FOREWORD

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The JFE Group regards the period of its 7th Medium-Term Management Plan as the largest period of change since its founding, and has positioned (DX) digital transformation as one of the key strategies that will determine its success or failure in responding to those changes. From this viewpoint, I feel that it is particularly significant that this "Special Issue on Reform with IT and Integrated Management System of Sales, Production and Logistics" of JFE Technical Report is being published at this critical time.

Since its founding, JFE Steel has been actively engaged in reforms utilizing ICT (information and communications technology). A new integrated system (J-SmileTM) was developed for management integration at the time of the merger that created the company in 2003, and a new sales and production management system (JFE-FlessaTM) was constructed to respond quickly to environmental changes during the period of drastic change that followed the Lehman crisis of 2008. Today, projects for steel works system renovation (J-HopeTM) and introduction of ERP (Enterprise Resource Planning) are in progress, and efforts in these core business areas are expected to play an important role in solving this company's management and business challenges.

To achieve an even more fundamental transformation, DX is currently underway along three axes: (1) Further improvement of operational efficiency and productivity by applying advanced ICT and data science such as CPS (cyber-physical system) to the company's steel works, (2) Reform of existing businesses through collaboration with group companies and outside companies, exemplified by supply chain linkage, and (3) Creation of new business models utilizing digital technology.

In this Special Issue of JFE Technical Report, we introduce the development of a private cloud environment (J-OSCloud), which is the basis for promoting these initiatives, and examples of problem-solving solutions that contribute to renovation, construction and improvement of the efficiency and productivity of core business systems.

The key to promoting DX is not to introduce tools, but rather to set and solve problems. In a rapidly changing environment, real reform can be realized by setting the essential issues for transformation of business models and structures and using the latest technology as the means

to achieve the necessary reforms. With the dramatic progress of ICT, whether or not a company can undertake digital reforms from this perspective will be the lifeline that determines its survival.

In the Foreword of "Special Issue on Innovation by information Systems" in JFE Technical Report published in 2006, which was the first technical bulletin on this company's information systems, Mr. Hiroyuki Kikugawa, then a JFE Fellow in Information Technology, stated:

"Identifying and responding to challenges and management issues to increase customer satisfaction, and speeding up reform by quickly reflecting customer needs, new business demands, and other business changes in the system are important issues to be addressed in the future."

The importance of this perspective is no different in today's DX era. Going forward, JFE Steel will continue to set essential issues from the customer's perspective and promote DX as a group-wide effort to resolve these issues, rather than letting tools and methods come first. We look forward to your continued feedback and support.