

Minato Mirai 21 (Future Port 21)

~ Mixed Use Eco-Friendly
WaterFront Development in Yokohama ~





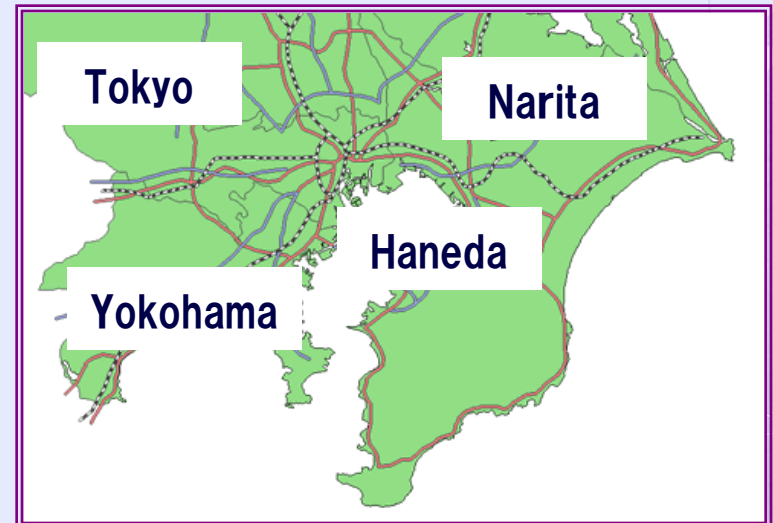
橫濱 燃 冰



City of Yokohama



- Population of 3.67 million: Largest city
 - GDP of 12 trillion JPY (US\$120 billion)
 - A rapid urbanization
 - 25 minutes to Tokyo by commuter train
- Access to Metropolitan Area:
42 million people, one third of
population of Japan



A sudden wake-up



A gateway to the western communities and beyond



A gateway to the western communities and beyond



Urban Challenge faced by Yokohama in 1970s

- **Urban Expansion and Population Increase**
- **Weak Urban Core and Infrastructure (Exodus to Tokyo)**
- **Unique Development Approaches (Yokohama Model)**



Six Major Projects for Urban Solution



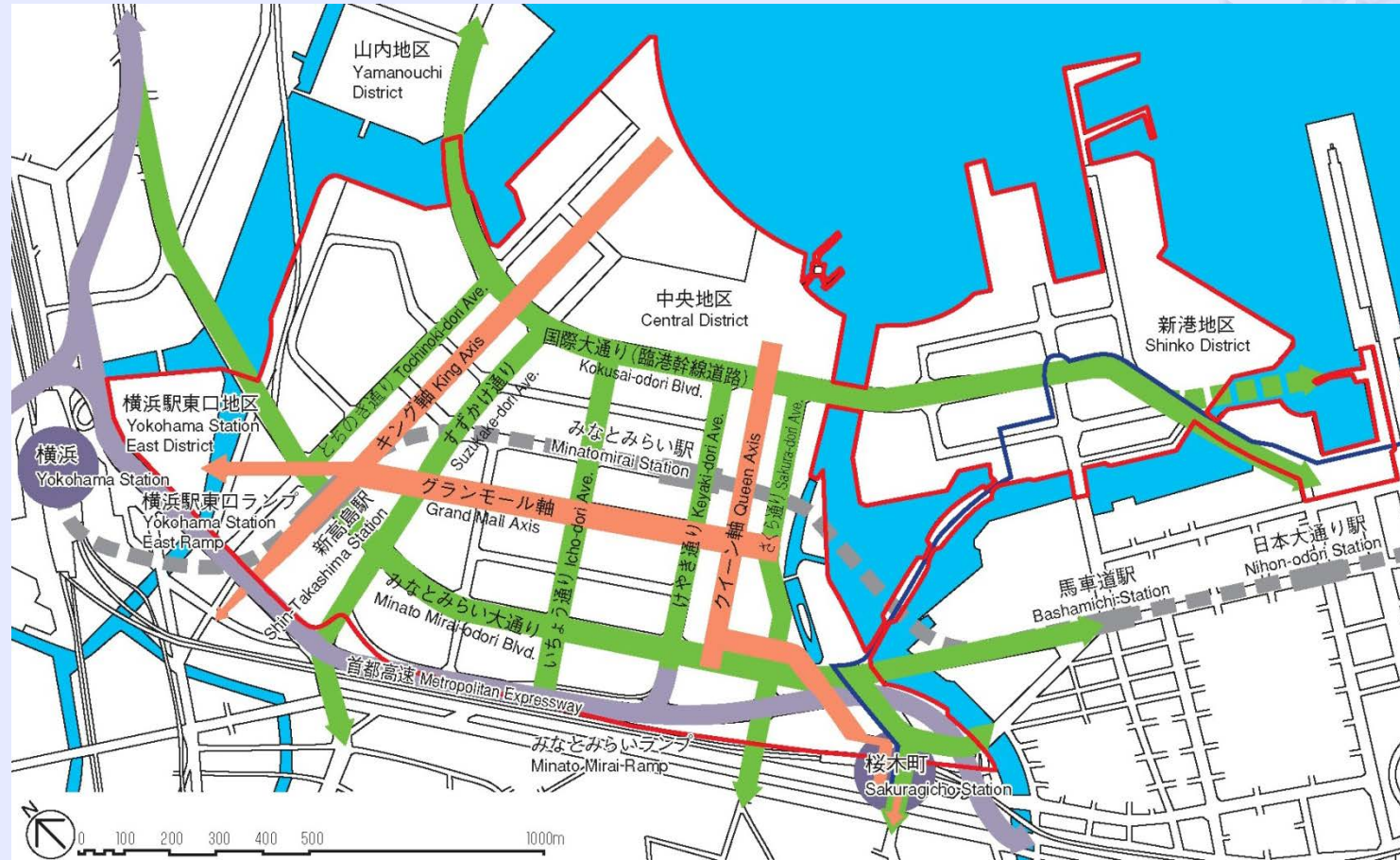
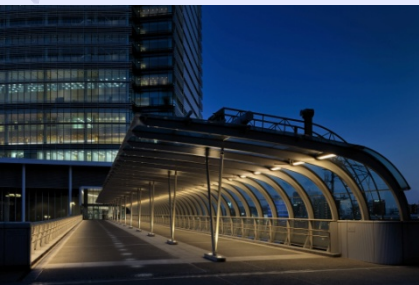
Example of Consolidated Mixed-Use Urban Center



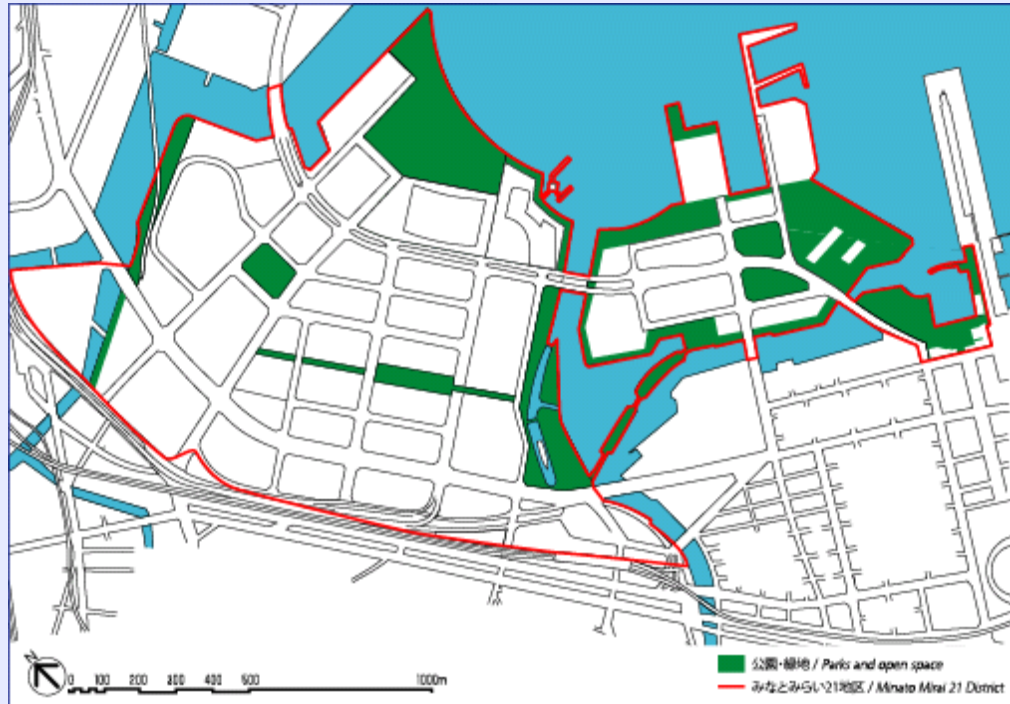
- **Conversion from Industrial Area to Urban Core**
- **International Culture Center**
- **Information Urban Center**
- **Eco-Friendly Development**



Integration of Multiple Transportation Modes

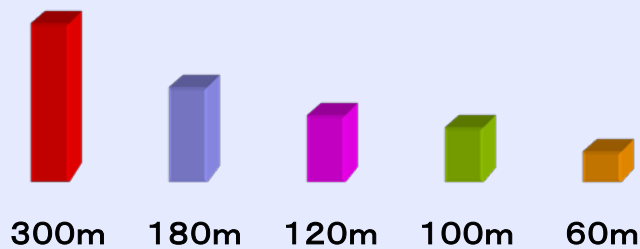
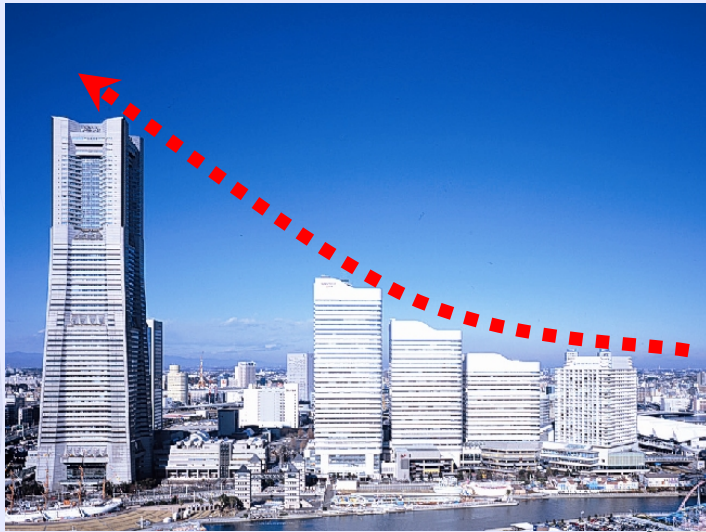


Water and Green Network



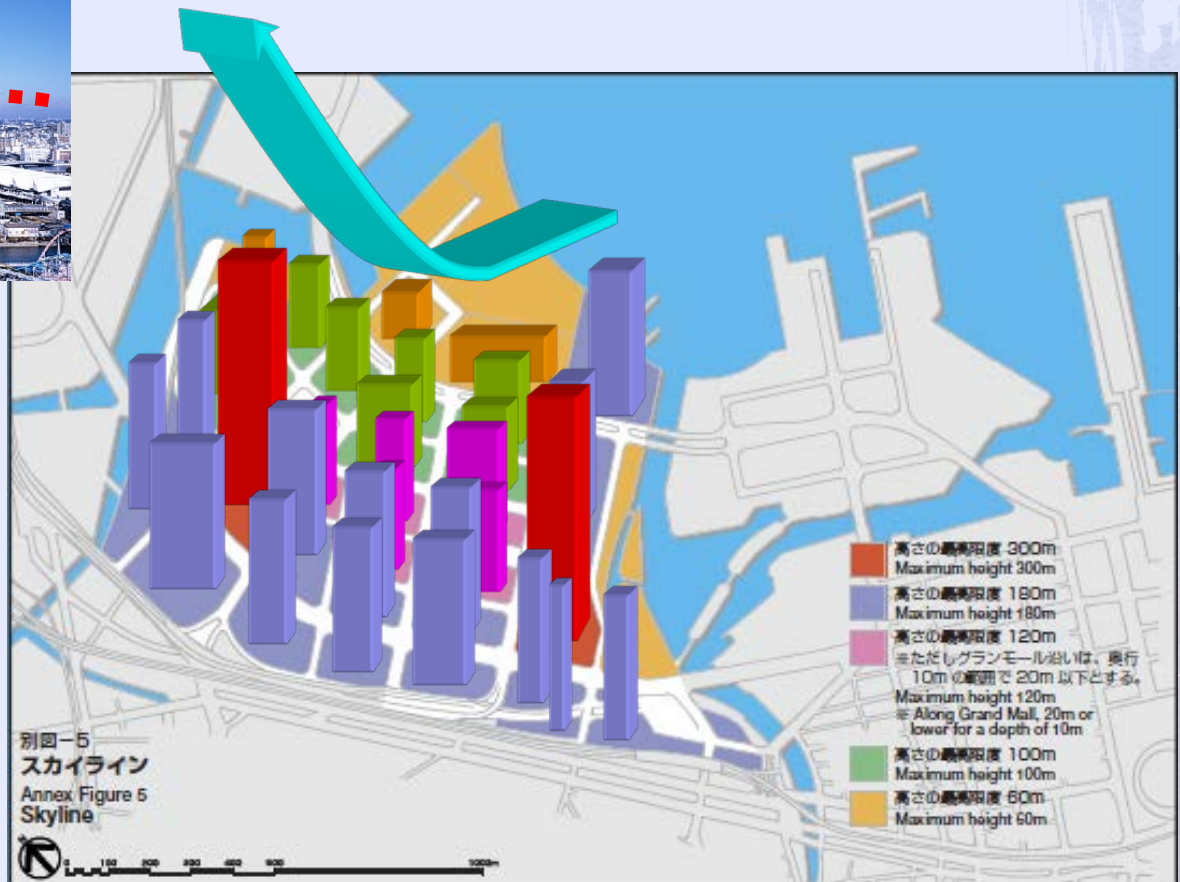
Urban Design

Skyline Vista



Land

Ocean



Creative City Strategy

—Preserving Historical Sites—

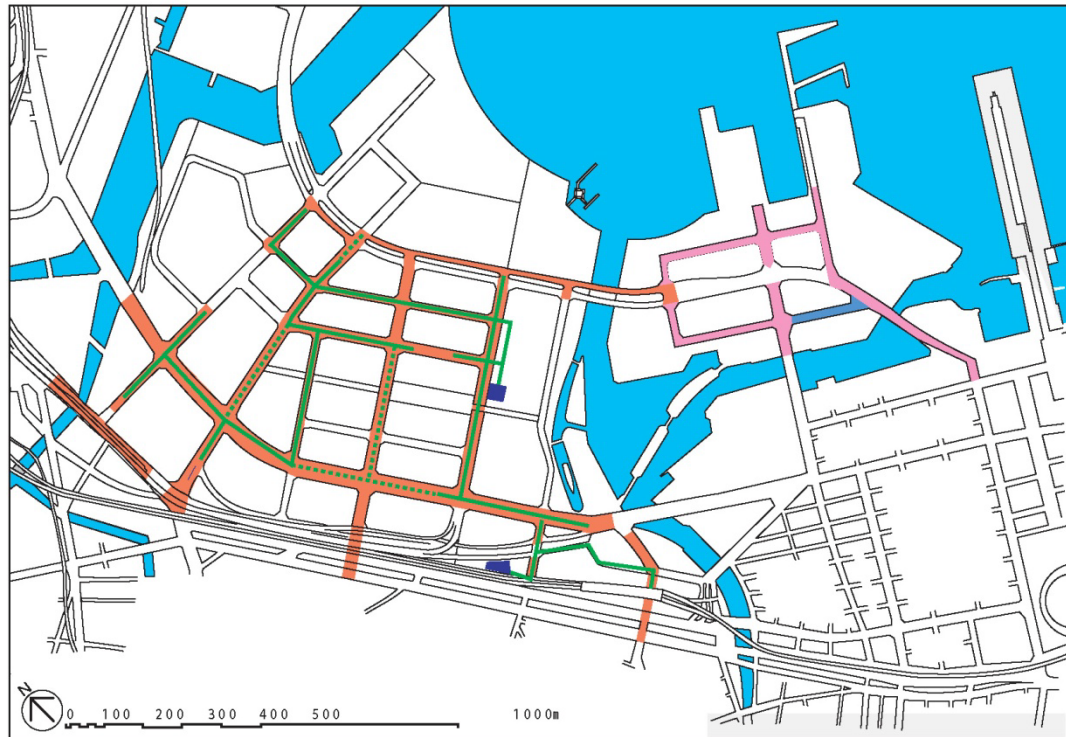
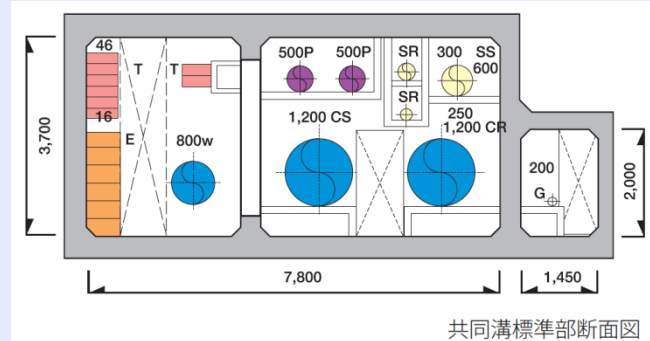


Akarenga (Red Brick) Building
(Converting Warehouse to
Commercial Spaces)

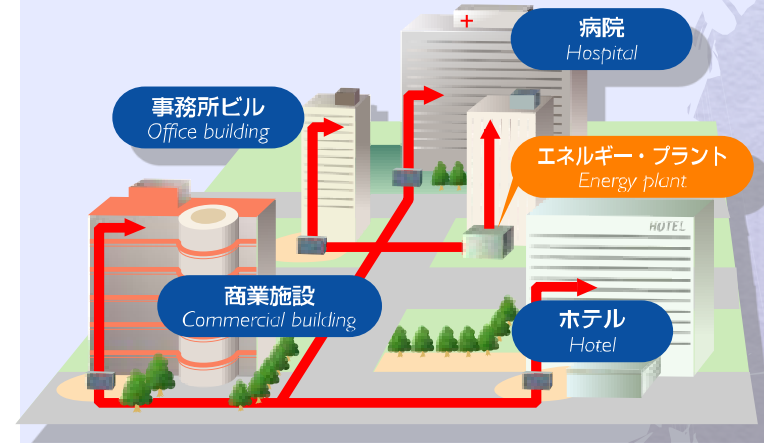
Yokohama Creative City Center
(Converting Bank to Cultural
Center)



Utility Tunnels, District Heating and Cooling



(凡例) 共同溝
整備済区間
電線共同溝
供用済区間 (平成19年度末)
整備計画区間
地域冷暖房システム
熱供給管プラント
熱供給管
熱供給管(計画)



□ Solar Power and Moving Walk Way



電光表示板

□ Green Rooftops, Walls and Public Spaces

屋上緑化



日産自動車株式会社グローバル本社

屋上緑化



パシフィコ横浜

壁面緑化



ワールドポーターズ

公開空地緑化（デッキ上）



富士ゼロックスR&Dスクエア

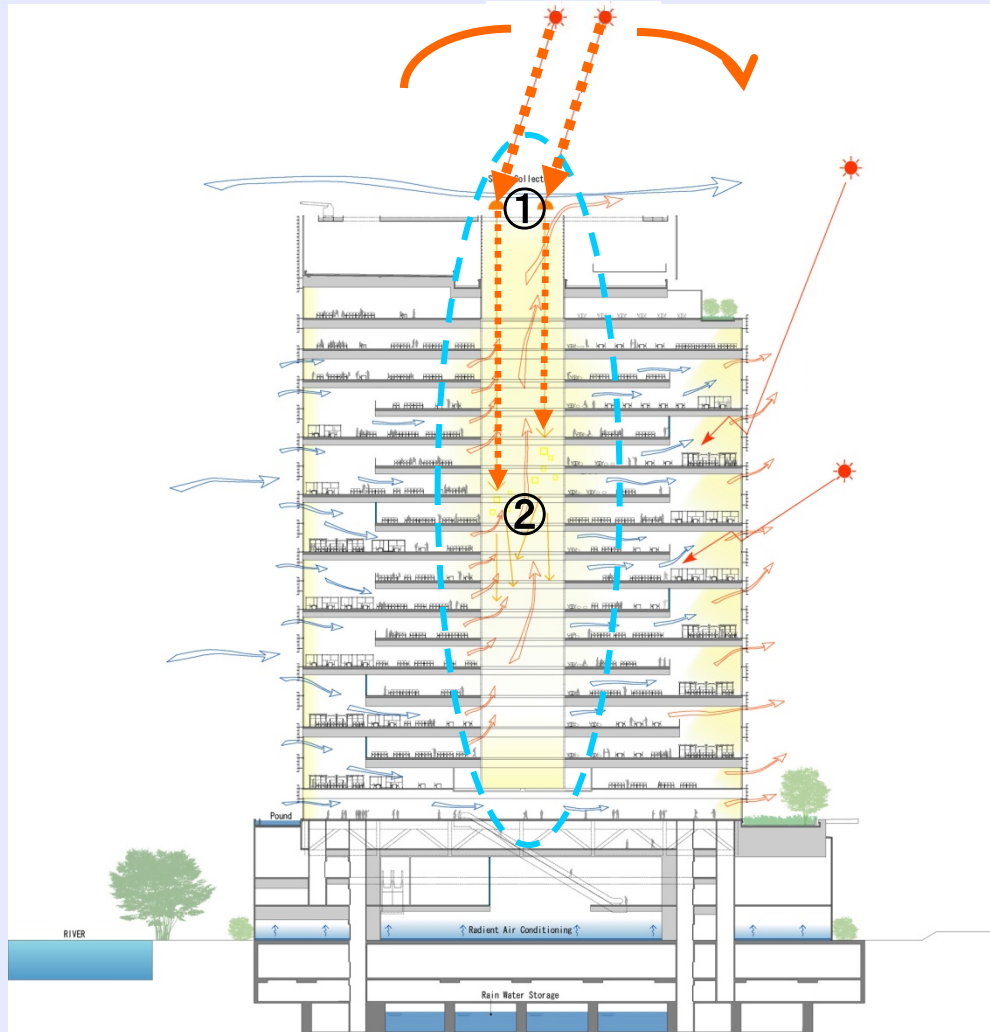
公開空地緑化



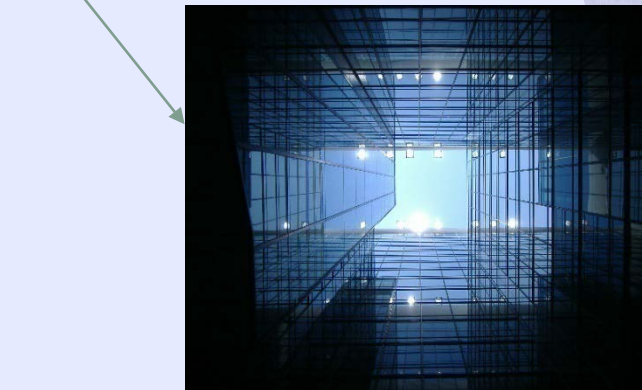
みなとみらいセンタービル

□ Lighting System Using Natural Sunlight

- Automatic Sunlight Tracking Sensor...①
- Sunlight led into the building through Atrium...②
- Utilizing Solar Power...③



Nissan Global Headquarter

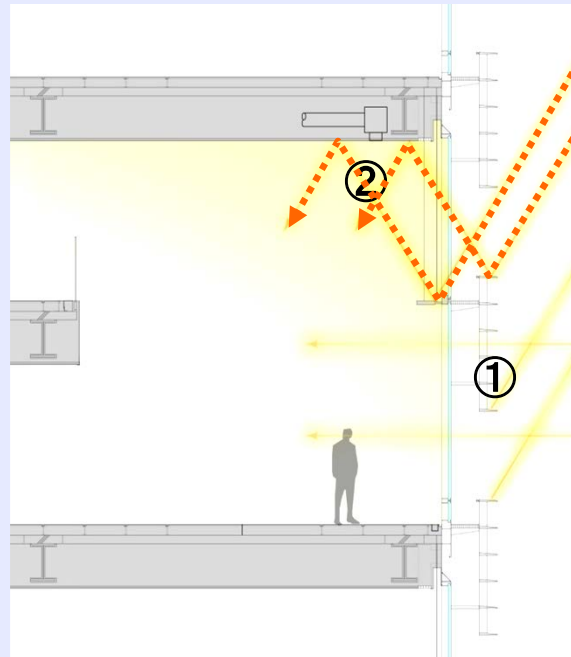


□ Highly Reflective Louvers



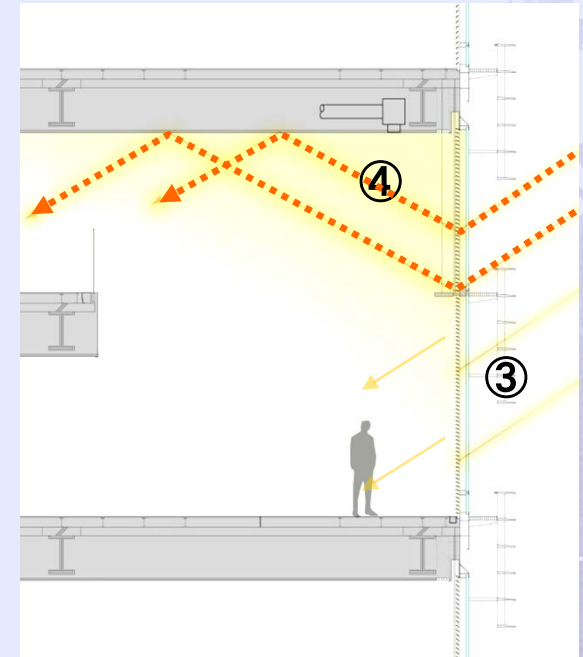
Summer

- Sun at high angle, louvers provide shade... ①
- Louvers reflect light gently... ②



Winter

- Sun at low angle, direct sunlight passes... ③
- Louvers reflect more light into the building... ④



• 二酸化炭素削減量
115,400kg-CO₂

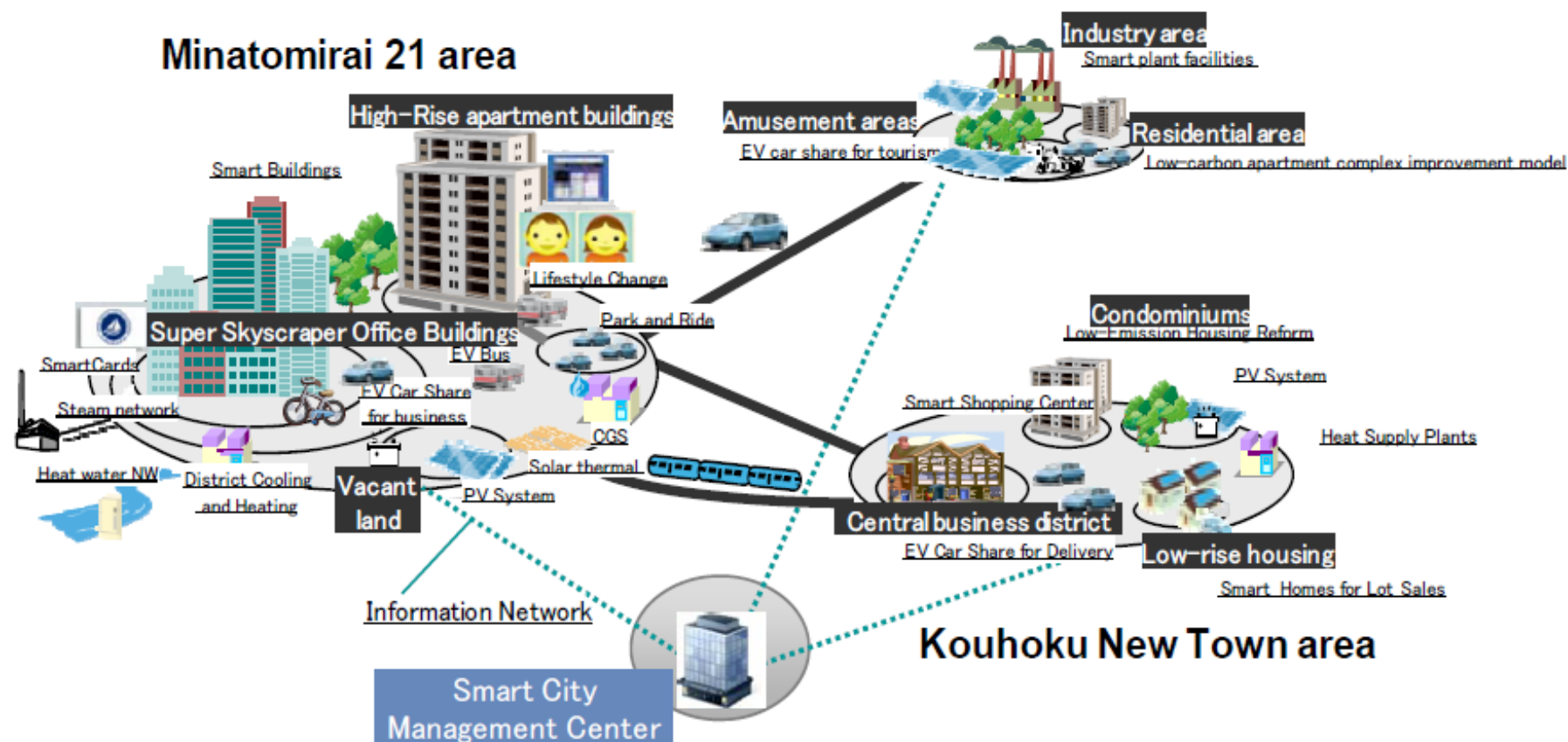
● Low-Carbon City ("Smart City" Project)

Climate Change

- Energy management systems will be implemented by pursuing citizens participation.
- The plan is to introduce the systems in the above existing urban districts.
- The plan aims to achieve the following targets by 2014:
 - To reduce CO2 emissions by 64,000tons
 - To introduce 27 MW of PV systems, Home Energy Management System (HEMS) to 4,000 households and 2,000 units of EVs

Yokohama Green Valley area

Minatomirai 21 area



Show Case of Green Technologies



● Coordination

accenture
High performance. Delivered.

● Project Management

Panasonic

● Home Energy Management System (HEMS), PV etc.



Building Energy Management System (BEMS) etc.

Minato Mirai 21

Condominium district

Commercial building district

District Cooling and Heating

Model homes

Vacant land

TOKYO ELECTRIC POWER COMPANY
Energy
TOKYO GAS
Infrastructure

TOSHIBA
Leading Innovation >>>

Community Energy Management System (CEMS) etc.

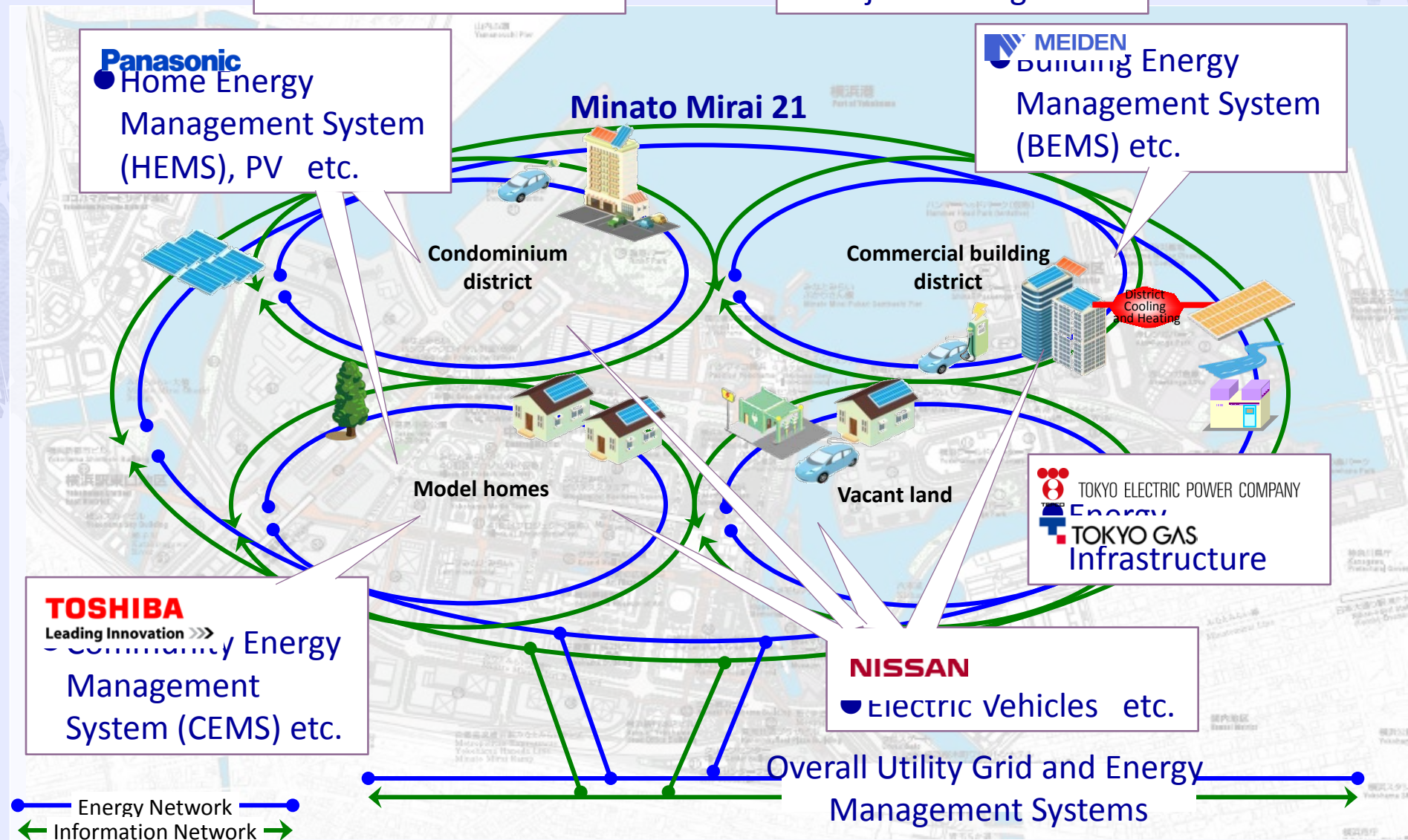
NISSAN

● Electric Vehicles etc.

Overall Utility Grid and Energy Management Systems

Energy Network

Information Network



Global Companies in MinatoMirai 21

- ✓ Accenture - Some departments of its headquarters in Japan relocated from Tokyo to Yokohama in 2008
- ✓ Nissan - Global headquarters relocated from Tokyo to Yokohama in August 2009
- ✓ Fuji Xerox - Global R&D center operated in Yokohama from April 2010
- ✓ JGC – Japan's largest engineering company
- ✓ Lenovo Japan – R&D center
- ✓ Tata, WIPRO, etc.



● Minatomirai 21 Area :

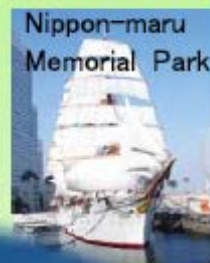
Showcase of Yokohama's Knowledge on Urban Development

Urban
Planning

○ Greener City Center



○ Integration of History, Culture and Art



○ Utilisation of Renewable Energy towards Low Carbon Emission

Minato Mirai 21

- Long-Term, Holistic, Integration
- Linkage to other Urban Projects
- Disaster Preparedness and Urban Convenience
- Collaboration with Citizens and Users
- Urban Design and Content Creation
- Pursuing New Themes



Future Urban Development: Inner Harbor Concept





*Look forward to working with you soon
again in Yokohama*

www.city.yokohama.jp