Expanding downstream services for automobile manufacturers "PoC–Proof of Concept"

Automotive aftermarket is about 3.7 times larger than new car sales, OEM and service providers are competing beyond the industry barriers.

The advancement of linked technologies, mainly connected cars, has increased the scale of downstream business

The type and quantity of information that can be collected and transmitted to the car is greatly increasing with the advancement of linked technologies, such as the introduction of connected cars and advanced functions of automotive infotainment system. In addition, with a decline in data communication charges, cloud usage charges and unit price of devices, such as sensors, it has become easy to use large volume of data. As a result of these changes, automobile OEMs are shifting their resources from selling hardware, i.e. traditional vehicle sales to downstream business domain that are strong in software, such as autonomous driving, sharing platform, telematics insurance and real-time prediction of failure in components. NRI estimate that the size of aftermarket will be about 3.7 times of the new car sales.

With a tough competition among OEM and service providers, it is necessary to devise a way to succeed in downstream market

On the other hand, service providers, such as Google, Apple, Uber, Grab, have been proactively involved in the development of autonomous driving or shared platforms in the large-scale downstream business area, and the automobile OEMs and service providers are competing beyond the industry borders.

While the whole industry is accelerating towards establishing a new automotive industry such as autonomous driving and sharing, the existence of service providers with advanced service models and know-how on data utilization poses a threat to OEMs. Although some OEMs have steered up the road of partnership, it is a challenge for OEMs to consider how to take advantage of their own customer assets and data assets to capture downstream areas.

■ Annual retail market size related to automobiles (Japan)
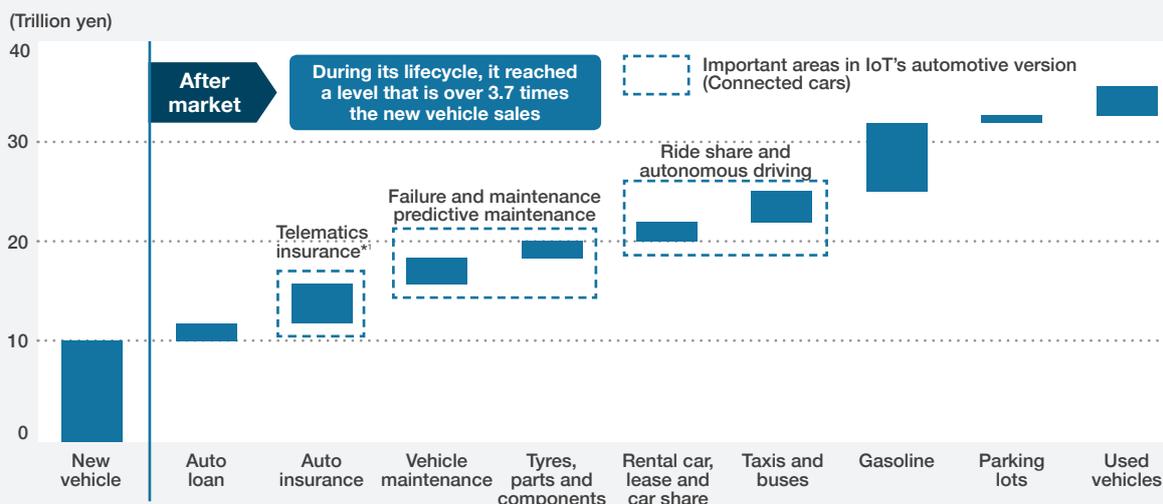
*1 Automobile insurance wherein data regarding car's mileage and driving mode (sudden start or stop) is collected and analysed, and insurance premium is calculated after evaluating the driving pattern of the driver

Source: New vehicle, Tyres, parts and components, Gasoline, Used vehicles: Business statistics on vehicle maintenance, Ministry of Economy, Trade and Industry (2014); Rental car, lease and car share, Taxis and buses, Parking lots: Survey on trends of auto insurance in Service industry, Ministry of Internal Affairs and Communications (2015): General Insurance Association of Japan (2015) - Auto loan: Market size is equal to the amount of credit extended annually. The amount was calculated by NRI taking 20% of the retail market for new vehicles.

It has become an urgent issue for OEMs to devise a way to compete in the augmenting aftermarket

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Global Practice Group
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NRI will support from formulation of the data-driven strategy for automobile OEM through PoC due to harmonize consulting and solutions.

Supports PoC with "Con-solutions" that combines consulting and solutions

When deploying services that utilize data such as car sharing and failure prediction in the downstream, know-how and resources are needed to analyze large amount of data owned by the company or partner companies and summarize it in output that can be used within the company. NRI has a system of "con-solution" in which the consulting department and the system solutions division are monolithic, NRI provide support starting from the study of strategy and vision for OEMs in downstream area, creating use cases in detail based on the analysis done within the company, formulation of small start execution plan for PoC, developing analysis environment, implementing analysis using AI or machine learning, to the study of requirements and estimation of the market scale for formulating a business plan for new services.

Case: Creation of new service menu and environment for data analysis

NRI provided support to a division of an automobile OEM that promotes cross-company data usage. Taking advantage of the global research network, we conducted a case study on the use of advanced data applications, and we jointly formulated a new service menu with a company, while listening to the After-Sales Services division, the Technical Development department and the production site. Further, to implement PoC, NRI built an analysis environment that ensure security on the cloud, based on the Amazon Web Services (AWS) that NRI has a tie-up. As a result, the company was able to prepare a mechanism where external data scientist can be used, without disclosing the highly-confidential data possessed by each division to external parties.

■ Features of NRI's downstream business development "PoC" service