

# Innovation Exploring Initiative HQ (IXI)

Corresponding SDGs



The Innovation Exploring Initiative HQ (IXI) aims for creation of new businesses by designing near future to solve social issues, and planning and implementing the necessary strategies to realize it. We contribute to realization of better society by pioneering new business opportunities as the company-wide innovation platform, and creating social needs with new businesses created by innovating business models.



Executive Officer  
Senior General Manager of Innovation  
Exploring Initiative HQ

## Hidetaka Ishihara

## Making a Model for Creating New Businesses that Solve Social Issues

OMRON has been banding together across the entire company to strive for “ambidextrous management” as a way to build up the power to achieve self-driven growth. IXI plays a role for it with its mission “Seeking and establishing new businesses.” In order to develop new businesses and improve reproduction as OMRON’s innovation platform for the entire company, we are focusing on planning strategies that create back-casting innovation starting from the near future designs, building dedicated groups for business verification and accumulating knowledge. We have implemented over 20 projects since our establishment three years ago, and four themes are currently proceeding to business verification phase. Also, in fiscal 2020, we have built the Integrated Innovation Process as a model of business creation. In this process, verification points and judgment criteria are clarified that tend to be personal and vague for new businesses, and

quality of themes and implementation speeds have improved significantly. Additionally, we have been working on strengthening and training human resource for architect and business creation who can promote business development, through this process. We have established a human resource development method that allows a high-quality “trial and learning” approach by defining required skills for each job type and giving detailed feedbacks through the on-the-job training in projects.

## Creating New Businesses to Drive Growth and Accelerating the Social Implementations

In the time of new normal, society drastically changes globally, causing various social issues. On the other hand, for OMRON with the corporate philosophy to solve social issues through its business, this is a time full of business opportunities, so we will work on catching those opportunities for new businesses.

Seeking business opportunities does not mean randomly looking for an unknown area. With all the various business opportunities available, we strategically need to select target areas and maximize investment efficiency. OMRON has been proceeding businesses with a focus on three domains: factory automation, healthcare, and social solutions. We will continue to create businesses with these three axes, proactively responding to social issues that could not be covered in each domain.

In determining the direction of new businesses, we focus on two main approaches. The first approach is business expansion from an essential value perspective. In this approach, we utilize customer assets that our business divisions have ever built, re-define our value by recognizing new social issues, and expand our business by advancing business models. The second approach is expansion into new business areas in our domain. By proactively promoting collaborative creation with customers regarding the four growth opportunities that OMRON recognizes for next long-term vision – “rising sophistication of manufacturing,” “automation of primary & tertiary industries,” “preventative medical support,” and “energy solutions to achieve carbon neutral” – we will powerfully promote the creation of new value and implementation in society, while obtaining the business assets that OMRON does not have.

Over the course of three years since IXI’s establishment, we have built OMRON-specific model process for business creation and many external people have joined this, agreeing with OMRON’s approaches and the direction of business creation. We are also internally training ambitious human resource for architect and business creators, through many projects. Our goal to “reproduce the founder’s philosophy and capability as a company” is surely being achieved. We are completely warmed up to fulfil the next long-term vision. From fiscal 2021, we will definitely shift to the goal of

creating businesses to drive OMRON's growth, focusing more on speedy businesses implementation in society and accelerating business creation.

## Examples of New Business Creation to Solve Social Issues

### Promoting Agri-automation Business in Which People Can Flourish

#### Social Issues to be Solved

In recent years, agriculture in China is experiencing serious lack of labor force, and it has become a social issue how to continue the farming. At the same time, demand is increasing for vegetables and fruit grown with low or no pesticides as customers become more conscious of food safety and security. Under these situations, the number of skilled worker who can produce crops with low or no pesticides is limited, and there is a need to realize high-quality, stable agriculture that does not depend on human skills.

#### Effort for Social Implementation

OMRON has developed services that support human judgment in their work by analyzing cultivation conditions, such as growth of crops, temperature, humidity and daylight hours, instead of whole automation that requires large capital expenditure. These services are now being tested in the field in China. In these services, as the crops growth state is timely quantified and the use of pesticides and chemical fertilizers are controlled to be minimal, anyone can work on production at the same level as those of skilled workers, which contributes to solving lack of labor force. In May 2020, we started up the cultivation technology development base in China, accelerating developments to make it a new business. With experimental farms further expanded, business creation is proceeded with partnerships between Japan and China.



### Data Utilization Support Business to Effectively Help Digital Transformation in Manufacturing

#### Social Issues to be Solved

With the advanced digital technology, we are now able to obtain large amount of data through sensors at various places including manufacturing sites. Customers in manufacturing industry expect that they can utilize the various data for creation of new value in quality improvement, new product development, and collaborative creation projects by multiple companies. On the other hand, it takes a lot of manpower and time to digitalize on-site documents and extract necessary information from large amount of data to analyze it. It is required to facilitate efficient data use and sharing for various purposes.

#### Effort for Social Implementation

OMRON extracts and processes necessary data from large amount of data collected from manufacturing sites, and verifies solution value for creative work, such as planning quality improvement and production or developing new products and services. At our Group's production sites, we automatically summarized production control data of parts handled at multiple locations and significantly improved work efficiency, such as converting the data into a suitable form for production planning. With these achievements, we now have started suggesting introduction of data utilization support business for customers who are in need of production of multiple products or in variable volume production, such as automotive parts, digital parts or cosmetics. With lack of labor force in the manufacturing industry becoming more serious, we will support customers' DX effort by enabling more people to engage in work with high added value.



## Elderly Care Support Business Aimed for Extension of Healthy Life Expectancy (Japan) Social Issues to be Solved

Ultra aging society that Japan will experience first in the world will afford a huge opportunity for OMRON to create new businesses. While the number of care givers are shorted for the elderly in needs of long-term care, it is the social challenge to extend healthy life expectancy where people can make livings independently.

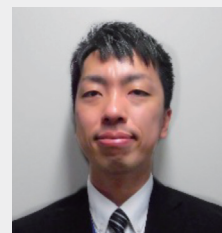
### Effort for Social Implementation

About half of people who need light nursing only have physical and mental functional deterioration due to their living style that is not active, and this can be prevented or improved. It is essential for extending health expectancy to promote preventing long-term care by "self-reliance support," which helps those people recover physical and mental functions to make their daily lives or join social activities. Therefore, OMRON has developed a system to support promotion of self-reliance that can be utilized further, by codifying know-how of experts who support self-reliance. Currently, we are in a partnership with Oita Prefecture, which is proactively supporting the elderly for self reliance and preventing care need level deterioration and are verifying systems at nursing care facilities in the prefecture. At nursing sites, communication is very important to grasp care receivers' conditions that vary on individuals. Therefore, this system is designed to decrease work load with machine supporting daily works so that people can concentrate on creative works such as having communication. By allowing anyone to give support for self-reliance at the same level of experts, we will provide new values with which employees at nursing sites can play more important roles.



### Comments from Partner

In Oita Prefecture, we are working on building the community-based integrated care system with the policy goal of "building a society of healthy longevity and lifelong activity. We have been focusing on promoting self-reliance and preventing deterioration of care need levels for the elderly, such as holding community care meetings, which is a leading move in Japan. Within the prefecture, the short-term intensive prevention service is spreading (which works on improving the elderly's physical functions with rehabilitation experts, etc. in a short period aiming for improvement of the quality of the elderly's living function such as meals and baths), while it is required to build a system that allows the elderly in need of support to receive the service. To solve this issue, we as the prefecture have agreed with OMRON to promote cooperative business utilizing ICT systems. We are working on improving the quality and efficiency of nursing and preventive long-term care by utilizing and analyzing collected data, along with promoting self-reliance of the elderly in regions. Also, through our approaches, we plan to assess and verify the effect of general supporting business for nursing and daily livings, including our short-term concentrated prevention service.



Senior Staff, Community-based Integrated Care Promotion Group  
Welfare for the Aged Division  
Welfare and Health Department  
Oita Prefecture

**Hikaru Ogasawara**

### Employee Comments

#### Feeling My Own Growth through Business Creation Process

With my strong will to narrow the gap between the average life span and health expectancy by supporting self reliance for the elderly, I joined IXI from a different business division in 2019 and am now the project leader of elderly care support business. In IXI, you can obtain skills that are necessary to create businesses proceeding projects steadily, with the vision to solve social issues as an axis. I only had experience of technology or products developments as an engineer when I joined the division, but I formed a team with those who had various experience and have been proceeding projects based on integrated innovation process. Through promoting projects, I was able to not only accumulate know-how to create new businesses but also recognize my own strength as an engineer to "change technology into value." After starting with four members, this project has become a business department in fiscal 2021 which makes me feel that we are making this a business steadily. With the large field of Oita Prefecture, we aim for supporting the elderly in Oita first, by verifying the effects with parties from the Prefectural Office and across the Prefecture. Further, we aim to contribute to the society by focusing on the social implementation of our system as an eco system that supports people's health, in partnerships with more companies and municipalities.



Elderly Care Business  
Department  
Business Incubation  
Center

**Yuki Kato**

## Propelling Collaborative Creation toward New Businesses

To accelerate implementation of new businesses in society, it is important to overcome the “Not Invented Here Syndrome” and create collaboratively with the startups developing cutting-edge technologies and business models by open innovation. In particular, for new business development or areas where innovation of business models is needed, who you have partnerships with is the key. To deepen key cooperation with partners, OMRON VENTURES CO., LTD. (OVC) proactively promotes strategic investments and expands the network to connect to advanced startups.



President and CEO  
OMRON VENTURES CO., LTD.  
and  
General Manager  
Co-Innovation Design Center  
Innovation Exploring Initiative H.Q.

**Tomoko Inoue**

In seven years since its establishment, OVC has invested in 17 startups and has been building relationships with venture capital firms in the center of the world's innovation eco system. In fiscal 2018, OVC started to accelerate investments for startups in Israel and Silicon Valley where world-leading high-technology startups emerge, nurturing businesses and technologies. To invest in foreign companies, it is important to build connections by getting involved in networks of foreign investors. There are many entrepreneurs who work on solving social issues by innovative technologies and business ideas, and many successful entrepreneurs establish venture capital firms to support newcomers. Therefore, excellent entrepreneurs gather at world-famous venture capital firms, creating many innovations. OVC focuses on the eco system of these innovations and increases the chance to meet excellent ventures to conduct optimal investments by combining relationships with entrepreneurs and networks with venture capital firms. Moreover, with the customers and technology assets obtained from these investments, OVC aims to create more social needs through collaborative creation with IXI and other businesses of OMRON.

### ■ OVC Investment Track Record

May 2015: Plant Life Systems Co., Ltd.	Nov. 2018: Connected Signals, Inc.
Jun. 2015: 3D Media Co., Ltd.	May 2019: Theranica Bio-Electronics Ltd.
Jul. 2015: Organic nico Co., Ltd.	Jun. 2019: Patients Know Best Limited
Mar. 2016: Life Robotics Inc.	Oct. 2019: Realtime Robotics, Inc.
Oct. 2016: Exvission Corporation	Mar. 2020: Avails Medical, Inc.
May 2017: Vegitalia Inc.	Mar. 2020: AIRx Health Inc.
Jun. 2017: Lark Technologies Inc.	Mar. 2021: DIMAAG-AI, Inc.
Dec. 2017: mofiria Corporation	Jul. 2021: Terrals Technologies Pvt. Ltd.
Oct. 2018: De-Identification Ltd. (D-ID)	

### Example of Collaborative Creation Projects with Investees

#### Patients Know Best Limited (PKB) (U.K.)

PKB provides platforms to share patients' medical data. Electrical medical records are common in U.K., but they are not shared among hospitals. Thus, it was causing physical and financial burden for patients as they needed to repeat check-ups every time they change hospitals to visit. Also, there were other social issues such as optimization of public medical expenses. For this situation, PKB has built a medical data sharing system with high security, which patients are authorized to administrate. This enabled not only to share medical data among hospitals but also for patients to administrate own medical data. Currently, OMRON Healthcare Europe is working on connecting its health care app “OMRON Connect” and PKB's system so that patients with chronic diseases can share their home data measured with OMRON's devices with hospitals and improve efficiency of treatments.

#### DIMAAG-AI, Inc. (U.S.)

DIMAAG-AI provides solutions utilizing AI that can explain the estimate results, such as failure detection or machine failure estimate. It aims for renovating manufacturing processes with human, and the comprehensive system buildings such as generation of AI model and re-learning after operation with data visualization in inspection area show their characteristics. While inspections by human are more difficult than before due to lack of labor force or COVID-19 crisis, the social issue is how to inherit experienced workers' skills. The Inspection Systems Business Division at IAB works on introduction of AI for substrate visual inspection system and X-ray inspection system in order to support customers' high-quality manufacturing processes. With the synergy effect of collaborative creation with DIMAAG-AI, we are working on realization of unmanned inspection system by introducing AI-based technologies for various scenes related to inspection operation.