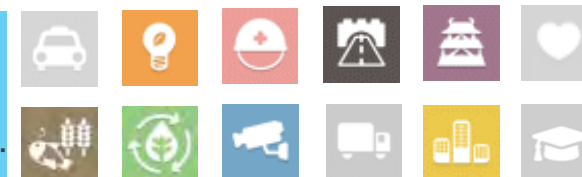


# Smart City project in Toyama City

Project Area Toyama City, Toyama Prefecture

Project Organization Toyama City

Urban issues and Goals.



Project area goals, features and issues. (Smart city image)

## I. Toyama City Overview

Toyama City is the prefectural capital of Toyama Prefecture. The population is about 413,000 and the area is 1,242km<sup>2</sup>. The north boundary is Nihonkai, and the geographical is diverse, consisting of a wide plain formed by the two major rivers of the Jinzu and Joganji rivers and 3,000-meter-class mountains. It is about the same distance from the two metropolitan areas of Tokyo and Osaka and you can get to Tokyo in 2 hours 16 minutes by boarding the Shinkansen.

## II. Main issues to be addressed by cities and goals of smart city projects

Toyama City is taking on the challenge of "building a compact city centered on public transportation."

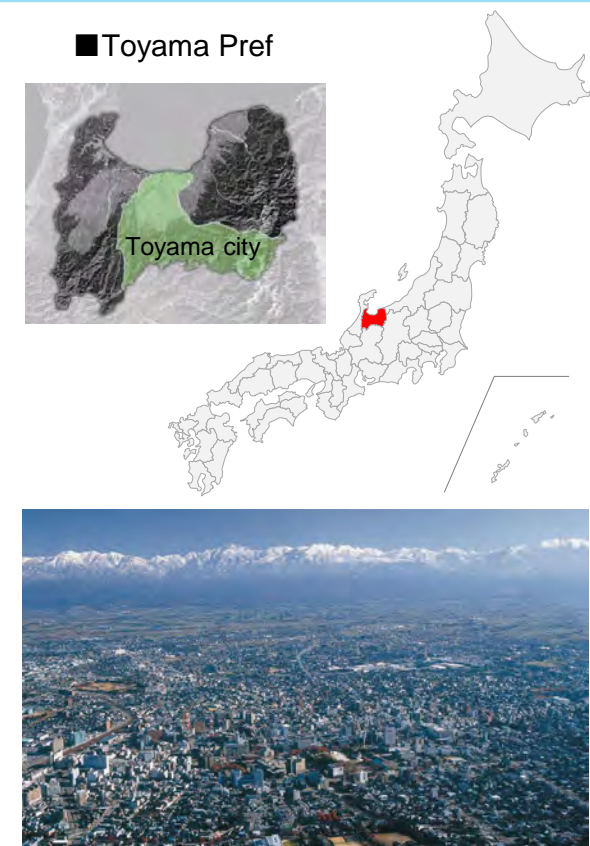
Issues to promote the project in the situation of declining birthrate, aging population and declining population are "insufficient resources in regional activities by mutual aid and assistance" and "appropriate maintenance of public and private infrastructure in city" etc.

## III. Features of Smart City Project in Toyama City

Toyama City is developing a "Toyama City Sensor Network" consisting of an LPWA network and an IoT platform that covers the entire city (resident population 98%).

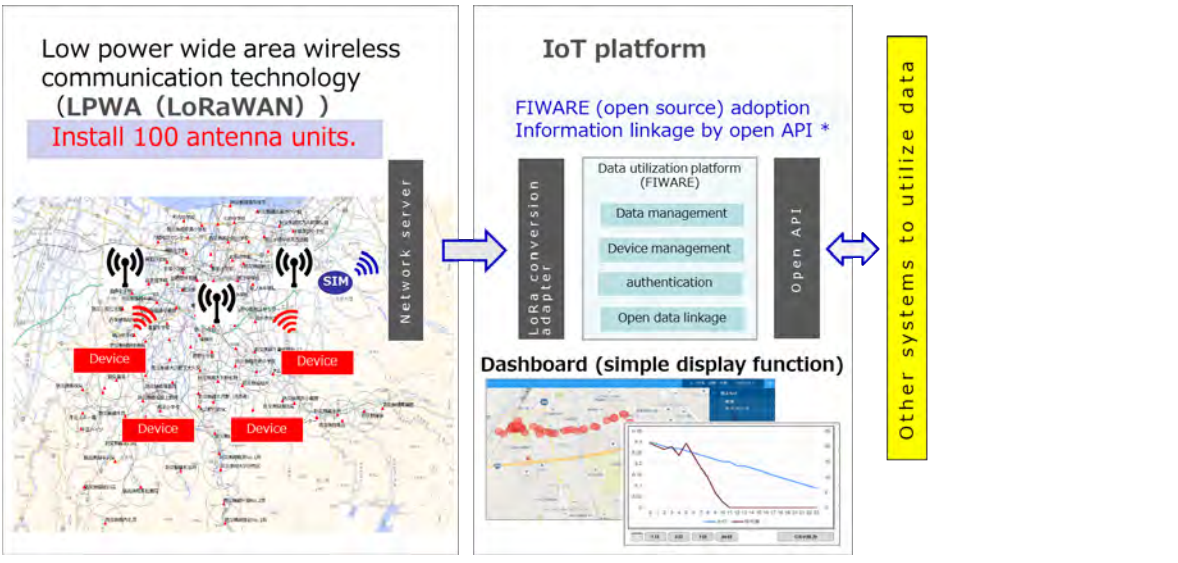
Toyama City will provide an IoT usage environment as a platformer itself.

To realize "examination of regional cooperation model utilizing new technology", "efficiency of various operations by IoT technology", and "creation of new business model and employment by open recruitment of demonstration experiments for private sectors" etc.



◇ It will challenge to solve problems in cities and townships by utilizing technology and data.

Toyama City will develop "Toyama City Sensor Network" which is an IoT infrastructure.



① "Watching sensor project for children" utilizing GPS. It lends GPS sensors to school children. We will collect movement data of children when they go to school and analyze and visualize in collaboration with Toyama University. It will be shared with PTA, schools, self-government promotion associations, etc. and utilized for studying new regional cooperation models.

GPS sensors to school children



Have them go to school in a school bag pocket.

[visualize]



Children are stopped on the route near the school.

Sharing project results with citizens



② Public competition for a demonstration experiment project in which the private sector participates to promote IoT technology development.

Advertisement for public competition.



Since 2019, we have been conducting a public competition for the private sector, which will provide the Toyama City sensor network as a demonstration experiment environment free of charge. It has adopted 23 projects in 2019 and 22 projects in 2020.

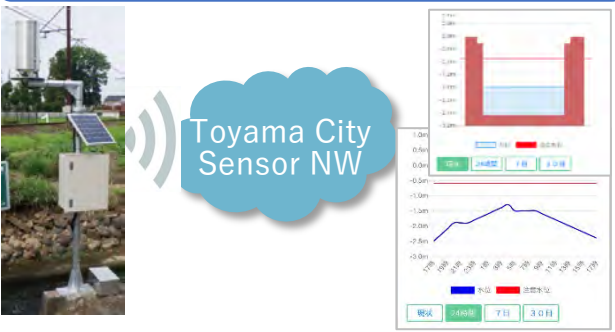
Achievement briefing session (2019)



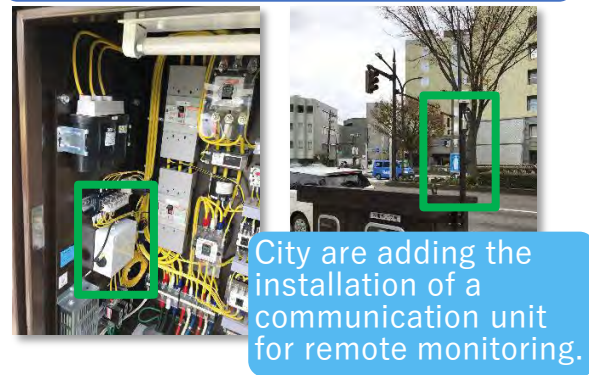
③ Use IoT technology, etc. in the city hall to improve citizen services.

Introduced various IoT sensors to projects in Toyama City. Improve citizen services and improve operational efficiency. Useful information is actively disclosed on the information disclosure site for citizens "Toyama Smart City Square".

Speedily deliver information on changes in river water levels for citizens.

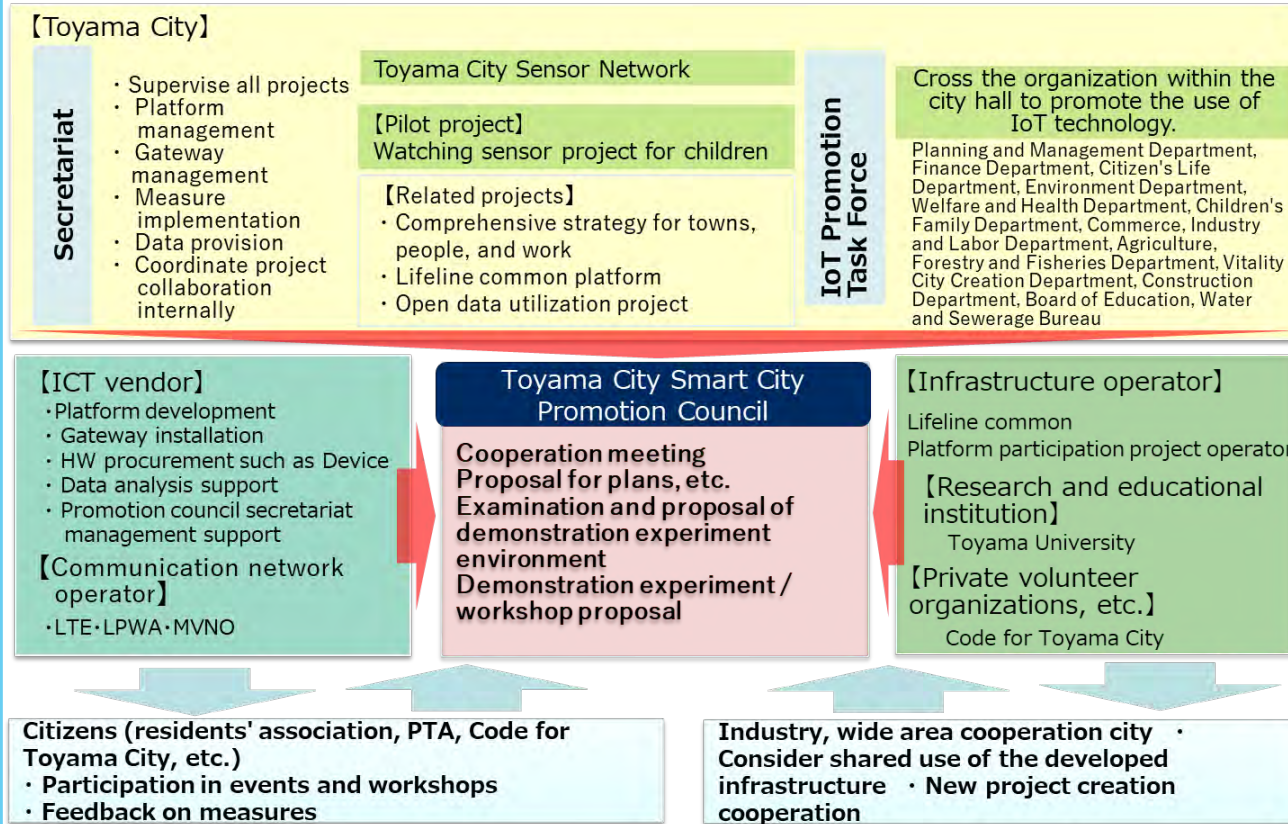


Remote monitoring of snow-melting equipment and bridges etc.



## ◇ Implementing organization

- ✓ Toyama City will promote all projects.
- ✓ Toyama City will establish a smart city promotion council consisting of industry, universities, the private sector, and government to hear opinions widely.
- ✓ Establish a task force that crosses the organization within the city hall to promote the use of IoT technology.



## ◇ Project Timeline

### Future image five years from now

**By utilizing the Toyama City sensor network, we aim to save energy and SDGs that can always use IoT sensors.**

Project item	2018	2019	2020	2021	2022
0. Develop Toyama City sensor network.	Execute				
1. Demonstration experiment using sensor network.		It will continue to be implemented from 2019.			
2. Internal project development and commercialization		Internal task force		Budgeting / project	
3. Review committee / working group by the private sector		Established		Expand to each project	
4. Examination and commercialization of a paid service model when utilizing the private sector			study	model study	verification
5. Consideration when disclosing collected data		survey-study		Expand	
6. Examination of cloud-based model with neighboring local governments				study	
7. Support for next-generation networks, new standards, and infrastructure updates			survey		study

By utilizing the Toyama City sensor network, we aim to save energy and SDGs that can always use IoT sensors.

## ◇ Others (Awards, selection for smart city projects promoted by the government, etc.)

- 2018 Selected as a "data utilization type smart city promotion project". <Ministry of Internal Affairs and Communications>
- 2019 Selected as a "future technology social demonstration project". <Cabinet Office>
- 2019 Selected as "Society 5.0 type that promotes regional revitalization of City, residents, and jobs." <Cabinet Office>
- 2020 Received "i-Construction Grand Prize, Minister's Award for Efforts of Local Public Organizations, etc." <Ministry of Land, Infrastructure, Transport and Tourism>