

# $\sim$ SDGs FutureCity Yokohama $\sim$





# SDGs FutureCity Yokohama

Realizing a city that creates new value and prosperity through its economy, culture, and the arts, with the environment at its heart.



In 2008, Yokohama was selected as an Eco Model City for its promotion of progressive environmental initiatives, and in 2011 it was selected as a FutureCity to address common global issues such as environmental problems and super aging. In order to contribute to the achievement of the world's agreed upon Sustainable Development Goals (SDGs) and further advance progressive urban development, as SDGs FutureCity Yokohama (selected 2018), we will build domestic and global partnerships and promote new measures that simultaneously solve environmental, economic, and social issues.





PHOTO : © Hideo MORI

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\* This brochure is based on the City of Yokohama's SDGs FutureCity Plan (formulated in October 2018) and documentation from the Cabinet Office and the Japanese government's Sustainable Development Goals (SDGs) Promotion Headquarters.



PHOTO: UN Photo/Cia Pak Projections on Sustainable Development Goals and 70th Anniversary of the United Nations 22 September 2015

## SUSTAINABLE GALS DEVELOPMENT GALS

## About SDGs

"SDGs" is an abbreviation for the universal Sustainable Development Goals adopted at a special summit of the United Nations.



In the global economy, where people, goods, and capital move on a worldwide scale, just as one nation's economic crisis can instantaneously affect other countries, our common challenges are also interconnected. We have entered an era where these forces have a serious impact on economic growth and societal issues. In light of this situation, the United Nations adopted the 2030 Agenda for Sustainable Development in September 2015. Not limited to issues concerning the development of emerging nations, it is a unified initiative addressing the global economy, society, and environment. The 2030 Agenda includes 17 Sustainable Development Goals (SDGs) and 169 targets adopted as a universal goal for the international community to be pursued by developed and developing nations alike.



#### The Japanese Government's Vision: 8 challenges

In implementing SDGs, the Japanese government promotes initiatives to bring about a sustainable world where no one is left behind. In December 2016, Japan formulated its SDGs Implementation Guidelines with a vision of the nation "Leading towards a future where environmental, economic and social improvements are attained in an integrated, sustainable, and resilient manner while leaving no one behind."

#### (Implementation Principles)

1. Universality 2. Inclusiveness 3. Participatory approach 4. Integrated approach 5. Transparency and accountability

#### (8 Priority challenges and Policies)

#### A follow-up will be conducted in 2019 or sooner

- ① Empowerment of All People
- ② Achievement of Good Health and Longevity
- ③ Creating Growth Market, Revitalization of Rural Areas, and Promoting Technological Innovation
- ④ Sustainable and Resilient Land Use, Promoting Quality Infrastructure
- © Energy Conservation, Renewable Energy, Climate Change Countermeasures, and Circular Society
- © Conservation of Environment, including Biodiversity, Forests and Oceans
- O Achieving Peaceful, Safe and Secure Society
- $\circledast \mbox{Strengthening the Means and Frameworks of the Implementation of the SDGs}$

#### Expanded 2018 SDGs Action Plan Points (Summary)

The international spotlight will be on Japan when it hosts gatherings such as the G20 Summit and the Tokyo International Conference on African Development (TICAD) in 2019. Japan adopted its SDGs Action Plan 2018 to showcase its key initiatives and take this opportunity to present its SDGs model to the world. Specifically, the Action Plan calls for:

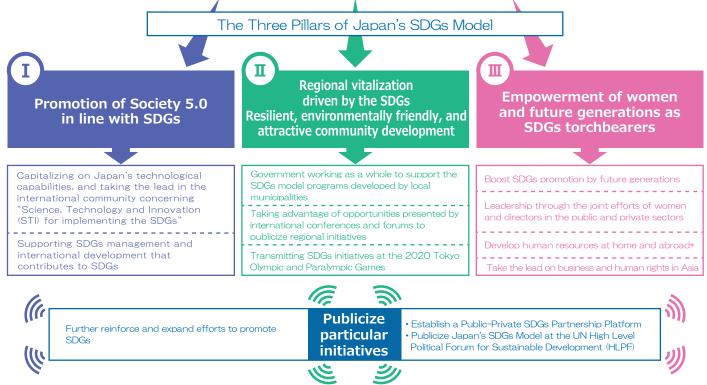
- 1. Joint promotion of Society 5.0 by the public and private sectors, which is closely linked to SDGs:
- 2. Regional revitalization driven by SDGs; and
- 3. Empowerment of women and future generations as SDGs torchbearers.

The government will introduce major initiatives in line with these three points, and it formulated its Expanded SDGs Action Plan 2018 in June of that year, specifying and expanding Japan's initiatives.



#### The Direction of Japan's SDGs Model

- Through promoting SDGs, Japan will create new enterprises and employment, and become the first in the world to materialize a future vision for a prosperous and vibrant society that can be achieved amidst a declining birthrate, aging population, and globalization, leaving no one behind.
- In order to address all eight priority areas in the SDGs Implementation Guidelines, we will further specify and expand our major initiatives and improve dissemination.



\* Based on the SDGs Promotion Headquarters' Expanded 2018 SDGs Action Plan



PHOTO: The SDGs FutureCity Selection Certificate Presentation Ceremony

#### About SDGs FutureCities and Local Government **SDGs Model Projects**

The government decided to create Japan's SDGs model with a focus on regional vitalization and promote local government initiatives for achieving Sustainable Development Goals (SDGs) that would contribute to it. There was a call for municipal initiatives to achieve SDGs,



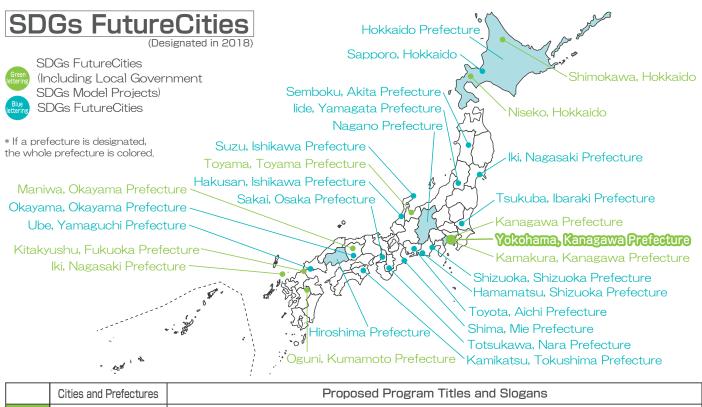


Mayor Hayashi receiving the Selection Certificate from Prime Minister Abe.



Group photo of representatives from the selected cities and Cabinet Office officials.





	Cities and Prefectures Proposed Program Titles and Slogans	
(Inc	Niseko, Hokkaido	Sustainable Town Niseko: An Environmentally Conscious, Autonomous Town That Enjoys a Circular Economy of Recycled Resources
ludin	Shimokawa, Hokkaido	Shimokawa Challenge 2030: Connecting Future Humans and the Environment
e Lo	Kanagawa Prefecture	Kanagawa for Vibrant Lives: Realizing a Sustainable, Happy, and Long-lived society
SDG cal G	Yokohama, Kanagawa Prefecture	SDGs FutureCity Yokohama: Creating a Major City Model Through Collaboration
SDGs FutureCities (Including Local Government Model Projects)	Kamakura, Kanagawa Prefecture	SDGs Future City Kamakura: Creation of a Sustainable City Administration
	Toyama, Toyama Prefecture	Realizing a Sustainable, Value-Adding City Through a Compact City Strategy
Cities Int Mod	Maniwa, Okayama Prefecture	Making 2030 SDGs Future City Maniwa a Reality with an Energy Self-Sufficiency Rate of 100%: Aiming for a Sustainable Development Model for Agricultural and Mountain Villages (A Community Where People Live As They Please)
el Pr	Kitakyushu, Fukuoka Prefecture	Kitakyushu SDGs FutureCity
ojec	lki, Nagasaki Prefecture	Lively, Dialogue-Based Iki: Smart Society 5.0
ts)	Oguni, Kumamoto Prefecture	Developing a Sustainable Community through the Benefits of Geothermal Heat, Forests, and Connections Between People
	Hokkaido Prefecture	Development of an Expansive SDGs Model Making Full Use of Hokkaido Value
	Sapporo, Hokkaido	A Sustainable City where Future Generations of Children Can Live with a Smile: Eco-Capital SAPP _ RO
	Higashimatsushima, Miyagi Prefecture	Higashimatsushima: A City with All Generations Growing
	Semboku, Akita Prefecture	IoT and Hydrogen Energy Infrastructure Development Project
	lide, Yamagata Prefecture	Revival of the Rural Planning Research Institute: To Still Be the Most Beautiful Village in Japan in 2030
	Tskuba, Ibaraki Prefecture	Tsukuba SDGs Future City Leadership Project
ហ	Suzu, Ishikawa Prefecture	Noto's Challenge towards a Cutting-Edge FutureCity
SDGs FutureCities	Hakusan, Ishikawa Prefecture	Hakusan SDGs Future City 2030 Vision <sup>:</sup> Passing the Bounty of Nature to Future Generations
ი ლ	Nagano Prefecture	Formation of a Self-Reliant, Decentralized Society through Learning and Autonomy
ltir	Shizuoka, Shizuoka Prefecture	Shizuoka's Five Main Concepts x SDGs: Realizing "Shizuoka, a City with Global Shine"
eC:	Hamamatsu, Shizuoka Prefecture	Hamamatsu: Enriching the World 50 and 80 Years Ahead
ities	Toyota, Aichi Prefecture	A Smart City Where Everyone's Connected, Leading to Tomorrow
0)	Shima, Mie Prefecture	Creating a Sustainable Miketsukuni
	Sakai, Osaka Prefecture	A City Based on the Spirit of Freedom and Autonomy Where Everyone is Healthy, Active, and Happy
	Totsukawa, Nara Prefecture	Totsukawa Village SDGs Model Plan Based on Preservation of Sustainable Forests and Tourism Promotion (tentative name)
	Okayama, Okayama Prefecture	Promoting a City Where Everyone is Healthy, Learns Together, and is Active for Life
	Hiroshima Prefecture	Enhancing SDGs Initiatives Through Multi-Stakeholder Partnerships: Accelerating Efforts to Make Hiroshima a Hub for Global Peace and Create Peace Activities Helping Achieve SDGs
	Ube, Yamaguchi Prefecture	The Treasure of Human Resources and the Ube SDGs Promotion Project, Created by All: Further Evolution of "Prosperous Co-Existence and Harmonious Collaboration"
	Kamikatsu, Tokushima Prefecture	SHLs (Sustainable Happy Lives) Through SDGs

# The FutureCity Concept and the story of FutureCity Yokohama

PHOTO: Kodomo Nature Park (Asahi Ward)

#### 1.The FutureCity Concept



The national government promotes the concept of FutureCities, which aims to create urban areas and regions that realize a sustainable economic and social system with recognition of continuing global urbanization. Eco-Model Cities and FutureCities are selected from municipalities nationwide to implement specific initiatives.

Eco-Model Cities uphold the FutureCity concept through pioneering efforts with the ambitious goal of creating a sustainable, low-carbon society. FutureCities respond to challenges common to humankind like aging and environmental issues. Yokohama's leading project, by creating value in the three areas of the environment, economy, and society, we aim to realize a city and region that "everyone wants to live in" and where "everyone is full of vitality." Yokohama City was selected as both an Eco-Model City and a FutureCity and has been working on related initiatives.

#### 2. City Development in FutureCity Yokohama

In 1859 at the beginning of modern Japan, Yokohama opened its port as a gateway to the world. At the time it was a small town, but it rapidly became a city. In the nearly 160 years since the port's opening, Yokohama has encountered many difficulties such as disasters and the pollution accompanying economic growth. However, every time the city has overcome these issues and achieved further growth with the progressive spirit of an open port. Today Yokohama is Japan's largest single municipality with a population of 3.74 million. It faces greater challenges than ever before, such as a rapidly aging population and energy problems associated with the Great East Japan Earthquake. Under these circumstances, as a FutureCity, Yokohama is putting all its effort into addressing urban problems including a super aging society, reducing CO<sub>2</sub> emissions, and revitalizing the economy.

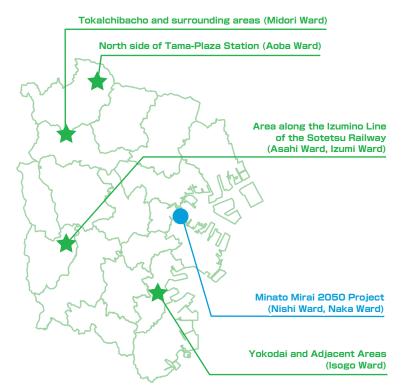
The FutureCity Yokohama initiative aims to create a vibrantly well-balanced and prosperous city that everyone wants to live in by tackling our diverse challenges.



#### Efforts Toward the Realization of FutureCity Yokohama

#### Sustainable suburban community development

Many issues are coming to the fore in suburbs with their declining birthrates and aging populations. To create a familiar community where everybody can peacefully live in a comfortable environment, Yokohama has implemented the Model Project for a Sustainable Residential District by selecting four model areas\* with different regional characteristics. Initiatives are being advanced in these areas according to their respective challenges. \*4 model areas(In green on the map)



#### Minato Mirai 2050 Project

Almost 30 years have passed since the development of the Minato Mirai 21 Area. In light of the social changes that have occurred during that period, the area's development now incorporates the demands of a new era. These include approaches to global warming and Business, Living, Continuity, and Planning (BLCP)\* measures. Further city growth is expected, especially with an increase in visitors from overseas who will come for major sports meets and other events. In light of 2014's Yokohama City Minato Mirai 21 District Smart City Planning Policy report, we formulated an action plan with the coastal city center area of the Minato Mirai 21 District at its core. It promotes smart city development across four areas, engaging citizens, business operators, universities, and all other entities, while promoting initiatives that increase Yokohama's appeal and value so people will choose to live here.

\* BLCP (Business Living Continuity Planning): Crisis management action planning that allows for the continuation of a minimum of daily and business activity in case of disasters and accidents.

#### Energy

- Energy with excellent safety, environmental performance, and economic viability
- Promote the installation of a cogeneration system (CGS)\* that enhances environmental and disaster-preventive performance as an autonomous, decentralized energy infrastructure
- Establish a new consortium in cooperation with MM21 DHC Co., Ltd. and General Incorporated Association Yokohama Minato Mirai 21 promoting the integrated energy management of both supply and demand.
- \* Cogeneration system: Energy saving systems that effectively use waste heat given off during power generation for cooling and refueling purposes
- -----

#### Green

#### Eco-friendliness that passes a vibrant landscape of greenery and flowers and a comfortable environment on to future generations

- Develop new green spaces like parks through projects such as renovating Grand Mall Park with its environment in mind.
- Conduct the Street Corner Green Project by utilizing open public spaces, create more vibrant flowering and green landscapes through public-private cooperation, and create a harmony of green and urban life by introducing green curtains and environmental technologies.

North side of	f Tama-Plaza Station (Aoba Ward)
Area size	About 120 ha
Area population	About 14,600 people
Aging rate	About 19%
Main partnership	In cooperation with Yokohama City and Tokyu Corporation
Agreement concluded	FY2012 (renewed every 5 years)
Vokodaj a	nd Adjacent Areas (Isogo Ward)
i okodali al	nu Aujacent Areas (isogo waru)
Area size	About 200 ha
Area size	About 200 ha
Area size Area population	About 200 ha About 24,500 people
Area size Area population Aging rate	About 200 ha About 24,500 people About 30%

Area along the Izumino Line of the Sotetsu Railway (Asahi Ward, Izumi Ward)			
Area size	The area serviced by Sotetsu Railway Izumino Line stations		
Area population	About 401,400 people (Izumi Ward: 153,700 people, Asahi Ward: 247,700 people)		
Aging rate	About 28%		
Main partnership	In cooperation with Yokohama City and Sotetsu Holdings Inc.		
Agreement concluded	FY2013 (renewed every 3 years)		
Tokalchibacho	and surrounding areas (Midori Ward)		
Tokalchibacho Area size	and surrounding areas (Midori Ward) About 3.5 ha		
Area size	About 3.5 ha		
Area size Area population	About 3.5 ha About 19,500 people		

#### Activities Community activities that stimulate

the creativity of its citizens

- Establish a position as an international base for MICE by developing and expanding new MICE bases (such as the No. 20 district).
- Implement Yokohama's unique art festivals with dance, music, and other genres and enhance the city's attractiveness by utilizing the port, cityscape, historical assets, etc.

#### \_\_\_\_\_

#### Eco-Mobility

Eco-Mobility that guarantees free movement and energizes the city

- Promote Yokohama tourism in cooperation with Nissan Motor Co., Ltd. through a demonstration project with ultra-small vehicles called "Choimobi."
- Implement the Yokohama Community Cycle Project's bike sharing system known as "Baybike" to improve mobility in the downtown area and to roduce cachen emission

# The FutureCity Concept and the story of FutureCity Yokohama

#### Expansion of Energy Management

#### Yokohama Smart City Project (YSCP)

In 2010, Yokohama was nominated by the Ministry of Economy, Trade and Industry as one of the Next-Generation Energy and Social Systems Demonstration Areas. To promote the Yokohama Smart City Project (YSCP), in cooperation with Japan's 34 leading companies in the fields of energy, electronics, and construction, the city has introduced a system to optimize the energy supply-demand balance in existing urban areas, including those with houses and commercial buildings. We will continue to develop these initiatives, moving from demonstration to implementation.

GEMS	CEMS Community Energy Management System	<b>Community Energy Management</b> <ul> <li>Develop the standard functionality of Community Energy Management Systems (CEMS) (*1)</li> <li>Achieve accurate demand forecasting</li> <li>Demonstrate demand response (DR) tests (*2)</li> </ul>
HEMS	HEMS Home Energy Management System	<ul> <li>Home Energy Management</li> <li>Verify the peak cut effect by demand response (DR)</li> <li>Verify optimal domestic energy usage by automatically controlling solar power generation and battery storage</li> </ul>
<b>BEMS/FEMS</b>	BEMS/FEMS Building/Factory Energy Management System	<ul> <li>Office Complex, Commercial Facilities, and Factory Energy Management</li> <li>Verify the peak cut effect by demand response (DR)</li> <li>Verify the stabilized reduction in electricity consumption through measures like negawatt trading (*3)</li> </ul>
SCADA	SCADA Supervisory Control And Data Acquisition	<ul> <li>Integrated control of storage batteries</li> <li>Develop and verify a system to consolidate multiple storage batteries and treat them as one large virtual battery</li> <li>Promote the standardization of the interface between batteries and battery SCADA</li> </ul>
Ā	EV Electric Vehicle	<ul> <li>Charging and Discharging Electric Vehicles (EV)</li> <li>Develop and verify the Vehicle to Home system (*4)</li> <li>Develop an eco-charging stand system and verify the effectiveness of EV sharing</li> </ul>
		; in Japan, including demand forecasting, DR, standard interfaces (OpenADR2,0b), visualized screens, etc.

\*3: An approach, in response to a request from electric power suppliers, that regards a reduction of electrical demand as a commodity equivalent to the approach, in response to a request from electric power suppliers, that regards a reduction of electrical demand as a commodity

equivalent to the amount of power generated for trade on the market \*4: Using electricity stored in EV batteries as a portion of household power



#### Yokohama Smart Business Association (YSBA)

The Yokohama Smart Business Association, a new public-private partnership organization, was established in 2015 to capitalize on the results of the Yokohama Smart City Project (YSCP) and assist the creation of an energy-circular city. It supports the study and development of projects that improve energy efficiency and disaster resistance through the promotion of regional power generation and consumption through energy-saving equipment and energy management systems.

#### Virtual Power Plant (VPP) Building Project

The City of Yokohama, TEPCO Energy Partner, Inc., and Toshiba Corporation are working together to install storage batteries and solar panels for power generation in elementary and junior high schools designated local disaster shelters to create Virtual Power Plants (VPP). The project then runs remote tests to control electricity usage at times of peak demand in an integrated manner. Under normal conditions, storage cells charge during periods of low demand and supply power during peaks, reducing reliance on old, inefficient thermal power plants and other facilities currently used during peaks. During emergencies, they act as an emergency power source, responding to peak demand and improving disaster prevention.

#### Realization of regional energy management

Taking the opportunity provided by the transfer and rebuilding of the Minami Ward Administration Office, an exclusive proprietary power line was laid between the New Minami Ward Administration Office and the adjacent Yokohama City University Medical Center (YCUMC Hospital), introducing extremely secure high-voltage power and a cogeneration system (CGS). This special supply system\* promotes energy cooperation between them, fostering regional energy management with a high degree of disaster resistance, environmental performance, and economic viability. \* A system to allow exclusive supply of electricity to a partner who has a close relationship with the electricity producer



#### Basic Approach to Initiatives: Cooperation with Various Entities

Yokohama has 3.74 million residents and 120,000 business operators. The FutureCity initiatives we have been promoting have been highly effective through collaboration with Yokohama's citizenry, its greatest strength.

#### Sharing knowledge about global warming

Understand the mechanism of global warming and deepen understanding of its impact and responses to it.

#### Creating an environmentally friendly lifestyle

Incorporate various environmental measures into daily life, not only by saving energy, but also through environmentally friendly practices such as reduction of waste and preservation of green space.

## Reducing greenhouse gas emissions

Promote concrete efforts toward the reduction of greenhouse gas emissions and the future vision of Yokohama defined in the Yokohama City Action Plan for Global Warming Countermeasures.



# The FutureCity Concept and the story of FutureCity Yokohama

PHOTO: In front of Izumino Station

#### FutureCity Yokohama: Main Outcomes (FY2012 - FY2017)

Building a city full of flowers, greenery, and smiles

We created an important opportunity to raise awareness about caring for nature during 2017's National Urban Greenery Fair Yokohama. With an abundance of flowers and greenery in both the central and suburban parts of the city, over 6 million visitors attended.

#### Global enterprises moving in

FutureCity Yokohama's urban development is also attracting business. Many global companies have moved to Yokohama, including Apple Japan, and the Minato Mirai 21 area in particular is becoming an R&D hub for large enterprises. This is producing enhanced economic benefits like job creation.

#### Demonstrating diverse energy management in cooperation with business

The city has promoted the adoption of home energy management systems (HEMS), solar panels, and electric vehicles through the Yokohama Smart City Project (YSCP). It achieved its targets by FY2013.

	HEMS	PV	Electric Vehicles	CO2 Emission Reduction	CO <sub>2</sub> Reduction Rate
Results	4,200 systems	37 MW	2,300 units	39,000 tons	29%
Target	4,000 systems	27 MW	2,000 units	30,000 tons	25%



#### Development of Sustainable Suburban Residential Districts

About 60% of the city's population resides in the suburbs. We are developing initiatives that incorporate regional characteristics and revitalize residential districts to help solve various problems due to declining birthrates, an aging population, and continued development.

#### 4 Model Area Initiatives Public-private partnerships in each area implemented through a concluded agreement

North side of Tama-Plaza Station (Aoba Ward)	

Based on the Agreement Regarding the Promotion of the Next-generation Suburban Development concluded with Tokyu Corporation in 2012, Yokohama City formulated the Basic Plan for the Next-generation Suburban Development in 2013 to promote community development. Various leading projects and proactive regional initiatives are underway, including the Inhabitants Emergence Project, a town-wide daycare and child rearing network, initiatives by a comprehensive community care system called the "Aoba Model," and the Domestic Energy-Saving Project.

#### Yokodai and Adjacent Areas (Isogo Ward)

In cooperation with Kanagawa Prefecture and the Urban Renaissance Agency (UR), Yokohama City runs community activity bases known as Community Challenge Labs (CC labs)\* where the shop facilities of housing complexes are used for multi-generational exchange, community revitalization, and station area revitalization, with lots of active group engagement. Through initiatives that offer new lifestyles and more, we promote efforts to raise the value of housing complexes and the district as a whole. \* These are limited-period leased properties.

## Tokalchibacho and surrounding areas (Midori Ward)

Area along the Izumino Line of the Sotetsu Railway (Asahi Ward, Izumi Ward)

In cooperation with Sotetsu Holdings, Inc., Yokohama

characteristics the stations on the line including the

enhancement of the community's attractiveness by

child-rearing age and senior citizens, environmental

abundant agricultural resources and to publicize new

life styles regarding food and agriculture, local farmers

and private business operators collaborate to stage

farmers markets and other events.

City promotes various efforts incorporating the

using regional resources, support for people of

preservation, and energy initiatives. To utilize the

Yokohama City is aiming to solve social issues occurring in suburban residential areas by working with city solicited proposals from private companies in six areas including the supply of various types of housing, energy saving projects, and low-carbon initiatives.

We will implement the results throughout Yokohama as new residential area model projects with various functions and area management systems on city-owned land.

#### Making a city of culture and artistic creativity

#### Three art festivals with an economic contribution of about 12.4 billion yen over 3 years

Culture and the arts help create a vital and prosperous economy. To publicize its charm at home and abroad, the city holds world-class cultural and artistic events like the Yokohama Triennale, an international exhibition of contemporary art, and a unique Yokohama music and dance festival with lots of local participation.

Cooperation with Other Cities We apply the know-how and technological capabilities cultivated through Yokohama Smart City Project (YSCP) demonstrations to domestic development while advancing cooperation with other cities.

#### Fuji City, **Shizuoka Prefecture**

Investigating sharing electricity with area facilities utilizing the local railway distribution network.

#### Aizuwakamatsu City, Fukushima Prefecture

Collective management through 'visualization" of electric power systems where Community Energy Management Systems (CEMS) and Home Energy Management Systems (HEMS) have been introduced

#### Yamamoto-cho, Miyagi Prefecture

Introduction of photovoltaics, portable storage cells, and power generation facilities utilizing disaster public housing

#### Ishinomaki City, Miyagi Prefecture

Introduction of smart Building Energy Management Systems (BEMS) and optimal power control through photovoltaics and storage cells



## SDGs FutureCity Yokohama: Concept and Vision

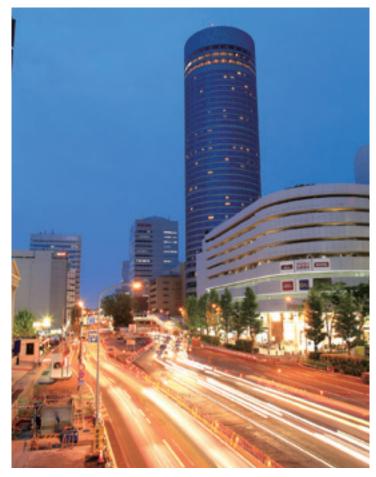


To solve the common global problems caused by the way people live that are addressed by the Paris Agreement and SDGs, not only nations but also cities around the world, including Yokohama, and other diverse entities must take the initiative. The comprehensive "Yokohama City Mid-Term Four-Year Plan (2018 - 2021)" was drawn up in October 2018. We are prepared to implement a full range of measures with SDGs in mind. We set the vision (goals) "Zero Carbon Yokohama", aims to "realize carbon neutrality in 2050 or as early as possible in the second half of the 21<sup>st</sup> century" in the Yokohama city Action plan for Global Warming Countermeasures. These two plans share a vision based on SDGs and the Paris Agreement, and SDGs FutureCity Yokohama will advance initiatives creating a Major City Model that simultaneously works to solve environmental, economic, and social issues.

#### 2. SDGs FutureCity Yokohama's vision

Looking towards 2030 when the SDGs are to be achieved, and in light of the Paris Agreement's call for decarbonization, we will work towards a city that continues to create new value and prosperity through economy, culture, and the arts, with the environment at







#### 3. Yokohama's Situation

#### Dwindling population and the approach of a super aging society

Yokohama City's population is expected to peak in 2019 and then begin to decline. Estimates indicate that in 2030 the population of residents over the age of 65 will exceed one million.

#### Accelerating intercity competition

Gross city product, corporate and municipal tax revenues, and other economic indicators differ greatly in scale from Tokyo. Besides continued migration from Yokohama City to Tokyo, there is excess emigration to Kawasaki City, Sagamihara City, and the Shonan and central prefectural areas.

## Technological innovation, changing industrial structure, and advancing globalization

With the advance of economic globalization, changes in industrial structure, and accelerating technological innovation in areas like the internet of things and artificial intelligence, Yokohama's economy must be further invigorated to expand business opportunities for city enterprises.

#### Increasing interest in cultural and the arts

In addition to initiatives like Yokohama's unique art festivals, by building a full-fledged theater presenting top-quality cultural and artistic events in league with other large international cities, we'll further enhance Yokohama's appeal and greatly improve its presence.

#### Accelerating environmental efforts like making a city full of flowers and greenery and implementing measures against global warming

As a result of the National Urban Greenery Fair Yokohama and city eco-initiatives, a blooming, green environment will become the norm for the population. We will also pro-actively advance initiatives based on the Yokohama City Action Plan for Global Warming Countermeasures. We expect these activities will make Yokohama an urban leader.

#### A changing transportation network

To maximize opportunities that improve the convenient transportation system Yokohama is known for, we must develop communities and industrial bases linked through new transportation nodes that will lead to urban revitalization.

#### PHOTO: Yokohama English Garden

#### Revitalizing the suburbs

We are actively working on common urban issues like the aging of large housing complexes, the increase in empty housing, and the rapid decline in birthrates and aging of the population. Efficient city planning that takes population decline into account is important, preserving and improving the vitality of the citizenry and the convenience of their lifestyles.

#### Improving vitality of the local community

As regional issues become more complicated and diverse, relationships in the area weaken. The role of local connections has garnered attention, and the power of local communities is indispensable for creating benefits like an environment where single seniors and children can be properly looked after.

#### Improving awareness of disaster reduction and prevention and enhancing response to all manner of disasters

We will create a strong and resilient city that minimizes damage and promptly recovers and reconstruct when faced with various natural disasters.

#### Aging of public facilities

The urban infrastructure that supported civic life and the economy in Yokohama during its period of surging population growth has begun to deteriorate. As lots of public buildings including schools and municipal housing will require reconstruction, it must be carried out systematically, taking the current condition of all structures into account.

#### 🜔 Strategic, systematic land use

To maximize the city's resources and potential, address its problems, and steadily revitalize its regions, it is necessary to promote strategic and systematic land use guidelines and review existing land use regulations in response to changes in the urban environment.



PHOTO : Kiyonori Hasegawa

#### Shared vision with Mid-Term 4-Year Plan aimed at achieving SDGs FutureCity Yokohama

Realize a creative city of culture and art with strong economic growth and a city for hosting tourism and MICE

- 1. Sustainable growth and development of companies in Yokohama
- 2. Strengthen industrial base and strategically attract businesses
- 3. Promote vibrant urban agriculture

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- 4. A creative city of culture and art that produces new value and enhances appeal
- 5. A vibrant city for hosting tourism and MICE\*
- 6. Promote Sport City Yokohama

\*MICE: a generic term for business and other events where a large number of guests are expected formed from the initial letters of Meeting, Incentive Travel (award and training trips organized by companies), Convention (an international meeting held by international organizations and groups and academic conferences), and Exhibition/Event (exhibitions, trade fairs, and events).

#### An Environmentally-Advanced City Full of Flowers and Greenery

- 1. Achieve attractive and vibrant communities that take advantage of flowers, greenery, agriculture, and water
- 2. Preserve and create water and green environments
- 3. Study and practice use of diverse functions of green infrastructure
- 4. Achieve SDGs FutureCity
- 5. Realize and disseminate a major city model for global warming policy and energy policy
- 6. Achieve a sustainable, circular society and a clean city
- 7. Practice and consolidate environmentally-friendly lifestyles
- 8. Disseminate environmental initiatives in Japan and overseas

# 15

## Address the Challenge of the Super-Aging Society

1. Build communities where everyone can lead stress-free, authentic, and healthy lives

- 2. Maintain health for each and every person to support a vibrant Yokohama
- Build and promote a comprehensive community care system for people to live authentic lives where they want
- 4. Enhance the healthcare provision system in order to receive appropriate healthcare
- 5. Support self-determination in living and preparation for the end of life

### Community Development with Connected and Vibrant People and Corporations

#### - A City Center Generating Growth and Vitality -

- Develop attractive communities, including the Central Seaside Area, Shin Yokohama district, and the Keihin Waterfront District
- 2. Promote community development using methods such as public-private collaboration
- 3. Develop communities in which people and corporations can come together and play active roles
- 4. Develop thriving communities that create human interaction and accessibility

#### Community Development with Connected and Vibrant People and Corporations

#### - Suburban Areas Where Everyone Wants to Live and Keep Living -

- 1. Develop communities around railway stations
- 2. Revitalize and enhance the appeal of residential land
- 3. Maintain and enhance transportation networks that are close to citizens
- 4. Develop communities taking advantage of opportunities such as urban infrastructure development
- 5. Promote use of former US military facility sites

#### Development of Diverse Human Resources to Create the Future

••••••

- 1. Create an environment in which children can be born and raised with peace of mind into the future
- 2. Promote education that expands the potential of children and create attractive schools
- 3. Promote efforts to protect the healthy development of children
- 4. Support active roles for women
- 5. Support the use of senior power and active roles for young people
- 6. Realize a society that recognizes diversity and respects human rights
- 7. Realize a society that facilitates choice and self-determination for children and adults with disabilities, etc.
- 8. Promote support for people facing challenges in life
- 9. Promote multicultural symbiosis

## Development of a Strong City that Creates the Future

- Safe and Sound City Strong Against Disasters -
- 1. Strengthen disaster response capabilities by enhancing functions
- 2. Promote self-help and mutual aid
- 3. Enhance disaster response
- Create a city strong against earthquakes and fires caused by earthquakes
- 5. Create a city strong against localized torrential rain, etc.

#### Development of a Strong City that Creates the Future - Urban Infrastructure that Supports Citizens' Lifestyles and Economic Activity -

- 1. Develop a transportation network that supports movement of people and goods
- 2. Strengthen functions as hub port in East Asia
- 3. Enhance environment for hosting cruise ships and attract them
- 4. Promote steady maintenance and renewal of public facilities
- 5. Reconstruct and combine public buildings for revitalization
- 6. Make efforts aimed at ensuring the quality of public works and securing and developing providers



Photo: Yokohama English Garden

## Initiatives for SDGs FutureCity Yokohama

## Overview of Target Identification and Initiatives

The challenges confronting Yokohama, which include depopulation from a peak in 2019, have become increasingly serious.

As an SDGs FutureCity, and conscious of achieving the 17 SDG goals, Yokohama is promoting environment-based initiatives appropriate for a major city like Yokohama aimed at the simultaneous solution of economic and social challenges to form a model project for local government SDGs.

In addition to mutual collaboration between initiatives on the three aspects of the environment, society, and economy, Yokohama is connecting diverse agents such as citizens and corporations, which are the agents in the various initiatives and using ICT to visualize and share the knowledge, technology, and information obtained, thereby increasing synergies and further creating new value. By doing this, we are creating Yokohama-Type "major city model" to form a framework aimed at expanding the city's presence.

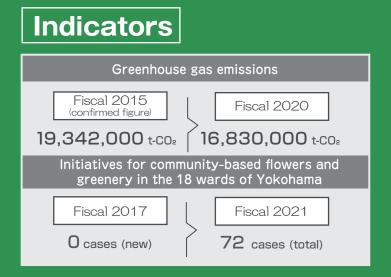


Initiatives on three aspects \*Each SDG goal icon shows the priority goals under each initiative



## 

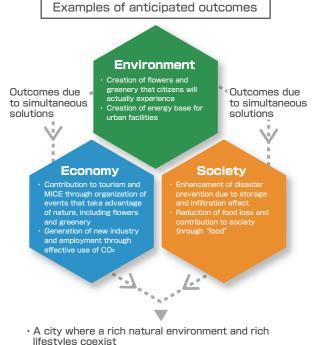
## **Environment Initiatives**



#### A city where a rich natural environment and rich lifestyles coexist



- We will develop "Garden City Yokohama" in partnership with citizens and businesses and aim for a city that also contributes to the achievement of a city for tourism and MICE by attracting the International Garden Expo and creating flowers and greenery throughout the city.
- We will pave the way to enhancing disaster prevention and reducing CO<sub>2</sub> by utilizing "Rainwater Storage and Infiltration Function 'Green Infrastructure (Infrastructure and Land Use Plan Using Diverse Functions of Nature)'" to take measures against flooding due to the localized torrential rain that has occurred frequently in recent years.



Creation of carbon neutrality and circulating society

and circulating society

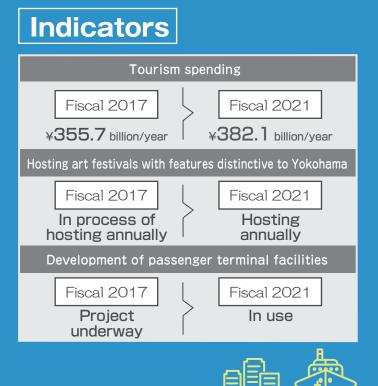
- We will pave the way to reducing CO<sub>2</sub> by creating an energy base for urban facilities and streamlining incineration plants.
- We will implement publicity activities such as "food" themed events and lectures aimed at reducing food loss to realize an affluent society through food.
- We will aim to generate new industry and employment through such means as effective use of CO<sub>2</sub> and utilization of biomass.



Photo: Kodomo Nature Park (Asahi Ward)

## 7 states and a source of a sou

# **Economy Initiatives**



## A City Center Generating Growth and Vitality

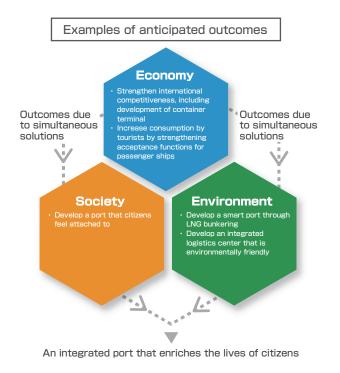
- We are implementing the Minato Mirai 2050 Project, centered on the Minato Mirai 21 District, in partnership with local companies, and we will promote verification testing for future-oriented on-board type mobility support robots (personal mobility) among others utilizing the latest technology.
- We will encourage the introduction of independent distributed energy systems (cogeneration systems (CGS), etc.)
- Aiming to be a creative city of culture and art, we will develop a full-scale theater and hold arts festivals to create appeal and activity.

#### A integrated port that strengthens international competitiveness and enriches the lives of citizens

- We aim to develop an environmentally-friendly integrated logistics center as a hub port in East Asia, including the establishment of a container terminal and creation of a smart port with Japan's first LNG bunkering, to further strengthen international competitiveness.
- In order to ensure that we capture the demand for large-scale cruises, which has continued to boom in recent years, we will strengthen acceptance functions, including wharf and seawall construction and passenger terminal development.
- We will generate activity in the Central Seaside Area by



reducing warming and enhancing the appeal of the seaside environment through the Yokohama Blue Carbon project (CO<sub>2</sub> absorption by marine life).





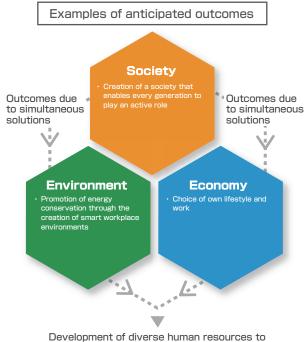




#### evelopment of Diverse Human Resources to Create the Future



- such initiatives as COOL CHOICE

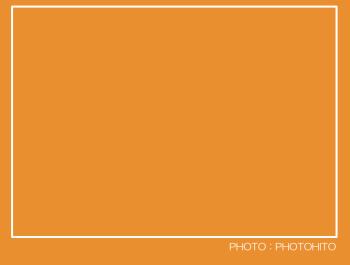


create the future



#### uburban Areas Where Everyone Wants to Live and Keep Living

- of mobility using the latest technology such as IoT and



# Local Government SDGs Model Project Yokohama SDGs Design Center

\*Photo is artist's impression

#### Yokohama SDGs Design Center Objectives and Role

The Yokohama SDGs Design Center promotes integrated initiatives that increase synergy aimed at solving challenges in the environment, economy, and society. Through collaboration with the "civic power" of citizens, businesses, and others, which is Yokohama's greatest strength, the Yokohama SDGs Design Center is constructing mechanisms that will create new value for the city and creating the Yokohama-Type "major city model".



#### 1) Sharing Challenge Solving Knowledge and Technology

Create innovation aimed at challenge solving through accumulation of challenges, gathering information, and visualizing solutions

#### 2) Developing Human Resources

Develop human resources and corporations to work on solving global-scale challenges such as the SDGs and carbon neutrality by creating opportunities for learning about technologies and information that contribute to solving global challenges through joint seminars with R&D centers and universities

#### 3) Disseminating Information in Japan and Overseas

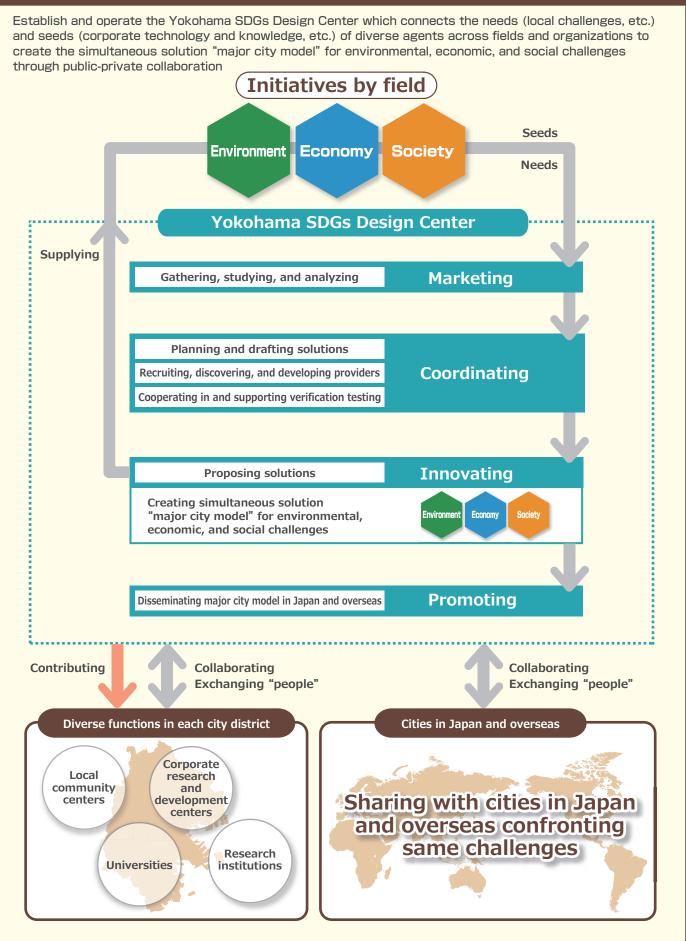
Disseminate individual initiatives aimed at challenge solving in Japan and overseas through every opportunity, including inter-city collaboration that takes advantage of global partnerships

#### 4) Other Support Aimed at Challenge Solving

Accelerate social adoption through repeated verification testing of initiatives based on technologies that contribute to challenge solving in collaboration with diverse local actors



### Yokohama SDGs Design Center



## Yokohama SDGs Design Center Developing Business and Building Networks



Photo: SDGs Design Forum

Yokohama City and its business partner (decided on November 22, 2018) will draw on their respective strengths to share roles in developing the project with the aim of fully establishing the design center. The design center will deepen collaboration not only with Yokohama City and its business partner, but also with diverse agents, including private corporations, universities and research institutions, citizens, and organizations while building its functions to create a "community" where each of the agents will continue growing together.



#### Yokohama City and Business Partner

Yokohama City and its business partner will collaborate and cooperate based on a division of roles in such areas as studying the functions required for operation of the design center, collaboration between various agents and facilities, implementation of trial initiatives aimed at solving local challenges, construction of an online network, and promotion.

#### Private Companies and Individual Platforms, etc.

It is expected that utilization of the extensive perceptions, ideas, and knowledge that is unique to private companies and the technological capabilities in specialized themes on diverse platforms will lead the way to solutions for local challenges.

#### Universities and Research Institutes

In addition to the provision of information on leading edge global trends and research and advice based on expert knowledge, it is expected that universities and research institutes will participate in advanced verification trials in collaboration with citizens, community action groups, and corporations among others.



#### Investors and Financial Institutions

It is expected that investors and financial institutions will provide support for the creation of new business models, including attracting ESG investment, which accounts for approximately ¥2,500 trillion, one quarter of global investment (as of 2016), and support for environmentally-friendly projects.

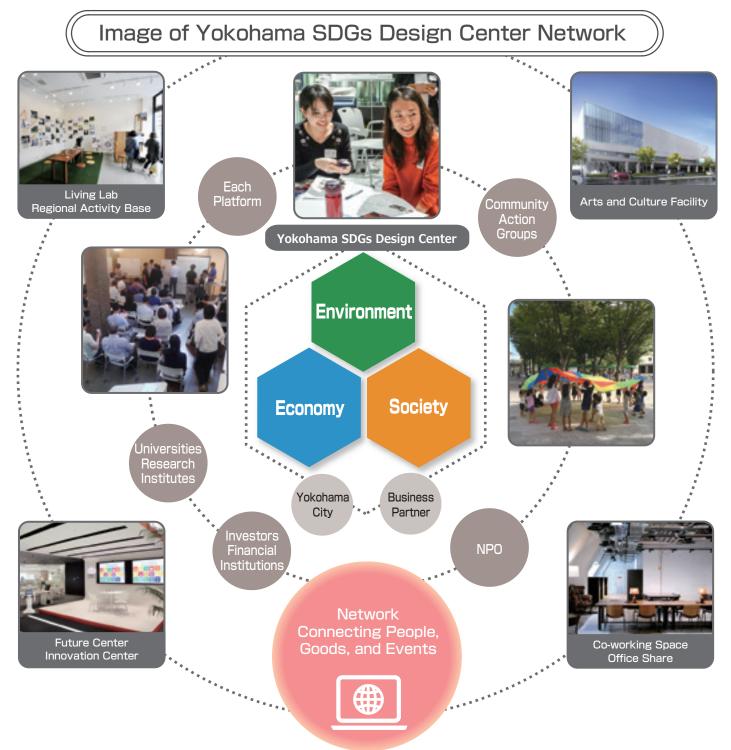
#### NPOs and Community Action Groups

It is expected that NPOs and community action groups will link initiatives to solve challenges being promoted in diverse communities to the design center in addition to providing locations for verification trials and participating and cooperating in verification.

#### Facilities

It is expected that the design center will be a place for stakeholders working on design center projects to come together for planning and consideration as well as a place for publicizing and raising awareness about SDGs FutureCity through the development of concrete projects and events at its facilities.

While playing their respective roles, these diverse agents will come together at the Yokohama SDGs Design Center and build networks in order to develop a sustainable "community."



The design center will aim to realize a "community" that keeps growing as it connects an array of concentrated and attractive facilities and functions and develops enriched people with active roles for every generation.

# Yokohama SDGs Design Center Developing Business and Building Networks

In order to generate collaboration between diverse agents and make the initiatives of the Yokohama SDGs Design Center sustainable, we will commence projects based on cooperation between Yokohama City and its business partner with the aim of independent operation by private enterprises in the future.

To this end, in addition to recruiting a business partner and establishing the foundations for design center operations, we will promote the creation of infrastructure that will facilitate independent operations through the creation of solutions based on the implementation of trial initiatives that identify specific regional challenges from the three aspects of the environment, economy, and society.

#### Trial Initiatives Aimed at Creating Major City Model

We will identify challenges and locations to implement initiatives aimed at the simultaneous solution of environmental, economic, and social challenges.

- Challenge identification model Identify challenges in consultation between Yokohama City and business partner
- Independent development model Gather needs and seeds from community and corporations, etc. and identify challenges

[Direction of initiatives in terms of three aspects]

- Environment Initiatives to counter global warming
- Economy

Society

Initiatives for reviving economy and creating prosperity Initiatives in response to suburban residential

areas to support super-aging society

#### Number of Initiatives

(Target figures) Fiscal 2018: 3 projects,

25

Fiscal 2019: 6 projects Fiscal 2020: 6 projects

#### \*Photo is artist's impression

#### Process for Deciding Business Partner

In order to comply with the principles of the Yokohama City Ordinance for Civic Collaboration from the establishment stage of the design center, we promoted the center as a civic collaboration project based on Article 8 Basic Principles of Civic Collaboration Projects\*<sup>1</sup> and decided on a business partner to operate the center in partnership with Yokohama City based on the procedure in Article 9\*<sup>2</sup> of the Ordinance.

Application period: October 22 - November 19, 2018 Decision on business partner: November 22, 2018 Business partner: Consortium composed of 5 participants

- Kanagawa Shimbun Co., Ltd.
- Television KANAGAWA, Inc.
- tvk communications co., Ltd.
- Toppan Printing Co., Ltd.
- EX Research Institute Ltd.

#### Points Evaluated and Overview of Selection Method

We selected the business partner based on a comprehensive evaluation of proposals, including the feasibility of the proposals, the business prospects, and the assignment of appropriate and credentialed human resources.

- \*1: The six principles of equality, respect for autonomy, respect for independence, mutual understanding, objective sharing, and disclosure
- \*2: Yokohama City Ordinance for Civic Cooperation (excerpt) Article 9 When the Mayor intends to implement a civic collaboration project based on the initiative of the city, the citizen, etc. that will be the counterparty must be selected using a fair method.

2 In the selection of the citizen, etc., that will be the counterparty in a civic collaboration project, the Mayor must consider comprehensively the technology, expertise, service quality, and other capacities for project implementation required for the civic collaboration project in question.

## What is the Yokohama City Ordinance for Civic Collaboration?

The Yokohama City Ordinance for Civic Collaboration was established in April 2013 with the aim of developing an affluent cooperation-based society while recognizing the respective strengths of citizens and the government administration and utilizing the knowledge and experience of each of them.

#### Yokohama City Ordinance for **Civic Collaboration: Preamble**

In Yokohama City, extensive support for independent and autonomous civic activities has been provided based on the efforts of many of its citizens. In particular, in addition to supporting civic activities aimed at contributing to the promotion of the public interest, Yokohama City has concentrated on developing civic collaboration. Civic collaboration makes progress when there are extensive and enriched civic activities. Today, with the development of the times, a need to establish new norms on procedures for promoting projects implemented through collaboration in order

to build more appropriate partnerships has been identified at the ground level of civic collaboration. Civic collaboration is created individually through consultation between government administration, citizens, and those implementing civic collaboration such as citizen's groups and local community-based groups. Therefore, civic

collaboration takes diverse forms. A society based on such civic collaboration is a society in which the freedom and right to act in accordance with one's own aims are guaranteed. It is also a society with mutual respect which can facilitate mutual aid rather than the exclusive pursuit of self-interest.

This Ordinance sets out the basic matters that should be considered as the required responsibilities of Yokohama City in promoting civic collaboration and aims to establish an environment for citizen's action and civic collaboration in addition to creating a cooperation-based society by reflecting the knowledge and experience of citizens in government administration.

2018

#### Implementing Trial Initiatives (artist's impressions)



#### **Future Schedule**

Initiative

2020 2021 - 2030

Yokohama SDGs Design Center		Yokoham	a SDGs FutureCity pl	an term	
		Open partially	Open fully		
Center operation		Build functions Establish operational organization	Operate on full sca Incorporate operat	1	Operate independently
Online system		Establish system	Operate system		
rial atives	(1) Challenge identification model	Study and impleme	nt		
(2) Autonomous (2) Autonomous development model			Implement		Implement
Promotion		Study and promote			

2019

(FY)

## Disseminating, Collaborating, and Expanding in Japan and Overseas

We will disseminate the initiatives and outcomes under SDGs FutureCity Yokohama widely in Japan and overseas and collaborate actively with other cities.



6th Asia Smart City Conference

For the realization of SDGs FutureCity Yokohama, it is essential that citizens, corporations, organizations, universities, research institutions, and others have a stake in SDGs FutureCity and participate in the initiatives. Therefore, we will promote dissemination and public awareness in diverse forms.

We will get each and every citizen to have a solid sense of what the SDGs are not only through broad dissemination within the city of Yokohama, but also by creating solutions for diverse local challenges through the SDGs FutureCity initiative.

To this end, we will promote the dissemination of information using the media and promotion capabilities of the business partner of Yokohama SDGs Design Center and encourage voluntary activities by citizens ranging from awareness to action to build up activities linked to the SDGs one by one.

In order to contribute to the achievement of the SDGs, which are common global goals, we will use the inter-city networks that we have cultivated to date and international conferences to disseminate information in addition to taking advantage of the know-how and



knowledge that Yokohama possesses to promote cooperation between cities worldwide, including support for emerging countries.

Disseminate information widely



Disseminate appeal through short film Hitotsubu no Mugi (A Grain of Wheat) Sound sense through initiatives



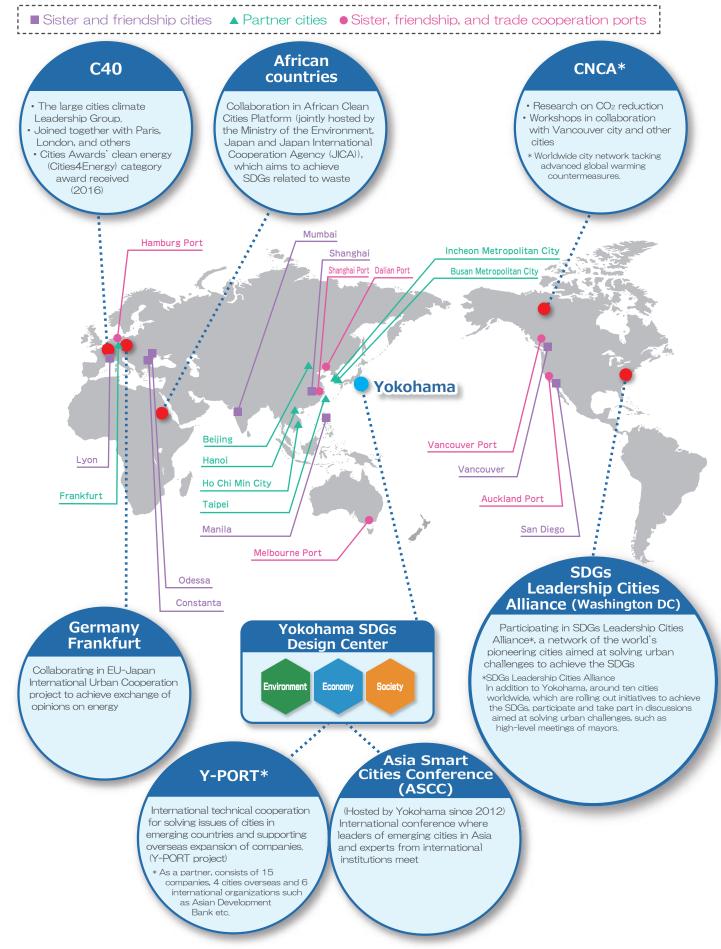
YOKOHAMA Future Mobility Showcase: verification testing using personal mobility

International collaboration and dissemination



with the US media about climate change policy (Washington D.C.)

International Expansion Promoting communication overseas and inter-city collaboration to contribute to worldwide urban development beyond national boundaries



# **Toward the Future**

We will accelerate initiatives aimed at making SDGs FutureCity Yokohama a reality with an eye on 2030, which is the year for achieving the SDGs. Yokohama SDGs Design Center is at the center of these initiatives, and it is not only essential to expand the wide-ranging collaboration within Yokohama, but also to collaborate in diverse ways with the nation of Japan and its related institutions, as well as cities in Japan and overseas in order to steadily create a major city model aimed at the simultaneous solution of environmental, economic, and social challenges.

We will seize on the civic power, inter-city networks and international conference venues of Yokohama as well as Photo: Yokohama Port passenger ship photo contest

all means of collaboration and diverse opportunities to promote communication to the world about solutions to regional challenges based on more connections. Through the SDGs FutureCity Yokohama initiative, Yokohama will not only contribute to achieving the SDGs in Japan but also around the world. Beyond that, we will make further efforts under Zero Carbon Yokohama which has set the goal of "realizing zero carbon neutrality (Zero Carbon Yokohama) in 2050 or as early as possible in the second half of the 21<sup>st</sup> century".



2020

Contribute to achieving SDGs







Zero Carbon Yokohama Achieving decarbonization Through initiatives to realize SDGs FutureCity Yokohama, priority goals in three aspects of the environment, economy and society

Overall				
Goal, target numbers	Goals for 2030			
17 PARTNERSHAPS FOR THE GOALS	Promote projects by Yokohama SDGs Design Center			
17.17	Current (2018): Concept study	2030: Promote		

	Environment			
Goal, Goals for 2030		or 2030		
15 UPE ON LAND 15.1	Indicator: Developing a city where a rich natural environme	ent and lifestyle coexist		
15.1 15.5	Current (2018): Develop Garden Necklace YOKOHAMA	2030: Hold International Garden Expo (fiscal 2026) Develop Garden City Yokohama taking advantage of flowers, greenery, agriculture, and water		
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 12.3	Indicator: Achieve a sustainable, circular society and a clean city			
CO 12.5	Current (2018): Promote 3R activities through collaboration of citizens and businesses	2030: Total volume of garbage and resources -10% (fiscal 2025)		
<b>13</b> ACTION 13.1	Indicator: Achieve and disseminate major city model for glo	bal warming policy and energy policy		
13.3	Current (2018): Promote pioneering initiatives to achieve major city model	2030: Achieve an environmentally-advanced city full of flowers and greenery		

	Economy				
Goal, target numbers		Goals f	or 2030		
7 AFFORDA		Indicator: Create a low carbon, zero-waste city that support	rts economic activity		
Ř	7.2	Current (2018): Revise the plan for global warming countermeasures.	2030: Greenhouse gases -30%		
8 DECENT V ECONOM	ICGROWTH 8.2	Indicator: Strengthen industrial base and strategically attra	act businesses		
Ĩ	8.3	Current (2018): Strategically attract business	2030: Strengthen industrial base and strategically attract businesses		
9 NDUSTRY. AND INFRA	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Indicator: Sustainable growth and development of compan	ies in Yokohama		
	9.4	Current (2018): Promote projects through I-TOP Yokohama, LIP. Yokohama, etc.	2030: Sustainable growth and development of companies in Yokohama		

	Society				
Goal, target numbers		Goals for 2030			
5 GENDER EQUALITY	5.1	Indicators: Support active roles for women, senior citizens,	and young people		
Ę	5.5	Current (2018): Support employment, career development, and entrepreneurship for women	2030: Achieve a society when everyone can reach their potential		
3 GOOD HEALTH and Well-Being		Indicator: Maintain health and independent living			
-/\/\	3.8	Current (2018): Implement health promotion and preventative care	2030: Promote initiatives aimed at extending healthy life expectancy		
11 SUSTANABLE CITIES		Indicator: Promote community development of compact suburbs			
	11.5	Current (2018): Promote sustainable suburban residential areas	2030: Achieve suburban areas where everyone wants to live and keep living		







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