Featured Articles

Enterprise Solution Supporting Global Operations of Japanese Multinational Companies

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OVERVIEW: As the operations of Japanese multinational companies become increasingly global, Hitachi is seeking to assist their activities by strengthening its total IT support structure, which encompasses not only system implementation but also the fulfillment of maintenance or operation needs. Hitachi is also developing service solutions that utilize a variety of advanced technologies to bring social innovation to different parts of the world.

INTRODUCTION

WITH economic activity extending internationally, Japanese multinational companies need to operate at a global level.

Against this background, Hitachi is strengthening its total information technology (IT) support structure at a global level to keep pace with the expansion of global business by Japanese multinational companies in particular.

This article describes what Hitachi is doing at a global level with regard to its IT support structure, and its enterprise solution for enterprise resource planning (ERP) and the automotive industry.

EXPANSION OF GLOBAL IT SUPPORT STRUCTURE

Hitachi has been working with its overseas group companies and locally based vendor partners to support Japanese companies of manufacturing/distribution industry, which have been going through an accelerating process of globalization. Factors such as the expansion of support to cover more regions and the increasing diversity of regional requirements have created a need for more comprehensive local support.

A global support structure has been established utilizing the offices, staff, and other resources of Hitachi Consulting Corporation, which supplies consulting, implementation, and managed services globally. For example, Hitachi has experience with companies of precision manufacturing industry and with global ERP projects that utilize products such as Oracle[*1] or SAP[*2], and is actively involved in supplying these services to the increasingly global pharmaceutical industry.

Hitachi supplies total IT support at a global level that includes not only system implementation but also subsequent support and other maintenance or operation needs.

In particular, Hitachi has established a global delivery structure that utilizes resources such as its Global Delivery Center in India and China Delivery Center in China for reasons that include cost and the availability of high-quality IT staff. This allows the provision of total services that extend from consulting to design, implementation, and maintenance, with services to customers being handled through area support points close to where they are located, and activities such as operational level manufacturing and maintenance being handled by the delivery centers in India and China. Also, each area support point is appropriately staffed with people able to speak Japanese.

In the future, Hitachi intends to meet the diverse globalization needs of Japanese multinational companies by strengthening and expanding its IT support structure at a global level (see Fig. 1).

USE OF ADVANCED ERP TECHNOLOGY TO SUPPORT JAPANESE MULTINATIONAL COMPANIES

Japanese multinational companies have a growing need for system integration aimed at things like pursuing

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*1 Oracle is a registered trademark of Oracle and/or its affiliates.
*2 SAP and SAP HANA are the trademarks or registered trademarks of SAP AG in Germany and in several other countries.
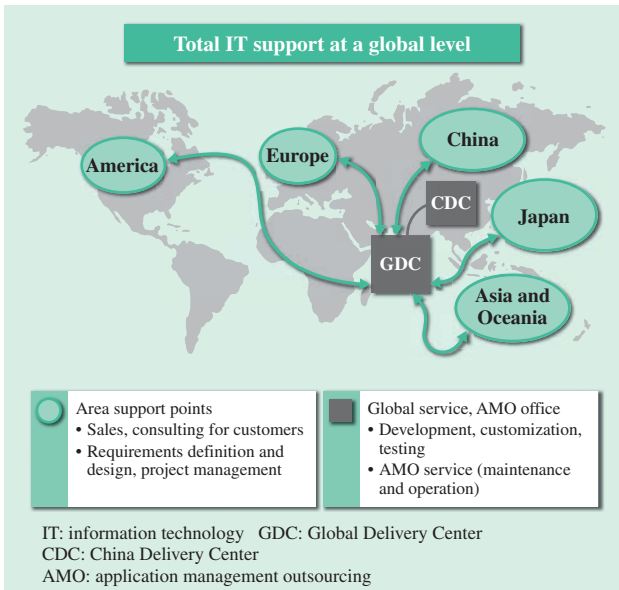
Fig. 1—Overview of Total IT Support at Global Level.
Hitachi supplies total IT support at a global level by utilizing the global resources of its group companies.

global business, strengthening their governance, and improving the efficiency of IT resources. Facing the same challenges, Hitachi has been deploying its global financial accounting system throughout the world to its group companies with systems based on SAP solutions since 2006, including system maintenance and operations (as of January 2014, the system had been installed at 382 companies in 33 different countries).
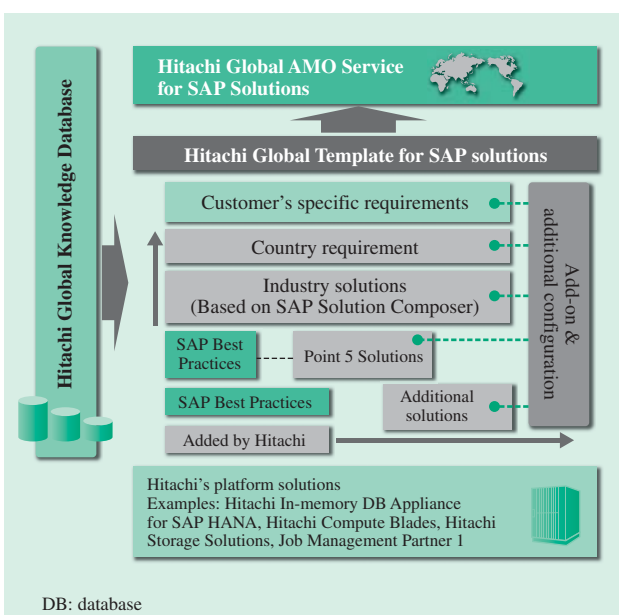

Fig. 2—Hitachi's One-stop Global Solution for SAP.
Hitachi supplies a one-stop global solution for SAP.

The following section describes an enterprise solution for Japanese multinational companies based around ERP that is based on the knowledge of global system deployment that Hitachi has gained from this work.

Hitachi Global Solution for SAP

Hitachi offers its Hitachi Global Solution for SAP as a solution that combines the functions needed for global system deployment. The solution is built around three core elements. These are the Hitachi Global Template for SAP solutions, which is based on SAP Best Practices and includes enhancements by Hitachi to the functions required for the global operations of Japanese multinational companies; the Hitachi Global Knowledge Database, which systematically collects and collates know-how from implementations in different countries drawn from sources such as experience of projects at numerous customers or core system deployment at Hitachi; and the Hitachi Global AMO[*3] Service for SAP Solutions, which deals with global operation and maintenance (see Fig. 2).

Keeping Pace with Latest SAP Technology

Hitachi also provides powerful support for the globalization of its customers on the hardware front by supplying the Hitachi In-memory Database (DB) Appliance for SAP HANA[*2] throughout the world through Hitachi Data Systems Corporation. This product is an appliance machine that supports SAP HANA, the latest technology for SAP systems. Having led its competitors by utilizing SAP HANA as the database for Hitachi Global Template for SAP solutions, Hitachi is contributing to new innovation by its customers by making it possible for them to process ever increasing of data in realtime.

Realizing Global Operations

For the globalization of increasingly complex business operations, the Hitachi Global AMO Service for SAP Solutions delivers operation and maintenance services to customers based on know-how obtained by Hitachi through the operation and maintenance of systems at its group companies (at 102 sites across 31 countries, as of 2013).

Through its global-level partnership with SAP AG, Hitachi intends to deploy solutions that combine its own technologies with those of SAP, globally and across a wide range of industries.

*3 Application management outsourcing: Outsourcing of business system management to a specialist vendor.

GLOBAL SERVICES FOR AUTOMOTIVE INDUSTRY

A global response is seen as being essential in the automotive industry where competition takes place on a worldwide scale. The following sections describe new global services being planned by Hitachi that are based on its past experience and knowledge.

Existing Global Business Model

Hitachi has already been supporting the globalization of the automotive industry through its past activities, which include the supply of (1) car parts, (2) on-board devices, and (3) information and telecommunication services for vehicles. These activities include solution services for enterprises, as described in the following section.

(a) Global telematics service (Japan, USA, Europe, Australia)

Services that add value to information services for drivers by connecting IT centers to on-board devices such as car navigation systems and telematics control units (TCUs) that transmit vehicle control data.

(b) Map update service for car navigation (Japan, North America, Europe, Australia, Gulf states, South Africa, China)

This service produces maps for car navigation. Hitachi developed an incremental map update technology in 2008 and provides map updating through a center-based service.

(c) Car navigation application for Android[*4] (Japan, North America, Europe[*5])

(d) Fleet management service (Japan)

Vehicle tracking, safe driving support, and vehicle dispatch and management are provided through an Android car navigation application linked to a center-based service.

Future Global Business Model

In the future, Hitachi intends to develop businesses that provide enterprise solutions to the automotive industry by utilizing advanced technologies in which Hitachi has particular expertise, namely technologies for car navigation map authoring and compilation, analysis and processing of location information (probe data), and analysis and processing of vehicle control data.

Specifically, Hitachi is proceeding with the global deployment of the following two businesses that utilize these technologies.

[*4] Android is a trademark of Google Inc.
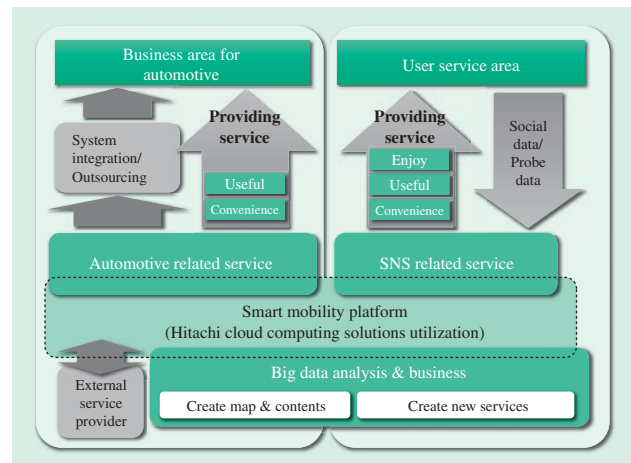[*5] Scheduled to be fully available in North America and Europe in December 2014.

Fig. 3—Overview of Smart Mobility Service.
Hitachi is constructing and supplying a new service system that combines and builds on existing technologies in the form of a smart mobility service.

The first is the supply of a smart mobility service that acts as a platform for assisting the analysis and processing of location information, not only by the automotive industry, but also by many other corporations. This will involve the construction and supply of a new service system that combines and builds on existing technologies.

The second is a center-based service business that provides technologies and services required by automated driving systems.

Smart Mobility Service

Fig. 3 shows an overview of the smart mobility service. It will initially be rolled out in Japan, North America, and Europe. This center-based service utilizes social networking services (SNSs) to learn about the different traffic regulations and road characteristics in each country, and uses this to collect, analyze, and disseminate content based on realtime location information. Various application services will be provided through social map and "driving characteristics/vehicle condition" businesses described below.

(1) Social map

This utilizes information such as changes in location data collected in realtime, context data provided to an SNS, and image data collected from vehicle-mounted cameras to generate map data and map content for distribution to vehicles.

(2) Driving characteristics/vehicle condition

This uses information such as vehicle control data, sensor data, and image data from vehicles to analyze vehicle behavior and direction, and then uses this as

the basis for evaluating the driving characteristics of the driver and the vehicle condition.

Fig. 4 shows the technology roadmap for the smart mobility service. As this is a service that can obtain added value from global support, Hitachi has planned from the beginning to deploy the service globally.

Automated Driving Support

2013 was the year in which the automotive industry set out on the road toward practical automated driving. In response, Hitachi has been working on research and development aimed at producing local dynamic maps (LDMs). In expectation of future integration with center-based LDM services, Hitachi will utilize its social map technology to support automated driving vehicles from the standpoint of maps and map content.

Hitachi is also supporting activities relating to automated driving in Europe, starting with the demonstrating and standardization of a telematics service that supports the optimal driving of electric vehicles (EVs) through its participation in the European Efficient Cooperative Infrastructure for Fully Electric Vehicles (eCo-FEV) project.

CONCLUSIONS

This article has described what Hitachi is doing at a global level with regard to its IT support structure, ERP, and advanced technology for the automotive industry.

The job title, chief digital officer (CDO), has become more prominent in recent years, particularly in the USA. The role of a CDO is to utilize digital technology to keep a business ahead of its competitors.
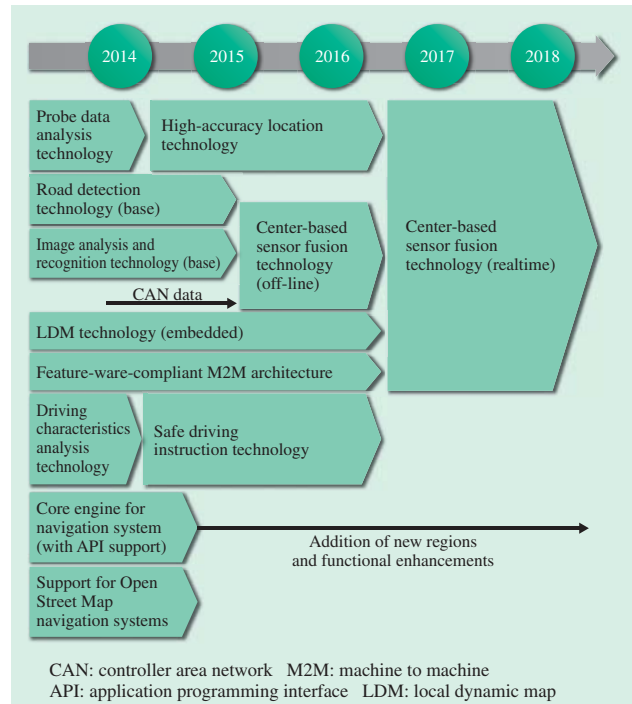

Fig. 4—Technology Roadmap.
The figure shows the technology roadmap for the smart mobility service.

The utilization of big data is one such activity. The utilization of big data is the leading concern of many companies, and it is made possible by the sort of work on advanced technologies and their applications described here.

Based on the advanced technology base described in this article, Hitachi believes it will be able to deploy services that support the rapidly accelerating globalization of Japanese multinational companies in particular.

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