

Accelerating the Tokyo Bay eSG Project

The Tokyo Bay eSG Project was launched to envision the future of Tokyo that lies beyond the dual crises of the threat of an infectious disease and climate change and to swiftly advance the **structural reform of society** to achieve that vision.

Initiatives have been underway in the **Bay Area** (the Waterfront City Area and the Central Breakwater Area). Notably, the Central Breakwater Area has been made available as a **vast area for the implementation of trials**, which have led to the birth of various **cutting-edge technologies**.

In addition to collaboration with surrounding municipal governments in the Bay Area, the **Tokyo Bay eSG Partners Program** was established for the public and private sectors and academia to spread the project's philosophy. This has grown into a network comprising **300 organizations**.

Ideas for the future of the Bay Area were also solicited from **children, who are our future**, using various tools such as LEGO blocks and Minecraft.

Leveraging the project's outcomes and network, which were cultivated in this manner, the vision for future cities that must be aimed for to build a sustainable world was **shared with many people from Japan and abroad** at **SusHi Tech Tokyo 2024**.

Currently, in the Bay Area, other than the expansion of BRT services and progress in railway construction plans, the facilities that were built for the Tokyo 2020 Games and private facilities, as well as the holding of various events, are leading to the generation of **new dynamism including arts and culture, sports, and entertainment**.

Meanwhile, **social conditions are changing dramatically**, including the **explosive evolution of digital technology**, the intensification of the **climate crisis**, and **a declining and graying population**. This project, which was conceived during the COVID-19 pandemic, has entered the **further planning and implementation phase**, making it necessary to **accelerate the project** by building on the outcomes achieved so far.

By updating the strategies, and under four new strategies, **specific initiatives up to 2035** will be presented by backcasting from the **vision for the 2050s**. These will be implemented as the **Tokyo Bay eSG Project (Version 2.0)** for Tokyo to become "**a model city for the world that continues to generate new value**".

What is the Tokyo Bay eSG Project?

- The project was conceived with the aim of building a sustainable city in the Bay Area that fuses “nature” and “convenience,” while looking 50 to 100 years into the future.
- By carrying on the spirit of our great predecessors, such as Shibusawa Eiichi and Goto Shinpei, caring for people who will live in the future, and applying bold ideas that break from the past, we will create a city that leads the world.

東京ベイeSGプロジェクト
Version 2.0

Envisioning Tokyo 50 to 100 Years into the Future

Carrying on the Spirit of the Great People Who Came before Us

- Looking back at history, our predecessors, who built the foundation for Tokyo and Japan, sought “sustainability,” and with foresight, firm conviction, and unceasing efforts, they overcame many difficulties to set forth a vision.
- **Shibusawa Eiichi**, who is called the “father of Japanese capitalism,” worked to **achieve a sustainable society** under the belief: “Rather than monopolizing the benefits of economic development, it is important to give back to society in order to enrich the entire country.”
- **Goto Shinpei**, who formulated the reconstruction plan for Tokyo following the Great Kanto Earthquake of 1923, **promoted urban development with an eye to the lives of residents 50 and 100 years into the future**, taking into account matters such as changes in the movement of people and goods.
- Precisely because this is a time of drastic change, while carrying on the spirit of our predecessors and with bold ideas that need not be an extension of what has come before, we are **laying out the vision for the shape of Tokyo with an eye to 50 to 100 years into the future**.
- While also pursuing the concept of the original ESG (Environmental, Social, Governance), in line with the above, we will promote the **Tokyo Bay eSG Project** guided by the following thoughts.



Shibusawa Eiichi
(Photo courtesy of the
National Diet Library)



Goto Shinpei
(Photo courtesy of the
National Diet Library)

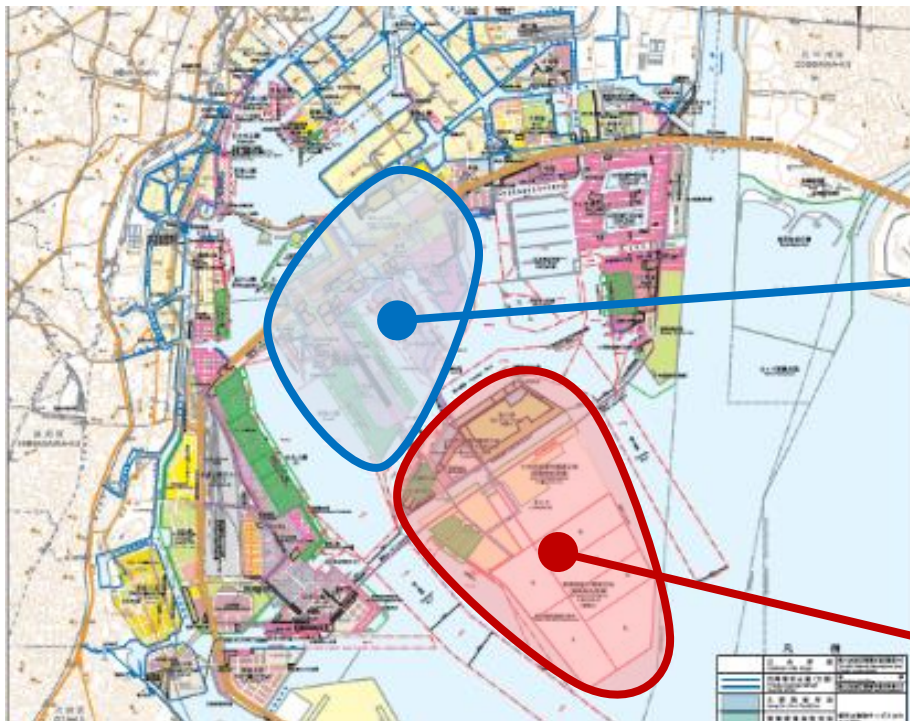
Thoughts contained in the "eSG" of the eSG project

e: Environment, Ecology, Economy, Epo^h-making (innovative technologies that will carve out a new era)

SG: Carrying on the spirit of Shibusawa Eiichi and Goto Shinpei

Building the Tokyo of the future with the Bay Area as the stage

- **Tokyo's Bay Area** has vast potential. The area is home to Tokyo Waterfront City which features Japan's leading logistics terminal, diverse attractions including commercial, entertainment, and facilities that were developed for the Tokyo 2020 Games, and **a vast parcel of new reclaimed land to measure about 1,000 ha** in the future.
- Putting this great potential to use, **we will prioritize the implementation of projects using this field as the stage** and realize a sustainable city where people gather in search of attractions that can only be found here even in the digital age.
- By sharing and creating with all of society a **city model that balances sustainability and the economy**, we will **further enhance Tokyo's international presence** and convey a **vision of the sort of future city the world should aspire to**.



- A city with high potential where places for work, living, learning, and leisure, as well as locations such as parks where people can get close to the water and greenery, are situated in a well-balanced manner.
- New attractions have been created, including facilities developed for the Tokyo 2020 Games, private sector entertainment facilities, and events that offer extraordinary experiences.



Sports and culture hub
(Ariake Arena)



Food festival
(Tokyo Delicious
Museum)



SusHi Tech Tokyo
2024

- New reclaimed land with unparalleled potential

Realizing a "sustainable city model" that fuses "nature" and "convenience"

- In Edo (the former name of Tokyo), which was the world's biggest city, **a circular economy was formed** in which the recycling and reuse of goods and materials occurred in all sorts of living situations, and **a city rich in harmony with nature** was cultivated.
- By leveraging the traditions of the Edo period (1603 – 1868) and the advanced technological capabilities of Japanese companies, and **promptly transforming the structure of society**, including making full use of cutting-edge technologies (digital technology, green technology, etc.), we will **create a sustainable city that combines "nature" and "convenience"** that can serve as a model for major cities around the world.

Visions for the city's future created by children



LEGO creation based on a painting of child's vision for the future



Minecraft Cup
Tokyo Bay eSG Award winning work
©Minecraft Cup Organizing Committee



An exciting future brought to life by generative AI

Vitality and nature in the Bay Area



Symbol Promenade Park alive with activity during SusHi Tech Tokyo 2024



Umi-no-Mori Park



Green infrastructure on a seawall (future image)

The Tokyo Bay eSG Project to date

- To realize our vision for a "sustainable city of the future," we have been working in collaboration with various entities to implement cutting-edge technology and develop the Bay Area.
- We will review the outcomes of our efforts to date and use those insights to support further expansion of the project.

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Summary of initiatives and outcomes to date

- By advancing the **implementation** of cutting-edge technologies and the **promotion** of our vision for the city of the future in tandem, these initiatives have steadily gained traction.
- The appeal of the Bay Area continues to be enhanced through a variety of initiatives to **boost vitality**.

Implementation

- ▶ Rollout of **priority projects** at the Central Breakwater area
 - **First flight of a “flying car” in Tokyo**
 - 20 projects including **world-first** technologies

- ▶ **Creation of the city of the future** in the Waterfront City area
 - Established an **“autonomous driving promotion district” to support the realization of Level 4 autonomous driving**
 - Accelerated efforts to achieve decarbonization through the utilization of hydrogen
 - Promoted the development of 5G communication infrastructure

- ▶ Opened **Tokyo Mirai Park** within Miraikan-The National Museum of Emerging Science and Innovation
 - A place to experience technology, **think about the future**, and **create new value** with partners

Supporting advanced initiatives by private businesses

Promotion

- ▶ **SusHi Tech Tokyo 2024**
(Cumulative total attendees: Approx. 610,000)
 - Allowed many Tokyo residents to experience the **“city of the future”**

- ▶ Collaboration with **Tokyo Bay eSG Partners**
 - Exhibited at **exhibitions** in Japan and abroad to promote technology
- ▶ Promotion of **child participation**
 - Used a popular game and other methods to solicit **ideas**

Creating opportunities to experience the future through technology, etc.

Creation of vitality

- ▶ Debut of **Tokyo 2020 Games legacy facilities**
 - **Tokyo 2020 Games-related facilities**
 - Ariake Arena, Ariake GYM-EX
 - Ariake Urban Sports Park
 - Ariake Tennis Park
 - Sea Forest Waterway
 - Umi no Mori Park
- ▶ **Various events**
 - Tokyo Tokyo Delicious Museum
 - GRAND CYCLE TOKYO
 - ARTBAY TOKYO

Sharing the attractions of the Bay Area

Strategies for realizing the project

- Although the project has achieved various outcomes, circumstances continue to change, such as with remarkable advancements in AI and other digital technologies, as well as the intensifying climate crisis.
- To realize the vision of the project, we will update our strategies and accelerate initiatives.

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Version 2.0

Updating strategies for realizing the project

- **Digital technologies** are evolving at a remarkable pace. In particular, there have been explosive advancements in **generative AI**, which has spread to virtually all fields. Some predict that the **technological singularity**, the moment when AI surpasses human intelligence, will arrive sooner than anticipated.
- The **climate crisis** is growing more severe every year, with extreme heat, sudden torrential rains, and other disasters becoming major threats. As countries strive to realize **a decarbonized world**, initiatives such as the widespread use of **renewable energy** are being accelerated to ensure **energy security**, and “**green transformation**” (**GX**) efforts are being promoted on a global scale.
- Sustainable initiatives are evolving into “**regenerative**” initiatives.
- **Structural challenges** have become more apparent, such as the diversification of values and workstyles due to **population decline**, the **declining birthrate**, and the **aging population**.
- Since the Olympic and Paralympic Games Tokyo 2020, the Tokyo Bay area has been **enlivened** through various efforts, including ongoing private-sector facility development projects and a diverse range of events that offer **extraordinary experiences** in art, food, entertainment, and other fields.

This project, which was conceived during the COVID-19 pandemic, has entered the further planning and implementation phase. We will expand on the outcomes thus far, advance the social implementation of the project, and update our strategies to accelerate measures.

Project Vision: A model city for the world that continues to generate new value

Based on four strategies, we present a vision for the 2050s along with concrete measures to be taken before 2035 formulated through backcasting

Environment / GX

DX / Technology

Co-creation /
Partnerships

Urban Development

Strategies for realizing the project (looking toward the 2050s)

Environment / GX

Harness environmental technologies to build a model zero-emissions city for the world

- Leverage renewable energy to achieve **local production for local consumption of energy**
- Realize a city that goes beyond "sustainable," where **the regeneration of nature and economic growth exist in harmony**
- Establish a **circular economy** that realizes resource circulation throughout the life cycle of materials and products, taking their characteristics into account

DX / Technology

Use digital technologies that transcend human intelligence to generate a constant stream of innovations to realize a convenient and comfortable city

- Implement **various intelligent digital technologies** throughout the city
- Create a **model city** with high productivity and comfort through **robots and mobility** intertwined with daily life
- Create an area where innovations are constantly generated and **new wisdom accumulates**

Co-creation / Partnerships

Create a stage where diverse societal actors, including game-changing challenge-seekers and children who represent the future, can constantly play an active role

- Facilitate the **gathering of challenge-seekers** and the continued creation of sustainable technologies originating from the Tokyo Bay area via empathy and co-creation, to draw the world's attention as a **birthplace of technology**
- Fully implement "Dream-Oriented Technology" that will allow children in 2050 to imagine and **realize a bright future vision** 50 and 100 years beyond

Urban Development

Create activity that utilizes vast spaces and waterfront areas and realize a city that captivates the world as a place for new discoveries

- Create a **world-leading hub** for promoting arts and culture, sports, entertainment, and more, where technology and sensibilities are highly intertwined
- Build a **people-centric sustainable city** that has an excellent transportation network and where comfortable, vibrant, swimmable waterfronts exist in harmony with diverse greenery and wildlife

2050

Harness environmental technologies to build a model zero-emissions city for the world

- ① Leverage renewable energy to achieve local production for local consumption of energy
- ② Realize a city that goes beyond "sustainable," where the regeneration of nature and economic growth exist in harmony
- ③ Establish a circular economy that realizes resource circulation throughout the life cycle of materials and products, taking their characteristics into account

2035

① Improve energy self-sufficiency through the introduction of renewable energy

- Establish a green hydrogen production and supply system in the Tokyo Bay area
- Deploy next-generation solar cells, photovoltaic pavements, and other cutting-edge renewable energy solutions throughout the city

② Harness various environmental technologies to realize a sustainable city

- Promote biodiversity conservation and restoration while also restoring waterfront spaces in the Tokyo Bay area, such as through improving water quality and developing green and blue infrastructure in waterfront areas
- Support the development of cutting-edge technologies, including through green finance

③ Implement an integrated circular economy involving the entire area

- Introduce resource circulation technology that supports carbon recycling through efforts such as promoting urban farming using urban spaces in waterfront areas, and actively utilizing Direct Air Capture (DAC) technology*

*Technology that directly captures carbon dioxide from the atmosphere



Photovoltaic pavements

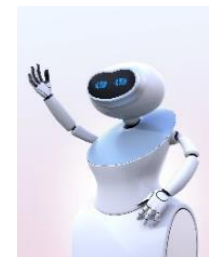
2050

Use digital technologies that transcend human intelligence to generate a constant stream of innovations to realize a convenient and comfortable city

- ① **Implement various intelligent digital technologies throughout the city**
- ② **Create a model city with high productivity and comfort through robots and mobility intertwined with daily life**
- ③ **Create an area where innovations are constantly generated and new wisdom accumulates**

2035

- ① **Introduce pioneering digital technologies for Tokyo Bay-area urban development and for people's lifestyles**
 - Use pioneering digital technologies to promote the **creation of comfortable environments optimized for individuals**, focusing on aspects of daily life such as healthcare, food, and hobbies
 - Enhance guidance and services in the Tokyo Bay area through diverse **communication robots**
- ② **Pilot the introduction of robots, mobility solutions, etc. in various situations to improve living standards and productivity**
 - Use and introduce **robots and drones that improve convenience and safety** in transport, work at height, infrastructure inspections, and more
 - In addition to **flying cars, autonomous driving technology**, and self-operating ships, **promote the active use of personal mobility solutions** tailored to the situation and characteristics of individuals
 - Call for the development of technologies that contribute to solving social issues, such as **physical augmentation, powered exoskeletons**, as well as **nursing care and healthcare technologies**
- ③ **Cultivate an environment that generates innovation through active showcases**
 - Establish a **vast implementation area for piloting the adoption of new technologies** such as robots and mobility solutions
 - Study mechanisms for generating new innovations, such as **space and ocean frontier development** and **digital transformation (DX) infrastructure**



2050

Create a stage where diverse societal actors, including game-changing challenge-seekers and children who represent the future, can constantly play an active role

- ① **Facilitate the gathering of challenge-seekers and the continued creation of sustainable technologies originating from the Tokyo Bay area via empathy and co-creation, to draw the world's attention as a birthplace of technology**
- ② **Fully implement “Dream-Oriented Technology” that will allow children in 2050 to imagine and realize a bright future vision 50 and 100 years beyond**

2035

① **Build an “eSG ecosystem” where diverse actors connect and co-create**

- Encourage **various actors** to participate in the Tokyo Bay eSG Partners program and promote the **creation of an environment and deregulation that will shape efforts** to solve societal challenges
- **Generate innovation** by building an “eSG ecosystem” in the Tokyo Bay area, in which relevant local governments, **local SMEs, startup support facilities**, organizations, partner companies, and visitors can collaborate and participate
- Create opportunities to **connect game-changing challenge-seekers and investors**

② **Promote “co-creation activities” that give shape to and realize the rich ideas of children and youth**

- Advance a variety of co-creation activities, such as using technology to materialize and commercialize the **“future vision” imagined by children**



eSG Partners Networking Event



Tokyo Mirai Park Workshop

2050

Create activity that utilizes vast spaces and waterfront areas and realize a city that captivates the world as a place for new discoveries

- ① Create a world-leading hub for promoting arts and culture, sports, entertainment, and more, where technology and sensibilities are highly intertwined
- ② Build a people-centric sustainable city that has an excellent transportation network and where comfortable, vibrant, swimmable waterfronts exist in harmony with diverse greenery and wildlife

2035

① Develop into a new birthplace for arts and culture, sports, and entertainment

- Grow into a new hub for creation by enhancing appeal with **world-class art, sporting events, entertainment, nighttime** tourism, and other attractions
- Create an **experience area** for enjoying “**entertainment & digital transformation**” (e.g., a fountain attraction, drone shows, projection mapping displays, light entertainment)

② Promote infrastructure development and urban development that features harmony between water and greenery through public-private collaboration

- Realize a comfortable, people-centric city **with calm, relaxing spaces that make use of water and greenery**
- Advance measures to improve the transportation network, **such as the building of a new City Center and Waterfront City subway line**
- Improve efficiency in port and harbor logistics through the **construction and reorganization of container wharfs** and the use of **digital technologies** such as AI
- Build a **disaster-ready city** that can withstand localized torrential rains, an earthquake that strikes directly beneath Tokyo, etc.
- Promote **urban development that enhances wellbeing** through collaboration among a diverse range of actors

