

# Science, Technology and Innovation Policy of Japan - Promotion of Automated Driving System -

Kazuo Kyuma

EXECUTIVE MEMBER  
Council for Science, Technology and Innovation,  
Cabinet Office



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and Communications

**Hiroshige SEKO**  
Minister of Economy,  
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※ *Relevant ministers are appointed ad-hoc members when needed to attend plenary session meetings of CSTI*

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**Dr. Kazuo KYUMA**  
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Mitsubishi Electric Corp.  
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Tohoku University



**Mr. Masakazu TOKURA**  
Representative Director,  
& President  
Sumitomo Chemical Co., Ltd.



Head of an Affiliated Organization

**Dr. Takashi ONISHI**  
President,  
Science Council of Japan

# Society 5.0

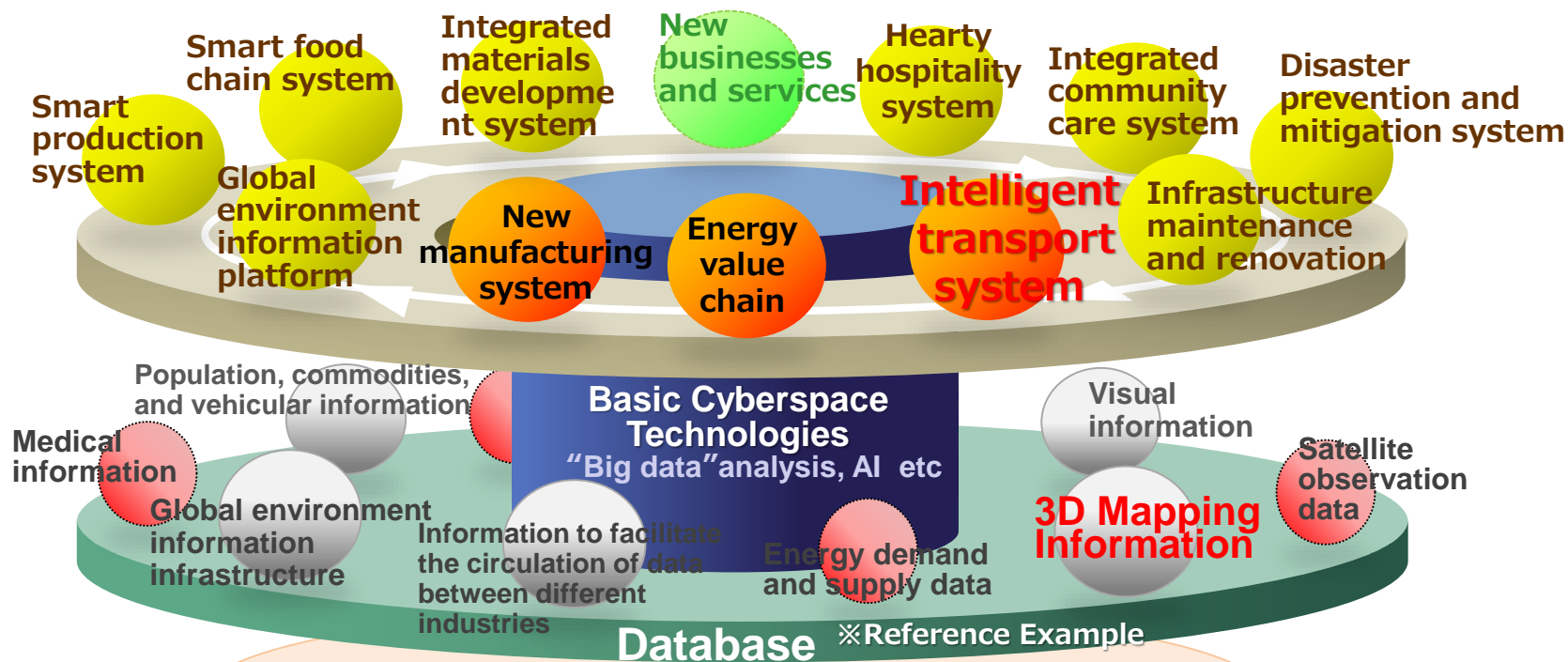
The next new social-economy after hunter-gatherer society, agrarian society, industrial society, and information society, “Society 5.0”:

- Sophisticatedly integrates cyberspace with physical space;
- Achieves both economic growth and addresses social challenges by providing the necessary goods and services to the people who need them, regardless of their age, gender, region, and language etc.;
- Realizes the human-centered society where people can live vigorous and comfortable lives.



# Construction of “Society 5.0” Platform

- Of the 11 systems set out in the Comprehensive Strategy for 2015, Intelligent Transportation Systems (ITS), Optimized Energy Value Chains, and New Manufacturing (monozukuri) Systems are **to be developed as core systems**, with a view to collaboration and coordination with other systems and the creation of new value
- Construction of Databases as a Foundation for the Creation of New Values and Services
- Reinforcing basic cyberspace technologies (e.g., AI, network technologies, big data analysis techniques)



- Promotion of Intellectual Property Strategies and International Standardization
- Promotion of Regulatory and Institutional Reforms and Cultivation of Social Acceptance
- Promotion of Capacity Development and Personnel Training

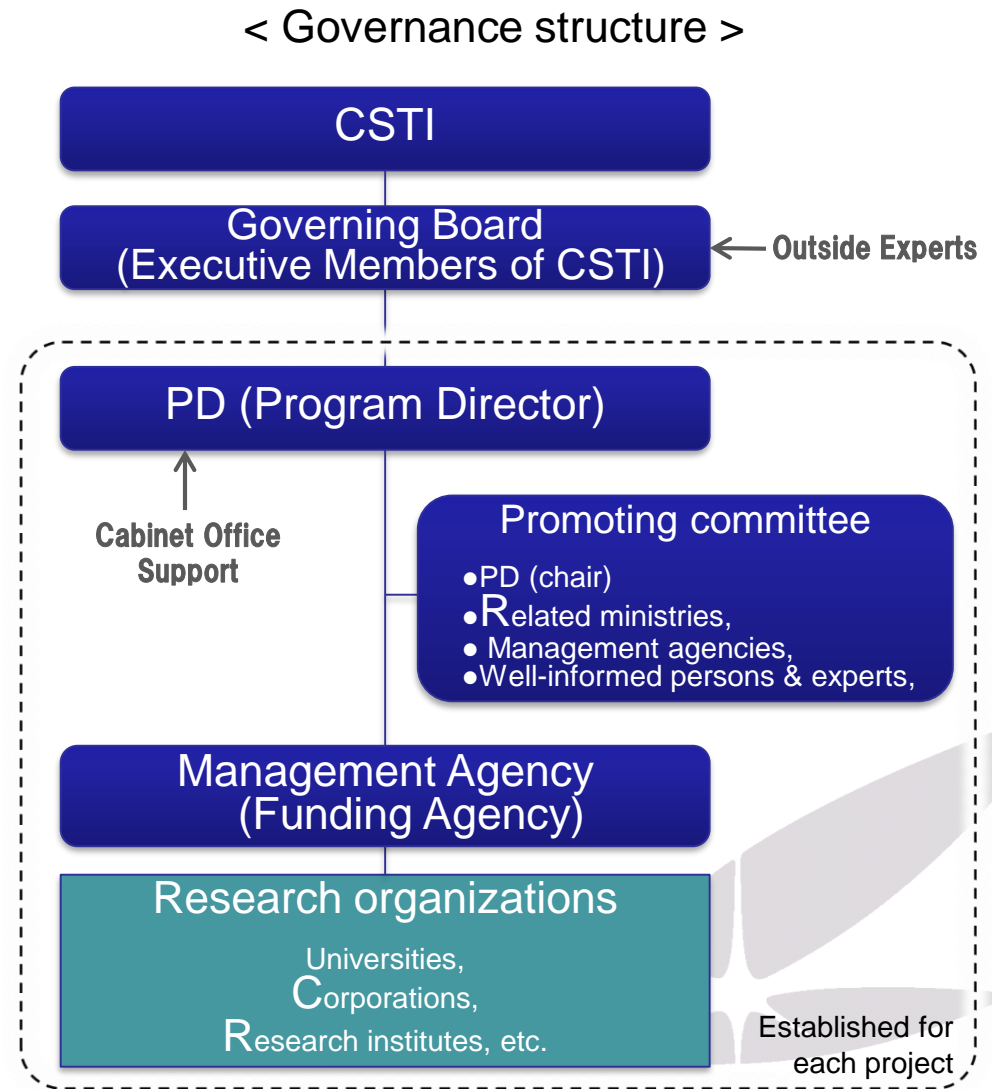
Common basis function

# SIP (Cross-Ministerial Strategic Innovation Promotion Program)

- Realizing Science, Technology and Innovation through promoting R&D overlooking from basic research to application and commercialization by cross-ministerial cooperation.
- Council for Science, Technology and Innovation (CSTI) defined the themes to solve societal issues and achieve economic growth
- CSTI appoints Program Directors (PDs) for each project and allocates the budget.



Established in 2013  
Total ¥50B (budget for FY2016)



# Program Directors for SIP

## Innovative Combustion Technology



**Masanori Sugiyama**  
Toyota Motor Corp.

## Structural Materials for Innovation (SM<sup>4</sup>I)



**Teruo Kishi**  
Univ. of Tokyo, NIMS

## Energy Carriers



**Shigeru Muraki**  
Tokyo Gas Co.,Ltd.

## Next-Generation Technology for Ocean Resources Exploration



**Tetsuro Urabe**  
Univ. of Tokyo, JMEC

## Next-Generation Power Electronics



**Tatsuo Oomori**  
Mitsubishi Electric Corp.

## Infrastructure Maintenance, Renovation and nagement



**Yozo Fujino**  
Yokohama National Univ.

## Automated Driving System



**Seigo Kuzumaki**  
Toyota Motor Corp.

## Enhancement of Societal Resiliency against Natural Disasters



**Masayoshi Nakashima**  
Kyoto Univ.

## Cyber-Security for Critical Infrastructures



**Atsuhiko Goto**  
Institute of Information Security

## Tech. for Creating Next-Generation Agriculture, Forestry and Fisheries

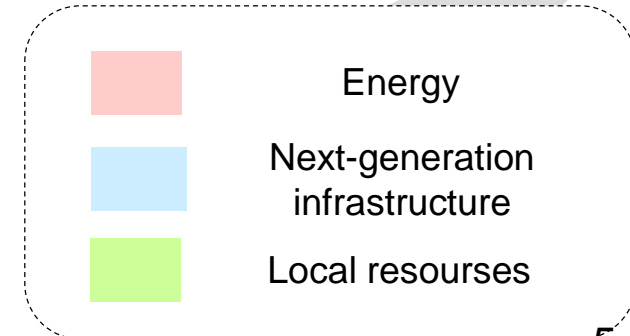


**Noboru Noguchi**  
Hokkaido Univ.

## Innovative Design/Manufacturing Technologies



**Naoya Sasaki**  
Hitachi Ltd.



# Automated Driving System and “Society 5.0”

- ✓ Incorporating AI, IoT, BD technologies into vehicle control system

..... ***Good example of CPS (Cyber-Physical-System)***

- ✓ Connected vehicles through communication network in mind

..... ***Common concept of “Society 5.0”***

- ✓ Data utilization and management are a key issue

..... ***Databases as a foundation for new values and service***



# Global Collaboration on Automated Driving System

- ✓ **Some technologies for ADS need collaboration between stakeholders around the world.**
- ✓ **Digital map and HMI are particularly deserve global ‘standardization’.**
- ✓ **Security and other topics also need continuous discussion.**
- ✓ **We are looking for global cooperation.**





# Thank you for your kind attention

Cabinet Office : <http://www.cao.go.jp/>  
SIP : <http://www8.cao.go.jp/cstp/gaiyo/sip/index.html>