

# C-PRESS

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Talk With

**Guest Naoto Ishida** Representative, Urawa Digital Planning, LLC

**The Future of Healthcare Pioneered by Elegant Ideas**





## Beautiful Parisian Bones? The Eiffel Tower and Thigh Bones

### CHANGE THE VIEWPOINT

The Eiffel Tower was completed in two years and two months—an amazingly short period of time for its era—in order to finish it in time for the 1889 World's Fair in Paris. It still stands unchanged today, decorating the cityscape as a symbol of Paris. But did you know that it was built in reference to thigh bones?

The architect focused on the reinforcement structures that eliminate fatigue in thigh bones. He realized that he could make a gale-resistant design by inverting the thigh bone shape, which tapers downward. Thanks to his idea, we can enjoy the beautiful arches in the beams of the Eiffel Tower that were inspired by thigh bones.

Also, bones have compact and hard areas (cortical bone) inside of their outer surfaces, and spongy bone inside with holes and trabecula. This reduces weight without decreasing strength. The architect used this structure as a reference, and decided to employ a truss structure in order to reduce the tower's weight.

If you have a chance to look up at the Eiffel Tower, consider taking a close look at its structure, which took hints from bones.



### Communicate

The "C" of C-PRESS refers to the "C" of CMIC and the "C" of communication.

C-PRESS delivers a wide range of information with a focus on topics in the medical and healthcare fields.

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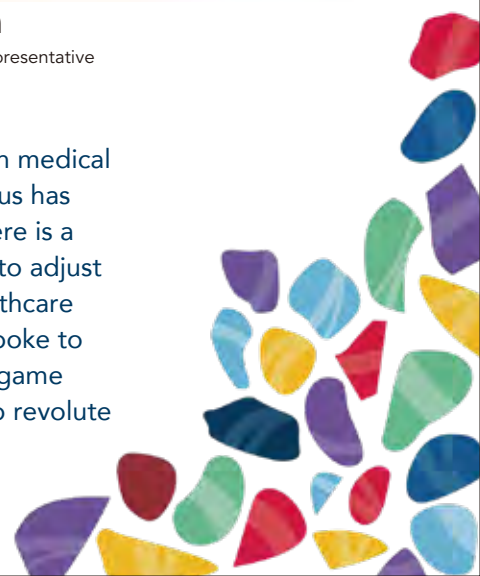


# The Future of Healthcare Pioneered by Elegant Ideas

**Kazuo Nakamura**CMIC HOLDINGS Co., Ltd.  
Representative Director and CEO**Naoto Ishida**

Urawa Digital Planning Representative

Till now, healthcare systems have been built with a view of providing patients with medical care and medicinal treatment. However, the recent spread of the novel coronavirus has changed how we see prevention, treatment, and other aspects of healthcare. There is a demand for healthcare systems to move closer to those who in need of care and to adjust to fit into their daily life. What is needed to construct the framework for new healthcare systems that adopt the perspective of those who receive care? CEO Nakamura spoke to Naoto Ishida, who has worked behind the scenes to help Japanese video games game succeed in the world and gained his view on the kind of reforms that is needed to revolute current healthcare system.



## Managing the entire process related to audio on the Super Nintendo

**Nakamura** This time, I am visited by Mr. Ishida, who has worked in development since the dawn of the video game console age, and who has supported the advancement of Japanese consoles abroad. At the time, people of my generation perceived video games as mere toys, but these games defied expectations, advancing internationally and achieving huge success. In addition, Sony's Walkman succeeded globally at almost the same time. Music was something that you listened to at home, but the Walkman created a culture where you could easily take music outside and enjoy it anytime, anywhere. When talking about Japan's strengths, people tend to focus on manufacturing and other "hard" areas. However, Japan also has great power

in "soft" areas to encourage changes in people's actions. Mr. Ishida, what was the video game industry like when you began working? **Ishida** I began working at Nintendo in 1988, which was the end of the period of the Family Computer (nicknamed "Famicom"). At that time, Nintendo was thinking of shifting to the next machine soon. I had studied acoustic physics at Kyushu University, so immediately after joining the company, I was assigned to manage sound design for the Super Nintendo. As it was going to be a 16-bit machine, its expressive power was like a Cambrian explosion. Nintendo was then still a small company, so it was normal for one person to play many roles. Thus, I managed the entire process related to audio: I worked on designing specifications for the game console's inbuilt synthesizer; I composed music; I built the chip; and I even arranged the circuits. There was no precedent for me to reference, so I did research on

my own and asked many people a lot of questions. I knew I wanted to use my abilities to make the best thing possible. As I had just joined my first company, I didn't know about other companies, so I thought this was a natural thing to do.

**Nakamura** Were you thinking about advancing in overseas markets from the start?

**Ishida** At that time, all Japanese video games were called "Nintendo" overseas, regardless of the actual manufacturer, so of course we were thinking about expanding overseas market

from the start. I think it was good that we didn't change the original design for overseas rollout. As people at Nintendo believe that if most of the end users liked it, it is a good product. They never wavered in this conviction, always starting by making whatever the employees themselves found to be the most interesting.

## Interesting things are born "under the desk"

**Nakamura** Today, I am also visited by Mr. Fukushi, who conceived of the electronic medicine notebook "harmo" during his time at Sony, and who now is Head of CMIC Tech Lab. What was the story behind the development of harmo\*1 at Sony? **Fukushi** Regarding harmo's development, I myself became ill and was prescribed many medicines. I did not know about the difference of medicines, and I made mistakes in taking them. I wondered whether there might be an easy way to manage prescription drug and instruction data, and this became my motivation for the development. In a flash of inspiration, I realized I could apply the FeliCa technology Sony had developed to achieve a completely new method of managing prescription drug and instruction data. However, this was not a task that the company assigned to me.

**Nakamura** Did the company approve of you doing research and development outside of work?

**Fukushi** It was not approved officially, but the culture was such that it was natural to do research outside of work using one's free time, and this was called "under the desk."

**Ishida** Nintendo also did not say "do this" or "do that"; it was a company that did not do anything like creating a release plan for a video game and then reflect that into the financial plan. Motivated people work voluntarily from the start, and when a task has vaguely taken shape, they show it to the division manager and ask for his or her decision. If they receive a go sign, then they finally start to engage in it as work. Ultimately, the company president decides on commercialization. In this world, we can drive maybe 1 out of 100 video games to commercialization, so we all rack our brains because we need to think of something that can get approved.

**Nakamura** Now, with remote working taking root due to the COVID-19 pandemic, new things are being born through exchanges across companies, but at the same time, I am afraid that we will lose the feeling and opportunities to gather everyone together and do something. I think that places where everyone can gather and rack our brains while we work are also extremely important.

## Three principles: "Do not hesitate; do not worry; enjoy"

**Nakamura** When we could not decide about the next move for harmo, I consulted with Mr. Ishida. What was your impression when you saw harmo?

**Ishida** I felt it was slightly formal. It is related to healthcare, so of course it should not be too playful, but I had the sense it is not something I would see every day. To say it another way, making it into something that I would see every day might eliminate

omissions in managing medicine at crucial moments. For the next stage, I thought it would be interesting to position it as an app that you would inadvertently check even at times completely unrelated to medicine.

**Nakamura** CMIC is a company that has 7,000 professionals involved in pharmaceutical industry and healthcare. Here, a culture of doing things based on the conventional flow is deeply rooted, and it is natural to think about work while complying with the many various regulations. However, I did think that something might be different when considering manufacturing from the viewpoint of patients. At that time, I received the following advice from Mr. Ishida: "Why not change it so that users will not easily move away from harmo?" With these words, I felt the fog inside my head clear.

**Ishida** Video games have a set of three principles: "do not allow the player to hesitate"; "do not make the player worry"; and "make it so enjoyable that the player cannot stop." Video games are things that you do in your free time, so people will run away if games do not comply with these three principles. I also think that it is a good idea to put all of these elements into the app.

**Fukushi** There are many free video games recently, so there is a greater hurdle in this regard. If the user does not understand a minor thing, the app will be deleted immediately. So as you said, Mr. Ishida, it is necessary to have a flow that does not allow for hesitation, and to make it simple and attractive so that users cannot stop once they start.

**Nakamura** Harmo goes beyond a simple medicine notebook; it is a tool with which we can expect many new

### \*1 Electronic medicine notebook service harmo

Using the contactless IC card technology FeliCa, the electronic medicine notebook service harmo empowers patients to centrally manage their own medicine information in a simple, reliable way. Healthcare professionals can also share and use this information. This healthcare information integration system has an electronic medicine notebook as its foundation.

➔ For details, see p.16 to 18.



developments using a Personal Health Record.\*2 However, when viewed from the user's perspective, I think it is necessary to make it a tool for people to enjoy content that they like, or for making daily life more interesting. What do you think about this?

**Fukushi** I think that it is important to create fans starting from a familiar place. Harmo uses a contactless IC card. For example, a sound is made when you touch the Suica IC card to a payment reader, and I have seen situations where children find the sound interesting and touch the Suica card to the reader many times. Thus, I proposed a system where "people use it because they want to touch it." At the time, this was flatly rejected because "it would not contribute to sales." (laughter)

**Nakamura** I greatly agree, though. Sensory enjoyment is important. Making fans in this area while working to realize the developments will be key to breaking apart the sense of despair in Japan today.



KAZUO NAKAMURA

\*2 Personal Health Record (PHR): A system for collecting and centrally storing data on a patient's healthcare, nursing care, and general health.





### Building a framework for health management from the perspective of those who receive care

**Ishida** Recently, the number of jobs related to healthcare and nursing care has increased, but I have noticed that the shift to IT has been quite slow. When people become ill, almost everyone goes to see a doctor, but if people could practice thorough care in their daily lives, then they would only need to make a comparison against their baseline data and find the differences.

**Nakamura** This is precisely what we are interested in right now. Particularly at present with COVID-19, people are minimizing their visits to hospitals, and how one manages one's own health has become extremely important. I think we can learn many things from video game development, but what do you think?

**Ishida** Recently, the keyword "idle" has become popular in the video game industry. Until now, games were



**Gakuho Fukushi**

Head of CMIC Tech Lab, Business Strategy Headquarters,  
CMIC HOLDINGS Co., Ltd.  
Conceived harmo.

things that you concentrate on while playing, but with idle games, something happens while you leave the game, and you can check the new event when you come back and play. It might be interesting if this sort of system could be made in harmo, too. "Pokémon GO" serves as a reference. If you make walking itself into a game, then people start walking. Smartphones have a pedometer function, so the issue becomes how to make it interesting.

**Fukushi** Listening to what Mr. Ishida said, I remembered that I tried to make a game called "Medicine Notebook Battler" after taking a hint from "Barcode Battler".\*<sup>3</sup> Barcode Battler is a game in which you scan barcodes to generate characters, and you can make the characters fight each other. I wondered whether I could make a version of this with medicine. If you could have the medicines you are currently taking fight each other, you would come to recognize those medicines, and you would always register new medicines when you get them, so it would be really good. But when I suggested this, I was scolded with the words "don't be ridiculous!" (laughter)

**Ishida** No, I think that is interesting, without a doubt. I too think it would be good to anthropomorphize medicines.

**Nakamura** In the past, the only ideas came from the viewpoint of people providing healthcare, so perspective was lacking in terms of blending medicine and the healthcare management system into each person's life to enable people to make maximal use of them. Do you have any ideas about this?

**Fukushi** I think that people in general, including myself, do not have much

interest in health. People do not usually do something if it is not interesting, so I think it is necessary to have a system which enables people to do something enjoyable without overexerting themselves, and this state actually helps with health management.

**Ishida** I think it may be good to expand the functions of pharmacies so that they become destinations. Now, they are only places for getting medicine, but they could become bases for the neighborhood if they have useful information for people and functions for encountering the new. Also, if pharmacies become fun places, the barrier to healthcare will be lowered significantly, and perceptions of health may change as well.

**Nakamura** COVID-19's impact has put healthcare systems at a crossroads. Going forward, it will be necessary to build a new ecosystem related to healthcare and health. As you pointed out, I think the position of pharmacies will change under this new framework. However, in reality, it is tough to train staff to acquire new functions, and so it would be good if harmo could assist in that.

### Going beyond a mere medicine notebook to create new value

**Nakamura** One problem is that medicine labels are hard for regular people to understand. Even if they look at the list of adverse effects, it does not seem real. For example, if there was site for facilitating exchanges between people who take the same medicine, I think they could all support each other and manage adverse effects in order to optimize

use of the medicine.

**Ishida** When I take medicine, I personally feel concerned, and I think I would be encouraged just by knowing that there are others taking the same thing. For example, even if the records for people taking medicine were simply published anonymously, others would see such people taking the same medicine without forgetting, and this may make them think that they should work hard, too.

**Fukushi** We are thinking precisely the same thing. For example, the message "Several thousand harmo users are taking this medicine now" by itself can create a sense of camaraderie because "so many others are taking it." It may be just a number, but I think that one's desire to continue taking the medicine will change depending on the presence of this number.

**Nakamura** Through exchanges between users, an optimal way to take the medicine may emerge. For example, with medicine taken after eating, the timing differs if it is "immediately after eating" or "after eating." The former means within 5 minutes of eating, while the latter means within 30 minutes of eating, but regular people may not be able to tell these two apart. People take more medicines as they get older, and so they may take all of their medicines together because it is bothersome to split them up into the categories of before and after eating. However, in principle, medicines have an optimal way to be taken, so I think such information exchange would be excellent.

Apart from this, there may be unexpected discoveries if we accumulate data such as whether people taking a certain medicine have COVID-19, or what happens when

people take the same medicine for many years.

**Ishida** For example, during disasters, it is important to know what kind of medicines are present in which locations. People may find that a certain district or user group still has at least one kind of medicine. This may allow people in that district to circulate the medicine to others who have an urgent need for it. This could also be done by comprehensively gathering the status of medicine registration and use.

**Nakamura** If people could ascertain where a certain type of medicine is and its expiry date, the entire production process could be adjusted, so there is also the possibility for revolutionizing supply chains.

### For people to live lives in their own ways in a post-COVID-19 society

**Nakamura** COVID-19 has significantly shaken up our values. How do you think society will change in the future?

**Ishida** I think we will transition into an age of more individual expression. Regarding the topic at hand, for example, I think people who develop medicine have the characteristic of being significant medicine nerds. In the past, information has only been given about effects, but I think it would be good for people to talk more about their feelings regarding the medicine or stories from development. Users can enjoy this content, so it might be good for harmo to include a space like this, too.

**Fukushi** This pandemic was a chance for me to rediscover the importance of



**NAOTO ISHIDA**

connections between people, as we have not been able to meet others for a long time due to COVID-19. I hope that harmo will serve as a tool for supporting these personal connections. I felt I want to make it so that people can communicate their feelings through this tool. For example, a grandson could receive a message if his grandfather properly takes his medicine every day.

**Nakamura** The COVID-19 pandemic has led me to understand the importance of each person living his or her life based on something to live for, not just treating diseases. I think that harmo will be an important tool for supporting such efforts. Moving one step forward, I want to make it into a tool where people touch it involuntarily because it is interesting, and through this process increase their healthcare literacy naturally. We want to advance while racking our brains together on how to achieve this, so I would appreciate your assistance in the future. Thank you for taking the time to talk today.

\*<sup>3</sup> Barcode Battler is an electronic game console that was sold by Epoch in 1991.



More people in Japan  
are working while engaging  
in nursing care

**Kanamaru** It is said that one in three people age 75 or over will require some form of nursing care.\*1 Could you tell me about the current state of nursing care in Japan?

**Nitta** While number of people who require nursing care increase, there has also been a significant rise in the number of two-income households, and in addition, there are fewer children per household, and the non-marriage rate is increasing.



**Kyoko Kanamaru**  
Corporate Officer in charge of Group Diversity Promotion, CMIC HOLDINGS Co., Ltd.

Thus, more people are forced to work while caring for their parents. Almost 65% of men and 50% of women who engage in nursing care have a job\*2, and I feel that would-be-nursing caregivers, people who need to take care of their parents who find it difficult to do the activities of daily life alone, are also increasing.

**Kanamaru** How many people quit their jobs to do nursing care?

**Nitta** The number is said to be about 100,000 people per year.\*2 People who actually had to quit their jobs often say, "I did not know what to do when faced with the issue of nursing care, as I had no knowledge and was not prepared. I took a leave of absence from the office, but as time went by I felt I had become a burden to the company, so I had to quit." To avoid getting flustered when faced with the issue of nursing care, it is crucial to prepare in advance.

**Kanamaru** Unlike childcare, you cannot predict when you will need to start nursing care. Can people take action in the initial stages if they live far away from their parents?

**Nitta** There are many cases of long-distance nursing care, but systems for nursing care and welfare are complicated, so it is best to research or consult with a care manager in advance to find a good method to implement. Also, it is best to make use of nursing

care leave and other systems to secure a period to get things on track for nursing care.

Creating an easy-to-talk-to  
workplace environment and  
promoting telecommuting

**Kanamaru** Few people take leave to do nursing care, but in fact there may be many who quit to do nursing care or who take leave for other reasons. What can be done to support these people?

**Nitta** Good question. Companies should communicate their stance, stating "we want to support those who work while doing nursing care, so please tell us if you have trouble."

Everyone faces the issue of nursing care, so it is crucial to foster a culture in which everyone can be open and cooperate. Companies should also promote telecommuting. There are cases in which people have worked at home while taking care of their parents, who could not attend care services during the day due to the COVID-19 pandemic.

**Kanamaru** Telecommuting has made rapid progress, allowing people to work while giving care.

**Nitta** Last year, one employee utilized telecommuting for the initial stages of long-distance nursing care. He lives in

Tokyo, and he recognized that his father living in Hokkaido was not doing well than before. He visited his father twice for a total of three weeks, telecommuting from his father's residence while providing care as a test-run for the future. He gathered information during break times as well as before and after work. He talked with his father about his wishes for nursing care, and he made all the preparations to bring his father to Tokyo while speaking with government offices and relatives. The employee said, "It would have been really tough if there was no telecommuting system." Even telecommuting only on Fridays or Mondays makes it easier for people who travel far to provide nursing care on weekends, so I think it helps reduce the number of people who quit to do nursing care.

Advance preparations  
help people work  
while giving care

**Kanamaru** Tell me more about such preparations.

**Nitta** You should learn about your parents' lifestyles, including their chronic diseases, regular medicines, regular doctor, and where they put their daily essentials. If you build friendly relationships with neighbors and your relatives, they will support you when you need it. Some municipalities offer assistance even if your parent has not been certified as needing care. If you research these systems and try using them little by little, you will naturally be able to get assistance from

care managers and helpers. You should also understand your parents' finances, such as their pensions. If you have a chance to visit a facility together with them, you can easily ask about monthly payments, the kind of lifestyle your parents want, and other in-depth questions.

**Kanamaru** It is vital to talk on a regular basis.

**Nitta** If one of your relatives is admitted to the hospital, you may want to ask your parents, "What do you want to do in the future?" It is also good to gather a wide range of information on welfare services in the area where your parents live, such as nursing care volunteers and taxi service from the Social Welfare Council. You can use nursing care insurance services together with volunteer services from the local municipality or the Social Welfare Council.

**Kanamaru** If you research services from your parents' local municipality, you will not become flustered when the time comes. I thought it would be very hard to work while providing nursing care, but after listening to you and gaining some knowledge, I feel a bit more relaxed.

**Nitta** When I say "do research when you go to visit your parents" at a seminar, I can sense everyone becoming more conscious. You sometimes find people who say, "I'm actually providing nursing care now" with whom you can share stories about nursing care.

**Kanamaru** I hope that these opportunities can create groups of



people who can help each other with nursing care.

**Nitta** If you regularly check in on your parents and think about how to work while providing nursing care, you will come to see what you need to do to prepare. Also, I think it is crucial for everyone to support each other as if it were their own parents, based on the awareness that it is only natural to cooperate if someone in the company needs to provide nursing care.

**Kanamaru** This awareness is the first step to cooperation. Working while providing nursing care feels like a more familiar concept now. I hope that this helps our company's employees think about nursing care as an idea close at hand. Thank you for joining me today.

\*1 Ministry of Health, Labour and Welfare, "2015 Status Report on Long-term Care Insurance Projects"  
\*2 Ministry of Internal Affairs and Communications, "2017 Employment Status Survey"

Get Ready Now Before Nursing Care Becomes Necessary  
and Build an Environment that Supports Work and  
Nursing Care in Harmony



Nursing care insurance began 20 years ago in 2000 with the Long-Term Care Insurance Act. During the past 20 years, in Japan the percentage of elderly people has continued to rise. It is said that about 33% of the population will be 65 or over in 2030. Nursing care for parents is an issue that many people will face sooner or later. Let's hear from Kaori Nitta, a social insurance labor consultant who has worked for many years doing nursing care training for companies.



**Kaori Nitta**  
Representative and Diverse Work Style Consultant,  
Grasse Social Insurance Labor Consultant Office  
Through training sessions held by municipalities, seminars at companies, and consulting in collaboration with public organizations on supporting employees in their work while providing nursing care, she offers suggestions and educates people from her position as a social insurance labor consultant regarding how to use systems to enable diverse work styles as well as trends in workplace awareness. In this way, she helps contribute to the development of workplaces where everyone can actively engage in work.

Please refer to Page 18 for brief explanation of current nursing care situation in Japan.

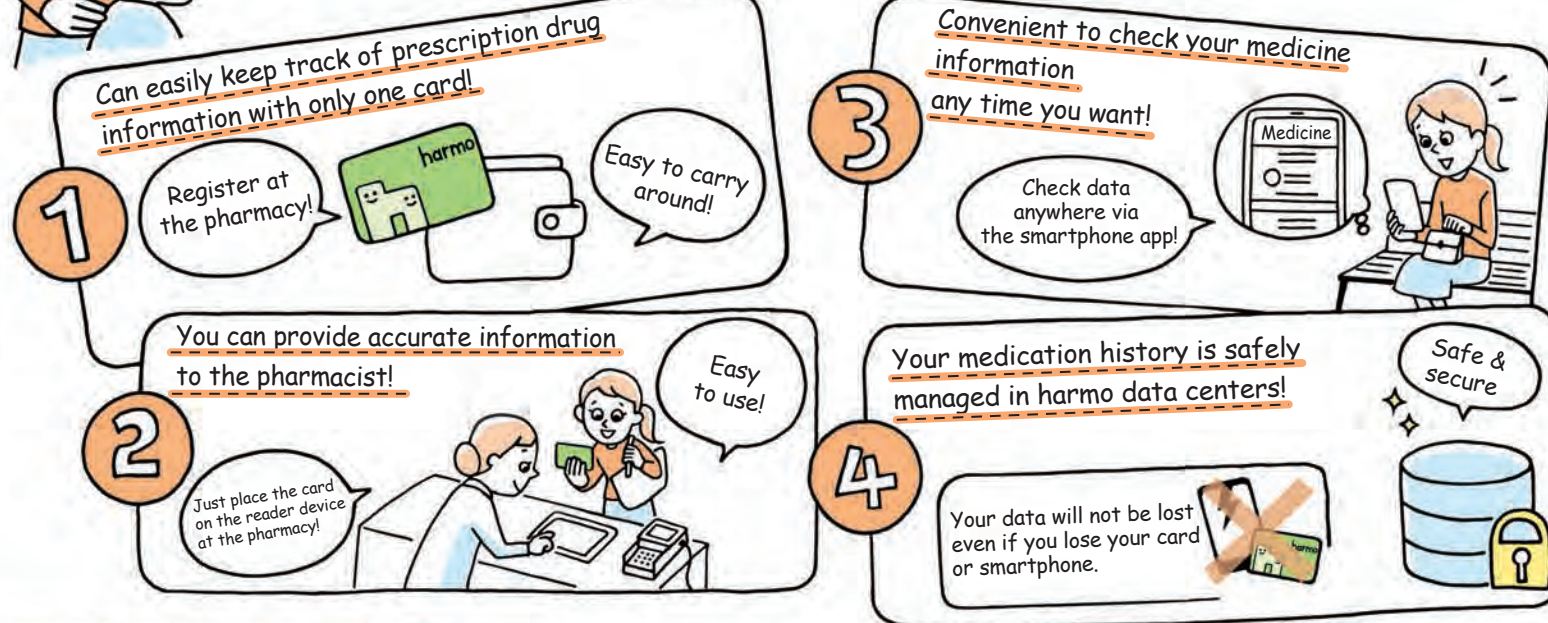


# Electronic Medicine Notebook harmo leads the Information Revolution in Healthcare!

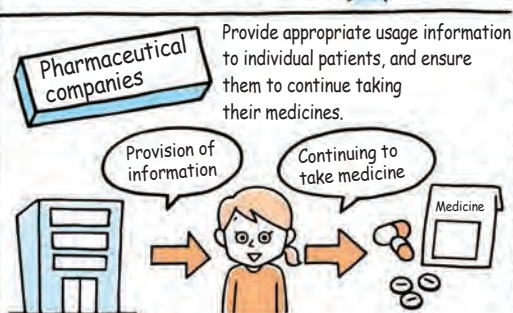
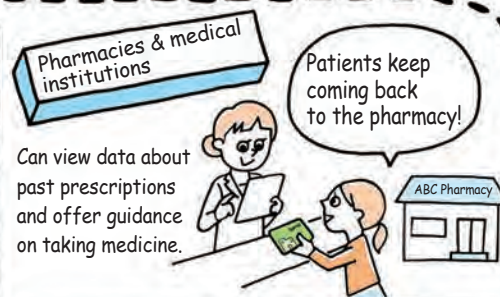
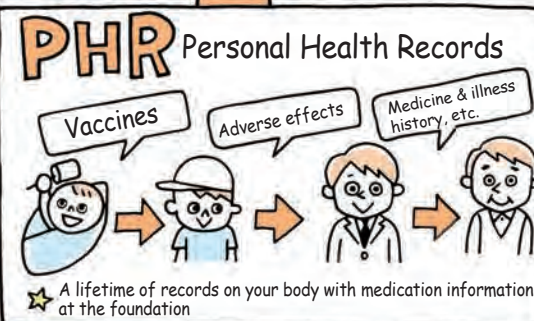
## What is harmo?



It empowers patients to centrally manage their own medicine information in a simple, reliable way. Healthcare professionals can also share and use this information. It is a healthcare information coordination system based on an electronic medicine notebook.

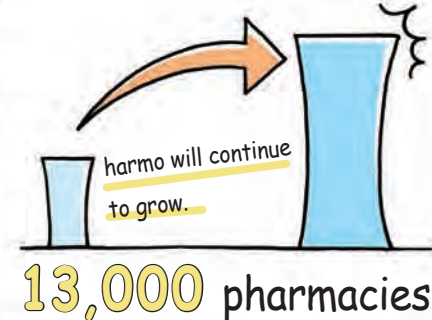


## Extended benefits focused on patients



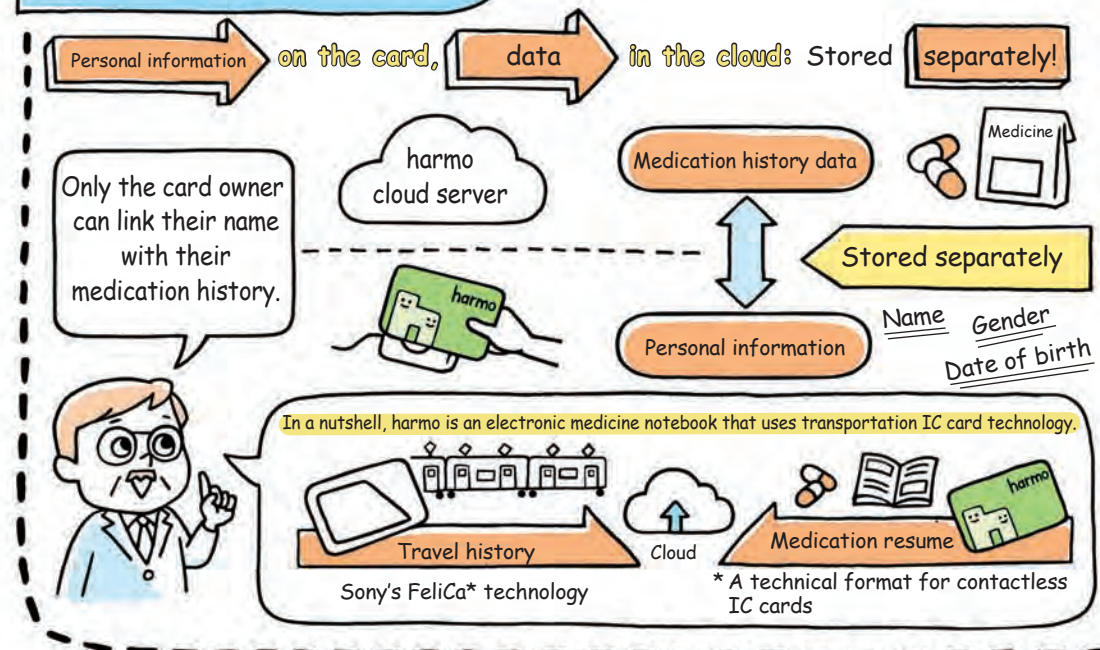
One of Japan's largest information distribution platforms:  
For **one million people** scale

Deliver correct information to the users on how to take medicine.



## How harmo works

The patented technology is the core of harmo



## Link with medicine history data for wide-reaching business opportunities!

For example, linking with POS systems could pave the way for new services.

### Utilizing in online practice

Provide appropriate information on medication history and checkups to physicians during remote medical care. Pharmacists at patients' regular pharmacies can provide online guidance on taking medicine.



### Advice on shopping

Alert customers before buying specific foods that interact with their medicines.



\* For example, grapefruits are known to interact with specific medicines, affecting efficacy.



In this edition,

## we are pleased to introduce the electronic medicine notebook service "harmo".

In June 2019, CMIC Group acquired the harmo business from Sony Corporation, and technical support is still provided based on the contract with the company.

This section describes what electronic medicine notebooks are, what they can do, and their future prospects.

### Q How does an "electronic medicine notebook" differ from a "medicine notebook"?

A "medicine notebook" is used in Japan to record details such as the names of prescribed medicines as well as the amounts, frequencies, and methods for taking them. Checking these records enables you to understand information about the medicines that you have been prescribed in the past (your medication history). Generally, paper medicine notebooks are used. You receive stickers from the pharmacy together with

your prescription to stick in the notebook, or you can write in such information yourself. Thus, it is not easy to accurately record your long-term medication history because you may forget to write down the details, and there is a limit to how much each notebook can store. An "electronic medicine notebook" solves these issues by making it electronic.

### Q What are the advantages of harmo?

Currently, dozens of companies have developed businesses for electronic medicine notebook services, many of which are used by having patients download a dedicated application onto their smartphones. When pharmacists use other systems to check medicine data in the pharmacy, they must ask patients for permission each time. The advantage of harmo is that there is a personal IC card in addition to the services inside the application. This card stores its owner's name, while encrypted data is stored in the cloud in a way that makes it difficult to identify individuals.

Each patient is assigned a common ID. Touching the card to the dedicated terminal indicates the patient's consent for the pharmacist to display the data, and the data is extracted from the cloud. Also, this card can be reissued if lost, and the reissue procedure renders the lost card unusable, so the system protects privacy.

In this way, you can say that harmo is an electronic medicine notebook service with strict privacy protection that enables appropriate feedback based on medicine-related information.

### Q What are CMIC's current initiatives for harmo?

Apart from basic electronic medicine notebook services, such as appropriate prescribing and medication guidance for patients based on dispensing information, harmo has a function for providing feedback to pharmacists at dispensing pharmacies, including information on the patient's characteristics and comorbidities, mainly in areas where the service already enjoys widespread use. In this way, harmo is starting to become used as an information

infrastructure as we obtain the understandings of local pharmacists.

In addition, we started collaborative research with Keio University in June 2020. We have started using harmo to record and check infant vaccinations in Kawasaki-ku, Kawasaki City, Kanagawa Prefecture as a verification test on the effects of reducing errors in vaccinations.

### Q What are harmo's future prospects?

In July 2020, we started collaborating with Pocket Pharmacy to build a business for offering common services using electronic medicine notebooks from over one million users. Alongside this increase in the number of users, harmo's functions have expanded beyond traditional

medicine-related information to include personal health records (PHR). Ultimately, we want to boost harmo's performance so that it can offer all health-related information that contributes to individual user's well-being.

#### About Medicine Notebook

In Japan, when one gets prescription drugs at pharmacies or hospitals, the name of medications, dosage and other information is recorded in a notebook called "Medicine Notebook".

Medicine Notebook started as an original service at some pharmacies, and from April, 2020, it is evaluated as medical service fees. At present, there are electric services and paper notebooks.

#### Caring for the elderly in Japan

As of 2018, one out of four people of the whole Japanese population is an elderly. It is unavoidable that the needs for nursing care will continue to increase. There are "home care" and "institutional care", and although one can get specialized service by institutional care, the cost will be higher compared to home care.

Depending on the care recipients' health condition and financial situation, many will be using the care services at home. Because of the rapid increase of elderlies, there are many social issues such as lack of professional caregivers and adult children taking care of their elder parents.



## Nikkei WOMAN's "The Best 100 Companies Where Women Actively Take Part" Placed 23rd in the "Overall Ranking" and 4th for "Management Appointment Level"!

CMIC Holdings has been recognized for its diverse initiatives, placing 23rd (28th last year) in the "Overall Ranking" on Nikkei WOMAN's "The Best 100 Companies Where Women Actively Take Part" for fiscal 2020. CMIC also attained a record-high place for the "Management Appointment Level" category, coming in at 4th (5th last year). Going forward, CMIC will continue to support flexible work styles and actively strive to build a comfortable work environment.



### Overall Ranking

- 1st IBM Japan
- 2nd Accenture
- 3rd Kao Group
- 4th Aflac Life Insurance
- 5th Resona Holdings
- ⋮

23rd CMIC Holdings

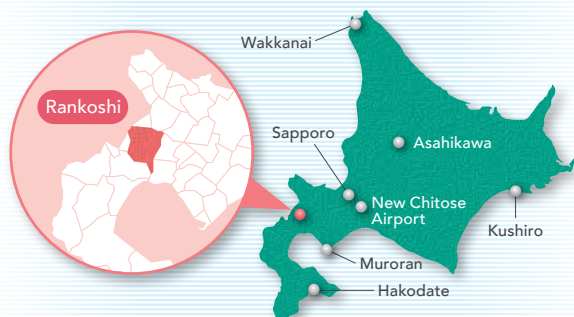
### Management Appointment Level

- 1st IBM Japan
- 2nd Pfizer
- 3rd Accenture

4th CMIC Holdings

## Rankoshi Town in Hokkaido, Kyoto University, and CMIC Holdings Started Cultivating Medicinal Plants for Raw Materials in Herbal Medicine, Based on a Joint Research Contract

This March, CMIC Holdings concluded a joint research contract with Kyoto University and the Town of Rankoshi in Isoya County, Hokkaido. Based on this contract, the three parties have started to cultivate Asiatic ginseng, senega, perilla, and other medicinal plants with strong market demand for use as raw materials in traditional Chinese medicine and herbal remedies. Through cooperation among industry, government, and academia, CMIC aims to work with Kyoto University and the Town of Rankoshi to provide strong support in building a lively community by cultivating medicinal plants, thereby propelling all three parties forward.



## CMIC Group Enters into a Partnership Agreement with Yamanashi Prefecture To Build a New Epidemic Prevention System in Yamanashi through Industry-Government-Academia Cooperation

In June 2020, CMIC Holdings concluded a partnership agreement with Yamanashi Prefecture, aiming to build a new epidemic prevention system in this prefecture. CMIC Pharma Science Co., Ltd. is one of the largest non-clinical CROs in Japan, and within the CMIC Group it handles non-clinical fields. Since its headquarters is located in Yamanashi Prefecture, its CMIC Bioresearch Center (a research facility located in

Kobuchisawa-cho, Hokuto City, Yamanashi Prefecture) assists in emergencies by swiftly expanding testing systems. CMIC Group is committed to contributing to the safety and security for all residents of Yamanashi Prefecture, and striving to strengthen this prefecture's new epidemic prevention system through cooperation among industry, government, and academia.



▲ Exterior view of the new research facility

In June, a new research facility has been completed at the CMIC Bioresearch Center, which incorporates the latest air conditioning facilities and airflow control systems. It chiefly focuses on short-term breeding experiments, and can accommodate GLP\*1 and GMP\*2 testing.

\*1 GLP (Good Laboratory Practice): Standards for conducting non-clinical studies on pharmaceutical safety  
\*2 GMP (Good Manufacturing Practice): Regulations for manufacturing and quality control of pharmaceuticals

For details and to read more of news releases, visit the CMIC Group's website at:

<https://en.cmicgroup.com/news-events/>

