

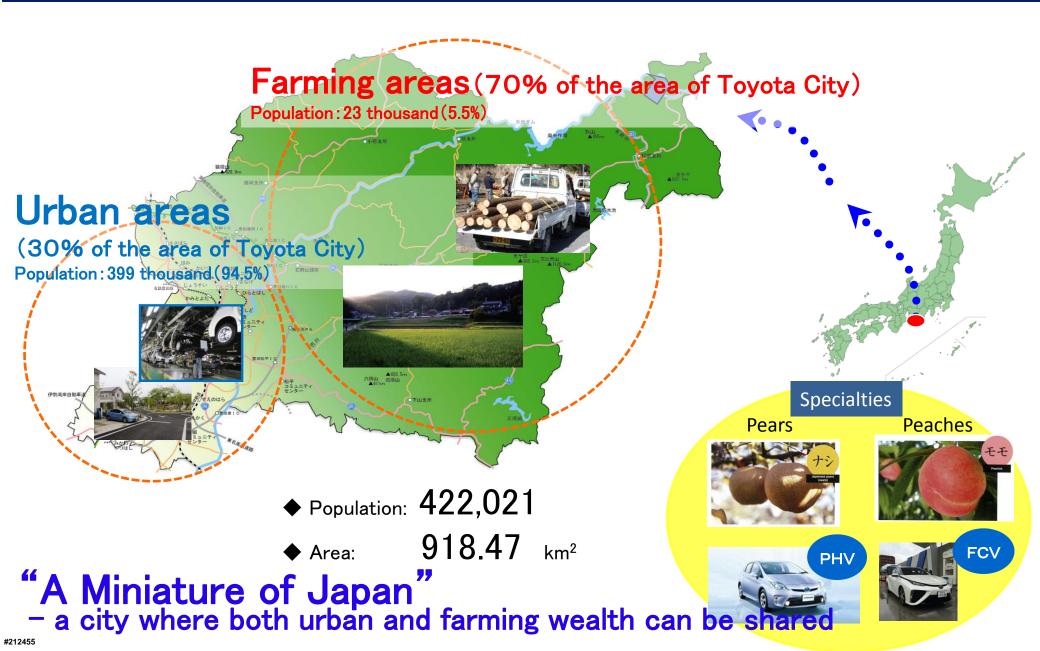
Outline and outcome from the advanced technology verification in Toyota City ~Aiming to be a Residents' High Satisfaction City~

OTA Toshihiko Mayor of Toyota City



1. Outline of Toyota City

Outline of Toyota City



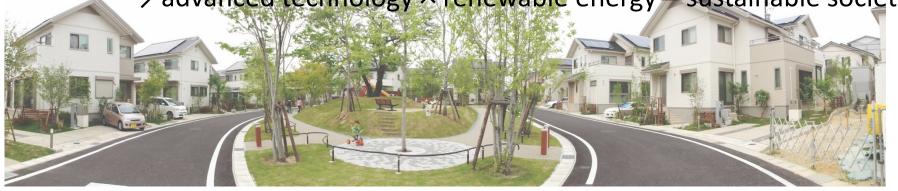
Toyota City's Vision

•Vision: A city where both urban and farming wealth can be shared

- Approach: Using local resources (human, materials and technology) effectively
 - : Take "the standards of tomorrow" in advance

Specific Efforts : Develop a smart community with Public-Private partnership

→ advanced technology × renewable energy = sustainable society





Advanced Technology Verification in Toyota City – Towards establishing a 'Smart City' –

Overview of Toyota city low-carbon society verification project

Together with Toyota City, which has been selected by the government of Japan as an Eco-model city, the leading companies and organizations * in the automobile, energy, housing, transportation, distribution, and other related fields are cooperating to conduct verification programs aimed at constructing next-generation, low-carbon energy and society systems.

By correctly understanding the "At home" environment which is at the core of everyday living, as well as "Mobility" and "Destinations," and the "Entire living environment" that binds all these together, and by acting in line with local citizens' behavior, Toyota is working to optimize energy use throughout society as a whole.

Optimizina

Home

Home appliances

Charger

PHV/EV

energy use in home

Maximizing the use of solar power electricity by controlling devices for energy creation,

Solar panels

Household storage battery

energy conservation, and energy storage

Developing devices

and systems for

*Home Energy

HEMS

EMS* with batteries

Support for green consumer behavior and **Entire living** optimizing the energy environment usage of society as a whole

Development of

PHV/EV capable of

charge and discharg

Making it possible

to see changes in

consumed electricity and

generated heat

Achieving eco-friendly lifestyles with high QOL (quality of life) and no laborious effort

Using EDMS* for analysis of energy usage data Energy Data Management System

Conserving energy by making energy consumption visible

> Charging/discharging functions based on advance reading of the future balance of supply and demand

> > Providing incentives, such as the use of Eco-Points

Awards for ecologically-beneficial activities

Installing Mobility and expanding the charging infrastructure and hydrogen stations



Promoting the use of public transit by TDMS⁴

Managemen



Relieving traffic congestion and promoting low-environmental-impact driving through the use of ITS'



*Intelligent Transport System

City-center model district

Introducing verified technologies in advance and providing an experience (showcase) in them, and then announcing these activities in Japan and overseas



Considering Regional Hea

and Power Sharing System

for Industrial Parks

Destination



Creation of a

izing energy

at commercial

ublic facilities

Maximizing the use of previously unused

energy at destinations and on the city level

Introduction of energy storage equipment at nmercial and other facil



Construction of a low-carbon

transportation system

Promoting introductions

of next-generation

vehicles

Sharing of personal mobility

and next-generation

vehicles

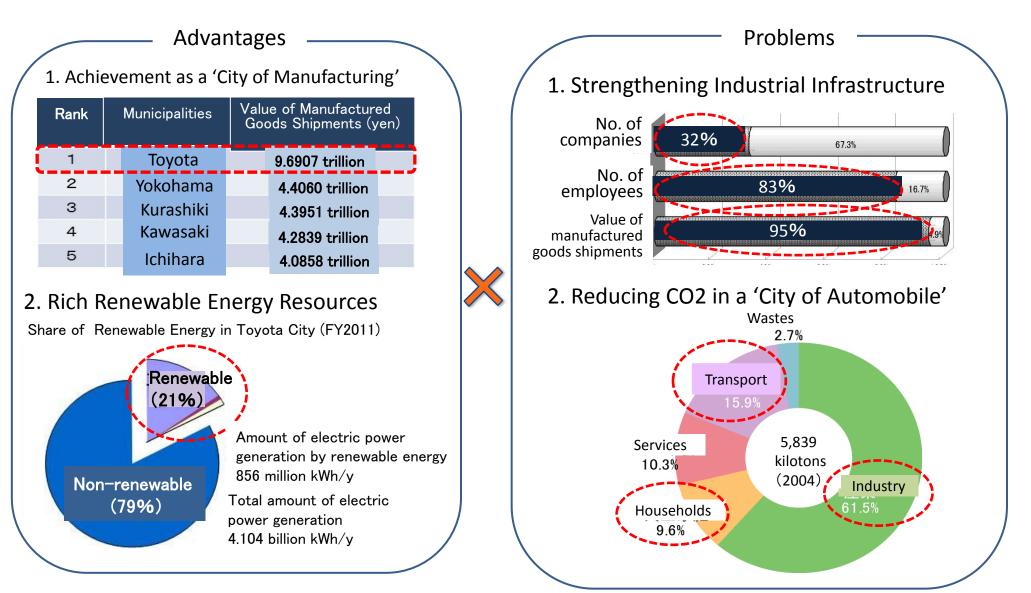
Providing and coordinating diverse means of

transportation in order to create low-carbon mobility



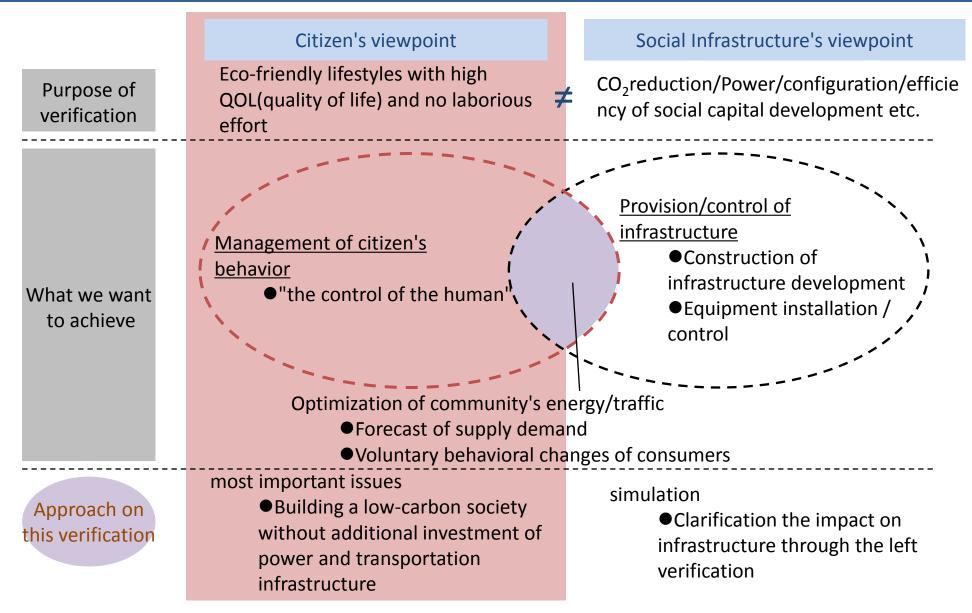


Advantages and Problems of Toyota City

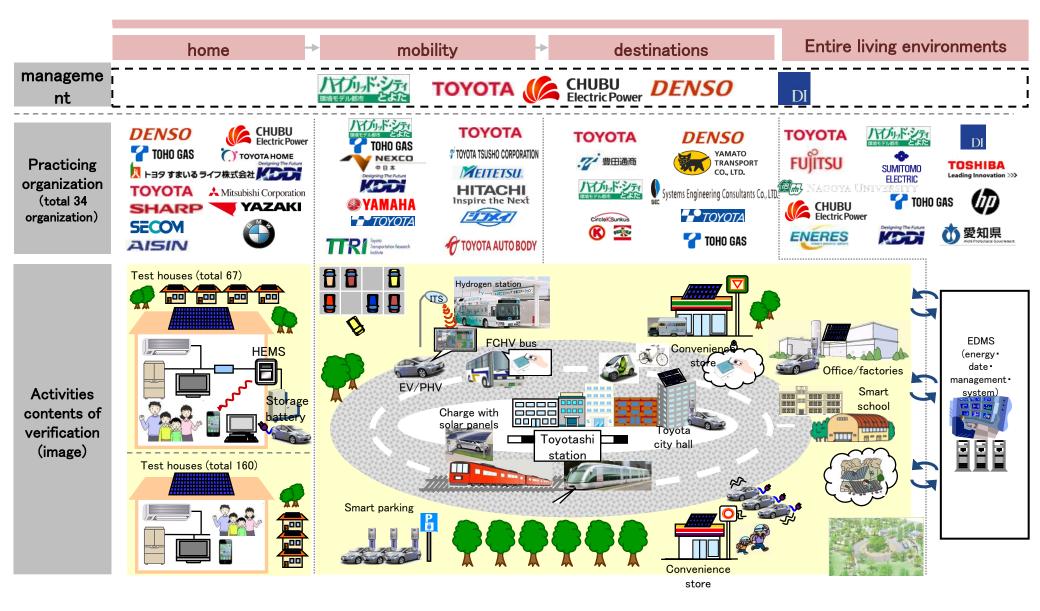


Problem Solving by Advanced Technology and Renewable Energy

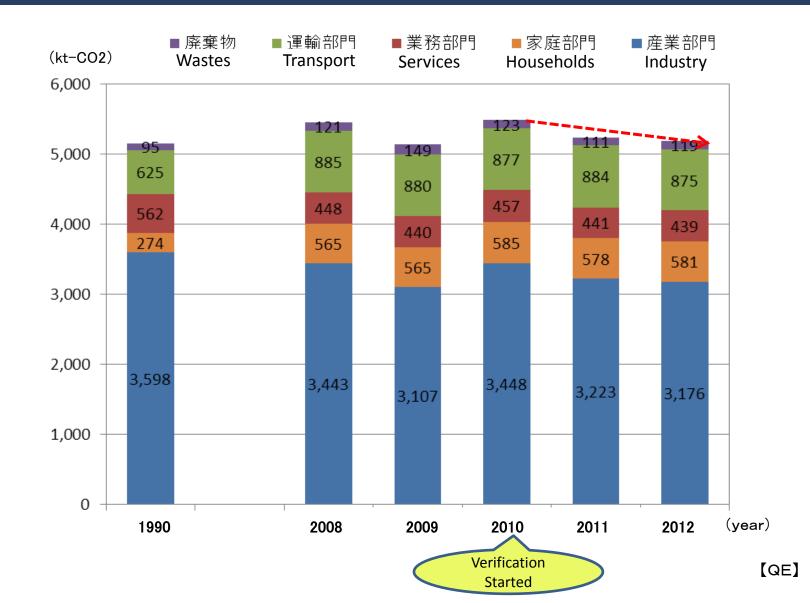
Basic concept of the verification is "Citizen's Viewpoint"



Toyota city low-carbon society verification project Promotion Council



Changes of Society (Hardware aspect) CO2 emissions Reducing Steadily



Changes in Living Residents getting accustomed to eco-friendly lives

Opinions of Residents



 I enjoy seeing the energy effects through saving by using HEMS (Home Energy Management System).

●I like HEMS because it can optimize our energy usage so that we can be engaged in eco-activities without difficulty.

• "I try to clean and wash when the EDMS display is blue. Difficult operation is not necessary at all."

• "I commute by PHV to work every day and there is still gas left without filling it up with gas for three month."

Towards a Sustainable Society Following the Verification

Toyota City Vigor Project



⁴Local Production for Local Consumption' for Investment to the Future Aiming for a society of circulation of local human resources, goods and energy