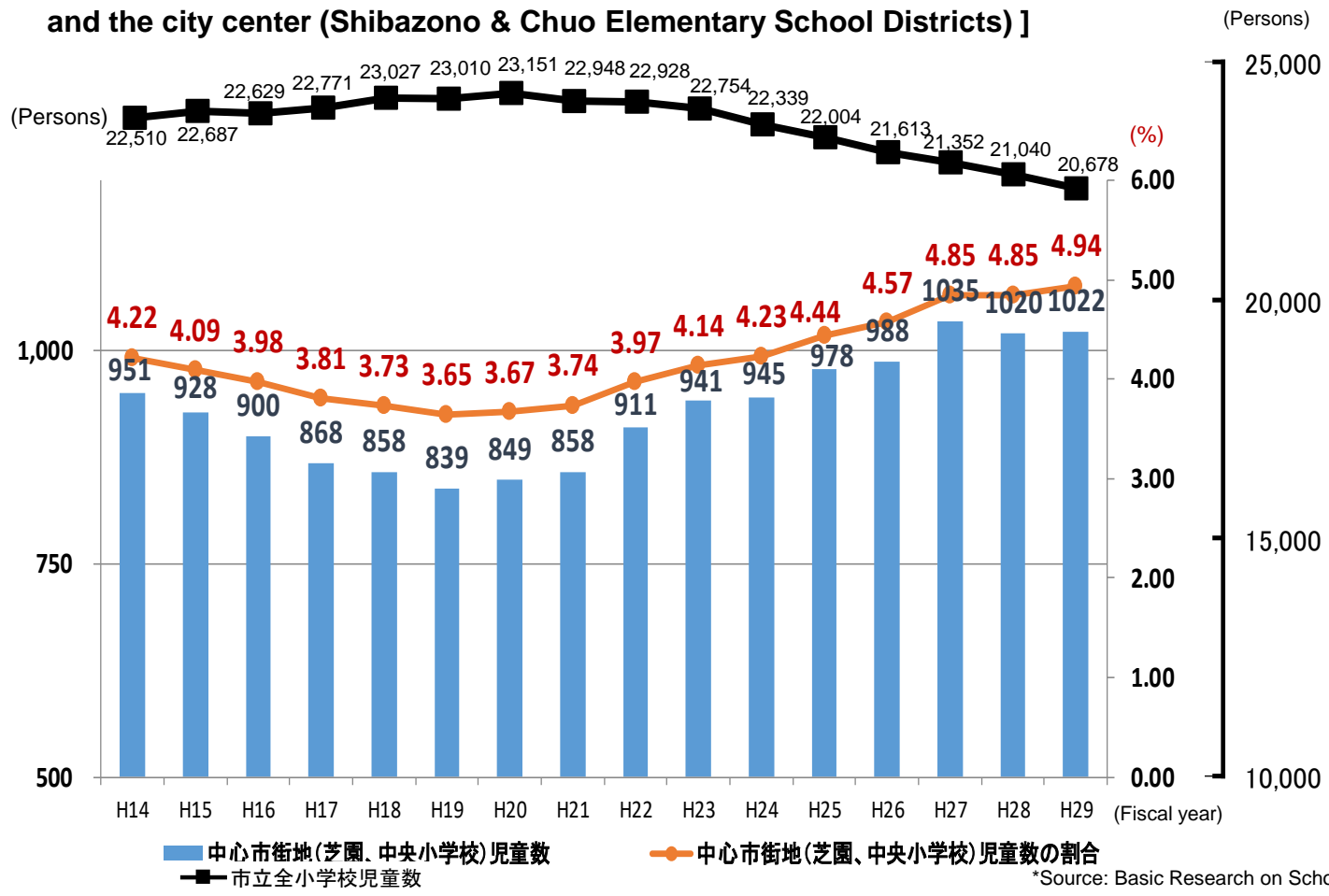
*Calculated based on basic resident register information as of June 30 every year

Effects of compact town development ~ Increase in the no. of schoolchildren in the city center ~



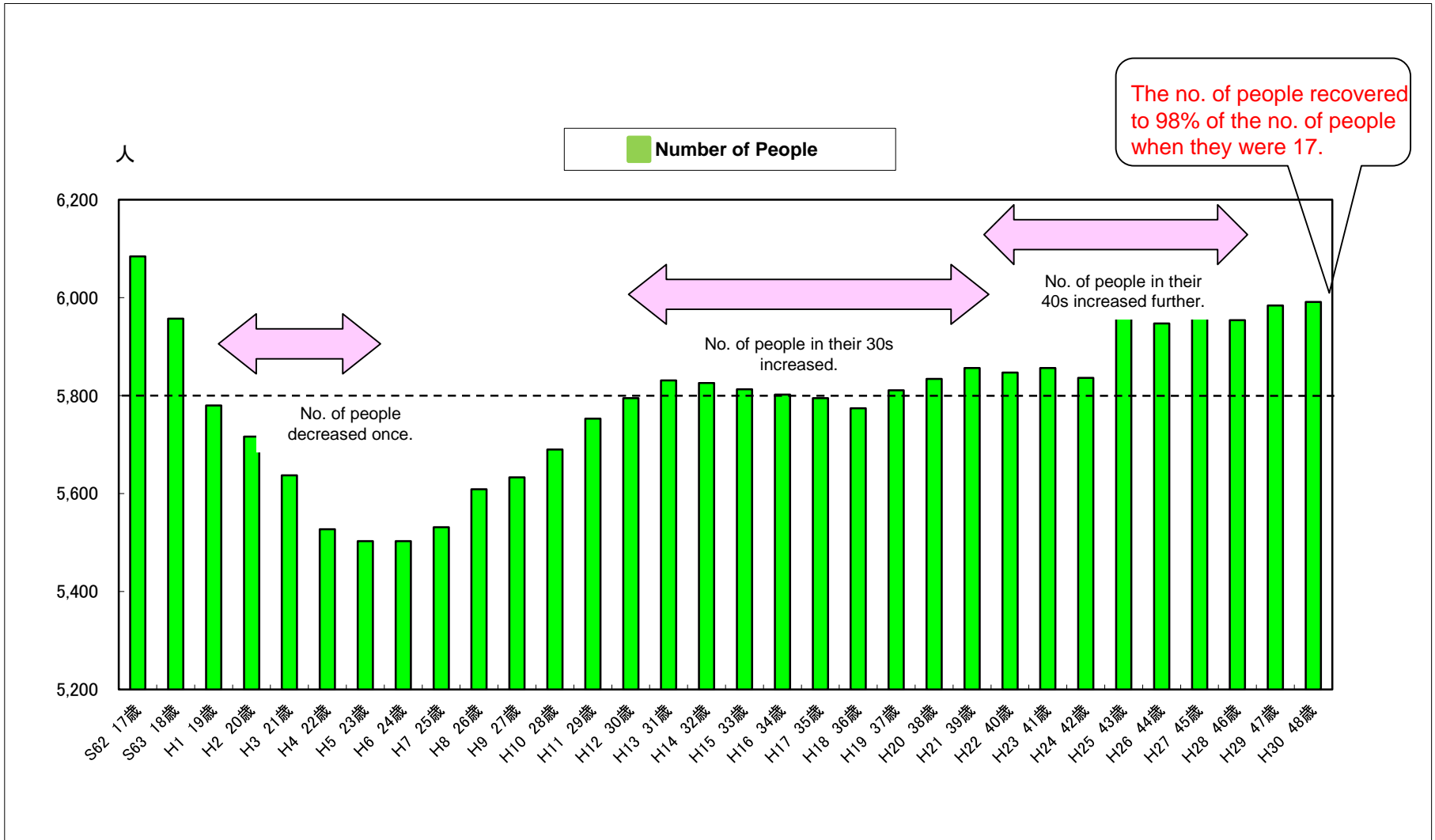
- The number of schoolchildren in the city center **increased by 183 (21.8%)**. (2007-2017)
- The proportion of schoolchildren in the city center to that in Toyama City **increased by 1.29 points**. (2007-2017)

[Change in the no. of schoolchildren in Toyama municipal elementary schools and the city center (Shibazono & Chuo Elementary School Districts)]

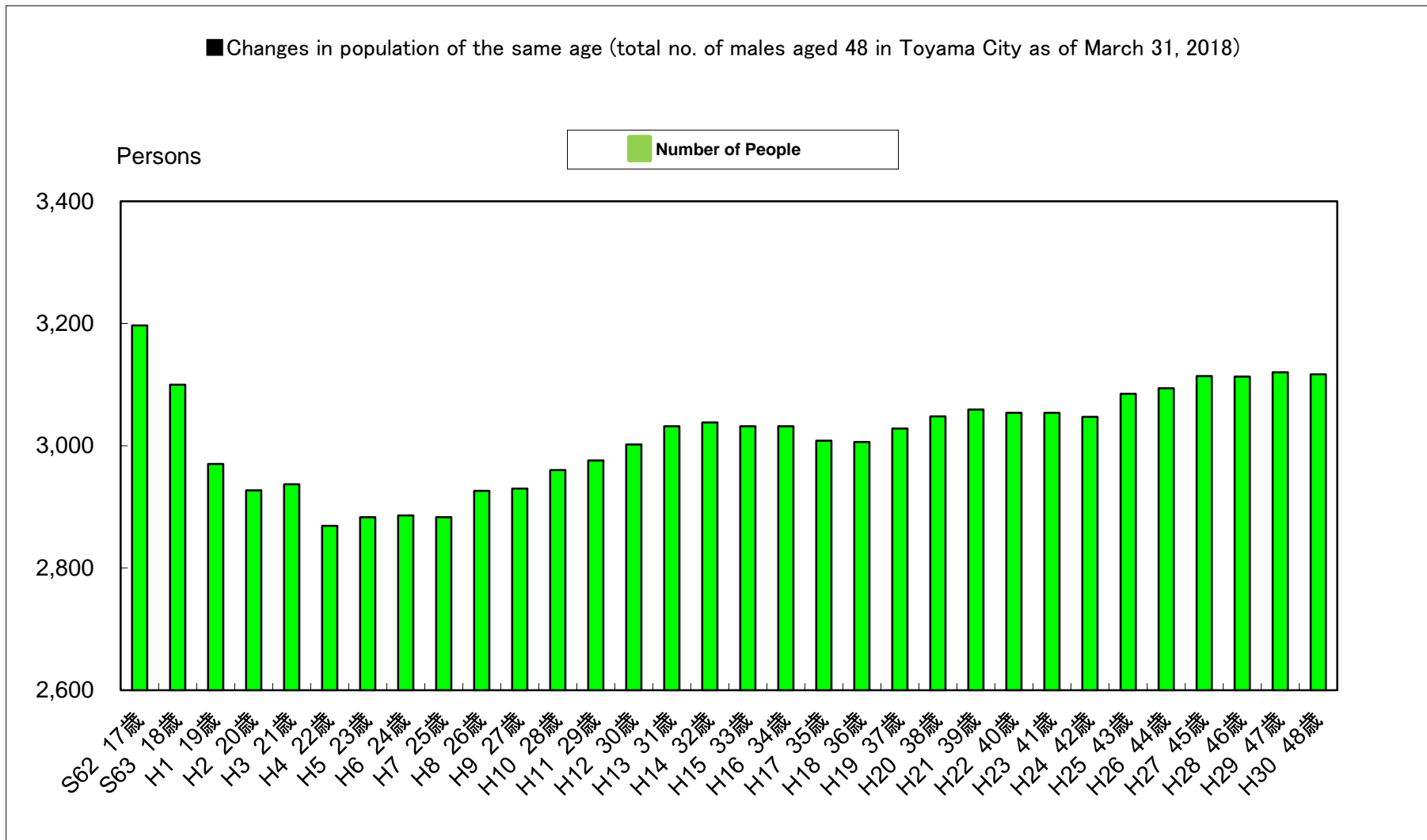


*Source: Basic Research on School

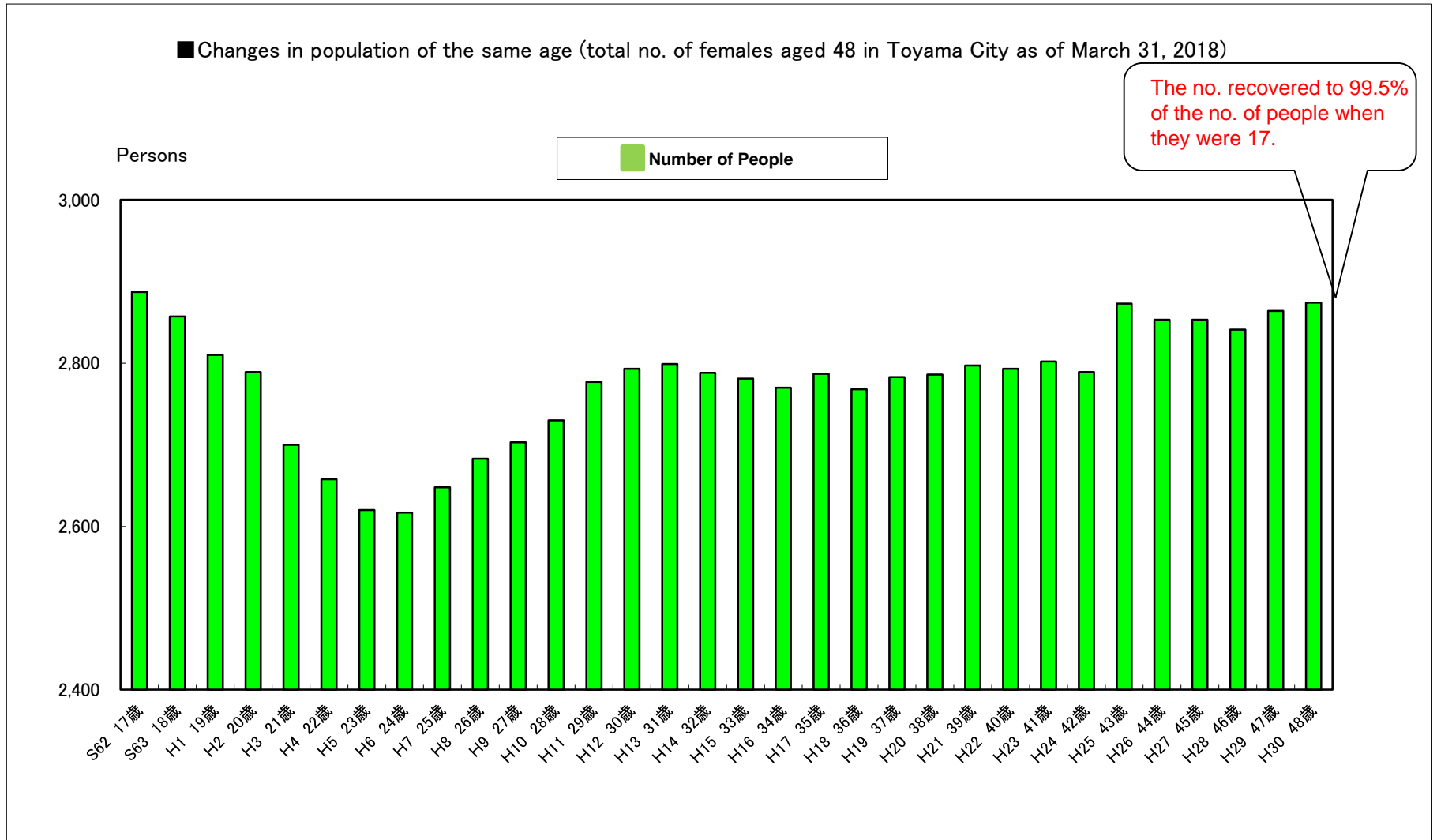
Changes in population of the same age (males & females) (those born in Apr. 2, 1969 to Apr.1,1970)



Changes in population of the same age (males) (those born in Apr. 2, 1969 to Apr.1,1970)



Changes in population of the same age (females) (those born in Apr. 2, 1969 to Apr.1,1970)



Effects of compact town development ~ Maintaining population~



1. The total population of Toyama City is declining as is the case in Japan and Toyama Prefecture.
2. In Toyama City, while the total population is declining due to natural attrition (birth-death) with the aging population, people moving in have been outnumbering people moving out in recent years.
3. Toyama City's depopulation is slower than Toyama Prefecture as a whole.

[Comparison of population change (for a year from January 1, 2016 to December 31, 2016)]

	Population on January 1, 2017	No. of increase/decrease	Increase/decrease rate (%)
Japan	125,583,658	▲308,084	▲0.24
Toyama Prefecture	1,059,931	▲6,532	▲0.61
Toyama City	412,493	▲1,204	▲0.29
excl. Toyama City	647,438	▲5,328	▲0.82

○Source: Demographic survey (announced July 5, 2017) based on the basic resident register by the Ministry of Internal Affairs and Communications *excl. foreigners

[Demographics in Toyama City (for a year from January 1, 2016 to December 31, 2016)]

No. of births	No. of deaths	No. of people moving in	No. of people moving out	Total no.
3,220	4,626	9,775	9,573	▲1,204

Natural attrition: 1,406

Social increase: 202 (people moving in outnumbered people moving out.)

○Source: Toyama City materials *excl. foreigners

Effects of compact town development

~ Increase in people moving in from other prefectures ~



[Basic resident register (source: Toyama City's statistics report)] *Total increase/decrease between Jan. and Dec. as of the end of every December

	Population	Birth	Death	Natural attrition	Moving in			Moving out			Social increase/decrease	Of which, increase/decrease within Toyama Prefecture	Of which, increase/decrease in other prefectures
					Total	From other cities in Toyama Prefecture	From other prefectures	Total	To other cities in Toyama Prefecture	To other prefectures			
2006	418,634	3,689	3,792	▲ 103	11,000	3,565	7,435	11,026	2,893	8,133	▲ 26	672	▲ 698
2007	418,194	3,530	3,947	▲ 417	10,743	3,335	7,408	10,749	2,666	8,083	▲ 6	669	▲ 675
2008	417,991	3,548	4,017	▲ 469	10,524	3,472	7,052	10,392	2,620	7,772	132	852	▲ 720
2009	417,790	3,505	4,026	▲ 521	10,146	3,154	6,992	9,957	2,654	7,303	189	500	▲ 311
2010	417,734	3,499	4,235	▲ 736	9,969	3,079	6,890	9,387	2,571	6,816	582	508	74
2011	417,108	3,352	4,285	▲ 933	9,770	2,982	6,788	9,479	2,494	6,985	291	488	▲ 197
2012	421,963	3,356	4,396	▲ 1,040	10,786	3,176	7,610	9,790	2,591	7,199	996	585	411
2013	420,434	3,287	4,485	▲ 1,198	10,897	3,168	7,729	10,564	2,865	7,699	333	303	30
2014	419,849	3,265	4,500	▲ 1,235	11,187	3,160	8,027	10,044	2,675	7,369	1,143	485	658
2015	419,123	3,322	4,564	▲ 1,242	11,537	3,104	8,433	10,477	2,770	7,707	1,060	334	726
2016	418,304	3,267	4,647	▲ 1,380	11,470	3,072	8,398	10,556	2,748	7,808	914	324	590
2017	418,045	3,142	4,754	▲ 1,612	12,707	3,234	9,473	10,984	2,878	8,106	1,723	356	1,367

*excluding deletions by the authority

Effects of compact town development ~ Result of public announcement of land prices (January 1, 2018) ~



コンパクトシティ富山
Compact City Toyama

- The average land price in Toyama Prefecture has been declining since 1993 (for 26 consecutive years).
- In Toyama City, **land prices rose for 4 consecutive years** (average of all purposes).
- In Toyama City, **land prices rose by 0.2% year-on-year on average.**
- Land prices increased in **8 business districts**, mainly **around Toyama Station and along the loop line.**
- Land prices of **12 housing sites in the city** increased.

(Source: Public announcement of land prices in 2018)
*Public announcement of land prices (survey by the government, record date: January 1)
No. of spots surveyed (106 in the city)

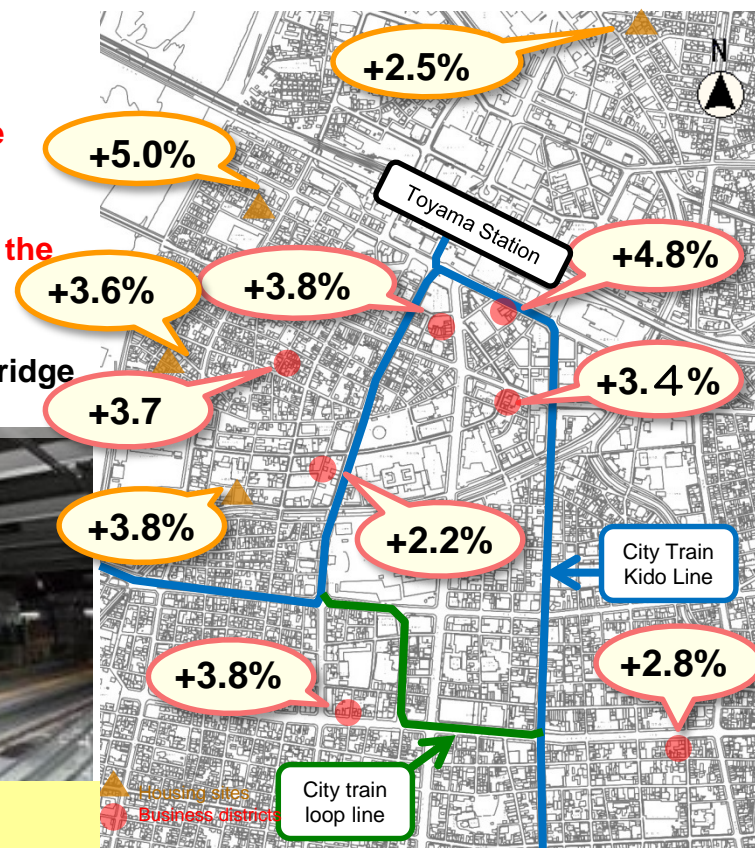
<Factors of the increase in land prices>

- **Business districts: Expectations for North-South connection of the tram, revitalization of redevelopment by private sectors**
- **Residential areas: Convenience and proper prices of areas around the city center, progress of the *Machinaka* Living Promotion Project**

Along the city train line



LRT space under the girder bridge of Toyama Station



[Reference] The land price survey (July 1, 2017) by Toyama Prefecture shows the benchmark land price for all purposes increased for 4 consecutive years. (Only Toyama City among Hokushinetsu cities)

[Spots where land prices rose significantly]

Change in fixed asset tax & city planning tax (comparison between 2012 and 2017)



Multiplying the tax base at the beginning of 2012 and 2017 by the tax rate and comparing the figures indicates a **6.8% increase** in the city center area and a **9.7% increase in Toyama City**.

City center

(Unit: \1,000)

	Fixed asset tax	City planning tax	Total
2012	4,782,978	920,163	5,703,141
2013	4,817,768	926,070	5,743,838
2014	4,839,661	929,845	5,769,506
2015	4,774,427	918,832	5,693,259
2016	4,873,546	1,123,964	5,997,510
2017	4,949,822	1,140,571	6,090,393
Deduct (2017-2012)	166,844	220,408	387,252
Rate (%) (2017/2012)	103.5%	124.0%	106.8%

Toyama city

(Unit: \1,000)

	Fixed asset tax (incl. depreciable assets)	City planning tax	Total
2012	28,728,653	3,165,910	31,894,563
2013	29,003,963	3,198,231	32,202,194
2014	29,317,127	3,244,354	32,561,481
2015	29,069,634	3,206,402	32,276,036
2016	30,048,113	3,913,318	33,961,431
2017	31,012,591	3,981,281	34,993,872
Deduct (2017-2012)	2,283,938	815,371	3,099,309
Rate (%) (2017/2012)	108.0%	125.8%	109.7%

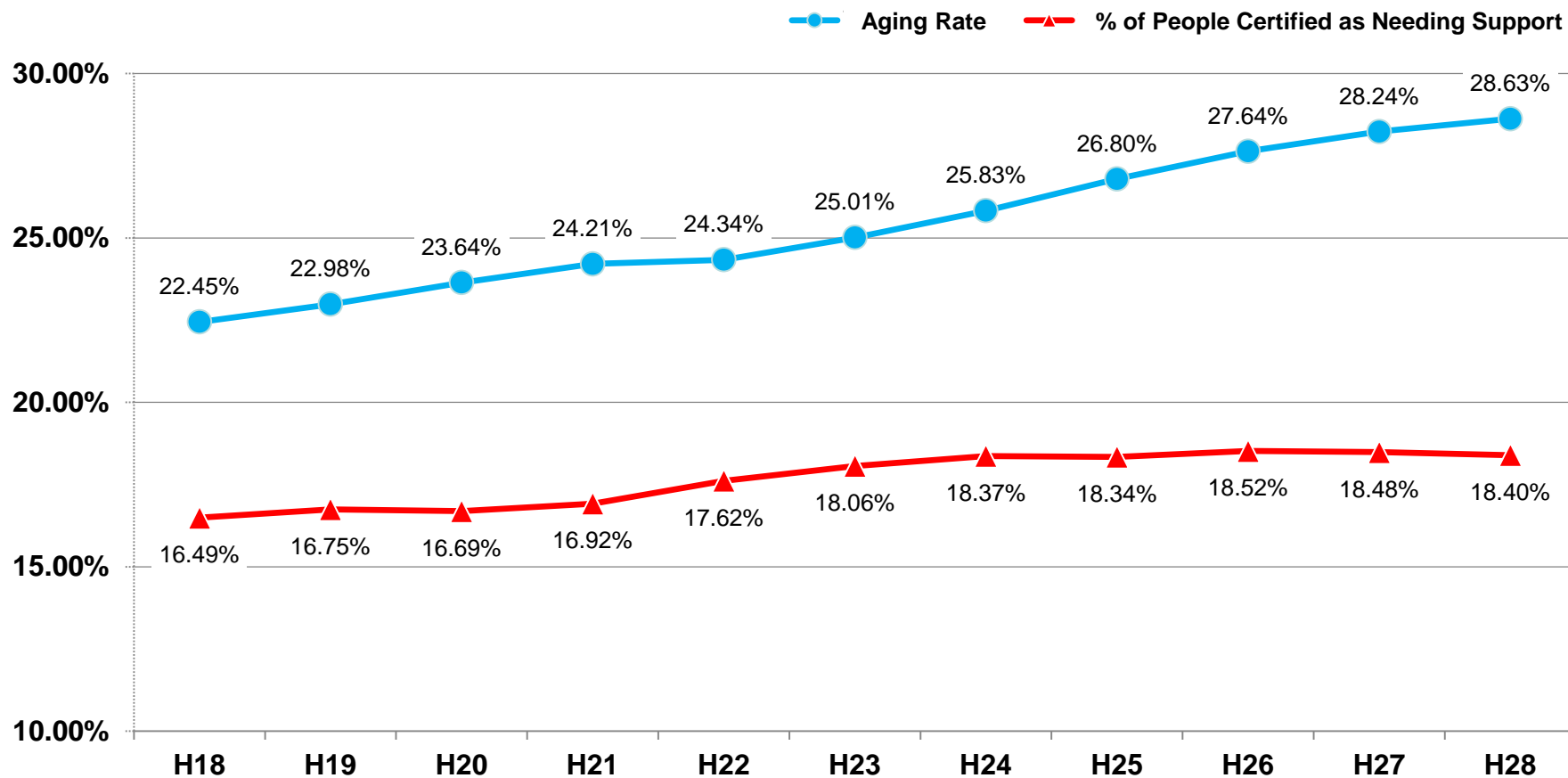
The figure calculated by multiplying the tax base at the beginning of April by the tax rate (incl. below the tax exemption limit and exemption from taxes)



Measures to extend healthy life expectancy

Growing need for preventive care

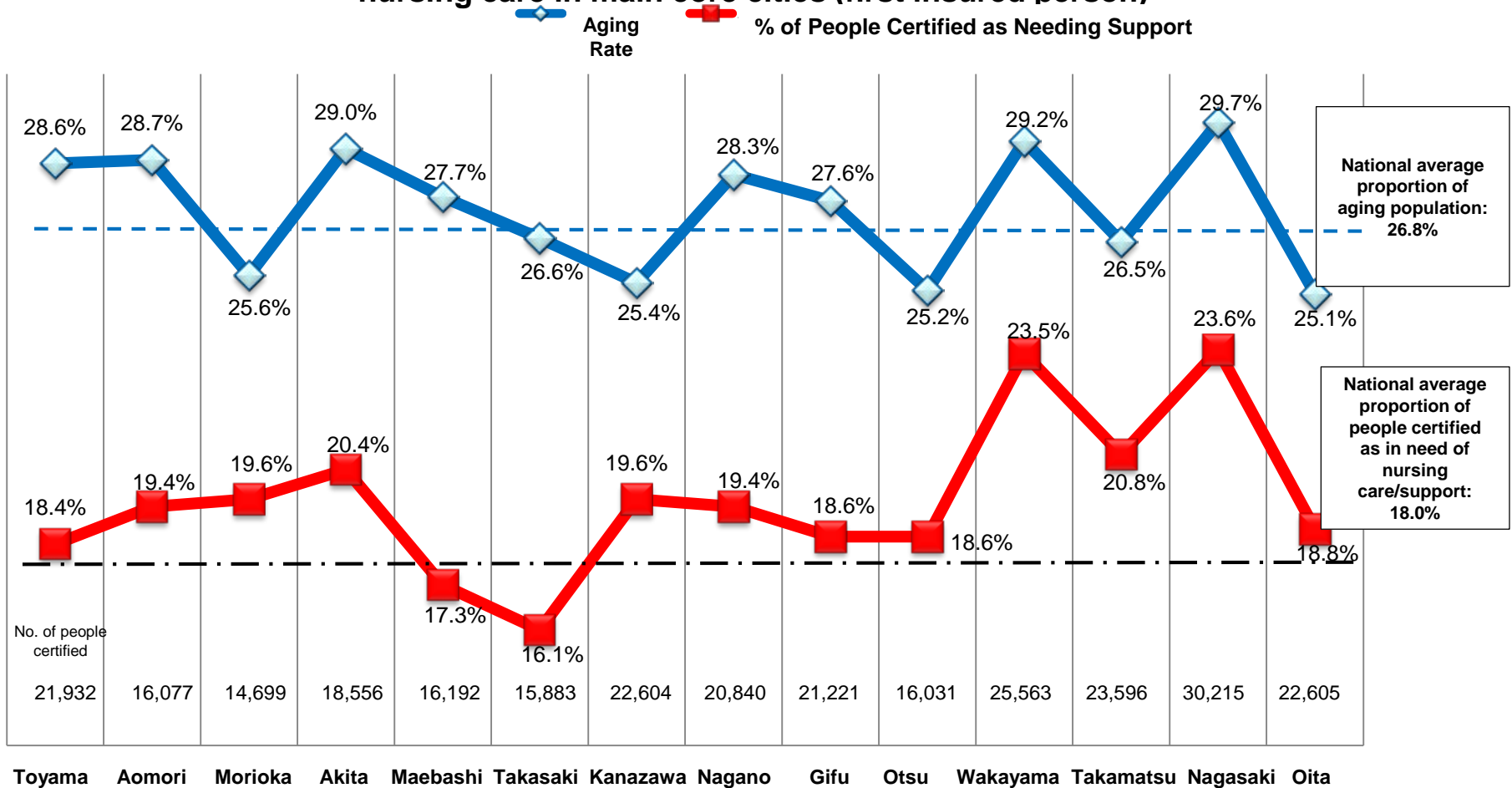
Changes in the proportion of aging population and the proportion of people certified as in need of nursing care/support



*As of the end of every March

Growing need for preventive care

● Proportions of aging population/proportions of people certified as in need of nursing care in main core cities (first insured person)

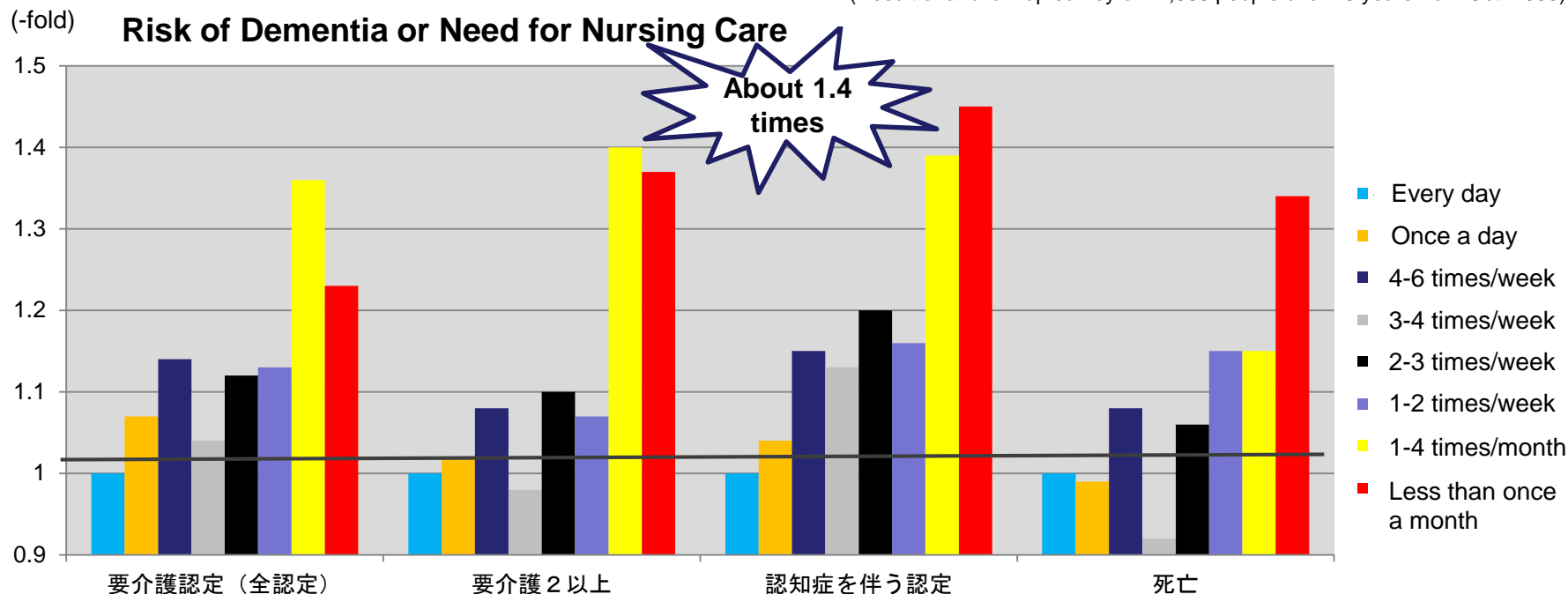


As of January 1, 2017
 (March 31, 2017 for Toyama City)

Socializing is important for preventive care

The elderly who communicate with other people less than once a week have an about 1.4 times higher risk of needing nursing care or having dementia than those who communicate with other people every day.

Source: Research led by Masashige Saito, Associate Professor,
Faculty of Social Welfare, Nihon Fukushi University
(Result of a follow-up survey of 12,085 people over 10 years from Oct. 2003)



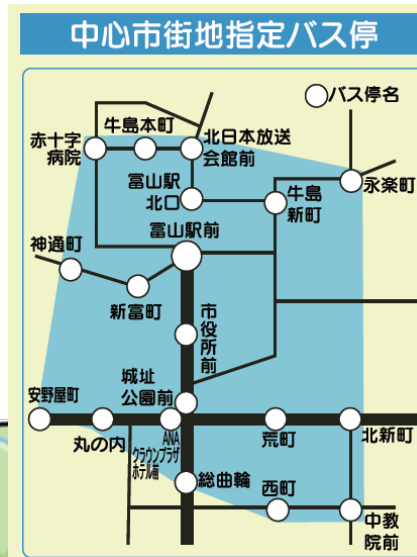
Odekake Commuting Pass Project

From May 2004



In collaboration with transport operators, the city has introduced a discount program that **reduces transportation fare to 100 yen per ride for commuting between all areas in the city and the city center** for people 65 years or older. **About 24%** of elderly people have this commuting pass, and the program is used **2,733 times by about 1,400 passengers per day**. (2017 record)

The project has brought outing opportunities to the elderly, revitalizing the city center and supporting transport operators.



<Example> Use of city bus
 [Inotani]→[Toyama Ekimae]
 Regular fare: ¥1,160
Odekake pass: ¥100



<Applying for the pass>

Fee for users aged 65 or older: ¥1,000

<Use of the pass>

- (1) Hours: 9 a.m. - 5 p.m.
- (2) Sectors

[City buses] (from May 2004)

All areas in the city
 City center district
 All areas in the city



City center district
 City center district
 Toyama City Hospital

[Toyama Chiho Railway] (from April 2008)

All stations in the city



Dentetsu Toyama Station
 Minami-Toyama Station

[Trams] (from April 2011)

City train (incl. loop line), Toyama Light Rail

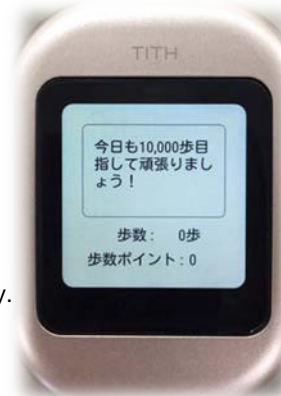
Transportation in an aging society & Health Monitoring Survey Project

■ Production of elderly health improvement device "Odekakecchi"

- In collaboration with a consortium led by Kyoto University, the city has developed the small portable device "Odekakecchi," which contains GPS, pedometer, and walking encouragement applications, producing 2,000 pieces. (using the 2015 subsidy for regional revitalization strategy)
- The city has elderly people carry the device to analyze transportation behavior and the purposes of movement around the downtown area.
- The city combines the device with GIS (geographical information systems), IC cards for public transport, and a variety of statistical data to utilize it for policy planning in various areas such as city planning, transportation, health, and welfare.

Overview of "Odekakecchi"

- Height: 68 mm × width: 49 mm × thickness 12 mm, weight: approx. 50 g
- The city has developed a tool containing GPS, pedometer, and walking encouragement applications.
- A pocket-sized device is easy for elderly people to carry.



[Data acquired on Odekakecchi]

- GPS data (behavior tracing data: latitude/longitude every 10 seconds, and time)
- Walking data (no. of steps, hours)
- Response data on health condition (1. Good, 2. OK, 3. Not good)
- Data on store visits

■ Utilization of data on "Odekakecchi"

Data collection

[Accumulated data]

- GPS (positional information) data
- Number of steps
- Health condition
- etc.



[Combined data]

- User attributes (incl. sex, age, and area of residence)
- Data from public transportation IC cards
- etc.



Data analysis and verification

- Verification of access distance and time to stations or bus stops
- Hours to stay in the city center and stop-off points
- Effects of the walking encouragement applications
- Relation between outings and number of steps
- Utilization of data in GIS

Examples of policy planning by using data

- To arrange resting places effectively in the downtown area
- To improve the waiting environment at bus stops etc.
- To improve the walking environment
- To create a space for interaction with people in the community
- To take measures to prompt the elderly to go out more often



Improvement of the environment at bus stops



Appropriate arrangement of walkers



Creating community gardens by using urban parks

Kadokawa Care Prevention Center (former site of Hoshii-cho Elementary School) Opened in July 2011



Japan's first preventative care facility using hot spring water has been established at the former site of Hoshii-cho Elementary School.

- The facility provides various preventive care programs combining ground exercise therapy, thermal therapy, personal care, etc. with a focus on aquatic exercise therapy.
- Donations from citizens were used for its development, and management and operations are carried out by designated administrators from the private sector.



Formation of a healthy & interactive town

Locating resources such as Kadokawa Care Prevention Center in the city center as hubs has **formed a walkers' network to enable safe, secure, and comfortable living for the elderly**, and to enhance their opportunities for outings and interaction.

"Walkable Zone Community Workshop" composed mainly of University of Toyama **implements efforts using walking aid carts as public tools.**

《City walking tour attended by college students》



▲Walking by using walking aid carts

《Hokoken IoT Project Event (June 26, 2016)》

In a walking aid cart, the city has installed a tablet terminal with a push notification function that tells a walking distance, walking hours, and store information, and started field tests to turn walking aid carts into IoT, with the aim to create a system so that **the elderly can enjoy walking.**



▲Walking aid cart installed with a tablet



▲Verifying usability

Creating high-quality, attractive civic life <creating outing opportunities for the elderly>

《**Mago to Odekake Project**》 In order to facilitate opportunities for outings for elderly people and to nurture family ties through interaction among generations, **admission fees are completely exempted** for elderly persons visiting participating facilities with their grandchildren (or great-grandchildren). (Implemented also in other municipalities in Toyama Prefecture)



Period

From July 2012

Participating facilities

- Participating facilities in Toyama City
- 16 facilities including Family Park, Toyama Science Museum, Toyama Folk Museum, Toyama Municipal Folk Craft Village, Yao Owara Museum, Former Mori Residence, Ecorink, and Glass Art Museum

Eligible persons

Grandparents and their grandchildren or great-grandchildren entering the facility together

No. of visitors (for 12 facilities incl. Family Park, Science Museum)

2011: 616,529 (before the introduction of this project)

2017: 662,144 (incl. 35,169 grandparents and grandchildren)

The number of visitors has increased by about 7.4%.

Creating high-quality, attractive civic life <creating social capital>

« Community garden project »

Facilitate the renovation of urban parks in the city center into community gardens in order to **restore local communities** by **creating opportunities for outings for elderly people and** sharing the enjoyment of the harvest with the people of the community.



Watering



<Implementation sites> (7)

Shibazono-cho 2-chome Park
Minami-shinmachi Park
Nakano-shinmachi Park
Shirogane-cho Park, etc.

<In-service >

April 2013

<Size>

Approx. 25 m2 per site

Harvest festival



Harvesting

Roasted sweet potato event



“Toyama Rakuno Gakuen” has been established to back up farmers by deepening knowledge of cultivating farm products through lectures or practical training, and to develop people involved in agriculture.

<Support for learning farming techniques>

As of March 2018

[Farming challenge course]

Enhance techniques through practical activities for those who are eager to become a farmer.

[Farming course for companies]

<Held once a year>
Help companies learn basic knowledge necessary to engage in farming.



[Farming supporter training course]

<2-year training>

•Vegetable course •Fruit course

<1-year training>

•Wet-field course •Flowering course

[Home garden course]

<1-year training>

A step-up course and a basic course focused on vegetables are held.



No. of people who completed courses:

879 (end of 2017)

No. of registered farming supporters:

735 (end of 2017)

Total no. of farming supporters:

3,176 (end of 2017)

Toyama Rakuno Gakuen



コンパクトシティ富山
COMPACT CITY TOYAMA

Farming supporter training course

Vegetable course



Planting cabbages etc.

Fruit course



Thinning out pears

Flowering course



Potting pansies

Wet-field course



Lecture on keeping soil in good condition

Farming challenge course

[Pear course]



OJT in a pear orchard

[Vegetable course]



Classroom lecture on cultivating individual crops

Farming supporter activities



Thinning out persimmons



Thinning out pears



Establishment of Community General Care Centers

(Establishment of a urban community general care system)

Town development responding to the aging population (Distribution of the elderly, 2017)

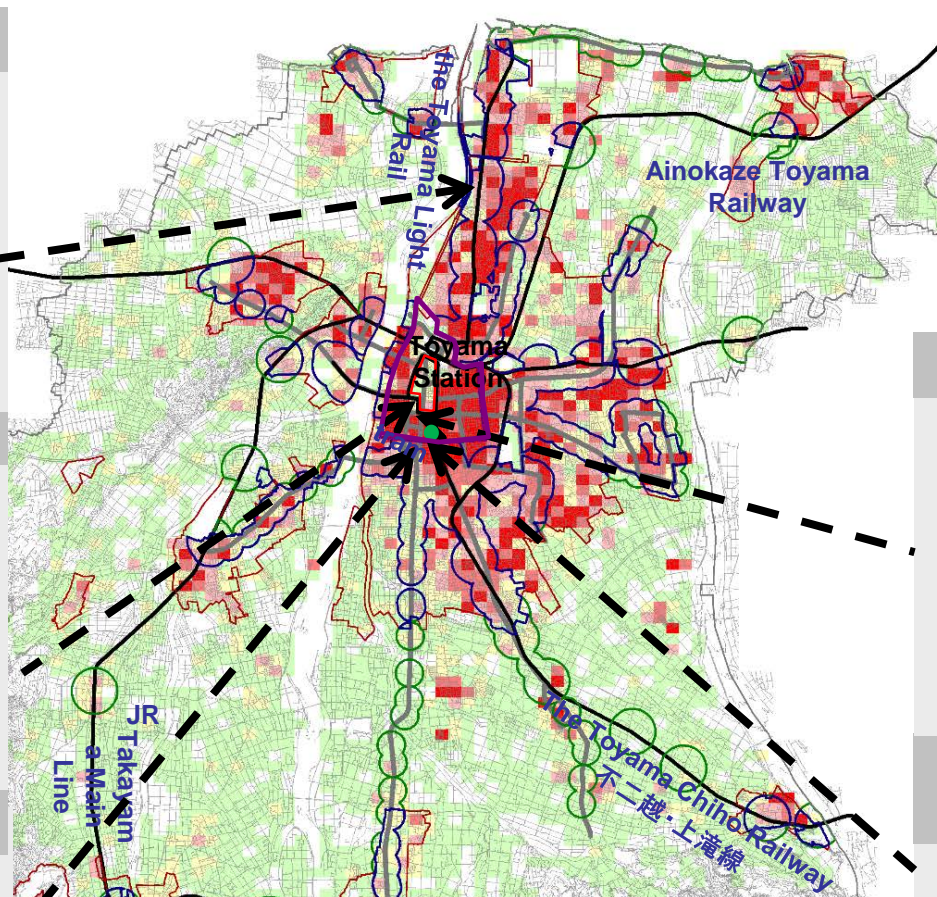
Toyama Light Rail



City train loop line



Aville



凡例

- 鉄軌道網
- 運行頻度の高いバス路線
- 市域
- 都心地区
- 沿線居住推進地区
- 沿線地区(用途外)
- 用途地域

高齢者

- 0
- 25 - 49人
- 50 - 74人
- 75 - 99人
- 100人以上

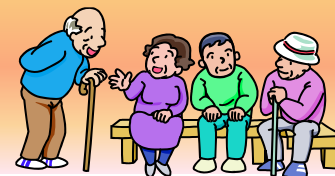
Grand Plaza



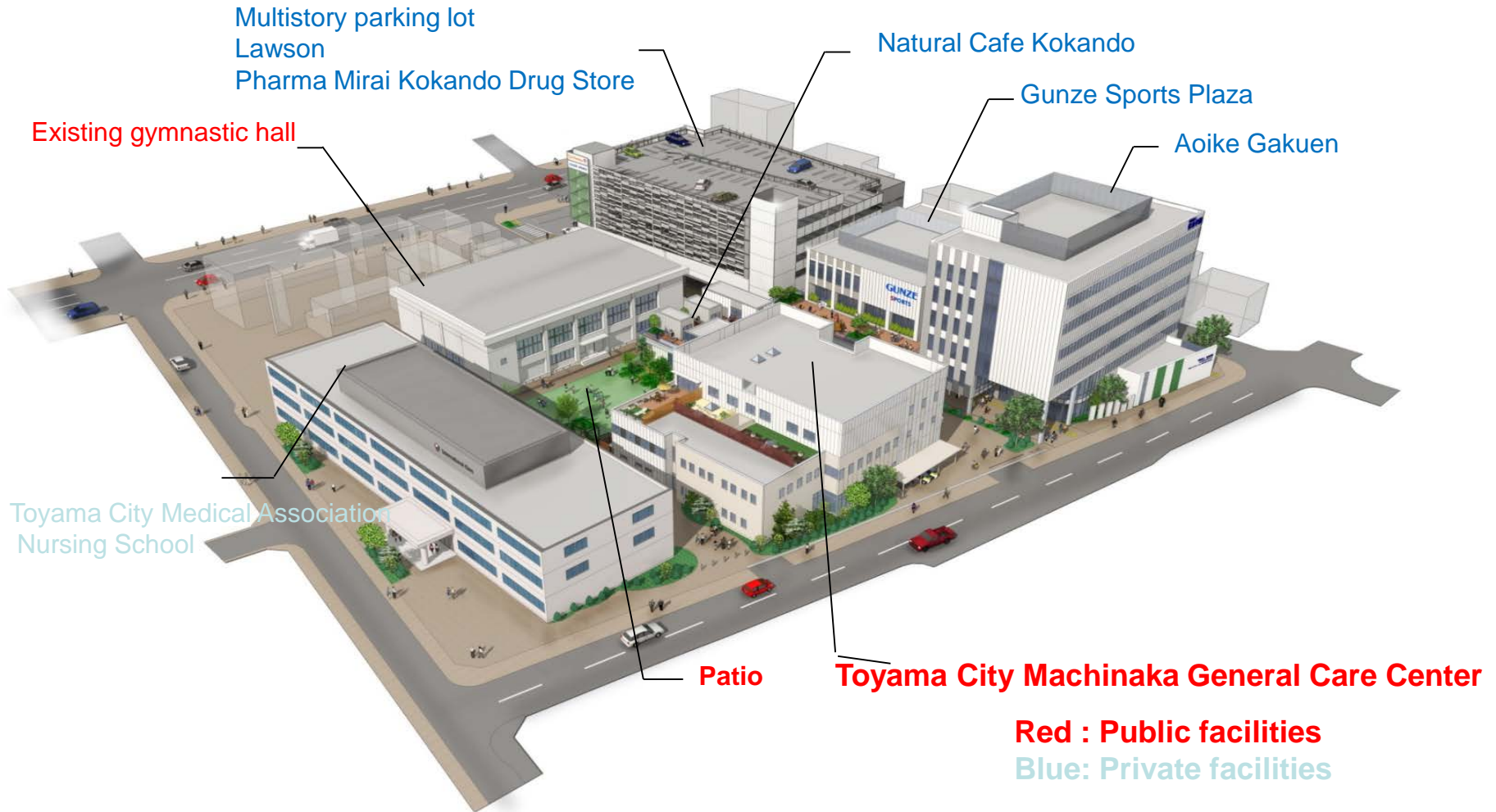
Kadokawa Care Prevention Center



“There are many elderly people in the city center.”



Sogawa Legato Square ~ Health center open to the community ~



(Legato: Play smoothly without breaks between notes)

***Machinaka* clinic (enhanced home care support clinic)**

***Machinaka* clinic gives support so that people in need of medical treatment can continue to live in their familiar hometowns.**

[Eligible persons]

- Those who receive medical treatment at home and have difficulty going to hospital due to disease or injury
- Those who cannot receive visiting care from other hospitals or clinics due to geographic factors or the condition of diseases

[Designated areas] All areas in Toyama City

[Staff]

3 full-time doctors, 3 full-time nurses, and 1 social worker

[Features]

- Specialize in medical treatment at home (no outpatient service).
- Make house calls for 24 hours throughout the year.
- Support visiting care of the patient's doctor.

[Consultation hours]

- 365 days (24 hours)



(As of the end of March)
No. of patients: 90
Total no. of visiting care: 630
Total no. of house calls: 264

Postnatal care support room

It helps postpartum mothers recover mentally and physically and live their new lives with their children at their ease.

[Eligible persons]

Mothers who have a resident's card issued by Toyama City and partner municipalities (Namerikawa City, Funahashi Village, Kamiichi Town, Tateyama Town) or are visiting their old home in Toyama City after their marriage and their children up to 4 months old if the mothers are worried about child-rearing or cannot be supported by their family

***The extension of the range of eligible persons in April 2018 has enabled those underlined to use the support.**

[Services] • Day care

- Short stay

- Classroom (10 pairs per class/held twice a week)

[Support hours] 24 hours (excl. Dec. 29 – Jan. 3)

[Staff] Midwives, public health nurses, social workers, psychiatric social workers, etc.



(As of the end of March)

No. of registered users: 212

Total no. of day care services: 207

Total no. of short stays: 305

First municipal postnatal care facility in Japan

Postpartum depression



Frequency : One person in 10 persons (10%)

Factors : Change in hormone balance

Lack of sleep

Mothers have to carry out child-rearing by themselves due to the trend toward nuclear families.

Neighbors give no support.

Income decreases because they left their jobs.

They are worried because they raise children for the first time.

Others

Change in social structure

Symptoms : They have lost motivation.

They do not respond to children even if they cry.

They cannot create attachment for their children well.

They treat their children cruelly or neglect them.

Children may have mental problems.

Postnatal care support room



Example of fees for using other facilities



Fees for using postnatal care houses in Japan (abstract)

Hokkaido	: Naebo Ladies Clinic	1 day	¥21,600
Fukushima Prefecture	: Commune Maternity Hospital	2 days, 1 night	¥20,000
Ishikawa Prefecture	: Hiro Maternity Hospital	2 days, 1 night	¥16,000
Tokyo	: Musashino University Postnatal Care Center	2 days, 1 night	¥65,800
	Aqua Birth House	2 days, 1 night	¥28,000
	St. Luke's Maternity Clinic	2 days, 1 night	¥58,000

Fees for using many of the facilities across Japan are between ¥20,000 and 60,000 per day.

Facilities are too expensive to use even if mothers want to use them.

Fees for using postnatal care support room



Option	Available Hours	Meals etc	User Fee	Standard Fee	Duration
Day Care	9:30-19:00	Lunch, Dinner, 2 Snacks	4,900 JPY	8,100 JPY	Up to twice per week
	9:30-13:00	Lunch, 1 Snack	1,800 JPY	3,000 JPY	
	13:00-19:00	Dinner, 1 Snack	3,100 JPY	5,100 JPY	
Stays	9:30-9:30 (24h)	Day 1: Lunch, Dinner, 2 Snacks Day 2: Breakfast	1 Day (24h) 7,200 JPY	1 Day (24h) 12,000 JPY	Up to 6 consecutive nights per use
Class-room	10:00-12:00	1 Snack	800 JPY	800 JPY	Up to twice a month
	13:30-15:30	1 Snack			

- **User fee** is applied to mothers who have a resident's card issued by **Toyama City or a partner municipality**.
(However, it is necessary to apply if they have a resident's card issued by a partner municipality.)
- Standard fee is applied to mothers who are **visiting their old home in Toyama City after their marriage**.
- **The same amount** of user fee is applied to mothers who have **twins** or more children.
- Mothers who use day care or short stay services are **exempted from municipal tax, and single-parent families and households on welfare** are given a subsidy. (depending on municipalities)

Sick child nursing with a pick-up service (Sick child nursery room)



When children are unwell, they are nursed and cared on behalf of their guardians if guardians cannot nurse their children due to work.

[Eligible persons]

Children who have been given a patient referral document by a doctor stating that they can be nursed at a sick child nursery room, and live in Toyama City or a partner municipality (Namerikawa City, Funahashi Village, Kamiichi Town, Tateyama Town).

◎Pre-school children aged 6 or older (children aged 1 or older for the pick-up service):
10 children

***The extension of the range of eligible persons in April 2018 has enabled those underlined to use the support.**

[Open] Monday to Friday (closed on Saturdays, Sundays, holidays, Dec. 29 - Jan. 3)

[Nursing hours] 7:30 – 19:00



The pick-up service was started at nurseries in the Nishida area for the first time in Japan (October 2016).

(As of the end of March)
No. of registered users: 654
Total user no. of sick child nursing service: 814
Total user no. of pick-up service: 7

Image of sick child nursery room

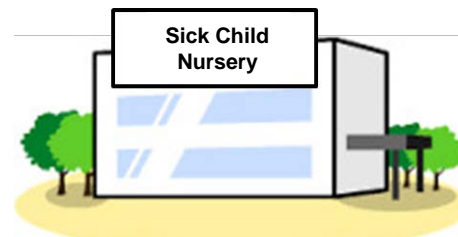
Sick child nursing service



Home
Sick or convalescent children



See a family
doctor



Nursing care by
nursery teachers
or nurses

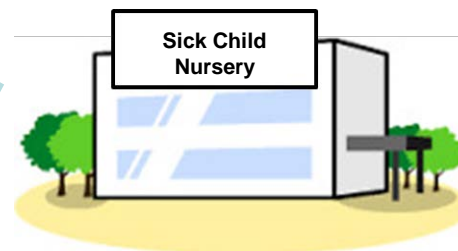
Sick child nursing with a pick-up service



Nursery etc.
Unwell children



See a family
doctor



Nursing care by
nursery teachers
or nurses



Pick up at a
nursery

Fee etc.

Fee for using a sick child nursery room: **¥2,000 per day**

+

1/4 of taxi fare
(in case of using sick child nursing with a pick-up service)

[Subsidies]

- **¥1,000** subsidy per use to **single-parent families**
- **¥2,500** subsidy per use to **families exempted from municipal tax**
- **¥5,000** subsidy per use to **households on welfare**

Children development support room



Children who are likely to have mental or physical development delay are given support from an early stage, including consultations and training, to promote seamless support to disabled children and their guardians.

From April 2018, people living in Namerikawa City, Funahashi Village, Kamiichi Town, and Tateyama Town can use services (1) to (3).

[Eligible persons] Children who are likely to have a developmental delay from infancy and their guardians

[Services] (1) Children development support service

(2) Disabled children consultation support service

(3) Consultation support service for children with developmental disabilities

(4) Infant development support & consultation support service

(5) Networking service for business operators



[Open] Monday to Saturday (closed on Sundays, holidays, Dec. 29 - Jan. 3)

[Service hours] 8:30 – 17:00

[Staff] Nursery teachers, child instructors, social workers, occupational therapists, physical therapists, speech-language hearing therapists, clinical psychologists, public health nurses, nurses, etc.

(As of the end of March)
Total no. of consultations: 5,379
Total no. of users: 10,942

Children development Support Room

Children who are likely to have mental or physical development delay are given support from an early stage, including consultations and training, to promote seamless support to disabled children and their guardians.



[Objective]

Quality of Life (QOL)

Given Condition = Sustainability

<Domestic>
Low Fertility
Aging
IT Revolution

<International>
Asian Growth
Econ. Globalization
IT Revolution

Economy

Ecology

A. Income and Employment

Industrial Agglomeration

Population Agglomeration

B. Life and Culture Opportunities

Educational/Cultural Opportunities

Health / Medical Opportunities

Shopping / Services Opportunities

Entertainment / Travel Opportunities

C. Comfort

Housings

Urban Landscape

Natural Environment

Local Identity

Comfort and Safety in Mobility

Timeliness

D. Safety

Natural Disaster Risks

Building & Facilitie Disaster Risks

Pollution Risks

Traffic Accident Risks

Resources

Public Order

E. Environmental Friendliness

Industrial Stress

Household Stress

Transport-based Stress

Heat Island

Source: Yoshitsugu Hayashi, November 14, 2014, Lecture at Nagoya University, Smart City

Toyama City is perfect for giving birth to children, rearing them, and still living in when people will need medical treatment or care.

