

Total value chain design in the digital age "Supply chain update"

**An era where each component or customer can be identified.
Functions need to be strengthened across complete supply chain.**

Following Industry 4.0, corporate management started collaborations with the emergence of new digital technology such as IoT

Need to design new business and system for the entire supply chain

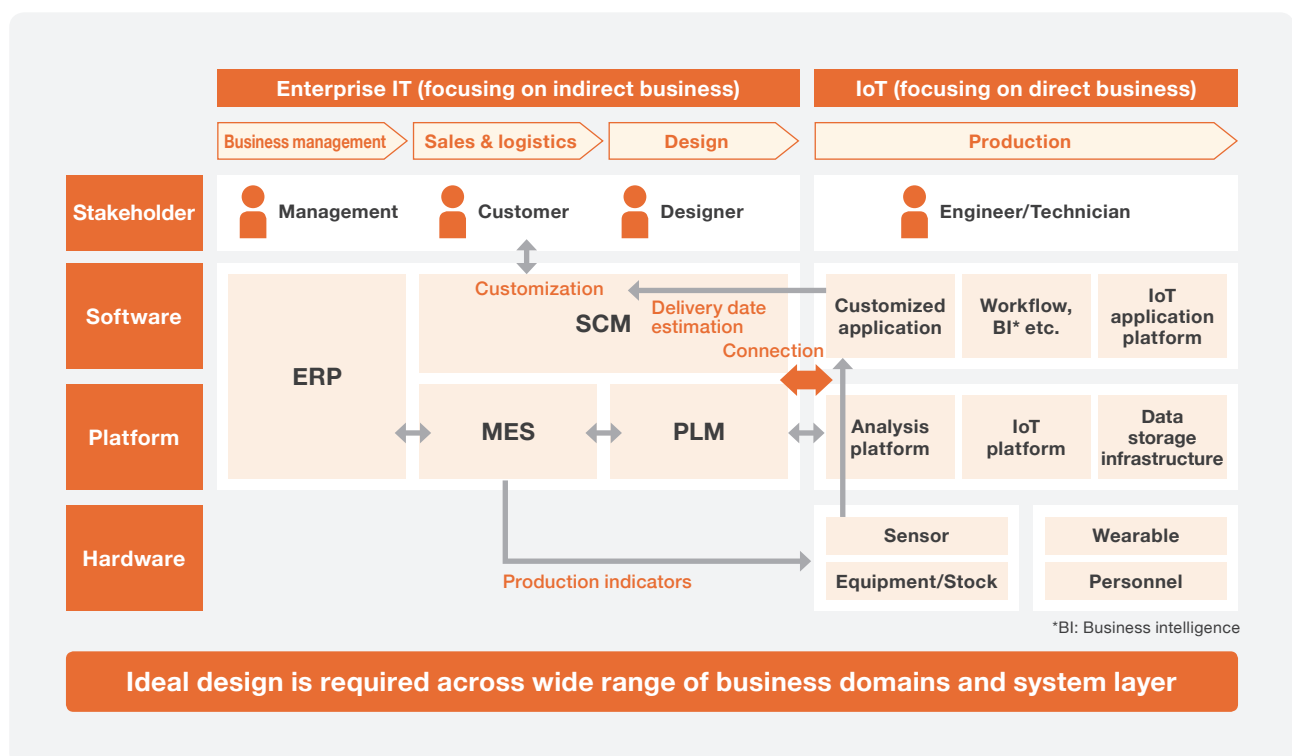
With the advent of IoT and Big data processing technology, it is possible to identify each component, manufacturing plant and customer. In Germany, the industry, government and academia are working together to promote "Industry4.0" and use these digital technologies to bring about innovations in the manufacturing sector. As a result, the horizontals of IT competition principles are added to the vertically integrated manufacturing competition principle and if there is no ability to quickly incorporate the "best practices" developed outside company into company's own management or business process, it will make the company less competitive compared to other companies.

The vision and speed to incorporate the new methods of competition while using company's strength will become one of the competition ability of an organization.

Mass customization is an example of close cooperation between management and digital technologies. This is a way to prepare a huge menu of options so that each customer can be satisfied. In order to implement the mass customization, it is necessary to have a flexible "procurement" from a wide range of suppliers, "production" capable of responding to specification changes for each item, "sales" to individual customers using digital channel, smooth "logistics" and a high level "system" that supports all of these.

Therefore, it is necessary to a design business and a system across the entire supply chain.

Integration of corporate management and new digital technologies such as IoT



NRI provides comprehensive support for supply chain updates with the help of consultants who have a deep understanding of the automotive industry and IT.

Consultants with deep understanding of automotive industry and IT, support the analyses of IoT utilization

The lack of "Business IT resources/team" that serves as an integral part for studying the collaboration between management and IoT has become a major challenge in many organizations. NRI has years of experience in executing various automotive industry projects and has amassed extensive knowledge of the industry. At the same time, system development division has been engaged in developing and operating IT platform and systems handling large amount of data such as securities and distribution. We support implementation of digital technology at client's company by working together as a team with experienced consultants and IT solution providers. Even in the field of supply chain design, we can propose optimum vendor-free solution, from optimum consulting to proposal of system development using package software such as LLamaSoft.

Case: PMO support to study the use of IoT in factories

NRI implemented the PMO from concept formulation to vendor control for using IoT in factories. First of all, we defined the significance of implementing IoT and formulated the concept of business and system "concept of systemization", we designed the PoC* to evaluate and understand the impact of IoT and supported vendor selection and negotiation. The person in charge of IoT at client company, mainly from Production Engineering Department, the business consultant of NRI, and the system consultant together formed the Business IT Review Team. Following the formulation of concept of systemization, we provided detailed usage scenarios to configure the full-fledged system and extended support to set the system requirements. While using the packages, we also carried out study and offered suggestions to ensure originality of an organization and freedom to select the IT vendors. NRI has experience in designing an IT mid-term plan that serves as connecting point between management strategy and IT plan and designing IT architecture concept to support the strengths of an organization so that system based concept can function effectively.

*PoC: Proof of Concept

Features of NRI's service of providing the support in studying the use of IoT

Steps	Issues identification	Concept designing	Detailed planning	System development	Installation/application
Managers/ Corporate Planning Department	<ul style="list-style-type: none"> Benchmarking case examples of leading organization Analyzing the present situation of business 	<ul style="list-style-type: none"> Reviewing the policies of digital transformation Formulating an IT mid-term plan strategically 	<ul style="list-style-type: none"> Creating business requirement/use cases Creating an action plan 	<ul style="list-style-type: none"> Management support for the development of multi-vendor based system 	<ul style="list-style-type: none"> System operation BPO
Logistics Department	<ul style="list-style-type: none"> Supply chain business assessment 	<ul style="list-style-type: none"> Supporting in designing the concept of smart logistics 	<ul style="list-style-type: none"> Extending support for introducing LLamaSoft and its application 		
Sales Department	<ul style="list-style-type: none"> Digital business consulting 	<ul style="list-style-type: none"> Benchmarking case examples of leading organizations 	<ul style="list-style-type: none"> Extending support for introducing digital market solution and its application (NRI digital) 		
Production Department	<ul style="list-style-type: none"> Analyzing the utilization of IoT 	<ul style="list-style-type: none"> Support in designing the concept of smart factory 	<ul style="list-style-type: none"> Vendor management 		
IT Department	<ul style="list-style-type: none"> Various IT assessment 	<ul style="list-style-type: none"> Studying the concept of business IT and designing the overview of platform 	<ul style="list-style-type: none"> Support in reviewing IT security and its application Support in using Data center/Amazon Web Services 		