

# **Intellectual Property Strategy Vision**

**-Towards a “Value Design Society”-**

**June 12, 2018**

**Intellectual Property Strategy Headquarters**

## **Intellectual Property Strategy Vision Executive Summary**

Times are changing in an eye-opening speed as represented by the utilization of new technologies such as AI and blockchain, a shift from goods consumption to experience consumption, the sharing economy and the rise of companies such as GAFAM of the U.S. and BAT of China. Among such changes, there are many things that could possibly continue in the future (Chapter 1),

We may not be able to accurately predict the future from 2025 to 2030 but we can consider the ideal society. Taboo-free discussions were held between the members of the Special Committee and the Secretariat on issues such as the ideal mechanism for people, industry and society and the core-values of the future society. Of course, signs will not continue without any change and thus, attention was also paid to reversals (Chapter 2).

What would be shared as social values in such future? Emphasis is placed on the diversity and multifaceted nature of individuals and the value of things “real” is increasing because of the cyber era, and thus creation of new things is becoming increasingly necessary. Such creation is realized in an environment where diverse personalities are generated and can easily shine, a platform which serves as the source of “new” things and the mechanism of the society which embraces a wide range of values (Chapter 3).

However, such creation alone makes no difference in the countries around the world. Considering the future of Japan, it is essential to make the best use of the characteristics of Japan that are respected by foreign countries (such as the sense of balance of not wishing to become the sole winner, co-existence with nature, ideological flexibility and the editing ability to accept and heighten new things). Meanwhile, it is also necessary to prevent the characteristics such as homogeneity that brought about advantages in the past from becoming weak points and to have the perspective of using the situation which Japan faces (the most advanced low birthrate and aging population) ahead of other countries as an opportunity. If this succeeds, there will be more chances for various values generated in Japan or uniquely found in Japan to be empathized and respected by countries around the world (Chapter 4).

The key point for realizing such success is to shape and transmit new values one after another and to have the countries around the world respect the ideas as if they were defined as values. Japan is aiming to become such “value design society.” Google attracted people to the platform, collected data and used them for marketing while creating value. Uber improved the

users' convenience by matching unused resources. Japan is expecting to generate such design of new value to astonish and delight people around the world. Of course, it is not easy. Many changes are necessary. For example, such generation must be made from the viewpoint of getting away from the past homogeneity and striving to be average, and instead by utilizing trial and error with the idea that nothing would be done without such trial and error, and placing the axis on the consumers' real time evaluation instead of providing supply in an one-sided manner from the supplier. No social change perfectly functions from the very first. Open innovation is characterized by the cooperation among various stakeholders and improvement through trial and error. In order to realize the following objectives, several examples of new mechanisms have been suggested in relation to intellectual properties in a broad sense that may serve as the key: (i) unusual talents gather and make repeated challenges empathizing with the concept of "value design society"; (ii) there are many platforms where various forces encounter and design values by fusing; and (iii) values that impress the world are designed and transmitted and further shared and respected around the world. We expect this vision to become the starting point for the strategy to think about the future IP system (Chapter 5).

# Intellectual Property Strategy Vision

## Table of Contents

Introduction – New Intellectual Property in the New Era - .....	1
Chapter 1 Current Environmental Changes and Signs That May be Connected to Future Social Changes .....	3
1. Signs of Changes in the Sense of Values and Social Circumstances.....	3
2. Advances and Penetration of New Technologies.....	7
3. Changes in the Environment of International Relations.....	12
Chapter 2 Future Vision of Society Estimated from Current Signs -Create a Future That Makes People Happy - .....	16
1. Future Vision Focusing on People (Lifestyle, Work Style and Sense of Value).....	19
2. Future Vision Focusing on Industry (Innovation and Competitiveness) .....	20
3. Future Vision Focusing on the Society (Mechanisms, Rules and International Relations).....	22
4. Duality of the “Future” (Is it a future where people are feeling happy?) .....	26
Chapter 3 “Value” in the Future and Value Generation Mechanism .....	28
1. “Values” Which Will be Important in a Desirable Future .....	28
(1) Making Good Use of Multifaceted Nature and Diversity of Individuals .....	28
(2) Increased Values of “Real” (e.g. real thing, experience, genuine object, history and culture).....	29
(3) Creation of New (Innovation) and Emergence Becomes Essential .....	29
(4) Acceptance of Various Values in Society is the Basis.....	29
2. Mechanisms to Create “Values” that Lead to the Creation of New Businesses or Improvement of International Competitiveness of Japan.....	30
(1) Mechanism That Generates Diverse Personalities .....	31
(2) Development of Environment Where Diverse Individuals Are Active.....	32
(3) Knowledge Platform .....	33
(4) Social System Which Embraces Various Values.....	33
(5) Example of a Future Value Creation Ecosystem.....	34
Chapter 4 Design Values by Using the Characteristics of Japan and Promote Them to the World .....	38
Chapter 5 Issues Requiring Further Considerations for the Future “Mechanism”.....	43

1. Challenge toward “value design society”	43
2. Example of a specific system	49
(1) Fostering and Accumulating Human Resources and Organizations that Assume the Challenge to Generate Values by Escaping from Normality/Being Average and Offering a Platform Where They Can Easily Generate Innovations by Exercising Their Abilities	49
(i) Fostering Human Resources Capable of Creating New Values [Short to mid-term]	49
(ii) Visualization of Value Creation Mechanism and Organizational Management Utilizing It [Short to mid-term]	50
(iii) Create Systems and Indicators to Visualize and Evaluate Diverse Values [Mid to Long-term]	51
(iv) A Mechanism to Boost Ventures That Challenge New Businesses That Meet Diverse Values [Short to mid-term]	51
(2) Establishment of Mechanisms Which Encourage Flexible Exchange and Sharing of Intellectual Assets such as Technologies, Data and Contents (including People) and Expands Values	52
(i) Formation of Places Where Diverse People and Organizations Gather [Short to mid-term]	52
(ii) A Platform for Intellectual Assets to Realize SDGs [Short to mid-term]	52
(iii) Construction of Next-generation Contents Creation and Utilization System [Mid to long-term]	54
(3) Sustainable Production, Dissemination and Development of Values and Senses That Will Be Shared Around the World	56
(i) Analysis of the Essence of Cool Japan and Effective Dissemination [Short to mid-term]	56
(ii) Attracting and Empowering Foreigners Supporting Cool Japan [Short, mid and long-term]	57
(iii) Development of Digital Archives [Short to midterm]	59
(4) Other Issues to be Considered in the Future	60
Closing Remarks	
Related Materials	63
1. Name list	64
2. Grounds for Establishment of the Special Committee on Intellectual Property Strategy Vision	65
3. Details of the Considerations made in the Special Committee	66

## **Introduction – New Intellectual Property in the New Era -**

After 15 years since the announcement of the policy to make Japan an intellectual property-based nation in 2002, nowadays, the global economy is in the midst of the fourth industrial revolution led by big data, artificial intelligence and IoT related technologies.

In such situation, major changes have become apparent. The outstanding performance of GAFAM and BAT of China which are world-leading companies is showing that innovation is largely converting from supply-led innovation to demand-led innovation. On the demand side, more weight is given to non-tangible consumption instead of tangible consumption and more people are focusing on empathy and sharing rather than owning or exchanging. Challenges such as low birthrate and aging population and environment-friendly energy faced in Japan are becoming apparent as internationally common ones. With respect to the appropriate economic society as a whole, the Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015 have now been recognized as a global common language, suggesting that the past short-term oriented financial capitalism should be modified. Moreover, the new promising technologies such as blockchain technology, quantum computing technology and genome editing technology have hidden potential to change the society by being implemented as important tools in the new society. In Japan, the number of foreigners visiting Japan has reached approximately 28 million, more than triple the number in 2012.

Changes in different dimensions that have substantially gone beyond the assumptions made in the “Intellectual Property Policy Vision” developed in 2013 are ongoing, including the abovementioned aspects.

Amidst the situation where digital networks have spread and penetrated in every aspect of life and have changed the industrial structure and lifestyle, making “service,” “information,” “idea,” “business models” and “designs” more important than physical “things,” intellectual properties will serve, more than ever, as the core elements for creating value in a way different from the past. This is why visions on mid to long-term intellectual property strategies based on the direction of change in the whole society mentioned above are required now.

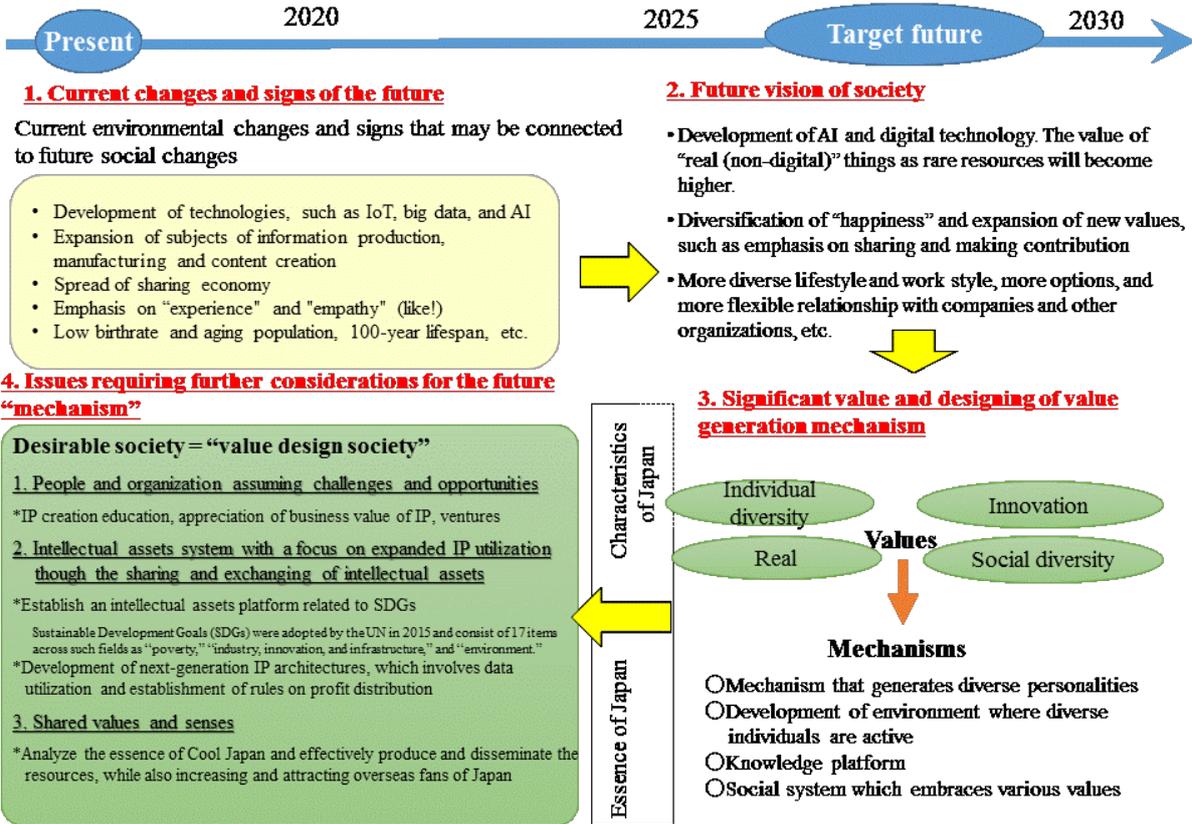
Therefore, the “Special Committee on Intellectual Property Strategy Vision (the “Special Committee”)” was established under the Intellectual Property Strategy Headquarters at the end of last year and many discussions were held by expert members with different ages and areas of expertise to show the mid to long-term perspectives and direction of the policies for the future vision of the society, and the method to create values and the intellectual property system that supports them, looking ahead to the period from 2025 to 2030.

To discuss the new era, new methods such as group discussions were employed. In order to

realize free and vigorous discussions, the members were subject to the Chatham House Rule<sup>1</sup> while making open discussions so as to avoid any unexpected personal attack or misunderstanding by the members' remarks.

In the future, this new vision will be shared by the government as a whole while inviting public opinions and reviewing the vision by verifying its validity at platforms where free and vigorous discussions can be made, and further, specific systems that are necessary for the future society will be designed and implemented in an active and creative manner. This is essential for Japan, which has further advanced from an IP-based nation, to realize development of strong industry and culture and to further grow while being acknowledged by the international society.

**Figure 1** Approach for Development of the Intellectual Property Strategy Vision



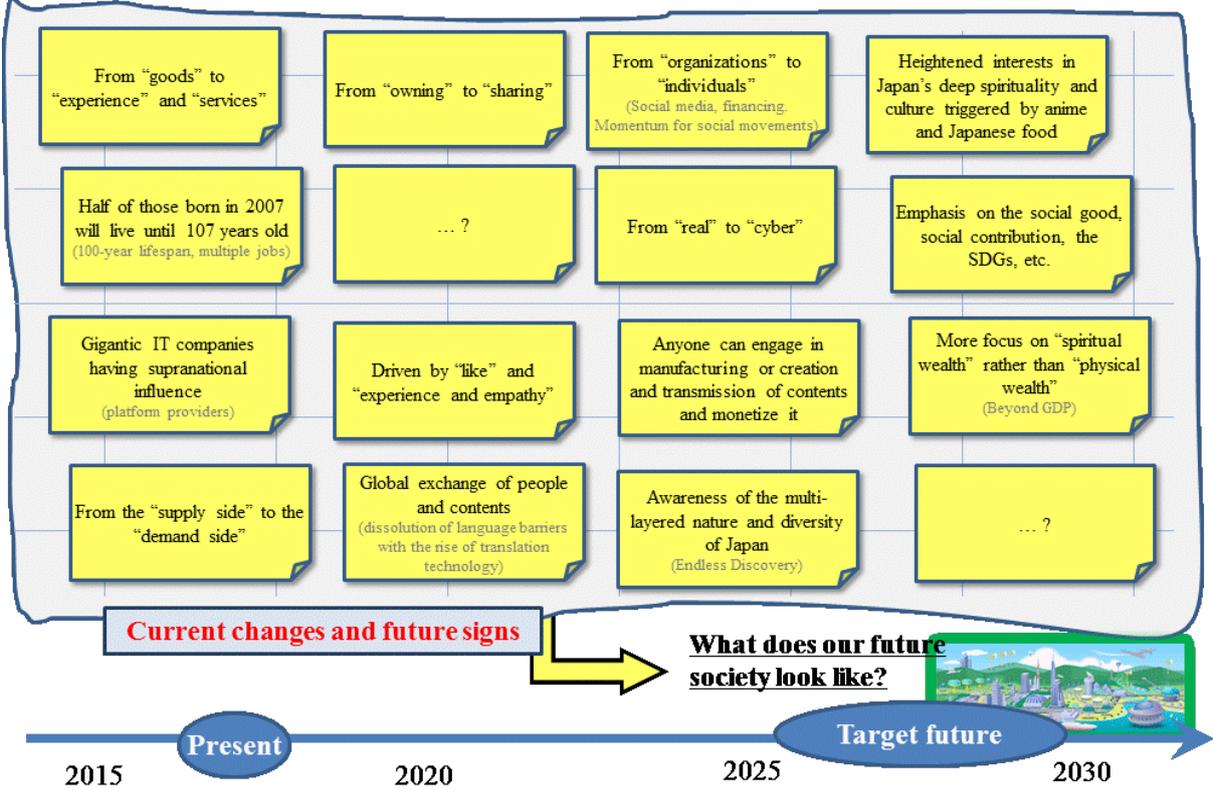
(Prepared by editing Document 3 of the First Meeting)

<sup>1</sup> A rule that participants may freely quote or disclose information obtained during the meeting but must keep information which can specify the person who made the relevant remarks secret.

**Chapter 1 Current Environmental Changes and Signs That May be Connected to Future Social Changes**

It may be difficult to predict the future, but there are many signs of changes that are likely to continue to some extent in the future (Figure 2). In this Chapter, the direction for future social changes will be marshalled.

**Figure 2** Signs of the “Future”



(Extracted from Document 4 of the First Meeting)

**1. Signs of Changes in the Sense of Values and Social Circumstances**

**(From Linear Innovation Model to Complex Innovation Model)**

Recent innovations have substantially changed especially in this century. More specifically, in the 20<sup>th</sup> century where the capacity to “supply” was not keeping up with the “demand” around the world, a relatively simply innovation model, which could be called a linear innovation model, where innovation occurred as a result of the creation of new technology, manufacture or production of new goods or services using such technology, and spread of such technology by sale of such goods or services thereby changing the society. However, since the collapse of the Cold War structure in the late 20<sup>th</sup> century, the capacity to “supply” has surpassed the “demand”

around the world as a result of the rise of the emerging countries such as China, the former Eastern European Countries and Southeast Asian Countries that have huge production capacity. In such market, new goods or services will not sell unless they are chosen by users. In other words, the initiative and right to choose in economic activities have moved from the suppliers to the users. Moreover, under the circumstances where users have less sense of scarcity for things per se, even if new technologies are supplied as products or services, they are not spreading in the society and evolving into innovation unless they are chosen through meeting the tastes or complicated needs of a broader range of consumers. As just described, modern innovation is changing into a complex innovation model where new knowledge is created by fusing information related to demand or ideas based on users' perspective and various technical findings related thereto and thus being spread to society.

### **(Growing Open Innovation and Challenges)**

In order to realize the complex innovation model mentioned above, open innovation which promotes innovation through cooperation among companies instead of a single company or with the society including broader users has become essential. This trend is expected to continue in the future. Meanwhile, although the necessity of open innovation is understood by the management layer, awareness and actions of people on the line do not change immediately. For example, as demonstrated in the typical example where a large-scale company requires a venture company to enter into a unilateral Nondisclosure Agreement (NDA), a fifty-fifty partnership is not entered into by building a mutual trust relationship that is necessary for open innovation. Moreover, many companies are falling far short of open innovation involving users.

### **(Changes in Consumer Demands - From Goods to Experiences and Services)**

The fact that the mainstream needs of consumers are changing from “goods” to “experience” and “services” is also a major change. In B2B<sup>2</sup> business, using the construction industry as an example, there are cases where not only “goods” but also “services” such as maintenance are offered by utilizing the operation information of the monitoring system mounted on construction machines or where the whole business is entirely changed into a “service” where the user is charged based on the operation time. In B2C<sup>3</sup> business, looking at the example of the music industry, the same trend is found: while the “goods consumption” of buying CDs is declining, “experience consumption” where money is paid for a concert (experience) or streaming service where users pay monthly fees to unlimitedly listen to their favorite music is rapidly increasing.

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<sup>2</sup> An abbreviation of Business to Business, meaning transaction business carried out between companies.

<sup>3</sup> An abbreviation of Business to Consumer, meaning transaction business carried out between companies and consumers.

### **(Spread of SNS and Changes in Social Behaviors)**

Needs for approval and empathy represented by the “like buttons” instead of money, as well as the expansion of its social use are one the signs. Social networks services (SNS) as represented by Facebook created a culture where users post their experiences and receive “likes” and empathy on the network. In addition, as represented by the fact that the word “instagrammable” was awarded the grand prize in the annual buzzwords contest for 2017, the act of obtaining “likes” has come to the surface as one of the motives for consumers’ behaviors and goods or services that can easily receive “likes” on SNS are provided by companies seeing such phenomena as business opportunities. Moreover, the expansion of advertisement on SNS has opened a new way for individuals to make their hobbies a second job or a main business instead of a side job.

### **(Expansion of the Sharing Economy)**

The appearance and spread of the sharing economy which is based on the idea that sufficient benefits can be obtained by “sharing” without necessarily sticking to exclusively “owning” something are also signs. For example, new markets have been generated to enable virtual sharing of assets which have been exclusively used by an individual as shown by the service provided by Uber where vehicles which are idle assets of individuals are connected with persons who want to be transported using them or the private lodging related services where hosts wishing to utilize spare rooms and guests looking for accommodation are connected. Moreover, the aspect of satisfying the consumers’ ethical feeling of contentment such as the bicycle sharing based on “using only when needed” or the idea of “too good to throw away” in the C2C<sup>4</sup> type flea market app is also considered to have contributed to the spread of the service to a certain degree.

### **(Diversification of Sense of Values and Relativization of GDP as Economic Indicators)**

Regarding economic indicators, in addition to the past indicators based on production as represented by GDP, indicators for “wealth” which may substitute for such past indicators are also explored. When the sharing economy expands, consumers’ utilities increase but this would not lead to the purchase of things and thus, GDP may even drop. As such, for example, OECD has released an indicator named the “Better life index”<sup>5</sup> listing 11 items including education, health and work-life balance.

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<sup>4</sup> An abbreviation of Consumer to Consumers, meaning transactions carried out between consumers.

<sup>5</sup> Source: “Regarding Better Life Index BLI” (website of OECD)  
<http://www.oecd.org/tokyo/statistics/aboutbli.htm>

### **(From Real to Cyber-Virtual)**

Advancement and wide spread of computer technology has led to the rapid expansion of cyberspaces and virtual spaces that are not real spaces. In addition, development of technologies for Virtual Reality (VR) and Augmented Reality (AR) has further made the border between real spaces and virtual spaces unclear. In association with the spread of SNS and expansion of the culture of empathy as mentioned above, human life and relationships are also stretching to virtual spaces.

### **(From Organization-oriented Social Participation to Individual-oriented Social Participation)**

Japan is moving on to a mature society of declining population due to increased longevity and low birth rate and aging population, ahead of other countries in the world. It is said that population will decline by approximately 10 million people and the population aging rate (people aged 65 or older) will reach 32%, by 2030. Moreover, by 2045, one-fourth of the population will be 75 years old or older. It is also said that half of those born in 2007 will live until 107 years old. In such “100-year lifespan,” human healthy span will be increased, enabling people to work at 70 years old or older. Moreover, it is expected that the “standard life in the Showa period” where people worked in one organization through their career will end, people will have more opportunities to have second jobs or multiple jobs, and it will become more common to repeat the cycle of study and work more than once. If that is the case, changes from the social participation based on a single “organization” to a social participation as an “individual” will be promoted and diversification of the sense of values and life designs will be expanded. The fact that the means to start a business by individuals or to realize the ideas of individuals (for example, shared offices with machine tools or fund procurement through crowd-funding) have become more abundant than in the past will also serve as a spur to the abovementioned changes.

## 2. Advances and Penetration of New Technologies

The pace of advances and penetration as well as the variety of new technologies in recent years are nothing but eye-opening. The whole list of such technologies includes “IoT,” “big data,” “Artificial Intelligence (AI),” “blockchain technology,” “3D printers and fables production,” “Virtual Reality (VR) / Augmented Reality (AR),” “quantum computing,” “5G” and “genome editing technology.”

While new technologies developed in foreign countries are showing up, it has been pointed out that the scientific research abilities to create new technologies are showing signs of decay in Japan. For example, with respect to the total number of papers which is a quantitative viewpoint for scientific research abilities and the number of highly cited papers which is a qualitative viewpoint for such abilities, the developed countries including European countries and the U.S., China and South Korea are largely increasing such numbers, while Japan is hitting the wall, showing a slip in its relative status<sup>6</sup>. Moreover, regarding universities which are the base for higher education and research, Japanese universities are not receiving high evaluation for their internationality, resulting in their rankings stagnating in the World University Rankings<sup>7,8</sup>. The number of doctoral degree recipients is also declining only in Japan among developed countries and the difference is becoming larger<sup>9</sup>. The difference in the average annual income of full-time professors of the top three universities in Japan and the U.S. is also becoming larger<sup>10</sup>. While the

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<sup>6</sup> When the shares in the amended number of Top 1% highly cited papers and the amended number of Top 10% highly cited papers are compared, while China increased its share and moved to second position following the U.S., Japan and other countries are losing their shares. National Institute of Science and Technology Policy of the Ministry of Education, Culture, Sports, Science and Technology, “Science and Technology Indicators 2017”; Articles and reviews were subject to the analysis. Counting was made for the year of publication. The three-year moving average for the share in the number of papers in every field is shown. The Integer Count Method is used.

<sup>7</sup> For example, Japanese universities that ranked in the top 100 universities around the world in the “World University Rankings 2018” published by Times Higher Education of the U.K. numbered two; The University of Tokyo and Kyoto University (in 2018, The University of Tokyo ranked 46 and Kyoto University ranked 74). In addition, with respect to the number of universities ranked based on countries, 89 Japanese universities were ranked among the 1,102 universities ranked; Japan was third following the U.S. and the U.K. <https://www.timeshighereducation.com/world-university-rankings>

<sup>8</sup> For example, the top 10 universities in the “World University Rankings 2018 by subject: computer science” published by Times Higher Education are occupied by the U.S., the U.K. and Switzerland, having 5, 3 and 2 universities, respectively. The highest ranked university of Japan was the University of Tokyo ranked 35th. <https://www.timeshighereducation.com/world-university-rankings/2018/subject-ranking/computer-science>

<sup>9</sup> In the “number of doctoral degree recipients” shown in page 7, item (3), table (C) of the “Science and Technology Indicators” of National Institute of Science and Technology Policy, the number of doctoral degree recipients per one million people was compared between the figure in 2008 and that in 2013 and the number was decreasing only in Japan among developed countries. [http://data.nistep.go.jp/dspace/bitstream/11035/3178/1/NISTEP-RM261-Press\\_J.pdf](http://data.nistep.go.jp/dspace/bitstream/11035/3178/1/NISTEP-RM261-Press_J.pdf)

<sup>10</sup> The average annual income of full-time professors in the top three universities in Japan was about 11 million yen while that was about 22 million yen in the U.S.; double. The U.S.: California Institute of Technology, Stanford University and Massachusetts Institute of Technology. Japan: The University of Tokyo, Kyoto University and Osaka University. THE CHRONICLE of Higher Education CHRONICLE DATA (the U.S.); financial reporting materials of each university (Japan). The numerical figure for the U.S. was

science and technology budget has been at a standstill for approximately 20 years in Japan, it is increasing in the U.S. and China; making the difference much larger<sup>11</sup>. The amount research and development investment of giant IT companies in the U.S. has reached more than 10 billion dollars, creating a large difference with Japanese companies<sup>12</sup>. The shortages of human resources for advanced IT in Japan is also pointed out<sup>13</sup>.

There are also concerns that insufficient investment of resources to enhance the ability to create IPs in this historical technology innovation period is serving as one of the major background factors leading to the sagging ability to create IPs in Japan. If this goes on, not only will the ability to create IPs in Japan further decline, making it impossible to invite excellent human resources (including students and researchers), but it may also generate concerns over talent drain.

**Table 1 Summary of New Technologies and Their Applications**

“IoT”	An abbreviation of Internet of Things which is a mechanism where various “things” are connected to the Internet and are mutually controlled through exchange of information. The volume of data generated from various aspects of life is expected to explosively increase.
“Big data”	An aggregate of data which is so huge and complicated that it is difficult to be handled by general data management and processing software. Data which could not be utilized due to the limits of the computing capacity can now be handled thanks to the increasing computing capacity and advancement of software.

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calculated by being converted based on the rate of 1 dollar=107 yen.

<sup>11</sup> While the science and technology budget is about 4 trillion yen in Japan (2016), it was about 18 trillion yen (about 4.5 times that of Japan) in the U.S. and about 3 trillion yen (about 7.5 times that of Japan ) in China. National Institute of Science and Technology Policy of the Ministry of Education, Culture, Sports, Science and Technology “Science and Technology Indicators 2017” REUTER 「China spends \$279 bln on R&D in 2017: science minister」 <https://www.reuters.com/article/us-china-economy-r-d/china-spends-279-bln-on-rd-in-2017-science-minister-idUSKCN1GB018>. Science 「Trump, Congress approve largest U.S. research spending increase in a decade」 <http://www.sciencemag.org/news/2018/03/updated-us-spending-deal-contains-largest-research-spending-increase-decade>

<sup>12</sup> 16.1 billion dollars for Amazon (the U.S.), 13.9 billion dollars for Alphabet (Google) (the U.S.) and 12 billion dollars for Microsoft (the U.S.). R&D expenditures rankings in the 2017 Global Innovation 1000 Study by Strategy &. <https://www.strategyand.pwc.com/innovation1000>

<sup>13</sup> The Artificial Intelligence Strategy Meeting “Artificial Intelligence Strategy” Attachment 3 (March 31, 2017) <http://www.nedo.go.jp/content/100862413.pdf>. “Human resources for Advanced IT” refers to human resources engaged in big data, IoT and artificial intelligence.

<p>“Artificial Intelligence (AI)”</p>	<p>Various technologies, software and computer systems that realize the intellectual abilities of human beings on computers. Their applications include natural language processing, expert systems which imitate the inferences and decisions of experts and image recognition which detects and extracts specific patterns by analyzing image data. From 2016 to 2017, an AI in which deep learning was introduced beat the top Japanese chess and go players and became the cutting-edge technology. In the past, instructions from human being were necessary to make analysis but AIs in which deep learning is introduced have become able to provide suggestions even if human beings did not understand the data.</p>
<p>“Blockchain technology”</p>	<p>A distributed ledger technology which has a list wherein ordered records called blocks sequentially increase. This technology is applied to virtual currency, right management (smart contract) and securing of reliability of data.</p>
<p>“3D printers and fabless production”</p>	<p>A technology used to form three-dimensional objects by using the 3D data created on a computer as the design drawing and laminating the cross-sectional shapes by additional machining. The technology has spread mainly in the manufacturing industry but is also spreading in a broad range of fields including architecture, healthcare, education, aerospace and advanced research. Industrial low-volume production can be made at low costs.</p>

<p>“Virtual Reality (VR) / Augmented Reality (AR)”</p>	<p>Virtual Reality (VR) is a technology which enables one to perceive the artificial environment or cyberspace which is a world created by computer as reality while Augmented Reality (AR) is a technology which literally augments the real world viewed from the human perspective by adding, deleting, emphasizing or decreasing information with respect to the surrounding real environment. While VR presents to people five sense information as if they are in a virtual room and are looking at a virtual tea pot placed on a virtual table, AR presents information as if a virtual tea pot is placed on a table in a real room where the person is actually present. These technologies have opened the way to work on virtual spaces by enabling cheap simulation on what will happen without making actual investments. As a result of the advancement of these technologies, reality and virtual reality are becoming increasingly less distinguishable.</p>
<p>“Quantum computing”</p>	<p>A computing technology which is to realize parallelism by using quantum superposition. Research and development are also made on those conducting quantum computing using “quantum gate” and on other methods, in addition to the conventional computer logic gates. This technology is far superior to the current computing capacity in specific fields such as combinatorial optimization issues.</p>
<p>“5G”</p>	<p>The fifth-generation mobile communications system which is currently standardized for commencement of its practical use in 2020. The system dramatically improves communication speed and the volume of data that can be handled (low-delay and high reliability) and is expected to serve as the communication standard which supports the era of IoT where everything is connected to the Internet.</p>
<p>“Genome editing technology”</p>	<p>A technology which introduces variation (deletion or replacement, etc.) to DNA by using an enzyme which cuts DNA (artificial restriction enzyme), etc. and cutting the targeted parts on the genome. It makes it possible to efficiently change the specific character of living objects by preventing the target gene from functioning, etc. It is recently gaining attention as a basic technology which could bring about innovative changes to wide-ranging industries such as treatment or diagnosis of diseases or breeding of useful varieties.</p>

### **(New Technologies and Accelerated Innovations by the Combination Thereof)**

These new technologies and their peripheral technologies are producing new goods and services, respectively. However, what is more important is the fact that these new technologies are combined and used beyond the bounds of different fields by penetrating into the society as a whole. For example, building new businesses by combining data analysis using “IoT,” “big data” or “AI” and conventional industries is promoted at an accelerated rate at production sites and in all fields including the medical and healthcare industry and agricultural industry. Moreover, anticipating and providing new values by analyzing the huge amounts of data produced by users are becoming major business opportunities for global companies. Furthermore, although the practical use of AI, VR/AR and blockchain technology has only just begun, if new technologies are further fused in various scenes of society and penetrate by being linked to the needs data of consumers, all industries are expected to largely change and improve.

### **(Increase of Cyberspaces and Integration with Real Spaces)**

Initiatives on “Society 5.0”: which was proposed in 2016 as a new society where innovation is created by introducing new technologies to every industry and social life and social challenges are solved in a manner tailored to each individual’s needs, are accelerated in various fields including the business community. In these initiatives, the proportion of “cyber” increases and the connection between “real” and “cyber” is strengthened, thereby accelerating the direct connection between different industries or between suppliers and customers through the mediation of data.

### **(Individuals Becoming Creators and Suppliers)**

In association with the development of cyberspaces as mentioned above or automatic translations, there are less constraints on distance, time, cost and language concerning contents and data, making sharing easier than ever before. This would also enable easy manufacturing or creation and transmission of contents for everyone and realize technical development of mechanisms for consideration collection or profit allocation, making commercialization easy as well. In such a situation, from now on, individuals will be able to carry out the whole process from generating ideas to realizing them, which in the past could not be achieved even if the ideas existed. In such sense, the span and time from generating ideas to realizing them will be shorter and conventional users can easily become creators and suppliers.

### **(Spread of Blockchain Technology – Toward Securing Data Reliability)**

The spread of “virtual currency” using blockchain technology is attracting attention in the cyber world. In the past, legal currency issued by each country served as the axis of economic activities, but due to the spread of virtual currency which is issued by non-governmental entities

and which can be immediately transferred around the world, there are signs of change in the methods of settlement by consumers, fund procurement for businesses (especially, venture companies/startups) or means of storage of value. While the blockchain technology is attracting attention by “virtual currency,” applications for its distributed ledger technology are being searched for not only in the financial field but also over a broad range including the contents field, as a technology securing the transparency and reliability of data.

In such development of new technologies, the computing capacity would particularly be important. However, since the computing capacity is largely affected by the electricity prices, use of computing capacity is concentrated in specific countries where the electricity prices are especially low among countries in the international society and such trend is suggested to further intensify in the future. At the same time, there are also suggestions that, while data is important, since the systems and regulations related to the handling of information including personal information and medical information are different in each country, businesses in the field of artificial intelligence using data are growing rapidly in countries where such data can easily be obtained.

### **(Shortened Product Life Cycle and Expanding Importance of Design Thinking)**

In a situation where supply is exceeding demand as a whole, the demand side has the sense that latest things are always available. Moreover, the speed of technological progress and penetration and transmission of technologies is getting faster, thereby shortening the product cycle. The international spread of technologies is also getting faster, making it increasingly difficult to differentiate goods or services solely by technology. As such, it is getting increasingly important to act based on a design thinking where one creates new goods or services by getting an idea from a specific situation where the product will be used by users and capturing the latent needs which the users themselves are not aware of (i.e. a user-centered manner) instead of being focused on technology or the market.

## **3. Changes in the Environment of International Relations**

### **(Increased Presence of the U.S. and China)**

Looking at the international society, the presence of the U.S. and China attracts attention first. According to the survey conducted by OECD<sup>14</sup>, the world GDP will grow from 54.9 trillion dollars (2009) to 111.1 trillion dollars while the GDP of Japan will grow from 3.8 trillion dollars (2009) to 4.9 trillion dollars, that of the U.S. from 13.3 trillion dollars (2009) to 22.5 trillion

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<sup>14</sup> Source: OECD, Economic Outlook No 95 - May 2014 - Long-term baseline projections

dollars and that of China from 8.3 trillion dollars (2009) to 26.3 trillion dollars: the GDPs of the U.S. and China account for approximately 45% of the world GDP in sum and are approximately four to five times larger than Japan. The technical capabilities of the U.S. and China are assumed to continue holding top-ranking positions based on the data on the number of patent applications and papers.

### **(Rise of Global Platform Companies)**

Huge IT companies of the U.S. such as Google, Apple, Amazon, Facebook and Microsoft as well as those of China such as Baidu, Alibaba and Tencent, that are companies with an economic scale even equal to states, have gained power, forming an international platform. While these platform-type companies have provided huge convenience to users, issues concerning protection of personal information have become visible. Also, the facts that such companies are in a situation where they can form systems which they prefer by using their overwhelming scale<sup>15</sup> or enormous influence on users and that disparities could be generated due to the situation of what is generally called “being the sole winner” are suggested as latent issues. In connection with the increased influence of platform companies on the society, there are movements to introduce some types of regulations.

### **(Strong Protectionist Trend)**

Although the economy was heading towards liberalization and globalization under international cooperation, recently, there are trends of protectionist and regionalism. Examples of such trends are restriction on the influx of people which was the subject in Brexit<sup>16</sup>, restriction on leakage of personal data such as GDPR<sup>17</sup>, and imposition of tariffs against specific products or countries.

### **(Address of Global Common Challenges such as SDGs on a Full Scale)**

Various global issues are rising up to the surface in the world, and in the UN Sustainable

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<sup>15</sup> For example, when the number of monthly users of various services are compared, in e-commerce, approximately 520 million people used Alibaba (China) and approximately 400 million people used Amazon (the U.S.) while approximately 44 million people used Rakuten (Japan); for search engine service, approximately 2 billion people used Google (U.S.) and approximately 600 million people used Baidu (China) while approximately 65 million people used Yahoo Japan (Japan); and in SNS services, approximately 2.1 billion people used Facebook (U.S.) and 330 million people used Twitter (U.S.) while 11 million people used mixi (Japan) (according to various web articles). Between the platform companies of Japan and those of the U.S. and China, there is an incommensurable difference in the volume of data handled.

<sup>16</sup> The referendum asking whether to remain a member or leave the European Union (EU) took place on June 23, 2016 following the enactment of the European Union Referendum Act 2015 (English version) and the polls for leaving EU slightly exceeded the polls for remaining a member of EU.

<sup>17</sup> In EU, the “General Data Protection Regulation (GDPR)” enacted in April 2016 was enforced on May 25, 2018 as the law to regulate personal data protection within the EU. (website of the Personal Information Protection Committee) <https://www.ppc.go.jp/enforcement/cooperation/cooperation/GDPR/>

Development Summit 2015, “Sustainable Development Goals (SDGs)” listing 17 objectives such as no poverty, quality education, no hunger, clean energy, industry, innovation and infrastructure were adopted. SDGs cover a wide range of social and environment problems beyond the conventional framework dividing the countries into developed countries and developing countries and are widely recognized as the global common language. This is a major movement to review the capitalism centered on financing and to seek simultaneous pursuit of a longer sustainability of society and the environment and development of economy. Such pursuit is also recognized as business challenges by the Japanese business industries, and the Japan Federation of Economic Organizations is planning to work on such pursuit by connecting Society 5.0 and achievement of SDGs as one of the management strategies.

Moreover, while Japan is facing the issues related to the aging population and mature society ahead of other countries, the same issues are to be faced by some of the other countries. Furthermore, in light of the advancement of low birth rate in association with the advancement of the economic development, such issues are expected to become global common issues sooner or later.

### **(Change from an Economic Power to a Transmission-based Nation)**

Amid such a situation, while the share of Japan in the world economy is declining, there is a global trend of appreciating the Japanese way of thinking such as “Sanpo Yoshi (good for all),” “Mottainai” and “Zen” which have a commonality with the basic concept of SDGs. According to a survey<sup>18</sup>, the first image of Japan was “a country with rich tradition and culture” (64%) while the second image was “a country with high economic and technical power” (58%). This result suggests that the awareness that leads to the multi-layered nature and diversity of Japan such as the balance between tradition and culture and economy and technology is increasing. In addition, the number of foreigners visiting Japan is sharply rising. For example, such number was 8.36 million people in 2012 but sharply increased to 28.69 million people in 2017; an approximately 3.4 times increase in five years. In addition, discovery and transmission of the attractive points of Japan are actively made by foreigners concerning places such as Mt. Kouyasan, Niseko, Kunisaki Peninsula and Miyoshi city. While the economic ranking of Japan is declining, many clues are given for maintaining the influence of Japan on other countries around the world from another perspective.

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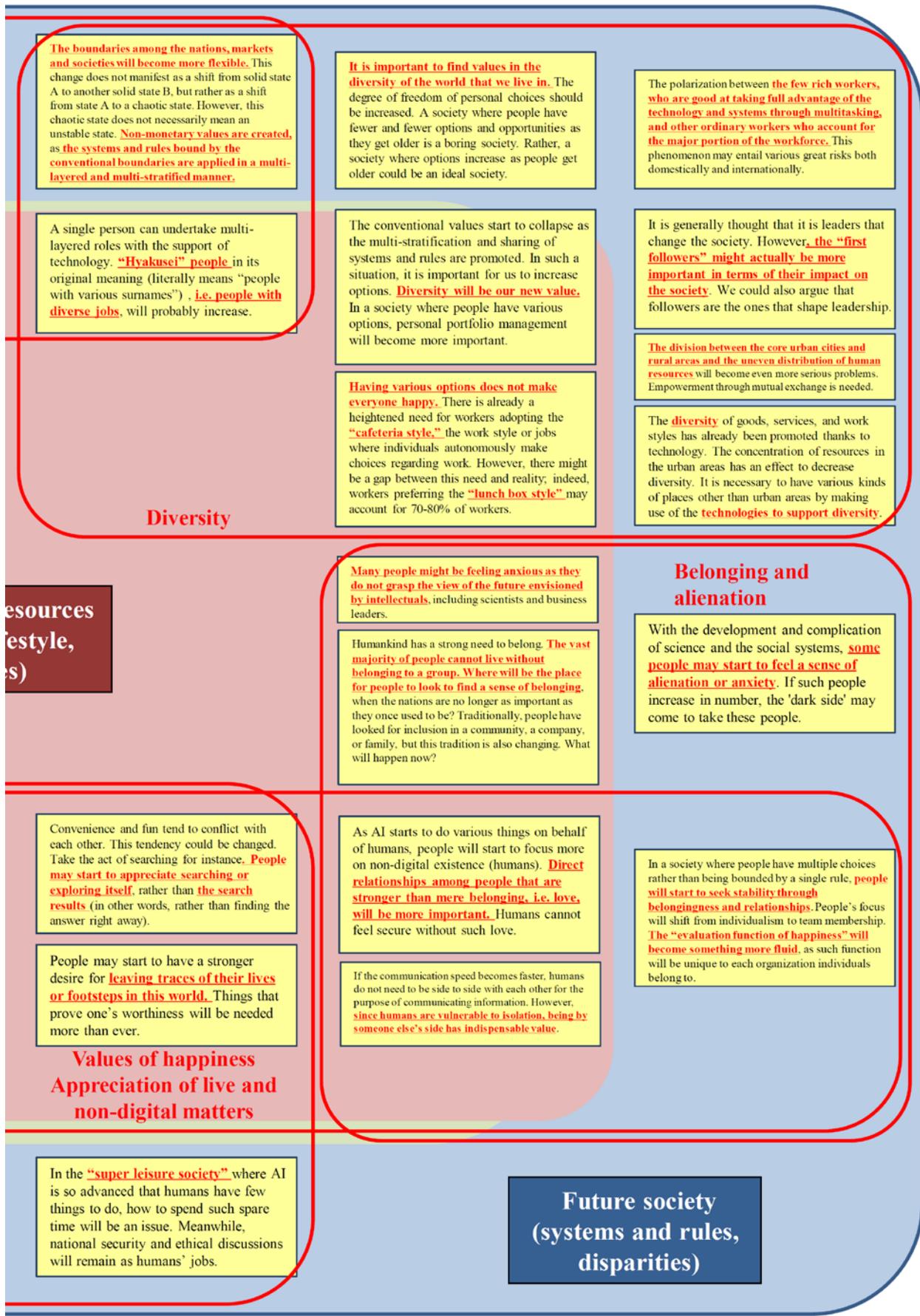
<sup>18</sup> Source: Ministry of Foreign Affairs “Public opinion survey on Japan in five European countries” (March 2017)  
[http://www.mofa.go.jp/mofaj/erp/ep/page4\\_003899.html](http://www.mofa.go.jp/mofaj/erp/ep/page4_003899.html)

## **Chapter 2 Future Vision of Society Estimated from Current Signs -Create a Future That Makes People Happy -**

Taking into account the signs mentioned in Chapter 1, the society and the people and industry in such society in around 2030 were arranged (Figure 3). In doing so, the society was not simply estimated as a continuation of the current signs, but also the appropriate shape of society was taken into consideration from the viewpoint of whether people will really feel happy in such society. In addition, while people, industry and society have mutual relevance and there are various overlap and mutual interaction, people, industry and society will be described in this order in the following figure.

**Figure 3** Future Vision of Society





The boundaries among the nations, markets and societies will become more flexible. This change does not manifest as a shift from solid state A to another solid state B, but rather as a shift from state A to a chaotic state. However, this chaotic state does not necessarily mean an unstable state. **Non-monetary values are created, as the systems and rules bound by the conventional boundaries are applied in a multi-layered and multi-stratified manner.**

A single person can undertake multi-layered roles with the support of technology. **"Hyakusei" people** in its original meaning (literally means "people with various surnames"), **i.e. people with diverse jobs**, will probably increase.

**It is important to find values in the diversity of the world that we live in.** The degree of freedom of personal choices should be increased. A society where people have fewer and fewer options and opportunities as they get older is a boring society. Rather, a society where options increase as people get older could be an ideal society.

The polarization between the **few rich workers, who are good at taking full advantage of the technology and systems through multitasking, and other ordinary workers who account for the major portion of the workforce.** This phenomenon may entail various great risks both domestically and internationally.

The conventional values start to collapse as the multi-stratification and sharing of systems and rules are promoted. In such a situation, it is important for us to increase options. **Diversity will be our new value.** In a society where people have various options, personal portfolio management will become more important.

It is generally thought that it is leaders that change the society. However, **the "first followers" might actually be more important in terms of their impact on the society.** We could also argue that followers are the ones that shape leadership.

**Having various options does not make everyone happy.** There is already a heightened need for workers adopting the **"cafeteria style,"** the work style or jobs where individuals autonomously make choices regarding work. However, there might be a gap between this need and reality; indeed, workers preferring the **"lunch box style"** may account for 70-80% of workers.

**The division between the core urban cities and rural areas and the uneven distribution of human resources** will become even more serious problems. Empowerment through mutual exchange is needed.

The **diversity** of goods, services, and work styles has already been promoted thanks to technology. The concentration of resources in the urban areas has an effect to decrease diversity. It is necessary to have various kinds of places other than urban areas by making use of the **technologies to support diversity.**

**Diversity**

Resources (lifestyle, ...)

**Many people might be feeling anxious as they do not grasp the view of the future envisioned by intellectuals,** including scientists and business leaders.

**Belonging and alienation**

Humankind has a strong need to belong. **The vast majority of people cannot live without belonging to a group.** Where will be the place for people to look to find a sense of belonging, when the nations are no longer as important as they once used to be? Traditionally, people have looked for inclusion in a community, a company, or family, but this tradition is also changing. What will happen now?

With the development and complication of science and the social systems, **some people may start to feel a sense of alienation or anxiety.** If such people increase in number, the 'dark side' may come to take these people.

Convenience and fun tend to conflict with each other. This tendency could be changed. Take the act of searching for instance. **People may start to appreciate searching or exploring itself,** rather than **the search results** (in other words, rather than finding the answer right away).

As AI starts to do various things on behalf of humans, people will start to focus more on non-digital existence (humans). **Direct relationships among people that are stronger than mere belonging, i.e. love, will be more important.** Humans cannot feel secure without such love.

In a society where people have multiple choices rather than being bounded by a single rule, **people will start to seek stability through belongingness and relationships.** People's focus will shift from individualism to team membership. **The "evaluation function of happiness" will become something more fluid,** as such function will be unique to each organization individuals belong to.

People may start to have a stronger desire for **leaving traces of their lives or footsteps in this world.** Things that prove one's worthiness will be needed more than ever.

If the communication speed becomes faster, humans do not need to be side to side with each other for the purpose of communicating information. However, **since humans are vulnerable to isolation, being by someone else's side has indispensable value.**

**Values of happiness  
Appreciation of live and non-digital matters**

In the **"super leisure society"** where AI is so advanced that humans have few things to do, how to spend such spare time will be an issue. Meanwhile, national security and ethical discussions will remain as humans' jobs.

**Future society  
(systems and rules, disparities)**

## **1. Future Vision Focusing on People (Lifestyle, Work Style and Sense of Value)**

### **(Exercising Versatile Abilities)**

In a society where the proportion of digital increases, indirect experience or simulated experience through cyberspaces increases. Thus, it becomes important for people to actually feel the “sense of being alive” or that the experiences are “live or raw.” Therefore, there will be increasing needs for affluent living using technologies or for technologies that supplement, expand or enlarge people’s abilities. By using the help of such technologies, individuals can exercise their versatile abilities to the utmost extent and can live a multi-layered life with various jobs. In addition, if individuals have multiple footholds, a society where one can launch a second challenge in a much easier manner even if he/she once fails can be realized.

### **(Toward a Lifestyle Where People Navigate Their Lives by Themselves)**

If labor is substituted due to the advancement of AI, a “super leisure society” in the sense of being relieved from “labor” as understood under the current concept may be realized. Thus, it will become increasingly important for people themselves to navigate and choose their lifestyle in such society by setting their individual goals. On the other hand, while the past demands were those of “wanting what they don’t have” in the times where the supply was less than the demand, the future demand will shift to those of “not wanting to lose what they have” for the values which people have already acquired such as safety and peace of mind.

### **(Increasing Value of “Real”)**

In digital society, the value of “real (non-digital)” is expected to improve relatively in comparison to digital which can be reproduced and spread at cheap cost. Here, the term “real (non-digital)” refers to, for example, direct relationship between people, works by the human hand (instead of AI), real experience, history and tradition. In addition, people will easily know the behaviors of others through information sharing and penetration of AI technology in the society. As a result, uniformity may advance or the society may move toward extremes. In such a situation, the values of securing diversity or securing the degree of freedom of individuals' choice which is essential for securing diversity will increase. Moreover, if full use of such technologies is made, the costs for grasping individual needs and customizing the goods or services according to such needs will be reduced; thereby reducing the necessity to standardize the goods or services when providing them and enabling securement of various options. Even if various options become technically available, they cannot be chosen if pressures to be average or adapt are applied, and thus, it is also necessary to make the society into one where individuals can make their choices from various options with freedom and security. In addition, values can be newly created (including rediscovery and reediting) through exchange between people who

make the best use of their inventiveness by exercising their diverse personalities. In doing so, not only the leader who creates a new value but also the first follower who supports it is important: it shouldn't be overlooked that, unless there is a person who takes the initiative of expressing acceptance for new things or things that are different from those in the past, new creation would not spread to the society.

### **(Diversification of “Happiness” and Pursuit of One’s Own “Happiness”)**

In a diversified society or a society with many options, it becomes rather difficult for individuals to gain a feeling of security by stably belonging to a single organization and they may even feel a sense of alienation. As such, in order to feel “happiness,” individuals are required to actively find organizations or places where they can feel a sense of belonging. Since happiness (“evaluation function of happiness”) differs based on organizations, the “evaluation function of happiness” may change simultaneously with the diversification of society. In addition, although the values of money were highly regarded under capitalism in the past (adversely, values other than money existed but were difficult to be regarded). In the future, appreciation of values other than money such as empathy, trust and social contribution will be promoted. As the relationships through cyberspaces increase, the weight of “real” happiness such as the pursuit of the “actual sense of being alive” as mentioned above, demand for things that prove one’s worthiness or the desire to leave one’s mark, or securing of fundamental values of people such as the sense of feeling healthy, happy or fun may increase.

## **2. Future Vision Focusing on Industry (Innovation and Competitiveness)**

### **(Dramatically Improved Productivity by Data Utilization)**

As stated above, major change is to be caused beyond the conventional industrial field and the barrier between the supply side and the demand side by connecting everything through IoT and analyzing the data generated therefrom by AI. Developing a business by grasping the consumer behavior and latent demand through meta treatment of data, i.e. extracting and using important pieces of data from data of every sort and kind of data, while promoting effective use of resources by AI and dramatically improving productivity, would be the source of competitiveness.

### **(Exploitation of New Markets by Connecting Dreams, Technologies and Designs)**

While improvement of production efficiency by AI or data utilization will be important to improve competitiveness in the existing industrial field, in order to realize greater improvement

of productivity, it is important to create new added value by exploiting new markets. To this end, it is further important to create new value by connecting “dreams (or objectives)” (what you want to realize or solve), “technologies” (the means to realize such dreams or objectives) and “(business) designs” (how you realize them) and to sustainably carry out such acts.

With respect to technologies, since technologies necessary for each product or service will increasingly be wide-ranging, the relative importance of each technology may be reduced. Adversely, it will be important to generate demand by receiving empathy from consumers. Thus, it would relatively be important to win the consumers’ hearts through packaging, acquisition of trust, image strategy and branding while explaining the “dreams” or concepts. In doing so, since people are not necessarily reasonable homo economics and are living creatures whose behavior is largely dependent on emotions, flexibility (pliancy) and art will be important to appeal to such emotions.

### **(Importance of the Time to Market)**

Since the pace of information transmission and social change is accelerated more than ever, the speed of practical realization and time-to-market will be important. An environment or culture that allows trial and error, i.e. to repeat challenges and failures and improve the perfection level by interacting with the market, instead of taking plenty of time aiming to succeed without fail by one challenge, will be essential.

### **(Deepening of Open Innovation)**

As described in Chapter 1, Section 1, as the innovation model is changing from a linear-type to a complex-type, possible responses to increasingly demanding consumers’ needs by one company are limited, and thus it is expected that the necessity of open innovation to satisfy such needs by multiple companies involving users will further increase.

### **(Utilization of Values and Culture Specific to Japan as the Key for International Competition)**

In order to win international competition, it is also important to recognize one’s position in the world. For example, as strategies against emerging economic superpowers, it makes sense to compete in other areas instead of competing on quantity. Therefore, it will be important to market goods, services and sightseeing with high added values utilizing the values and cultures specific to Japan by utilizing the characteristic features of Japan mentioned below and determining and targeting the global consumers who would empathize with the sense of values.

### **(Paradigm Shift from Monopoly to Use, from Holding to Accessing and from Pipeline to Platform)**

Business forms have changed in association with changes in society. Especially, companies capable of forming platforms and utilizing accumulated data are increasing their international presence and this trend will further be noticeable. In other words, business forms have changed from a pipeline-type business where value chains comprised of entities undertaking respective roles are promoted in a sequential order as in the past to a platform-type business where various players and users realize various activities and offer “platforms” to exchange various values. Furthermore, information exchanged in such platform is used in various ways and the business is thereby accelerated. In such business, since one player cannot carry out the whole business, multiple players need to run the business in cooperation by accessing and mutually using technologies and assets of others. Therefore, the preconditions of business models will shift from “monopoly” to “use” and technologies will also change their form from personally “holding” to “accessing” the technologies of others. The sharing economy which is rapidly expanding these days can be considered to be one of the typical examples of business which offers a platform to connect “persons who are not using” assets with “persons who want to use” such assets.

### **3. Future Vision Focusing on the Society (Mechanisms, Rules and International Relations)**

#### **(More Flexible Borders of States and Organizations)**

As noted above, amid the substantial change in the manner of individual’s participation in society through organizations due to expansion of individual abilities and departure from dependence on single organizations, organizations will increasingly be required to be more flexible. In addition, international borders will also change from the past forms due to increasing cross-border transactions of goods and services as a result of the advancement of network technologies, expansion of cyberspaces and emergence of global companies with powers exceeding those of states. Moreover, for example, virtual currency is not covered by the current monetary policy since it is issued by entities that are not states but if its circulation scale expands, the existing monetary policy issued by states may become less effective. It is also possible that states and organizations may be required to adjust or rebuild the concepts, mechanisms and rules based on conventional borders if they become dysfunctional.

#### **(Relativization of Position of States in Human Society)**

The relations between states and companies are also changing. In the cyber world, there are virtually no borders, and thus, the application of the national laws is becoming one of the major challenges. Meanwhile, for example, although recognition of convenience of virtual currency has been expanding, its treatment is still under examination in each country from the viewpoint of

monetary and credit policies since most of the virtual currencies are issued by entities other than states. As stated above, several IT platform-type multinational corporations have economic scale equal to states and their social and economic influence on the whole world is growing increasingly. These corporations are also required to bear appropriate social responsibility and governments and multinational corporations must jointly solve social challenges in a constructive manner.

### **(Shift from an “or” Society to an “and” Society)**

Advancement of technology makes something that was impossible in the past possible. In such situation, the society where one of several options had to be chosen (an “or” society) may change to one where all of such options can be chosen or exist simultaneously (an “and” society). For example, there will be more cases where the world of “digital” or “analog” changes into a world of “cyber” and “physical” and “contents” and “science” as well as science fiction writer “and” technologist or technology connoisseur “and” Migosha (experienced viewer).<sup>19</sup> of business or industrial “and” academic, instead of occupation A “or” occupation B. In such cases, the mechanism where individuals can carry out activities by using their various abilities (“independence”) and the mechanism where individuals can carry out activities in cooperation with someone else (“alliancing”) occur simultaneously, and in the future, the balance between the two mechanisms will be important in the society.

### **(Increased Effective Learning and Mutual Learning)**

In the era where the pace of change is getting increasingly faster, it is necessary to develop human resources who are capable of responding to such change in a flexible manner and can compete and cooperate in the world. Cross-border career formation will also be another major option. Especially in higher education, measures such as modularizing learning<sup>20</sup> by the effective use of IT is effective, promoting efficient learning. In addition, use of IT would enable easy establishment of opportunities where every person who participates in the place of learning can learn from each other (“mutual learning”) while proactively learning in comparison with the past educations which tended to place a disproportionate emphasis on unilateral instruction of knowledge. Meanwhile, in the future, many things would be created in cyberspace or through such space, increasing the values of real, and thus, physical and emotional education through real experiences will be even more valuable.

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<sup>19</sup> Migosha refers to being familiar with plays and good at watching them or persons who are such. In this context, this word refers to being capable of understanding and recognizing the meaning of the business description.

<sup>20</sup> This refers to the act of dividing learning into small parts and customizing the way of learning (the materials, order, speed or level for learning) to a certain degree according to the person who is to learn, at the time of acquiring necessary learning.



**(Universities and Places of Learning will Not Only be the Platforms for Learning but also the Platforms of Mobilization of Human Resources)**

Based on the assumption that there will be more second or multiple jobs in multiple organizations and the work style of repeating the cycle of learning and working several times becomes general, universities and various places of learning will be important as the platform for lifelong learning where people can learn what they need in each case. In addition, these places are expected to serve as the place where various human resources gather, exchange, emerge and conduct social experiments or trial and error with respect to ideas and to function as a platform with high productivity in the sense that stagnation of human resources will not occur by utilizing the characteristics of the automatic flow of human resources (as a result of enrollment and graduation of students or people-to-people exchanges, etc.).

**(From Ownership to Sharing of Intellectual Assets - Adding High Value to Intellectual Assets)**

In the future described above, in view of intellectual assets, similarly to the change in the social sense of values from “ownership” to “sharing” or the circumstance where people will create values in cooperation in and outside the organization based on open innovation, tools which enable authors to establish rules that make it easier for many people to use their work such as the idea of copyleft<sup>21</sup> in open-source software, etc. or creative commons<sup>22</sup> may spread. Through such mechanisms, for example, ingenuity can be exercised to enable the author to freely distribute his/her work while holding the copyright while the recipient can redistribute or remix the work within the scope of the license terms; expanding the mechanisms of sharing and co-working of intellectual assets. While it is inevitable for products to physically deteriorate over time and become less valuable in general, the more the services are used, the more they become valuable since the increased data will be analyzed by AI, enabling offering of more advanced service. In terms of maximizing the values of intellectual assets, it is important to change the management and mechanism of data and intellectual properties based on such differences and changes.

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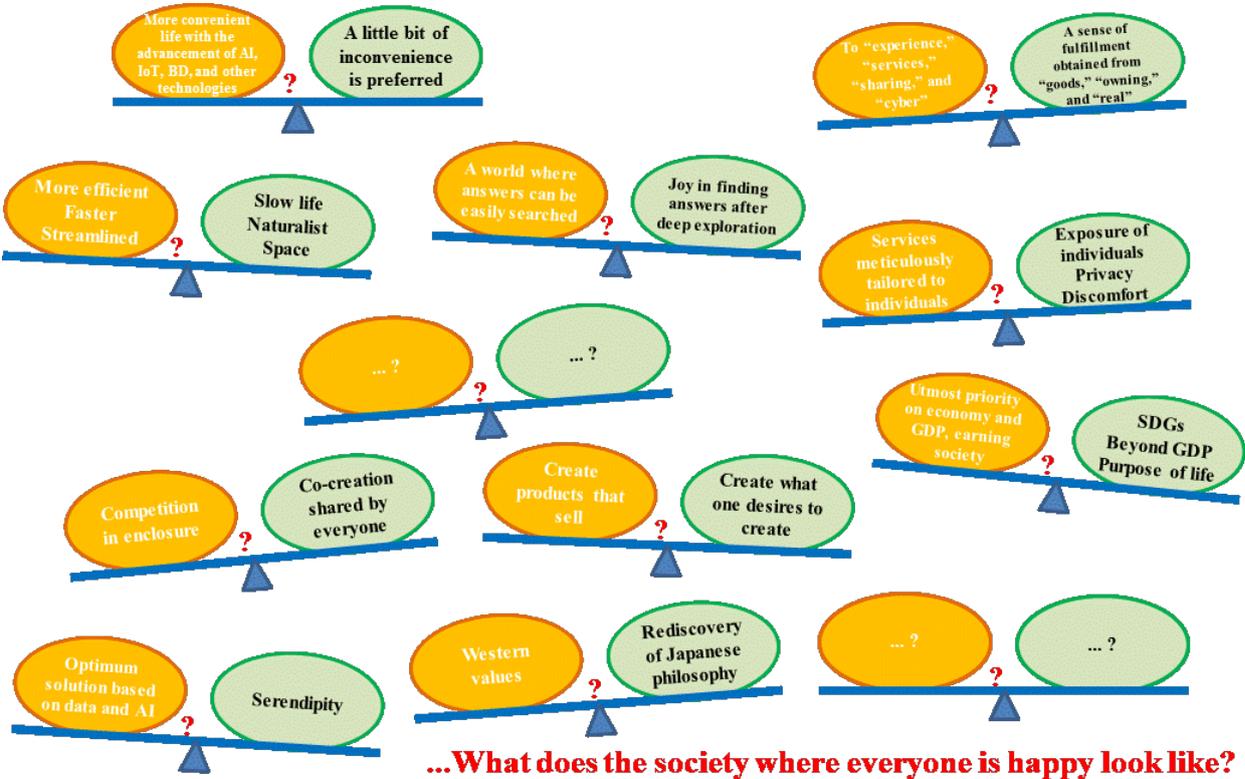
<sup>21</sup> A software licensing concept invented by Free Software Foundation (FSF) to enable the author of the work such as software to license the public to freely use, distribute or alter the work and freely distribute the work while still holding his/her copyright.

<sup>22</sup> Creative commons is a collective term for an international non-profit organization offering creative commons license (CC license) and its project. <https://creativecommons.jp/licenses/>

**4. Duality of the “Future” (Is it a future where people are feeling happy?)**

Various changes represented by the advance of technologies are considered to enrich people’s lives by basically increasing the convenience and efficiency of society. However, it is also important to consider values that do not only focus on improving convenience or efficiency from the viewpoint of whether such changes are working to create a society in which people are really feeling happiness (Figure 4).

**Figure 4** Duality of the “Future”



(Extracted from Document 4 of the First Meeting)

For example, while a variety of conveniences can be enjoyed by being connected to others through SNS, sometimes people may have desires to be released from such connection. It may be convenient to be able to immediately search on the Internet, but there are pleasures that are obtained by thinking and searching beyond convenience. In other words, re-evaluation of values in intellectual searches and strolls may be required because of the digital era. In a society where diversity is provided in various aspects ranging from the way of working and lifestyle to everyday consumption, there is freedom to choose from various options. Meanwhile, there may be certain number of persons who feel troubled by the increased options for everything and do

not prefer options (while some prefer the “cafeteria-style” where one can freely choose the menu combination, some prefer the “box lunch-style” where the menu combination is fixed in advance and there is no need to choose items one by one.).

Moreover, even if physical abundance is achieved, some may feel a sense of alienation or anxiety due to science and the social system becoming gigantic, complicated or a black box accompanying their development. Furthermore, some may feel that not only the innovation led by scientific technology is valuable.

These circumstances are considered to become apparent when the power of embracement held by states, companies or families becomes weaker. Thus, solutions to satisfy the individuals’ desire for attribution. Surveillance society and life manipulation which have become technically feasible in association with innovation and events such as brainwashing by fake news must be seriously faced and discussed in order to develop understanding and responses. In an extreme example, the concept of “human being” may even be amended with respect to an autonomous existence (bot) modeled after human beings in cyberspaces.

Furthermore, some group of people may become wealthy by making full use of such new technologies or systems and further advancing them using the money they obtained while some group of people may not be able to become wealthy due to failure of making full use of such technologies or systems and become increasingly remote from such technologies or systems. This kind of polarization may be accelerated and redistribution of wealth could become an increasingly important challenge. Moreover, amid the advancement of urban-centered society, phenomena such as the division between the core urban cities and rural areas far away from the core or the uneven distribution of human resources in urban cities could further be promoted. The current time may be the turning point to choose whether or not to become a world controlled by technology where everything is mechanized or automated or a society where mutual exchange between urban cities and rural areas is secured by proactively using technology and access to urban cities is enabled while co-existing with nature.

Thus, an attitude to proactively create a future where there are more people who can feel happiness based on various senses of values is important while recognizing that such duality exists.

### **Chapter 3 “Value” in the Future and Value Generation Mechanism**

As stated in Chapter 2, the society, the people living in it and the industry in around 2030 will largely change, but pursuit of economic performance, convenience and efficiency does not create a society where people feel happiness. In order to form a desirable society, the “values” which will be important for the society as a whole to be oriented in a desirable direction were recognized and the mechanism to generate such values were marshalled.

#### **1. “Values” Which Will be Important in a Desirable Future**

##### **(1) Making Good Use of Multifaceted Nature and Diversity of Individuals<sup>23</sup>**

In order to enable individuals’ versatile abilities to be exercised (Chapter 2, Section 1), maintain conflicting demands for the future (Chapter 2, Section 4) and realize consistent exploitation of new markets (Chapter 2, Section 2), the diversity of individuals active in such society will be an important value.

Diversity of individuals brings about the following various effects: 1) improvement of the abilities to respond to the changes to the environment and to survive as a group<sup>24</sup>; 2) a base to create new things through exchange and stimulation between such diversity; 3) an environment to empathize using “like!” by finding common points with others while recognizing the differences between each other; and 4) provision of values to society from the individuals’ own viewpoint or vision and acquisition of sense of fulfillment.

In addition, in realizing a lifestyle where one navigates his/her life by him/herself (Chapter 2, Section 1) in an “and” society (Chapter 2, Section 3), clarifying the multifaceted nature essentially held by individuals and making good use of it will also be an important value.

Furthermore, the combination of the individual diversity and the multifaceted nature (wideness) and expertise (deepness) of individuals may create new values of a scale which cannot be realized by a single person, thereby enabling the generation of “multi-layered” values through connection of people including experts beyond the framework of groups or organizations.

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<sup>23</sup> In this part, the multifaceted nature of individuals refers to the various sides of one person such as a worker, intellectual and family person, while the diversity of individuals refers to the different sides of each person.

<sup>24</sup> For example, there are suggestions that living things have not extinguished due to diversity and excessive adaptation and uniformity could lead to the extinction of species.

## **(2) Increased Values of “Real” (e.g. real thing, experience, genuine object, history and culture)**

In the era where any goods or service can easily be obtained and cyberspaces and virtual worlds are expanding, more emphasis is put on experience consumption rather than goods consumption (Chapter 1, Section 2 and Chapter 2, Section 1). In addition, since the real world does not increase at a pace similar to digital or virtual worlds, the value and importance of real increases relatively. In such world, emphasis is put on the following values: (i) humanity such as emotions, experience and realization; (ii) to maintain privacy in a “super surveillance society”; (iii) information source and the fact that the information is not apocryphal or fake; and (iv) history, tradition and culture which are inheritances from the past and cannot be changed.

## **(3) Creation of New (Innovation) and Emergence Becomes Essential**

While exploitation of new markets by innovation is essential to realize greater added values beyond improvement of productivity (Chapter 2, Section 2), it is also essential to fuse various knowledge and sensibility beyond the walls of organizations in an open manner (Chapter 2, Section 2), create new combinations and sublimate them into actually used things, and such actions will be increasingly valuable.

In order to create “new” things, the design ability to connect resources such as human resources, information and technologies according to the objective and to further connect such resources with the needs and wants clarified through data analysis of consumption.

Use of new combinations generated by human unpredictability and the speed of realizing changes may also create important values.

In order to accelerate such emergence and innovation, it is important to intentionally create a state where information materials can be smoothly utilized.

## **(4) Acceptance of Various Values in Society is the Basis**

Acceptance and embracement of various values in society are the prerequisites for exercising the versatile abilities of individuals, pursuing various types of happiness by navigating one’s life by oneself (Chapter 2, Section 1) and making various choices or creating values while feeling the duality of the future (Chapter 2, Section 4). In Japan, people often seek to be “normal” or “average” or are subject to peer pressure, but it is necessary to build a society where various senses of values are accepted.

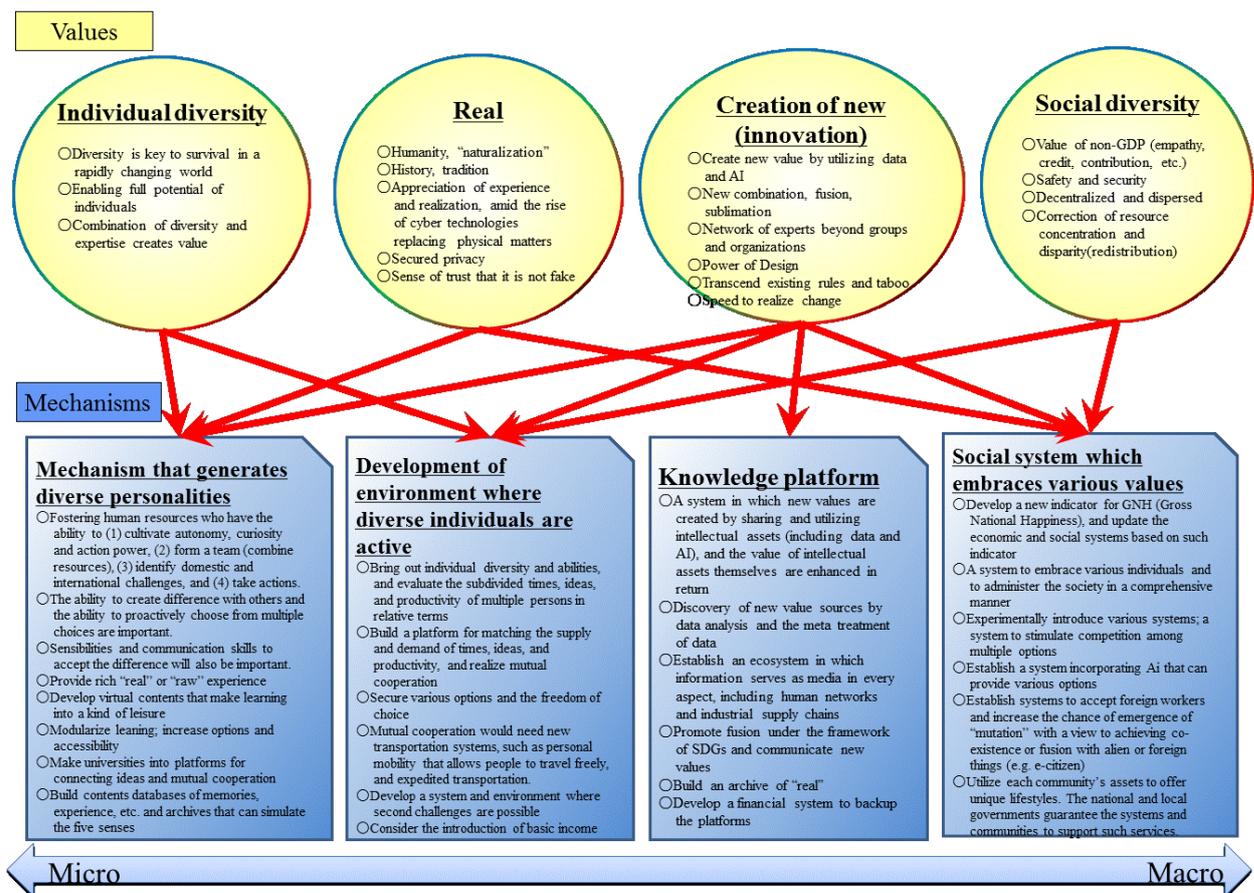
For example, not only the values or numerical figures measured by GDP but also other various values such as empathy, trust, contribution, safety and security and respective uniqueness of regions may be insisted upon.

If various values are accepted, various lifestyles may emerge, population concentration in urban cities may be eased, one will be able to choose both the urban and rural areas instead of a choice between the two or an appropriate balance could be generated between a non-centralized mechanism and centralized mechanism. Meanwhile an important element will be that all resources including people and wealth are not locally concentrated and disparities are adjusted (redistribution) in an appropriate manner so that the specific choice would not serve as the cause for being isolated from the social system.

## **2. Mechanisms to Create “Values” that Lead to the Creation of New Businesses or Improvement of International Competitiveness of Japan**

Now, what kinds of “mechanisms” will generate “values” of the future as stated in the preceding Sections (Figure 5)? In this Section, the concept of “mechanisms” will be marshalled and the specific system will described later.

**Figure 5** “Values” and “Mechanisms”



(Document 1-2 of the Third Meeting)

## (1) Mechanism That Generates Diverse Personalities

First of all, a mechanism that generates diverse personalities and enables their co-existence is necessary to enable existence and active participation of various individuals that are capable of creating something “new.”

In order to generate diverse personalities, the following abilities will be important: (i) the ability to cultivate autonomy, curiosity and the power to act, think by oneself, define the challenges and to act; (ii) the ability to create difference with others; and (iii) the ability to proactively choose from multiple choices (for example, it is important to foster creativity in school education).

On the other hand, for the co-existence of various individuals in the same society, sensibilities and communication skills to make more contacts with heterogeneous group of others than before and to accept the differences will also be necessary (for example, due to the sharp increase in the number of foreigners visiting Japan, there are more opportunities to make contact with foreigners of different cultures.).

In order to foster such abilities, instructions must be given according to the interests or developments of each person instead of giving them in a one-way didactic manner. As such, a mechanism where learning is modularized by IT to enable each person to access and freely choose what they want to learn is appropriate in some aspect. In addition, especially for children, it is effective to develop and use virtual contents since they absorb more things and have more curiosity when learning with pleasure.

On the other hand, in order to develop the human real abilities such as emotions, feelings and sensations, it is also necessary to establish a mechanism to offer real experiences. To this end, in addition to creating many occasions to gain real experiences such as the opportunities to come into touch with nature, it would be helpful to build and use a contents database of memories or experiences, etc. or archives that are capable of embodying the five physical senses and use them as a threshold.

## **(2) Development of Environment Where Diverse Individuals Are Active**

Secondly, in order to create a society where diverse individuals exercise their abilities and various values exist through the creation of something “new,” an environment where diverse individuals are active is necessary. To this end, not only will it be important to have many choices for individuals but also freedom should be secured in making such choices (for example, making regional contribution as a side business in addition to the main business or making one’s hobby into business). In addition, in order to facilitate the challenges for such choice, if there is a mechanism or environment which enables one who has once failed to challenge again, one can exercise his/her diversity without fearing to fail. In this regard, measures to grant an amount of money necessary for a minimum standard of living by introducing a mechanism of basic income<sup>25</sup> to guarantee that one can live even if he/she fails are considered effective.

Moreover, using the multifaceted abilities and interests of individuals by dividing time are considered important. It is a mechanism to build a platform where the times available for the individuals are subdivided and the specific target and the length of time to be used for it are applied, thereby matching the supply and demand of subdivided times, ideas and abilities of multiple persons and making it possible to realize mutual evaluation and cooperation. In doing so, in order to realize real cooperation such as actually gathering and carrying out activities, personal mobility where individuals can freely move and new transportation such as faster transportation would also be necessary to support such mechanism.

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<sup>25</sup> One sort of guaranteed minimum income which is a policy where the government regularly grants cash in an amount necessary for a minimum standard of living to every citizen.

Universities could assume the role of such platform as a place to make exchange and combination of the ideas, cooperation and trial and errors of various human resources.

### **(3) Knowledge Platform**

The mere existence of diverse individuals and various values in an unbound state does not realize easy generation of innovation in a complicated innovation model. The third necessary mechanism is a platform where diverse abilities of individuals or organizations and the various needs and wants of unique individuals are matched and easily fused. This is a “place” where various intellectual assets can be accumulated and people who access it can cooperate. A wide variety of purposes and forms is possible. For example, it could take the form of SDGs, regional or small and medium-sized enterprises, or those in which focus is placed on contents as mentioned above. For the sustainable development of such platform, it is desirable for the persons who offer information to feel some advantages and that money based on intellectual assets can flow.

In such platform, it is important that intellectual assets including data will be accumulated and new values will be generated through sharing and utilization of such assets while the value of the original intellectual assets itself increases and a network of people and industry is built through such pieces of information.

### **(4) Social System Which Embraces Various Values**

In order to enable diverse individuals to live with dignity and to generate a variety of new values using their abilities, the existence of a social system which embraces such various created values is essential.

In the present day where emphasis is often placed on monetary values including GDP, consumer surplus which is to show the abundance perceived by consumers is underestimated due to being difficult to measure. While there are few indicators that represent values other than economic values, it would be effective to develop some kind of indicator while referring to the Gross National Happiness (GNH).<sup>26</sup> used in Bhutan to realize a society where a wide range of values are accepted.

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<sup>26</sup> “Bhutan – A country which respects Gross National Happiness (GNH)” (website of the Ministry of Foreign Affairs; November 7, 2011). For example, national health, education, diversity of culture, vitality of regions, diversity and vitality of environment, way of using time and balance are listed as some of the indicators. <http://www.mofa.go.jp/mofaj/press/pr/wakaru/topics/vol79/index.html>

In addition, experimentally introducing systems that are different from those used in the past in every aspect of society such as politics, economy and finance, labor and employment, education, culture and life may give awareness to values other than economic values.

In a society which embraces such diverse of values, it is possible that AI will not only present one optimum solution but also present multiple choices according to the values focused on, enabling individuals to proactively choose from among such choices.

In addition, it is desirable that the following actions be conducted smoothly: (i) to not hesitate from co-existing or fusing with different kind of things; (ii) to value the same sort of mutation that accidentally emerged by such fusion; and (iii) to actively use the input from foreigners (see the mechanism similar to the e-Residency system<sup>27</sup> used in Estonia).

Moreover, taking into account that, in Japan, there are diverse cultures in each region and important values differ therein, Japan can transmit with confidence that it has a society which involves numerous communities with unique values and embraces various values and may further show the possibility to further develop such society, through offering unique cultures and lifestyles.

## **(5) Example of a Future Value Creation Ecosystem**

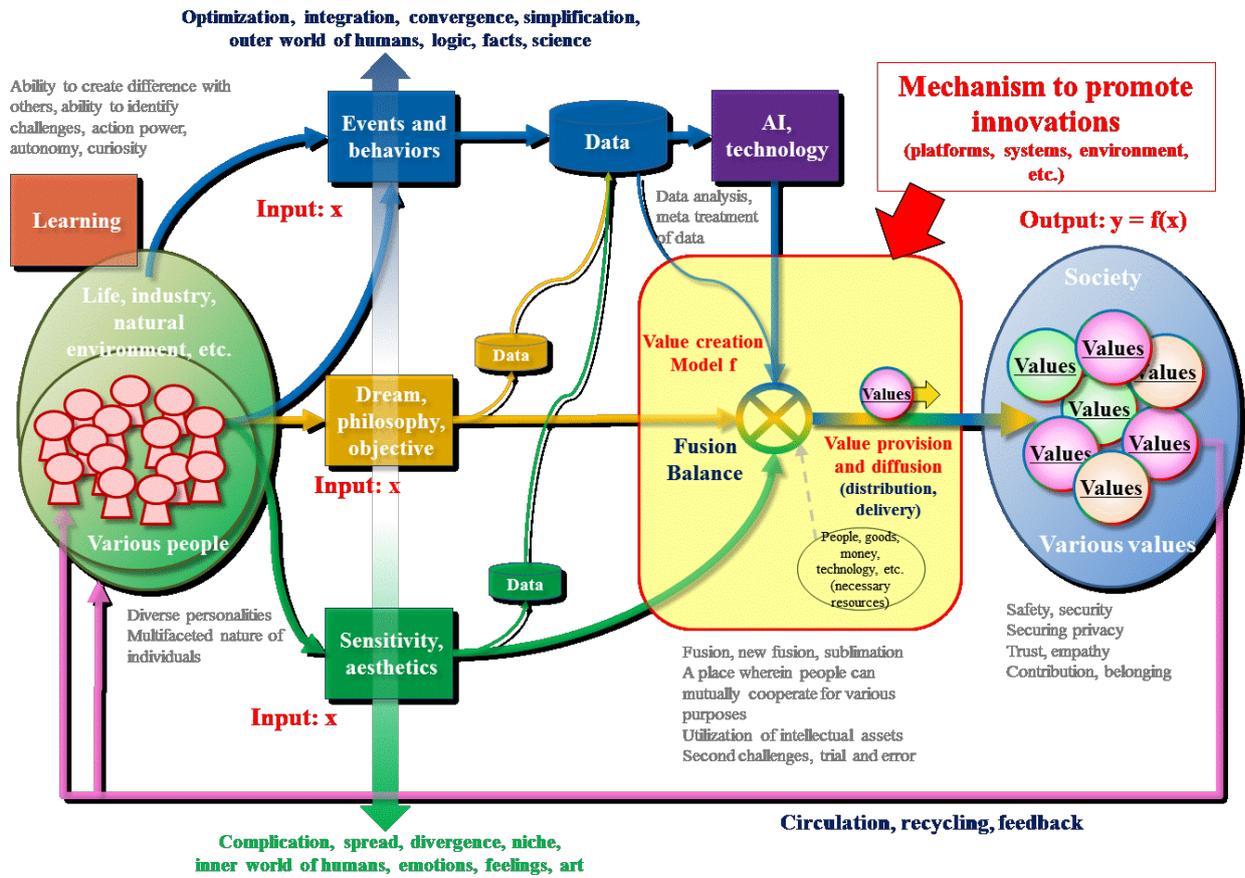
A value creation ecosystem as one large system which involves the mechanisms mentioned in (1) to (4) above can be marshalled in the form shown in Figure 6.

The upper side of the figure is a relatively pro-science part while the lower side of the figure is a relatively pro-art part. A platform can be formed by gathering the pieces of data placed in the center of the figure and will serve as the functional base for the yellow part on the right side showing the place where diverse personalities are active. If various values created in a value creation model receive a certain empathy and are accepted in the society, the society will embrace a wide range of values. It is an ecosystem where sustainable creation of values is realized by receiving feedback of evaluations and considerations in the society and individuals with diverse personalities get further motivated. The comparison of this kind of ecosystem with the past value creation ecosystem is as shown in table 2.

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<sup>27</sup> A mechanism wherein foreigners can obtain an ID issued by the Government of Estonia upon application and thereby venture on new business, enter into agreements or settle funds in EU online. “e-Residency – New Digital Nation” (website of Estonia) <https://e-resident.gov.ee/>

**Figure 6** Example of a Future Value Creation Ecosystem



(Prepared by editing Document 1-3 of the Third Meeting)

**Table 2** Comparison of Conventional and Future Value Creation Ecosystems

	Principal elements of conventional value creation ecosystem	Principal elements of future value creation ecosystem
Preconditions	<ul style="list-style-type: none"> <li>● Supply &lt; Demand (Basic demand is not fulfilled)</li> <li>● Homogenization of ideas due to mass communication</li> </ul>	<ul style="list-style-type: none"> <li>● Supply &gt; Demand (Basic demand is fulfilled)</li> <li>● Diversified information and ideas</li> </ul>
Values (Output (y))	<ul style="list-style-type: none"> <li>● Economic utility</li> <li>● For shareholders</li> </ul>	<ul style="list-style-type: none"> <li>● Economic utility</li> <li>● Contribution, new values</li> <li>● Wide range of values that win consumers' hearts according to the diverse sense of values embraced in the society (users' experience)</li> <li>● Multiple stakeholders</li> </ul>
Value design concept	<ul style="list-style-type: none"> <li>● Product out concept</li> </ul>	<ul style="list-style-type: none"> <li>● Design thinking</li> </ul>
Feedback	<ul style="list-style-type: none"> <li>● Market, the invisible hand of the price mechanism</li> <li>● Consideration (money)</li> </ul>	<ul style="list-style-type: none"> <li>● Market, the invisible hand of the price mechanism</li> <li>● Consideration (money)</li> <li>● Sensitivity data such as gratitude, evaluation, trust and "like!"</li> </ul>
Input (x)	<ul style="list-style-type: none"> <li>● New technologies</li> <li>● Marketing</li> <li>● Market research, product planning</li> </ul>	<ul style="list-style-type: none"> <li>● New technologies</li> <li>(a) Events and behaviors →Data (potential needs) →Analysis by AI and technology</li> <li>(b) Dream, philosophy, objective</li> <li>(c) Sensitivity, aesthetics</li> </ul>
Entity	<ul style="list-style-type: none"> <li>● Single corporation, people of the same nature</li> </ul>	<ul style="list-style-type: none"> <li>● Multiple organizations, diverse people</li> <li>● Users, NPOs, people that connect</li> </ul>

Value creation Model f	<ul style="list-style-type: none"> <li>● Generates values which have become possible to realize by new technologies</li> <li>● Linear or waterfall-development<sup>28</sup></li> <li>● Planning and research and development by one company (closed)</li> <li>● Arrangements within the organization</li> </ul>	<ul style="list-style-type: none"> <li>● Generates values by combining (a), (b) and (c)</li> <li>● Complicated, agile development<sup>29</sup></li> <li>● Collaborative creation by multiple entities + user participation-type new open innovation</li> <li>● Platform that connects individuals</li> </ul>
Value diffusion	<ul style="list-style-type: none"> <li>● Development by supply chains</li> <li>● Development in the real world</li> </ul>	<ul style="list-style-type: none"> <li>● Development by the platform or exchange between individuals</li> <li>● Virtual development by SNS and evaluation</li> </ul>

<sup>28</sup> Waterfall development is a means where the specification is fixed prior to the development and the phases such as the analysis, design and test of such specification are executed in sequence. Information-technology Promotion Agency (IPA) “Trends and Challenges of Non-waterfall (Agile) Development” (March 4, 2013) <https://www.ipa.go.jp/files/000027309.pdf>

<sup>29</sup> Agile development is a means where the whole system is built by repeating demand, development and test (and release) in a short period of time in accordance with the demands of customers. Information-technology Promotion Agency (IPA) “Trends and Challenges of Non-waterfall (Agile) Development” (March 4, 2013) <https://www.ipa.go.jp/files/000027309.pdf>

## **Chapter 4 Design Values by Using the Characteristics of Japan and Promote Them to the World**

The values and mechanisms presented in Chapter 1 to 3 are all universal concepts that will be relatively general in the future world. The following measures must further be taken for Japan as the system of the state as a whole and the entities active therein to maintain international competitiveness while focusing on distinction with other countries:

- 1) To create mechanisms unique to Japan reflecting its characteristics; and
- 2) To actively and strategically input “mechanisms” and the background ideas in the formation of international rules (however, such input should be made by internationally broadening empathy and building consensus instead of unilaterally imposing the sense of values of Japan).

As such, some of the characteristics of Japan which are considered to be especially important from the abovementioned viewpoint are listed as follows.

Some of the characteristics do not necessarily fit to the current state of Japan as a whole (due to the difference in age or regional characteristics) or are subject to concerns of being lost. In addition, some require change due to having negative impact depending on the specific form of expression while some tend to be considered restrictive (e.g. “homogeneity” and low birthrate and aging population described below). However, many of the characteristics of Japan recognized by the countries around the world have potential to serve as the source for providing values that differentiate Japan from other countries in the world and thus, it is desirable that such characteristics which can be utilized in creating the future mechanism be utilized.

### **(Sense of Balance Not Swinging to an Extreme)**

The first characteristic of the Japanese society is considered to be the sense of balance which values “moderation” and “overall fairness” and does not swing to an extreme. For example, in the economy, some of the examples are simultaneous attainment of pursuit of one’s own profits and benefiting of others as represented by the term “Sanpo Yoshi (good for all)” (“good for the seller,” “good for the buyer” and “good for the world”) which are passed down as the dos and don’ts for trade among Oumi merchants as well as the mechanism of joint management of resources as seen in the practice in the common land; they are extremely similar to the idea of SDGs.

This kind of sense of balance is linked to a non-centralized orientation which does not approve of concentration of resources and authorities to a specific person in the aspect of social systems. Japan is a country formed by regional cohesion and occupations such as “domain,” “village,” “neighborhood” and “cooperative.” Groups with certain autonomy have existed in a multilayered manner in society in various scales and within various scopes with the community

spirit at the core and have served as the basis for daily lives and economy. In such framework, in addition to a mechanism regarding which similar cases are found in foreign countries such as a patronage where “successful businessmen” with economic power assist talented persons who have no such funds, peer-to-peer mutual assistance such as “Ko (mutual financing association)” has also been generally conducted.

In addition, with respect to “nature,” as represented by seeing multitudinous gods in nature in ancient times while being exposed to tough environments such as earthquakes, typhoons, floods, droughts and heavy snow in Japan, Japanese citizens have a strong conscious of seeking “coexistence” with nature instead of looking at it as an object to “conquer” or “control” by clearly showing a confrontational position.

### **(Few Dogma and Taboos)**

Another characteristic of Japan is the few dogmas and taboos in ethics, thoughts and customs, a situation which is considered to be based on the relatively flexible religious outlook. This characteristic is considered to have especially created bold expressions in the art field such as those found in Ukiyo-e and has smoothly promoted acceptance in the society of advanced technology of the science and technology field such as humanoid robots. Meanwhile, there is another characteristic that acts are less likely to escalate to social deviance or antisocial behaviors even if there are few dogmas or taboos since intrinsic constraints generally work due to the sense of balance mentioned above.

Moreover, in the cultural aspect, the small number of dogmas is also considered to be connected to the viewpoint of accepting unheroic traits, immaturity or slow growth found in many works ranging from old tales to modern comics and cartoons (in other words, there are no socially implicit presuppositions that the story has to be a success story or growth story, which is often found in other countries).

### **(Considering Labor as “Pleasure” Rather than “Hardship” and Artisan Spirit)**

The Japanese way of considering work is also characteristic. Unlike cultural areas where labor is considered hardship, Japanese consider labor as “pleasure” and “delight” through creating something and contributing to someone and feel it as one’s reason for living by developing a feeling of pride in the skills which cannot be achieved by anyone else but him/her.

This characteristic has, for example, appeared in the continuous sincerity toward reform and improvement of the object of work even in the absence of instructions as seen in the “Kaizen” system of Toyota which became globally famous or the dexterity of craftspeople who pay careful attention to details as seen in the field of manufacturing or in the pursuit of “Dou” requiring mental attitude along with skills as found in the field of traditional crafts.



### **(Demand and Supply of Rich Cultural Activities Not Only by the Wealthy but Also by the General Public)**

In the cultural aspect, it is also characteristic that, especially in the society since the modern era, not only the nobles and elites but also the general public has actively enjoyed, supported or sometimes even created cultural activities against the background of a stable society and economy and the spread of education. For example, numerous culture arts which are remain today such as readers, picture books, Ukiyo-e, haiku, senryu, comic storytelling, kabuki and various local entertainment were mainly targeting the general public and were deeply integrated in their lives. The demand and supply of culture by the general public as mentioned above are still serving as the origin of developing the publishing, music and film industries as well as the pop culture including cartoons, cartoon films and costume plays, up to the present day.

### **(Respect for Non-verbal Sense and “Margin (Space),” “Flexibility” and “Simplification (Deformation)”**

Non-verbal sense expressing the context including that between the lines (implication) without putting everything in words and the intentional use of “margin” and “space” as shown in music art, painting, architecture, garden and sumo are also one of the characteristics. In addition, the attitude of putting emphasis on the context which is not clearly defined is considered to have generated some room for “flexibility” (parts which allow free expression by the performer’s interpretation or the recipient’s certain range of interpretation) in every part of the culture while developing into an expression form of bold simplification (deformation) as found in the formal beauty of movement in Noh and Bunraku or designs of craftwork.

### **(Existence of Continuous History and Culture)**

Thanks to the geographical condition of being an island, Japan has never been controlled by other states over a long period of time. This fact has generated the situation where history, tradition and culture were accumulated and continued to exist along with the transitions of the times without being interrupted and have served as the basis of the cultural characteristics and sense of values of Japan as mentioned before.

### **(Editing Abilities to Accept New Things and to Reinterpret Them from a Unique Perspective)**

In the past of Japan, the period during which there were no exchange with foreign countries and acceptance of cultures and institutions therefrom was rather rare. Starting from the acceptance of various cultures, knowledge and technologies including characters (Kanji characters) and Buddhism from the continent from the tumulus period to the Asuka period, for example, looking back on the establishment of the Japanese art of tea ceremony, tea plants was

brought in from China and the tools used were transported from China and Korea and have been largely influenced. Yet, the Japanese art of tea ceremony itself has been perfected as composite art by disciplining people, tools and space in an integrated manner with Zen ideas and unique aesthetics such as “wabi (taste for the simple and quiet)” and “sabi (tranquility).” As described above, one of the characteristics of Japan can be found in some sort of skillfulness of “editing” to generate new values by flexibly accepting new foreign things, digesting them and interpreting them from a new perspective by sometimes fusing them with conventional things.

### **(Homogeneity)**

On the other hand, the most characteristic thing especially in the modern times is that the homogeneous situation is preferred. While this is also related to the sense of balance mentioned before, it is deeply related to the fact that, especially in the post-war period, extremely high growth was achieved by developing homogenous people on a large scale and improving efficiency both in the economic and social aspects. This could cause a situation where people that excel at something become disliked or make it difficult for one to try something different from others or to risk something, in association with collectivism. Therefore, it should be drastically revised in realizing the direction required in the future where diverse personalities exist and a wide range of values are embraced.

Furthermore, it is also a matter of concern that there is a trend where it is difficult to make bold challenges due to the strong trend of disapproving things that make “one too embarrassed to face the public” that continues from the past as the behavioral pattern of Japan being associated with the concept of “compliance” imported from the West.

### **(Leading Country in Low Birthrate and Aging Population in the World)**

While demographics is the most predictable certain change in the future, needless to say, Japan is the first country which will face an extremely high aging population in the world. In association with the low birthrate, Japan will become a civilized nation facing a top-level rapid depopulation in the near future. While there are difficult issues such as the social security system, this is a new challenge which other countries have never experienced in terms of the social system. This means, it is possible to try things which are not available to other countries and this could be regarded as an opportunity to spread the results of such challenges to the world.

## **Chapter 5 Issues Requiring Further Considerations for the Future “Mechanism”**

### **1. Challenge toward “value design society”**

The descriptions made in the previous Chapters have illuminated the shape of a desirable society wherein diverse values beyond economic values are embraced and a wide range of new values are created and disseminated to receive empathy and respect from countries around the world by exercising the multifaceted abilities of diverse personalities and making good use of the “characteristics of Japan.” Such society can be expressed in one word, a “value design society,” wherein dreams, technologies and designs are connected to create the future (“dream × technology × dream = future”). The wide range of values generated therein will also be accepted by the world. In other words, Japan is expecting to lead the world by having such society define a wide range of new values.

For example, Google, holding out the dream to “organize the world’s information and make it universally accessible and useful,” built a business model of acquiring an enormous quantity of data by attracting numerous users to one platform by offering free search engines and using such information for various marketing activities. This is nothing less than a design of a new value; Google has defined one new value. Uber’s business offered in foreign countries is also a victory of the design of business where idle personal assets are connected with the needs and wants of many people. This phenomenon is also found in Japanese companies. For example, the method adopted by MUJI whose products are considered cool by many persons around the world by pursuing the simple functional beauty and embodying the method of subtraction unique to Japan has not only designed and defined the colors and shape of goods but also a new value.<sup>30</sup>

All of the abovementioned successful cases are the fruits of design thinking which captures the latent needs and wants which the users themselves are not aware of by getting an idea from a specific situation where the product will be used by users instead of focusing on technologies or markets.

If Japan could lead the world as a “value design society,” unusual talents with the potential to design new values will gather from around the world. This could increase the ability to generate, disseminate and define new values, creating a virtuous cycle.

In order to realize such situation, a knowledge system to develop and accumulate “knowledge” which is the source for generating values and to facilitate the exchange, fusion, sharing and utilization of knowledge must be envisioned and realized.

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<sup>30</sup> Website of MUJI. “MUJI is an ‘idea’ and a ‘lifestyle.’” [www.muji.net/ikkotanaka/#/quote7](http://www.muji.net/ikkotanaka/#/quote7) “The world’s first MUJI HOTEL “MUJI HOTEL SHENZHEN” is open. A space where you can feel MUJI’s vision of the world.” <https://www.muji.com/jp/blog/muji-hotelopen/>

In table 3, the directions suggested in the Special Committee for being particularly important in considering the necessary systems in the future based on the discussions made in Chapters 1 to 4 were marshalled under seven keywords.

**Table 3** Keywords and Future Directions

Keywords	Members’ opinions on future directions
1. Escape from normality/average	<ul style="list-style-type: none"> <li>● Create a “village” which does not fall under the category of conventional administrative vision to enable persons to belong to (multiple) communities that suit their tastes and the taxes be used for necessary things within the community.</li> <li>● Accept persons with unusual talents (as one might say “crazy persons”) and have centripetal force to attract unusual talents.</li> <li>● Picture many “extraordinary” scenarios and encourage them.</li> <li>● Value and increase patrons, guides and mentors who support edgy persons</li> <li>● Ambassadors who deliver information on Japan to foreigners will also serve as the promoters who incorporate foreign ideas which are not common in Japan</li> </ul>
2. “State of skunk works <sup>31</sup> ” where unusual talents gather and hit upon ideas	<ul style="list-style-type: none"> <li>● Venture to become a “mini Galapagos” where Japan follows its own course</li> <li>● While rapidly generating and sifting ideas, store ideas that were not used in a “night-soil pot”<sup>32</sup> like place to make them available any time and use such place as the hotbed of new ideas</li> <li>● Keep mysterious elements in the state as a whole</li> <li>● Maintain a state where there are many absurd things (they may generate values in the future)</li> <li>● Create a platform where privacy is multi-layered (by choosing the parties to whom personal information will be disclosed and the</li> </ul>

<sup>31</sup> “Skunk works” was originally used an alias of the secret development department of a defense and aircraft manufacturers of the U.S. but by further extension, it sometimes refers to an (secret) independent research and development team which is established separately from an existing research organization to develop innovative products or technologies or further extensions, refers to research and development activities carried out by the engineer or team consisting of a small number of persons that is conducted without being reported to the company.

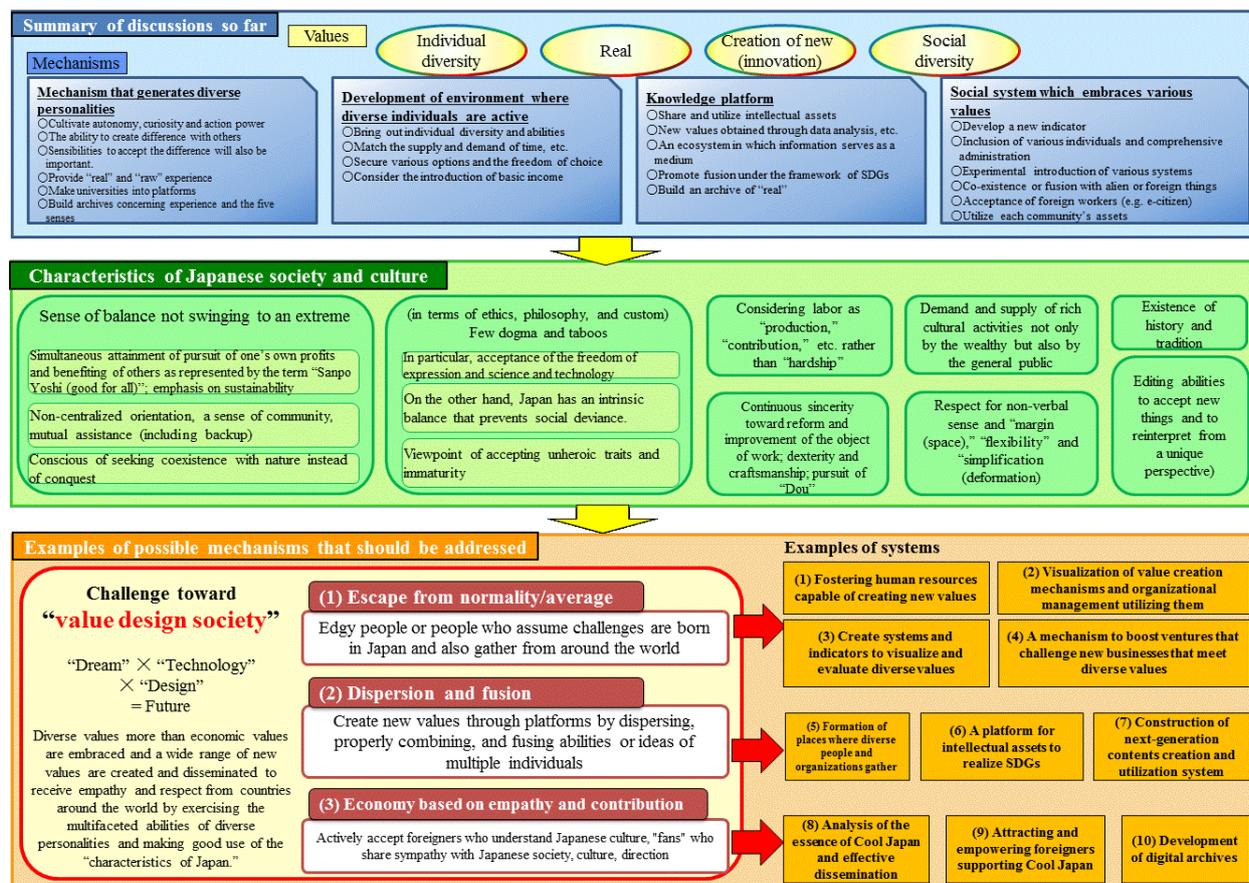
<sup>32</sup> “Night-soil pot” originally refers to one kind of traditional agricultural equipment wherein human waste of farming families are stored in water jars buried in the ground, turned into farmyard compost and used as fertilizer. In this context, it refers to the act of storing ideas which were not used and generating new ideas by using them as materials.

	<p>degree of such disclosure) and participants can make big steps with security by limiting the participants.</p> <ul style="list-style-type: none"> <li>● Practice “Three principles plus one of knowledge and unusual talents” (Hold, create and incorporate from outside ideas + use them).</li> <li>● Relax exclusive ownership and establish joint ownership on various legal rights.</li> <li>● Create certain mechanism to acquire data and platforms and spaces to test the conduit and ideas using such data.</li> </ul>
<p>3. Economy based on the idea that nothing would be done without trial and error</p>	<ul style="list-style-type: none"> <li>● Individuals assume many roles in minutes. One individual should carry out various things.</li> <li>● Active Fullmoon (Use of times of people in all directions. Especially, enabling of the time and potential abilities of elderly people in various ways)</li> <li>● Encourage people to face a pitch and make a lot of hits instead of valuing their batting average. Make many challenges in the spirit of hit and away.</li> <li>● Improve by trial and error without fearing to make small failures. Incorporate amendment and forgetting in system creation based on such premise.</li> </ul>
<p>4. Credit economy, evaluation-driven contribution GDP</p>	<ul style="list-style-type: none"> <li>● Generate what cannot be evaluated by existing evaluation functions such as art. Find such value evaluation function.</li> <li>● Create new value indicators using SDGs. For example, accumulate the achievements of knowledge which have been disseminated to the world or consumed and regard them as “Contribution GDP”</li> <li>● Count values which have been created based on the evaluation of the degree of being beneficial for people</li> <li>● Create a platform related to SDGs and build a business by the design ability of the project manager who connects seeds and needs</li> <li>● Evaluate the degree of contribution of the achievement of SDGs by each entity participating in the platform on a point basis and publish them.</li> </ul>
<p>5. Contents creation and utilization ecosystem</p>	<ul style="list-style-type: none"> <li>● Create platforms and ecosystem for creation, utilization, secondary use and distribution of contents = autonomous-decentralized sharing centered around the creator</li> </ul>

	<ul style="list-style-type: none"> <li>● Clarify who was involved in the creation process and what he/she was involved in using blockchain technologies</li> <li>● Distribution to persons involved in free use and creation of works</li> <li>● Create incentives based on the evaluation by “fans” in addition to monetary considerations</li> </ul>
6. “Immoral” in good condition	<ul style="list-style-type: none"> <li>● Prepare appropriate rooms for systems including regulations (provoke challenges that something may be done)</li> <li>● Give indulgence to “hidden innovation” which develops in an invisible place (e.g. special zones)</li> <li>● Avoid being hedged in excessive “compliance”</li> <li>● Security rather than safety, which means, to respect the sense that anything may be done as far as it is secure to a certain degree (a state near the very limit where bad acts cannot be conducted)</li> <li>● Develop collective morals which do not fall into limited or uniformed dogma and are well-balanced</li> </ul>
7. Metabolism	<ul style="list-style-type: none"> <li>● Create start-ups steadily and promote metabolism of the industry</li> <li>● Defying the framework of existing faculties of universities. Innovation occurs in succession in the boundary area</li> <li>● Japan must be a state which steadily takes initiatives which are yet to be shaped</li> <li>● The course of Japan which was developed in line with the growth phase cannot be maintained without change and thus a growth withdrawal is necessary</li> <li>● Regulations that protect existing industries and hinder the development of new industries must be repealed.</li> <li>● Most of the innovations were carried out by twenty-something people (the Meiji Restoration, post-war rapid growth, merging companies of Silicon Valley)</li> </ul>

(Cited from the discussions made in the Special Committee on the Intellectual Property Strategy Vision)

**Figure 7** Example of the Overall Framework for Realization of the Intellectual Property Strategy Vision



(Prepared by editing Document 1-2 of the Fourth Meeting)

Summing these up, the following shapes of society which embraces a mechanism for intellectual assets will be illuminated as the future vision of Japan.

The first shape of society is one where people who are edgy or assuming challenges (eccentric people) and have diverse abilities are born in Japan and also gather from around the world. To this end, it is necessary to create a place where the act of purposely escaping from normality/being average and breaking homogeneity is appreciated and participants can take big steps with security. In other words, it is required to develop an environment where people can easily challenge things which no one has every tried or which are new to him/herself and can repeat trial and error any number of times (or to make such environment the prerequisite of the mechanism). Pursuit of diverse values by various entities instead of a single axis will not only make various choices available but will also make it possible to create values in a sustainable and agile manner in the future where there will be more uncertainty due to diversity.

A society which embraces various sense of values serves as the prerequisite for the abovementioned situations. It is desirable that a mechanism where values are evaluated by multiple axes is in place and is practiced while making good use of concepts such as “Sanpo Yoshi” and “Companies are public institutions of society” which have a commonality with the idea of SDGs. In doing so, participation of diverse people in the decision-making or evaluation processes is considered to realize pluralistic values and further increase the overall benefits instead of a centralized method where a specific person with authority makes evaluation and decisions based on strict rules.

The second shape of society is one where the time and place for individuals to exercise their multiple abilities or realize their multiple ideas are dispersed according to their respective needs and such abilities and ideas are combined with those of others, thereby enabling exercise of abilities and realization of ideas. In order to enable such “dispersion” and “combination,” it is necessary to build some kind of mechanism (for example, a platform for data, etc.) and enable individuals and organizations participating therein to utilize or distribute various intellectual assets with greater freedom in accordance with the rules mutually agreed. In such platform, it is considered effective to clarify the transactions in the process where abilities and ideas generate values and to ease fair evaluation and profit distribution by using cutting-edge technologies such as blockchain technology in addition to the importance of fostering the human resources capable of thinking the overall “combination” based on design thinking and developing such combination into values.

The third shape of society is one which can actively accept foreign supporters and “fans” who feel empathy on the characteristics of the society or culture of Japan or any of the elements in its future direction. Increasing “fans” of Japan in the international world is expected to lead to the natural spread of values and sense appreciated by them to the world. This could lead to increased consumption of goods or services created in Japan in and outside Japan. In addition, by incorporating the feedbacks of “fans” into the value creation mechanism, diversity of values will be secured and sustainable production, dissemination and development of values and senses shared in the world will be realized.

## **2. Example of a specific system**

In order to realize the future vision mentioned above, it is necessary for more entities to empathize with such direction, start specific activities to realize such direction in cooperation and promote such activities by appropriately sharing relevant information. While there may be various specific actions to be taken, some of the specific mechanisms that may support such activities have been illustrated below according to the three pillars marshalled in the previous parts. It is desirable that these mechanisms are carried out through involvement of relevant ministries and agencies.

### **(1) Fostering and Accumulating Human Resources and Organizations that Assume the Challenge to Generate Values by Escaping from Normality/Being Average and Offering a Platform Where They Can Easily Generate Innovations by Exercising Their Abilities**

#### **(i) Fostering Human Resources Capable of Creating New Values [Short to mid -term]**

In order to create new values that appeal to the demand side, human resources with the following abilities will be fostered while utilizing the characteristics of Japan such as the sense of flexibility or the ability to master things: (i) the ability to develop uniquely human ideas; (ii) the ability to deal with problems for which there are no clear solutions; (iii) the ability to materialize the future vision which has been shaped with a quick overview of the entirety (design ability); (iv) the ability to increase the degree of perfection through trial and error by challenging many times without fearing to fail; and (v) the communication ability. In particular, an environment where creativity, design ability, science and mathematics literacy and artistic knowledge can be fostered from the stage of elementary and secondary educations and where university students and working members of society can acquire the abilities to put in practice such abilities at the site business will be developed.

- In order to have education for fostering creativity from elementary education be carried out throughout the nation, systems in each region will be developed while collection and preparation of necessary teaching materials, education on teaching staffs and transmission of successful cases will be carried out.
- In order to enable university students and working members of society to conduct the creation required by society, measures will be taken to enable them to receive learning where humanities, sciences and arts are integrated at universities, etc. while human resources who are capable of creating new values by combining the creations will be fostered. In addition, by improving entrepreneurial educations etc., human resources capable of implementing creations in society will also be fostered.
- The abilities to illustrate and realize the large design in the future from a broad

perspective will be strengthened and practice will be encouraged both for people and organizations including companies.

**(ii) Visualization of Value Creation Mechanism and Organizational Management Utilizing It [Short to mid-term]**

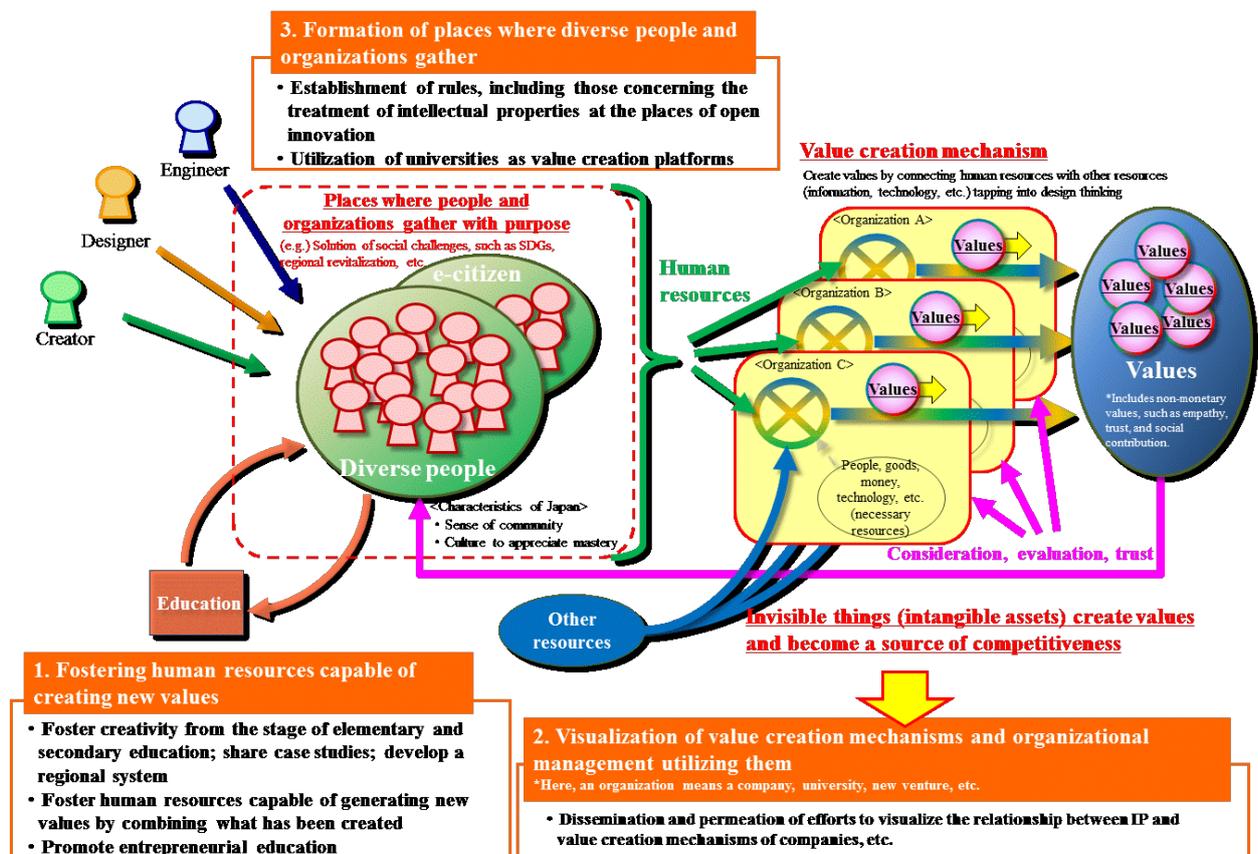
The optimization of resource allocation within organizations<sup>33</sup>, and diversification and facilitation of resource procurement from outside the organization will be sought through encouragement of each organization's voluntary initiatives to visualize and grasp the value creation mechanism within the organization in order to enable organizations to build mechanisms where new values (social values and monetary values) which appeal to the demand side are sustainably created while using such initiatives as the opportunities to build a new business model, thereby enhancing the value creation abilities and international competitiveness of Japanese companies, etc.

- In light of the facts that the weight of intangible assets is increasing in comparison to that of tangible assets and that the mechanisms of sharing and collaboration of intellectual assets are assumed to expand, the initiatives to clarify the functions served by intellectual assets in promoting the visualization of value creation mechanism under the leadership of the management layer will be spread and their penetration increased.
- Realize utilization of the results of using human resources in and outside the organization and visualize the value creation mechanism including intellectual assets in the business evaluation which is conducted by financial institutions in financing or investment or the existing initiatives of visualization of corporate information such as the integrated report.

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<sup>33</sup> In optimizing resource allocation based on the results of visualization, it is necessary not to prevent construction of value creation mechanism in the future by taking heed of the fact that resources which are not currently contributing to value creation may contribute to value creation in the future.

**Figure 8** Development of Human Resources, Visualization of Value Creation Mechanism and Formation of Platforms



(Prepared by editing a handout of the Fourth Meeting)

**(iii) Create Systems and Indicators to Visualize and Evaluate Diverse Values [Mid to Long-term]**

A mechanism to evaluate and measure non-monetary values such as contribution to others or empathy obtained from others will be studied based on the ideas unique to Japan such as “Sanpo Yoshi” at the core and specific proposals will be made. Evaluation will be carried out through a democratic process involving many participants instead of being carried out by a specific person with authority based on strict rules, and the reliability of such evaluation will be maintained by utilizing blockchain technology.

**(iv) A Mechanism to Boost Ventures That Challenge New Businesses That Meet Diverse Values [Short to mid-term]**

An environment, where a fifty-fifty partnership can be built between existing business companies and ventures in various ways such as experimental procurement of products and services, joint development of trial products, joint marketing and financial cooperation, will be developed. The government will create a mechanism to procure products and services of

ventures as experimental products in public purchase and public projects.

## **(2) Establishment of Mechanisms Which Encourage Flexible Exchange and Sharing of Intellectual Assets such as Technologies, Data and Contents (including People) and Expands Values**

### **(i) Formation of Places Where Diverse People and Organizations Gather [Short to mid-term]**

People who assume challenges including persons with unusual talents that generate disruptive innovation or original contents will be attracted from in and outside Japan. An environment where diverse people and organizations gather, challenge and learn from one another and cooperate while allowing challenges and failures (including those in cyberspaces) will be developed so as to enable such people to be active and easily generate innovation and creations at an accelerated speed (see Figure 8).

- Places where diverse people and organizations can gather to solve issues through promotion of SDGs or for other specific purposes will be formed in universities, etc. to develop an environment where diverse people can challenge one other, thereby encouraging creation of innovation.
- Diverse people will be attracted to Japan by establishing or inviting educational or research institutions gaining international attention to promote creation of innovation in Japan.
- Treatment of intellectual properties at the places of open innovation will be organized so as to enable diverse people and organizations to participate in the place of open innovation with security.
- A system to match the abilities and time of individuals with the demands (abilities, roles and time required) of the sides who want use such abilities will be developed in an easy-to-use form in general so as to enable diverse people to exercise their multiple abilities by dividing the time (Fullmoon Project).
- Publicize to the world that edgy people are increasingly accumulating in Japan which aims to become a place where diverse people and organizations can easily make challenges.

### **(ii) A Platform for Intellectual Assets to Realize SDGs [Short to mid-term]**

A platform for intellectual assets where various intellectual assets that contribute to the achievement of SDGs or the solution of social challenges such as regional revitalization through support of SMEs are mobilized both from the supply side and demand side by utilizing the

characteristics of Japan which have a high degree of affinity for the SDGs that have become a global common language by putting into practice the idea that companies develop together with the society as represented by the phrase “Companies are public institutions of society” while having huge cultural and technical accumulation. In such platform, companies participating in the platform will establish new ideas and businesses by utilizing certain intellectual assets as commons.<sup>34</sup>

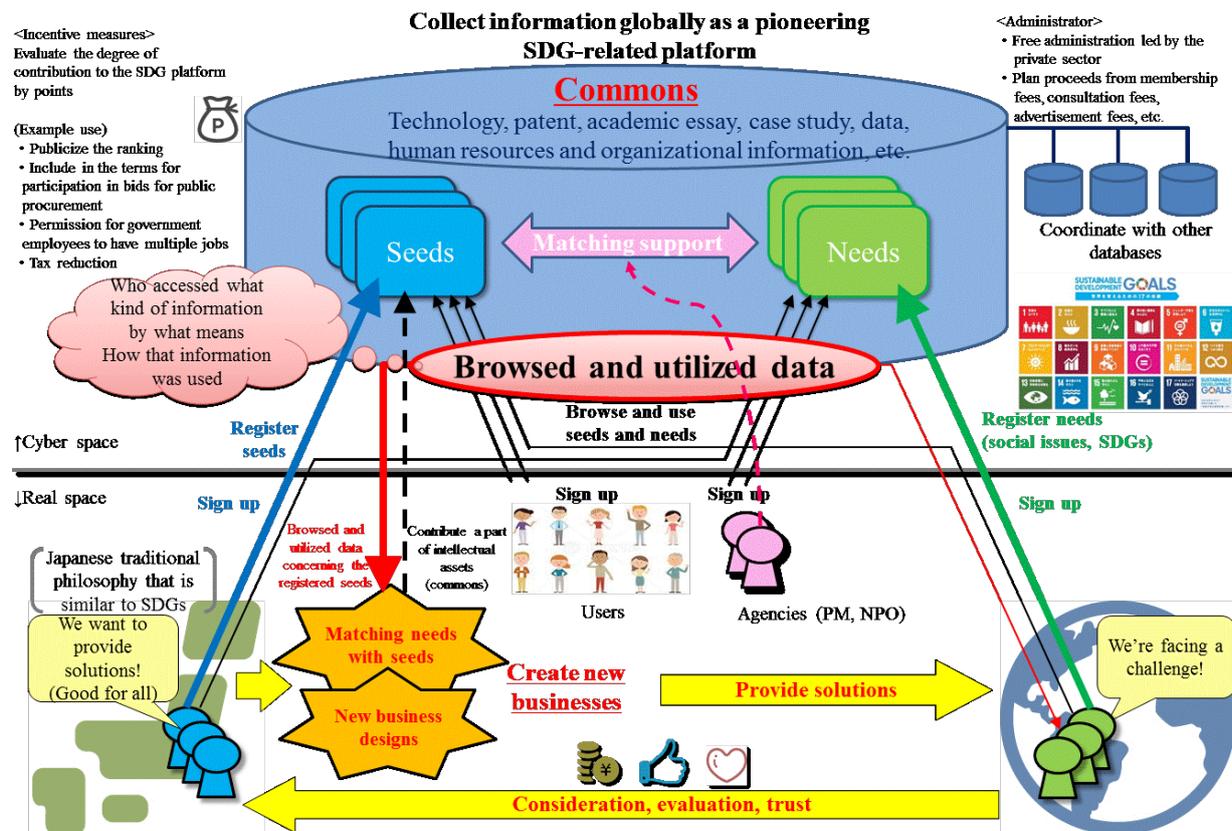
This kind of platform will serve as the tool for open innovation but can also be used as the tool for Open & Closed strategy if companies offer information which may be disclosed, succeed in matching and utilize technologies protected by intellectual property rights or more confidential information at the time of actually starting individual business.

- A platform for intellectual assets comprising technologies, data, information on people or organizations (seeds) related to SDGs and issues to be solved (needs) will be created, information provider and users will be subject to a registration system, feedback on the access to information on the platform will be given to the information provider and a person similar to a project manager as a mediator who makes matching will be allowed to participate in the platform, thereby encouraging the creation of new business ideas through formation of matching and alliance of interested persons.
- With respect to regional companies and SMEs, establish an environment where needs and seeds can be easily matched by seeking cooperation between the platform for intellectual assets mentioned above and SMEs support platform by taking into consideration the trends in the creation of SMEs support platform wherein users can access every SME support service through one site and thereby encourage creation of new business through various seeds and needs related to regional companies and SMEs.
- Fullmoon project (reprinted)

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<sup>34</sup> It is possible to impose conditions such as requiring licenses for the use of intellectual properties while allowing free access to the contents of intellectual properties.

**Figure 9 Knowledge Platform for SDGs**  
 (Example of a Platform for Intellectual Assets to Realize SDGs)



(Prepared by editing a handout of the Fourth Meeting)

**(iii) Construction of Next-generation Contents Creation and Utilization System [Mid to long-term]**

A mechanism to eradicate pirated editions will be constructed while promoting automation and simplification of right management and profit distribution through utilization of blockchain technologies and facilitating activation of collaboration in both aspects of production and use, establishment of new fund procurement means and expansion of the secondary use market so as to realize prompt and wide delivery of valuable legitimate contents which could be considered as one of the cultural aspects of Japan and return of adequate consideration to the related parties. In association with this, facilitation of improvement of productivity by use of AI, realization of new creative expression, and marketing and localization including translations will be encouraged.

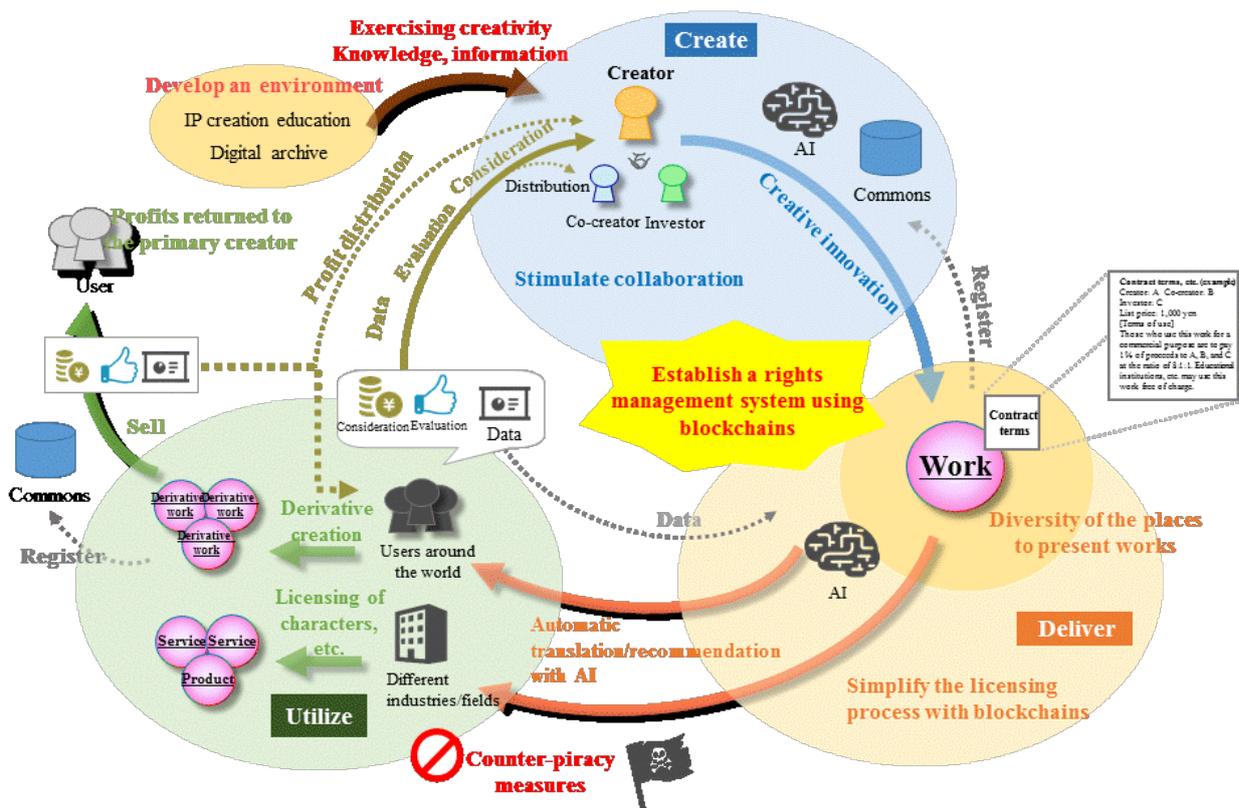
Meanwhile, introduction of architectures to secure soundness and the mechanism of dispute settlement will be examined for user generated contents (UGC) which is a place to generate new abilities.

- Construction of a system for management and smooth use of rights and profit distribution will be promoted so that the overall process of “creating,” “delivering” and “making good

use of” contents appropriately flows and the participants can sustainably enjoy benefits through utilization of blockchain technologies, etc.

- Support will be provided so that new technologies such as AI will be introduced to the contents production site while seeking spread of optimum utilization methods for advanced contents production or expression technologies.
- Support will be provided to initiatives for simultaneous deployment of contents around the world.
- Measures will be taken to introduce multi-layered and viable countermeasures against malicious piracy websites by clarifying that legal measures are available against acts inducing infringing contents through leech sites, etc. or clarifying the legal grounds for site blocking.

**Figure 10** Construction of Next-generation Contents Creation and Utilization System  
(Utilization of New Technologies such as Blockchain (distributed ledger technology) and AI)



(Prepared by editing a handout of the Fourth Meeting)

### **(3) Sustainable Production, Dissemination and Development of Values and Senses That Will Be Shared Around the World**

#### **(i) Analysis of the Essence of Cool Japan and Effective Dissemination [Short to mid-term]**

As the interest in Japan increases as represented by the rapid increase in the number of foreign visitors and number of Japanese restaurants in foreign countries.<sup>35</sup>, the specific expressions, ideas and cultures, etc. of Japan attracting foreigners, the specific foreigners attracted and the reasons of attractiveness will be properly captured and initiatives based on such capture will be promoted so as to generate added values from “Japan which foreigners consider cool” by recognizing the Cool Japan Strategy as one of the growth strategies to generate values for the future.

To this end, the following measures will be taken based on the idea of sorting out customers’ potential needs (so to speak a “customer-in” which is a concept that has further advanced the concept of market-in) instead of a mere idea of product out.

- Create, discover and edit the resources of Cool Japan based on the essence of the attractive points of Japan which foreigners consider cool (for example, conscientiousness, meticulousness and the attitude of mastering things, etc.).
- Weave, present and effectively disseminate stories and contexts that appeal to foreigners.
- Strategically develop Cool Japan taking into account the tastes based on the social attributes such as income and religion in addition to the market characteristics of states or regions.

Moreover, the following initiatives will be taken with an aim to have more foreigners consume the essence of Japan with higher added value.

- Promotion of movement to give added values to Cool Japan by weaving and presenting stories and contexts.

As suggested by many experts<sup>36</sup>, initiatives to tell extremely important stories and contexts (such as the local culture, historical background and positions in the world cultural history) to increase the added values of the resources of Cool Japan ranging from mental ones to physical ones and popular culture to high culture will be widely promoted.

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<sup>35</sup> (i) Number of foreign tourists visiting Japan: Increased from 8.36 million people in 2012 to 28.69 million people in 2017; approximately 3.4 times increase in five years; (ii) Number of Japanese restaurants in foreign countries: Increased from about 55,000 restaurants in 2013 to about 89,000 restaurants in 2015 and about 118,000 restaurants in 2017; approximately twofold increase in four years.

<sup>36</sup> (i) Bearer of lacquerware craft: In an initiative to launch a brand for lacquerware in Europe, in order to explain the attractiveness of Japanese lacquerware, it is important to explain the history of the family business and the unique manufacturing process instead of a mere explanation that the “product is good because it is made in Japan or a famous production area”; (ii) David Atkinson: Regarding the Japanese tea ceremony, the mere explanation of the manner of drinking the tea by turning the tea bowl twice only makes such manner cryptic for foreigners and thus, it is important to have them understand why such manner is used; and (iii) Interview with foreigners group: In order to tell the attractiveness of Japanese sake to foreigners, the history of the sake brewery and the skills and passion of the master brewers working there should be explained instead of the mere explanation of the taste of the sake.

In doing so, the “Foreigner survey for reproduction of Cool Japan”<sup>37</sup>, conducted in February 2018 and the “Nihon-Gatari-Sho (Guidelines for Narrating Japanese Culture)”<sup>38</sup>, used as one of the examples for the model of stories and contexts can be used as a reference.

➤ Promotion and continuance of studies related to Cool Japan

Examinations will also be conducted on creation of places or equipment for accumulation of basic knowledge that is necessary for further deeper study or systemization or further deeper analysis based on states or attributes through the “renaissance movement” which revives and regenerates the tales and stories in relation to the characteristics of Cool Japan that appeal to foreigners.

➤ Developing human resources that produce collaboration between cities and regions and the attractive points of regions

In order to discover regional resources of Cool Japan and increase the attractiveness of regions, external seeds and human resources will be introduced to regions to be connected to the seeds, needs and human resources of the region and improved<sup>39</sup>. As one of such measures, Regional Producer Talents will be developed through demonstrations at regions.

➤ Dissemination of the diverse attractiveness of Japan through various medias and overseas diplomatic missions, etc.

Diverse regional values which have been improved will be effectively disseminated and developed in foreign countries in an easy-to-understand manner for foreigners by using measures such as dispatch of experts, various invitations including foreign press, broadcasting contents and web marketing. In addition, diverse attractiveness will be disseminated in a strategic and meticulous manner taking into account the tastes based on social attributes such as the characteristics of the state or region, income and religion, through overseas diplomatic missions, etc.

## **(ii) Attracting and Empowering Foreigners Supporting Cool Japan [Short, mid and long-term]**

Initiatives that further increase the interest in Japan of Foreign Talents supporting the demand side by actively participating as an influencer and playing the role as a consumer by extended

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<sup>37</sup> Implemented by Visual Industry Promotion Organization (VIPO) as a project commissioned by the Cabinet Office (Intellectual Property Secretariat)( [http://www.cao.go.jp/cool\\_japan/report/report.html](http://www.cao.go.jp/cool_japan/report/report.html))

<sup>38</sup> Implemented by the Editorial Engineering Laboratory as a project commissioned by the Cabinet Office (Intellectual Property Secretariat) ([http://www.cao.go.jp/cool\\_japan/report/report.html](http://www.cao.go.jp/cool_japan/report/report.html))

<sup>39</sup> Final compilation of the Study Group on Developing Human Resources for Cool Japan (March 30, 2018) [see p.48]

stay or settlement in Japan and thicken the layer of such Foreign Talents will be promoted in addition to promoting the measures for attracting and empowering foreign people assuming the supply side of Cool Japan from a foreign perspective by making good use of the advantages of knowing both foreign countries and Japan.

In doing so, attention will also be paid to the fact that foreigners supporting the demand of Cool Japan may also be potentially involved in the layer forming the bearer of the Cool Japan industry

- Promotion of comprehensive initiatives by industry-government-academia collaboration for facilitation of acceptance of Foreign Talents.

In order to create a platform to match SMEs or regional companies which are in need of Foreign Talents but lack the opportunities to access or know-how to utilize such talents with foreign students who wish to work in Japan but return to their countries due to being unable to find the opportunity suitable to their career plans, this measure will be taken in cooperation between educational institutions with foreign students, companies or their industry group wishing to employ foreign students and government and local governments in charge of the system. Moreover, initiatives to match foreign students wishing to work in Japan and regional companies, etc. wishing to accept Foreign Talents will be promoted. Along with this, initiatives to spread Japanese in foreign countries will be strengthened.

- Examination of the mechanism to encourage accumulation of foreigners who have an attachment or sense of belonging to Japan.

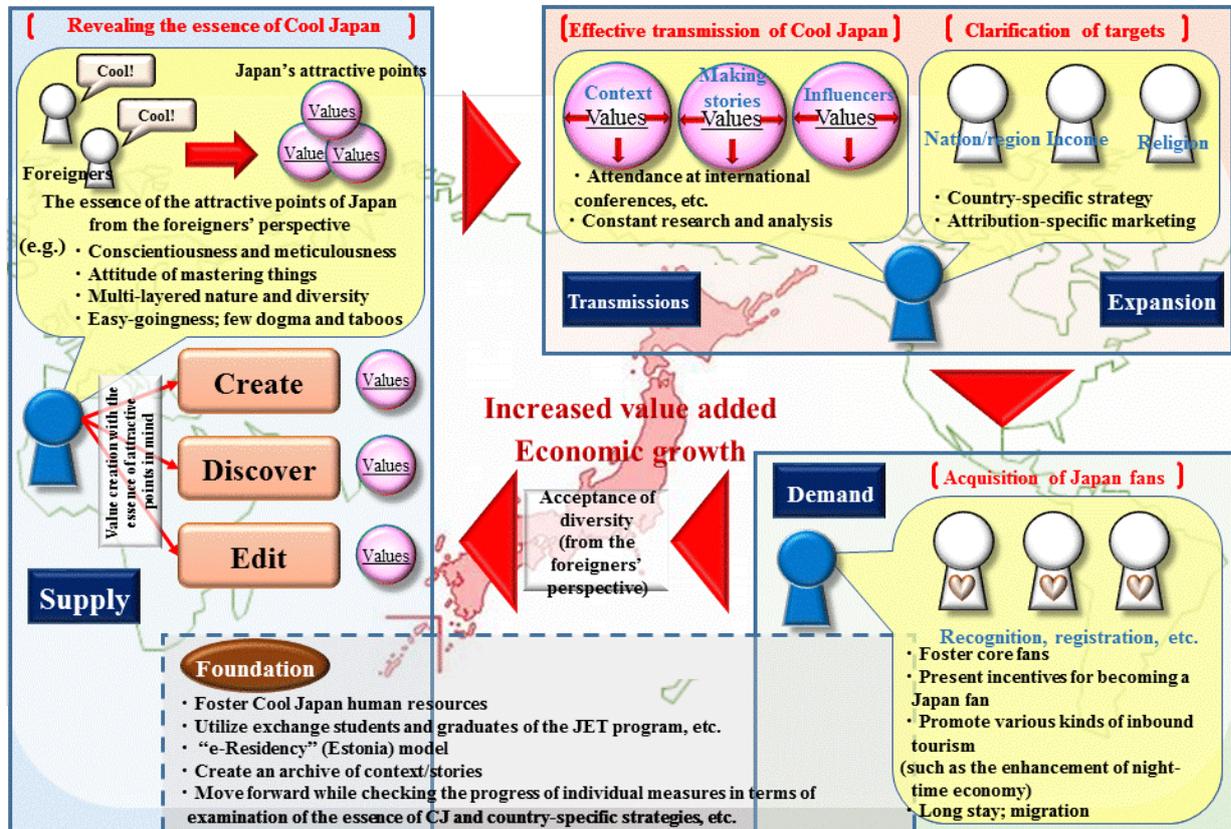
Initiatives to increase the number of foreigners who aim for extended-stay or settlement in Japan for various purposes will be promoted in addition to the initiatives of increasing “fans of Japan” by giving certain benefits through registration of foreigners interested in Japan with reference to the initiatives of other countries such as the e-Residency system of Estonia, in order to examine the measures of encouraging more foreigners to actively participate as the consumer or bearer of Cool Japan. In addition, measures for creating a follow-up mechanism to encourage foreigners who have stayed in Japan (e.g. foreigners who have studied or worked in Japan or have participated in the Japan Exchange and Teaching Programme (JET Program)) to register as a “fan of Japan” and to maintain their attraction to Japan.

- Development of counters to introduce human resources who can talk from a Japanese perspective, etc. at international conferences, etc. and listing them.

Experts of each field who have abilities to transmit message to the international society or knowledge such as the members of the government council or study group will be listed as a pool of human resources capable of delivering appropriate messages about Japan and

development of a mechanism such as a counter to effectively introduce Japan to foreign countries will be examined.

**Figure 11** Reproduction of Cool Japan



(Prepared by editing a handout of the Fourth Meeting)

**(iii) Development of Digital Archives [Short to midterm]**

Intellectual assets of various fields held by various entities such as companies, universities, administrative organizations, art museums, museums and libraries will be turned into an easy-to-use form to the possible extent as digital archives and will be used as the source for new contents creation while developing perspectives to inherit, share and rediscover the sense of values, history and culture of Japan beyond the constraints on time and space.

- Measures will be taken for construction and utilization of digital archive Japan using a cross-sectoral integrated portal site as an entrance as well as international cooperation.
- Construction of a system for right management and profit distribution of intellectual assets through utilization of blockchain technologies will be promoted.

#### **(4) Other Issues to be Considered in the Future**

- Development of a system which enables trials (career, business) in various parts of the society (promotion of multiple businesses, sandbox system<sup>40</sup>, test area<sup>41</sup> and time-limited deregulation, etc.)
- Utilization of artificial intelligence (AI) in planning of policies

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<sup>40</sup> Sandbox refers to a system to drastically review ex-ante regulations and procedures while paying sufficient attention to safety so that municipalities and private business operators can promptly carry out demonstration experiments for near-future technologies used to generate new goods or services; National Strategy Zone in the website of the Prime Minister of Japan and His Cabinet ([http://www.kantei.go.jp/jp/headline/kokkasenryaku\\_tokku2013.html#q09](http://www.kantei.go.jp/jp/headline/kokkasenryaku_tokku2013.html#q09))

<sup>41</sup> A place to test new technologies.

## Closing Remarks

Under the objective of “Intellectual Property-based Nation,” measures were taken with an aim to strengthen Japan using intellectual properties as tools. On the other hand, the Intellectual Property Strategy Vision set the target to become a “value design society” by thinking of the ideal society with the period of 2025 to 2030 in mind. Discussions in a layer different from the past were placed at the core by examining specific intellectual properties that contribute to the objective by clarifying the objective instead of considering intellectual properties as tools. The specific way to broaden and put into practice this vision are the future challenges.

Regarding this vision, a “place” where diverse experts gather was established and brainstorming was carried out in a free and vigorous manner in a workshop style by trying to figure out how “a future where more people can feel happiness based on diverse sense of value” can be created. This vision which was generated as an outcome of the very practice of “open innovation” shows the destination to which the relevant parties would like to head together.

The vision set forth the formula, “Future” = “Dream” × “Technology” × “Design” and presented a “value design society” which will shape and disseminate new values one after another and receive empathy and respect from the world, as the direction in which Japan should head. In such society, individuals and companies escaping from normality/being average will generate values in a diversified manner. Moreover, such individuals will start new initiatives or challenges one after another based on the idea that nothing would be done without trial and error, and the society will develop in an agile manner (i.e. the society gets better as time goes by). We hope that the readers will empathize with such ideas and move toward together.

Meanwhile, this vision is nothing but a starting point to take future steps and the next step is important.

The first step is to obtain feedback while having more people share the ideas of this vision. To this end, the members of the Special Committee, the Secretariat and the relevant departments of the government will disseminate the ideas to the parties whom they can easily make appeals to in an easy-to-understand manner that they are good at.

The second step is to have people who share ideas start designing values one after another with the same sense, act using trial and error and disseminate the ideas.

The third step is to have the government, etc. abolish mechanisms and regulations that inhibit new challenges and create a mechanism which would induce challenges. One of the important pieces is the system related to intellectual property, and the relevant parties will mobilize knowledge and deeply dig into the question., i.e. the specific system required.

The fourth step is to secure a place where free and broad discussions on the future in the abovementioned shape will be held, and to have serious and honest discussions continuously be made; this step is one of the major points of awareness focused on throughout this examination. To this end, the special committee will continuously verify the effectiveness of this vision and make amendments or new proposals.

We will conclude this report hoping that these steps will contribute to Japan becoming a state respected and admired by countries around the world as a “value design society.”

# **Related Materials**

## **1. Name list**

### ○ Special Committee on Intellectual Property Strategy Vision

Kazuto ATAKA:	Chief Strategy Officer of Yahoo Japan Corporation
Shogo IKEDA:	Board Chairman, Niigata Sogo Gakuin / 2018 JCI Japan National President, Junior Chamber International Japan
Takaaki UMEZAWA:	Partner and Japan Chairman, AT Kearney Japan
Yoichi OCHIAI:	Advisor to President and Associate Professor at Tsukuba University
Kazuhiko TOYAMA:	Managing Partner of Industrial Growth Platform, Inc.
Masao KAWAKAMI:	President of KADOKAWA DWANGO CORPORATION
Kenichiro SENOO:	Director & CEO, the Industry-Academia Collaboration Initiative Nonprofit Organization
Ichiya NAKAMURA:	Professor of Keio University Graduate School of Media Design
Akihiro NIKKAKU:	President, Toray Industries, Inc. Chair of Committee on Intellectual Property of KEIDANREN (Japan Business Federation)
Chiaki HAYASHI:	Co-founder and Representative Director, Loftwork Inc.
Yuko HARAYAMA:	Former member of Council for Science, Technology and Innovation
Toshiya WATANABE:	Professor, University of Tokyo, Policy Alternatives Research Institute

(Experts in the order of the Japanese syllabary: as of June 12, 2018)

## **2. Grounds for Establishment of the Special Committee on Intellectual Property Strategy Vision**

- Regarding the establishment of the Special Committee on Intellectual Property Strategy Vision

December 22, 2017

Decided by the Intellectual Property Strategy Headquarters

1. The following special committee will be established on December 22, 2017 for the purpose of making studies on important challenges related to the Intellectual Property Strategic Plan pursuant to the provisions of Article 2 of the Order on Intellectual Property Strategy Headquarters (Cabinet Order No. 45 of 2003).
  - Special Committee on Intellectual Property Strategy Vision (the “Special Committee”)  
The future intellectual property system corresponding to the mid-to long-term social and economic changes will be studied and examined looking at 2025 to 2030.
2. When the Special Committee finds it necessary, it may invite a person of reference and hear his/her opinions.
3. When the Special Committee finds it necessary, it may establish a working group.
4. The term of service of the members of the Special Committee is to be within two years from the day of appointment or nomination; provided, however, that this will not preclude the relevant member from being appointed or nominated again.
5. The administrative affairs of the special committee shall be handled by the Intellectual Property Strategy Promotion Secretariat of the Cabinet Office with the cooperation of relevant ministries and agencies.
6. In addition to what are provided for in the preceding items, matters related to the administration of the Special Committee and other necessary matters will be specified by the Special Committee.

### **3. Details of the Considerations made in the Special Committee**

- First meeting of the Special Committee: December 26, 2017
  - (1) Regarding the explanation of the purpose, etc.
  - (2) Regarding the data and signs for future prospects
  - (3) Exchange of opinions
  
- Second meeting of the Special Committee: February 2, 2018
  - (1) General discussion ~ Regarding the “future vision of society” ~
  - (2) Group work
    - \* The specific “value” which is especially important in the “future vision of society” illustrated and the reason therefor.
    - \* The specific manner of designing the “mechanism” and “ecosystem” to realize such “value.”
  
- Third meeting of the Special Committee: March 1, 2018
  - (1) General discussion ~ Regarding “values” and “mechanisms” ~
  - (2) Group work
    - \* Strengthen Japanese brands by Cool Japan strategy
    - \* The ideal future intellectual assets system
  
- Fourth meeting of the Special Committee: March 23, 2018
  - (1) General discussion
    - \* Regarding the general initiatives to realize the Intellectual Property Strategy Vision
  - (2) Group work
    - \* Regarding the system related to intellectual assets (individual themes)
  
- Fifth meeting of the Special Committee: April 20, 2018
  - (1) Regarding Chapters 1 to 3 of the Draft Intellectual Property Strategy Vision
  - (2) Regarding Chapters 4 and 5 of the Draft Intellectual Property Strategy Vision
  - (3) Regarding the direction of the Intellectual Property Strategy Vision
  - (4) Regarding the overall draft vision
  
- Sixth meeting of the Special Committee: April 25, 2018
  - (1) Regarding the Draft Intellectual Property Strategy Vision
  - (2) Regarding the future plan