



KASHIWA-NO-HA

# Kashiwa-no-ha Smart City

A New Vision for the Cities of Tomorrow

February 9th, 2015

Hiroyasu Akiyama  
Mayor of Kashiwa City



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(A New Vision for the Cities of Tomorrow)

# 1. The Environs

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# Location



25 km  
from central Tokyo

27 minutes  
by Tsukuba Express  
from Akihabara

**Tokyo Access**

 by Train

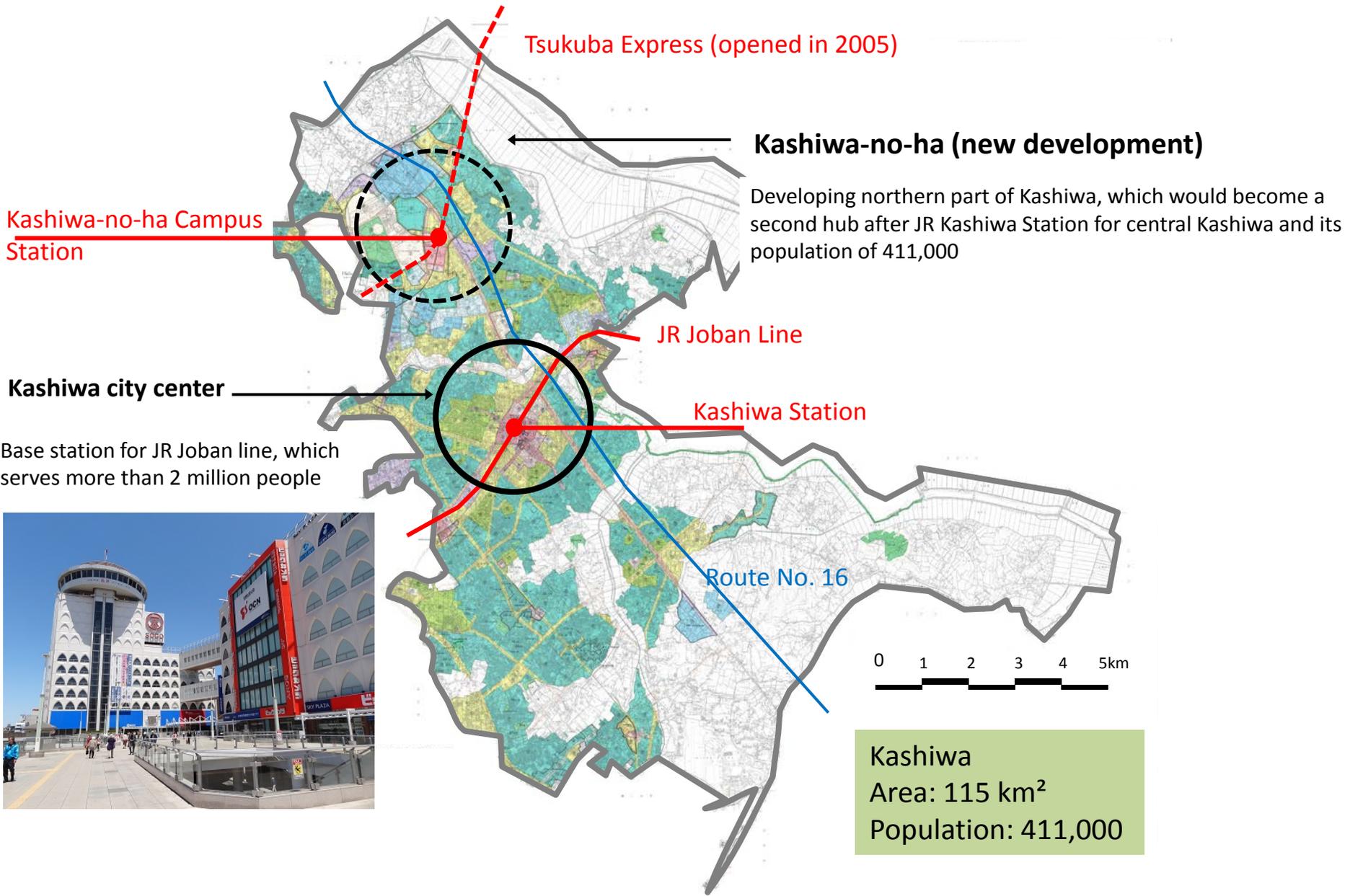
Tokyo:	30 min
Akihabara:	27 min
Roppongi:	50 min

**Airport Access**

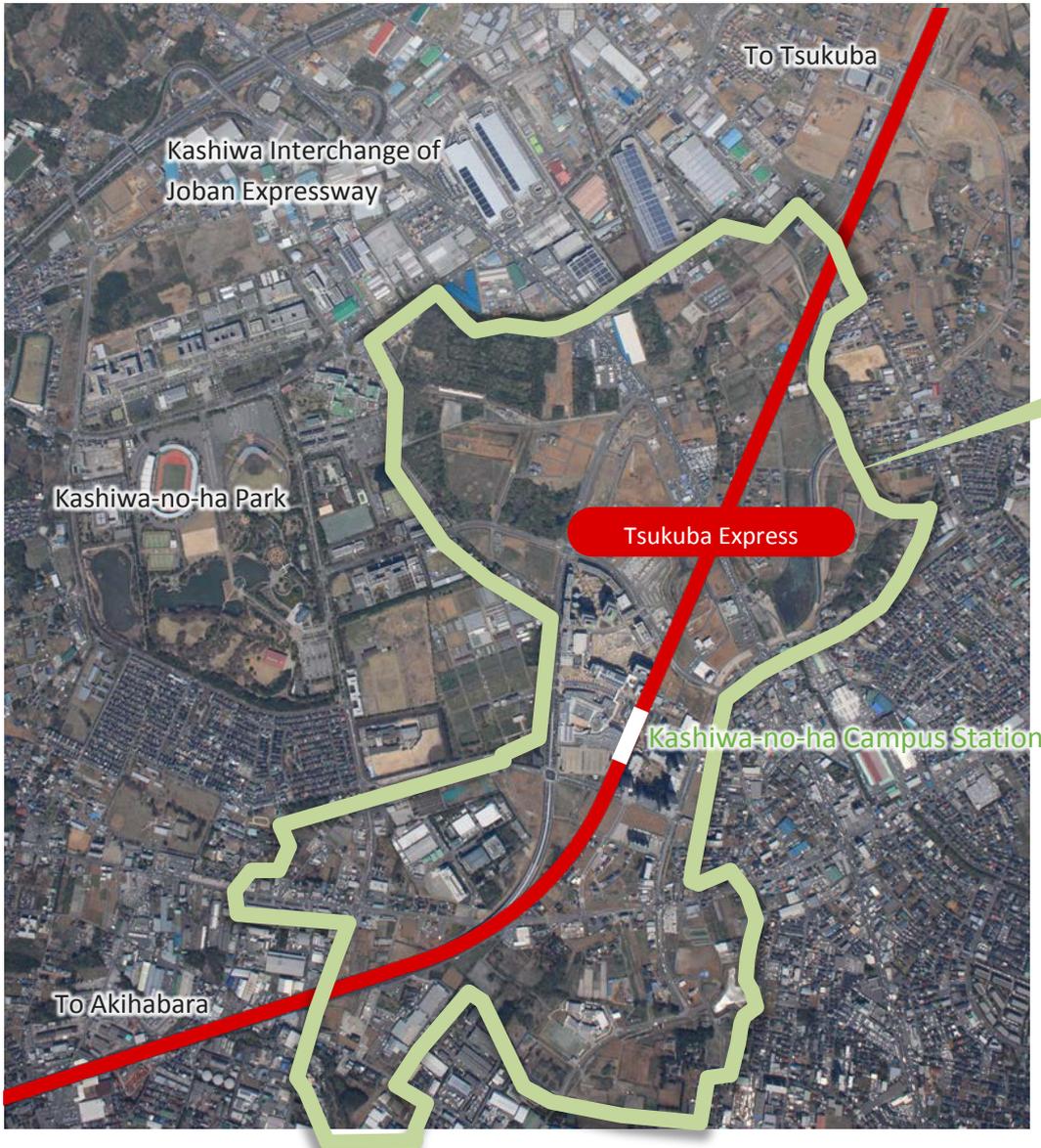
 by Train	Haneda: 58 min Narita: 62 min
 by Car	Haneda (54km): 60 min Narita (48km): 60 min*

Note: Excluding transfer and waiting times

# Kashiwa-no-ha Area in Kashiwa



# Area under Development



## Kashiwa-no-ha Campus



A land readjustment project area covering roughly 273 hectares and with a planned population of 26,000



### Developed from scratch

- Leveraging advanced knowledge and technologies
- A social experiment in which residents are participating



# The Leading-Edge Kashiwa-no-ha Campus Station Area



Chiba University  
Kashiwa-no-ha Campus

Park City Kashiwa-no-ha  
Campus Nibangai District

LaLaport  
KASHIWANOHA

Gate Square

Park City Kashiwa-no-ha  
Campus Nibangai  
District

Kashiwa-no-ha Campus  
Station

## 2. Urban Development Framework

(Partnership between public and private sectors and resident participation)



# Area Potential

Some of Japan's leading universities, research institutions, and industrial support facilities are here

東大柏ベンチャープラザ

東葛テクノプラザ

東京大学 柏キャンパス

至柏I.C.

こいずけ池公園

国立がん研究センター 東病院

Higashi Hospital of National Cancer Center (1992)

ゲートスクエア

University of Tokyo Kashiwa Campus (2000)

Tokatsu Techno Plaza (1998) 物工場

ららぽーと柏の葉

柏の葉キャンパス

京葉銀行

Chiba University Kashiwa-no-ha Campus (1991)

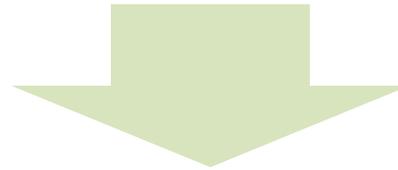
柏の葉キャンパス駅

0 100 200 500m

# Basic Urban Development Approach at Kashiwa-no-ha



Leverage **universities** as the area's greatest resource and **create an entirely new city** that is a **model for resolving social issues**



Formulate a new urban development **paradigm** that eschews the traditional centralized administration approach

# Kashiwa-no-ha International Campus Town Initiative

In 2008, Chiba Prefecture, Kashiwa City, the University of Tokyo, and Chiba University formulated this initiative, with Mitsui Fudosan and the Urban Renaissance Agency also taking part

They presented the eight objectives shown below and 27 policies as priority measures



Goal 1: Develop a **garden city** coexisting in harmony with the environment

Goal 2: **Deploy creative industrial** and cultural spaces

Goal 3: **Create international academic, educational, and cultural spaces**

Goal 4: Maintain a sustainable **transportation** system

Goal 5: Undertake a Kashiwa-no-ha approach that fosters **health**

Goal 6: **Manage the area** through a partnership between the public, private, and academic sectors

Goal 7: **Design high-quality urban spaces**

Goal 8: Develop a city that supports **innovative fields**



# Public, Private, and Academic Sectors Partnering to Operate UDCK



# Functions Connecting UDCK and Initiative

Collaborative urban development institution

**Urban Design Center Kashiwa-no-ha (UDCK)**



Shared vision

**Kashiwa-no-ha International Campus Town Initiative**

Committee established to follow up with Initiative, with UDCK functioning as secretariat to continuously monitor progress

Chiba Prefecture, Kashiwa City, University of Tokyo, Urban Renaissance Agency, and Mitsui Fudosan

Kashiwa-no-ha International Campus Town Initiative Committee

Follow-up secretariat: UDCK

Basic research conducted in fiscal 2006

Initiative formulated in fiscal 2007

Follow-up research in fiscal 2008 through 2012

Explored bolstering Initiative in fiscal 2012

Follow-up research in fiscal 2013

Bolstered Initiative in fiscal 2013



1. Spatial Design Subcommittee
2. Area Management Subcommittee
3. Mobility Subcommittee
4. Location Subcommittee
5. Agriculture and Food Subcommittee
6. Community Education Subcommittee
7. Area Promotion Subcommittee
8. UDC Deployment Subcommittee

# UDCK's Vital and Open Facilities

## UDCK Usage

Purpose	Fiscal 2013 gatherings (Previous year numbers in parentheses)
Town planning meetings	371 (449)
University lectures, seminars, and research meetings	54 (43)
Forums and events	57 (76)
Tours from Japan and abroad	184 (308)
Public lectures and workshops	51 (89)
Civic activities, preparations and work	36 (29)
Total	753 (994)

• In fiscal 2013, UDCK limited usage during around one month owing to relocation preparations



- Functioning as multipurpose facility for everything from university lectures to town planning meetings and civic activities
- Number of event bookings in fiscal 2013: Around 750

# Diverse Community Activities

## Town club activities



- Number of club activities: Around 26
- Number of registered people: Around 1,100 at end-March 2014
- Creating a local communities that brings residents together through their interests

## Gardening near station

かしはな



Citizens draw on tips from instructors of the Faculty of Horticulture, Chiba University to plant and care for flowers, vegetables, and herbs in front of Kashiwanoha Campus Station.

# Diverse Community Activities

## Marche Couleur



Local stores and producers set up booths around the station with assistance from students. There are also events featuring artists and presentations about town development.

## Community points program



People can use community points they accumulate by participating in the town's activities or in field tests for local programs or activities. The points link Kashiwanoha residents and cultivate their awareness of the environment and health, creativity, and interaction.

# Diverse Community Activities Involving Academia and Citizenry

## College link program



Chiba University created this lifelong learning program, which positions the entire community as an educational vehicle. As well as offering systemic, the program it aims to create an interactive teaching and learning approach that shares the experiences and expertise of people from diverse backgrounds.

## Kashiwa-no-ha Science Education Lab

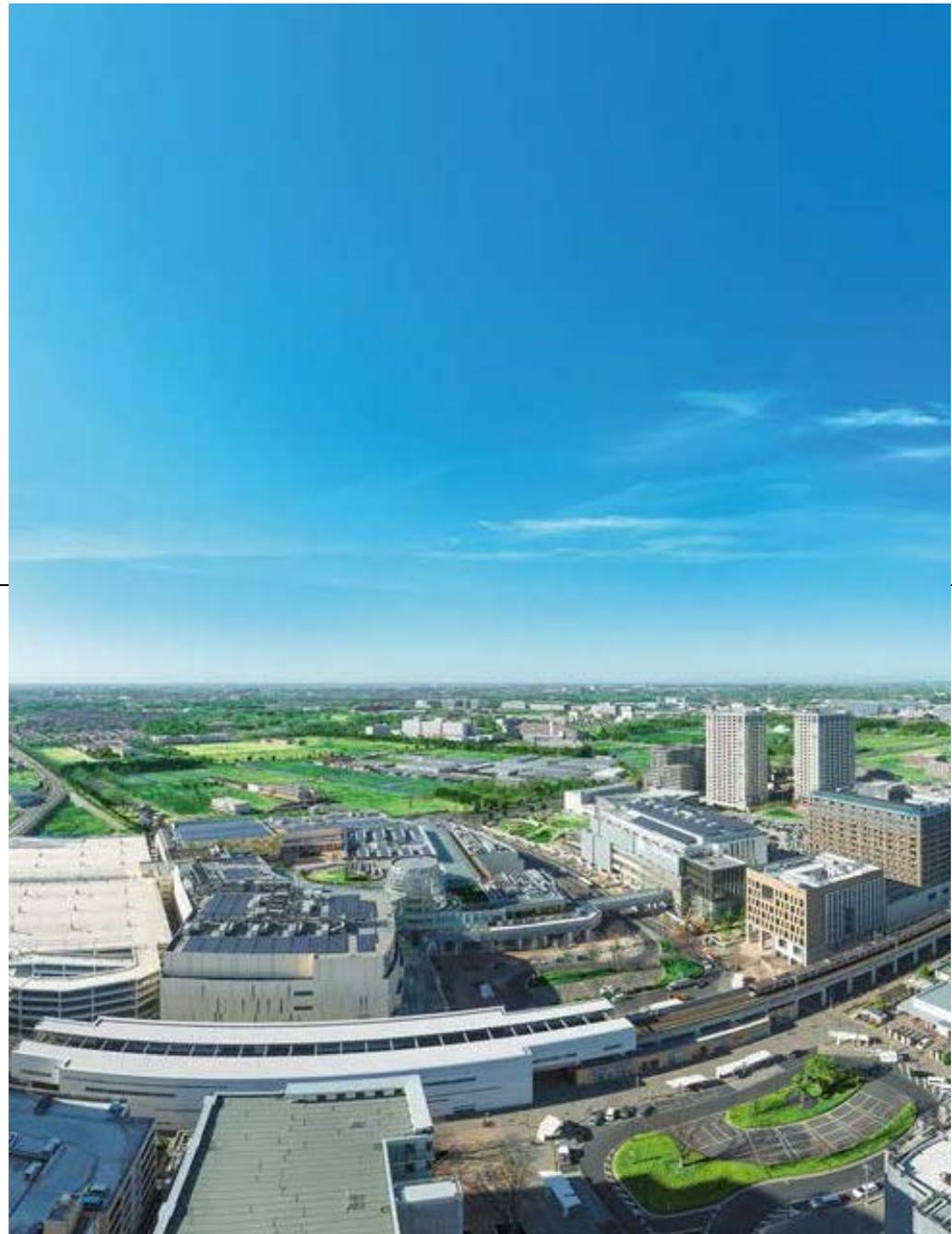


A group from the University of Tokyo aims to revitalize the community by communicating through science. The group shares noteworthy achievements through the Science Café and runs traveling science classes for children and adults.

### 3. Urban Development Concept

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(A model for resolving city issues)



# Kashiwa-no-ha Urban Development Concepts



A new vision for the cities of tomorrow

Formulated three urban development concepts to help Japan fulfill its commitment to tackling challenges for the future of the world

## Environmental-Symbiosis

A city that is people- and environment-friendly and fully disaster-prepared

## Health and Longevity

A city in which people of all ages can enjoy healthy and secure living

## New Industry Creation

Fostering growth fields that become sources of new vitality for Japan

# Designated as Comprehensive Special Zone and Future City

Two systems to materialize Japan's growth strategy

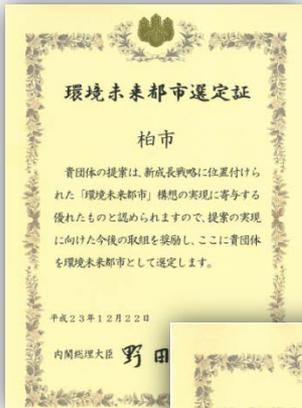
Comprehensive Special Zone  
for regional revitalization



Future City

Japanese government offering **deregulation and tax incentives** for advanced **regional vitalization** initiatives

Japanese government providing financial assistance for advanced initiatives to tackle **environmental and social aging** issues in creation of cities as models for the world



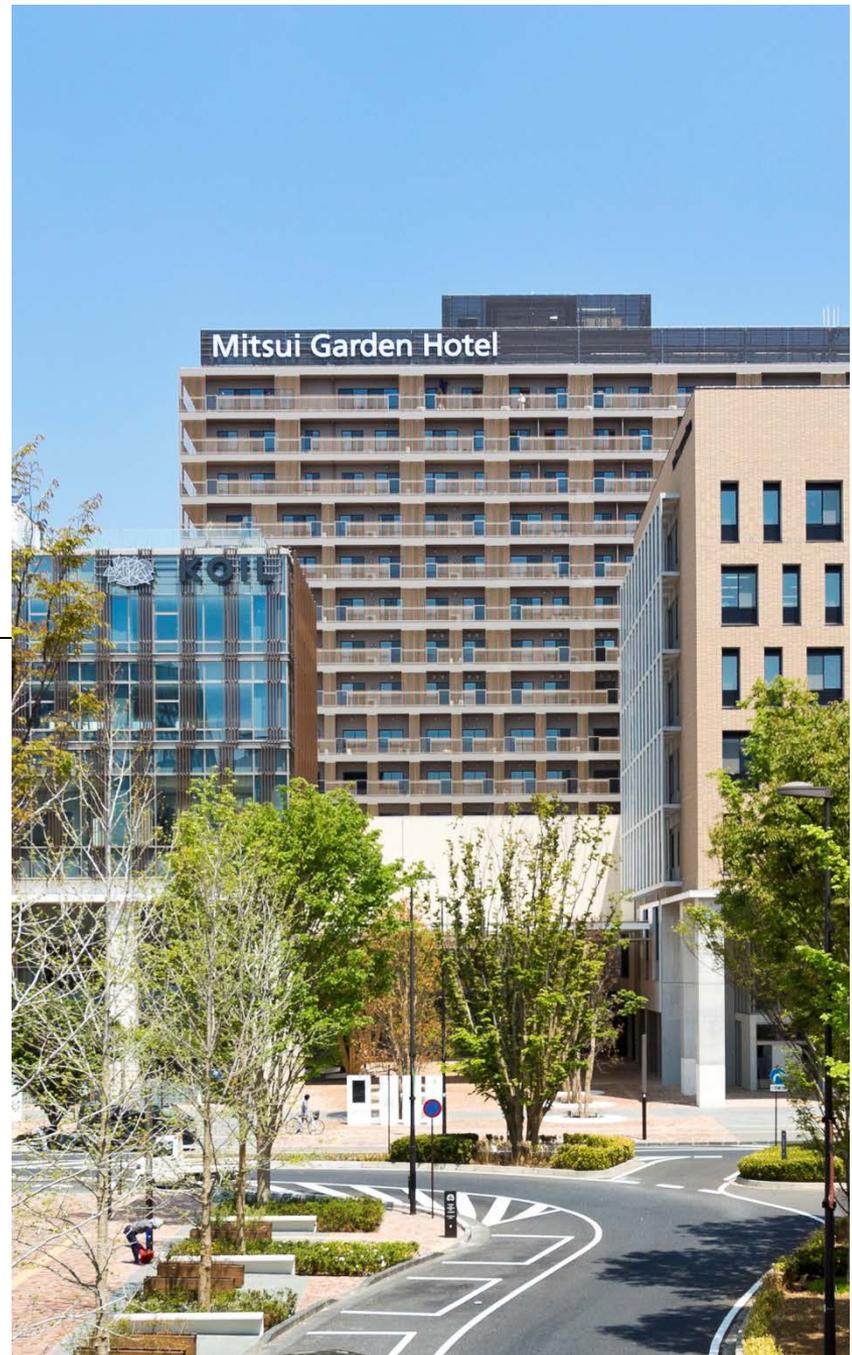
December 2011

Kashiwa City received both designations, centering on the Kashiwa-no-ha Campus

Japanese government is providing comprehensive support to swiftly materialize the world-class **Kashiwa-no-ha Smart City Model**

## 4. State-of-the-Art Gate Square (Demonstration to Implementation)

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# State-of-the-Art Gate Square

July 2014 saw the grand opening of Gate Square, which integrates the environmental, healthcare, and new industry creation components of a smart city.



# Key Facilities

## Health and Longevity

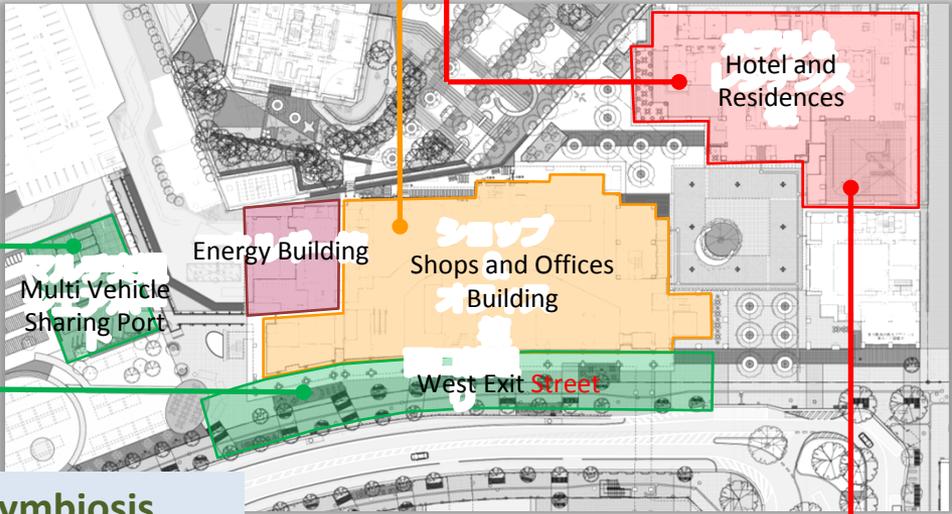
④ Town Health Station

## New Industry Creation

⑤ Kashiwa-no-ha International Village

⑥ Mitsui Garden Hotel Kashiwa-no-ha

⑦ Kashiwa-no-ha Open Innovation Lab (KOIL)



## Environmental-Symbiosis

① Kashiwa-no-ha Smart Center

② Kashiwa-no-ha HEMS (Park Axis Kashiwa-no-ha)

③ Kashiwa-no-Harappa/Multi Mobility

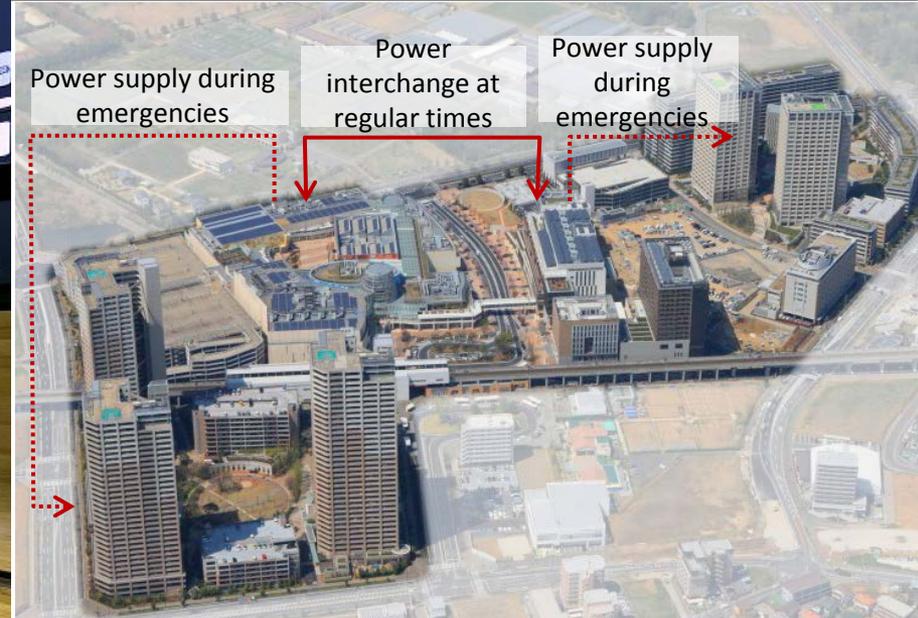
# Urban Energy Operations, Monitoring, and Control Centers

## Kashiwa-no-ha Smart Center

Leveraging the Kashiwa-no-ha Area Energy Management System to operate a smart grid that was Japan's first facility to interchange power between districts



Cutting regular peak power demand by 26% Eliminating outages during emergencies



### Key points

- Managing and controlling energy for entire region
- Power interchange setup for emergencies

# Residences Employing Kashiwa-no-ha HEMS

## Kashiwa-no-ha HEMS (Park Axis Kashiwa-no-ha)

Residences equipped as standard with the Kashiwa-no-ha Home Energy Management System (HEMS), drawing on energy conservation advice to control air-conditioning and lighting



### Key point

Conserves energy while supporting disaster prevention and community involvement

# Floor Offering Preventing Healthcare Services

## Town Health Station

12 medical facilities and health services shops that emphasize preventive care



Shops that are fun and provide healthy lifestyle experiences



Free health support facility that University of Tokyo oversees

### Key points

A-shi-ta Health Support Lab

Town Health Station

- Health measurement services drawing on fruits of advantage research
- Framework in which citizens collaborate in facilities operations
- Each store offering unique health methods and services

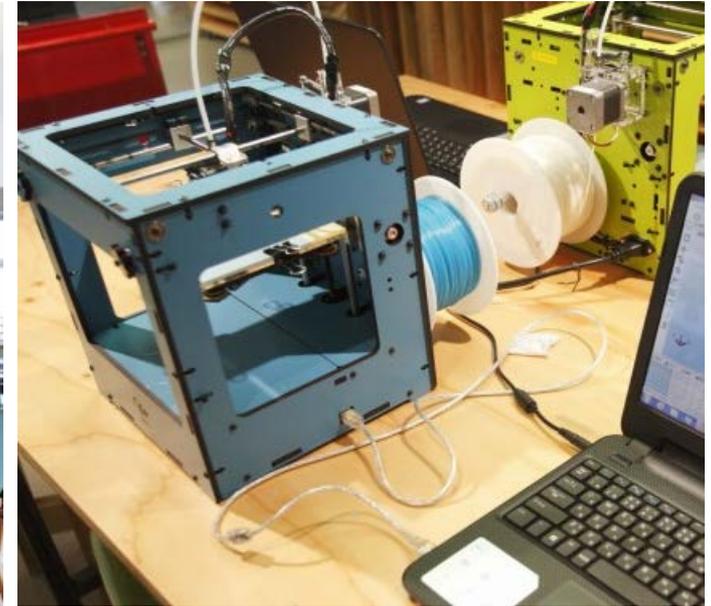
# Office Environment to Encourage Innovation

## KOIL (Kashiwa-no-ha Open Innovation Lab)

Encourages innovation through interactions between diverse people, helping to create new industries through startup assistance from experts and networking events



KOIL Park: Japan's largest coworking space



KOIL Factory: A digital manufacturing workshop complete with 3D printers and other systems

### Key points

- Diverse facilities create a one-stop innovation site
- Encouraging reactions through events and startup support programs



## 5. Collaboration between Portland and Kashiwa-no-ha

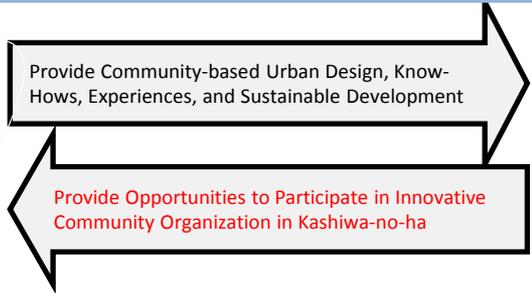
(A New Vision for the Cities of Tomorrow)



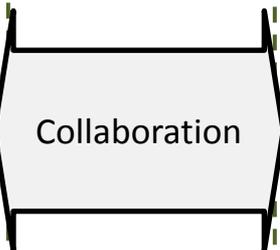
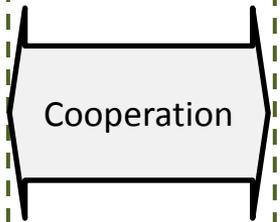
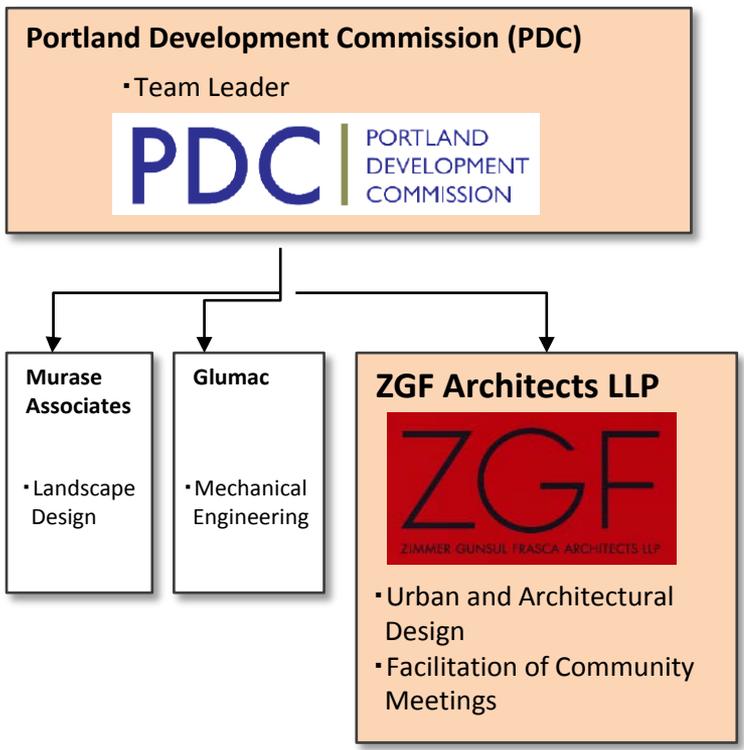
# Overall Kashiwa-no-ha Smart City Concept (Future Areas)



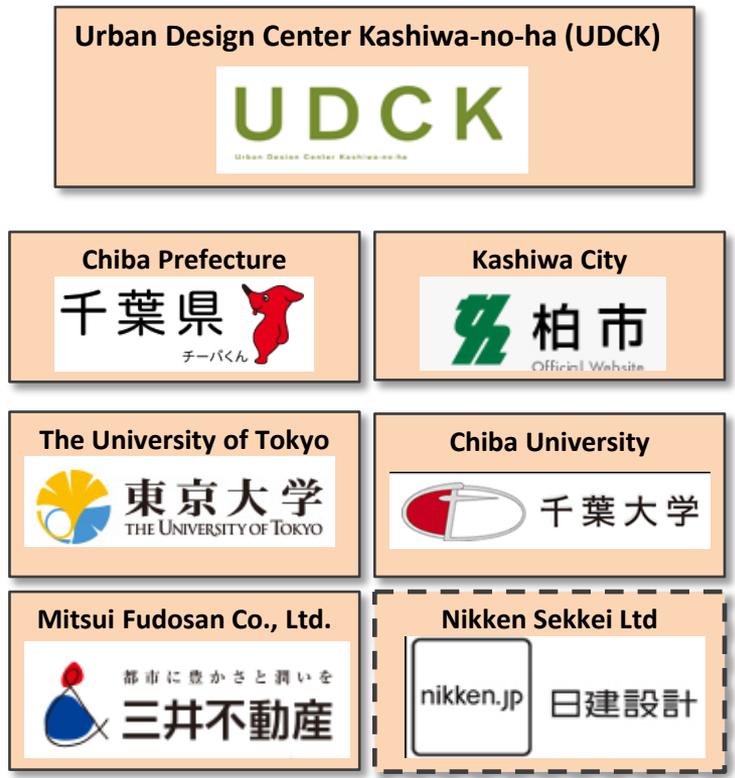
# Collaborative Structure between Portland and Kashiwa-no-ha



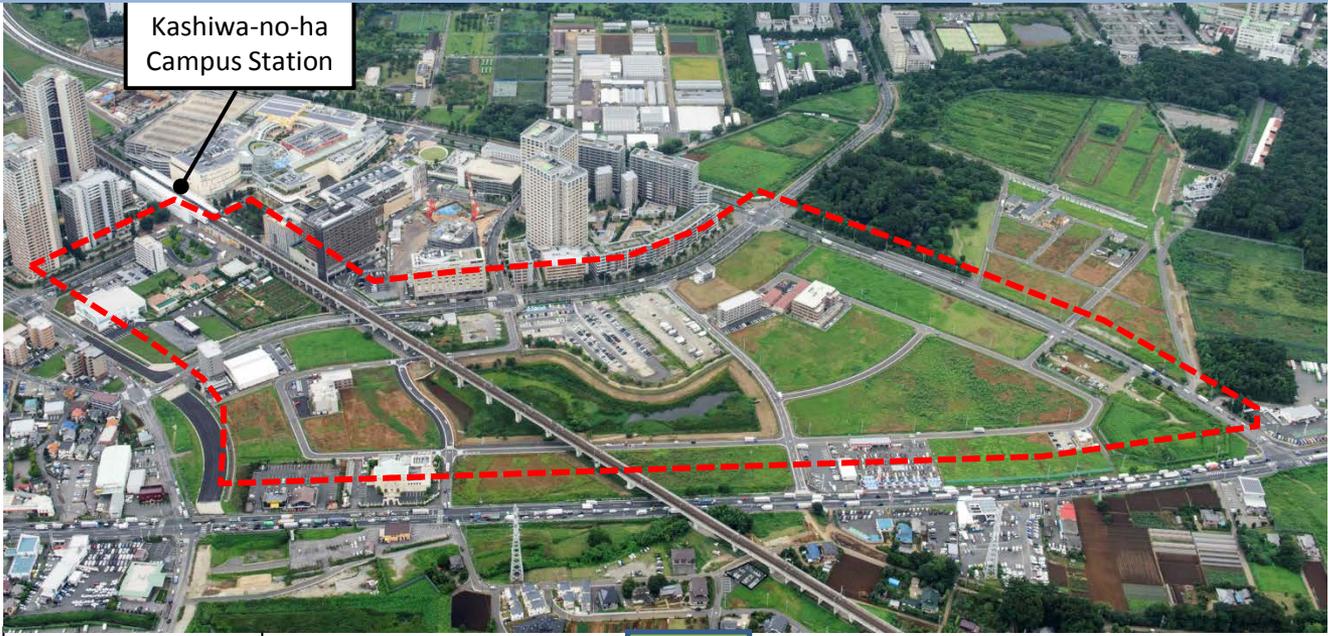
## We Build Green Cities Team (WBGC)



## Kashiwa-no-ha Team



# Vision proposed for Kashiwa-no-ha Smart City Innovation Campus



Future Vision





# Kashiwa-no-ha 2030

Artist's impression of Kashiwa-no-ha Smart City in 2030