Social Innovation
-New Value through Collaborative Creation

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1. An Era of New Innovation
2. Hitachi’s Social Innovation Business
3. A New Form of Business, Created with Partners
4. FUTURE IS OPEN TO SUGGESTIONS
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Global Mega Trends

Mega Trends

Social issues the world is facing = Needs that will help shape the future

Opportunities for innovation
Global Activities

Innovation led by collaboration among different industries
- Horizon 2020
- Industrie 4.0
- Eight Great Technologies
- Market expansion strategies based on standardization

“New Normal” innovation
- One Belt, One Road
- Made in China 2025
- Internet Plus
- Asian Infrastructure Investment Bank

Innovation targeting competitive markets / Innovations from industry, government, academia, and the military
- Industrial Internet Consortium
- Advanced Manufacturing Partnership
- Health care reforms
- United States Department of Energy
Data: The Seeds of Innovation

Value creation

- Safe society
- Convenient services
- Increased business efficiency

Knowledge

Intelligence

Information

Data

Develop model

Analyze/visualize

Extract

Collect/store
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An Innovation Partner in IoT Era

Accelerate collaborative creation with customers through Social Innovation Business

Four main business domains

- Power Energy
- Industry Distribution Water
- Urban
- Finance Public Healthcare
Open Innovation: Creating Even Greater Value

Open innovation transcends the frameworks and boundaries of companies, business fields, industry/government/academia, countries, and regions.
Accelerating the Social Innovation Business

The front line is crucial

Before

Customers

Sales

Business Division

Plants

From FY2016

Customers

Front line

Regional bases

Customer segments (12 Business Units)

Platform

Core of Social Innovation

Products

Industrial products, automotive parts, materials, etc.

Develop and provide services close to the customers

Use platform to provide services quickly and efficiently

Provide value through products

*1 EPC: Engineering, Procurement and Construction
Front line sales supported by R&D

R&D closely with customers

<table>
<thead>
<tr>
<th>Business structure from FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customers</strong></td>
</tr>
<tr>
<td>Customers’ segments (12BUs)</td>
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</table>

| **Front Line**                |
| **Platform**                  |
| Center for Social Innovation  |

| **Products**                  |
| Industrial products,          |
| automotive parts, materials,  |
| etc.                          |

[R&D structure from FY2015]

- **Global Center for Social Innovation**
  Developing services in response to the needs of customers in each region
  - North America: 100
  - Europe: 70
  - China: 115
  - Asia: 65
  - Japan: 200

- **Center for Technological Innovation**
  Establishing Global No.1 Technologies (Platforms, products)

- **Center for Exploratory Research**
  Addressing future social issues
Creating innovations with many stakeholders

Rapid execution based on the framework provided by Hitachi
A KPI analytics-based simulator for calculating and visualizing effects of solutions

An example of using Cyber-Proof of Concept to calculate and visualize far-reaching effects of logistics solutions
NEXPERIENCE / Cyber-Proof of Concept

Using Cyber-Proof of Concept to calculate and visualize far-reaching effects of logistics solutions for manufacturing companies in the city of Suzhou, China

In Japan, traffic congestion has been causing a 12 trillion yen loss to the country’s economy every year.*

Hitachi proposes “shared truck transport.”

**Source: http://www.mlit.go.jp/common/000043136.pdf published by the Ministry of Land, Infrastructure, Transport and Tourism
Demo Movie
IoT Platform “Lumada”

Open platform to create high-value-added digital solutions

- More data
- More business ideas
- More players

New Value

World IoT market in 2019: $1.3 trillion

- Users
- Enterprises
- Investors

Evolving digital technology

Unified data management

Data Lake

IoT platform

- Business data
- Machine data
- Human data

- Analytics
- A.I.


*2 An enabler for various data aggregation and utilization
Collaborative Creation Model of Digital Solution

- Analysis of customers’ issues
  - Analytics

- Hypothesis formulation
  - Artificial Intelligence
  - NEXPERIENCE

- Prototyping and value verification
  - Simulation
  - Integration of partner technology

- Provision and operation of solutions
  - Provide solutions to customers

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IoT platform “Lumada”

- Solution core (Solution blueprint)
- Agile development foundation
- Data sharing, analysis
- AI
- Simulators

Data lake

- OSS *2 communities
- Partner’s IoT platforms
- IT/OT partners

Customer OT *1 system
- Machine data
- Human data

Customer IT system
- Business data

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*1 OT: Operation Technology
*2 OSS: Open Source Software
Combine input data, and find the correlation between data and goal

**Business**
- Performance goal
- Sales, etc.

**Artificial Intelligence**
- From numerous combinations of big data,
  - find factors that influence corporate performance automatically

**Business Scene**
- Big Data time, customer, sales person, location, etc.

Find and validate the relationship between influential factors and performance

Show the performance improvement plan
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Transportation: UK “Intercity Express Programme”

Social issue: Aging railways; delays and accidents
Business issue: Increasing reliability and safety of railways

**Agility Trains**
(a train leasing company invested by Hitachi)

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**Hitachi**

Train leasing and guarantee of operation
- Establishing a new railway service business -

- Regular operations and safe, comfortable rides
- Greater QOL for users and revitalization of the economy
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THE FUTURE IS OPEN TO SUGGESTIONS
未来は、オープンだ。アイデアで変えられる。