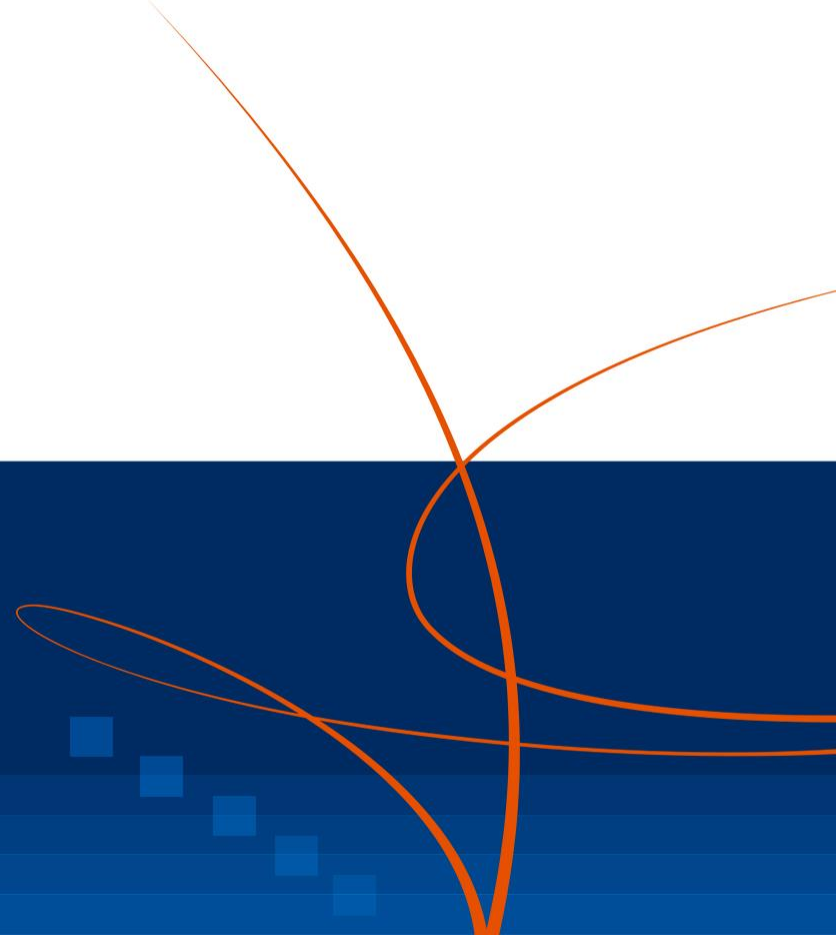# Enterprise Business

**Kazuhiro Sakai, Executive Vice President**

# Overview of Enterprise Business Unit

▎Provide advanced integrations of systems and services to private sectors including manufacturing, retail and services, and finance

▎Going forward, expand cross-industry service platform-based businesses (new businesses) and provide solutions to deal with social issues

**<Base Business: Major Solutions>**
- **Manufacturing:**     **Global SCM systems (syst.),**
                         **Product lifecycle management syst.,**
                         **Production management syst.**
- **Retail and services:**  **Retail syst. for stores and head offices,**
                         **Logistics management syst.**
- **Finance:**           **Banking syst., Business branch syst.,**
                         **Insurance and securities infrastructure syst.**

**<Service Platform-based Business>**
- **NEC Value Chain Innovation**

\Orchestrating a brighter world   **NEC**

Orchestrating a brighter world

NEC
Safer Cities

Realize safe, comfortable,
efficient and fair society

Safety   Security   Efficiency   Equality

NEC
Value Chain
Innovation

NEC Smart Connectivity

NEC the WISE     Bio-IDiom     Cyber Security

Orchestrating a brighter world   NEC
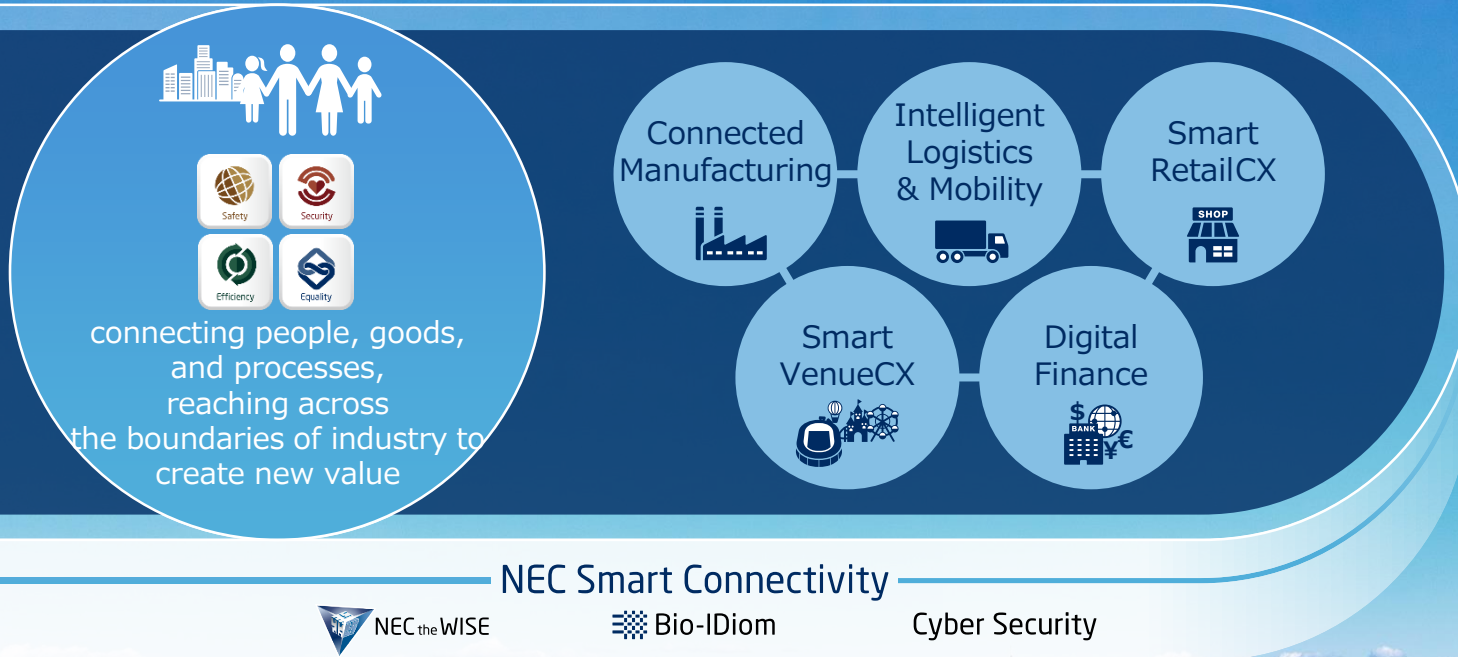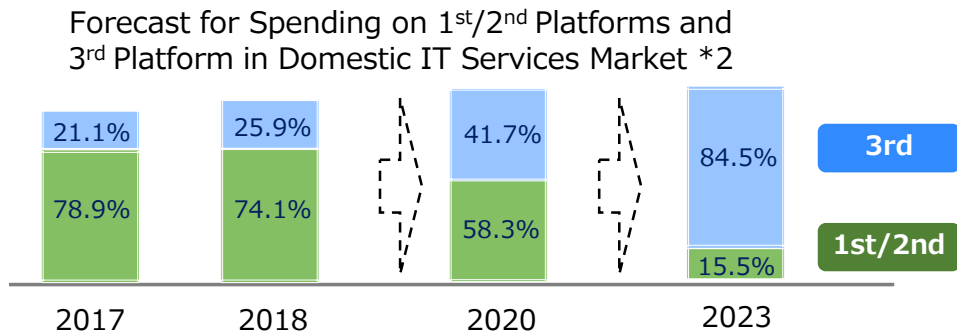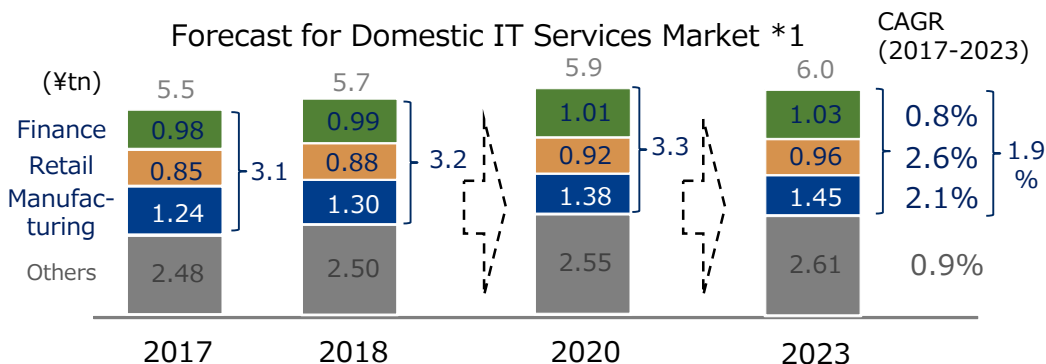
# Market Environment

## Domestic IT services market grows steadily driven by the 3rd platform

### ■ Market Size and Technology Trend

**Forecast for Domestic IT Services Market *1**

CAGR (2017-2023)

(¥tn)

| | 2017 | 2018 | 2020 | 2023 | CAGR |
|---|---|---|---|---|---|
| Total | 5.5 | 5.7 | 5.9 | 6.0 | |
| Finance | 0.98 | 0.99 | 1.01 | 1.03 | 0.8% |
| Retail | 0.85 | 0.88 | 0.92 | 0.96 | 2.6% |
| Manufacturing | 1.24 | 1.30 | 1.38 | 1.45 | 2.1% |
| Others | 2.48 | 2.50 | 2.55 | 2.61 | 0.9% |

3.1 → 3.2 → 3.3 (1.9%)

**Forecast for Spending on 1st/2nd Platforms and 3rd Platform in Domestic IT Services Market *2**

| | 2017 | 2018 | 2020 | 2023 |
|---|---|---|---|---|
| 3rd | 21.1% | 25.9% | 41.7% | 84.5% |
| 1st/2nd | 78.9% | 74.1% | 58.3% | 15.5% |

- **Change in Domestic IT Services Market**
  - ・**Overall market continues steady growth**
  - ・**Market components change sharply (IDC: expansion of 3rd platform)**
- **Trends among Competitors**
  - ・**Focus on new domains like AI/IoT/5G**

*1: Calculated based on IDC Japan, February 2019
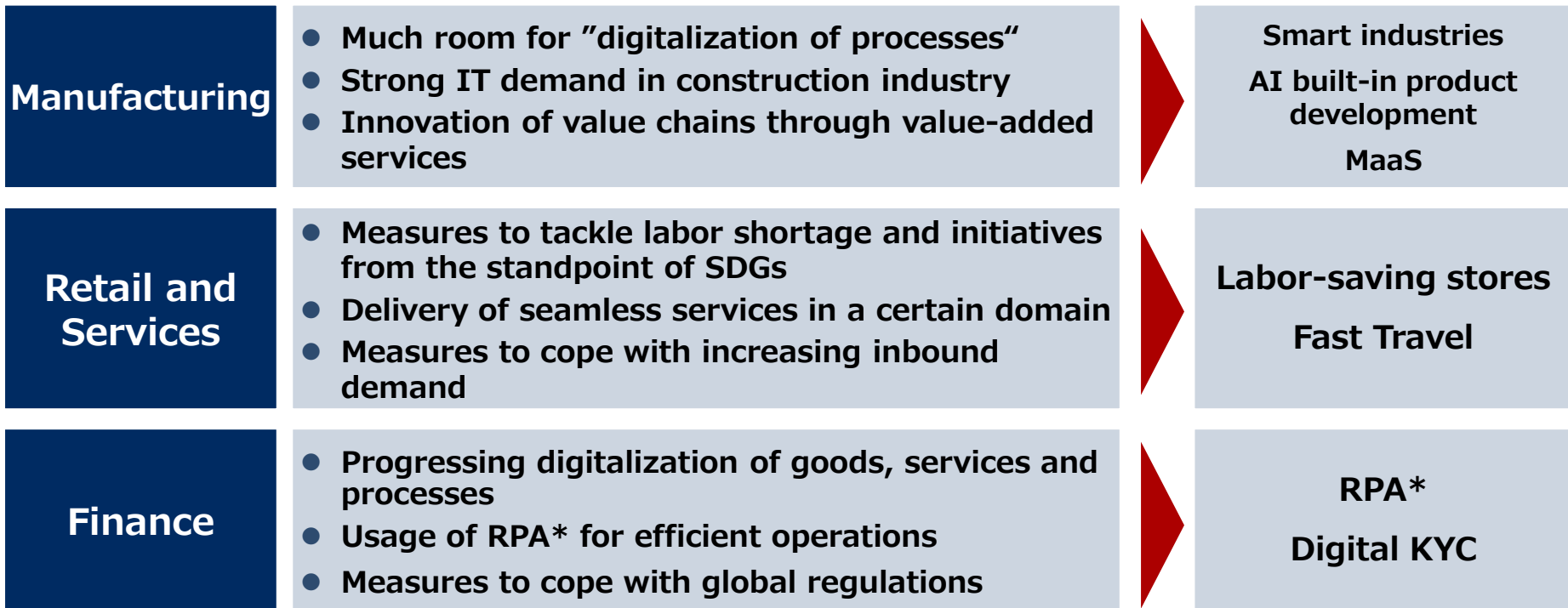"Japan IT Services Forecast by Vertical Segment 2019-2023"

*2: IDC Japan, June 2018
"Japan 3rd Platform Forecast by Vertical Segment and Company Size 2018-2022"

*2: IDC Japan, June 2019
"Japan 3rd Platform Forecast by Vertical Segment and Company Size 2019-2023"

Definitions of platforms (IDC):
1st: mainframes, 2nd: client servers,
3rd: cloud, business analytics, enterprise mobility, and social business
Figures for the 3rd platform are simple sums from the four domains.
Actually there is considerable overlap

Orchestrating a brighter world **NEC**
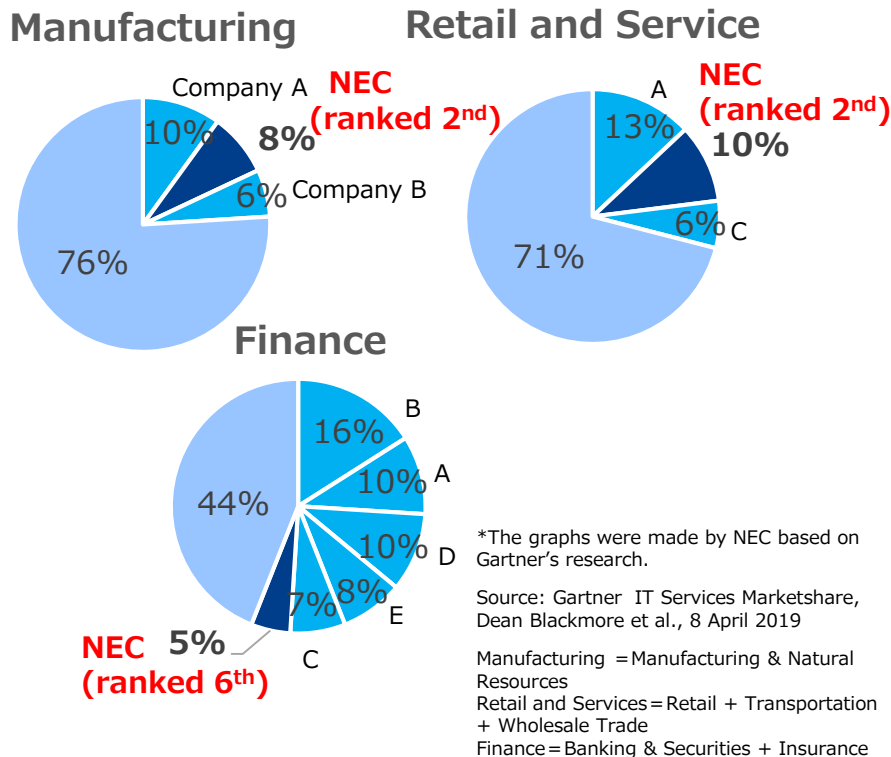
# Business Opportunities by Sector

■ <u>Among all sectors, strong demand for business innovation and business process re-engineering through digitalization</u>

| Manufacturing | • Much room for "digitalization of processes"<br>• Strong IT demand in construction industry<br>• Innovation of value chains through value-added services | ▶ | Smart industries<br><br>AI built-in product development<br><br>MaaS |
|---|---|---|---|
| **Retail and Services** | • Measures to tackle labor shortage and initiatives from the standpoint of SDGs<br>• Delivery of seamless services in a certain domain<br>• Measures to cope with increasing inbound demand | ▶ | **Labor-saving stores**<br><br>**Fast Travel** |
| **Finance** | • Progressing digitalization of goods, services and processes<br>• Usage of RPA* for efficient operations<br>• Measures to cope with global regulations | ▶ | **RPA***<br><br>**Digital KYC** |

\* Robotic Process Automation

\Orchestrating a brighter world  **NEC**

# NEC's Positioning

## Shares in Domestic Markets

**Manufacturing**



Company A
10%
6% Company B
76%
**NEC (ranked 2nd)**
**8%**

**Retail and Service**



A
13%
71%
6% C
**NEC (ranked 2nd)**
**10%**

**Finance**



B
16%
A
10%
D
10%
E
8%
C
7%
44%
**NEC 5% (ranked 6th)**

*The graphs were made by NEC based on Gartner's research.

Source: Gartner IT Services Marketshare, Dean Blackmore et al., 8 April 2019

Manufacturing ＝Manufacturing & Natural Resources
Retail and Services＝Retail + Transportation + Wholesale Trade
Finance＝Banking & Securities + Insurance

## NEC's Strengths and Challenges

| Strengths | • Long-standing customer relationship and trust |
| --- | --- |
| | • Ability to integrate advanced technologies and businesses |
| | • Knowledge and expertise developed in our own manufacturing business |
| Challenges | • Securing IT personnel corresponding to market demand |
| | • Initiatives for external collaboration such as open innovations |

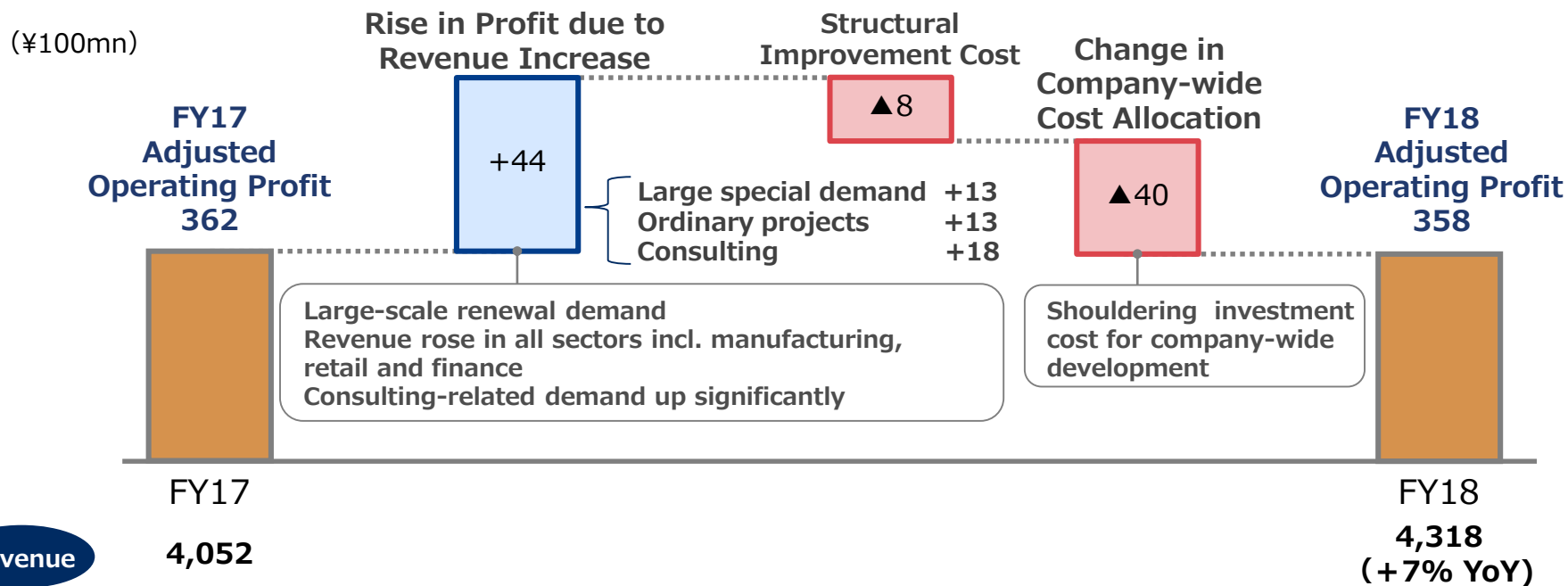Orchestrating a brighter world  **NEC**

# FY2018 Results

## Revenue: ¥431.8 billion (+7%)

- Revenue from all sectors increased following favorable market conditions

## Adjusted Operating Profit: ¥35.8 billion (down ¥400 million)

- Profit from system-related services increased, while overall profit fell due to rise in investments related to AI and IoT

（¥100mn）

**Rise in Profit due to Revenue Increase**

**Structural Improvement Cost**

**Change in Company-wide Cost Allocation**

**FY17 Adjusted Operating Profit 362**

+44

▲8

▲40

**FY18 Adjusted Operating Profit 358**

Large special demand +13
Ordinary projects +13
Consulting +18

**Large-scale renewal demand**
**Revenue rose in all sectors incl. manufacturing, retail and finance**
**Consulting-related demand up significantly**

**Shouldering investment cost for company-wide development**

FY17

FY18

**Revenue**

**4,052**

**4,318 (+7% YoY)**

Orchestrating a brighter world  NEC

# Summary of Business in FY2018

**Key Achievements**

- **Overall business growth was higher than market growth. The results for each sector remained robust**
- **The ratio of the 3rd platform: 27%\*  (IDC statistics: 25.9%\*\*)**
- **Through NEC Value Chain Innovation, concrete use cases expanded to cope with changes in social issues and environment toward realization of new value (e.g. labor-saving convenience stores, forecast of demand using AI, AI Fraud detection, etc.)**

**Challenges**

- **Enhancement of capabilities and resources to support digital transformation (DX) of customers**
- **Shift to a service-type business model**

*1  Ratio of the 3rd platform in FY 2018 revenue of the Enterprise Business Unit   ** See IDC report on p.5
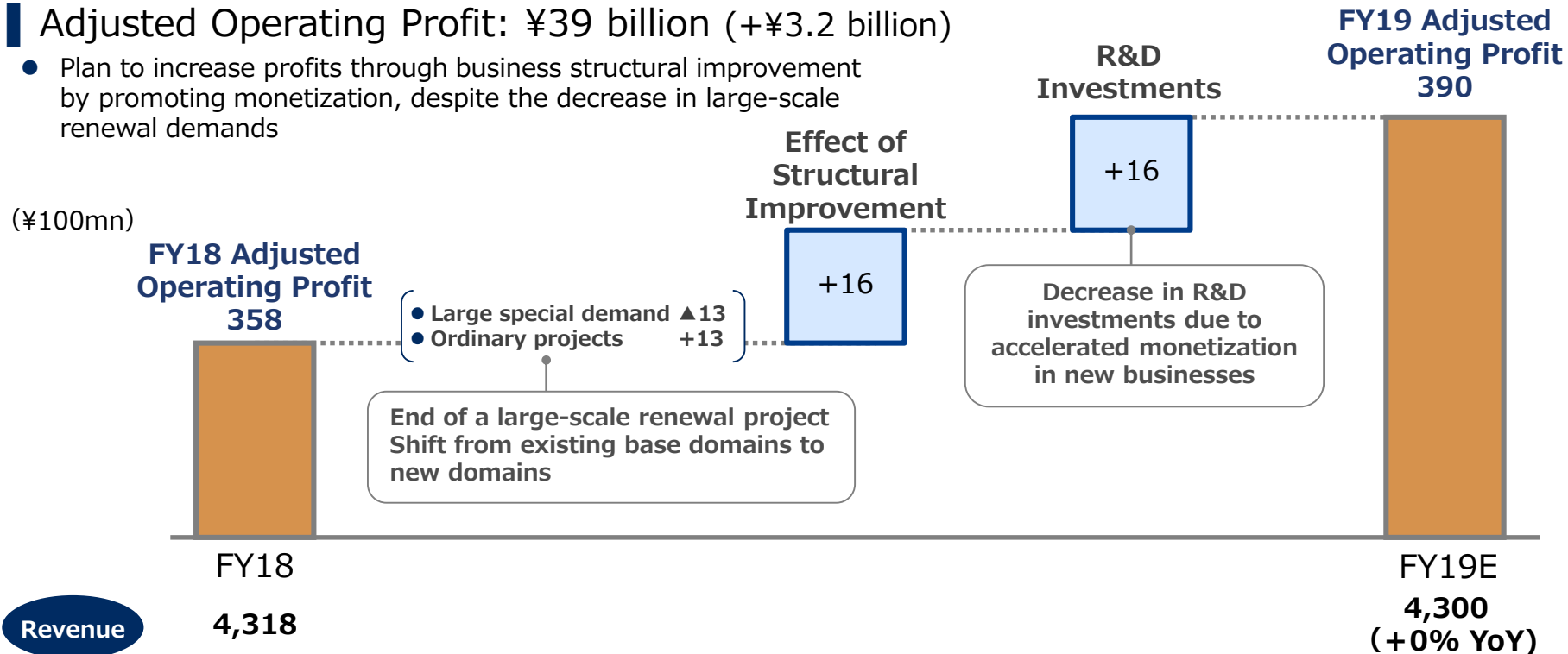
\Orchestrating a brighter world  **NEC**

# FY2019 Outlook

## ▌Revenue: ¥430 billion (+0%)

- The year-before level secured by offsetting a decrease in large special demand

## ▌Adjusted Operating Profit: ¥39 billion (+¥3.2 billion)

- Plan to increase profits through business structural improvement by promoting monetization, despite the decrease in large-scale renewal demands

（¥100mn）

**FY18 Adjusted Operating Profit 358**

- Large special demand ▲13
- Ordinary projects +13

**End of a large-scale renewal project Shift from existing base domains to new domains**

**Effect of Structural Improvement**

+16

**R&D Investments**

+16

**Decrease in R&D investments due to accelerated monetization in new businesses**

**FY19 Adjusted Operating Profit 390**

FY18

FY19E

**Revenue**    4,318

4,300
(+0% YoY)

\Orchestrating a brighter world    **NEC**

# Business Strategy for FY2019

**Business Strategy**

- **Secure profitability of base businesses with firm executions**
- **Shift to new IT services business (for the 3rd platform)**
- **Expand NEC Value Chain Innovation**

**Focus Initiatives**

- **Establish a business model based on the VCI\* platform in each business domain and expand revenue**
- **Enhance resources for new businesses and strengthen relationships with partner platforms (mega cloud vendors)**

\* NEC Value Chain Innovation

\Orchestrating a brighter world   **NEC**

# Service Platforms and Solutions that Support NEC Value Chain Innovation

## Markets

**Connected Manufacturing**

**Intelligent Logistics & Mobility**

**Smart Retail CX**

**Smart Venue CX**

**Digital Finance**

### Creation of new customer values / Solutions for various business domains

## Solution Examples

**Connected Manufacturing**
- NEC Industrial IoT Platform
- Product demand forecast/ Service parts demand forecast
- PLM/SCM/MES

**Intelligent Logistics & Mobility**
- Management service for logistics resources
- NEC Smart Analytics for Railway Operation & Maintenance

**Smart Retail CX**
- Payment service with face recognition
- Forecast of demand for daily necessities
- Image analyses solution for the shelving allocation

**Smart Venue CX**
- Value improvement solution for venue
- NEC volunteer support service

**Digital Finance**
- Digital KYC
- AI Fraud detection

### Supply and Demand Optimization Platform

## Service PF

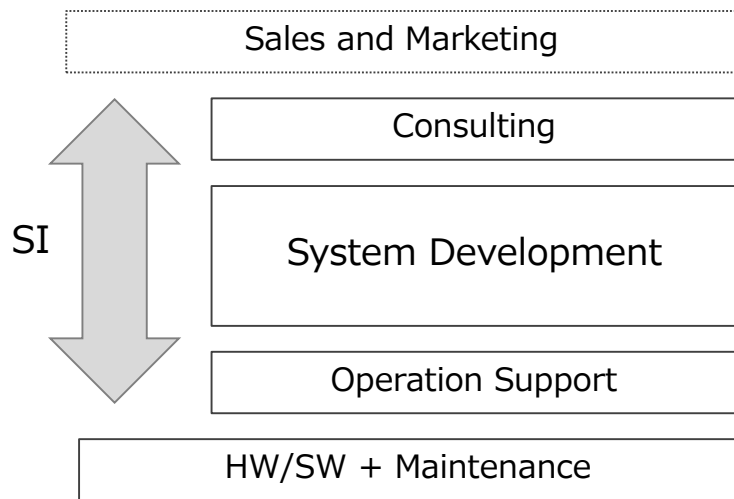### Service Platforms that Support NEC Value Chain Innovation (VCI* Service Platform)

* NEC Value Chain Innovation

\Orchestrating a brighter world  NEC

# Shift to Service Platform-based Business

## Shift to a high-speed and more efficient business model through business transformation

### Base Business
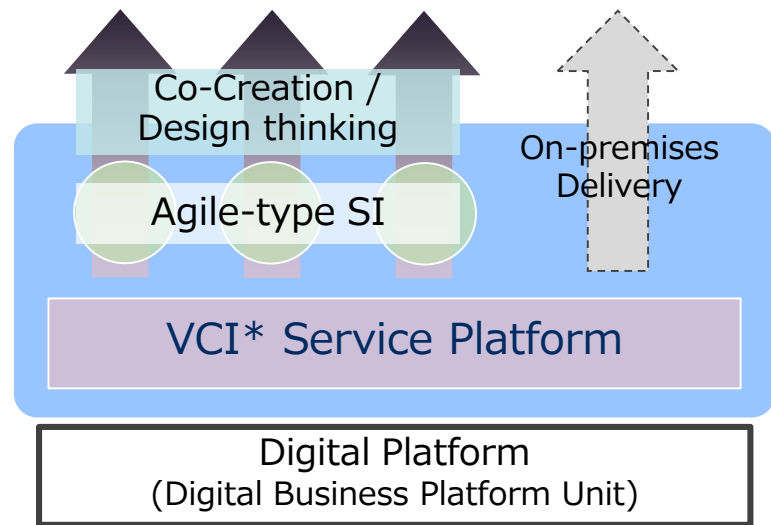
Sales and Marketing

Consulting

System Development

Operation Support

SI

HW/SW + Maintenance

Delivery: 1-2 years / Pricing: Cost-based

**DX**

### Service Platform-based Business

Co-Creation / Design thinking

On-premises Delivery

Agile-type SI

VCI* Service Platform

Digital Platform
(Digital Business Platform Unit)
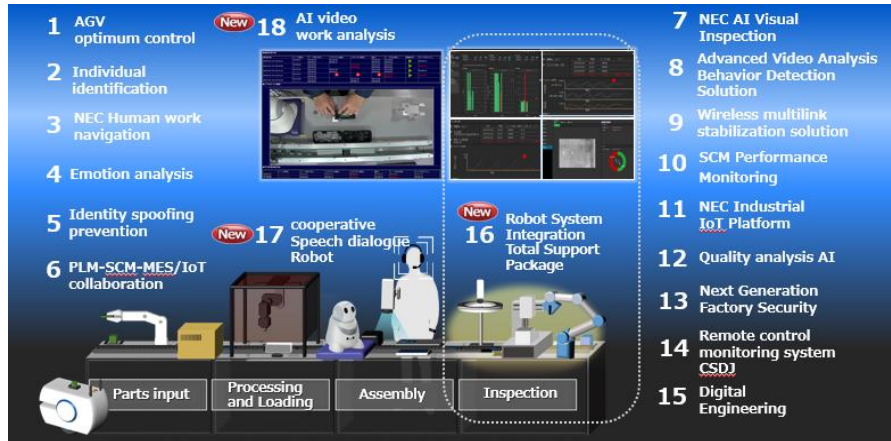
Delivery: 1-2 months / Pricing: Value-based
(Subscription, revenue share, etc.)

\* NEC Value Chain Innovation

\Orchestrating a brighter world **NEC**

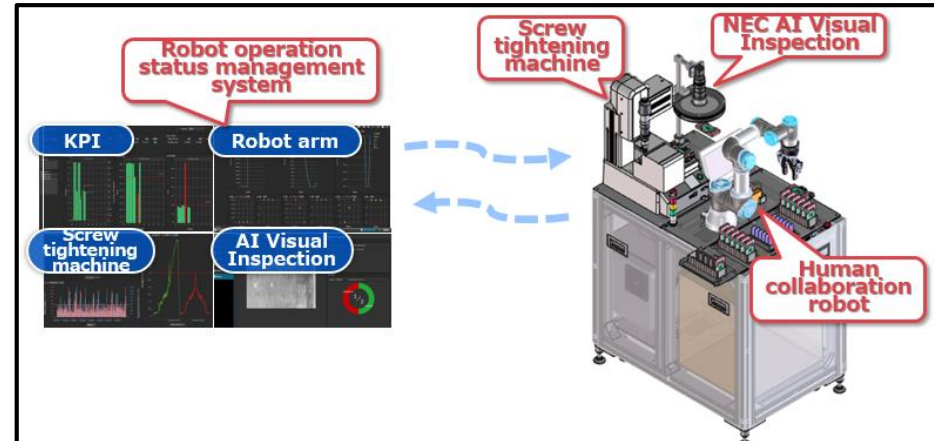**Connected Manufacturing**

- NEC DX Factory's concept:
"Future of manufacturing" driven by digital transformation

- Implementation of AI and IoT solutions in the domains of design, production and logistics

- Strengthening solutions by adding "Total support packages in introducing robots", etc.
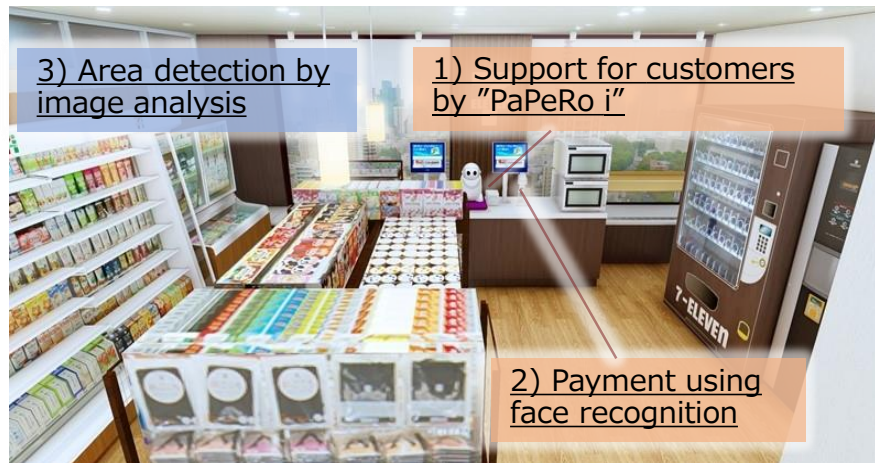
**Outline of "NEC DX Factory"**



1 AGV optimum control
2 Individual identification
3 NEC Human work navigation
4 Emotion analysis
5 Identity spoofing prevention
6 PLM-SCM-MES/IoT collaboration
(New) 17 cooperative Speech dialogue Robot
(New) 18 AI video work analysis
(New) 16 Robot System Integration Total Support Package
7 NEC AI Visual Inspection
8 Advanced Video Analysis Behavior Detection Solution
9 Wireless multilink stabilization solution
10 SCM Performance Monitoring
11 NEC Industrial IoT Platform
12 Quality analysis AI
13 Next Generation Factory Security
14 Remote control monitoring system CSDJ
15 Digital Engineering

Parts input | Processing and Loading | Assembly | Inspection

**"Total support packages in introducing robots"**



Robot operation status management system
Screw tightening machine
NEC AI Visual Inspection
KPI
Robot arm
Screw tightening machine
AI Visual Inspection
Human collaboration robot

Orchestrating a brighter world **NEC**

Opened the first "labor-saving store" jointly with Seven-Eleven Japan Co., Ltd., using NEC's AI and IoT technologies. Aim for rollout to stores for micro-market

Aim to achieve labor saving with systems to support employees, in addition to implementation of systems to support customers' comfort and convenience, such as "payment by face recognition" NEC introduced for the first time in Japan



3) Area detection by image analysis

1) Support for customers by "PaPeRo i"

2) Payment using face recognition



4) Enter the store with walkthrough face recognition

5) Target ad signage

7) AI-based proposal of purchase order

6) Management of equipment operation

Orchestrating a brighter world NEC

- Provide "Digital KYC," a personal identification service that supports identification procedures required for account openings, to financial institutions and FinTech operators

- Identify individuals speedily and securely online with easy operations using a smart phone app by leveraging our face recognition technology that triumphs as the world's No.1 accuracy**

- Establish anti-spoofing technology to reduce the risk of illegal use by other persons

1. Take a face picture with driver's license
2. Take a picture of the thickness of driver's license
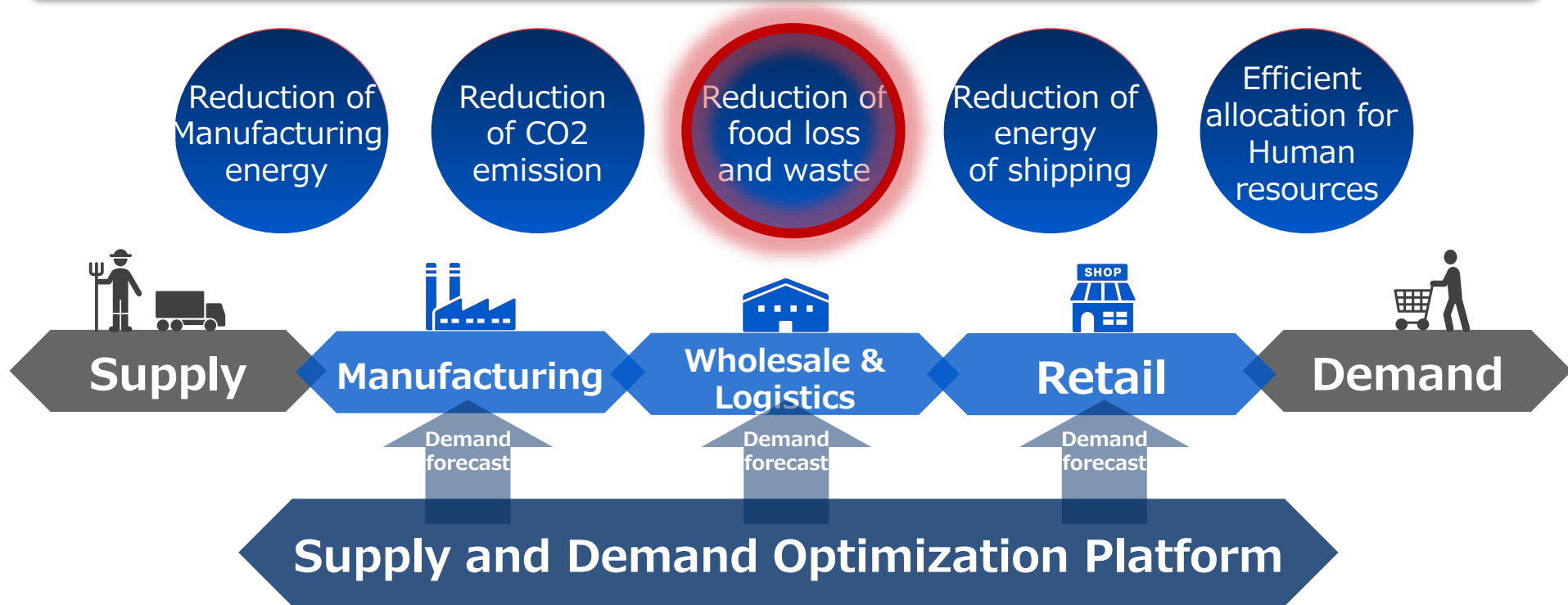3. Fill in the required items
4. Complete

*Know Your Customer: Identification procedures required when financial institutions open accounts, customers conduct risky transactions or financial institutions continue to monitor customers

**Result of a contest by the U.S. National Institute of Standards and Technology (NIST)

# Shift to New Business Structure: Case 4 (Optimization of Entire Value Chain)

**Enhance accuracy of demand forecast and optimize production, inventories and orders by sharing and using various data through value chain**

- Reduction of Manufacturing energy
- Reduction of $CO_2$ emission
- Reduction of food loss and waste
- Reduction of energy of shipping
- Efficient allocation for Human resources

**Supply** → **Manufacturing** → **Wholesale & Logistics** → **Retail** → **Demand**

Demand forecast

Demand forecast

Demand forecast

**Supply and Demand Optimization Platform**

\Orchestrating a brighter world    **NEC**

# Increase Personnel for New Business: Securing Quantity and Quality

## ■ In-house Initiatives

### To strengthen system-related talent

**Assign younger and selected members** to be **dedicated** to DX development projects

Foster agile-type SEs
・Promote project experiences and acquisitions of certificates

Promote fostering of **digital-oriented talent**, aiming to triple from FY2018 to FY2020
・Cloud engineers　・Security engineers
・Analysis coordinators/Data scientists

### To strengthen sales-related talent

Foster personnel who can execute a recurring model by implementing **design thinking + a lean-type business creation**

Foster **personnel for** business **creation and producing**, starting from management of investments for new businesses

Strengthen personnel to **cope with ecosystems,** starting from **alliances with cloud vendors**

## ■ Cooperation with External Parties and Partners

| | |
|---|---|
| **1) Cooperation with partner companies** | **Design comprehensive cooperation, accept and educate members** |
| **2) Cooperation with students and overseas companies** | **Strengthen education curriculums to enhance relations with partners, ally with overseas candidate companies** |

Orchestrating a brighter world　NEC

# To Achieve Mid-Term Management Plan

## ■ Numerical Targets（FY2020）

| | |
|---|---|
| **Revenue** | **¥440bn-¥450bn** |
| **Adjusted Operating Margin** | **9% (aim at 10% for the medium term)** |
| **Additional Target** | **Continuous control of risk costs** |

## ■ Strategy to Achieve Targets

**Execute the base business steadily**

**Structural shift to new businesses (the 3rd platform, NEC VCI*)**

**Further optimize the base business**

**Pursue a profitable business model (NEC VCI*)**

**Enhance quality from a proposal phase and on-site capabilities**

**Establish risk management in new businesses**

\* NEC Value Chain Innovation

\Orchestrating a brighter world **NEC**

**Shift our business structure by capturing a major change in components of the market**

**Execute the base business steadily and expand new businesses (the 3rd platform, NEC VCI*)**

**Aim at growth of the entire business by aiming to be a category leader in domains where NEC VCI* focuses**

* NEC Value Chain Innovation

\Orchestrating a brighter world   **NEC**

# \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

NEC