[Executive summary]

Managing data utilization in the digital revolution
― From the standpoint of intellectual property strategy ―

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This article proposes ways for companies to undergo a digital transformation as the digital revolution advances so that they can use more natural data, industry data, and personal data to bring about a better society: Society 5.0. Although the onset of the digital revolution raises many concerns, such as the advent of a surveillance society that infringes privacy, decision-making without human input, and data supremacy, it is very likely to open the way to an inclusive society, like Society 5.0, that allows for diversity. Recognizing that this is a watershed, what we need to do now is formulate rules for data utilization that will treat new data assets as intellectual property in the broad sense so that the digital revolution can help us become a model society.

The novel coronavirus pandemic has exposed the weaknesses of the social infrastructure that exists in physical space. In the future, most social systems will transition to cyberspace. While companies are finding it necessary to undergo a digital transformation, the rules for utilizing data have not yet been determined. Even with the steps being taken to combat the pandemic, a plethora of problems are occurring, because the use of public and private data requires collaboration as a key aspect.

From the empirical studies on companies conducted by this research unit, we have concluded that for the industry, merely possessing large volumes of data is meaningless and the following initiatives are crucial: (1) It is critical that companies develop data utilization capabilities, such as big data analytics capabilities, so that they can make use of the data they possess; (2) Companies need to develop data contracting know-how so that organizations can easily collaborate using data; and (3) Companies need to formulate criteria for both intra- and inter-organizational data reliability so that they can use machine learning to enhance the usage of data obtained from several organizations. In addition, (4) systems that facilitate the flow and use of standardized data that meets the requirements for creating economic value are needed so that cross-border and other economic transactions in the broad sense of intellectual property can proceed smoothly, and (5) company managements need to be aware that the current systems for the protection of data and personal data are limited and need to exercise adequate managerial prudence in handling incidents of unintentional data leaks and intense online criticisms stemming from a lack of societal acceptance of their managerial approach.

In addition, we summarize the key points of corporate data utilization based on past studies and positions taken by the government and industry. Based on these, we set forth some policies that should be adopted by companies themselves and policies that should be implemented by the government and other bodies as backups and present some proposals.

Specifically, we propose the following:

1. Partner with the government, academia, and business groups consisting of corporate executives to form a consortium. This consortium will spur the development and usage of management design sheets for promoting digital transformation.
2. Promote collaboration among the industry, academia, and government in international certification activities for AI data contract guidelines. Specifically, encourage cooperation between the public and private sectors for such activities as international conferences on data contracts, surveys on sectors that are taking a similar approach overseas, and information sharing.

3. In order for companies to be able to handle AI data contracts, set up a decision-making framework that allows those in charge of data operations to liaise with legal, intellectual property, and business departments.

4. Initiate programs for training specialists in the management of intellectual property and AI data contracts, such as attorneys with expertise in digital intellectual property and legal personnel with expertise in digital legal affairs.

5. Cooperate with the government and other key bodies engaged in data flow and the use of AI data to promote networking activities for public awareness and discussion forums for the international development of a sound market for the utilization of data and AI.

6. Form industry-academia-government partnerships for research into consumer acceptance of personal data, standardize desirable regulations and criteria, and have the government encourage companies to use these in their own criteria.

7. Develop content for digital business curricula for graduate business schools, MOT professional graduate schools, and entrepreneurial training programs. Promote these educational and human resource training programs. Develop the necessary case studies and other materials for these programs.

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