Hitachi Rail Introduction and a Vision of the Future
Hitachi Social Innovation Forum
Brisbane 2017
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2. Key Achievement
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Our business in Hitachi (FY2016)

- **Revenues**
  - **9,162.2 billion yen**
  - **81.81 billion USD**

- **Information & Telecommunication Systems**
  - 20%

- **Social Infrastructure & Industrial Systems**
  - 23%

- **Electronic Systems & Equipment**
  - 14%

- **Automotive Systems**
  - 10%

- **Construction Machinery**
  - 12%

- **High Functional Materials & Components**
  - 7%

- **Smart Life & Ecofriendly Systems**
  - 6%

- **Financial Services**
  - 6%

- **Others**
  - 2%

*1: Hitachi Transport System, Ltd. which is included in "Others" became equity-methods affiliate of Hitachi, Ltd. on May 19, 2016.
*2: Hitachi Capital Corporation which constitute of "Financial Services" became equity-methods affiliate of Hitachi, Ltd. on October 3, 2016.

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Global Rail business performance FY2016

FY2016 Results

Revenues
¥ 497.9bn
A$6.22Bn

Order Intake
¥ 473.1bn
A$5.91bn

Order Backlog
¥ 2,020.5bn
A$25.26Bn

Note: FX Rate used 1AUD = 80JPY.
FY2016 results, as of March 30th, 2017.

First IEP train manufactured in UK

Hitachi Rail Italy delivers first train to Miami Dade County, USA
Our rail business has a full product range...

<table>
<thead>
<tr>
<th>ROLLING STOCK</th>
<th>SIGNALLING &amp; SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock</td>
<td>Components</td>
</tr>
<tr>
<td>Components</td>
<td>Signalling &amp; Traffic Management</td>
</tr>
<tr>
<td>Components</td>
<td>Station &amp; Information Solutions</td>
</tr>
</tbody>
</table>

- **Very High Speed**
- **Shinkansen**
- **Bogies**
- **Interlocking**
- **Satellite Train Control**
- **Passenger Information**
- **Commuter**
- **Intercity**
- **Traction Motor**
- **CBTC**
- ** Components**
- **Ticketing & Payment**
- **LRV**
- **Metro**
- **Traction Inverters & Transformers**
- **TMS**
- **ETCS**
- **Security**
- **Monorail**
- **HVAC**
- **Driverless**
- **Facility Control**
- **Crowd Flow Management**

<table>
<thead>
<tr>
<th>O&amp;M</th>
<th>TURNKEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>8%</td>
<td>RS Refurbishment</td>
</tr>
</tbody>
</table>

- **LRV**: Light Rail Vehicle
- **HVAC**: Heating, Ventilation and Air Conditioning
- **TMS**: Train Management System
- **ETCS**: European Train Control System
- **CBTC**: Communications-based Train Control
- **O&M**: Operations & Maintenance
- **RS**: Rolling Stock

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We have an international footprint…

We have a geographically diverse business with the ability to bid effectively on major projects all over the world.

Note: Percentages represent geographical split of FY16 revenues.

(1) – Headcount as at 31 March 2017

<table>
<thead>
<tr>
<th>Region</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>17%</td>
</tr>
<tr>
<td>Asia Pacific (excl. Japan)</td>
<td>10%</td>
</tr>
<tr>
<td>Europe (excl. UK)</td>
<td>32%</td>
</tr>
<tr>
<td>UK</td>
<td>26%</td>
</tr>
<tr>
<td>Middle East &amp; Africa</td>
<td>4%</td>
</tr>
<tr>
<td>Americas</td>
<td>11%</td>
</tr>
</tbody>
</table>

Total global headcount – 11,091 (1)
Global production

- **Pittsburg, USA**
  - Rolling Stock
  - Size: 19,300 m²

- **Newton Aycliffe, UK**
  - Rolling Stock
  - Size: 42,000 m²

- **Pistoia, Italy**
  - Electrical Components
  - Bogies
  - Size: 107,000 m²

- **Naples, Italy**
  - Electrical Components
  - Signalling System
  - Size: 58,850 m²

- **Mito(Rail), Japan**
  - Train Cars
  - Bogey
  - Size: 28,000 m²

- **Miami, USA**
  - Rolling Stock
  - Size: 13,000 m²

- **Batesburg, USA**
  - Signalling System

- **Reggio Calabria, Italy**
  - Rolling Stock
  - Size: 63,500 m²

- **HYC, China**
  - Electrical Components
  - Size: 19,800 m²

- **HYEE, China**
  - Electrical Components
  - Size: 14,300 m²

- **CHS, China**
  - Signalling System
  - Size: 4,700 m²

- **Kasado, Japan**
  - Train Cars
  - Bogey
  - Size: 130,000 m²

- **Riom, France**
  - Signalling System

- **Potenza, Italy**
  - Signalling System

- **Naples, Italy**
  - Electrical Components
  - Signalling System
  - Size: 58,850 m²

* JV with CNR.

**HYEE**: CRRC xi'an YongeJieTong Electric Co., Ltd.
**HYC**: Hitachi Yonge Electric Equipment (Changchun) Co., Ltd.
**CHS**: Qingdao CNR Hitachi Railway Signal&Communication Co., Ltd.

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Key Achievement in FY2016 – Investing in our future and delivering for our customers

**Delivering Projects**
- Testing began on the first of 70 commuter trains for Scotland
- The first driverless train for new Lima Metro arrived in Peru
- First train delivered to Miami Dade County USA as part of 68 Metro train contract
- Delivered first 4 cars of 68 car order to Taipei Metro for driverless metro system
- Hitachi-built battery powered trains began operation for Kyushu Railway Company & East Japan Railway Company

**Investing in Facilities**
- Our newly-refurbished UK Doncaster maintenance depot receives its first train
- Inauguration of new Pistoia Italy Testing Facility attended by then Prime Minister Matteo Renzi
- Production started at Pistoia Italy on GWR contract for the UK
- Our purpose-built IEP maintenance depot in Swansea UK became operational

**Key Achievements**
- The first UK-built IEP train was unveiled at Newton Aycliffe manufacturing facility
- Hitachi Rail and Trenitalia unveiled new double-deck regional train - Rock
- Hitachi Rail showcased its integrated global rail offering at the bi-annual InnoTrans exhibition in Berlin Germany
- 20th anniversary for Hitachi designed Tokyo Area Traffic Management System

IEP: Intercity Express Programme, GWR: Great Western Railway

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Key Achievement in FY2016 – We continue to win major contracts in the global market

UK RS
West of England options – 7 x 9 car AT300 bi-mode sets

UK RS
Hull trains – 5 x 5 car AT300 bi-mode sets

Italy RS
Framework agreement for up to 300 regional double-deck trains

India Signalling
CBTC systems for Noida-Greater Noida Metro Project

China Components
HVAC & High Voltage Equipment for CRRC and Traction for Xian Metro Line1

Japan RS
Inspection car MAYA35 for Hokkaido Railway Company

USA RS
Baltimore Metro Subway Link – 78 new trains with CBTC signalling

USA RS
Brussels Metro signalling system renewal

Belgium Signalling

Italy RS
Additional 15 “Leonardo” metro trains for the city of Milan

Italy Services
Three contracts for control, monitoring and maintenance of Trenitalia trains

Malaysia Signalling
Upgrade of signalling works within a section of Klang Valley railway

Australia Signalling
Complete system for Perth’s Forrestfield - Airport Link

USA Signalling
Long Island Rail Road to design and build a new signalling system

Taiwan RS / Turnkey
Turnkey and 29 two-car trainsets for the Sanying Line in New Taipei City

CRRC: China Railway Rolling Stock Corporation
SGTP: Sydney Growth Train Project
RS: Rolling Stock
We have 40 years experience in the Australian Rail market with offices in Sydney, Brisbane, Perth, Newcastle and Karratha

Track Record and on-going projects in Australia

- **Western Australia Signalling**
  - Signalling and communications system for the Roy Hill Iron Ore Project

- **Western Australia Signalling**
  - Rio Tinto signalling, communications, train control and automation systems

- **Sydney RS Components**
  - Waratah Train traction supply (624 cars)

- **Melbourne RS Design**
  - Design of the Silver Liner EMU's

- **Australia Signalling**
  - Complete system for Perth's Forrestfield - Airport Link (on-going project)

- **Queensland RS**
  - Tilting EMU (12 cars)

- **Queensland RS Components**
  - Electric Locomotive traction supply (22 cars)

- **Queensland RS Components**
  - Electric Locomotive traction supply (86 cars)

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Key Achievement – Intercity Express Programme

UK Department for Transport's £7.5 billion programme to replace older intercity trains currently operating on the East Coast and Great Western Main Lines

1976 2017

Background

- Total of 122 trains (866 cars)
- Includes bi-mode sets for non-electrified routes
- Construction of new depots for fleet maintenance
- Maintenance of the fleet for 27.5 years
- Collaborative interior design process

Project Details

- 30% more seats capacity
- 30% reduced journey time London to Bristol
- 15% reduced journey time London to Edinburgh
- 18% saving in energy consumption
- 43% saving in track damage
- Largest privately financed rolling stock deal ever
- One of the largest Public Private Partnerships projects to date

An award winning project

Project Benefits

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Project Delivery Progress of IEP Project

2014/11 1st Train (T1) Manufacturing Completion in Japan

2015/01 T1 Leaving Japan

2015/03 T1 Arrival Southampton, UK

2015/05~ On-going test in UK Network

2015/09 Open of Hitachi Manufacturing Facility at Newton Aycliffe, UK
Project Delivery Progress of IEP Project

2016/05 Unveiling IEP Train (Azuma)

2016/05 Prime Minister’s visit (Mr. D. Cameron & Mr. S. Abe)

2016/05 Queen Elizabeth II Ride

2016/12 1st UK built Train at Newton Aycliffe

2016/05 Queen Elizabeth II Ride

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Our future and the future of rail as a sector

- Hitachi Rail has become a major global player within the rail industry and we have ambition to grow further
- We aim to become a ¥1 trillion revenue business with market leading profit margins by:
  - Further strengthening our product offering and leading the way in innovation
  - Continuing the transformation of our business and operations
  - Using M&A to further grow and differentiate our offering

“Our aim is to become a ¥1 trillion revenue business by the early 2020s”

Mr Toshiaki Higashihara – President and CEO, Hitachi, Ltd

Our key areas of external focus that will allow us to achieve our ambitions

- **Strengthen Core Offering**
  - High quality manufacturing will remain core to our business and we will invest in expanding and improving our platforms

- **Grow Rolling Stock Maintenance**
  - Further grow our rolling stock maintenance business. Reducing total cost of ownership of our customers will differentiate us

- **Focus on IoT and Digital**
  - IoT and digital services will enhance our core products and present customers with a truly unique rail offering

- **Provider of end-to-end solutions**
  - Transition to a provider of end-to-end solutions, supported by market-leading technology from across the Hitachi Group

- **Innovation Leader**
  - Be an innovation leader in the rail industry, fully utilising the wider Hitachi Group’s technology capabilities

IoT = Internet of Things
Conclusions

- Our aim is to become a ¥1 trillion revenue business by the early 2020s

- We are investing in core platforms and technologies for future growth

- Our core markets remain strong

- Customers continue to value our technology developed and demonstrated overseas

- IoT is an integral element of our strategy and a clear differentiator for Hitachi.
Thank You