R&D and Intellectual Property Strategy

NEC aims to create a "Solutions for Society" and conducts research and development activities in close collaboration with intellectual property and standardization strategies. Researchers go out to visit customers, work through a variety of hypotheses until they can identify the exact problem, and then strive to create potential solutions that contribute to business and maximize value by using NEC's No. 1 technologies and unique technologies as our sources of competitiveness.

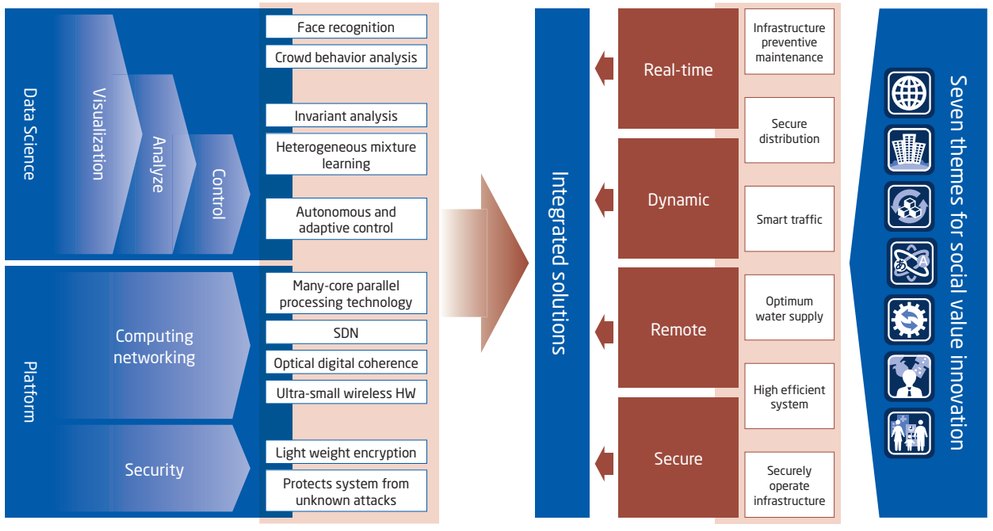
Main Research Domains and R&D Strategy

NEC aims to provide value that will ensure the safety, security, efficiency and equality in society by promoting the development of "Solutions for Society" under the "Mid-term Management Plan 2015." R&D activities at NEC improve technology that supports current businesses in providing the solutions. Furthermore, the R&D programs are designed to create technologies for future businesses that can provide added value for society. All in all, successful R&D activities support the sustainable development of the Company.

Regarding research domains, R&D activities are set to make vital contributions to seven themes related to social value innovation. These include "data science," which creates new values from Big Data using visualization and analyzing technologies, and "platforms" that are needed to respond to the large-scale, complicated issues actually facing the world.

NEC possesses many proprietary and highly competitive technological assets in both these areas. We continue to reinforce NEC's strengths in these areas, and furthermore, strengthen sources of value provision in real-time, dynamic, remote and secure, thereby enhancing the competitiveness of the "Solutions for Society."

Contributing to the Creation of Integrated Solutions Based on Seven Themes for Social Value Innovation and R&D Activities Centered on Data Science and Platforms

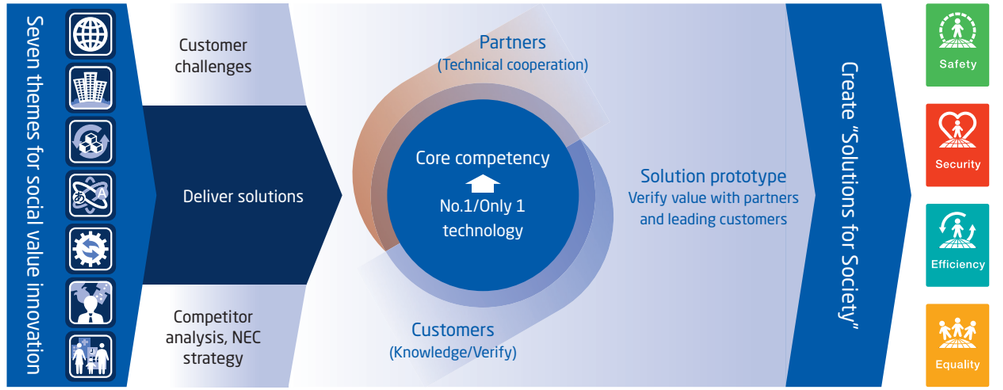


At NEC, we apply a process in determining R&D activities to carry on. The process involves focusing on domains in which NEC can provide high value; creating core competence after thoroughly refining strong technologies; and then delivering strong solutions by collaborating with partners and customers. We find this process important from the viewpoint of contributing to business with greater value through R&D.

As a result, in fiscal 2015, we contributed to creating the new "Solutions for Society," including through solution with the Predictive Monitoring and Diagnostics System for large-scale complex facilities utilizing Invariant Analysis technology* and through the integrated disaster readiness system using crowd behavior analysis technology.

* Invariant Analysis technology is an analytics-based technology that extracts and models the relationships within large amounts of data to enable the detection of behavior that is anomalous with the model, thus allowing discovery of potential performance issues.

By Leveraging the No. 1/Only 1 Technologies We Create "Solutions for Society" in Collaboration with Partners and Customers



Moreover, to expand these types of initiatives globally, NEC is moving ahead with R&D in the five regions globally including North America, Europe, China, Singapore and Japan. We will leverage their local advantages and accelerate the creation of new business by initiating collaborations with these regions.

Through its R&D programs, NEC aims to contribute to development of "Solutions for Society" as outlined in the "Mid-term Management Plan 2015," and to create new value to help realize "an information society friendly to humans and the earth" described in the NEC Group Vision 2017.

R&D Achievements in Fiscal 2015

- **Developed technology to observe and measure internal deterioration of a structure through video**
  Developed the world's first technology capable of measuring and estimating internal deterioration inside structures such as roads or bridges based on video images of the surface taken by camera. Contributed to early detection of structural deterioration and more efficient repairs, and reducing the cost of maintenance inspections.
- **Developed software technology to integrate different types of networks to expand SDN usage**
  Developed the world's first technology to enable service providers and telecommunications carriers to efficiently build and operate wide area networks through integrated management of multiple types of different networks such as optical or wireless.
- **Strengthened heterogeneous mixture learning technologies that automatically discover massive patterns hidden in Big Data**
  Developed new data analysis techniques to automate NEC's heterogeneous mixture learning technology. Enabled high-speed, highly accurate large-scale demand forecasts based on millions of target data, including sales forecasts by product and energy demand forecasts.
- **Developed "Fingerprint of Things" recognition technology capable of identifying industrial products and parts through fine surface patterns**
  Developed the world's first "Fingerprint of Things" recognition technology that enables instantaneous and highly accurate identification to identify specific products and their respective manufacturers by using image recognition of fine patterns naturally generated on the surface of industrial products or parts and matching these with cloud-based data. Application of this technology enables selection of optimum distribution routes and ensures the authenticity of products without any special device or identification tags.

Intellectual Property Strategy

The NEC Group owns approximately 65,000 patents worldwide, including some 22,000 patents in Japan as of March 2015. The Company positions intellectual property as important management resources for the NEC Group's business competitiveness and stability, and is working to strengthen its intellectual property capability. Specifically, NEC is concentrating on establishing a global patent portfolio, to support quickly achieving an overseas sales ratio of 25% as targeted in "Mid-term Management Plan 2015." In such areas as SDN and energy in particular, NEC is carrying out Group-wide strategic patent projects on a global basis to obtain patents that are strong and used extensively.

Furthermore, NEC believes that participating in standardization initiatives will help create and expand businesses, and will also contribute to the stable offering of products and services. In addition to pursuing a business model that utilizes standardization, NEC is engaged strategically in standardization activities by actively participating in standards organizations both in Japan and overseas. Also, as part of its external engagements with intellectual property, NEC is actively pursuing licensing activities to reduce business risks and expand business opportunities.