Network Services Business

Atsuo Kawamura, Executive Vice President
Overview of Network Services Business

- Remain in a top position in the telecom carrier business
- Expand network services business to enterprise and public customers based on our strength in Network and IT

Business Areas

IT/Services

Network

Customer Segment

New Network Services to Support Social DX**

- Service PF
- OSS/BSS*, etc.
- Maintenance /Operation Services
- Base stations
- Mobile Core
- Optical IP transmission equipment, etc.
- 5G

Industrial Network Services

- Local network
- Data distribution services, etc.

A. Telecom Carrier

B. Enterprise/Public

Market Environment [A. Telecom Carriers Domain]

- Total market size will slightly increase from over ¥2tn
- Maintenance/operation services domain is approx. ¥600bn
- Composition of investments will change due to carriers’ DX

Domestic Telecommunication Market

- CAGR 2% from FY19 to FY25
- Investments in IT/Services and Network will change

Domestic 5G Base Station Market

- Market will rapidly grow from FY2021
- Market will grow to approx. ¥250bn in FY2025
NEC’s Positioning [A. Telecom Carriers Domain]

Positioning in Network Business (Domestic)

- Market Share
  - NEC’s size indicates scales of sales
- Breadth of Business Area
  - Domestic peers
  - Overseas peers

NEC’s Strengths and Challenges

- **Strengths**
  - Domestic top position
  - Fine customer service capability
  - High quality products / services
  - Co-creation of 5G use case

- **Challenges**
  - Expansion of customer portfolio
  - Enhancing cost competitiveness

(By Revenue in FY2018, NEC estimates)
Market Environment [B. Enterprise and Public Domain]

- Total market will be doubled
- Needs for network optimized for services
- Data utilization needs across the industries

### Domestic IoT Market (NEC estimates)

<table>
<thead>
<tr>
<th>Year</th>
<th>Devices</th>
<th>SW and SI service</th>
<th>Network service</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY20</td>
<td></td>
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<tr>
<td>FY25</td>
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### Network Services Market (incl. local 5G) (NEC estimates)

- Network services market will grow to ¥2.5tn in FY2025
- Rapid ramp-up of data distribution service domain
Trends of Revenue and Operating Margin from FY2017 to FY2020

Execution of structural improvement resulted in temporary deterioration of operating margin.

Effect of structural improvement improves operating margin.

Launches of focus businesses will offset declines in existing businesses and maintain revenue and operating margin.

Focus Businesses
- Maintenance and operation services
- 5G
- Industrial network services

Existing Businesses

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue (¥100mn)</th>
<th>Adjusted Operating Margin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY17</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>FY18</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>FY19 (Forecast)</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>FY20 (Target)</td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>
FY2018 Results

Revenue

<table>
<thead>
<tr>
<th>(¥100mn)</th>
<th>FY17 Adjusted Operating Profit</th>
<th>229</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One-time Cost</td>
<td>▲ 30</td>
</tr>
<tr>
<td></td>
<td>Losses from certain projects</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Structural Improvement Cost</td>
<td>▲ 16</td>
</tr>
<tr>
<td></td>
<td>▲ 20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus Businesses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demand increases in network domain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher efficiency in investments in network domain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Structural improvement cost in FY18</td>
<td>▲ 20</td>
</tr>
<tr>
<td></td>
<td>Effect of structural improvement in FY18</td>
<td>+4</td>
</tr>
<tr>
<td></td>
<td>Investment expansion in focus businesses</td>
<td>▲ 20</td>
</tr>
<tr>
<td></td>
<td>Temporary losses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Investment for future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improvements in existing businesses</td>
<td></td>
</tr>
</tbody>
</table>

| FY18 Adjusted Operating Profit | 207 |

| FY17 | 4,425 |
| FY18 | 4,603 (+4% y/y) |
Summary of FY2018

Key Achievements

<Securing of Future Earnings>
- Execution of restructuring initiatives

<Maintenance and Operation Services>
- Rakuten has selected NEC’s OSS/BSS solutions

<5G>
- Contracts with NTT DOCOMO for base station equipment for 5G services
- Collaboration with Samsung for portfolio expansion
- Promotion of 5G trials with carriers and industrial partners

Challenges

- Secure stable earnings by expanding maintenance and operation services business
- Early expansion of 5G and industrial network services businesses
FY2019 Outlook

Revenue
4,603

FY18

FY18 Adjusted Operating Profit
207

Revenue Declines in Existing Businesses
△ 30

Higher Efficiency in Investments in Existing Businesses
+40

One-time Cost
+30

Revenue Increases in Focus Businesses
+17
+36

Structural expenses and benefits in FY18

Revenue
4,550
▲1% y/y

FY19E

Losses from certain projects

Existing Businesses: Lower revenue, efficient investment

FY18 Temporary expense

Effect of structural improvement, expansion of focus businesses

Impact of structural improvement cost in FY18
+20

Effect of structural improvement in FY19
+16
Business Strategy in FY2019

**<Expansion of maintenance and operation services to secure stable earnings>**
- Expansion of maintenance coverage of hardware

**<Expansion of 5G and industrial network services for future growth>**
- Maximization of entry opportunity to 5G businesses
- Acceleration of ramp-up in industrial network services businesses

**Focus Initiatives**
- **Maintenance and Operation Services**
  Development of multi-vendor maintenance
- **5G**
  Solid shipment for pre-commercial services
- **Industrial Network Services**
  Building track record of local network business
### To Achieve Mid-term Management Plan

#### Numerical Targets (FY2020)

<table>
<thead>
<tr>
<th>Category</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>¥450bn to ¥470bn</td>
</tr>
<tr>
<td>Adjusted Operating Margin</td>
<td>7%</td>
</tr>
<tr>
<td>Revenue from Focus Businesses*</td>
<td>¥50bn to ¥70bn</td>
</tr>
</tbody>
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#### Strategies to Achieve Numerical Targets

1. **Strategy-1: Telecom Carrier Market**
   - Remain in a top position by expanding maintenance and operation services business

2. **Strategy-2: Telecom Carrier Market**
   - Establish business foundation for expansion of 5G business

3. **Strategy-3: Enterprise and Public Market**
   - Grow industrial network services business by “NEC Smart Connectivity”

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*Focus businesses include maintenance and operation services, 5G and industrial network services*
Strategy 1: Expansion of Maintenance and Operation Services

Issues for Carriers in Maintenance and Operation

Increase in management man-day

Reality

NEC’s Strategy

Expansion of maintenance support domain

- Reduction in maintenance and operation management man-day at customers
  - BPO development

Automation and sophistication of operating system

- Operation administration which speeds up management
  - Sophistication by leveraging Netcracker
  - Automation by leveraging AI technologies

E2E Network Solution

- Secure delivery of products/services from HW to services
  - Use of ecosystem
### Strategy 2: Expansion of 5G Business

#### NEC’s Strategy

<table>
<thead>
<tr>
<th>Remaining in a Top Position</th>
<th>Market Expansion</th>
<th>Market Expansion</th>
<th>Value Enhancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share expansion in domestic market by leveraging strengths in wireless</td>
<td>Supporting various needs (partnership with Samsung)</td>
<td>Promotion of cloud native (Open vRAN)</td>
<td>Materialization of use case in 5G businesses</td>
</tr>
</tbody>
</table>

#### Measures

| Timey supply of products which match network expansion plans by customers | Joint proposal to customers in Europe and APAC by leveraging mutual complement of product portfolio | Approach to open-oriented carriers triggered by base station orders from Rakuten | Expansion of co-creation with telecom carriers and industrial partners (Remote control of construction machines with KDDI and Obayashi) |
Environment Change with Development of DX

Increase and diversification of connected devices

Needs of Industrial Players

Dedicated safe and comfort network enabling to connect significant number of devices

NEC’s Strategies

Focusing on industries handling important infrastructure (Railway, construction, retail, public)

“Connectivity” with value of flexibility, comfort, simplicity and agility

NEC’s Strengths

Exponential increase in amount of connected data

Capitalization (monetization) of information by externally offering internal data

Strategy 3: Expansion of Industrial NW Services Business by “NEC Smart Connectivity”

Local Network

- Focusing on industries handling important infrastructure (Railway, construction, retail, public)
- “Connectivity” with value of flexibility, comfort, simplicity and agility

Data Distribution Services

- Realization of mutual usage of data across industries
- Secure data distribution (Authentication and security technologies)

Provide mission critical network in one stop
Summary

- Remain in a top position by expanding maintenance and operation services
- Establish business foundation preparing for 5G business expansion
- Business growth by “NEC Smart Connectivity” across industries
- Business transformation by taking advantage of 5G and DX
  - In FY2020: ¥450bn to ¥470bn sales, 7% margin
Orchestrating a brighter world

NEC brings together and integrates technology and expertise to create the ICT-enabled society of tomorrow.

We collaborate closely with partners and customers around the world, orchestrating each project to ensure all its parts are fine-tuned to local needs.

Every day, our innovative solutions for society contribute to greater safety, security, efficiency and equality, and enable people to live brighter lives.
Orchestrating a brighter world