

Hitachi Establishes New R&D Framework to Spur Global Growth of the Social Innovation Business

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1. R&D for new growth
2. Hitachi's new R&D structure
 - 2.1 Reinforce overseas research centers
 - 2.2 Consolidate and re-organize domestic research laboratories
 - 2.3 Establish the Technology Strategy Office
3. Summary

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1. R&D for new growth

2. Hitachi's new R&D structure

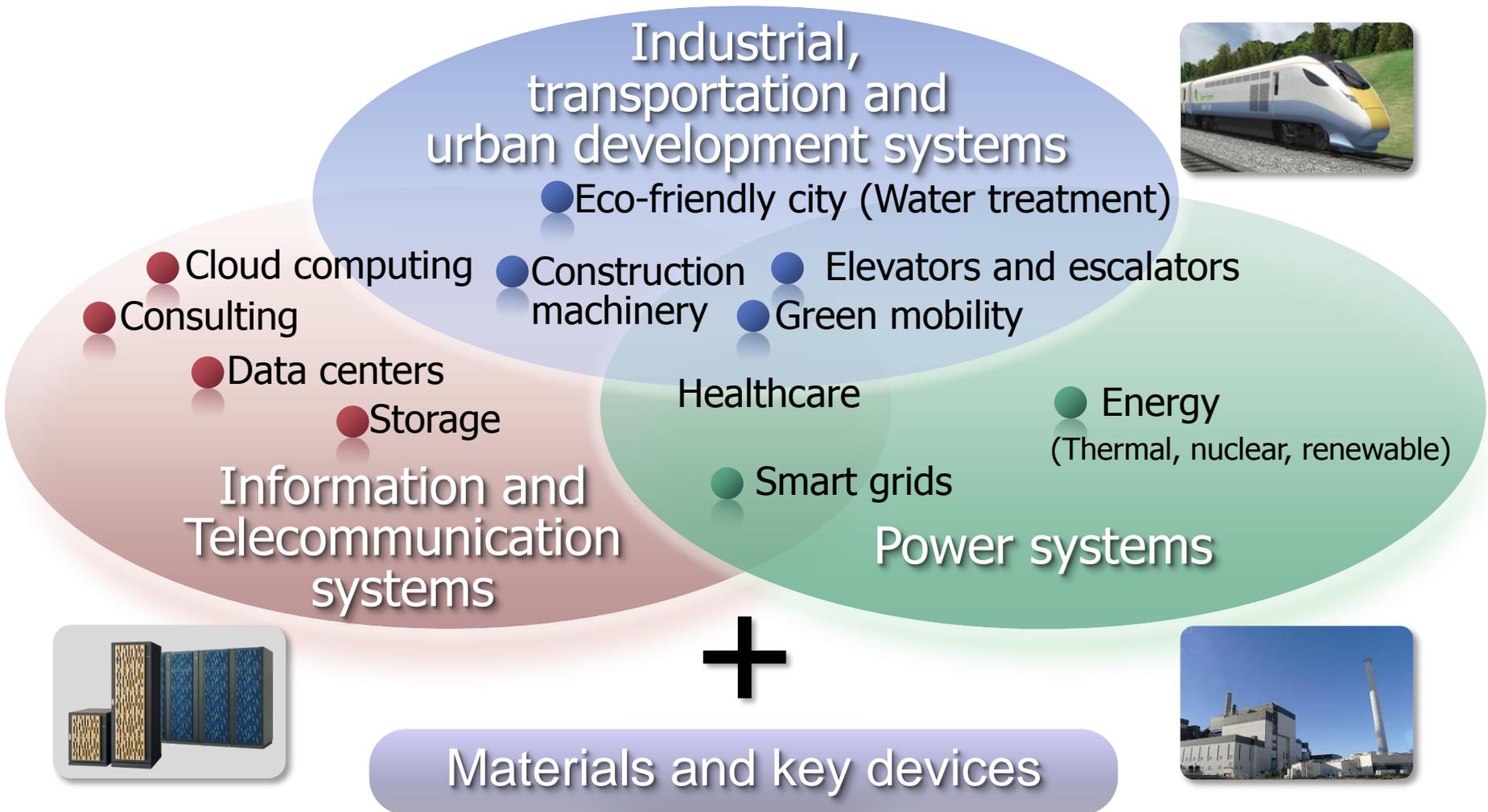
2.1 Reinforce overseas research centers

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3. Summary

Growth through Social Innovation Business



Global

Develop globally by leveraging the information, experience and trust held by Hitachi & Group companies

Fusion

Address social innovation needs by synergistic integration of social infrastructure and IT

Environment

Expand abilities to establish environmental systems by drawing on advanced environmental technologies and experience

New R&D structure to facilitate global growth in social innovation business

Basic strategy:

Reinforce domestic laboratories & expand locally led overseas research

Overseas research centers

- Reinforce locally-led global research



Double overseas research personnel

Domestic R&D organization

- Build-up the fundamental research organization to provide strong foundations for Hitachi one hundred years from now
- Consolidate and re-organize research into [Social infrastructure][IT・*Monozukuri*] to strengthen *Honebuto* and Fusion research



Reorganize the 6 corporate labs & 2 division labs into 3 corporate laboratories



Establish the Technology Strategy Office (tentative name)

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2.1-1 Reinforce overseas research centers

Strategy: Promote locally-led global research at the 4 worldwide research centers

[Initiative 1]: Increase overseas personnel

... FY2012 approx. 300 (2x)

[Initiative 2]: Foster global R&D human resources

... FY2012: 90%+ local staff, 30%+ doctorate holders

[Initiative 3] Focus on local social innovation business themes

● China

- Participate in national social innovation business programs
- R&D base for local Hitachi Group companies

● Europe

- Promote open innovation in cutting-edge physics
- Accelerate developments in social innovation business such as Rail & Power systems

● USA

- Reinforce next-generation storage systems R&D
- Development of environment-conscious vehicular technologies

● Asia

- 2011 establishment of R&D base in India
- Alliance with research organizations in India

2.1-2. Four global research centers

Europe (Hitachi Europe Ltd.)



London

- Adv. physics
- Power systems
- Rail system
- Design

Cambridge
Munich
Sophia Antipolis

China (Hitachi China R&D Corporation)



Shanghai

- Social infrastructure systems
- Next-generation networks
- Medical & Imaging systems
- Offshore development
- Design



Beijing

USA (Hitachi America, Ltd.)

- Storage systems
- Automotive equipment
- Wireless communication systems
- Design



Santa Clara

Detroit

Asia (Hitachi Asia Ltd.)

- Software
- Storage mechanics
- Network storage
- Water treatment



Singapore

India

R&D Group

Central Research Laboratory
Hitachi Research Laboratory
Yokohama Research Laboratory (tentative name)
Design Division

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2.2-1. Consolidate & re-organize domestic R&D (1)

Initiative 1: Build-up the fundamental research organization to provide strong foundations for Hitachi one hundred years from now

Consolidate Central Research Lab. & Advanced Research Lab.

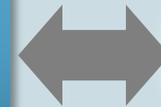
Strengthen basic research & reorganize to extend interface with the market

● **2011**

Central Research Lab.

Science interpreter

Basic research achievements
& resources



Market



Open
innovation

● **1985**

Adv. Research Lab. established

Challenge frontier issues and foster "young" technology

● **1942**

Central Research Lab. established

Creating new technologies for the coming 10 to 20 years, as well as pursuing development work for today's business

2.2-2. Consolidate & re-organize domestic R&D (2)

Initiative 2: Consolidate & re-organize research into
[Social infrastructure][IT•*Monozukuri*] to strengthen *Honebuto* and Fusion research

Consolidate social infrastructure research

Hitachi Research Lab.

Hitachi Research Lab. (Social systems, Components, Materials)

Mechanical Engineering Research Lab. (Mechatronics)

Energy and Environmental Systems Lab., Power Systems Company
(Energy, Industrial systems)

Consolidate IT•*Monozukuri* Research

Yokohama Research Lab.

Central Research Lab.
(Information services, Software production sections)

Systems Development Research Lab. (Information systems, Storage)

Production Engineering Research Lab.
(Management•Production systems, Processes)

Consumer Electronics Lab. (Embedded systems applications)

Reinforce *Honebuto* & Fusion research

2.2-3. Aim of the new laboratories

Central
Research Lab.

Promote fundamental to applied seamless R&D

Hitachi
Research Lab.

Enhance synergy through integration of social innovation

Yokohama
Research Lab.

Achieve higher efficiency through convergence of
IT research & fusion of *Monozukuri*

Promote fundamental to applied seamless R&D

● Personnel: approx. 900

- Mission
 - Technology development contributing to the expansion of the social innovation business area
 - Pioneering R&D of new areas based on future social needs
- Research area
 - Nano-science: Measurement, Materials, Devices
 - Life science: Healthcare, Medical equip.
 - Computer science: New generation computing, AI



Kokubunji-shi, Tokyo



Hatoyama-machi, Saitama

Enhance synergy through integration of social innovation

● Personnel: approx. 1,200

- Mission R&D to support social innovation business such as Social & Life infrastructures and underlying materials & key devices
- Research area Energy, Environment, Materials, Transport systems, Urban systems, Batteries, Motors, etc.



Hitachi-shi, Ibaraki



Hitachinaka-shi, Ibaraki

2.2-6. Yokohama Research Laboratory

Achieve high efficiency through convergence of
IT research & fusion of *Monozukuri*

● Personnel: approx. 1,100

● Mission R&D for information platforms supporting
IT & Infrastructure Fusion business
& *Monozukuri* technology

● Research area Next generation IT platforms, *Monozukuri*
technology



Yokohama-shi, Kanagawa

2.2-7. Location of new corporate laboratories

● From April 2011

Central Research Lab.

[approx. 900]



Hatoyama-machi,
Saitama



Kokubunji-shi, Tokyo

Hitachi Research Lab.

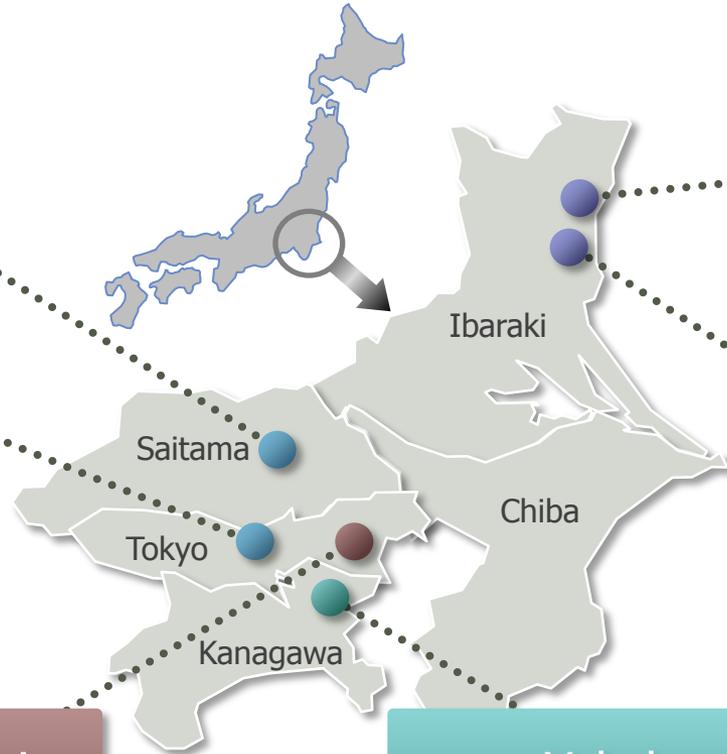
[approx. 1,200]



Hitachi-shi, Ibaraki



Hitachinaka-shi, Ibaraki



Design Division

[approx. 150]



Akasaka,
Minato-ku, Tokyo

Yokohama Research Lab.

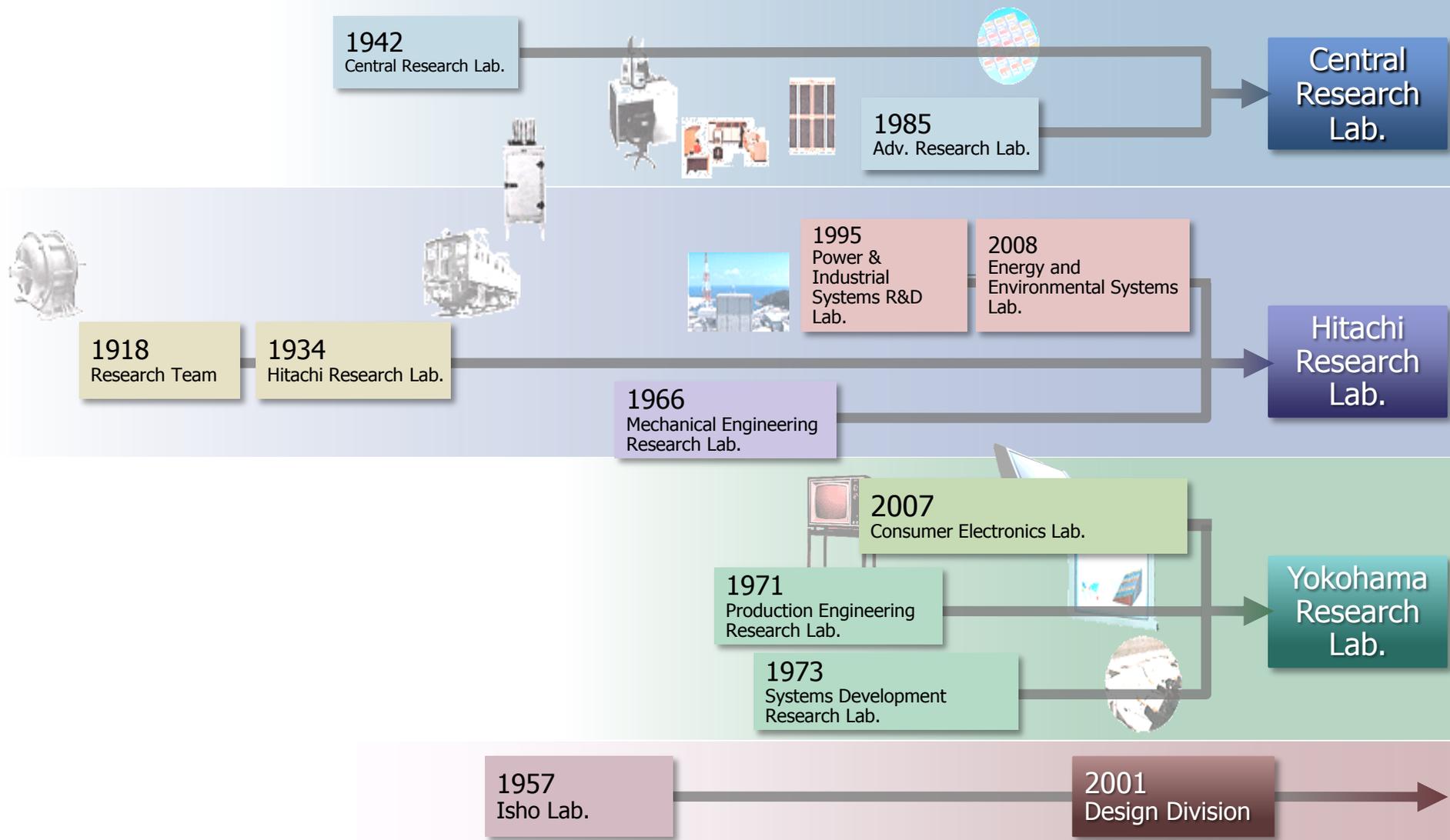
[approx. 1,100]



Yokohama-shi, Kanagawa

2.2-8. Transition of laboratories

1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010 **2011**



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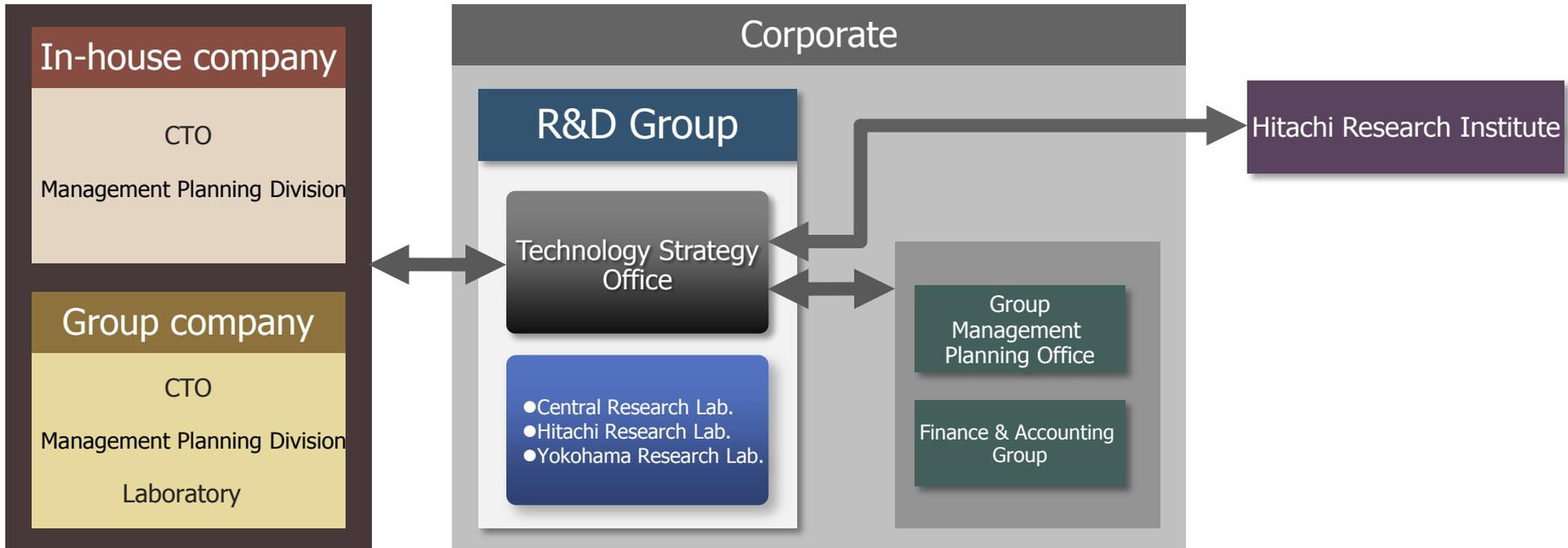
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2.3-1. Establish Technology Strategy Office

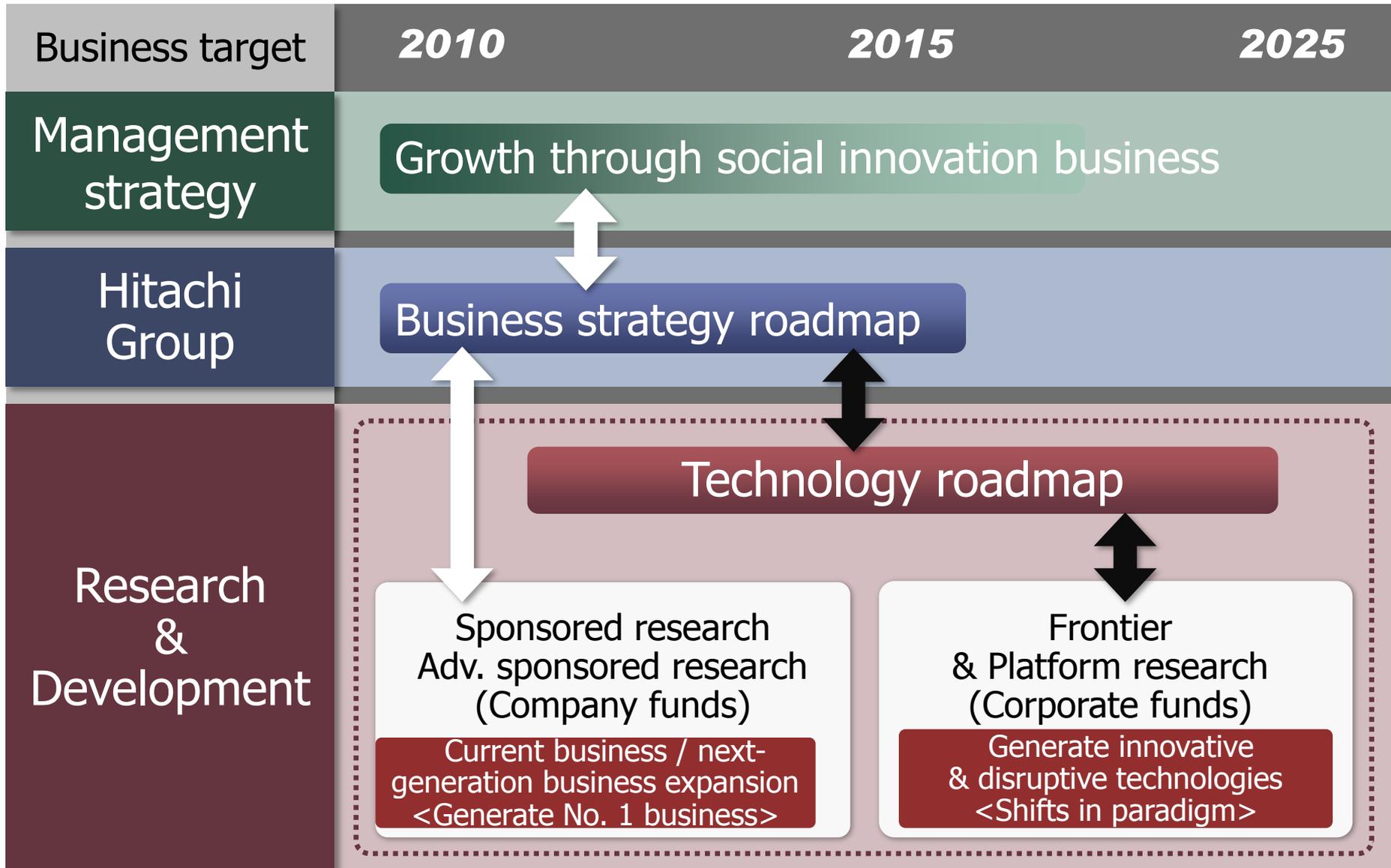
Connect Group corporate labs with business divisions Accelerate expansion of priority businesses

Main role: Draw-up technology strategies to achieve Hitachi Group key management strategies

- Propose Technology Roadmap for the Hitachi Group
- Propose trans-Group strategic projects



2.3-2. R&D schemes



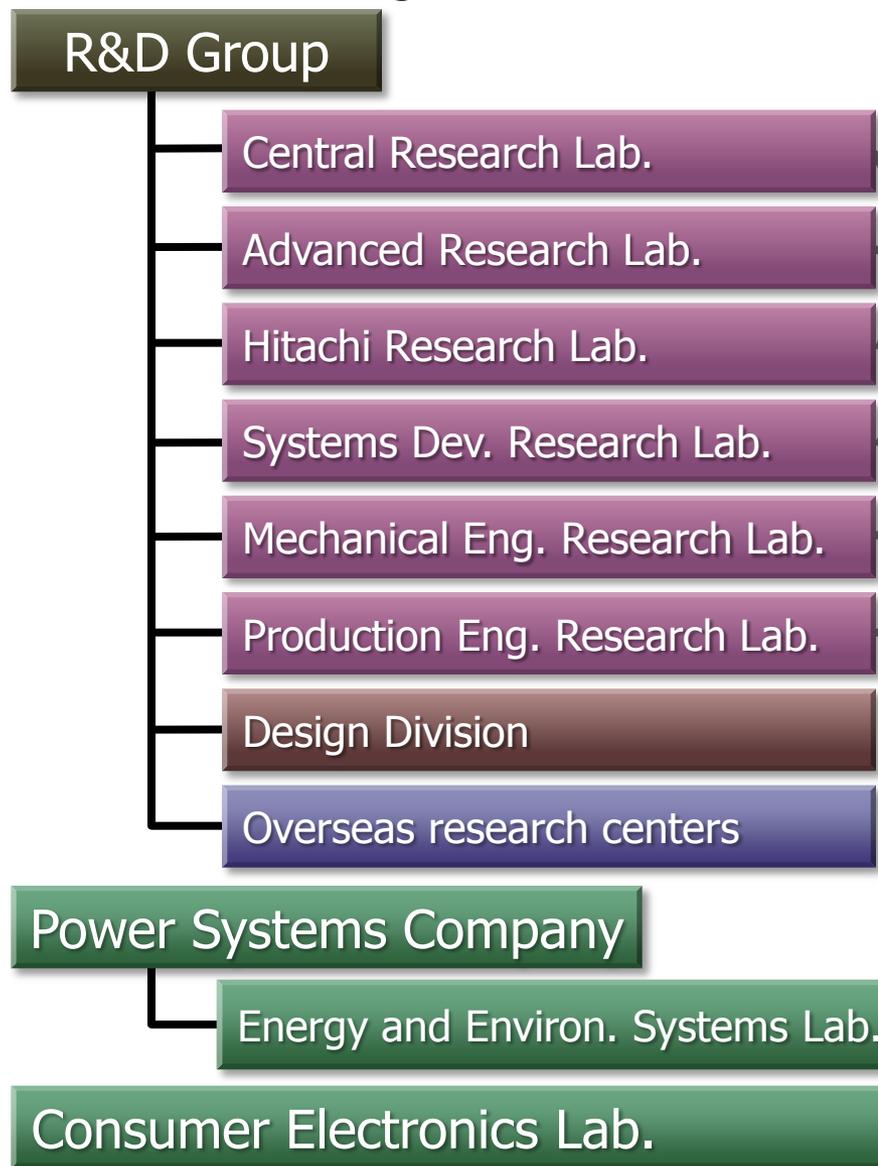
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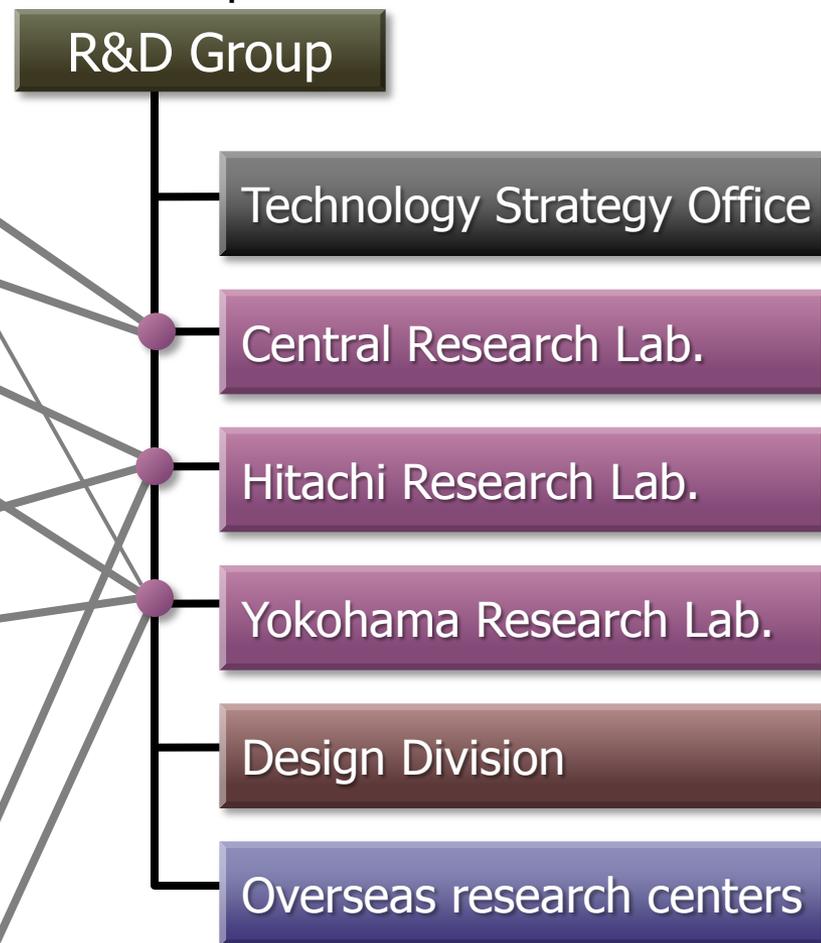
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3-1. New R&D Organization

● Current R&D Organization



● From April 2011~



New R&D structure to facilitate global growth in social innovation business

1. Reinforce overseas research centers

- Double overseas staff (FY 2012)
- Establish a new R&D base in India (2011)
- Focus on local social innovation business themes

2. Consolidate & re-organize domestic laboratories (April 2011)

- Build-up the fundamental research organization to provide strong foundations for Hitachi one hundred years from now
- Consolidate and re-organize research into [Social infrastructure][IT • *Monozukuri*] to strengthen *Honebuto* and Fusion research

Consolidate & re-organize the 6 corporate labs & 2 division labs into 3 corporate laboratories

3. Newly establish the Technology Strategy Office

- Draw-up technology strategy to achieve Hitachi Group management strategies

END

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HITACHI
Inspire the Next 