NEC Innovation Day

NEC
Executive Vice President, CTO
and Member of the Board

Motoo Nishihara

\Orchestrating a brighter world NEC

Relentless Challenges Toward Innovation

December 17, 2021

NEC
Executive Vice President, CTO and Member of the Board
Motoo Nishihara

\Orchestrating a brighter world

NEC creates the social values of safety, security, fairness and efficiency to promote a more sustainable world where everyone has the chance to reach their full potential.

01 Global Innovation Unit Which Leads Innovation

02 Advanced Technologies to Drive Mid-term Management Plan 2025 / NEC 2030VISION

03 The Challenge of New Business Development

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03 The Challenge of New Business Development

Social Issues on a Global Scale

Era of VUCA

People's values, lifestyles, work styles, the nature of society and responses to the global environment are changing significantly.

VUCA : An acronym of volatility, uncertainty, complexity, and ambiguity

Social Issues on a Global Scale

Digitalization of real world

Physical First
（Existing constraints）

Digital Support
(Incremental improvement)

There is a limit to transformation

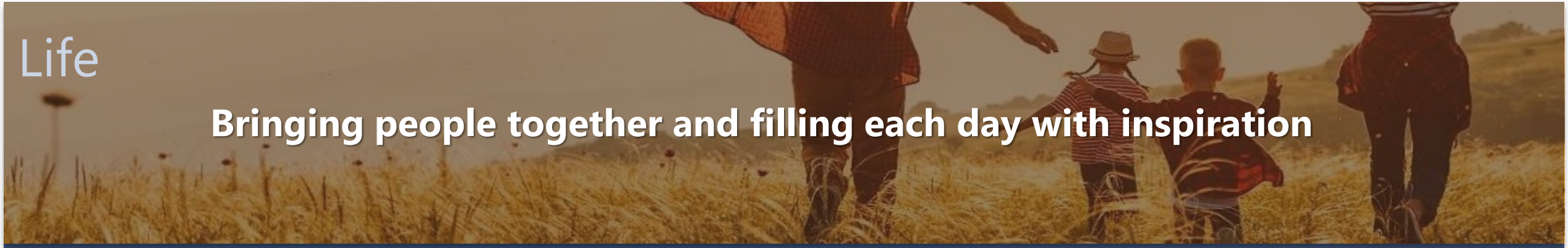
Toward Digital First

Digital First
（Powerful DX）

Physical Support
(Radical optimization)

Social consensus is important

NEC 2030VISION



Life

Bringing people together and filling each day with inspiration

Society

Nurturing prosperous cities with inclusive and harmonious societies

Creating sustainable societies by shaping new industries and workstyles

Sharing hopes that transcend time, space, and generational boundaries

Environment

Living harmoniously with the earth to secure the future

NEC's Challenges in the Era of VUCA

Era of VUCA

Society being complex and its future impossible to foresee

Shared vision for a brighter future

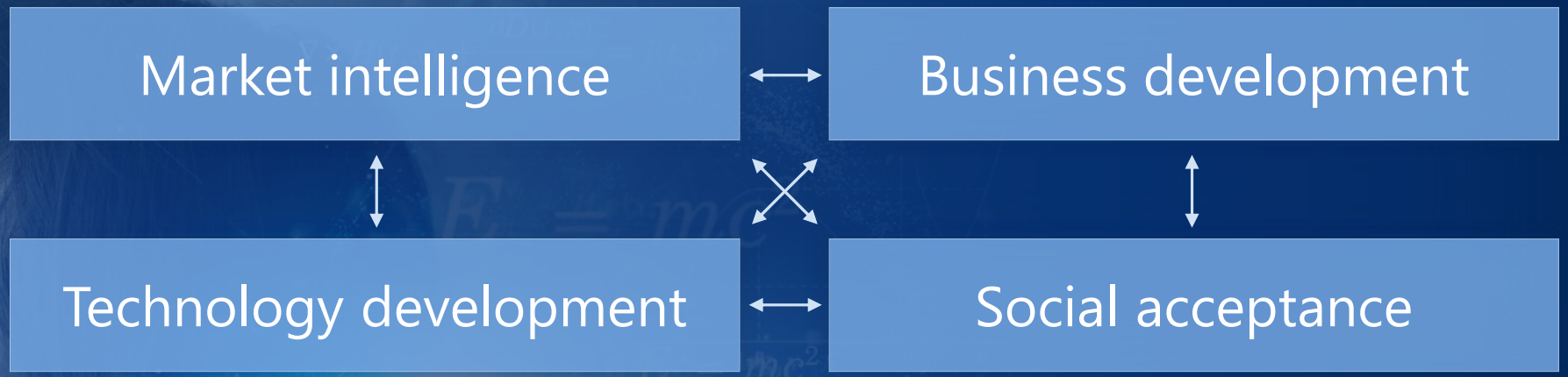
×

Technology

Realize NEC 2030Vision

Implementing Technology in Society to Realize NEC's Purpose

Social Implementation Scheme



Expand R&D co-creation

Create No.1 / Only 1 technologies as a source of innovation

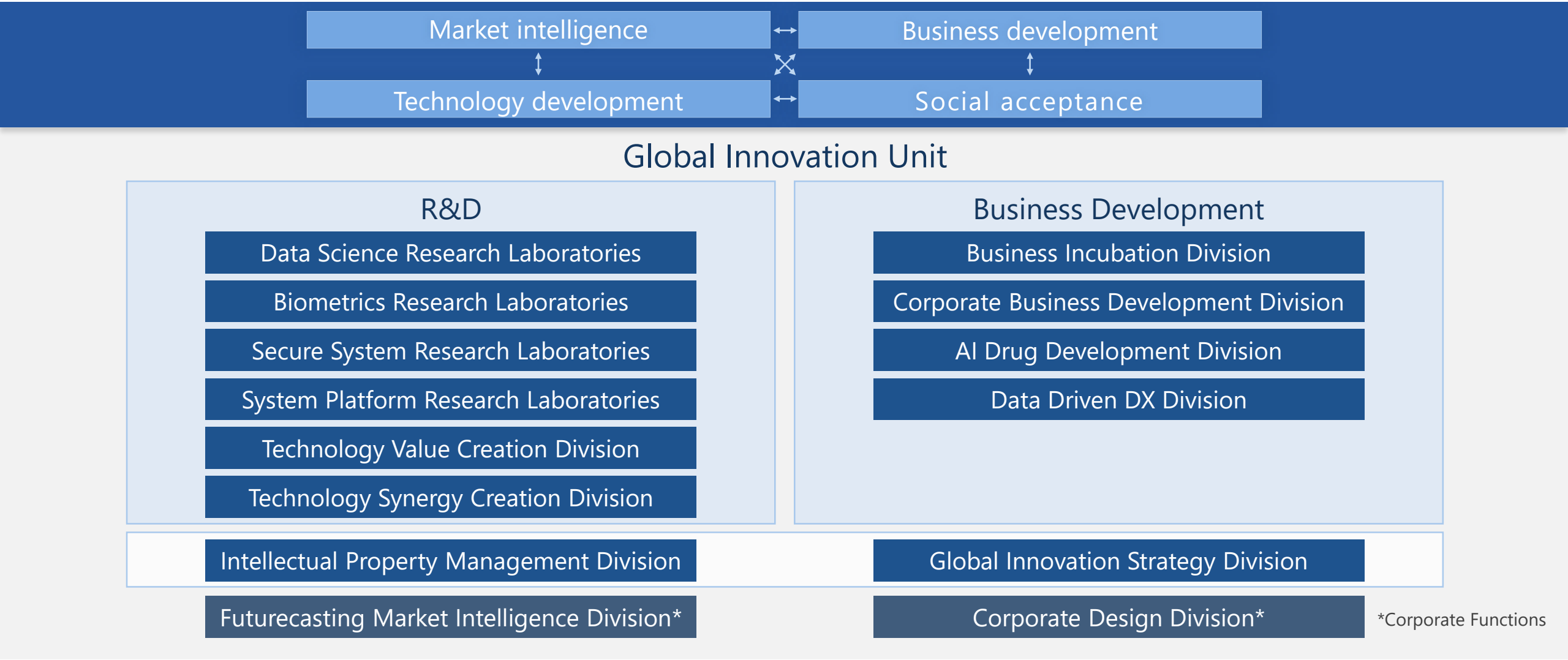
New business development

Create new businesses that becomes the next growth pillar

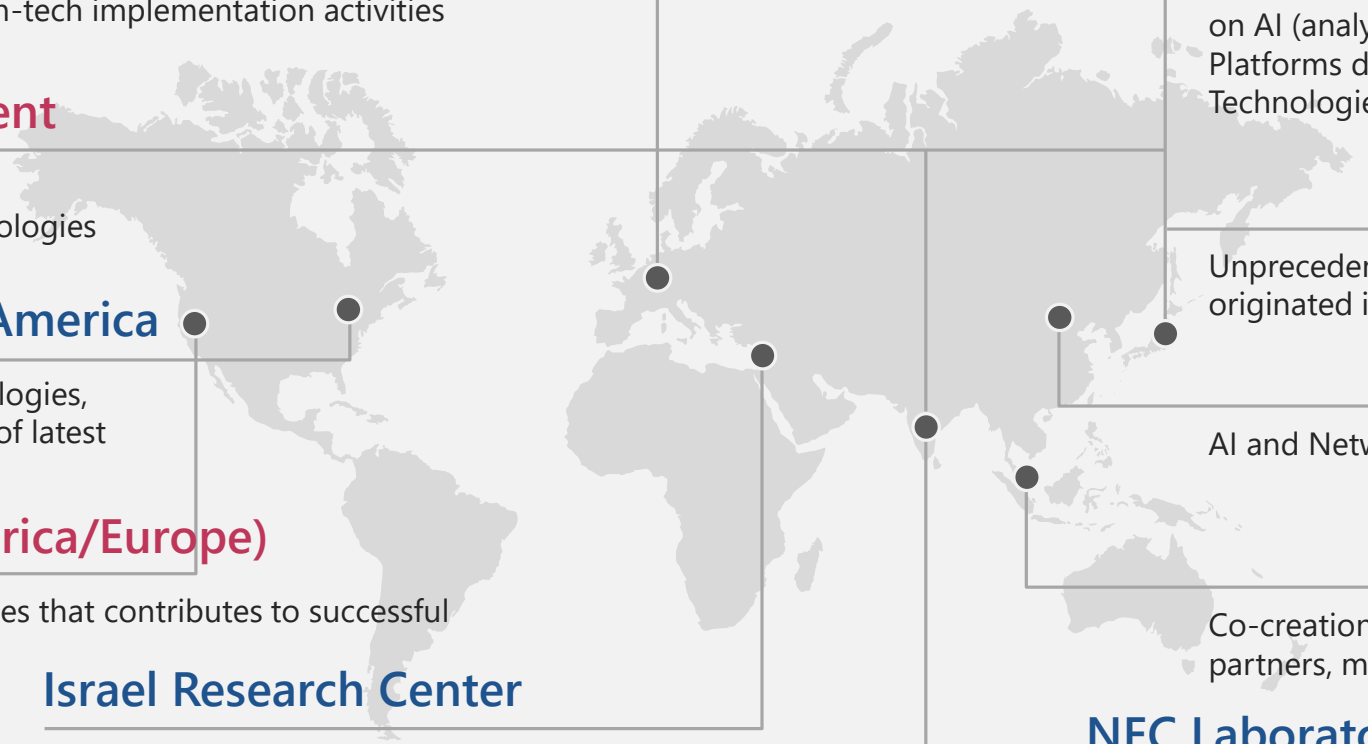
Thought leadership

Foster social acceptance by creating a shared vision for a brighter future

Achieve the Mid-term Management Plan 2025 and create new growth businesses



Expanding R&D and Business Development Opportunities, Utilizing Our Global Assets



NEC Laboratories Europe

Creation of solutions and technology
through EU projects and high-tech implementation activities

AI drug development

Personalized therapies
using Cutting-edge AI technologies

NEC Laboratories America

R&D of cutting-edge technologies,
taking locational advantage of latest
technological leader region

NEC X (North America/Europe)

Supports of startup companies that contributes to successful
business establishment

Israel Research Center

Rapid creation of solutions that combine NEC's
technology with advances in technology from outside the
Group, leveraging the world's largest source
of start-ups

NEC's Four Domestic Research Laboratories

Controls over NEC R&D worldwide. Mainly focus
on AI (analysis and recognition), security, ICT
Platforms developments, and other cutting-edge
Technologies such as quantum computing and devices

BIRD INITIATIVE

Unprecedented co-creation type of R&D business
originated in Japan

NEC Laboratories China

AI and Network related R&D

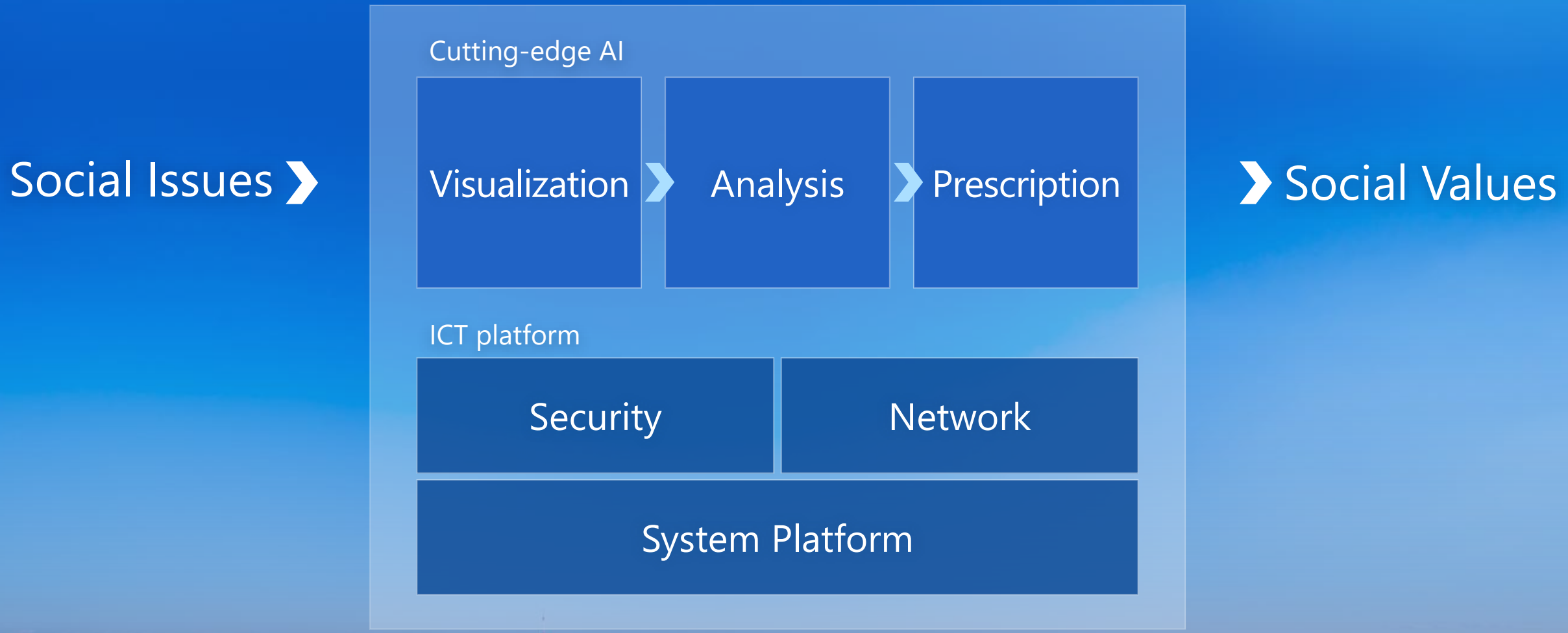
NEC Laboratories Singapore

Co-creation of innovative solutions with customers and
partners, mainly for developed countries

NEC Laboratories India

Creation of core technologies and solutions to
address the challenges of emerging countries

NEC Technology Vision as a Driving Force for Creating Social Value



NEC Technology Vision as a Driving Force for Creating Social Value

Social Issues ❯

Digital twin for co-creation and trial of the future

Provide a foundation to support the convergence of the real world and cyber world

AI that co-works with humans and becomes prevalent in society

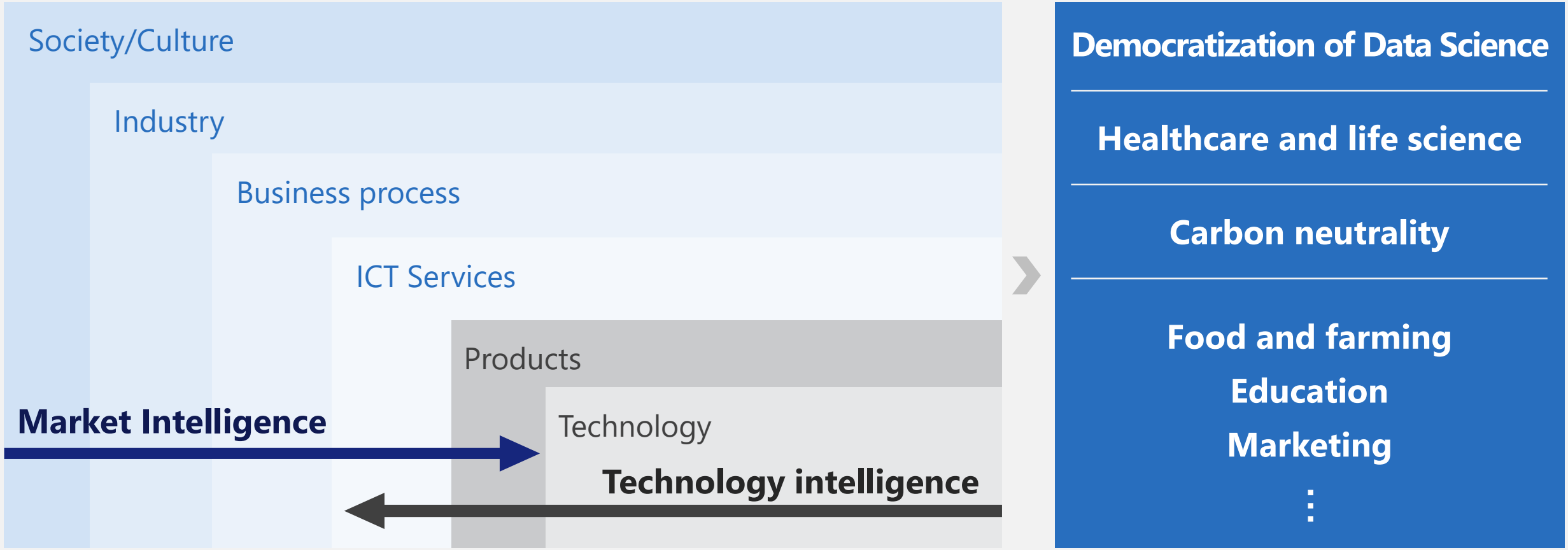
AI that people can trust, AI that people can accept

Platform to support environmental friendliness, high reliability, and high efficiency

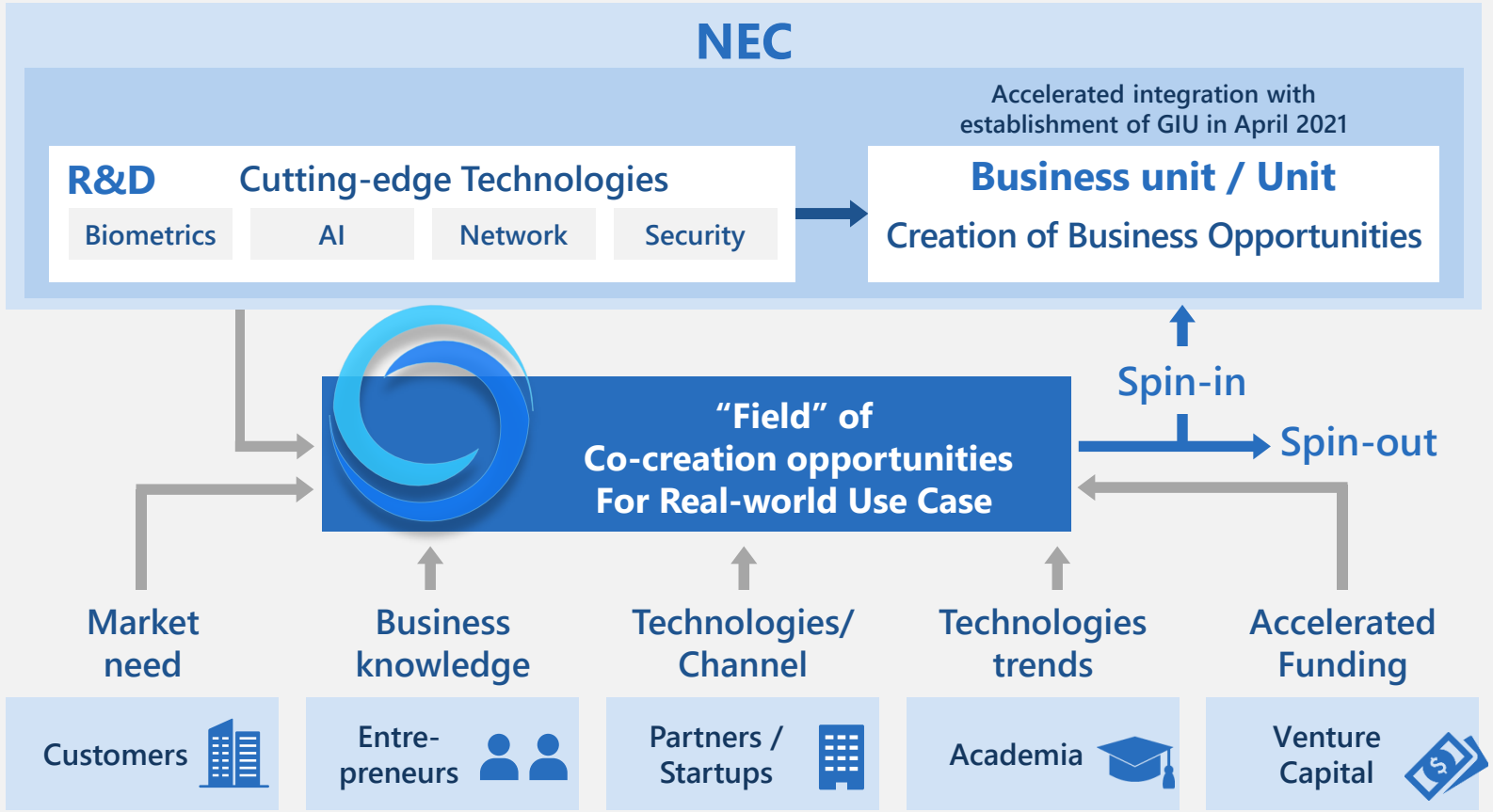
Integrate App/IT/Network & Security & Secure Data Platform

❯ Social Values

Market Vision that Drives Creation of Social Value



Accelerating New Business Development by Eco-System



Cases of New Business Developments

Apr. 2018 **dotData**

Jun. 2018 **NEC X**

May 2019 **AI Drug Discovery**

Sept. 2020 **BIRD INITIATIVE**

Taking leadership in creation of the environment for social implementation ~Thought Leadership~

Open co-creation and standardization

■ Rule-making

Strengthen global collaborations using data utilization

FIWARE FOUNDATION

gaia-x

Newly joined Gaia-X in November 2021

■ Promote co-creation activities with universities

CO_2 reductions with The Andlinger Center for Energy and the Environment at Princeton University

VTTI* Smart City with Virginia Tech Transportation Institute

*Virginia Tech Transportation Institute

Delivering messages for social system reform

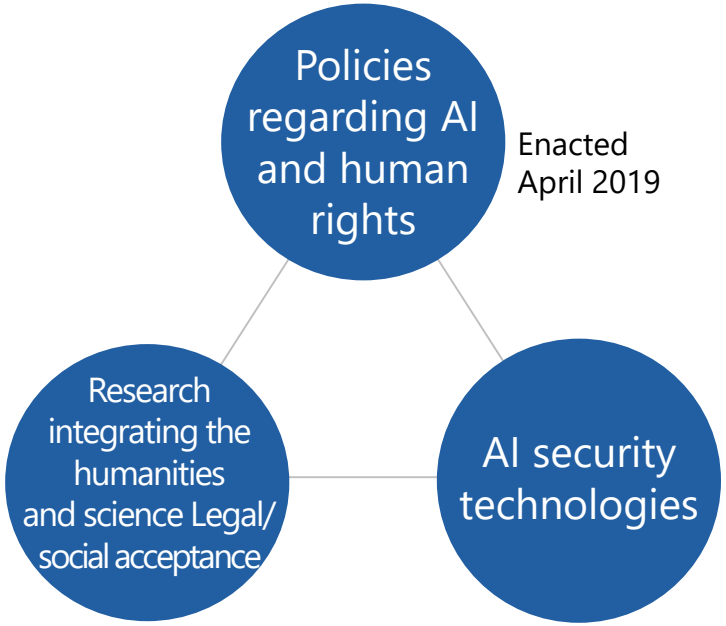
<Japanese only>

NEC Fellow
Hitoshi Imaoka

<Japanese only>

NEC
Managing Executive
Eiki Momotani

Enhancing AI ethics



Augmentation and Development of Highly Human Resources

Selective Compensation Program for Professional Researchers

■ Personnel system that achieves greater and faster research results

- A system where leading young researchers, including new graduates, challenge to achieve high-level goals and awarded benefits according to their results, with no upper limit on compensation.
- Since introducing the system, have continued strengthening investment in human assets in such ways through fair assessments and creating environments where they can produce their best results

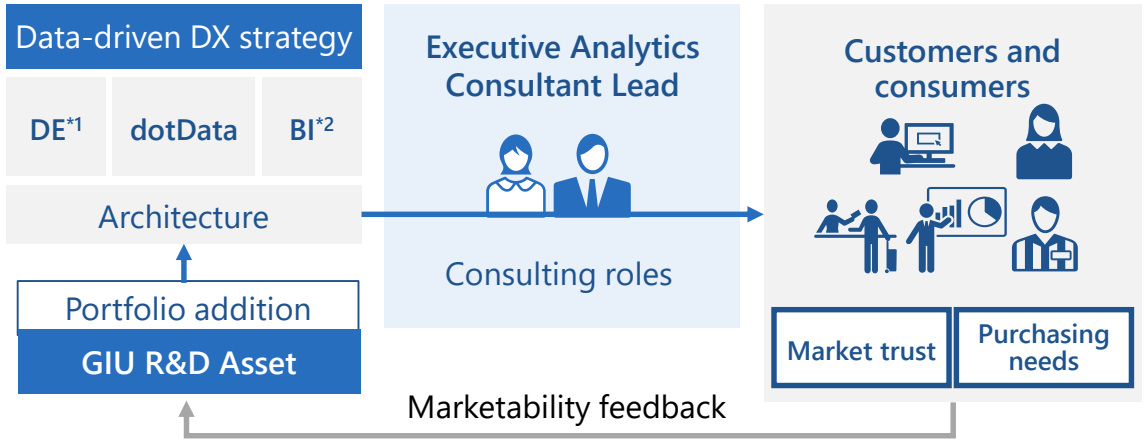
Fiscal 2022/3 **Cumulative total :promoted 20 people**

internal side business system (-Dec. 2021)

- Accelerate fusion of R&D and Business Development Divisions
- Development of human resources who is highly skilled in both of Technologies and Business

Business Development Professionals Highly Skilled Professionals System

- A high-risk, high-return system providing highly skilled business development professionals who possess outstanding skills with benefits based on their market value
- In fiscal 2022, established the new position of Executive Analytics Consultant Lead for Data-driven DX Business, in addition to AI drug professionals



*1 DE : Data Enrichment *2 BI : Business Intelligence

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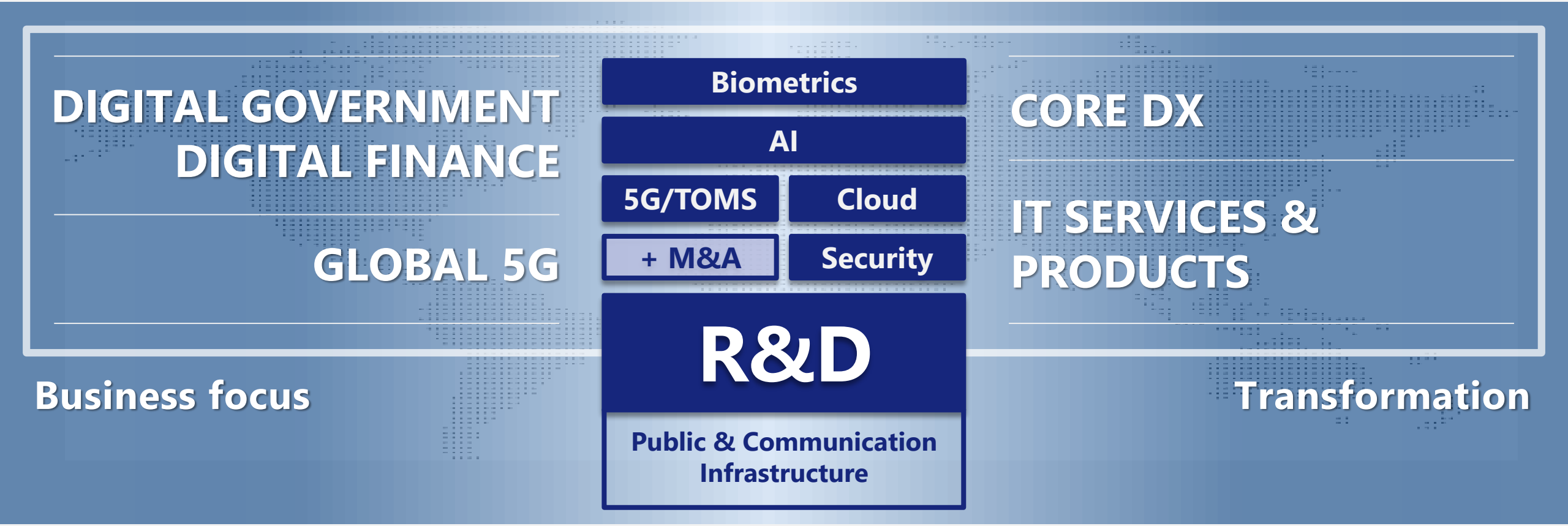
Advanced Technologies to Drive Mid-term Management Plan 2025 / NEC 2030VISION

2025 Mid-Term Plan NEC's Growth Model



High Technological Competitiveness in the World

Artificial intelligence

Machine learning
The number of papers accepted by top-quality international academic conferences *1

Ranked 7th in the World

Video and image processing
The number of papers accepted by top-quality international academic conferences*2

Japan No.1

Communication *3 / Security *4

Cyber Security
CRYPTO2019, the top-quality international academic conferences

Best Paper Award

Optical communication
Paper acceptance by top-quality international academic conferences

30+ consecutive years

Patents

Top 100 Global Innovators*5
Global survey of patent activities

10 year consecutive Selection

Facial Recognition
Number of international patent applications*6

World No.1

Biometrics authentication + video analytics + AI
Number of international patent applications*6

World No.1

Machine learning
Ranking of paper acceptance by top-academic conferences (Companies)

Rank	Corporate name	Number of papers
1	Microsoft	994
2	IBM	831
3	Google	830
4	Yahoo	336
5	DeepMind	267
6	Facebook*7	205
7	**NEC**	**184**
8	Alibaba	150
9	Amazon	132
10	Tencent	126

2000-2020 Our research

*1 NeurIPS、ICML、KDD、ECML-PKDD、ICDM
*2 CVPR、ICCV、ECCV、ACCV、ICPR
*3 Security: ACM CCS, Eurocrypt, IEEE S&P, etc.
*4 Communication: OFC/ECOC, etc.
*5 TOP100: https://clarivate.com/top-100-innovators/
*6 Number of international patent applications: cumulative number of applications since 2001 (our research)
*7 Current company name: Meta

World No.1 Biometric Authentication Technology

Technology

Facial recognition

World No.1

- FRVT Ongoing (2021)
- FRVT(2019)
- FIVE (2017)
- FRVT (2013)
- MBE (2010)
- MBGC (2009)

Iris recognition

World No.1

- IREX 10 (2021)
- IREX IX (2018)
  (Iris Exchange IX)

Fingerprint recognition

World No.1

- MINEX(2016,2006)
- PFT/PFTII(2013,2009)
- FpVTE (2012,2003)
- SlapSeg(2004)
- ELFT(2007)

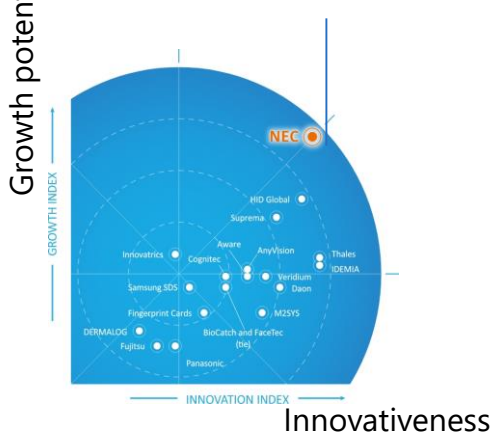
※ NEC's fingerprint recognition, Facial recognition, and iris recognition technology are ranked No.1 in benchmark testing conducted by the National Standards and Technology Research Laboratories (NIST).

※ Evaluation results by NIST do not recommend any particular product/service/companies by the U.S. government.

Business

NEC's biometric solutions
(out of 62 global companies)

World No.1



Up-to-date survey by Frost & Sullivan, a research firm

Brand

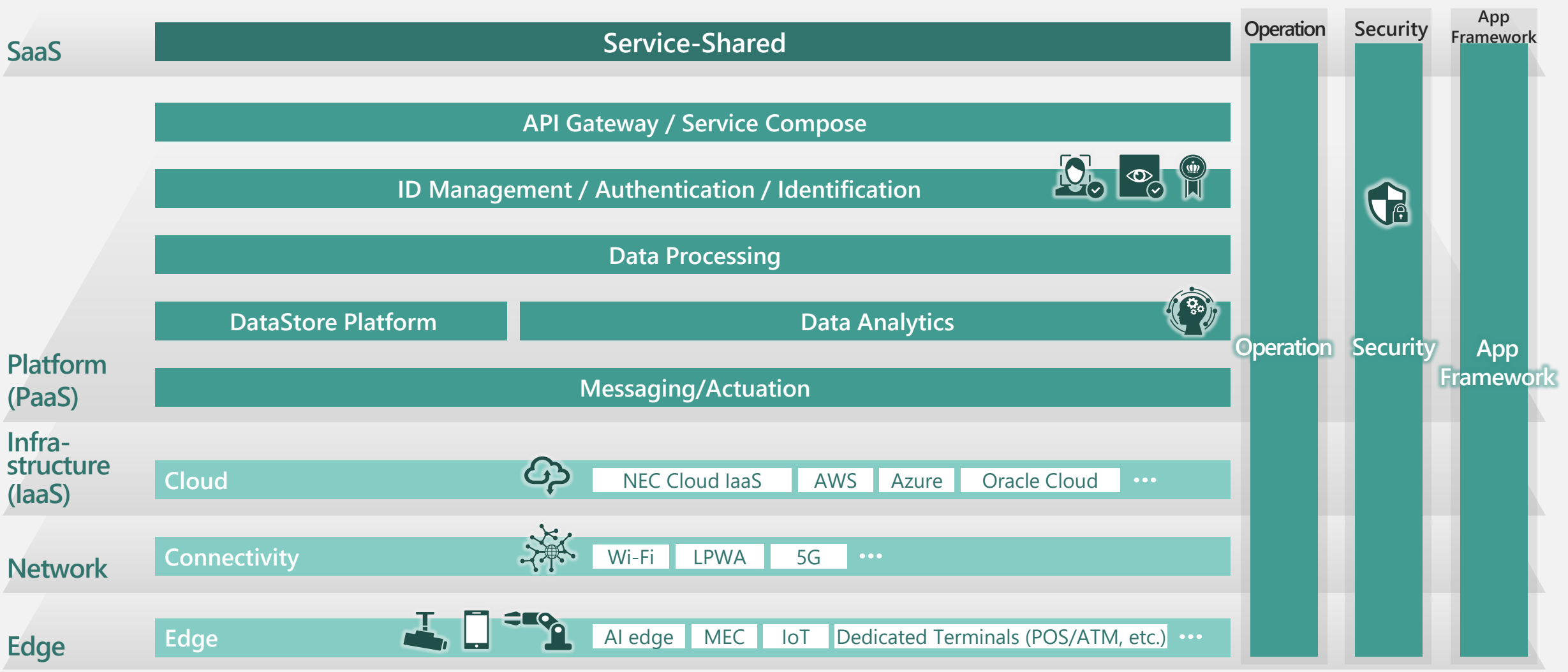
"Biometric authentication"

No.1
Share of mind

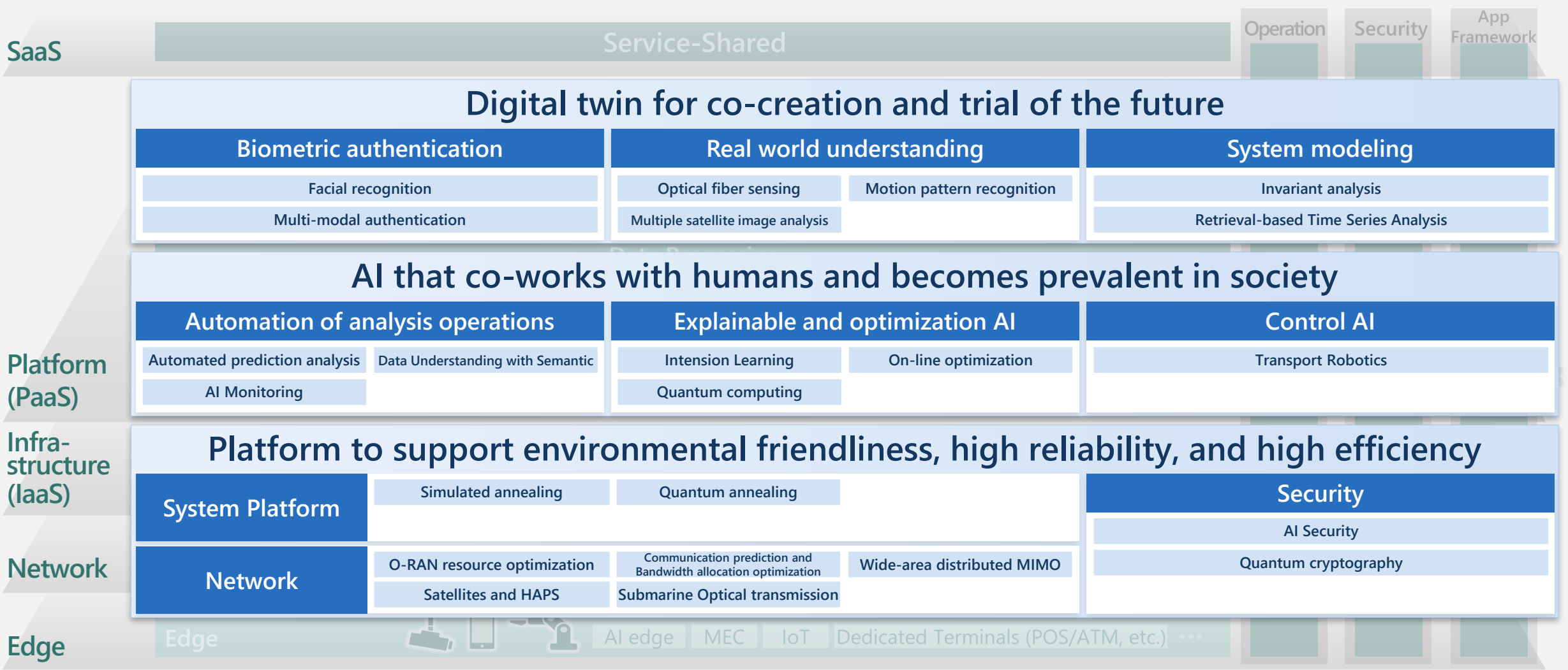
Rank	Corporate name
1	**NEC**
2	Fujitsu
3	Hitachi
4	Panasonic
5	Google

NEC survey (2021)

NEC Digital Platform =
NEC's Common Platform to Drive Growth Businesses



R&D Technologies Supporting NEC Digital Platform

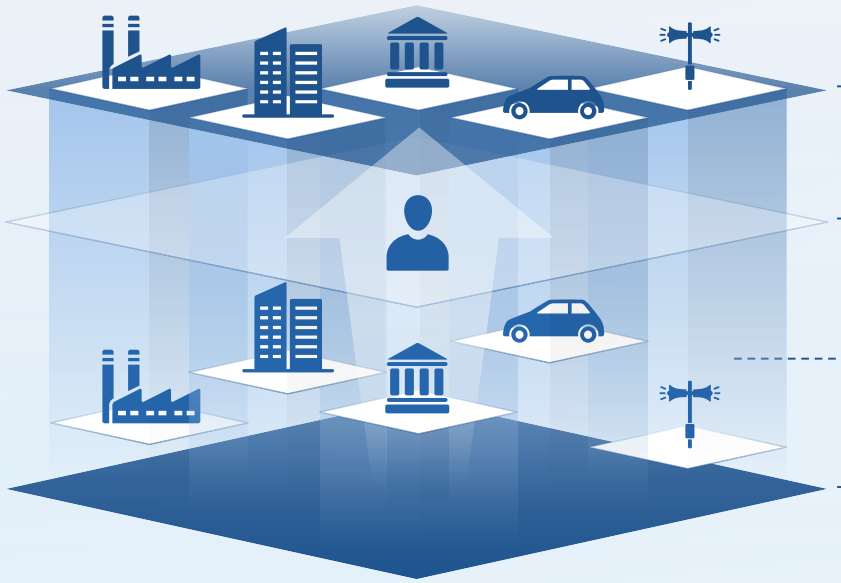


*1 HAPS: High Altitude Platform Station *2 MIMO: Multiple Input Multiple Output

Digital twin for co-creation and trial of the future

Provide a foundation to support the convergence of the real world and cyber world

Visualize and model all worlds of society/individuals/environment, and perform real-time optimization through AI driven simulations. Achieve the development of society, environmental protection, and individual wellbeing simultaneously.

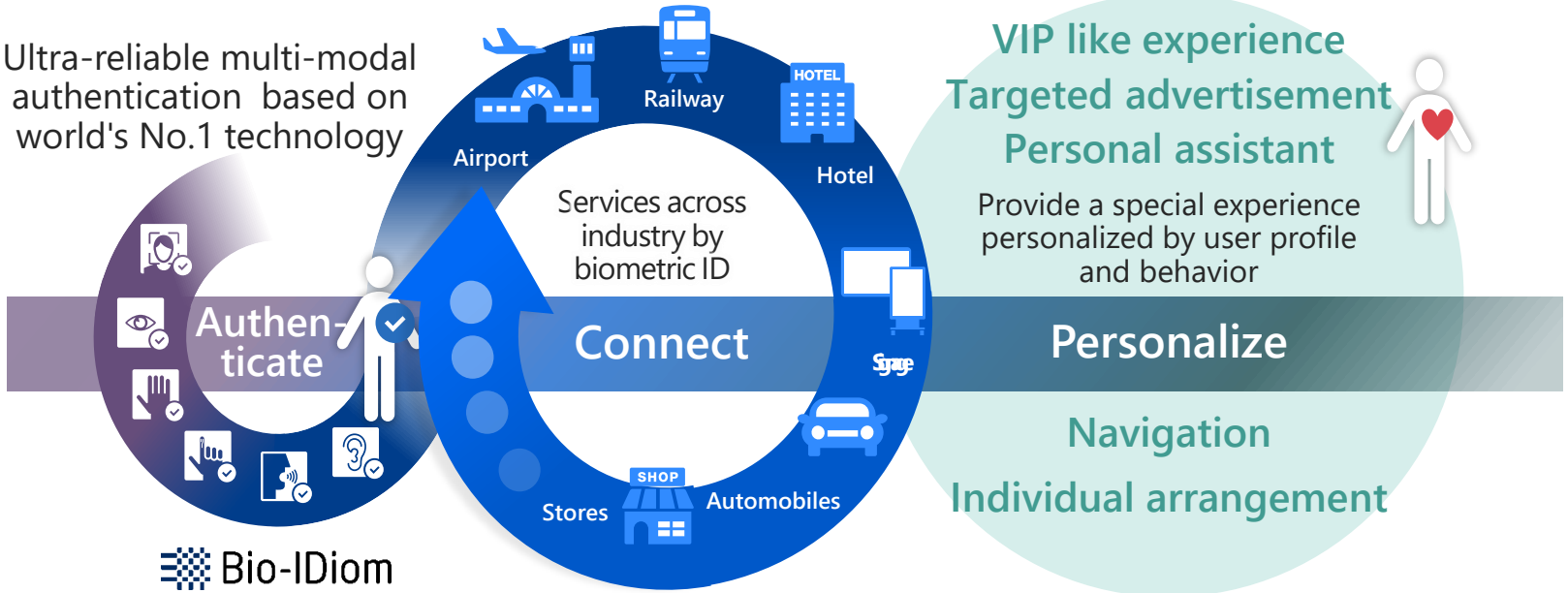


Optimal Personalized Services through Biometric Authentication

Demonstration ▶

World we aim with biometric authentication

Ultra-reliable multi-modal authentication based on world's No.1 technology



VIP like experience
Targeted advertisement
Personal assistant

Provide a special experience personalized by user profile and behavior

Navigation
Individual arrangement

※ Hitoshi Imaoka, "Facial Authentication Textbook"<Japanese only>

- Using biometric ID to connect various services (connect)
- Optimizing services for each individual (personalize)

Multi-modal biometric authentication distinguishing 10 billion persons*

Realize personalization through authentication distinguishes all the people on Earth

* Achieved 1/10 billion false acceptance rate of a wrong person.

Realize Safe and Secure Society through Visualization

Earth

No.1

NEC leads this technological area in IOWN Global Forum *

Optical fiber sensing to visualize the distribution of earthquakes and traffic flow over an ultra-wide area

Utilize **globally spread optical fiber for communications** as a sensor.
By special signal processing, sensing **not only vibration but also temperature etc. per a meter over several hundred km (more than 10 times that of other companies)** with high sensitivity.

Only 1 / No.1

Multi-satellite image analysis to detect all kinds of changes in the earth's surface

The conventional method can detect changes **in only specific locations every two weeks**. **Even at night or in bad weather such as storms**, this technology can detect changes **in the ground surface at any points with higher frequency (within an hour to a day)**. Technology for flexibly integrating observed images from multiple SAR satellites / optical satellites

Human

Only 1

Motion pattern recognition that instantly detects minute contaminants in liquid with high accuracy

High-precision detection of **foreign matter and foam of about 50μm (1/200mm)**, which was difficult to achieve in the conventional method, by video analysis. **Achieved reduction of visual inspection and uniformity of inspection quality for chemical liquids**, etc. in glass bottles.

Co-creation with Ono Pharmaceutical Co., Ltd.

Support Society by Mission-Critical Infrastructure

Only 1 Invariant analysis and model-free analysis of time-series data

Lockheed Martin collaboration

Development of the manned spacecraft Orion of the manned lunar exploration project Artemis by NASA

The technology enables anomaly detections **for the design, development, manufacture, and testing stages** of spacecraft
Generate a normal operation model by finding **22 billion relations** from **150,000 sensors** on the spacecraft within several hours

Large plants

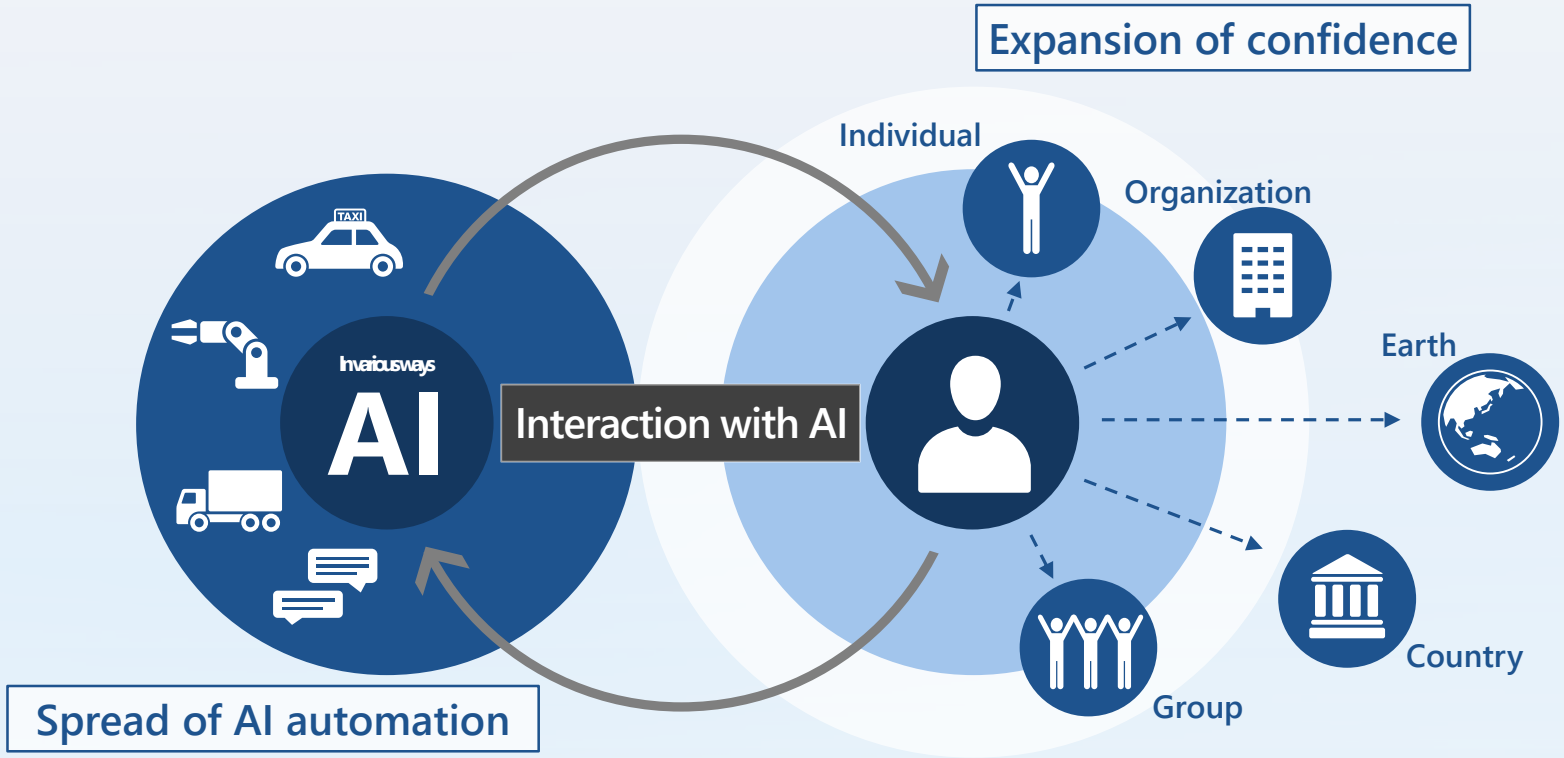
Case Study: Nippon Steel Corporation, Sumitomo Bakelite Co., Ltd., ENEOS Corp., etc.

Automatically detect "unusual" signs of malfunctions
Preventing deterioration of product quality due to **equipment outage** or failure

AI that Co-works with Humans and Becomes Prevalent in Society

AI that people can trust, AI that people can accept

Toward AI as a partner being close to people for drawing out human capabilities by interacting with humans with a sense of confidence and security



Data Analysis for Everyone - Democratization of Data Science

Consultation

Problem design → Formulation

Analytical work

Data reduction and integration → Prediction/Analysis/ Prescription

Delivery

Degradation monitoring → Degradation Analysis/ Recovery

Upstream process

Downstream processes

Automation of model development

NEC Data Enrichment

dotData

Automation of model operation

NEC the WISE Only 1

Intention Learning

Converted expert' judgement criteria which used to be difficult to acquire, into AI

NEC the WISE Only 1

Data Understanding with Semantic

1/10 of the time compared with manual work

NEC the WISE No.1

Predictive analytics Automation

Evaluated as a leader by external organization

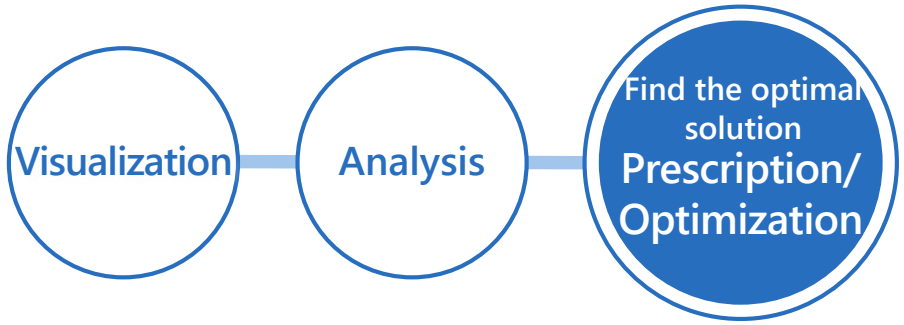
AI Monitoring

Analyze AI deterioration factors caused by environmental changes and maintain accuracy automatically

Making Society Efficient and Green through Optimal Prescriptions

Demonstration ▶

Visualization/analysis by AI ⇒ Prescription/optimization will generate further social value in the future



- Intention Learning … Absorb expert intentions (Everyone is convinced)
- On-line optimization technology … Become smarter while trying
- Quantum Computing … Find an optimal solution at high speed

Use case

Human resource allocation

Recommendation Optimization

Vehicle dispatch plan

Dynamic pricing

Timetable correction

press release on November 26, 2021
<Japanese only>

NEC begins providing support services for introducing optimization technologies that automate decision making with AI.

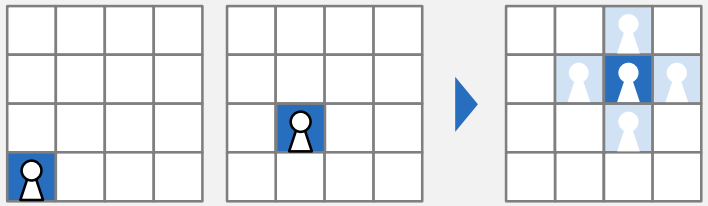
Support Prosperous Lifestyles with AI being Close to People

Only 1

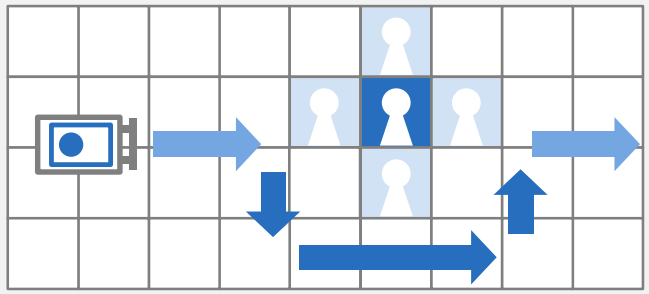
Simple transfer robots that work in coordination with humans in a coexistent environment while achieving both safety and work efficiency

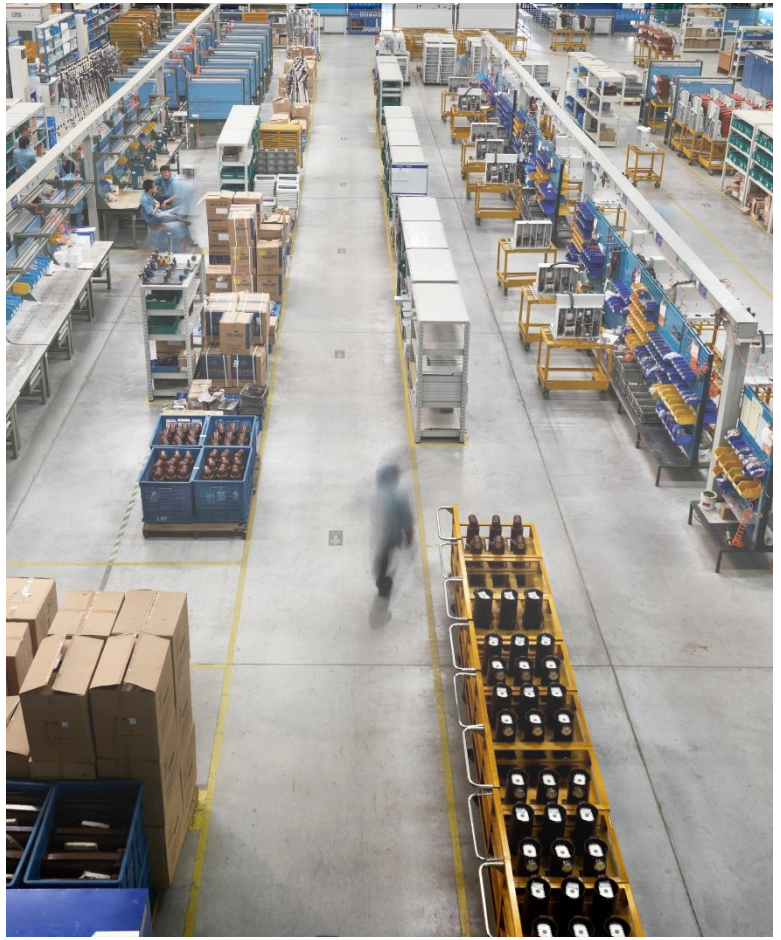
- A large number of simple transfer robots cooperatively move in the field where the worker goes. Collision with human is also predicted and avoided.
- "Cloud (AI control) + in-facility camera + wireless network" realizes this solution without renovating existing facilities

Dynamic obstacle prediction



Collision risk avoidance





*Avoiding congestion in warehouses, etc., twice as much transport efficiency as conventional transport robots

Realizing Efficient Social Systems by consulting and negotiating agreeable conditions among Multiple AIs

Only 1

AIs Negotiation Technology

Drone Logistic System by AIs Negotiations

Press Release on November 4, 2021

Demonstrated Japan's first flight services in Wakkanai City **involving diverse drone operators and service providers** towards commercialization

Operation of drones in accordance with the "Guidelines for Drawn Distribution of Medicines"

Drone takeoff and landing for distribution to the airport where scheduled air flights are in service

Distributed drone operation management system under international standardization

Established Automated Negotiation SCM Consortium (33 members)

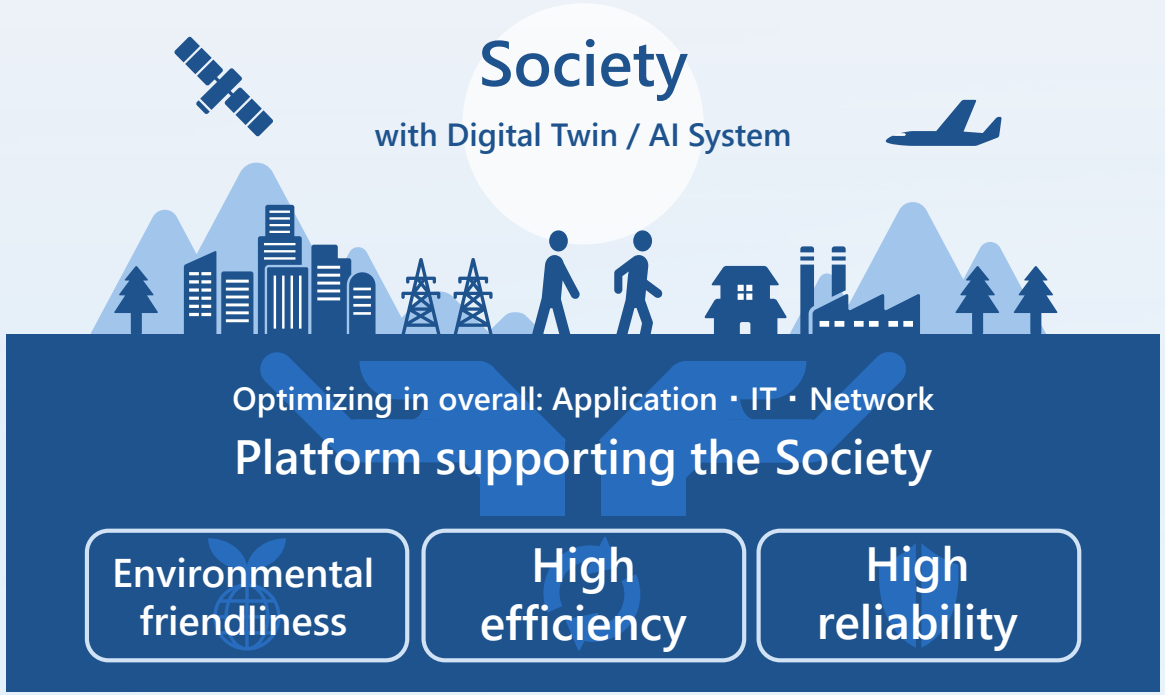
Press Release on September 17, 2021

Dramatically streamline the day-to-day "coordination of interests and behaviors among companies, organizations, and individuals" in the supply chain

Platform to Support Environmental Friendliness・High Reliability and High Efficiency

Integrate App/IT/Network & Security & Secure Data Platform

Provide environmentally friendly and sustainable infrastructure through integrated optimization including applications, IT and networks in addition to high reliability with security and data protection technologies



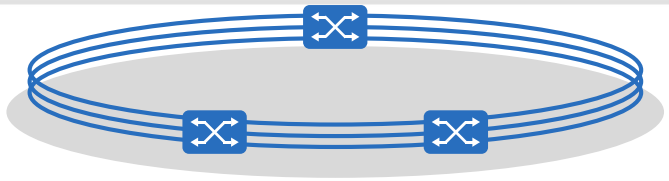
Integrating AI × Communications × Computing

Non-Terrestrial Networks

Satellite constellation・HAPS*1

- Providing communications over a whole globe such as **Gbps-level optical communication between satellites 40,000 km away**. They are key technology of Beyond 5G.

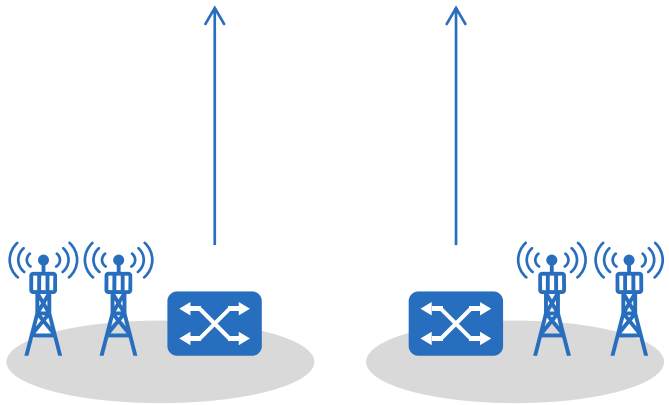
Optical Core Networks



All Photonics Network (non-linear distortion compensation・photonics chip)

- **Wavelength Conversion technology** targeting **<1/100 low latency & power**
- Successfully implemented **optical processing** on the photonics chip and proved the principle (**Joint Research w Princeton Univ.**)

5G Access Networks



Communication prediction・optimized BW allocation (Guarantee End to End QoE)

- Optimized ITNW process based on **the application's quality demand. Minimize BW usage upto 1/10**

O-RAN resource optimization

- 30% less power consumption through automatic optimization of Wireless & CPU resource allocation of O-RAN equipment (CU/DU). **Minimize BW usage up to 1/10**

Distributed MIMO*2

- Low cost & small O-RAN equipment (RU/DU) by distributed antenna system deployment of small antennas and high precision clock synchronization

Submarine Optical Fiber Cables

Submarine Optical Communication

- Succeeded **world's first long-haul transmission with 4 core fiber cable Uncoupled multicore fiber transport systems**
- Contributed to PO in the North Atlantics through joint demonstration with Facebook/Google/Amazon et. al

*1 HAPS: High Altitude Platform Station *2 MIMO: Multiple Input Multiple Output

Quantum Technologies Driving the Next Generation

Solving social issues with unprecedented computing power

Quantum Computing

NEC is a pioneer[*1] of quantum computing

Now Beginning service

- Vector Annealing service 300x faster
- D-Wave's Leap™ Quantum Cloud Service with Japanese support

Future

- Superconducting quantum computing circuit
  - Practical use targeted 2023
  - 100x quantum coherence time
  - Scalability for solving large-scale problem
- Leading National Projects
  - NEDO[*2] : Quantum annealing machine（2023）
  - JST[*3] : Fault tolerant quantum computer（2050）

Absolute secure communication

Quantum Cryptography Communication

Driven over 20 years of R&D in Japan

Now

- 2000～
  Leading QKD R&D along with National Projects
  The secure QKD[*4] equipment in Japan which has been evaluated by 3rd parties[*5]

Future

- 2022 **High End model**
  BB84 Long-distance communication
  Deploy at commercial environments in FY2022

- 2024 **Prevailing model**
  CV-QKD sharable with existing fiber

*1 Demonstration of world's first solid-state quantum bit operation(1999) *2 New Energy and Industrial Technology Development Organization
*3 Japan Science and Technology Agency *4 Quantum Key Delivery *5 Joint research with NICT, Hokkaido Univ., Tokyo Univ. <K.Yoshino et al., npj Quantum Info. 4, number 8 (2018) >

01 Global Innovation Unit Which Leads Innovation

02 Advanced Technologies to Drive Mid-term Management Plan 2025 / NEC 2030VISION

03 **The Challenge of New Business Development**

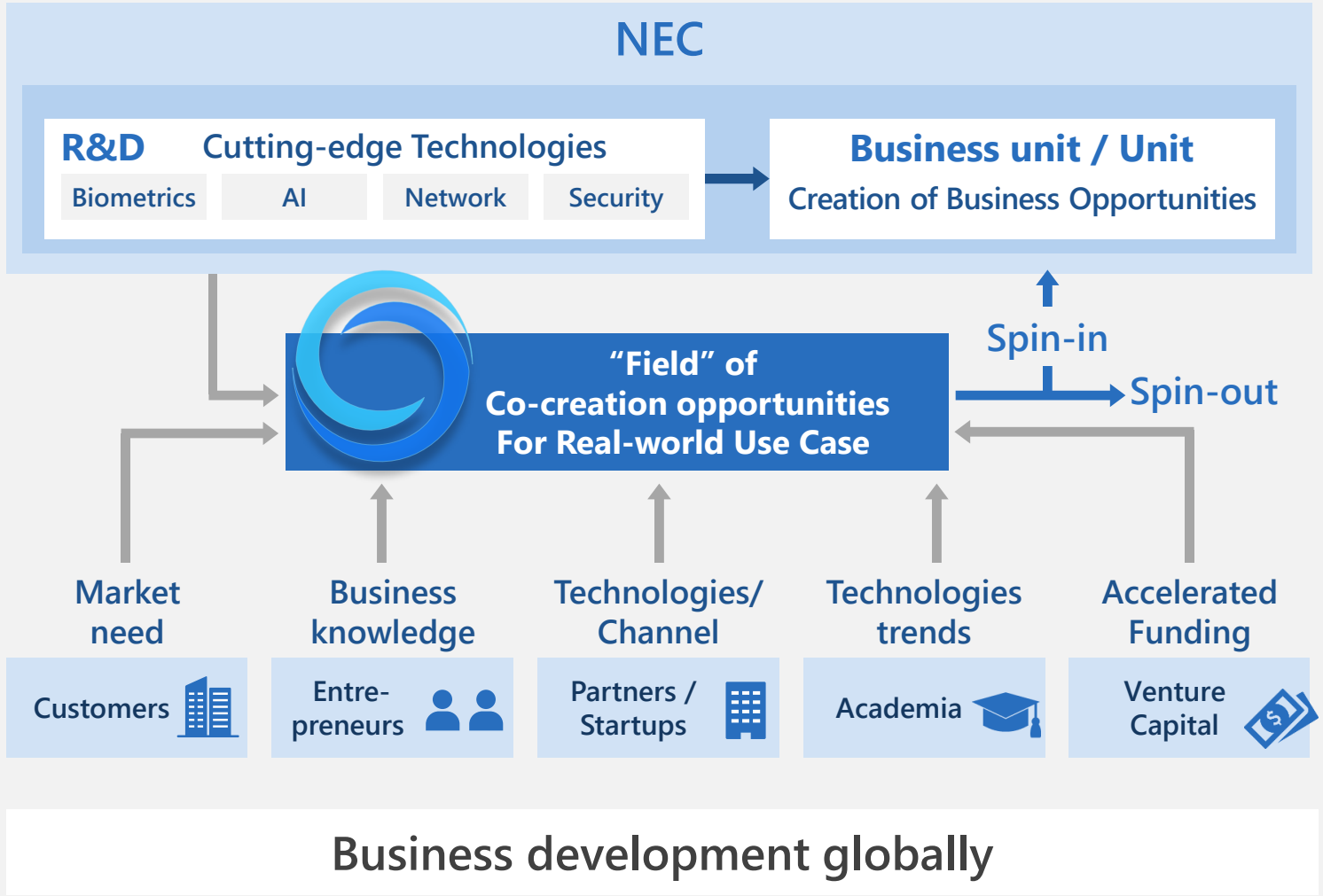
Direction of New Business Development

Strategies

Proactively use external resources

Take on the challenge to be high-value businesses with social impact

Strengthen partnering
(with major companies, universities, and startups)



Unprecedented co-creation type of R&D business originated in Japan

BIRD INITIATIVE

September 2020

Established by six companies from different industries incorporating business companies, finance, and academia

Orchestrating a brighter world NEC

大林組 OBAYASHI

JIP JAPAN INDUSTRIAL PARTNERS, INC.

JIA 株式会社ジャパンインベストメントアドバイザー

CTC Challenging Tomorrow's Changes

東大IPC Innovation Platform for The University of Tokyo

Revenue YoY **7 times***

Steady progress in the business development consulting service

Carve out planned for fiscal 2023 **2 projects**

assimee

To a world where digital twins are a given

Analysis shows threefold improvement in investment efficiency at a major semiconductor manufacturer

Automated negotiations x Drone

Realization of smart logistics and smart factories

Japan's first 3 tests were completed in the city of Wakkanai

*Forecast value as of November 2021

Unprecedented co-creation type of R&D business originated in Japan

DigitalTwin × AI (Automatic Simulation)

Oct. 2021 Jointly developed cutting-edge AI × 3D simulator with Genetec Corporation, firmly implementing DX in manufacturing and logistics

Nov. 2021 Collaborating with ITOCHU Techno-Solutions Corporation on DX acceleration businesses for customers and society with DigitalTwin

Automatic Negotiation × SCM

Sept. 2021 Established 'Autonomous Adjustment SCM Consortium' (Initial members; 33 companies)

In order to significantly eliminate 'operational coordination work among companies', organizations' and individuals' various interests and actions' that arise daily in supply chains, organize and verify practical coordination work flow, advance and penetrate jointly driven by members of various positions and views

Automatic Negotiation × Drones

Jun. 2021 Participated in regional proving tests conducted by NEDO at City of Wakkanai in Japan

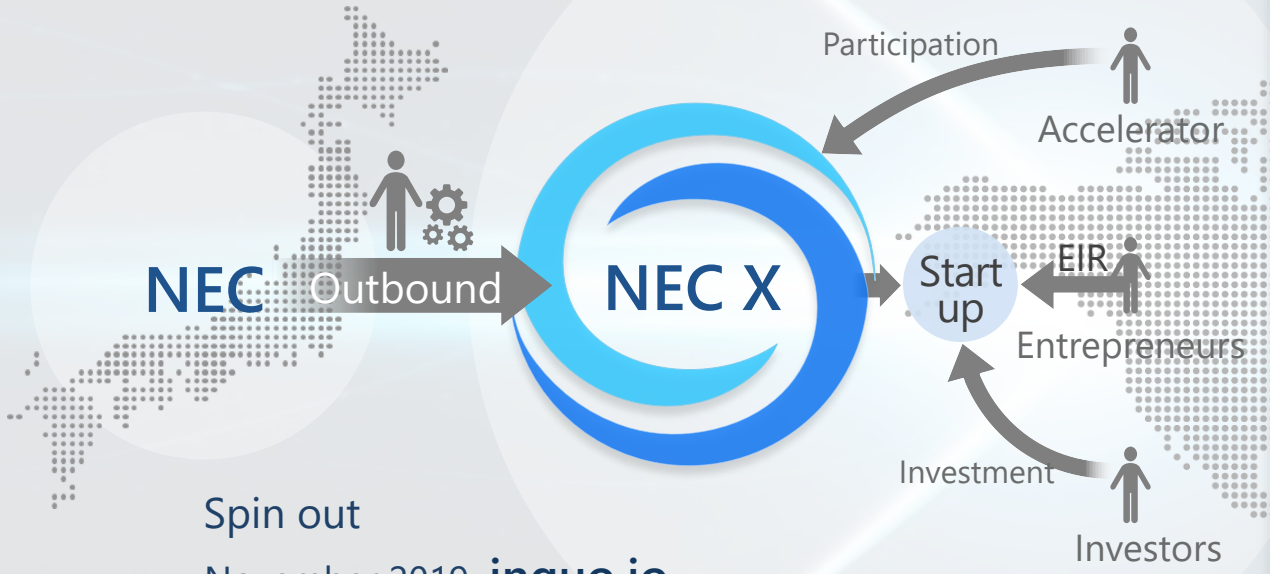
Three Firsts in Japan

1. Drones flown according to guidelines for drone for medicine delivery
2. Takeoff and landing of drones within an airport where regularly scheduled flights are in service
3. Decentralized operation management which has recently been internationally standardized

Decentralized adjustments of overlapping necessary flight plans detected or resolved
BIRD INITIATIVE is an operator of Unmanned Aircraft System Service Provider (UASSP)

Expand Venture Investors and Entrepreneurs Network to enhance New Business Developments

NEC X



Spin out

November 2019	**inguo.io**
April 2020	**GAZIRU**
January 2021	**Metabob**

Various other spinouts are anticipated during 2021 and 2022

Introduce the Stanford MBA case study

May 18, 2021

Concluded a partnership with Alchemist Accelerator, LLC

Network

Venture capitalists	Entrepreneurs-in-residence (EIRs)
5,000 people	**1,700** people

Expand Venture Investors and Entrepreneurs Network to enhance New Business Developments

inguo.io
(Causality Analysis Technology)

Nov. 2019 Established in NY, US.

Oct. 2020 NEC began to offer as causality analysis solution in Japan

Automatically draws cause and effect from observation data
which enables objective analysis of cause and effect

GAZIRU
(Object Fingerprint Technology)

Apr. 2020 Established in Japan

Capital Injection by Global Catalyst Partners

Highly precise sorting of various images through smartphone cameras
Offering core solution that enables establishment of new services that incorporates image recognition and information provision

Metabob
(AI for Code Analysis)

Jan. 2021 Established

Dec. 2020 Participated in Alchemist Accelerator Program

Code review and debug support tool for software developers
Visualize code structures and discovers bugs using machine learning models (Currently only supports Python)

Strengthen New Business Development through Collaboration with Major Companies/Universities

Progress in the strategic partnership with NTT

Innovative technological development

Fundamentally reduce security risks associated with using Open and capture the global 5G market using a safe and secure O-RAN

October 27, 2021

Developed supply chain security risk reduction technology for ICT infrastructure

Construct ecosystems through collaboration with universities

Social implementation

Aim to create results, form a vision, and foster social consensus taking into account the Beyond 5G domain through to social implementation

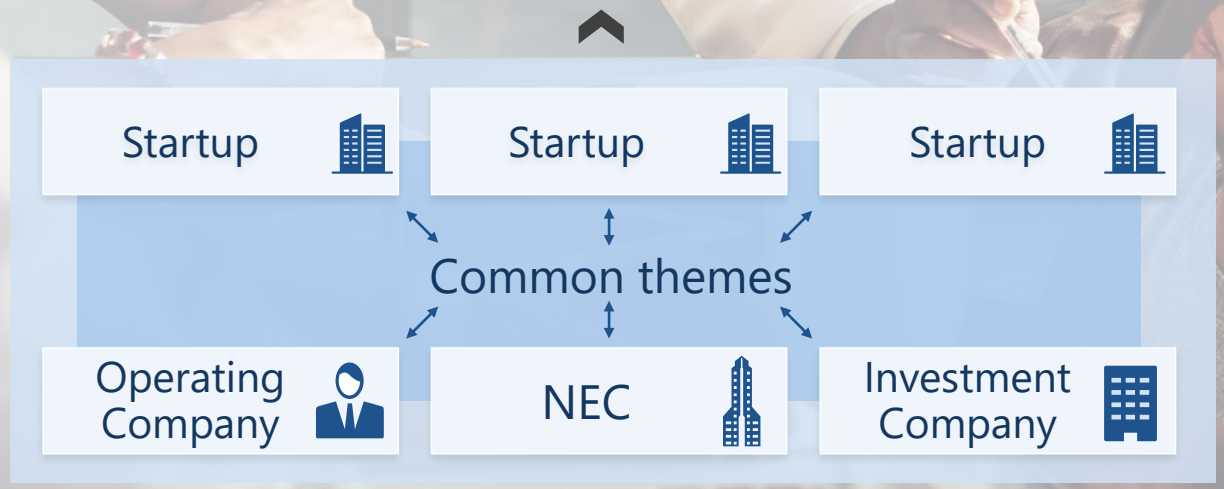
November 1, 2021

NEC Beyond 5G Collaborative Research Institute

Establishment of NEC Orchestrating Future Fund

Investment Mainly in 6 Areas

5G / 6G	Smart Cities
DIGITAL GOVERNMENT DIGITAL FINANCE	DX
Healthcare ・ Life Science	Carbon Neutrality



Externally Raised Fund Anchored by NEC

Co-create and Formulate Eco-system through Investments in Late Stage Startups in addition to Early Stage

Size

Approx. 17 billion yen

Add one company per one business domain as Limited Partner
towards final close In June 2022

Cases of New Business Developments

dotData and Data-driven DX Business
Creating New Business Value from a Data Starting Point

dotData/Data-driven DX Business Division

dotDat

- April 2018 **Established dotData**
- October 2019 **Completed dotData Series A**
- June 2020 **Started collaboration with Teradata**

NEC Japan (Becomes the Data-driven DX Business Division from FY 2022)

- July 2018 **Launched commercial sales**
- September 2020 **Concluded reseller agreement with Techfirm**
- October 2020 **Tableau alliance**

NEC acquired the exclusive sales rights for dotData in the Japanese domestic market
Expand sales in the Japanese domestic market and the related service business

FY 2022 Targets
Business value
50 billion Yen

› Total Financing Amount by Series A **43M$**

September 2021
Concluded partnership with Tableau Software

Number of paid services provided
Double sales yearly until FY 2021

More than 70 companies*

April 2021
Established the Data-driven DX Business Division
Shift to DX business that realize customer's Data-driven management

October 2021
Started providing DX human resources development services using dotData

* As of November 2021

AI Drug Development
Personalized Cancer Immunotherapy using Cutting-edge

Paradigm shift of drug development processes optimized for each patient

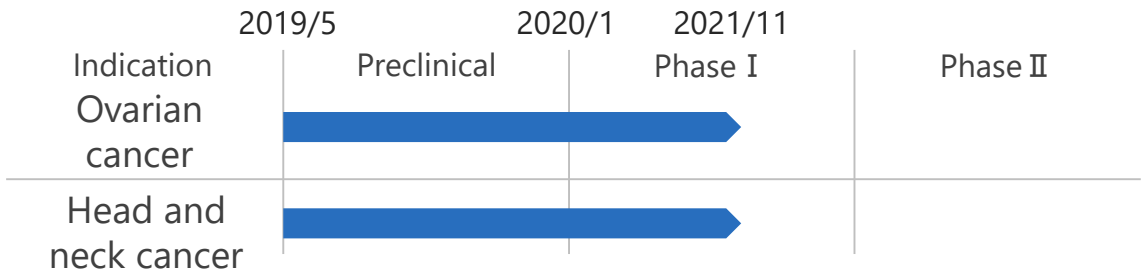
Technological progress

Personalized vaccine design using AI

- **Graph-based associative learning**
- **Multiracial vaccine design technology**

*) Calculation by market scale of drug development pipelines, development phases, value amount of competitors and pipelines of drug development, as general method of medication development

2025 Business value **300** billion Yen



November 24, 2021

Transgene and NEC report positive preliminary data from Phase I clinical trials

Induced robust anti-tumor cellular immune responses against multiple neoantigen targets in all evaluable patients (4 cases/4 cases)

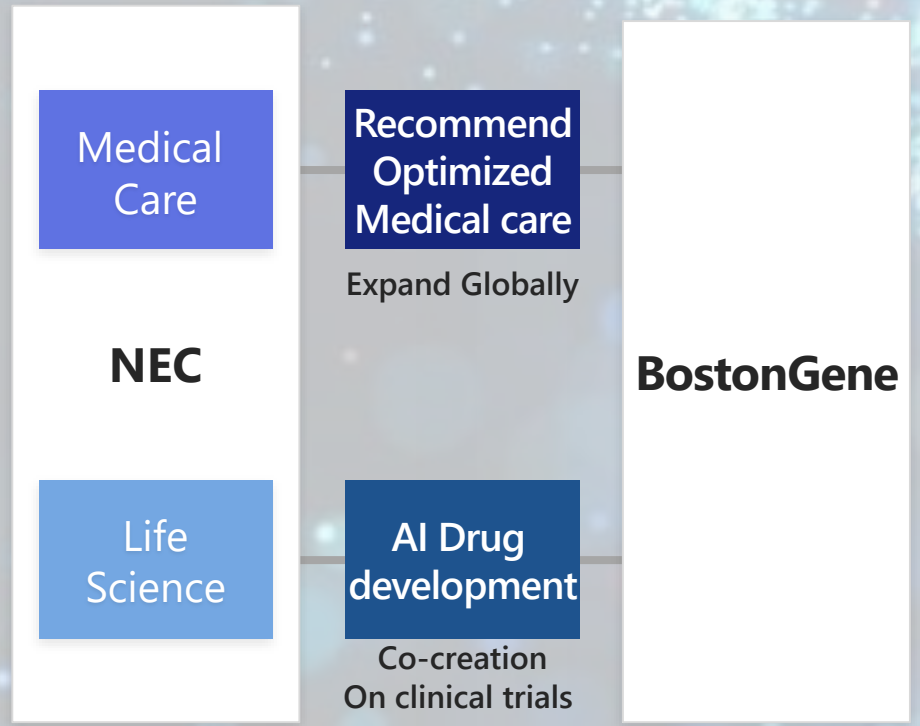
Healthcare / Life Science
Strategic Global Partnership with BostonGene Corporation

April 2019
Investment of USD50M

July 2020
Collaboration on analysis of oncology patients under clinical trials

October 2020
Collaboration on analysis on genetic analysis of ovary as well as head and neck cancer patients under clinical trials

December 2021
Expanded into Strategic Global Partnership



Jointly cultivated global markets

Offer services to hospitals utilizing NEC's networks in areas of healthcare / life science in Japan

Platform of BostonGene

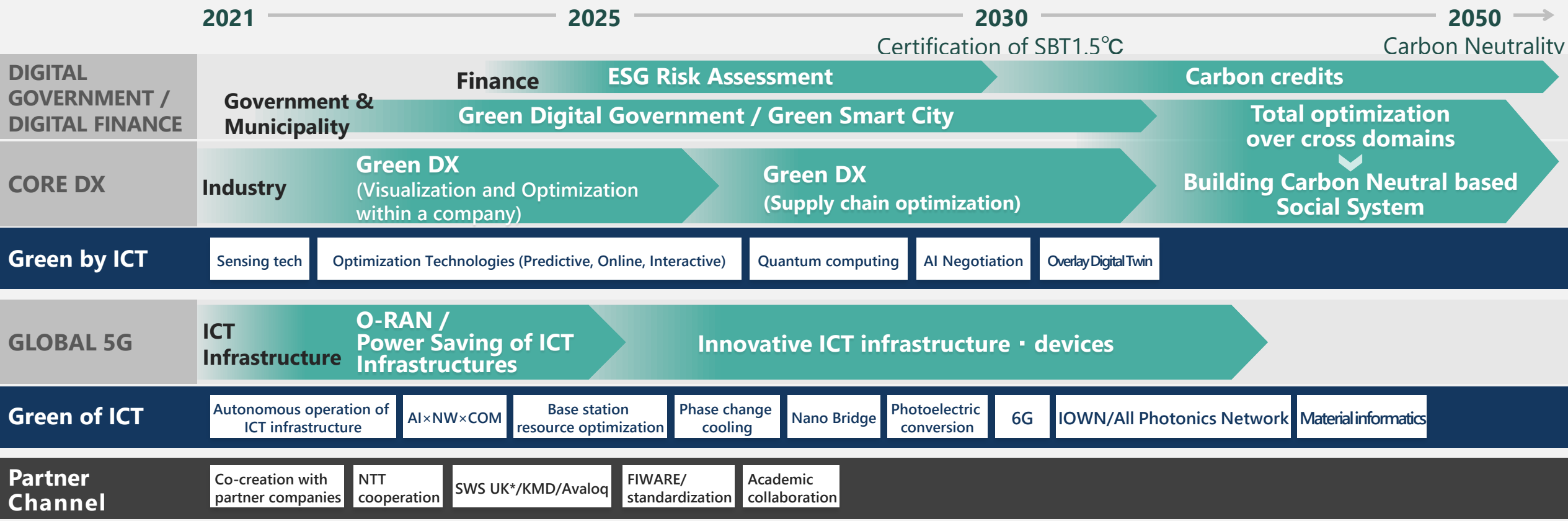
AI based profiling of molecules and immunity that enables doctors to offer diagnostic support to Individual oncology patients

Conducted 7 Joint Researches in the U.S.

Massachusetts General Hospital (Oct. 2021, Jan. 2020)
University of Texas MD Anderson Cancer Center (Sept. 2021)

Carbon Neutrality
Leading Society by “Green by ICT” and “Green of ICT”
(DIGITAL GOVERNMENT / DIGITAL FINANCE, CORE DX)

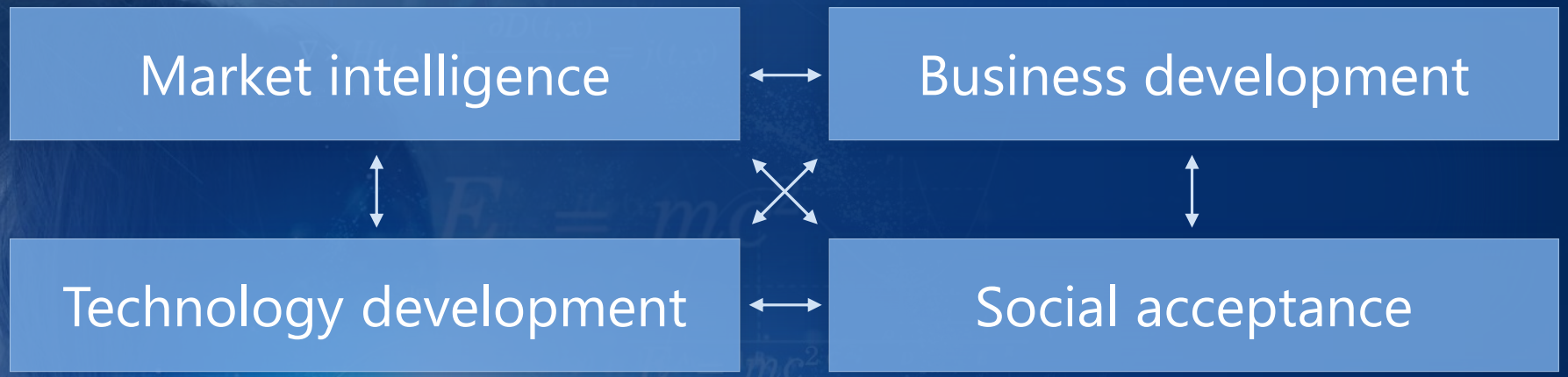
Lead Carbon Neutrality through total optimization across all steak holders; Industry, Government & Cities
Build Green based social system and industrial innovation



* NEC Software Solutions UK

Implementing Technology in Society to Realize NEC's Purpose

Social Implementation Scheme



Expand R&D co-creation

Create No.1 / Only 1 technologies as a source of innovation

New business development

Create new businesses that becomes the next growth pillar

Thought leadership

Foster social acceptance by creating a shared vision for a brighter future

Realizing new social value creation through innovation brought about by a shared vision for a brighter future and technology