Introduction

Twelve thousand (12,000) JR East trains run every day, and approximately 16 million passengers use the service each day. JR East has been making an effort to improve amenities provided by the railroad while tackling various service issues in inter-city transportation, transportation within the metropolitan area, as well as regional transportation, and also at more than 1700 of our railroad stations. With improvement of reliability of transportation services as the core objective, JR East is also developing a wide range of daily life services that can support customers in their daily lives.

Major examples of such services are of course tour and bus services, but also, there are also credit cards, gift certificates, shopping centers which in general are called station buildings, “Kiosks,” which are very familiar retail units in stations, and restaurant businesses. Furthermore, JR East operates: sport and leisure businesses, such as ‘GALA Yuzawa Ski Resort’ or the fitness club chain “JEXER;” hotels such as the “Hotel Mets” and “Metropolitan Hotel” operating as JR East hotel chains; and sales of houses and development of office building complexes. At the same time, JR East is developing: non-life insurance agency services; advertisement and publishing business; information, accounting, and human resources services; and trade and logistics business. JR East is also promoting child-care services such as the establishment of nursery schools in station-buildings in response to the declining birth rate and the aging society, and is also promoting elderly care services as typified by the opening of a nursing home for the elderly in Omori next spring.

In 2001, JR East proposed establishing the “reliable daily-life-oriented service creation group” as part of its mid-term management plan “New Frontier 21,” and we are now working on new plans for developing broad-ranging services that are more daily-life oriented than ever.

The mission of the Frontier Service Research Laboratory is to develop services that will allow effective liaison between railroad transportation and daily-life oriented services. Also, based on the fundamental principle of JNR privatization reforms, the laboratory emphasizes as its basic policy the importance of research from the perspectives of customers and the general public. Furthermore, in accordance with the philosophy of privatization, “open the way to your own future,” the laboratory will extend its scope of research to near-future applications in order to establish new services for the future.
In order to conduct the above mentioned research, the Frontier Service Research Laboratory has set three major research areas: value creation, amenity creation, and space creation. Approximately 40 researchers belong to this organization, covering a wide variety of specialization such as machinery, information communication, architecture, construction, engineering works, urban engineering, and marketing.

“Value creation” is a research and development field in which services are developed that will become new values that customers and citizens can benefit from. “Amenity creation” is a research and development field aimed at improving the amenity of station services and facilities. “Space creation” is a research and development field for creating infrastructures for providing services. While implementing advanced technologies such as information communication, robotics, and mobile networking, as described below, research and development in these three areas will be conducted.

Last year, JR East founded the “Near-Future Society Study Group” for predicting what the Tokyo metropolitan area and lifestyle will be like in 2020 and also founded the “Ubiquitous Life Study Group” for examining the possibility of service deployment at and between stations, assuming IT will be widely adapted to the daily life of the general public in five years. Also, JR East established the “Potential Market Study Group,” which is based on a network between JR East and the leading marketing practitioners as a method of market study for developing new products. Opinions of the general public will be collected from web-based messages or discussions in order to observe their potential needs and psychology. Then, based on such observations, research will be conducted to discover new markets.

Although JR East has known the number of passengers for the transportation marketing purpose, quantitative research on customers becomes difficult to predict demand for transportation and other associated activities. In marketing activities as part of business strategies, new micro and macro predictions from new perspectives will become important. Especially for JR East, which develops comprehensive daily-life oriented service business with transportation as the core, further studies focusing on value perspectives, ways of thinking, and activities of individuals will be necessary.

Research on value creation conducted at the laboratory is focusing on the marketing methods for creating potential demand in diversified and individualized markets. In this research, individuals and economic climates are studied through future prediction and social investigation, and businesses and services will be developed through scenario planning. Also, during the course of the research activities, marketing research will be conducted, marketing databases will be established, marketing methods will be systematized, and analysis and evaluation of services will be conducted.

After the long history of its development, the transport business will suffer overall lowered demand due to future changes in population. People use transportation as a means of going from one place to another to fulfill their original goals. In this sense, transport is a derived demand. When daily activities of people were relatively stereotypical, demand for transportation was appropriately forecasted through investigation of changes in population or economic figures, and it was possible to predict with reasonable accuracy the number of JR East customers. However when diversification of value perspectives, ways of thinking, and activities become significant, and societal systems and frameworks change as seen in today’s Japan, it
Understanding of relationships between traveling and consumption by customers and the general public as a whole, including food consumption and shopping at stations, has also been one of the study subjects. The result of the person trip survey of the Tokyo metropolitan area can be referred to as a clue, but in order to assess the current status of traveling and consumption activities by individuals with stations as base points, the laboratory conducted an even more detailed and larger-scaled social investigation within a 70 km cross-section of the Tokyo area and started annual fixed-point observation. Through this investigation, the laboratory is attempting to understand the activities of individuals in the Tokyo area, as well as the relationships between the purposes for traveling, railroad use, and consumption activities. This investigation will allow collection of marketing data which will serve as a shared infrastructure for the railroad and daily-life oriented service businesses.

As mentioned at the beginning of this document, JR East operates many types of businesses; therefore, various types of customer data have been accumulated. For example, data has been collected on 9,000 tenants in station buildings, approximately 2.3 million credit card holders, 6.61 million Suica holders, 600,000 “Eki-net” members on the Internet, and 750,000 senior “Otona-no-kyuujiitsu” members. By using such accumulated customer data, JR East believes it will be possible to provide services that match customer needs. This will lead to future establishment of a JR East marketing system.

While giving special consideration to protection of personal information, the laboratory will start development of a market database, which will contribute to the next generation marketing strategy. Also, establishment of a CRM (Customer Relationship Management) model is another important mission of the laboratory.

Up to now, 6.61 million “Suica” cards, or non-contact IC train tickets marketed by JR East, have been issued. As a result of laboratory research, it has become clear that Suica can increase the convenience of railroad use and also promote changes in selection of modes of transportation. In June, integration of Suica and credit cards was achieved, and from next spring, Suica cards will be able to be used at stations as electronic money. Future evolutionary use of Suica, such as integration with cellular phones, is at the core of research and development of the laboratory. For this reason, a wide range of research such as research on thermal environment, sound environment, design and color environment, air...
and olfactory environment, air pressure environment, visual environment, tactile environment, and space environment is required. By incorporating this station environment research especially with psychology, physiology, ergonomics, and cognitive engineering, the laboratory aims to improve the overall amenity of stations.

Also, envisioning various future possibilities for stations, the laboratory is actively conducting research and development while incorporating technologies from different fields. In order to come up with study subjects with fresh ideas from robot technology, nanotechnology, and biotechnology fields, the laboratory will hold the "Station Service Research Competition" mainly targeting university laboratories.

One of the most frequently submitted requests from customers now is the request to provide on-demand information. As a result of "Customer Opinions" collected in FY2002, the opinion category "information display" received the second most opinions, next to the "station facility" category. This shows that the customers wish to be provided with accurate information that meets their needs. The laboratory will conduct research and development to establish a framework for a comprehensive on-demand system for providing information that will allow users to receive train information anytime, anywhere. The laboratory will attempt to improve services by developing a passenger information communication system, in which customers can obtain information from information displays such as PDPs, or an information support system for front-line employees.

Currently, JR East is holding the "Station Renaissance" campaign to recreate stations into bases for living, based on the campaign concepts "from stations for people to pass through, to stations for people to gather at," and "stations for everyone." Starting with Ueno, Yotsuya, and Asagaya stations, and later on, Omiya and Tachikawa, the attractiveness of each of the stations will be improved so that high values will be added to them. To do so, space such as artificial ground for deploying services will be necessary, and for this reason, the laboratory is conducting research and development on civil engineering methods. In the research area of creating space, the laboratory is developing methods for establishing high quality artificial ground at a low cost and in a short period of construction time. The laboratory is also studying: safe and economic design and construction methods; economic methods for designing new
buildings; creation of high quality space while taking the environment into consideration; and noise suppression in response to operation of high-speed Shinkansen trains. Details of this research will be illustrated on a different occasion, but most of this research uses equipment such as horizontal loading test equipment installed in the Research and Development Center, repeat experiments, and accumulated technologies.

In closing

Research and development from the customers’ and general public’s points of view, especially research on abstract aspects and marketing, have just started. From now on, we plan to further advance our studies to create customer values by promoting sharing of internally accumulated information including group companies. Also, we will promote research and development of services that match the new era through liaison with universities, external research institutes that have conducted many types of research in corresponding fields, the Railway Technical Research Institute, and marketing strategy divisions or research divisions of related manufacturers.