

Network Solution Business

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NEC Networks & System Integration Corporation
(TSE: NESIC, 1973)

Self Introduction



Yukinobu Noguchi

Senior Vice President, Executive General Manager,
Network Solutions Business Unit

Career summary

- Joins the Company in 1987
- Successively held various experiences regarding network infrastructure including construction of central switching systems for Japan/overseas markets, SE of network solutions field and responsible post of telecom. carriers and social infrastructures business.
- Assumed his current position in 2023

Overview of the Network Solutions (NWS) Business



Business vision

We offer advanced technologies with high specialty to connect society from the floor of the ocean to the far reaches of outer space in optimal forms to help realize a digital society with greater security and convenience.

Carrier related business

Main customers and markets

- Telecommunications carriers
- NCCs
- Providers

Strengths of the business

- Advanced technologies capabilities (networks, IT, security, etc.)
- Multi-vendor SI capabilities
- Wireless technology capabilities (Wi-Fi, 4G, 5G, local 5G, etc.)

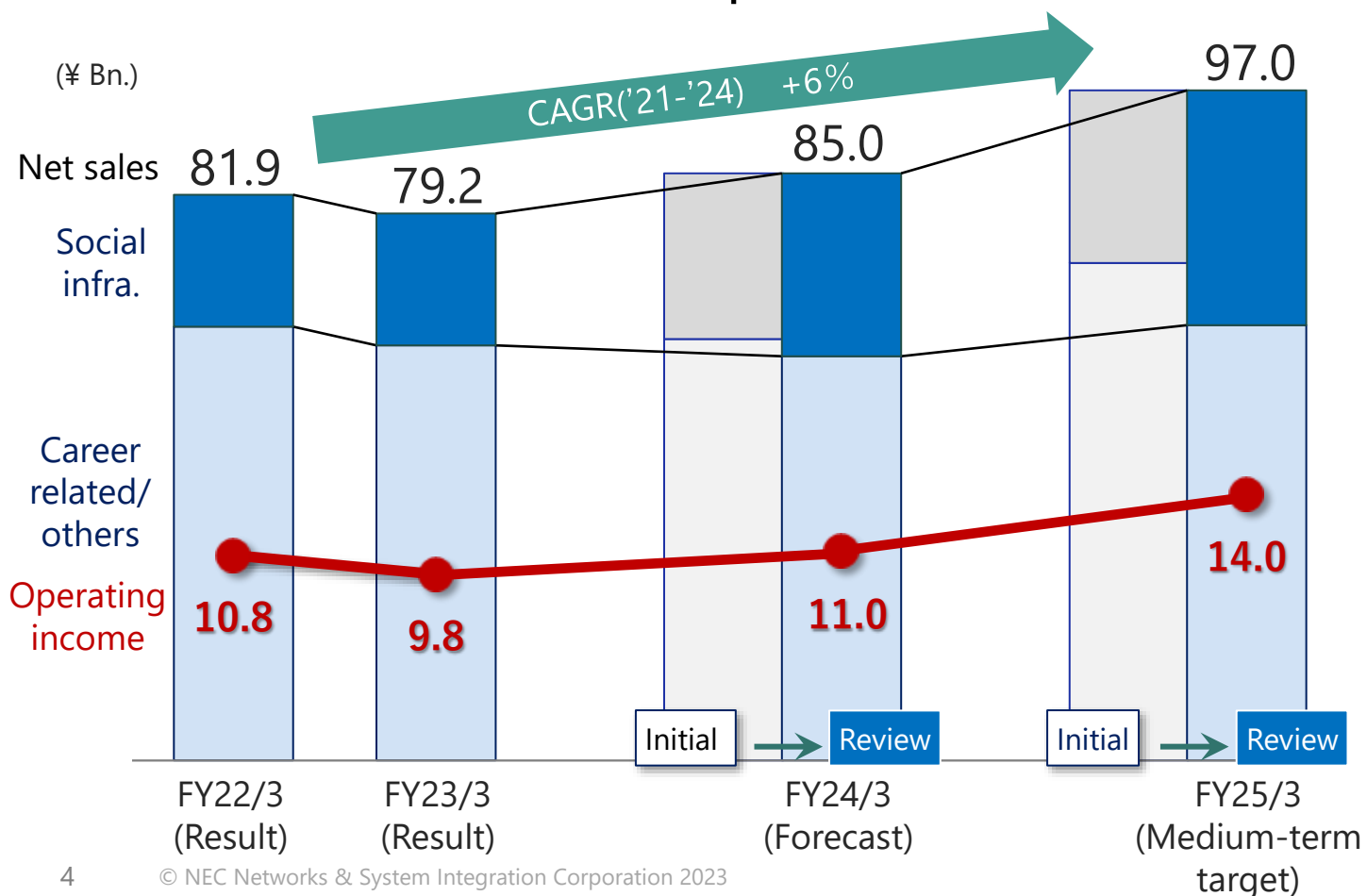
Social infrastructure business

- Space and defense
- Marine
- Media

- Industry know-how through collaboration with NEC
- Customer base cultivated over many years
- Specialized technological capabilities (satellite communications, marine communications/observation, etc.)

Medium-Term Management Plan and Progress of Business Results (NWS)

We aim to achieve the targets of the Medium-Term Management Plan by strengthening the social infrastructure business where investment is growing, at a time when telecommunications carriers have curbed investment and delays in the social implementation of local 5G have become apparent.



| Results |
|---|
| <ul style="list-style-type: none"> ● Space and defense Entered the NW/IT-SI fields ● Marine Received first orders for wind power-related cable landing conduit work, and business negotiations picked up steam |
| Issues |
| <ul style="list-style-type: none"> ● Carrier related business Enhancing solutions targeting areas of continued investment ● Social infrastructure business Exploring new fields through the repurposing of technology, and the development of human resources |

Carrier Related Business

Despite a difficult business environment, we will improve our response to areas receiving continued investment, and maintain or expand business growth.

Business environment

Telecommunications carriers continue to be reluctant to make infrastructure investments.

However, investment in business challenges, such as **corporate services, network toughening and improve operating efficiency** continues.

Infrastructure Business

Focus on areas receiving continued or expanded investment

Mega carriers

Coordinate with KNSI to provide solutions for streamlining operations

NCCs

Measures to deal with increased traffic (improvements to optical networking)

Local 5G

Pre-emptive introduction from mission-critical areas that require high levels of security and stability

Power plants



Railways



Airports and marine ports



Healthcare



etc.

Carrier Related Business: Examples of the Implementation of L5G in Society

Growing expectations for autonomous operation, robot remote control, high-resolution imagery, etc. in the area of critical infrastructure

(1) Power plants



- Remote operation of drones
- High-resolution video monitoring

Low latency

High speed and large capacity

(2) Railways



- Detection of abnormal objects along the rail line
- Remote real-time communication

Security

Low latency

(3) Airports and marine ports



- Improved logistics efficiency and autonomous operation
- Video-based physical security

Security

High speed and large capacity

(4) Healthcare



- Remote control of medical robots
- High-resolution video from ambulances

Security

Resistance to interference

Social Infrastructure Business: Business Environment

Marine

- In addition to measures to handle increased traffic volume (network toughening), marine-related budgets have expanded in the area of security (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism, etc.)
 - Marine-related Budget (Cabinet Office)
FY2023 **902.3 billion yen** (including FY2022 amendments; **up 23.8% year on year**)
 - Digital Garden City Digital Highway (Ministry of Internal Affairs and Communications)
FY2023 **50 billion yen**
 - Global sizes of the submarine cable market
FY2025 3 billion dollars (roughly equal to **420 billion yen**)

Space and defense

- Market resurgence due to increased security and space budgets
 - Defense-related expenses (budget for "first year" of fundamental reinforcement of defense capabilities)
FY2023 **6.6 trillion yen** (**up 27.4% year on year**)
 - Space-related (focus on security / improving national land resilience)
FY2023 **611.9 billion yen** (**up 17% year on year**)

Social Infrastructure Business: Marine

Leveraging marine-related experience spanning more than five decades and technological capabilities to expand into a newly growing markets



Social Infrastructure Business: Example of a Seabed Observation and Communications System

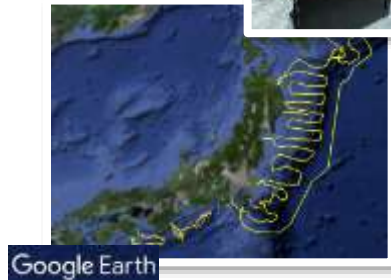
Track record of being the only domestic provider of fully integrated marine services cultivated through collaboration with NEC

Development of submarine seismometer network

Utilization of NESIC-developed Seabed Observation System



- Observation system development
- Surveying and construction placement locations
- Laying of cables
- Construction of cable landing stations
- Onshore and submarine maintenance and operation



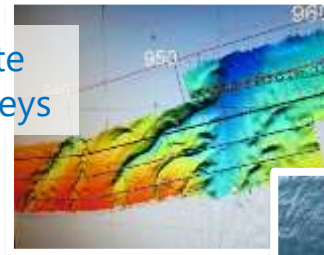
Google Earth

Action to develop more sophisticated information collection capabilities

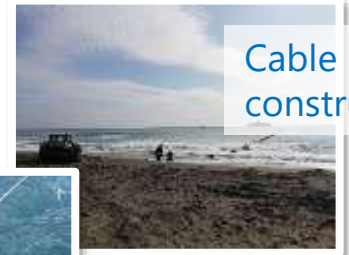
Participation in large-scale submarine cable project

Comprehensive Project Management for the Ocean, from Domestic to Global Endeavors

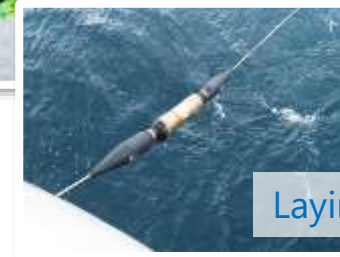
Route surveys



Cable landing construction



Laying of seabed cables



Expanding into new areas such as offshore wind power generation

Social Infrastructure Business: Space and Defense

Accelerate business expansion leveraging the security sector and strengthening national land resilience as tailwinds

Existing businesses

Key Points of Business Expansion

Installation, setup and operation of proprietary NEC products

- Antennas
- Control facilities
- Proprietary defense products
- Ground station monitoring
- Operation and maintenance

NEC's Areas of Focus

Advanced security / ICT

National Defense Strategy to strengthen defensive capabilities

Entry into new domains

Utilization of space-related private sector

Repurposing of carrier technologies

Product expertise via participation in the development process of NEC

Multi-vendor skills

Entry into New Network/IT-SI Fields

Pursuing businesses in greater depth in existing business domains

Providing one-stop services from design to operation

Social Infrastructure Business: Examples of Space and Defense (Satellite and Terrestrial)

A vast track record of projects involving the public and private sector with integrated handling from ground stations to satellites

Ground

Earth-station design and construction
Rocket launch support (monitoring and operation)



Tanegashima Space Center

Telemeter Antenna
Ogasawara
Downrange Station



Control

Planning / operational verification
/ base construction



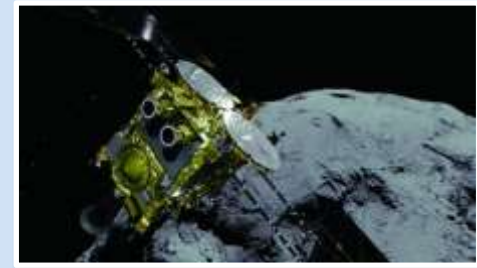
General command
building control
room

ISS Experiment
Module KIBO



Satellite

Design, development and satellite
operation



Hayabusa 2

Advanced Land
Observing
Satellite



Image provided by JAXA

Cultivating Advanced and Specialized Human Resources

| | | |
|---------------------------|--------|--------|
| Advanced DX professionals | 2023/3 | 2025/3 |
| | 21 | 50 |

| | | |
|-------------------------|--------|--------|
| Beyond 5G professionals | 2023/3 | 2025/3 |
| | 605 | 700 |

Personnel supporting businesses, improvements to safety, quality, and productivity

● Develop DX and beyond 5G network engineers

DX personnel that use AI, IT and data to solve different problems



● Advanced and specialized human resources in FY2025/3 Target: 750 (up 124 from FY2023/3)

- Advanced DX professionals : 50 (+29)
- Beyond 5G professionals : 700 (+95)
 - PM human resources
 - Network engineers : 270 (+30)
 - (Marine, Space and Defense, Carrier Networks) : 430 (+65)

● Improve safety and quality

Safety and quality based on the use of DX (data utilization, remote management and AI determination)

● Accelerate streamlining with the use of DX

Business streamlining through AI and automation, developing personnel into strategic staff by improving their digital literacy

Cautionary Statement

Forecasts and targets of results mentioned in this document are future estimates and are thus inclusive of risks and uncertain factors since they are not based on definite facts. Please be aware that a variety of factors could cause actual results to differ significantly from those projected. The major factors affecting actual results include the economic climate and social trends surrounding the business of this Company's group, consumer trends vis-a-vis systems and services provided by this Company's group, as well as pressure to lower prices and ability to cope with the market in response to intensified competition.

Factors affecting results are not limited to the ones mentioned above.

There was segment change in April 2022. Segment information for the FY 2022/3 have been recalculated to reflect the change in the content of business segments.

NEC

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<https://www.nesic.co.jp/english/ir/>