

Social Value Creation Initiatives

NEC is focusing on seven social value creation themes in light of six megatrends identified through analysis of global economic, societal and technological trends. Capitalizing on its long track record and unique strengths, NEC is endeavoring to resolve challenges facing its customers and society, focusing on the seven themes in particular.

NEC's social value creation themes are similar to the Sustainable Development Goals (SDGs) adopted by the UN in 2015 in that both involve goals rooted in social issues and otherwise have much in common with each other.

To quantitatively measure the extent to which it is providing value deemed necessary by society and its customers as a social value innovator, NEC is attempting to quantify the social impact of selected initiatives corresponding to its seven social value creation themes, using the SDGs as a model. Examples of the metrics NEC is using to do so include reduction in crime rates, improvement in operating efficiency and percentage reduction in food spoilage losses in distribution channels.

Sharing targets with customers and the general public is important to maximize the value that customers and society are seeking. NEC expects dialogue and co-creation with diverse stakeholders to become increasingly important as a means of sharing targets.

Examples of the fruits of such dialogue and co-creation are presented below.



Safer Cities & Public Services

Building and Developing Safe and Secure Urban and Administrative Foundations

As globalization and the concentration of populations in cities progress, new safety risks from cyber attacks are increasing. In addition to detecting potential crimes and disasters before they occur, NEC will contribute to the realization of an administrative platform that demonstrates regional appeal by making use of the power of local residents in addition to support from industry, government, and academia.

Trial of NEC's Public Safety Solutions



Conducted during G7 summit in Japan

Cutting-Edge Security System Preventing Dangers

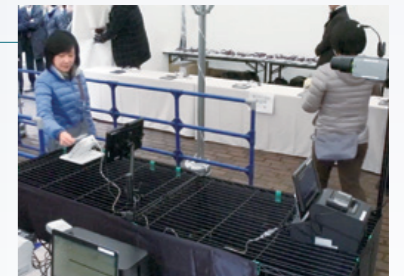
Working with Japan's National Police Agency, NEC deployed public safety technologies to help prevent accidents and hazards in certain areas of Tokyo during the May 2016 G7 Ise-Shima Summit. The technologies included real-time monitoring of crowd congestion with proprietary crowd behavior analysis technology* and automatic detection of suspicious stray objects using imagery from pre-existing surveillance cameras.

* Crowd behavior analysis technology: proprietary NEC technology that detects crowd congestion and changes in crowd behavior



Supporting International Cultural Exchange and Community Events with ICT Supporting Safe and Secure Event Management

At the Chichibunomiya Minato Rugby Festival 2017 held at Chichibunomiya Rugby Stadium, NEC provided secure identity authentication with facial recognition in addition to conventional ID cards. NEC also helped to ensure that the event ran smoothly and securely by optimally positioning volunteer staff. For example, by giving volunteers written instructions on their roles at the time of identity authentication, NEC enabled event sponsors to reduce the time required for volunteer check-in by 80% in comparison to manual check-in.



Unique Identification Authority System in India



Supporting a national project in India through advanced recognition technologies

India continues to exhibit rapid development spurred by its high economic growth. In order to equally provide education, healthcare, social welfare, and other social services to all residents, a Unique Identification Authority System for identifying each and every citizen has been launched in this country with a population of more than 1.2 billion.

Central to this initiative is an unprecedented, large-scale biometrics system for distinguishing 1.2 billion people, which is equivalent to approximately one-sixth of the world's population.

The system collects biometric data, including fingerprint, face and iris data, and combines it to match and identify individuals. This enables issuing a unique ID to each and every citizen throughout India.

NEC built a highly reliable system by utilizing the latest technologies in the continuously evolving field of biometrics, such as Face Recognition and Fingerprint Identification. NEC strongly supports the building of societies where people around the world can receive equal treatment and live in prosperity.





Lifeline Infrastructure

Building and Developing Safe and High-Efficiency Lifelines

Global urbanization is accelerating the diversity and complexity of production and daily life infrastructures. Using advanced and flexible ICT systems to reduce differences between regions and time zones and realize 24/7/365 uninterrupted infrastructures, NEC is continuing to provide important resources safely and efficiently.

Non-stop Development of Industrial Infrastructure



Aiming to Enhance Stability, Safety and Efficiency

Deploying Digital Data in Plant Operations

Oil refineries, natural gas plants and other such industrial facilities face the issue of how to operate safely and efficiently with aging infrastructure and workforces.

JGC Corporation and NEC are working together to resolve this challenge by synergistically combining JGC's plant construction know-how with NEC's "System Invariant Analysis Technology," a form of AI.

System Invariant Analysis Technology detects signs of abnormalities in plant operations based on correlations among various sensors installed throughout the plant. Such abnormalities are treated as a sign of impending malfunction and promptly addressed. Early rectification of deviations from the norm prevents emergency plant stoppages and helps to alleviate environmental burdens.



Laying the Groundwork for IoT Ubiquity



Indonesia Global Gateway (IGG) Submarine Cable

NEC is engaged in the Indonesia Global Gateway (IGG) project, a large-capacity optical submarine cable connecting nine cities of Indonesia with Singapore. NEC signed a contract with PT Telekomunikasi Indonesia, the country's largest telecommunications carrier, to lay cables totaling 5,300 km in length. The cable which is expected to be ready-for-service in the first half of 2018, features the latest 100Gb/s DWDM (Dense wavelength Division Multiplexing) technology and it has an initial design transmission capacity of 32Tb/s.



Once IGG is completed, this cable system will not only enhance connectivity between the major cities of Indonesia but it will bridge two other International submarine cables being built by NEC, namely the SEA-US submarine cable system connecting Indonesia to the U.S. and SEA-ME-WE5 submarine cable system connecting Singapore to Europe through the Middle-East. The IGG will empower Indonesia's domestic communication networks, while transforming Indonesia into an international communication hub.



Industry Eco-System

Supporting a World Recreated with New Bonds of Industries and ICT

Organic integration of people, things and processes through IoT, the rapid digitalization of production and sales activities, the emergence of new business offerings in response to diversified consumer experiences and high-level needs, and many other factors are driving ongoing structural changes in our industries. NEC is delivering next-generation eco-systems for industry through the creation of new digital platforms.

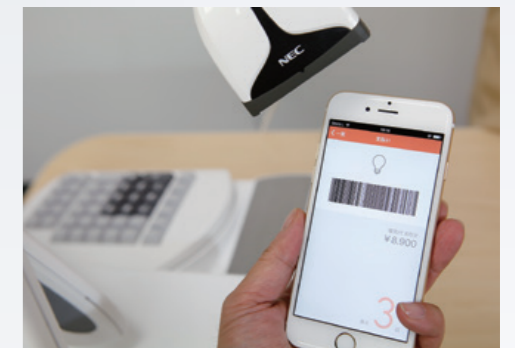
Co-creation with Customers in the FinTech Space



Creating New Value by a FinTech Joint Venture with SMBC

Sumitomo Mitsui Banking Corporation (SMBC) and NEC have established a joint venture company "brees corporation" that will offer a new Convenience Store Payment service that allows customers to pay utility bills and online shopping purchases at convenience stores using their smartphones rather than conventional payment slips. Users of the new service, available from 2017, will be able to upload barcodes on payment slips to their smartphones and make payments by scanning the screens at convenience stores. This not only contributes to improving the efficiency of payment processing for convenience stores, but also reduces the costs involved in printing and transporting payment slips for merchants. Users of the service also enjoy the benefit of not having to carry around slips of paper, which, if forgotten, could lead to late payments.

Going forward, breez aims to collaborate with major convenience stores and other retail companies, as well as venture startups, to continue creating new value.



Initiative to Improve Agricultural Productivity and Eradicate Poverty and Hunger



Facilitating FAO Farmer Assistance Project with e-Money Technology

In Mozambique, where 70% of the population lives in rural areas, improvement in agricultural productivity is a key issue for national development. One means of improving agricultural productivity is widespread distribution of high-quality seeds, seedlings and fertilizer to farmers. The UN's Food and Agriculture Organization (FAO) has been endeavoring to improve Mozambique's agricultural productivity by distributing vouchers that partially subsidize farmers' purchases of seeds, seedlings and fertilizer. Once the vouchers had been used by farmers at agricultural supply stores, the FAO previously collected them and reimbursed the merchants for the vouchers' value. However, given the vast expanse of Mozambique's rural regions, collection of paper vouchers and reimbursement of merchants took a long time. Long delays between voucher redemption and reimbursement led to a problematic situation that tied up agricultural supplies merchants' working capital, with no means to accurately assess by whom and for what purposes the vouchers were being used.

To resolve these issues, NEC partnered with local companies to build economic infrastructure that utilizes e-money technology. The infrastructure has facilitated smooth distribution of agricultural supplies while also enabling the FAO to provide more effective guidance on improving crop yields based on individual farmers' purchase histories. Mozambique's agricultural productivity has consequently improved. The improvement has been accompanied by growth in farmers' incomes also.

NEC will continue to endeavor to resolve local social issues through global co-creation activities, thereby contributing to customers and society's sustainable growth.



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