Best Engine

Vol. 9

Special Feature

Dealing with and Disseminating Information in the Post-Truth Age

Keiko Hamada   Executive Editor, Business Insider Japan

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Cover photo by
Masataka Nakano

The Heiwajima Logistics Center supports the quality of the infrastructure business. In addition to handling product movements and storage, inspections before shipment, deliveries to clients, and other logistics functions, there is an onsite kitting facility at the Center.

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Four Classifications of Time

When thinking about my time, I classify it as being spent doing one of the following four things.

1. Time spent making outputs
2. Time spent making inputs
3. Time spent giving vent to stress, etc.
4. Time spent not thinking (though in reality, you are, in the background)

When you are working, you are outputting your capabilities for the company. If the amount and the quality of your output are good, then you and your work will be recognized. However, spending your time only on making outputs is tiring and can be stressful. That is why you also need to spend time giving vent to the stress, such as by drinking alcohol or immersing yourself in your hobby.

With that said, spending your time only making outputs and then venting your stress will not lead to self-growth. That is why it is important that you also take time to recharge your batteries. It could be by reading books, listening to music or studying. By thoroughly absorbing what you can gain from the activity and making it your own, you will be making an input to yourself. I spent this past New Year's 9-day holiday reading and reading books. It was like feeding a thirst after exercise by guzzling a cold beer!

What is important along with making inputs is to spend time not thinking. Making your head blank, possibly even spacing out a bit. Like when you are washing your face in the morning, taking a shower or spending time on a walk. According to one brain scientist, the brain carries out maintenance on itself during such times, and it seems that various changes are taking place in the brain. In fact, you may have experienced an idea suddenly popping up in your head when you are doing something else and not really thinking about it. Making time spent inputting and time spent not thinking into a set package will lead to a good output (i.e., good work!)

When I was younger and working in the U.K., my British mentor said, "Good job!" and praised me when I somehow managed to complete a task despite my unfamiliarity with English at the time. I remember how happy that made me feel. When you are swamped with work, you tend to focus on only making outputs. However, I hope that we can place value on how we allocate our time between the four classifications of time so that we can be recognized as having done a "Good job!"

Satoshi Kikuchi

President & CEO
ITOCHU Techno-Solutions Corporation

Dealing with and Disseminating Information in the Post-Truth Age

We now live in a Post-Truth Age in which information that strongly appeals to emotions moves the world without questioning whether or not that information is true. The role played by information today is changing significantly from the past. How should we deal with information in such an age?

We spoke with Keiko Hamada, executive editor of Business Insider Japan – the Japanese edition of the global financial and business news website. Prior to her current position, Hamada worked for The Asahi Shimbun and was involved for many years in the editing of AERA, the Asahi Shimbun's weekly news magazine. We asked her about the current state of information and media, how we should be, and furthermore, about information dissemination by companies.

Coverage and text by Yuki Kondo

Special Interview ## Keiko Hamada
Executive Editor, Business Insider Japan

Keiko Hamada

Executive editor of Business Insider Japan, the Japanese edition of the online financial and business website, which has rolled out in 18 countries around the world. Hamada joined The Asahi Shimbun in 1989 and worked at the newspaper's Maebashi Bureau, Sendai Bureau and the editorial department of the weekly Shukan Asahi before moving on to the editorial department of the weekly AERA magazine in 1999. She subsequently became the magazine's deputy editor-in-chief in 2004, followed by a stint as acting editor-in-chief before becoming AERA's first female editor-in-chief. As editor-in-chief, Hamada launched various new innovative challenges in succession, such as collaborations with online media and "special editors-in-chief" issues with articles produced by external editors. Hamada went on to serve as a producer at The Asahi Shimbun's General Producing Office from May 2016 before leaving the company at the end of March 2017. She has been in her current position since April that year. Author of *Hataraku Joshi to Zaiakukan* (Working women and the feeling of guilt) (publisher, Shueisha). Appears as a commentator on morning television shows, such as *Hatori Shinichi Morning Show* and *Sunday Morning*. Also gives lectures on topics like diversity and working style reform.

An Age in Which Youths Do Not Purchase Magazines

——Ms. Hamada, you were involved in editing The Asahi Shimbun's weekly news magazine AEAR for 17 years, even serving as the editor-in-chief. From 2017, you developed from scratch Business Insider Japan (BIJ), the Japanese edition of the global online financial and business news media, as its executive editor. Can you start by telling us your thoughts now that three years have passed since you moved from print to the web?

K. Hamada: While making AERA, I felt for many years the frustration of finding it hard to deliver information to the people that I wanted to deliver it to. In particular, Millennials – people in their 20s and 30s – are already among the generation that won't spend money on a magazine. It was no easy thing to get them to read print. On the other hand, if it's web media, I see that I can get them to read things by being creative in the hook, writing style or in the way photographs are used. In fact, with web media, it's possible to get a clear confirmation of how many people of which generation are reading the content. In the case of BIJ, we know that two-thirds of the readers are in their 20s and 30s, and women account for 30 percent of the readership. Furthermore, if you write a good article, it goes viral and has a large impact on the world. I can feel the large power of web media.

——I was surprised that it has only been three years since BIJ was launched. I feel that it's become a web media with that much of a big presence.

K. Hamada: Business Insider already has a history of more than10 years in the United States, where it has gained wide credibility as a financial and business media. However, when we launched BIJ, the Business Insider name was virtually unknown in Japan. Because of this, we were often denied access to coverage because they had never heard of us. But, with each article that was written after sound coverage, we gradually started obtaining people's trust. In January 2018, we came out with many exclusives in relation to the Coincheck

hacking incident in which a massive amount of virtual currency was stolen, and that was one of the things that put us on the map in Japan. Today, we have become a media that companies ask us to come and do a story on them.

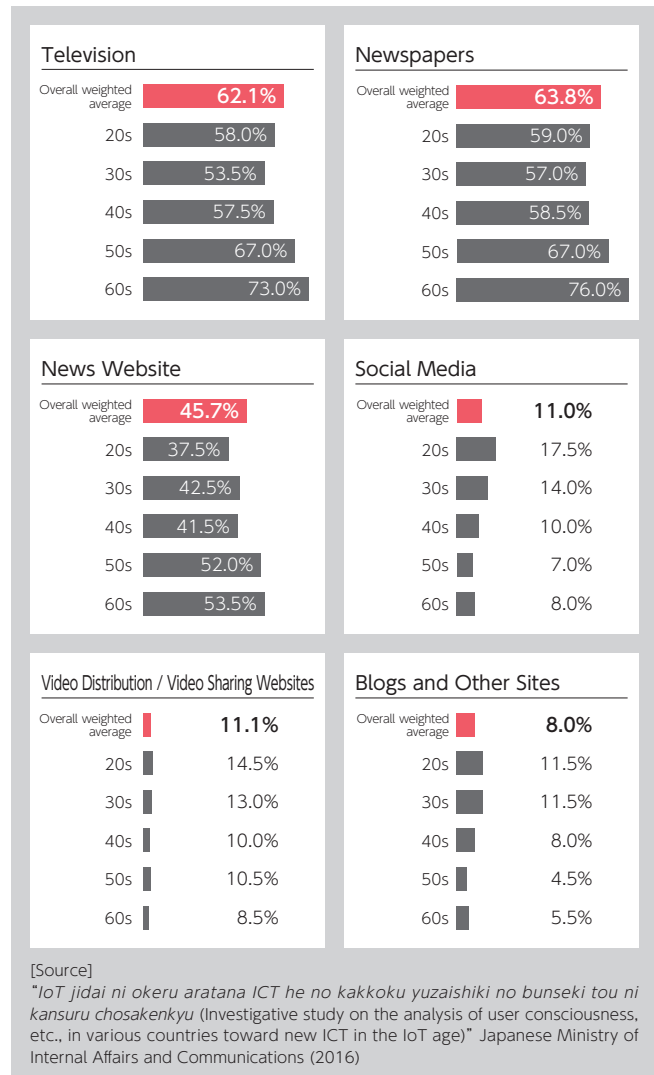## Even Headlines Differ Between Print and Web Media

——I think that aside from the way the content is read, there are also various differences between print and web media in relation to their production – whether or not there are word count limits, for example. Can you tell us about the impact of such differences on the character of articles and other such aspects?

K. Hamada: I think that the major characteristics of print media is space limitation, so, there is a limit to the length of articles that can be written. Furthermore, once printed, there is no way to make any changes to an article to fix it. That's why creating print magazine pages is like completing a precision instrument after meticulous fine-tuning. On the other hand, people may think that articles on the web can be made as long as one likes. However, if it's too long, readers will tend not to read it through to the end. So, it's important to make an article the appropriate length in accordance with its theme. Articles on BIJ are around 2,000 characters each. Because it is a medium for financial and business news, BIJ is often read on a smartphone during a commute to work. We thought that a length that would enable people to finish an article between station stops would be appropriate. Also, even if the same theme is handled, the ways an article is laid out and communicated differ between print and web media, and that, in turn, also affects the writing style and design.

——What about the content of articles? Are there ways that the written style differs between print and web media?

K. Hamada: Articles that are well read are those with a clear point of view. This is true for both print and web media. However, even if the content is the same, I believe that we should change the way it is written. Print media exists as a package, so the people who buy a magazine, for example, have a general idea of the worldview contained in the

Confidence Toward Major Media

Television	
Overall weighted average	**62.1%**
20s	58.0%
30s	53.5%
40s	57.5%
50s	67.0%
60s	73.0%

Newspapers	
Overall weighted average	**63.8%**
20s	59.0%
30s	57.0%
40s	58.5%
50s	67.0%
60s	76.0%

News Website	
Overall weighted average	**45.7%**
20s	37.5%
30s	42.5%
40s	41.5%
50s	52.0%
60s	53.5%

Social Media	
Overall weighted average	**11.0%**
20s	17.5%
30s	14.0%
40s	10.0%
50s	7.0%
60s	8.0%

Video Distribution / Video Sharing Websites	
Overall weighted average	**11.1%**
20s	14.5%
30s	13.0%
40s	10.0%
50s	10.5%
60s	8.5%

Blogs and Other Sites	
Overall weighted average	**8.0%**
20s	11.5%
30s	11.5%
40s	8.0%
50s	4.5%
60s	5.5%

[Source]
"*IoT jidai ni okeru aratana ICT he no kakkoku yuzaishiki no bunseki tou ni kansuru chosakenkyu* (Investigative study on the analysis of user consciousness, etc., in various countries toward new ICT in the IoT age)" Japanese Ministry of Internal Affairs and Communications (2016)

The older the age group, the higher the confidence level tends to be towards mass media, such as television and newspapers. The younger the age group, the slightly higher the confidence level tends to be towards social media and video distribution and sharing sites.

magazine. On the other hand, this does not apply in the case of web media. Let's use AERA as an example. Editors know that the readers who buy AERA are familiar with what is "AERA-like." Editors therefore have an idea of how something should be written for readers to "get it." Meanwhile, web-based articles are distributed on multiple platforms – Yahoo! News, LINE, SmartNews, for example, in the case of BIJ. Readers are therefore diverse, and we have to compete to grab the favorable attention of readers who don't necessarily

accept a "BIJ worldview." For instance, there was an article in AERA in the past about the harassment of women who had no children, and it caused quite a big stir. If an article on the same topic of reproductive harassment were to be written on web media, it would have to be done even more carefully because it is the kind of theme that could come under fire and cause flaming. Even [the Japanese phrase] "childlessness harassment" used in the article headline might have to be changed web media. Many people share things with others after reading only the headline [and not the article itself]. It could therefore be interpreted in an unexpected way that has nothing to do with the intent of the article and result in flaming or bashing. Knowing differences like these between print and web media is important when writing articles.

Why News Must Be Actively Read

——How do you think the general public currently deals with the information they obtain online? Have you noticed any changes in this over the past few years?
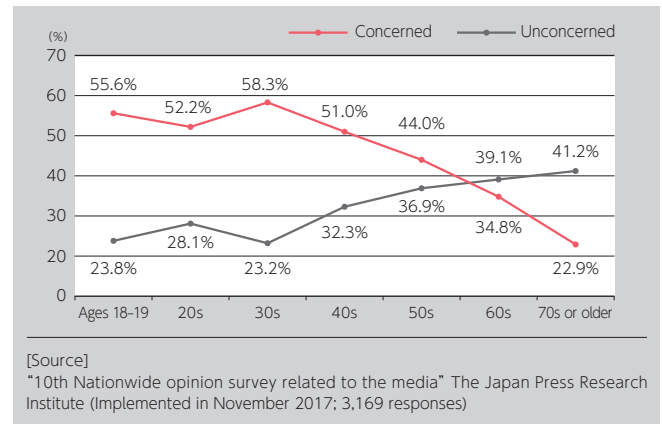
K. Hamada: When we first launched BIJ, people often told us that web media was wildly inaccurate. We wanted to do away with that image and enhance readers' trust, while collaborating with other solid web media. Today, there are multiple web media outlets that are widely trusted by people. Readers, too, no longer bunch web media into a single group and think that all web media is wildly inaccurate. Conversely, it feels to me that the public is also not as prone to believing everything that they read, hook, line and sinker.

In the past, articles found on so-called content curation media – which simply reprinted information found online without verifying it, or items that might be seen as fake news – often went viral and were handled as if it were the truth. However, in terms

Paid membership is growing with BI PRIME, which is available only to such Business Insider Japan subscribers. Its rich content includes rare, newsy interviews.

When reading / hearing news, are you concerned about fake news?

[Source]
"10th Nationwide opinion survey related to the media" The Japan Press Research Institute (Implemented in November 2017; 3,169 responses)

The younger the age group, the higher an awareness of and concern over fake news, and the higher the age group, the lower such awareness and concern.

of curation media, a large number of such sites were weeded out after a 2016 incident when it came to light that a medical information site was widely distributing a large amount of erroneous information. Today, it has become common for both the media and the public to verify information that has been widely shared. I get the sense that readers are starting to look at information found online with a stern eye to judge its validity.

——What about media literacy and people's capabilities for critically analyzing or evaluating media? Does it seem to you that many people in Japan today have that capability? If not, what is required to acquire that capacity?

K. Hamada: The other day, I gave a lecture at a women's university on the topic of the media. I asked the students if they read any particular news website, and I was surprised when not a single student responded that they did. I suspect that many students read only articles that happen to come their way through a link pasted on twitter or other social media. The thing is, you cannot acquire media literacy if that's all that you do. The important thing is to read the news actively. If you intentionally read the news published by several different media outlets, you'll start to see the differences in the ways that they write their stories things like, this media outlet has done its own news gathering to write the article, but this outlet's article is simply a patchwork of information from other media. You then start to see how each media differs in their way of thinking, including whether the

information found on a particular media is reliable. You acquire the ability to understand the news even more accurately. This is also very important for acquiring the ability to understand the circumstances that you are currently under and making a decision on what you should do. That's why I have a strong desire to use education to convey to the younger generation the importance of acquiring the habit of actively reading the news. I think that if people don't understand this, they will suffer losses in various situations.

The Reason for the Arrival of the Post-Truth Age

——It's said that we are now in the Post-Truth Age. Assertions that are not clearly based on fact yield power and move the world, and this is starting to become a global trend. Why do you think things became that way?

K. Hamada: Isn't it that people are turning a blind eye to the things that they don't want to see? Using Japan as an example, the gap between people has widened over the past 30 years or so. It has turned into an age in which many people are experiencing various anxieties. Amid such circumstances, I think that there are many who feel that they don't want to see truth that feeds into their anxieties. In Japan, you see it expressed in a pronounced way in gender related issues. For example, even if we report, as fact, issues like the sexual harassment of women, people react to it by saying, "That's a lie. I've never heard of that kind of discrimination taking place." You see glimpses of male angst and worry that their own positions may be in jeopardy through the active participation of women in the workplace. The same kind of thing takes place in relation to poverty. When people suffering from poverty raise their voices to be heard, we hear others saying, "That's a lie." That may be the reaction of people who are anxious that they may themselves fall into that kind of poverty, but they don't want to look at reality. In today's world of algorithms, everyone tends, without even noticing it, be surrounded only by information that makes them feel good. It is therefore possible not to face reality. I think that was a factor for the birth of the Post-Truth Age.

——What should we do about those circumstances?

K. Hamada: I think you could say that the age is at a major turning point. Whether it is the position of women in society, forms of employment or the structure of industry, things that have continued for many years are now wavering in a major way. I believe that people who don't want to recognize that reality are rushing into post-truth. The consciousness of those who are middle-aged or older will not easily change. It seems to me that we will have to wait for a generational turnover for circumstances to change. Of course, it is a given that there are people with many different kinds of thinking among the middle-aged and older, and the younger generation. However, if you look at things as a whole, the younger generation can be said to be more flexible in their thinking than those who are older. As symbolized by the teen Swedish environmental activist Greta Thunberg, I believe that we will likely advance into the age that follows post-truth as the world begins to revolve in the future around people of her generation.

How Should Owned Media Be Created?

——With various media existing in vast numbers today, companies, too, are getting a piece of the action. They are disseminating information by creating their own communication channels, known as "owned media." What do you think companies should keep in mind to disseminate information effectively in this age?

K. Hamada: I think that there are three major functions to corporate owned media. They are, recruiting, corporate branding and marketing. Although the way content is made and the approach that is taken will differ according to the objective, the important thing is to have a good understanding of how the print and web media differ in characteristic, and disseminate information in accordance with the objective. Like print magazines, printed public relations magazines constitute a physical package that people have to have in hand, so there will be a limit on the number of readers it can have. However, on the upside, print would make it easier to communicate a company's set of

values. On the other hand, a web-based media would contain the possibility of being read by many, unspecified readers. However, it would also be read by people who don't know the company or its owned media, so the impression that such people might get would have to be kept in mind. When they read it on the web, people won't differentiate between a company's owned media and regular media. That's why companies should carefully examine carefully how much content that advertises the company should be incorporated into their owned media as well as bring the quality up to one that can compete with existing media.

——There is an increase in companies possessing online owned media sites. Do you get the sense that there are many companies that have developed effective websites?

K. Hamada: There are a number of high-quality owned media sites that are attracting a large readership. However, they're probably the exception and not the norm. In fact, many companies probably find it difficult to get people to read the content that they have created. I get the sense that sites that are widely read often have a channel for external distribution of their owned media. In other words, they have their content republished as part of the content of a more general media

site. BIJ, too, republishes good-quality content from a number of owned media. Having that kind of an outlet vastly increases the chances of the content being read. Whether it is going to take the form of print or web media, it is very important that people from the company will be actively involved in the creation of the media instead of farming everything out to an external party. Even if they're amateurs at editing content, people from the company should make clear decisions on what kind of media will be created and its purpose. In particular, owned media that has the recruitment of new employees as its purpose seems to succeed when people from the company's human resources department are robustly involved in development.

——Meanwhile, are there any benefits to continuing to disseminate information through paper-based owned media?

K. Hamada: I think print would be more advantageous if a company is engaging in B2B and wants to deliver content to customers with certainty. The majority of people would probably not visit a website even if a link is sent to them. However, if printed media is sent, it is likely that many people will at least flip through it. The benefit of printed media is that it contains the certainty of being read.

It Will Become Even More Important to Think

——Please tell us your thoughts on the future of media. It has been said that the role played by artificial intelligence in the writing of articles will become even greater going forward. What do you think about this trend?

K. Hamada: Some media are already using artificial intelligence in writing articles that have a certain degree of established format. Examples include summaries of financial statements or sports results. Does this mean that the scope of the application of AI will expand going forward, leaving no work for human reporters to carry out? I don't think that's the case at all. Automating what can be automated should enable human reporters to concentrate on things that can be done only by humans. For example, a human reporter can think about the background, gather information and carry out analysis based on an earnings report article that was written by AI. With its declining workforce, utilizing AI is a necessity in Japan. I see these changes that will probably progress even further in a positive light. Countermeasures will have to be taken in response to new risks, such as the fabrication of information that arises

through the utilization of AI and other new technology. However, I hope to see matters moving in a good direction by having those on the media side make the production process more open and checkable by many people, including readers.

——Lastly, could you tell us what you would like to continue valuing as you develop media?

K. Hamada: I want to keep providing, particularly to young people, materials that will help people think on their own about various matters. Everyone has something that they wonder about, such as "Why are we treated so unreasonably?" or "Why are my wages so low?" I am convinced that news plays a huge role in helping people think about and understand the answer to such questions. As I said earlier, the development of artificial intelligence will bring about an age in which every single one of us will increasingly need to find and carry out things that only humans can do. The conclusion is that the thing that only humans can do is think. As a person on the media side, I would like to continue thinking thoroughly about matters, carry out news gathering, and send various articles out into the world.

The Value Chain in the Age of Digital Transformation
— Considering the Future of Digital Health

Whether in the healthcare industry or IT, CTC wants to be a company that can help resolve societal issues. So that we may provide optimal services (solutions) for the age of digital transformation (DX), the company has reorganized the Life Science Division and is aiming to optimize the value chain.

Tsuyoshi Nagao

Deputy General Manager
Life Science Division, Enterprise Group
ITOCHU Techno-Solutions Corporation

The 2025 Problem for Two Industries

For the healthcare industry, 2025 is the year when the first wave of Japan's baby boomers (those born between 1947 and 1949) will be 75 or older, signaling the start of a period of increased overall social security costs. The comprehensive reform of the social security and taxation system is being promoted to ensure the sustainability of Japan's social security system. The enrichment of social security includes the unified revision of health and nursing care. The development of the Community-based Integrated Care System[1] is a part of this. Centered around the home, the formation of a seamless connection between health care, nursing care, preventive care and livelihood support are hoped for when the Community-based Integrated Care System will be realized in 2025.

Meanwhile, for the information technology industry, 2025 is the year of the "2025 Digital Cliff," mentioned in the DX Report that was released by the Ministry of Economy, Trade and Industry (METI) on September 7, 2018. It is the period when companies will have to contend simultaneously with multiple managerial, human resources and technical challenges, which must be overcome to avoid major financial losses that may arise after 2025. For this reason, IT services companies, including CTC, are shifting its human resources and funding to the field of state-of-the-art digital technology, and converting to a business model for the provision of cloud-based applications, with expectations for the development of partners to share profits with.

The Desired Overall Optimization of the Value Chain

Generally speaking, Japan is said to be behind in the digitalization of health care, while it has progressed in Europe and the United States. This can be said to be true as paper and plastic are still very much in mainstream use in Japan for items such as insurance cards, patient registration cards, medical charts, prescriptions and drug history handbooks. In principle, healthcare services are provided on a face-to-face basis in Japan. Meanwhile, in Europe and the United States, telemedicine that utilizes smartphones and computers (i.e., the Internet) is possible. Test kits enable specimens required for diagnosis to be sent in by post, and electronic prescriptions allow medicine to be delivered directly to a patient's home. There is also a system that allows patients to see their own medical charts. Seamless health care, with the home at the center – which is exactly what the Community-based Integrated Care System aims to achieve – is already available in Europe and the United States.

In response to this DX age, we at the Life Science Division implemented reorganization in FY2019 based on the healthcare value chain. The value chain in the age of manufacturing is likened to the flow of a river. Manufacturers are found upstream, while services exist downstream. The value chain consisted in the order of manufacture, transport, sell, select, and pay (see Fig. 1). In the DX age, we redefined the value chain as a circle with the data that flows at the center
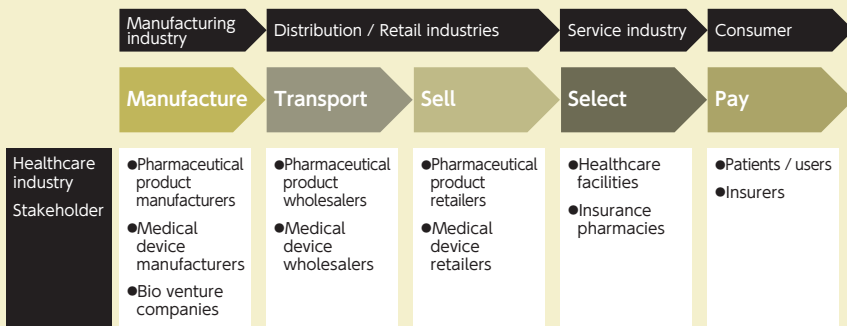
(see Fig. 2). We created an organizational structure that can support the optimization of the overall value chain instead of the partial optimization of the value chain as it related to each stakeholder.

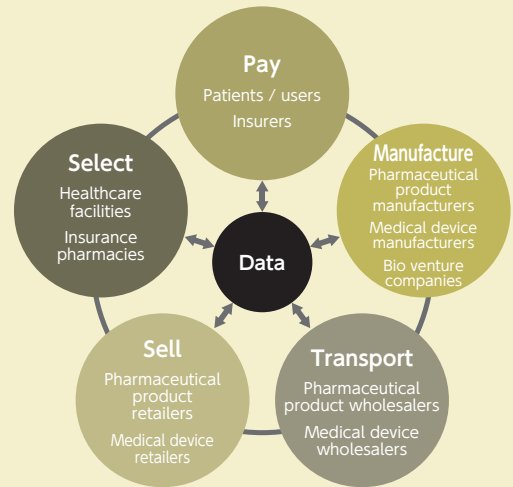### The Asymmetry of Information, and the Value of Pharmaceutical Products

As compared with other industries, there is a greater "asymmetry of information" in the healthcare industry. It is characterized by a huge gap between those who possess information and those who do not. The asymmetry of information in the healthcare industry is not just the kind of asymmetry of information found in the age of manufacturing wherein those upstream possessed the information and those downstream did not. In the DX age, all stakeholders possess information, and each within the value chain needs information. Unless this state of disparity in the information possessed is resolved, we believe that it will be difficult to seamlessly connect health care, nursing care, prevention, and livelihood support through the Community-based Integrated Care System.

At the same time, there is a need to think about the value of things. The discovery of pharmaceutical products by pharmaceutical companies is manufacturing as a chemical industry associated with healthcare services. The value that pharmaceutical products deliver to healthcare services is the treatment of diseases and the improvement of symptoms. Among healthcare services, we consider healthcare devices, the digital

■ (Fig. 1) The Value Chain in the Age of Manufacturing

Manufacturing industry	Distribution / Retail industries		Service industry	Consumer
Manufacture	**Transport**	**Sell**	**Select**	**Pay**
Healthcare industry Stakeholder				
●Pharmaceutical product manufacturers ●Medical device manufacturers ●Bio venture companies	●Pharmaceutical product wholesalers ●Medical device wholesalers	●Pharmaceutical product retailers ●Medical device retailers	●Healthcare facilities ●Insurance pharmacies	●Patients / users ●Insurers

■ (Fig. 2) The Value Chain in the DX Age

Pay
Patients / users
Insurers

Select
Healthcare facilities
Insurance pharmacies

Manufacture
Pharmaceutical product manufacturers
Medical device manufacturers
Bio venture companies

Data

Sell
Pharmaceutical product retailers
Medical device retailers

Transport
Pharmaceutical product wholesalers
Medical device wholesalers

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therapeutics apps that are recently on the rise, and regenerative medicine, showing future promise, as all being at a comparable rank as pharmaceutical products. We believe that they will increase the options for people to select from, and diversify the solutions for the treatment of diseases and the improvement of symptoms.

Utilize IT and Prevent the Occurrence of Accidents

Current pharmaceutical products are medicinal drugs with origins as chemical substances. They are administered in vivo and exert an effect by bringing about some kind of change, which leads to the treatment of a disease or the improvement of symptoms. The number of medicinal drugs that are taken concurrently can increase with the objective of boosting a curative effect or when there are multiple diseases that afflict a patient. However, because an increase in the number of medicinal drugs that are taken concurrently can increase risks to a patient, such as bringing about wobbling or falling, the recent direction being taken is to try and suppress polypharmacy[2], or the concurrent administration of multiple medicinal drugs.

To begin with, pharmaceutical products can have side effects. If it is a side effect that is known to a pharmaceutical company, a warning will be listed in the package insert. For example, it is probably well known by now to people that antiallergenic drugs for the treatment of hay fever, etc., can sometimes cause drowsiness. Medicinal

agents like antiepileptic drugs and antidepressants can also sometimes result in drowsiness or reduced attentiveness, concentration and reflex action capabilities. Side effects of lifestyle disease treatments include hypotension and vertigo in the case of hypertension treatment drugs, and grogginess caused by hypoglycemia in the case of antidiabetic drugs. For this reason, package inserts warn that sufficient care must be taken when driving cars or operating dangerous machinery.

However, patients receiving treatment on an outpatient basis must manage the administration of the drugs themselves. We have heard of instances in which side effects have unfortunately resulted in a patient wobbling while walking and breaking a bone after a fall, or causing a traffic accident while driving a car.

We therefore believe that making it possible to share information with physicians and pharmacists on physical condition management during drug administration, monitoring changes in physical condition 24-hours a day, and preventing falls and accidents caused by side effects would bring us closer to solving a major societal issue. Healthcare devices, which will likely appear in the future, include products that have multiple vital sign sensors (e.g., for measuring heart rate, blood pressure, blood oxygen level, and blood glucose level) installed in them. Users of the future, wearing such healthcare devices, will be able to upload their vital signs data into the value chain, and receive support from

healthcare professionals. Furthermore, if data from the sensors are linked to machinery, such as automobiles, it would be possible to avoid unfortunate accidents by stopping the car or machine if an emergency should arise. This is also probably one of the roles that are hoped to be played by IT systems.

Health Care in the Age of DX

There is not all the much time left until 2025. We hope to be able to make a contribution as your business partner and support the optimization of the overall value chain.

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*1 The Community-based Integrated Care System is a measure promoted by the Japanese Ministry of Health, Labour and Welfare. The objective of the system is to provide housing, health care, nursing care, preventive care, and livelihood support in an integrated manner to enable the people of Japan to remain in a familiar community and continue to live a life that is true to themselves up until the very end of their lives. Details of each system is to be developed in accordance with the characteristics of a community on the basis of the self-initiative and independence of the municipality or community, which is the insurer.
https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hukushi_kaigo/kaigo_koureisha/chiiki-houkatsu/

*2 Polypharmacy is word coined by combining poly- (i.e., several) with pharmacy. It refers to a state in which more medicinal drugs than required is prescribed. Because the adverse effects of using many different medicinal drugs concurrently are being seen, healthcare professionals need to monitor the state of a patient and reduce the number of drugs being administered. Although a clearly established definition does not yet exist, the term seems to be generally applied to cases in which six or more medicinal drugs are being concurrently administered.

Airport Planning Support Utilizing Data Analysis and Simulation

The global demand for airports continues to grow. In 2019, 32 million foreign tourists visited Japan, which was 4.7 times the 6.79 million who visited Japan 10 years ago.* An increase in the number of incoming travelers means that airports must keep up to accommodate the demand, requiring a concrete, persuasive plan for the future ("airport plan"). Here, we will take a look at the importance of airport planning and the supportive technologies offered by CTC.

Ryo Miyashita

DS Business Department
Science & Engineering Systems Division
ITOCHU Techno-Solutions Corporation

In Anticipation of an Increase in Foreign Visitors to Japan

Up until 2019, the number of incoming tourists was on an upward trend, but with the spread of the new coronavirus, foreign tourists to Japan is on the decrease. However, in consideration of past instances when there were such declines (e.g., 2008 financial crisis and SARS outbreak), in the long run, the number of tourists to Japan will likely return to an upward trend.

Against the backdrop of global expansion in aviation demand, the number of air travelers is increasing each year. In Japan, too, there is growth in the number of air travelers, and that trend is expected to continue going forward. What is more, with the Japanese government declaring the promotion of Japan as a tourism-oriented country, there is active investment in various tourism resources taking place, with an eye to translating the rise in inbound tourism into growth in internal tourism. Target numbers of inbound tourists have been established, and Japan is aiming to see 40 million inbound tourists in 2020, and 60 million in 2030. While the number of foreign tourists to Japan was roughly 32 million in 2019, further growth is expected with the Tokyo 2020 Olympic Games.

Airports Being Required Various Things

Achieving the country's targets in the number of inbound tourists means a significant increase in the number of travelers visiting Japanese airports. While it is very good for airports to see increases in travelers, too big of a surge can bring about a variety of problems.

For example, each airport was designed with an assumed number of annual travelers. However, if a significant divergence from the assumed number arises in its actual use, it becomes difficult to provide satisfactory services to travelers and can mean longer waiting times at its facilities. In fact, this is already starting to occur at some airports where disparities have arisen between the size of the airport as originally designed, and the demand created by users. Reasons for this include the passage of many years since the initial opening of the airport, and a sudden, sharp rise in users.

Continual, Long-term Airport Planning

To meet these changes in demand as well as strategically capture new demand, airports must also continually change. However, this is easier said than done. This is because airports are like a city in itself and have a large impact on neighboring municipalities and concerned parties. For instance, about 50,000 people work at Narita International Airport, and more than 40 million travelers use the airport each year. Airport noise exposure from aircraft takeoffs and landings affects those on the ground within a radius of about 10 km from the airport. Furthermore, international airports can also have a large impact on a nation's diplomatic strategy.

Airport operators therefore must continually prepare plans for the future of their airport from a long-term perspective, and communicate those plans in an easy-to-understand, objective manner to a diverse range of concerned parties. This is known as airport planning operations. Meanwhile, airport plans can be broadly categorized into two types: near- to medium-term plans (for a few years to 10 years into the future) and long-term plans (for more than 10 years into the future).

What is more, major airports also prepare a master plan that describes the vision for the airport in about 20 to 30 years' time. Master plans must take into account the basic managerial policy of an airport, forecasts of future demand, and various expected environmental changes both within and outside the country, and estimate when, which facility, and to what extent renovations should be carried out. Technical and societal issues should also be considered, and plans should also be formulated for investment recoupment, transition to the final form of the airport, and compensation of those concerned parties that will suffer losses.

In recent years, not only large-scale airports but also medium-sized airports must evaluate such matters as the impact of increases in foreign travelers and the aging of airport facilities to formulate more precise and persuasive airport plans.

■Simulated image of an airport check-in hall

After coming up with congestion levels using indexes like waiting times and the number of people waiting in line, simulations are carried out to enable a comparative evaluation for the identification of the number of facilities and method of operation that will enable smooth check-ins.

Simulation of Airport Operations

In the past, airport planning was primarily an "armchair" planning process. However, as airport operations became more complex, virtual models of airport operations started to be made on computers, with evaluations carried out through numerical simulations of the impact of changes in demand.

Ever since the simulation of airport operations became commonplace in Japan about 20 years ago, CTC has been involved in the analysis and simulation of various airport-related data. In data analysis, various historic data related to airports are analyzed to visualize the operational state of an airport. Periodic analysis makes data from the past and present available as well as future forecasts. This enables a confirmation of changes in the operational state of the airport into the future. Checking these items against future demand makes visible airport and operational conditions that can result in bottlenecks, enabling the priority-setting of various facility renovations.

Meanwhile, computerized airport models that take into account the movement of aircraft, travelers and vehicles are created in the simulations, to which assumed airport operations are incorporated. The results of simulations are made visible as various statistical values and moving images. Furthermore, confirming not only the current operational

state but also the impact any changes to the airport, facilities and the number of personnel as well as their operation may have will enable the consideration of future operational methods. Simulations that allow visualization from the present to future are a good tool to promote a common understanding between concerned parties of different positions. The utilization of simulations leads to optimal airport planning carried out from even wider viewpoints.

To enable more airports to make use of such data analysis and simulation techniques, CTC has organized the content of such services and prepared a quantitative evaluation service related to airport operation. The service checks the usage situation and runs diagnoses of not only the airfield area of an airport – such as runways, taxiways and aprons – but also the terminals, inclusive of the security check and immigration areas. Countermeasures for any identified issues and improvements to income and expenditure plans are proposed using quantitative evaluations based on simulations, etc.

Even small airports can have partial or vague issues. For example, an airport may have ample space in its check-in hall, but there may be concerns for the security check area during peak hours. The CTC service can also be utilized for smaller-scale issues for which quantitative evaluations were not carried out in the

past. It will provide persuasive quantitative evaluations in a relatively short time while keeping costs lower.

Toward the Future of Airports

The number of air travelers is expected to keep increasing going forward due to the global increase in the demand for air travel. Various international events, including the Tokyo 2020 Olympic Games, are scheduled to take place in Japan. The role played by airports, which are a gateway to Japan, will become even more important during such an age.

What is more, with the recent trend in digitization, efforts toward the mechanization and automation of manned operations are also progressing at airports. There is a need to consider response to various societal challenges, including the labor shortage.

CTC will continue to leverage the use of data sciences, including data analysis, simulations and various IT technologies, to contribute to the making of an even more appealing airport.

[Source]
* Visitor Arrivals to Japan (Japan National Tourism Organization (JNTO))

Airport Simulation

This issue's theme is...

【 HR Tech (Human Resource Technology) 】

As new words with "tech" as its suffix – like Fintech and Foodtech – appear, one after another, the word that is in the spotlight right now is human resource technology, otherwise known as "HR tech." This is technology that will transform personnel related operations. HR tech is a rapidly growing field in recent years. Here, we will explain what it is about as well as take a look at its current state in Japan and abroad.

Text by Yuki Kondo

Technology for Efficient and Strategic Personnel Operations

The abbreviation CHRO is often heard recently along with CEO (chief executive officer) and CFO (chief financial officer). CHRO stands for chief human resources officer, and it is a top-level executive position responsible for human resources management. It has become commonplace for large global companies in Europe and the United States to have this position in place. Although it is still not very common among Japanese companies, there has been an increase in the number of companies that have created this position over the past year or two. In fact, the Japan Association for Chief Human Resources Officers (JACHRO)[1] was established in October 2018. One of its objectives is to build awareness of and promote CHROs.

Why is this kind of trend occurring recently? In the background is the rise of HR technology, or HR tech. The development of information and communications technology (ICT), such as artificial intelligence (AI), big data analysis and cloud computing, has made it possible to use more scientific methods to execute HR management, which tended to be carried out in the past on the basis of the experience and gut instincts of HR personnel. HR tech is enabling the efficient and strategic implementation of HR management in a completely different dimension as compared to the past. It helps deal with issues such as: Who should be hired? What kind of talent distribution is optimal? What needs to be done to create an environment that makes it easier to exhibit teamwork? How can employees who seem to lack motivation be stimulated to do their best? And, even, how can the massive amounts of clerical work that arise in HR management be reduced?

The Shrinking Workforce and Other Factors Driving the Annual Growth of HR Tech by Around 40%

HR tech is achieving impressive growth around the world. With a focus on the US, various services have been appearing over the past 10 years in countries that include the UK, Canada, India and China. According to the US research company MarketsandMarkets, in 2019, HR tech was a 16.7-billion-dollar global market. It is expected to grow by an average 9.7% per year, becoming a 26.5-billion-dollar market in 2024[2].

Among the various fields of HR tech, some surveys show that there is almost a 90% adoption rate by companies around the world of applicant tracking systems (ATMs), which manage the personal history and selection process of job applicants. As such, some HR tech applications have virtually become part of the corporate infrastructure of companies of the world.

Just as CHRO has yet to become commonplace in Japan, it is said that there is also a delay in the adoption of HR tech by Japanese companies. Even so, the domestic market for HR tech in Japan became 17.95 billion yen in 2017. It subsequently continued to achieve annual growth of around 40% and is expected to be a 100-billion-yen-plus market by 2023.[3] As of 2019, there were about 450 applications available for use.

One of the factors promoting the growth

of HR tech in Japan is the difficulty that companies have in securing superior talent due to the falling birthrate and shrinking labor pool. Another major boost to the growth of HR tech is work style reform, which has become a slogan of sorts in recent years. All companies must even more seriously address the promotion of operational efficiency.

From the Recruitment of Employees to Motivation Enhancement and Health Management

The objectives of using HR tech include the streamlining of personnel management operations, the centralized management of personnel data, and the utilization of accumulated data to obtain an understanding of employee attributes. For example, according to the Nikkei mook "*Maruwakari HR Tekunology* (Everything about HR technology)" (Nikkei Business Publications, Inc.)[4], which was issued in February 2020, applications that will achieve such objectives are divided into the following seven categories.

1. Recruitment (streamlining recruitment operations)
2. Talent management (optimizing talent distribution)
3. Employee engagement (boosting employee motivation)
4. Attendance management (streamlining the management of coming to / leaving work)
5. Various formalities (streamlining various personnel administration work)
6. Payroll (streamlining the calculation of wages, expenses, etc.)
7. Health management (centralized management of employee health information)

The first category, "recruitment," refers to technology such as using artificial intelligence to screen applications for employment (the so-called "entry sheet" in Japan), which is the preliminary selection process of job applicants. According to the aforementioned publication, by adopting selection by AI toward the more than 30,000 job applications that it receives [in a year], SoftBank is said to have cut the time it takes for the preliminary selection process by about three-quarters. In regard to "employee engagement," the third category listed above, applications are used to carry out a simple questionnaire survey, for example, to hear each employee's concerns and current situation. The responses are then analyzed using AI to find optimal measures to raise the engagement level of each employee. In Japan, in particular, a survey carried out in 2017 by Gallup, the American analytics and advice company found that the proportion of employees full of enthusiasm (i.e., highly engaged employees) in Japan was only 6% of all employees, ranking 132nd among the 139 countries surveyed. HR tech in this category can be said to be very important in raising productivity.

With that said, the effective use of HR tech requires the integrated management of various HR-related data, such as in terms of the format and system. Many Japanese companies are still unable to reach this stage, and clearing this step also seems to be a major challenge[5].

Use in a Way Beneficial to Employees Is Desirable

While HR tech contains great potential, it is not that there are no concerns being raised over its use. With various data concerning an employee being collected and analyzed by AI, there is a possibility that it could prove detrimental to an employee if unfavorable information, such as that they are disengaged and are highly likely to leave the job, is derived. Neither is it clear how a company will use such information nor have there been any laws prepared to protect employees. What is more, an attempt to raise the predictive accuracy of the AI may bring about a desire on the part of companies to obtain an endless amount of information related to employees. From such perspectives, experts say that it is desirable that companies be conscious of not becoming overdependent on AI and understand its use as being nothing other than a supplementary measure; that they limit the use of HR tech to those matters that will have a positive significance to employees, such as using it to create an environment conducive to exhibiting their strengths; and that rules on its use will eventually start to be established.[4]

On the other hand, progression in the automation of personnel management through the use of AI in no way means that human work will be taken away. Automating what can be automated will enable humans to devote their time to more advanced tasks, which in turn will no doubt lead to the creation of new jobs. HR tech could probably be said to be a major step toward humans specializing in those tasks that only humans can carry out.

*1 Japan Association for Chief Human Resources Officers (JACHRO) website: http://www.jachro.jp/ (in Japanese)

[Sources]

*2 "Attractive Opportunities in the HCM Market" (MarketsandMarkets)
https://www.marketsandmarkets.com/Market-Reports/human-capital-management-market-193746782.html

*3 "*HR Tekku Kuraudo Shijo no Jittai to Tenbo 2018 Nendoban* (The actual conditions and outlook of the HR tech cloud market, 2018 edition)" (MIC Research Institute Ltd.) https://mic-r.co.jp/mr/01535/

*4 "*Maruwakari HR Tekunology* (Everything about HR technology)" (Nikkei Business Publications, Inc.)

*5 "*Futto Suru HR Tekku, Kinshigan ni Naranai Tameni* (HR tech, coming to a boil: to avoid becoming myopic)" (Data no Jikan) https://data.wingarc.com/hrtech_saireco-20364

The Digital Transformation Movement Among Major Corporations in the US

Wataru Matsumoto

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ITOCHU Techno-Solutions America, Inc.

Studies advanced technologies and DX efforts in North America, and introduces Japan to the latest trends.

Self-Manufacturing of Software

It has been nine years since Marc Andreessen, co-founder of America's Netscape, contributed the article "Why Software Is Eating The World" to the Wall Street Journal (US) and said that "in the future, every company will become a software company." Today, a shift towards software is progressing among major corporations of the United States.

America's Goldman Sachs has 38,000 employees, of whom 9,000 employees are engaged in IT-related work, whether at the company's IT division or a business division. Even as its IT talent already account for 24 percent of its total workforce, there are still nearly 1,500 IT-related positions that have yet to be filled at the company. Although not in the US, the German auto manufacturer Volkswagen announced that it will invest 7 billion euros in five years – starting in 2020 – to increase the proportion of in-house developed software from the current 10 percent to 60 percent. This is due to the fact that outsourcing development makes it impossible to continuously upgrade their software with unfathomable speed. A move to possess internal development teams is progressing at the company.

Meanwhile, the proportion of IT-division employees at Japanese companies is said to be extremely low. Even when taking into account the situation in the US in which roughly 70 percent of IT-related human resources are employed by IT-user companies, the gap between Japan and the US is so wide that it cannot be explained away by saying that it is because circumstances are different between the two countries.

Acquisition of Technology Companies

Many major corporations say that artificial intelligence (AI) is the most important technology in promoting digital transformation (DX). Because of this, AI-related human resources are in high demand, and major American corporations are struggling in the competition with technology companies to obtain AI-talent.

In March 2019, America's McDonald's Corporation acquired Dynamic Yield for 300 million dollars. Dynamic Yield utilizes AI to provide personalization technology, which includes changing the displayed menu in accordance with the time of day, weather and other factors. In September of the same year, the fast food company acquired Apprente, which offers multilingual, multi-accent voice AI technology, to automate order-taking. Dynamic Yield was McDonald's largest acquisition in 20 years. The "Golden Arches" is incorporating the AI technologies possessed by the two companies to make order-taking at the Drive Thru a smoother, stress-free experience for both customers and employees.

In a move to predict consumer purchasing behavior as well as optimize inventory by utilizing AI, America's Nike acquired Celect in August 2019. Nike is attempting to promote its direct-to-consumer (D2C) strategy through the acquisition of Celect.

Digital Platforming

In January 2019, the American supermarket chain Kroger announced its joint development of retail-as-a-service (RaaS) platform with Microsoft. They are promoting a digital store strategy using the data possessed by Kroger and Microsoft's Azure technology. In addition to reinventing the customer experience, this move is also providing an employee-friendly environment, such as by making the state of the inventory and availability of a product clear at a glance. They are trying to bring about innovation for the whole retail industry by crossing the insight of America's largest supermarket with Azure.

America's Walmart, another retail giant, also seems to be considering making profits by offering the fulfillment platform, which it launched for its inhouse ecommerce business, as a service (aaS) to other retailers.

Before now, technology was considered work to be handled by an IT division. However, DX that utilizes technologies is work that needs to be handled by a business division. What is more, the adoption of technology alone is not enough to achieve DX. Changing the way work is carried out, or even a company itself, through "making," "buying" and "earning profits" is required. Because of this, the involvement of top management is essential.

Of course, the steps being taken by large American corporations are not necessarily the right way of doing this when it comes to DX. There are hopes that Japan, too, will see the success of its own brand of DX.

News Pickup

Here is information on solutions and services,
selected from CTC news releases, that are in the limelight.

AI / Simulation

CTC Begins the Provision of a Digital Twin Solution for the Manufacturing Industry

CTC has started providing a digital twin solution that replicates machinery equipment, people, work processes, etc., on a computer to optimize production. It is an IoT platform equipped with artificial intelligence (AI) for the purpose of prediction, and a simulation function for optimization and control. The combination of AI with simulations achieves the streamlining of plan formation, allowing any abnormalities in factory facilities to be predicted in real time, with an optimal production for the factory worked out on the basis of the prediction.

Solutions / AI / IoT

CTC Launches a Next-Generation Retail Solution for the Achievement of a Smart Store

In partnership with ITOCHU Corporation, CTC began the provision of CTC DX Solution for Retail, which offers comprehensive support for the achievement of a smart store that leverages new technologies, like AI and IoT. The solution consists of four services: consulting for the introduction of a smart store, the installation of IoT devices, a smartphone app for making payments, and a data analysis infrastructure that utilizes AI. Centering on businesses in the retail and distribution industries, CTC DX Solution for Retail will be expanded to other industries, including the financial and real estate industries, to provide integrated support for digital transformation that utilizes AI and IoT.

IoT

The Official Acceptance of Orders for the OMNIedge IoT Service Commences

OMNIedge (pronounced omni-edge), is an IoT service for the manufacturing industry. It was born through a collaboration between THK, NTT Docomo, Cisco, and CTC, which brought their respective strengths together for this service. The system combines THK's sensing system with Cisco's edge computing router, NTT Docomo's LTE transmission mode, and CTC's expertise in the construction and operation of IoT systems. It can predict / detect the state of machine element parts. One of its characteristics is that it takes a subscription-type fee structure, which helps hold down initial investment costs and enables ease of adoption.

Material Development / Consulting

CTC Collaborates with QuesTek to Launch Design Services of New Materials

QuesTek, based in the United States, possesses advanced technologies, such as those for the development of new materials or the improvement of the properties of existing materials. In collaboration with QuesTek, CTC has established a joint venture with the Illinois-based company to launch a joint business that will offer design services of new materials. Using the technologies possessed by QuesTek, the joint venture will provide design services of new materials and the sale of licenses for alloys in Japan. CTC's experience of over 30 years in businesses related to materials will be utilized as a foundation to contribute to cost reductions and the resolution of societal challenges through the development of new materials.

AI

CTC Commences the Provision of an Operation and Maintenance Tool Linked with AI Development and Implementation Environment

CTC, WingArc1st and Grid have commenced the provision of an operation and maintenance tool for artificial intelligence developed using Grid's ReNom AI development platform. The tool monitors the accuracy and operational status of developed AI. Implementation results and analytical accuracy are monitored to streamline the visualization of AI results as well as operation and maintenance by recommending scoring and relearning. It can help identify data that caused a fall in accuracy or collaborate with the infrastructure to prepare computer resources necessary for relearning.

Cloud / IoT

CTC Begins Handling Edge Computing Volterra Products

CTC began providing Volterra Edge Cloud, a cloud edge computing service provided by Volterra, a US venture company. The spread and popularization of IoT services are expected with the full introduction of 5G, and development that utilizes edge computing is drawing attention. The adoption of this product enables the integrated management of multiple functions, which will help suppress the number of hours and costs spent in the preparation of an environment and enable the speedy development of applications and services.

Please visit the following for further details.

http://www.ctc-g.co.jp/news/

The Path to Prestige,
Paved by a History of Good Fortune

The Kasumigaseki Country Club (KCC) – one of Japan's renowned golf courses – is the scheduled venue of the golf competitions of the Tokyo 2020 Olympic Games. In particular, the East Course embarked on a new chapter of its 90-years-plus history after being redesigned by Tom Fazio and his son Logan in advance of Tokyo 2020 under the principle of "risk and reward." KCC's past is one that was blessed by many good fortunes.

Allow me to begin by expressing my personal opinions on what makes a prestigious golf course.

When we say "country club" in Japan, we are referring to a golf & country club where the country club and golf course are a single unit. However, what became prevalent in the United Kingdom was that country clubs came first, and golf courses were added on as a recreational facility for the enjoyment of club members. Furthermore, a country club is a gathering of like-minded people who share values. So, for example, if the shared value of the group is one that emphasizes etiquette, then there would be no need to create a dress code. Such groups can be celebrated as being prestigious as they gain sophistication over the course of its history. In other words, I believe that the prestige of a country club is something that is built up by the people who gather there.

Today, there are several golf courses in Japan that are considered prestigious. A look at the history of KCC makes it obvious that it differs from the country clubs created by the privileged classes of that time, such as the Imperial Family in the case of the Tokyo Golf Club, and major players from the Kansai region's economic circle in the case of the Hirono Golf Club.

Golf Is Akin to Bushido (the Way of Warriors): The Starting Point of the KCC

We cannot talk about the history of KCC without mentioning Shohei Hocchi. The Hocchi family was a major landowner in Kasahata, Kasumigaseki Village, Saitama Prefecture (where the country club is currently located), possessing roughly 400 acres of land. The golf course was built on about 80 acres of that land, which Shohei Hocchi leased, free of charge to the country club. Claiming that "golf was akin to Bushido (the Way of Warriors)," it is said that the elderly Hocchi played a round of golf in 1929 wearing haori and hakama (formal Japanese attire consisting of a half coat, and skirt-like trousers worn over a kimono) with a flat cap atop his head. His great-granddaughter Mieko, who is the 30th head of the Hocchi family, said, "Due to the liberal movement known as 'Taisho Democracy,' individualism was rampant at the time. He probably saw the state of society that made light of manners as being lamentable. He seems to have considered golf, which is played without referees, as being akin to the Japanese Way of the Warrior, and a sport for bringing back moral fiber."

What is even more surprising is that the elderly Hocchi insisted that in the spirit of democracy, a public course open to the masses should also be created. Although the construction of a public course was aborted partway through the plan, it is clear that KCC aimed from the start to follow the trajectory of making golf a sport for the masses. The existence of 36 holes is none other than proof of this. Eighteen holes would have been more

East 10th hole, Par 3 over a pond; following the advice of Charles Hugh Alison, a large, deep bunker was created in front of the green, making Hole 10 not only highly strategic but also beautiful to behold. Although the recent remodeling added some changes, the beauty of the hole remains eternal.

A 36-hole golf course in the gentle hills of the Musashino area, consisting of the East and West courses. It has served twice as the venue of the Japan Open Golf Championship and once as the venue of the Japan Women's Open Golf Championship. A new drama is about to unfold as golf virtuosos from around the world gather at KCC to vie for top place in the Tokyo 2020 Olympic Games.

than enough if KCC was intended to be a golf course only for the limited elite members of society. The clubhouses of golf courses with 36 holes are quite noisy and do not allow quiet conversations to be enjoyed. However, the atmosphere at the KCC restaurant is one that cannot be found at other prestigious golf courses. At KCC, friends can be seen in lively conversation at the restaurant after they finish playing golf, enjoying drinks and a meal until darkness sets in.

A Golf Course Designed and Created by Founding Members in Charge of Different Holes

Although the five founding members were of the noble class or a family-run conglomerate, they were the exception and not the norm among KCC members at the time of its opening. Consisting of active top management from various industrial circles and returnees from abroad, the KCC's membership was the opposite of that of the Tokyo Golf Club. Furthermore, the design of each hole on the East Course was divided up between the five founding members: Shin Inoue, Shiro Akaboshi, Mitsujiro Ishii, Yonosuke Shimizu and Kinya Fujita, with Fujita serving as the facilitator. The West Course opened in 1932, three years after the East Course. It was designed solely by Seiichi Inoue. However, C. H. Alison, who was visiting Japan, saw the 10th hole and advised that a bunker should be created in front of the green. The deep, "Alison Bunker" was thus created, resulting in what has been called "the most beautiful par 3 in the East." What other than good fortune had Alison drop casually by

the golf course and offer his advice? So was the fact that the course was maintained, even after it was handed over to the US forces following the end of World War II.

The Canada Cup Makes the Kasumigaseki Country Club Known to the World

KCC's good fortune continued as it was selected to serve as the venue for the 1957 Canada Cup (currently the World Cup of Golf). The International Golf Federation (IGF), which was the organizer of the event, made a tour of candidate golf courses. It is said that Fred Corcoran, who was the chairman of the preparatory committee at the time, made a snap decision when he saw the large size of the 1st hole. Sixty golfers from 30 countries competed in the Canada Cup held at KCC. With Japan winning both the team (Torakichi Nakamura and Koichi Ono) and individual competition (Torakichi Nakamura), the Canada Cup brought on an unparalleled golf boom in Japan. It also brought KCC into the global limelight as a course that served as the stage of an international golf competition, opening the way for KCC to become a prestigious golf course.

Needless to say, KCC is highly recognized as a golf course. However, it was the passion of club members toward the sport of golf as well as several good fortunes that helped KCC develop into one of Japan's renowned golf courses. Having been selected as the venue for the golf competition of Tokyo 2020, KCC will surely be taking another big step forward.

Taizo Kawata

Special Adviser, Japan Golf Association (JGA)
Executive head, Japanese Society of Golf Course Architects
President, T&K Incorporated

Born in 1944 in Tokyo. After studying abroad at The Ohio State University, graduated in 1967 from Rikkyo University's Department of Law. His career includes the design of 23 golf courses and the remodeling of 29 golf courses. Has also served as a referee at major golf tournaments, including the British Open and the U.S. Open.

Message from Hikari Fujita
a Female Professional Golfer Supported by CTC

We spoke with professional golfer Hikari Fujita and asked her at the start of the new golf season if there were challenges that she wanted to take on.

Q It has been two years since the operation on your left elbow. Has it resulted in any changes to your playing style?

Before the operation, I pretty much played aggressively. Since my operation, I learned how to play defensive, safe golf, so my playing style has expanded. My swing isn't quite back to normal yet, but last year, I practiced hitting a fade, and this year, I'm also practicing hitting draws. I've always achieved distance with my driver by hitting a draw.

Q What would you like to try in 2020?

I've been making a challenge of doing double under jump-rope drills so that I can build up my instant response and strengthen my trunk. In my private life, I've been practicing decluttering and minimalism and cutting back on shopping, which is something that I love to do. I also want to eat Wanko soba (small servings of buckwheat noodles eaten from a small bowl, which is immediately refilled as soon as it becomes empty) (laughs).

Q Is there anything that you would like to say to your fans?

My message is, "Thank you very much for always rooting for me. I'll do my best this year so that I can live up to your expectations!"

This year again, I'll be giving my best in the major battlegrounds of the Step Up Tour!

Hikari Fujita - born 1994. Started playing golf from age 3 with her father as her teacher. Passed the JLPGA pro test in 2013. First win as a pro was the JLPGA Kaga Electronics Rookies Cup. Achieved her long-sought win in a regular tournament in 2015.

CSR Forward

The CTC Group's Sustainability

CTC Hinari Corporation
Toward a Society that Respects Individual Diversity and Shines Together

CTC Hinari Corporation ("Hinari") is a special subsidiary company established by ITOCHU Techno-Solutions Corporation in April 2010 to promote the employment of people with disabilities. It has offices in Tokyo and Hamamatsu (Shizuoka Prefecture). In Hamamatsu, there is focus on agriculture welfare cooperation in which agricultural work and welfare are carried out at the same time.

The name Hinari was given to mean that growth is achieved, day by day.

Support manager and staff member in charge of asparagus

Boxes full of tomatoes of uniform color

Company brochure "Yuku Yuku" (Issued in April 2020)
Introduces Hinari's business outline as well as the activities carried out Hamamatsu and Tokyo

Expanding Operations

When it was first established, Hinari had only 28 employees (of whom 21 were persons with disabilities), and initially offered office-related services, such as massage services for CTC Group employees, office cleaning services, and washing services, and agricultural subcontracting services. Today, Hinari has 101 employees (of whom 77 are persons with disabilities). Since 2014, the company's operations have been expanding and now include the sale of novelty goods, recycling and reuse operations, and filing services.

The Hinari Model

The Hamamatsu Office is currently entrusted with agriculture-related contract work from seven farming households. It promotes collaboration between agriculture and welfare in which agricultural work and welfare are carried out at the same time.

Between three and five employees with disabilities (staff members) and an employee who assists and provides guidance to the staff members (support manager) work as a team. The support manager takes photos of each procedure, writes explanations, and creates a manual for staff members that communicates the techniques learned from the farming household. The support manager also makes jigs (aid devices) that are needed during work such as harvesting. The support manager checks to see that staff members are dressed appropriately as well as watches over to ensure that there are no accidents. This format is called the Hinari Model.

When Hinari first began agricultural contracting work, the tasks that were subcontracted to Hinari were cleaning areas in front of a greenhouse and weeding. However, a relationship of trust was developed with the farming households by carefully carrying out routine tasks without fail. Today, Hinari contracts a wide range of agricultural work, including the settled planting and harvesting of vegetables and fruit.

Certified as a Company Where Persons with Disabilities Play an Active Role

In January 2020, Hinari was certified by the Japan Association of Employers of Persons with Disabilities as a company where persons with disabilities play an active role. Contracted by the Ministry of Health, Labour and Welfare, the Japan Association of Employers of Persons with Disabilities certifies companies that are implementing excellent initiatives, such as employment management that takes the characteristics of a disability into account, and reviews of types of employment, and are companies where many people with disabilities have been hired and are playing an active role. Sixty companies have received certification at present.

Certification mark

Hinari and all of its employees will continue its efforts to achieve growth, one step at a time.

COMPANY DATA

Name	CTC Hinari Corporation ("Hinari") *The company name changed from Hinari Corporation on April 1, 2020
Established	April 1, 2010
No. of employees	101 (of whom 77 are persons with disabilities) (as of April 1, 2020)
Representative	Kaori Watanabe, President & CEO
Business content	・Massage services for Group employees ・Beautification and cleaning services for Group offices ・Washing services for CTC employee uniforms and fixtures ・Agricultural support (contracted agricultural work) and the sale of crops and processed goods ・Subcontracting of work related to the dismantling and reuse of computer devices reuse

Principal Group Companies

Japan

CTC Technology Corporation (CTCT)
Kurita Kudan Building, 11-5, Fujimi 1-chome, Chiyoda-ku, Tokyo
https://www.ctct.co.jp/en/

CTC System Management Corporation (CTCS)
Sanban-cho Tokyu Building, 8-1, Sanban-cho, Chiyoda-ku, Tokyo
https://www.ctcs.co.jp/

CTCSP Corporation (CTCSP)
Komazawa Nakamura Building, 16-7, Komazawa 1-chome, Setagaya-ku, Tokyo
https://www.ctcsp.co.jp/english/

CTC Facilities Corporation (CTCF)
1-2, Ninomaru, Tsuzuki-ku, Yokohama
https://www.ctcf.co.jp/

CTC Business Service Corporation (CTCBS)
Kasumigaseki Building, 2-5, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo
https://ctcbs.ctc-g.co.jp/

CTC Business Expert Corporation (CTCBE)
Kasumigaseki Building, 2-5, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo
https://ctcbe.ctc-g.co.jp/

Asahi Business Solutions Corp.
Asahi Beer Azumabashi Building, 23-1, Azumabashi 1-chome, Sumida-ku, Tokyo
https://www.n-ais.co.jp/

CTC Hinari Corporation
Kasumigaseki Building, 2-5, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo
https://hinari.ctc-g.co.jp/

CTC First Contact Corporation (CTCFC)
Komazawa Nakamura Building, 16-7, Komazawa 1-chome, Setagaya-ku, Tokyo
http://www.firstcontact.co.jp/

Overseas

ITOCHU Techno-Solutions America, Inc.
3945 Freedom Circle, Suite 640, Santa Clara, CA 95054, U.S.A
https://www.ctc-america.com/

CTC Global Sdn. Bhd.
Unit TA-10-1, Level 10 Tower A, Plaza33 No.1, Jalan Kemajuan,
Seksyen 13, 46200 Petaling Jaya, Selangor Darul Ehsan, Malaysia
http://www.ctc-g.com.my/

CTC Global Pte. Ltd.
315 Alexandra Road, #02-01 Sime Darby Business Centre
Singapore 159944
https://www.ctc-g.com.sg/

CTC Global (Thailand) Ltd.
2525 FYI CENTER Tower 2, 5th Fl., Unit 2/502–2/504, Rama IV Rd.
Klongtoey, Klongtoey, Bangkok 10110, Thailand
https://www.ctc-g.co.th/

PT. Nusantara Compnet Integrator
AKR Tower Lantai 8, Jl. Panjang No.5, Keurahan Kbon Jeruk
West Jakarta, Republic of Indonesia
http://www.compnet.co.id/

PT. Pro Sistimatika Automasi
AKR Tower Lantai 12, Jl. Panjang No.5, Keurahan Kbon Jeruk
West Jakarta, Republic of Indonesia
http://www.prosia.co.id/

Best Engine

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CTC

Challenging Tomorrow's Changes