



Aichi and Tokoname Super City Initiative

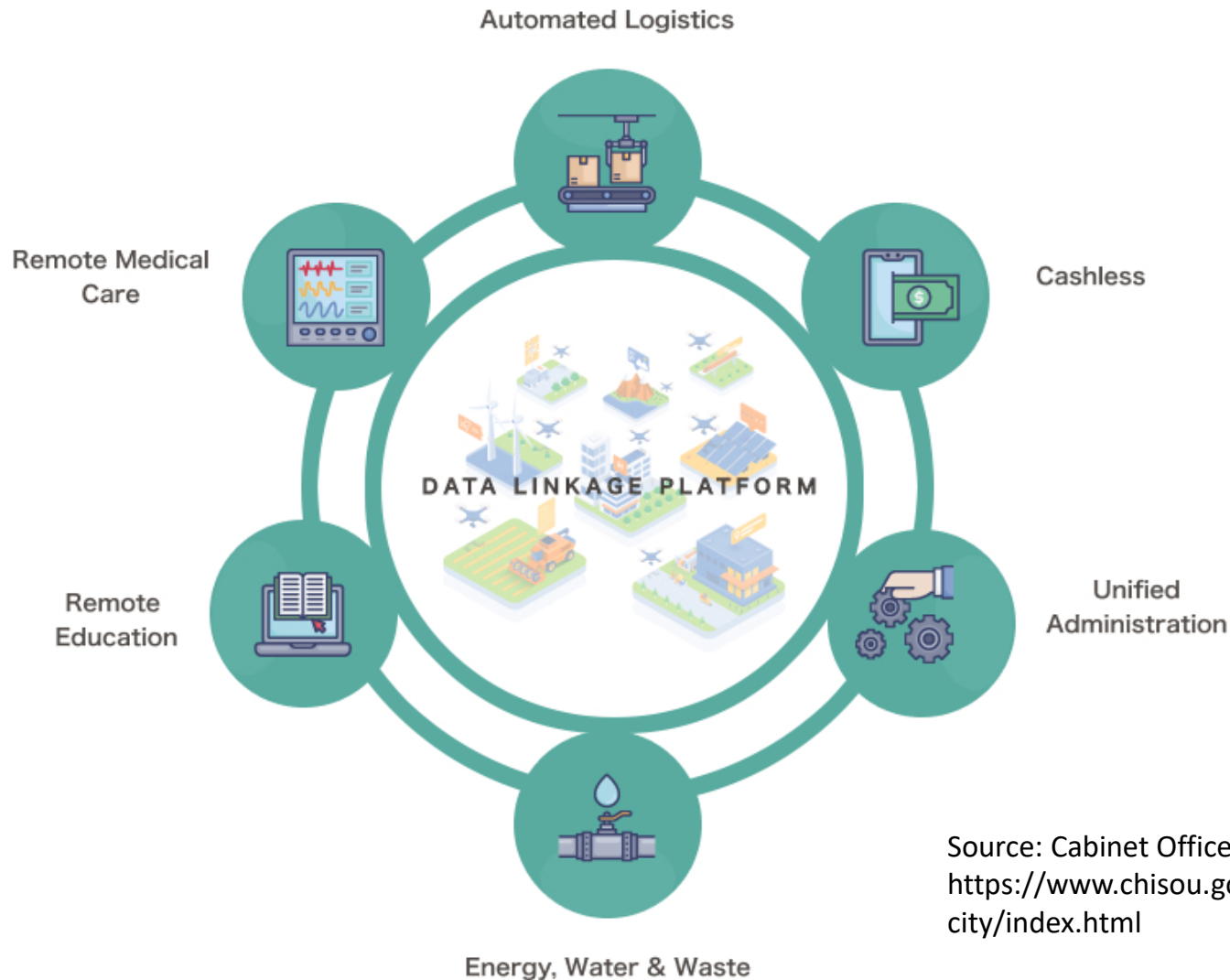
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► About the Super City Initiative

A Super City is a city that

- interconnects various systems used in everyday life,
- implements cutting-edge technology in practical ways, and
- is informed by the lifestyle of the people who live there.



Source: Cabinet Office's website for regional revitalization
<https://www.chisou.go.jp/tiiki/kokusentoc/english/super-city/index.html>

► The Future Is Now

We already have the technology we need to transform urban design as we know it. Artificial intelligence and big-data technology are in our hands, on our wrists, and throughout our cars.

Technology is already an essential part of our daily lives, but its role is superficial compared with what it could achieve if it were integrated into the very fabric of our cities.

It is not just the level of integration that it is important but also the method. In the past, the developers and suppliers of technology dictated how it would be deployed. In a Super City, the technology is integrated with the lifestyle of the people living there—not changing that lifestyle but enhancing it for mutual benefit.

This vision of the future supported by Japan's technology (J-Tech) prowess is set to revolutionize urban life.



► From Smart Cities to Super Cities

Examples of data-driven technology are all around us. Cashless payment systems, unattended checkouts, and the smartphone you may be using to view this website—this technology was probably striking at first but now undoubtedly seems normal. It connects us remotely to our health care, our education, and our business, ensuring privacy when we want it.

We notice the technology we use every day, but in Smart Cities the same technology is integrated into everyday life so seamlessly as to be unnoticeable. Examples abound: artificial intelligence (AI) being used to reduce traffic congestion, urban areas being mapped and tracked to understand the needs of residents, and administrative records and tasks being digitized to improve efficiency.



These successful Smart Cities are the blueprint for the Super City Initiative, which was introduced by the Japanese government in October 2018. A Smart City is defined as having one data-driven system included in its urban design, but the bar is much higher for a Super City, which must have several data-driven systems fundamental to urban life. However, a Super City must do more than just provide convenience and improve residents' quality of life; it must tackle or preempt social problems, ensure equality, and guarantee the safety of the populace. A city of the future may be data-driven, but it is first and foremost created by and for its inhabitants.

The Japanese government is going to select the first few pilot cities this year, 2021, and whether the new generation of Super Cities to come are developed from the ground up or an existing city that has been restructured, the benefits will be shared by everyone.



Proposal toward Realizing the Aichi and Tokoname Super City Initiative

<Ideal Future City Vision>

Green & Innovation Island

Toward **developing into an international tourism city that can continue to create new businesses and lead the world in the era of green and digital technology** by taking advantage of its position as Japan's largest manufacturing center

Concept

- **Develop into the world's No.1 international tourism city by incorporating all implementable cutting-edge technologies**
- **Propose a new form of space and time management using various technologies**
- **Attract innovators from around the world and serve as a showcase continuing to produce cutting-edge achievements**

Project Area

On and near Chubu Centrair International Airport Island (Tokoname City, Aichi Prefecture)

Phase I (until 2025)

- Introduce cutting-edge technologies and services to Chubu Centrair International Airport Island and to Rinku-cho, an area located opposite the island, and establish an appropriate business model

(The project area will serve as a base for societal implementation at an early phase.)

Current circumstances of the airport island and the area located opposite the island (Rinku-cho)

Population: 87 (as of the end of March 2021)

Workers: approx. 10,000

Airplane passengers: approx. 12.60 million (in FY 2019)

- * 2025 population frame

(Central Japan Airport City's Community Development Guidelines [2017])

Night population: approx. 2,000 (resident population & transient population)

Working population: approx. 17,000

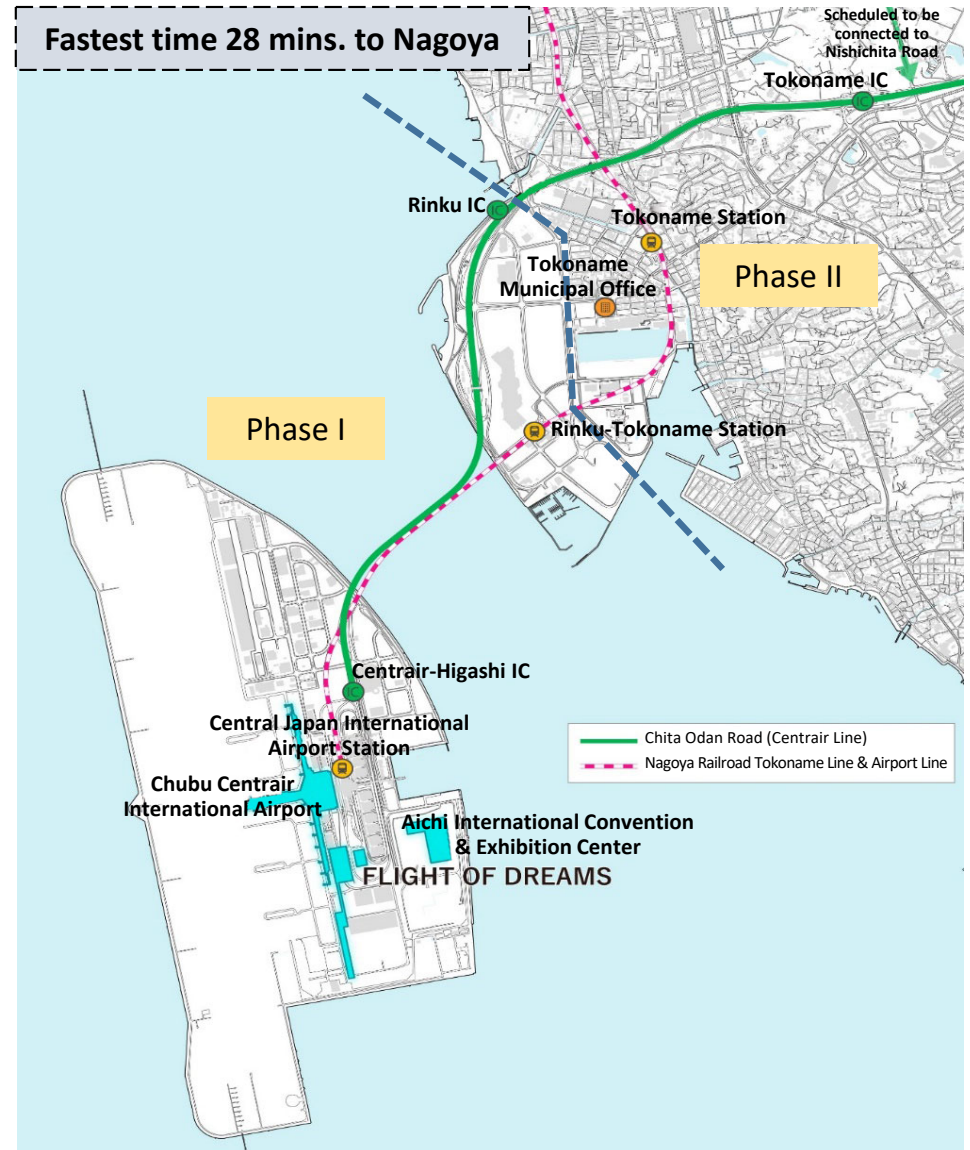
- Generate synergy by ensuring a link with initiatives for other cities in Aichi Prefecture

Phase II (in and after 2026)

- Spread the services realized in phase I to the area around Tokoname Station and other urban areas

Phase III (around 2030)

- Develop the services toward solving the city and the prefecture's problems



Provide Cutting-edge Services in Different Fields

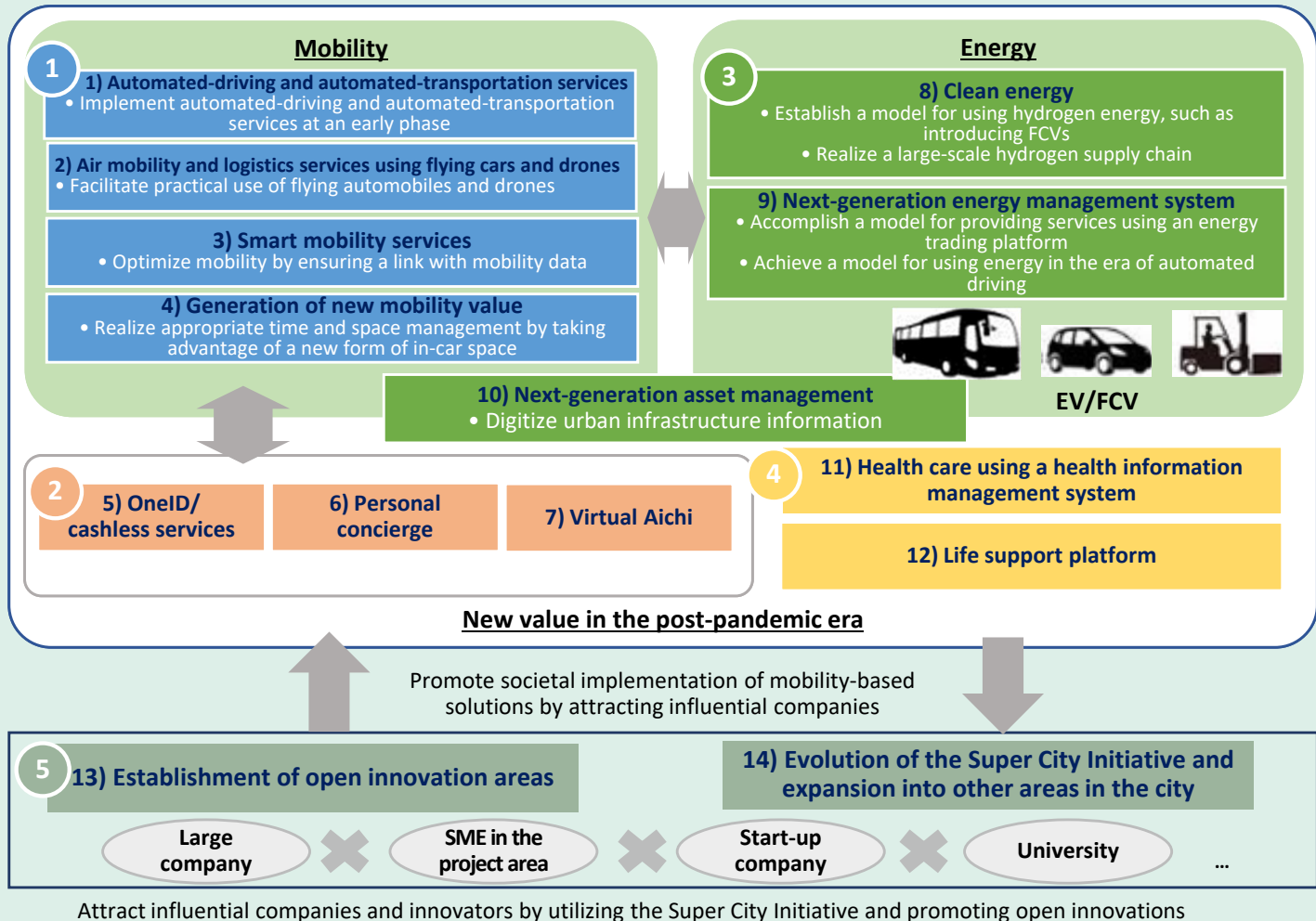
Overview of Cutting-edge Services

Cutting-edge services

- Solutions**
- 1 Achieve mobility and logistics systems that are ahead of the times
 - 2 Provide cutting-edge hospitality services that satisfy all customers
 - 3 Realize the world's highest-level resilience functions by achieving zero carbon emissions
 - 4 Accomplish a human-friendly society suitable for an era of population decline

- Mechanism**
- 5 Establish an innovative eco system to continue to produce the world's most cutting-edge achievements

Establish a business model for creating **new value in the post-pandemic era** by developing into a demonstration test base for industries related to **mobility and energy**



Overview of Cutting-edge Services

1

Achieve mobility and logistics systems that are ahead of the times

Striving to realize an automated-driving service ahead of other prefectures in Japan, Aichi Prefecture is cooperating with a corporate group in continually conducting demonstration experiments (for example, of passage through an ETC gate, simultaneous driving of multiple cars on a public road other than an expressway, use of commercial 5G, a long-term service throughout the airport island, and design of automated-driving concept vehicles while examining an ideal in-car space with consideration given to countermeasures against infectious diseases). The project is already in the phase where technical implementation is possible. With our focus on both technical and institutional aspects, we will provide a sustainable, automated-driving service 24 hours a day, 365 days a year, on and near Chubu Centrair International Airport Island at an early phase. Moreover, we will establish a link with all means of mobility and transportation, such as airplanes, trains, automobiles, buses and vessels, and also with authentication and payment systems, thereby not only enhancing the convenience of users, but also contributing to achieving optimization of energy use.

- Ideal vision
- Enable service users to enjoy point-to-point mobility and transportation anytime as they like
 - Realize a new form of space management to ensure harmony between humans and mobility
 - Create new mobility value by, for example, providing some programs to enable sightseeing sites to appeal even more strongly to visitors while they are traveling.



2

Provide cutting-edge hospitality services that satisfy all customers

In the World Airport Awards 2020, Chubu Centrair International Airport was selected as the World's Best Regional Airport, achieving this accolade for six years in a row. Housing the Aichi International Convention & Exhibition Center (Aichi Sky Expo), used as a venue for exhibitions, international conferences and other events, and the commercial complex "Flight of Dreams," the airport provides experiences for visitors to enjoy various forms of excitement. In addition, the airport is located in Tokoname City, a long-established production center of ceramics. Blessed with rich regional resources, such as a spring float festival and the magnificent scenery of Ise Bay, the city provides opportunities for visitors to appreciate its excellent history, culture and nature. By integrating these regional potentials and new technologies, such as robotics, automation and digitization, we will present new value in a new era from the perspective of a gateway welcoming visitors from around the world.

- Ideal vision
- Introduce a face authentication system for airport check-in, immigration procedures, and payment
 - Realize automated transportation of suitcases, baggage, and shopping bags
 - Develop into a tourism city where even those who are visiting the city from abroad for the first time can have a good time without getting lost or facing any other trouble, and enjoy sightseeing without carrying their passport with them



Overview of Cutting-edge Services

3

Realize the world's highest-level resilience functions by achieving zero carbon emissions

On the airport island, the Centrair Hydrogen Station was opened in 2019 for the purpose of promoting the local use of hydrogen. Moreover, FC buses and FC forklifts have been introduced. As indicated by these initiatives, there is progress toward accomplishing a hydrogen-based society. From now on, in addition to introducing EVs and FCVs for mobility, we will consider digitization, electrification and hydrogenation for local power use, and also explore the use of stationary battery cells. We will integrate these measures with an energy management system to accomplish optimum control of energy. By doing so, we will strike the best balance between a comfortable daily life and effective use of energy.

- Ideal vision
- Reduce CO₂ emissions by making effective use of renewable energy, surplus energy, etc.
 - Realize a peak shift by interchanging power between facilities
 - Make communities resilient enough for them to continue independent operations for a long time (one week at the longest) even if their outside power supply is disrupted



4

Accomplish a human-friendly society suitable for an era of population decline

We will accomplish optimum management of the health conditions of those working at the airport and local residents through a health information management system to ensure their good health and safety, and through smart homes appropriate to the era of an aging population. We will realize a human-friendly society where it will be possible to conduct risk management to prevent diseases and to extend the healthy life expectancy by preventing labor accidents and occupational diseases so that people can continue to live and work safely for as long as they like. In addition, we will digitize administrative information and infrastructure information to make communities resilient to disasters. At the same time, we will go further than merely making various procedures available online, and introduce avatars in virtual space in order to make digital services similar to in-person services. By doing so, we will realize a future city where nobody is left behind.

- Ideal vision
- Address all possible future risks and always watch over people's safety and health



5

Establish an innovative eco system to continue to produce the world's most cutting-edge achievements

As an enormous implementation field where the entire project process can be tried seamlessly from the development phase to the implementation phase, we will attract many more start-up companies. In addition, by promoting open innovations through cooperation with large companies and business entities, we will achieve harmony between green and digital technology and facilitate the integration of art, history, culture and new technology. Taking advantage of the project area's location of the international airport, we will further cooperate with overseas smart cities and promote the project area to the world as an island showcasing cutting-edge technologies. Furthermore, we will transform the project area into a model for developing services with various facilities in the area linked with one another and draw many more innovators and incubators, thereby invigorating local industries.

- Ideal vision
- Develop into a city attracting human resources and technologies from all over the world and showcasing cutting-edge technologies

