

Ecosystem construction in the AI/IoT era

“Support to explore and evaluate technology ventures”



In the AI/IoT era, it is important to construct an ecosystem with cross industries and venture companies.

Expanding the technological field which automotive industry should deal with

For automotive operation and connected service, the functions required of the car are expanding significantly. In order to implement these functions, importance of technology is increasing in areas where conventional automobile manufacturers do not possess know-how such as AI (artificial intelligence), large-scale software development, big data analysis, high precision digital maps. Such innovative technologies are not only emerging in the In-Car domain (technologies used within a car), but also in the Out-Car domain (technologies used outside the car); hence, automobile manufacturers are required to effort to these technologies.

Collaboration with different industries and ventures is required in area that can't be covered independently

The technical areas that needs to be covered is extremely wide and there is hardly any company that can cover all of them all alone. Moreover, speed is also important to secure a competitive advantage in the AI/IoT era. Therefore, regarding the areas that cannot be covered by the company, it is important to leave the principle of self-sufficiency and quickly collaborate with other companies, including different industries and venture companies. By collaborating with different industries and venture companies the automobile manufacturers not only acquires the technology that the company owns, but also leads to speedy management and the opportunity for high-risk development that it is difficult for the company to handle alone.

Technologies required in automotive operation and connected domain

	In-Car domain	Out-Car domain
Autonomous driving	<ul style="list-style-type: none"> • Development of recognition algorithm using AI • High-performance semiconductor • Advanced sensing technology • Large-scale software development 	<ul style="list-style-type: none"> • Creation and delivery of highly-accurate digital map • Use of dynamic information (V2X*¹ communication)
Connected	<ul style="list-style-type: none"> • In-Car communication module • In-Car cyber security technology • Application and platform development 	<ul style="list-style-type: none"> • OTA*² updates • Big data analysis and utilization • Link with Out-Car information, such as user information • Cyber security technology

*1 V2X: Vehicle to X. This technology enables cars to communicate with their surroundings.

*2 OTA: Over the Air. Technology to update software and information by wireless communication.

Automobile manufacturers are required to deal with a wide range of technologies

NRI quickly explores and evaluates the venture companies that possess the core technologies of AI/IoT to meet customer needs.

Total support, from search to evaluation of venture companies

In the AI/IoT industry, venture companies are likely to grow very quickly. On the other hand, there is a risk that the company gets dissolved or taken over by any other company due to insufficient finance or human resources. Therefore, when selecting a venture company for collaboration, it is necessary to evaluate the target companies from various aspects and make quick decisions.

NRI has established a system to monitor venture companies not only in developed countries but also in the emerging countries, and has built a database to understand the industrial structure and companies working on core technologies. Instead of providing a simple list, NRI can flexibly evaluate the company from various perspectives, such as technology strengths, networks maps, and stakeholders' evaluation, to meet the needs of clients.

Case: Support for evaluation of partners with AI/IoT technology

NRI has success stories in several fields, such as automotive industry and machine industry. For example: During evaluation of AI-related companies by automobile manufacturer for collaboration purpose, in addition to collecting public information, such as credit information, we also created a network map of stakeholders of the candidate companies, interviewed stakeholders of venture capital or potential companies, and evaluated them from various aspects. In addition, we also presented the return and risk expected from the collaboration, points to note for inferring risk, and measures to reduce such risk.

Although it was a short-term project of about a month NRI completed it very quickly.

Further, for developing an IoT-related strategy for machine manufacturers, NRI promptly supported the search for IoT venture companies in various countries and regions to support negotiation with partners.

NRI's Technology Venture Evaluation

