

Innovation Exploring Initiative HQ (IXI)

“Takeoff” From Business Validation to Business Launch

Executive Officer Senior General Manager, Innovation Exploring Initiative HQ

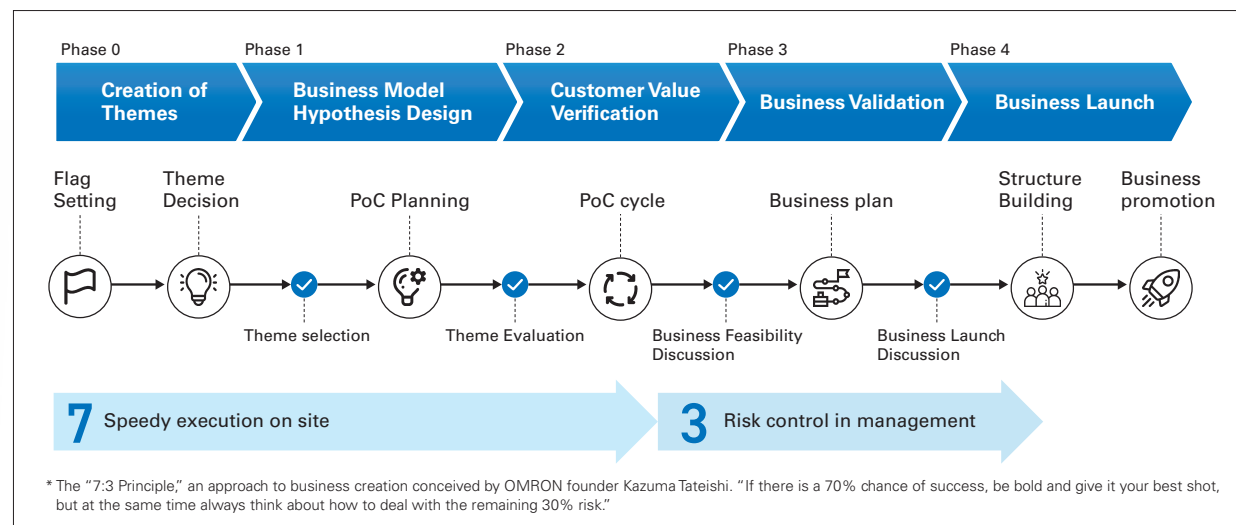
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The Innovation Exploring Initiative HQ (IXI) aims to be an organization that anticipates new rapidly emerging social issues, including the trajectory of the ongoing technological evolution as well as social needs likely to emerge in the near future, and to be a source of new businesses corresponding to the opportunities and challenges inherent in these developments. In the five years since its inception in 2018, IXI has established a “Business Creation Process” for launching new businesses with high reproducibility. This is a “mechanism enabling an organization to operate autonomously.” (See [Figure 1]) We have built a solid foundation (organization, processes, and human resources) for our execution of high-potential themes.

Fiscal 2023, the sixth year of IXI, is an important year for us in which we intend to make a big leap toward the achievement of SF2030. We got off to a flying start. For example, the on-site data utilization support solution business (pengu), for which we have been conducting business validation ahead of other themes, was launched in the current fiscal year as an internal start-up. In addition, the elderly care solution business and the agri-automation business have advanced to the final stage of business validation and are scheduled for launch in fiscal 2024. Regarding collaboration with JMDC Inc. (JMDC), with which OMRON formed a capital and business alliance in February 2022, IXI led the planning and promotion of

the Health & Productivity Management Alliance aimed at enhancing the competitiveness of Japanese companies and securing the sustainability of corporate health insurance through improvement of employee health. The Health & Productivity Management Alliance was established on June 30, 2023, with seven lead managing companies. (See P66.) Leveraging the Health & Productivity Management Alliance as a corporate health platform, we will co-create various healthcare solutions. The relationship with JMDC will be further deepened by making it a consolidated subsidiary*. Each of OMRON’s businesses possesses vast amounts of data not only in the healthcare solution domain, but also in the social solution domain and the industrial automation domain. IXI will lead the creation of a new data solution business by leveraging JMDC’s outstanding data management technology and solution development expertise to transform all the data held by each business of OMRON into value. These fascinating themes are about to blossom.

Figure 1 <Format of Value Verification>



Fiscal 2023 will be a year in which the themes we have been working on take-off as businesses addressing social issues.

* As of this writing (September 15, 2023), the tender offer to make JMDC a consolidated subsidiary has not yet closed. The share acquisition is scheduled to be executed on October 16, 2023.

Five New Business Fields Envisioned by IXI

In order for businesses to take off one after another over the medium to long term, it is essential to compile a portfolio of well-developed themes. IXI has identified five new business fields that will contribute to resolving the three social issues OMRON is addressing under SF2030, namely, “achievement of carbon neutrality,” “realization of a digital society,” and “extension of healthy life expectancy.” They are “data-driven healthcare,” “automation for food industry,” “support for achieving carbon neutrality of manufacturing industry,” “support for DX of manufacturing sites,” and “decent work.” (See Figure 2) Based on these five themes, we will compile a portfolio of themes and create groups of

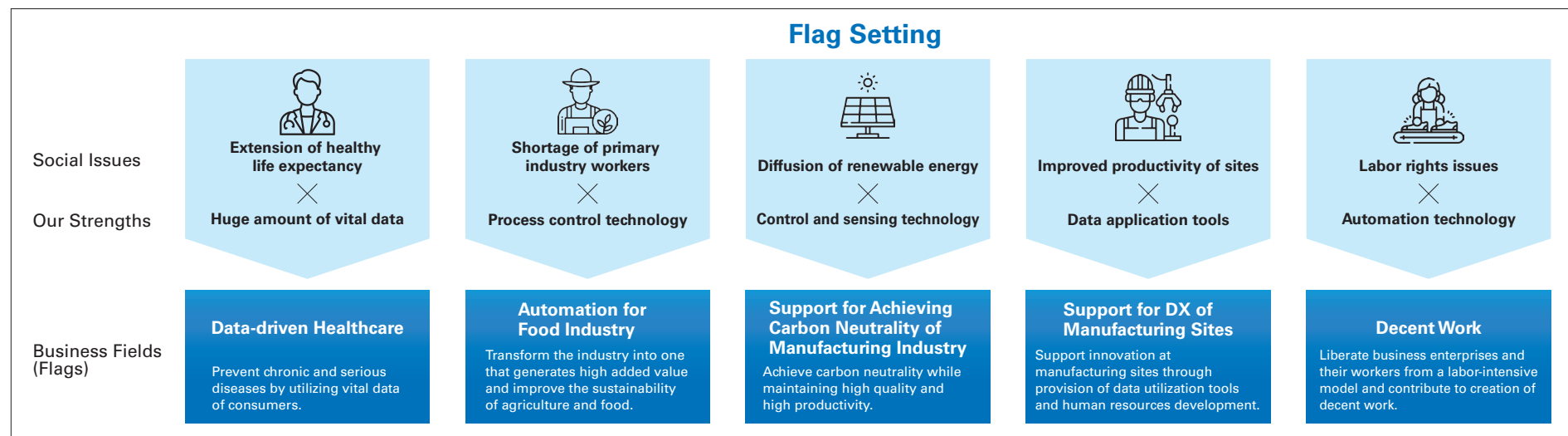
businesses through investment in startups, collaboration with other companies, and development of solutions utilizing OMRON’s business assets.

“Business Creation Process” and “Architects” Supporting IXI’s Creation of New Businesses

The most difficult aspect of creating a new business concerns decision-making to “go” or “stop” while making and testing hypotheses and changing directions repeatedly. The larger the organization, the more rigid it becomes and the more difficult it is to be agile. IXI has established the “business creation process” as a “mechanism enabling an organization to operate autonomously.” In this process, senior executives who make investment decisions, the managers who lead the projects, and the members of the project team have a shared recognition of the actual difficulties, discuss what should be considered and decided in each phase, and create new businesses with a high degree of reproducibility

through iterative “trial and learning.” This process is never-ending and is evolving day by day. Over and above that, the business creation process hinges on human resources. As the business creation process proceeds to a new phase, the capabilities and skills required for a project team become more diverse. The success of a new business depends on the ability to manage this diversity so that it strengthens the team’s capabilities. Among the diverse capabilities and skills, IXI has focused on improving capabilities and skills of “architects.” Specifically, they are capabilities and skills to repeatedly test hypotheses, identify intrinsic value for customers, and shape a business model. Through mid-career hiring and development of internal human resources, IXI has developed more than 60 “architects” over the past five years. Several people have returned to the business companies and are demonstrating their capabilities in the business field as leaders in the evolution of the business models of existing businesses.

Figure 2 <Five Flags Planted by IXI>



IXI's First New Business: Support for DX of Manufacturing Sites

The first in-house startup originated from IXI, the "pengu" business, which provides support for DX of manufacturing sites, was launched in March 2023. Many companies are investing in "management" DX such as the introduction of enterprise systems for their organizations. Meanwhile, in order to increase organizational productivity and maximize business output, "on-site" DX is also essential. On-site DX[®] (See [Figure 3](#)) is an innovation that creates value by dramatically evolving the triggers for improvement that emerge from day-to-day operations through the combination of business operation automation tools and training programs. If frontline personnel are equipped with IT skills to automate and streamline routine tasks such as voucher entries at each site, devote more time to new tasks, and increase productivity, this will lead to on-site DX[®] that will take management to new heights. IXI Data Utilization Solution Business Department not only provides and supports "on-site" DX itself but also a mechanism to connect "on-site" and "management" through pengu. We currently provide services to customers in a broad range of manufacturing industry, including automotive parts, machinery and electrical

products, electronic components and devices, materials and processed materials, semiconductor-related equipment, food, cosmetics, and consumer goods. We are challenging to further expand our services.

Services to Meet the Challenges of Manufacturing Sites

Another feature of pengu is training support. Besides introduction of pengu, we offer training of on-site personnel according to their skill levels in order to upgrade their skills so that they will be able to create automation tools tailored to their tasks and improve business operations.

Milbon Co., Ltd. is a cosmetics manufacturer that manufactures and sells hair care products and hair colorants exclusively for beauty salons. Milbon's factories were experiencing a growing need for data aggregation. In view of the urgent necessity of implementing effective measures, Milbon decided to introduce OMRON's pengu because of its attractive characteristic of "no special skills required for use." Mika Onoda and Miho Maekawa, who are using pengu at Milbon's Yumegaoka Factory, gave us some feedback.

"In my department, I am in charge of logistics. I have automated the Excel-based daily warehousing

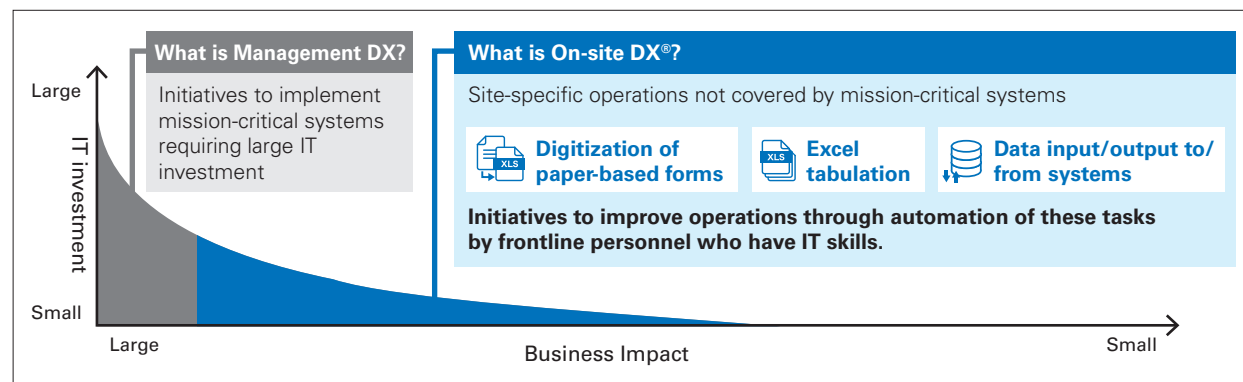
operations, using pengu's SUISUI ETL. Previously, I had to manually calculate and update the Excel file based on the daily changing inventory status, which took several hours. Utilizing pengu saves me a great deal of time and effort." (Onoda)

"I am engaged in labeling. Using SUISUI RPA, I can now automatically print labels to be attached to packages. This has also eradicated errors attributable to manual input." (Maekawa)

They both say that the key to mastering the tools was the support they received from OMRON. "People from OMRON repeatedly instructed us in the basics, helping us master the tools. We appreciate the in-depth support, not only on how to operate the tools, but also on organizing and reviewing the best way for us to proceed based on OMRON's understanding of our business operations." (Onoda and Maekawa)

Terukazu Takahashi, General Manager, has high expectations for the impacts of automation. "If we can improve issues one by one, we will be able to identify the appropriate number of personnel and their allocation. But reducing the number of people deployed isn't our ultimate goal. This is a process enabling us to tackle new themes. In our quest for optimization, we have great expectations of OMRON's support tailored to our on-site needs."

Figure 3 <On-site DX>



Elderly Care Solutions centering on Nursing Care Prevention

The “supporting elderly care business” is the second in-house startup originating from IXI that is now in the final stage of business validation. Japan is facing a super-aged society ahead of the rest of the world. In Japan, a country where there is a shortage of caregivers for the growing numbers of elderly people who require nursing care, the need to extend healthy life expectancy, enabling people to lead healthy and independent lives, has become a social issue. It is known that about half of those with light needs for long-term care are in such conditions due to a decline in physical and mental functions attributable to inactive lifestyles. Such conditions are preventable and there is high possibility of improvement.

Promotion of nursing care prevention, that is, helping these people regain physical and mental functions so that they can be independent in their daily life and participate in society, is also a great opportunity to create new businesses. IXI Supporting Elderly Care Business Promotion Department has developed solutions that enable unskilled caregivers to provide support on a par with that available from skilled caregivers. Know-how based on skilled caregivers’ experience and insights is presented in the form of text and charts and implemented on an ICT system. By combining this system with human support, it has become possible to improve operational efficiency and raise the skill level.

To verify the effectiveness of our solutions, we are currently collaborating with several municipalities that are working to support the elderly so they can live independently and endeavoring to prevent progression of the level of care required. Through verification in municipalities with different regional characteristics, the effectiveness of solutions combining ICT and human-based support is steadily being demonstrated. Specifically, by homing in on the difficulties that the elderly experience in their daily life and the causes of

those difficulties, it is now possible to identify elderly people who may be able to lead independent lives. As a result, we are able to help determine the most appropriate support plan for each individual, and thus for three consecutive years we have helped a growing number of the elderly improve their life functions and regain their independence. It has also become clear that by utilizing data on the elderly and the community accumulated in the ICT system, we can contribute to community development through support of independence. We have presented these results at academic conferences. Through exchanges of opinions with experts and municipalities throughout Japan, we are also working to expand recognition of our initiatives.

In fiscal 2023, we will complete verification of business profitability and scalability. We aim to launch the business in fiscal 2024.

Launch of the Health & Productivity Management Alliance in Collaboration with JMDC

In addition to creating new businesses organically based on our business creation process, we are also working on creation of businesses through M&A (alliances) based on the business strategy. As a first step, we formed a capital and business alliance with JMDC in 2022. “Extension of healthy life expectancy” and “realization of a sustainable healthcare system” are two goals universally desired in the healthcare field. As society becomes more mature, the issues they involve become more pressing and yet the difficulty of achieving both goals simultaneously become starkly apparent. OMRON is accumulating vital data of consumers and patients in their everyday lives. On the other hand, JMDC possesses medical and healthcare data, such as health insurance claims and health check-up data, which OMRON does not possess. By combining these data, we develop and

provide preventive solutions for chronic illness and for worsening conditions so as to “extend healthy life expectancy” and “realize a sustainable healthcare system.”

In the business alliance with JMDC, seven working groups have been established to promote collaboration. One of the major achievements was the launch of the Health & Productivity Management Alliance on June 30, 2023, with the vision of “revitalizing Japanese companies and securing the sustainability of company-run health insurance societies by promoting employees’ well-being.” As of September 30, 2023, 244 companies and organizations have participated. Nine companies (Ajinomoto Co., Inc., SCSK Corporation, OMRON Corporation, Kirin Holdings Company, Limited, Shimadzu Corporation, JMDC Inc., Nippon Life Insurance Company, Nomura Research Institute, Ltd., and Sumitomo Mitsui Banking Corporation) from across the economy are lead managing companies. They are working with companies in the Alliance to practice health & productivity management and share and accumulate know-how. The Alliance will also promote collaboration with government and academia, aiming to contribute to optimization of ever-expanding healthcare costs, going forward.



Management of the eight lead managing companies of the Health & Productivity Management Alliance

Creation of Solutions to Prevent Disease Aggravation using a Health Data Platform

The initiatives of the Health & Productivity Management Alliance go beyond the practice of health & productivity management and the sharing and accumulation of know-how. The Alliance also aims to develop and provide solutions for health promotion and prevention of disease aggravation, thus benefitting companies and health insurance associations engaged in health & productivity management, and to develop a co-creation platform to verify the effectiveness of those solutions. OMRON's initiatives have been primarily focused on solutions for cardiovascular diseases and asthma. However, many diseases in the world need to be addressed and the need to prevent their aggravation is increasing. In order to meet these social needs, OMRON will expand the range of diseases it targets based on the health data platform it has built and provide more preventive solutions. Through the Health & Productivity Management Alliance, we will promote development of three preventive solutions for disease areas that cause significant losses to management. (See [Figure 4](#))

An example of these initiatives is the "hypertension improvement program." As a demonstration experiment, we have been conducting field testing of the effectiveness of the program at OMRON since June 2023. Specifically, OMRON identified those at high risk of severe hypertension from the results of health checkups and solicited their participation in the hypertension improvement program. Through three months of blood pressure monitoring and interviews with doctors and healthcare professionals, many of the participants were able to achieve their antihypertensive goals as a result of improved diet, exercise, and lifestyle modifications. By contacting those who are neglecting to receive treatment at an early stage, it is expected to be possible to prevent the development of severe cerebral and cardiovascular diseases whose origin is hypertension. This will not only help individuals maintain health but also lead to the maintenance and stability of the company's workforce. Another example is "health support for women." As women are expected to play more active roles, many companies are aware of the challenges they face with regard to their health. Facing social issues, OMRON

and companies participating in the Health & Productivity Management Alliance are collaborating to develop solutions. The demonstration experiment will utilize OMRON Healthcare's basal thermometers. By providing health information reflecting the data on changes in basal body temperature, a vital rhythm unique to women, and tailored to the changes that women experience with the passage of time, as well as online health consultation services, behavioral changes in working women and changes in their performance will be verified. These services are expected to help women play active roles in the workplace and reduce labor losses due to ill health. Through the Health & Productivity Management Alliance, we will address social issues related to health and develop preventive solutions to improve the quality of life (QOL) of employees for diseases and conditions that result in major losses for management, such as prevention of aggravation of hypertension, health support for women, and mental health-related support, thereby contributing to the extension of healthy life expectancy.

Figure 4 <Health Data Platform-based Solutions for Companies to Prevent Disease Aggravation>

Contribute to the Health & Productivity Management Alliance by developing preventive solutions to improve employees' QOL for diseases that result in major losses for management		
	Needs of employees and management	Business summary
Prevention of aggravation of hypertension	Prevention of severe cerebral and cardiovascular diseases caused by hypertension	Screening for high-risk individuals + RPM Providing risk screening and remote patient monitoring (RPM) services for high-risk individuals using medical examination/billing data and, in future, vital data such as blood pressure
Health support for women (Femtech)	Improvement of presenteeism and absenteeism caused by women's health issues	Women's health support services Supporting women's success by providing one-stop services ranging from awareness-raising through seminars, basal body temperature management apps, and self-care/RPM services
Mental health prevention and improvement support	Improvement of presenteeism and absenteeism caused by mental disorders	Mental health support services Early detection of at-risk individuals through stress checks, pulse surveys, etc., and provision of mental risk intervention solutions using sleep data

Creation of a Data Solution Business Going beyond the Healthcare Solution Domain

In the social solution domain, we are collaborating with OMRON FIELD ENGINEERING Co., Ltd. (OFE), an OMRON Group company, on its management & service business. Taking advantage of its 140 sites throughout Japan and 1,200 maintenance and service personnel, OFE provides operation, maintenance, design, and construction services nationwide in wide-ranging fields, including finance, rail and road transportation, manufacturing, and distribution, as well as operational support related to store operations.

Currently, the retail and restaurant industries, including major convenience stores and coffee shops, are facing various social issues, such as the increasing burden of IT equipment management and rising operating costs due to soaring gas and electricity costs, in addition to worsening labor shortages. To resolve these issues, we are working with JMDC on "solutions to achieve optimized operations and energy conservation throughout stores," using data collected from stores.

To accelerate solutions through the use of on-site data, we are also working on "one-stop repair and maintenance services." For one-stop services, it is necessary to manage all the repairs as well as all the equipment and facilities of different manufacturers used in commercial facilities across industries. Through integrated management of the equipment and facilities of different manufacturers used in commercial facilities, it will become possible to collect a greater variety of on-site data than ever before. Co-creation with JMDC based on these collected data will enable us to accelerate the development of new data solutions to resolve our customers' issues.

Toward Creation of Even Greater Results and Evolution of IXI

There are two keys to IXI's further advancement from now on. The first is to strengthen the human resources portfolio and increase the engagement of each employee. The organic approach based on the business creation process and the inorganic approach utilizing M&A&A (alliances) differ greatly in terms of the skills required for business creation and the corresponding jobs. In addition to strengthening the recruitment of diverse human resources with different skills, we will create an environment in which people with high aspirations and strong motivation can maximize their abilities.

Another key is to implement through "high cycle management." The essence of high cycle management lies in the hypothesis testing cycle, that is, how quickly the hypothesis can be formulated, tested and pivoted to maximize the value created. Although the value created per cycle may be small, the value is exponentially amplified as the number of cycles run increases. In other words, it is like the power of compound interest. IXI's business creation process is truly a process that enables high cycle management. We will create even greater results through repeated hypothesis testing and continuous "trial and learning."

<M&A&A based on Management Strategy to Maximize Corporate Value>

