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.
## Table of Contents

1. Public Business Overview  
2. Business Environment  
3. Focus Domains  
4. Initiatives for Future Growth
1. Public Business Overview
Public Business Overview

Focus on Solutions for Society
Transformation into a “Social Value Innovator”

Solutions for Society

Public

- Telecom Carrier
- Enterprise
- Smart Energy

Innovation of social infrastructure via ICT

FY2014 Sales Composition Ratio

Public

28%
Public Business Domains

ICT-based Solutions for Society primarily in the infrastructure domain

- **Government**
- **Community**
- **Financial Institution**

Submarine cables (Telecom Carrier)

- **Infrastructure diagnosis system**
- **Building energy management**
- **Infrastructure surveillance**

- **Digital TV transmitters**
- **Electronic medical records systems**
- **Social security and tax systems**

- **TV program production/reporting/transmission systems**
- **Dam/river remote monitoring systems**
- **Leak detection**

- **Satellite communications, earth observation**
- **Outdoor communication systems**
- **Space**

- **Banking systems**
- **Bank ATMs**

- **Air traffic control system**
- **Runway safety monitoring**

- **Banking systems**
- **Bank ATMs**

- **School, education systems**

- **Government agencies**

- **Dams, water supply**

- **Fire prevention digital radio systems**
- **Firefighting command systems**
- **Disaster prevention systems**

- **Self Defense Forces**

- **Cloud services for municipalities**

- **Post offices**

- **Schools**

- **Municipalities**

- **Harbors**

- **Railways**

- **Roads**

- **Banks**

- **Critical infrastructure**

- **Broadcasting towers**

- **Broadcasters**

- **Hospitals**

- **Police**

- **Post offices**

- **Airports**

- **Seas, rivers**

- **Harbor surveillance**

- **Underwater surveillance**

- **Railway network systems**

- **Traffic control system**

- **ETC**

- **Postal tracking systems**

- **Fire departments**

- **Government agencies**

- **Schools**

- **Municipalities**

- **Cloud services for municipalities**

- **Post offices**

- **Schools**

- **Municipalities**

- **Cloud services for municipalities**
Main Customers

- **Government agencies**: Central government organizations, Government-affiliated organizations
- **Municipalities**: Local authorities, Fire departments, Waterworks Bureaus, etc.
- **Educational institutions**: Universities, elementary, junior and senior high schools
- **Medical institutions**: Hospitals, clinics
- **Transportation companies**: Operators of airports, railways, buses, and expressways
- **Financial institutions**: Banks, trust banks, credit unions, insurance companies, securities, JA, non-bank institutions
- **Broadcasters, media**: Broadcasters, newspaper companies, publishers
Business Performance

Maintaining an average annual growth rate of more than 10%, NEC was able to achieve its Mid-term Plan Sales target of 780 billion yen one year earlier in FY2014 for public business.
Major Achievements

Exhibited stable performance in NEC’s areas of strength

<table>
<thead>
<tr>
<th>Main areas</th>
<th>Main achievements (★ Contributors for outperforming MTP targets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative services</td>
<td>★ Acquired order from Japan Agency for Local Authority Information Systems (J-LIS) for “My Number” intermediate server platform</td>
</tr>
<tr>
<td></td>
<td>● Ongoing renewal of systems for municipalities; increasing demand for face recognition as security measure</td>
</tr>
<tr>
<td>Defense</td>
<td>★ Acquired order for field communication system through FY2014 Supplementary Budget</td>
</tr>
<tr>
<td>Public Safety</td>
<td>★ Secured sales for special demands of fire prevention radio system digitalization</td>
</tr>
<tr>
<td></td>
<td>● Provided face recognition solution for Arizona Department of Transportation</td>
</tr>
<tr>
<td></td>
<td>● Conducted trials for disaster prevention information system using digital terrestrial broadcasting in the Philippines</td>
</tr>
<tr>
<td>Transportation, Water</td>
<td>● Built a mission-critical network using SDN*1 for West Nippon Expressway Company Limited (NEXCO-West)</td>
</tr>
<tr>
<td></td>
<td>● Conducted trials on effectiveness of water leak monitoring services in collaboration with City of Arlington, Texas</td>
</tr>
<tr>
<td>Broadcasting</td>
<td>● Acquired order for digital terrestrial TV transmitters from PBS TV*2, Thailand</td>
</tr>
<tr>
<td></td>
<td>● Constructed environment for live 4K digital terrestrial broadcasting for Brazil and UK TV stations</td>
</tr>
</tbody>
</table>

*1 SDN: Software Defined Networking  
*2 PBS TV (HQ: Bangkok, Thailand, Thai Public Broadcasting Service)
2. Business Environment
“My Number” and security demands are driving the public ICT market in Japan, with stable growth at approx. 2% expected.

(In trillion yen)

- 2014: 8.9
- 2015: 9.2
- 2016: 9.3
- 2017: 9.5
- 2018: 9.6

2015-2018 CAGR 1.6%

*CAGR: Compound Annual Growth Rate


The Gartner Report(s) described herein, (the "Gartner Report(s)") represent(s) data, research opinion or viewpoints published, as part of a syndicated subscription service, by Gartner, Inc. ("Gartner"), and are not representations of fact. Each Gartner Report speaks as of its original publication date (and not as of the date of this Prospectus), and the opinions expressed in the Gartner Report(s) are subject to change without notice.
# Social Demands for Security

Increasing security needs arising from legislation improvement, responding frequent occurrence of security incidents

## Government
- Rise in cyber attacks targeting government agencies
- Reinforcement of the National Center of Incident readiness and Strategy for Cybersecurity (NISC)

## Municipalities and Public agencies
- Actualization of needs for security measures following introduction of the "My Number" system
- Sudden increase in need for surveillance of transportation infrastructure due to arson attacks and other incidents/accidents

## Society
- Increase in threats from terrorist and real/cyber attacks
- Proliferation and rise in amount of damage from Internet banking crimes
- Intensified damage from natural disasters and increased needs for disaster prediction
Medium- to Long-Range Direction

Keep the growth momentum by seizing the major, medium- to long-term demand trends

Sales

Existing business

Fire prevention radio

My Number

Public Safety

● Water ICT
● Optimization of operations for critical infrastructure
● Medical, healthcare
● Finance (Fintech)

Initiatives for future business expansion

Business growth along the major demand wave

Software radio development

Experience in implementing government and municipal systems

Accumulation of recognition technologies and cyber security measures

R&D and field trials

3. Focus Domains
① "My Number"
Aim to achieve 100 billion yen in sales out of the 360 billion yen*1 market for infrastructure development from 2014 to 2016

*1 NEC estimation

*2 Government Security Operation Coordination team

*3 Disclosure System of Personal Information Corporation Record

*4 as of July 2015
Aim to achieve 100 billion yen in sales out of the 360 billion yen*1 market for infrastructure development from 2014 to 2016.

(Government systems)

140B yen*1

(Security measures)

60B yen*1

(Municipal systems)

160B yen*1

*1 NEC estimation

140B yen*1

2014 to 2016

2017 onwards

© NEC Corporation 2015
Market Scale of My Number-Related Systems

Aim to achieve 100 billion yen in sales out of the 360 billion yen*1 market for infrastructure development from 2014 to 2016

(Target) 100B yen
(FY2014-16, including security)

*1 NEC estimation
NEC’s Strengths in the My Number Market

Deploy knowhow on implementation of mission-critical systems for local governments nationwide

**NEC’s strengths**

- **Knowhow gained through implementation of mission-critical systems for governments**
  - Intermediate server platform
    - NEC independent contract
- **Wide experience in implementing mission-critical systems for local authorities**
  - Approx. 20% market share

**Expansion measures**

- **Expansion to intermediate server business**
  - Information delivery network system
  - Shared government NW
- **Local authorities**
  - (1,743* organizations)
- **National agencies**
- **Related organizations**
- **Intermediate servers**
  - Government agencies
  - Related organizations
- **Municipality intermediate server**
- **J-LIS** (Japan Agency for Local Authority Information Systems)
  - Local Government Wide Area Network (LGWAN)
  - Municipalities
  - Prefectures

**Expansion measures**

- Prompt application to municipality business systems
- * as of July 2015

*Approx. 20% market share

© NEC Corporation 2015
Offer advanced security measures based on NEC’s security technologies

**Cyber security solutions**

1. Remote surveillance and analysis (SOC*)
2. Measures to improve convenience (SDN, thin-client terminals, etc.)
3. Municipal information security cloud
   - Municipality cloud with SOC functions

**Biometrics solutions**

- Adopt NEC’s face recognition solution to enforce rigorous personal identification procedures during issuance of Individual Number Cards at municipalities nationwide

---

*SOC: Security Operation Center**

---

To be used at all municipalities nationwide beginning January 2016
Market Scale of My Number-Related Systems

Support the creation of new services arising from the use of "My Number" by the private sector

Personal identification based on the My Number platform (Individual number card, face recognition)

- Retail
- Electricity, gas
- Broadcasting, communication
- Finance
- Healthcare
- Manufacturing
- Transportation
- Banks, securities
- Life, non-life insurance
- Distribution
- Manufacturing
- Transportation
- GSOC
- Information delivery network system
- Specific Personal Information Protection Commission
- Electronic private mailbox
- Government agencies
- Recognition platform
- Juki Net
- JPKI (公的個人認証)
- GSOC
- Intermediate server
- Juki Net
- LGWAN

〈Use by private sector〉
700B yen*

*NEC estimation
Support the creation of new services arising from the use of “My Number” by the private sector

My Number seminars for private enterprises
Held for 2,500 companies*

Contribute to promotion and penetration of My Number

*approx. total since Nov 2015

Use by private sector
700B yen*

*NEC estimation
Usage Example (My Number ATM)

Optimize and improve accuracy of ATM-based procedures. Deploy services based on rigorous personal identification, and improve convenience of citizens.

Use of ATM as a high-functionality terminal familiar to citizens

- Card reader
- Biometrics
- Multilanguage support
- Highly reliable network

NEC’s market share for Convenience store ATM 45%

Financial transactions (Open/change accounts)

Expanding services

One-stop services

Electronic private mailbox

NEC's market share for Convenience store ATM 45%

Financial transactions (Open/change accounts)

Expanding services

One-stop services

Electronic private mailbox
Usage Example (Healthcare Payments)

Use of My Number card for all transactions—from insurance card verification to payment

〈In the hospital: Usage flow〉

Reception → Insurance card verification using Individual Number Card
(Examination) → Payment using Individual Number Card
Payment

Insurance card verification using Individual Number Card

Individual Number Card Authentication Platform
- 4 basic information items*2
- E-certificate number
- Use ID, etc.

Japanese Public Key Infrastructure (JPKI) Service Center
List of disqualified users

Local authorities
- National Health Insurance beneficiary information
- Vaccination information

Credit companies
- Member information

Community healthcare network

From: MIC “Private sector utilization trial for public individual authentication services in the broadcasting and communication fields”

*1 Virtual Private Network
*2 Name, Address, Birth date, Gender
3. Focus Domains
② Public Safety
Increasing Security Risks in the IoT* Era

With the advancement of IoT, integrated protection combining physical and cyber spaces has become essential in maintaining stable operations of social infrastructure.

Internet

Threats in cyberspace (information theft, hijacking, etc.)

Government/Ad ministration
Power/ Gas
Water
Transportation
Broadcasting
Medical
Financial Institute

Physical threats (Unauthorized entry, terrorism, etc.)

*IoT: Internet of Things
Integrated Physical and Cyber Surveillance (Power Company Example)

Stabilize operations for entire facility through integrated monitoring of equipment operation status and of physical and cyber threats against facilities and equipment.

**Infrastructure diagnosis**
- Failure sign monitoring
- Structural deterioration assessment

**Facility surveillance**
- Intrusion detection

**Recognition of persons**
- Detection of suspicious persons

**Cyber security**
- Detection of cyber attacks
Backed by highly advanced human resource and information, NEC has the total capability to implement the most appropriate system

**Information**
- Collaboration with INTERPOL
- Practical cyber defense exercises CYDER*1
- Participation in Japan Cybercrime Control Center (JC3)

**Human Resources**
- Acquisition of Cyber Defense Institute
- Acquisition of Infosec
- Joint human resource development with Singapore government
- Sponsored course at the Japan Advanced Institute of Technology

**Technology**
- SDN collaboration (automatic communication interception)
- Biometrics collaboration (continuous monitoring of device users)
- Big Data collaboration (unknown attack countermeasures)
- Data encryption technologies (secured computing, quantum cryptography)

**System construction**
Experience in systems integration of many customers

*1 CYDER: Cyber Defense Exercise with Recurrence
NEC’s Strengths (Cyber Security 2)

Reinforcement of information-sharing in cyber security

Collaboration with INTERPOL
Collaboration with INTERPOL on global cyber security measures. Fusion of NEC’s advanced cyber security technologies with INTERPOL’s knowhow and international anti-crime network

Practical cyber defense exercises CYDER
Subcontractor for MIC “Analysis, Defense-model, and Exercise against Cyber Attacks” Project since FY2013. NEC prepares and implements exercise programs (Photo: October 2014 exercise)

Participation in Japan Cybercrime Control Center (JC3)
Consolidate experience of industry, academe, and government (police) in handling cyber threats. Disable the origin of threat to prevent damage. NEC Executive Vice President, Chief Marketing Officer, and Member of the Board Takaaki Shimizu appointed as Executive Director of JC3 (November 2014 Press Release)
NEC’s Strengths (Cyber Security 3)

Professional security experts to fight against professional cybercrime groups. Consolidate superior human resources, advanced information, and state-of-the-art technologies into the Cyber Security Factory

Cyber Security Factory

- 24h-365 day monitoring of networks
- System analysis and exercises using simulated environments
- Knowledge-sharing and analysis of cyber attack trends
- Development of advanced security technologies
- Training and improvement the skill level of security administrators
- Evidence preservation and inspection through analysis of digital information

(Started operations in June 2014)
NEC’s Strengths (Physical Security)

Having developed many unique technologies through long years of R&D, NEC takes pride in its high level of innovativeness.

World’s No.1*/ Only 1 technologies

- Face recognition
- Fingerprint identification
- Monitoring signs of malfunction (Big data analysis)
- Image sharpening, super-resolution
- 3D perimeter recognition, object recognition (Urban safety solution)
- Crowd behavior analysis
- Human behavior analysis, line-of-movement analysis
- Ultra-high sensitivity camera (harbor monitoring)
- Infrared camera (fever detection)

* Source: NEC
Generating synergy in business execution through joint marketing and solution development activities with the Global Safety Division, established in Singapore on April 2013.

- **Smart Cities**
- **Transportation systems**
- **Recognition solutions**
- **Surveillance services**

- **Optimization of garbage collection system through the use of sensor information (Spain)**
- **Fingerprint and face recognition for Police (U.S.)**
- **City surveillance service (Argentina)**
- **Train (subway) communication and surveillance systems for the Land Transportation Authority (Singapore)**

- **NEC Europe**
- **NEC (China)**
- **NEC America**
- **NEC Asia Pacific**
- **NEC Latin America**

**Global Safety Division**

**Public Business Unit**

**Collaboration**
NEC’s Strengths (Achievements in Public Safety)

For approximately 30 years, NEC has deployed more than 500 recognition systems in over 40 countries around the world, as part of its public safety business initiatives in a wide range of countries and regions.

- Face recognition for Police (India)
- Earthquake and tsunami detection using submarine cables
- Cloud systems for Disaster prevention and emergency
- Taiwan Power Company Disaster Prevention Center (Taiwan)
- Issuance of biometric passports
- Subway communication and surveillance systems for the Land Transportation Authority (Singapore)
- Face recognition for customs of 14 airports
- Systems for stadiums (Brazil)
- Visa information system (Greece)
- National ID system (South Africa)
- Optimization of garbage collection using sensor information (Spain)
- Fingerprint/face recognition for Police (U.S)
  - Western Identification Network (WIN)
  - Pennsylvania Justice network
  - Automatic fingerprint identification system for State and Municipal Police, etc., (many others)

Increasing number of public safety projects along with the growing safety needs around the world.
Argentina: Tigre City Surveillance Service Case Study

Reduction in crime rate after introduction of service; Horizontal deployment using this case study as a standard model for surveillance services

- Offer city surveillance system as a service to Tigre City, Argentina.
- Use of behavior detection engine to detect actions that could lead to crimes, such as loitering, riding double on motorcycles, riding without helmet, etc.
- Use of face recognition to identify blacklisted persons or missing persons in train stations, etc.
- **40% reduction in car thefts** after surveillance was implemented (Between first half of 2013 and first half of 2014)
Growth of Public Safety Business

Aim to achieve growth exceeding the market growth rate for security-related business

- Expansion in cyber security business through M&A
  - World’s No.1 biometrics technologies
  - Technologies nurtured through deployment in central government agencies

- 8% market growth rate

- Public Safety
  - $>80B$ yen
  - $110B$ yen

* Market growth rate is inferred from NEC research materials
4. Initiatives for Future Growth
Create new social solutions business, and conduct innovative new trial projects in collaboration with partners possessing knowhow in particular domains.

**Things (Superior technology)**
- Water hybrid sensor
- Invariant analysis
- SAR*/ satellites
  *Synthetic Aperture Radar
- Drone + sensor

**Trial projects**
- Prediction of water pipe deterioration
- Failure sign detection
- Wide-area infrastructure diagnosis
- Infrastructure inspection

**Phenomena (new value creation)**
- Water
- Critical infrastructure
- Healthcare
- Finance

**Approach from things (technologies) to phenomena (new value creation)**
- Healthcare ICT
- Diagnosis assist/ Monitoring patients
- New financial services

**New business creation that begins with a deep understanding of business, operations, and social problems**
Approach from things to phenomena  (Water ICT Case Study)

Leverage technologically superior hybrid sensors (vibration, water pressure, temperature) and partnering with industry vendors to enter Water ICT (Water AMI*) market.

Key asset development (Hybrid sensor)

Diagnosis of water pipe deterioration

Water leak detection trial in Texas State

Business rollout leveraging technological superiority

Understanding of things

Understanding of phenomena

Joint research on smart water management with Imperial College London

Operation service for water pipe assets

Water AMI network service

Deeper understanding of phenomena

Leak detection/deterioration assessment

Application of ICT to entire water ecosystem

Expansion of IoT coverage area

Social solutions based on sensor IoT network

AMI Network

Smart Meter/Lights/Sensors/Actuator

*AMI: Advanced Metering Infrastructure (Infrastructure for remote metering via the network)
Using the failure sign detection system based on sensor data as a market entry point, develop into consulting services that support the improvement of operations through an understanding based on acquired knowledge.
New business creation that begins with a deep understanding of business, operations and social problems (Medicine, healthcare)

Aim to provide total care, which goes beyond healthcare and supports an abundant lifestyle, and create the healthcare support services needed to deliver it.

Digital hospital

Understanding of phenomena through collaboration with industry experts

Business model verification

Total lifecycle care

Understanding of phenomena and business model creation through partnering with medical institutions and doctors

Co-creation of ideal phenomena

New value creation

Understanding of phenomena through collaboration with industry experts

Business model verification

Biometric authentication

Image analysis

Big Data

Combination of things

Applied technologies

Insurance customization

Ceremonial occasions

Reduction of waiting times

Simplification of history-taking

Continuity during change of hospitals

Treatment during emergency transport based on medical history

Anxiety relief

Food safety

Marketing

Patient card cloud system

Total NW/Security Delivery of different life services
New business creation that begins with a deep understanding of business, operations, and social problems (Finance Case Study)

Aim to create an abundant society with a more revitalized economy through financial services, and create new financial services through partnering with financial institutions

Provision of new services through Fintech

Understanding of phenomena through collaboration with industry experts

Business design through partnering with financial institutions and advanced enterprises

Business model verification

(Examples of model)

Microfinance

Crowdfunding

Mobile payment

Multi function ATM

Co-creation of ideal phenomena

Financial institutions

Advanced enterprises (Fintech)

Combination of things

Applied technologies

Revitalization of hidden capital demands and circulation of investment funds

Contribution to establishment of financial infrastructure in emerging countries

Alliance/Co-creation

NEC

IT

Construction knowhow
Summary

Public ICT market in Japan is foreseen to exhibit stable single-digit growth.

Focus on My Number-related business and public safety business as the current growth drivers:

- Aim for 100B yen in sales in My Number-related business for FY2014-16. Reset targets considering stable order intake.
- Leveraging NEC’s global and domestic strengths in public safety business, target of 100 billion yen* in FY2015.

Execute investments aimed at new domain expansion towards medium- to long-term growth.

*Including GSD (Global Safety Division)
Orchestrating a brighter world

NEC