Asia Digital Transformation (ADX) Projects Briefing Materials

August, 2022

Japan External Trade Organization (JETRO)

Asia Digital Transformation(ADX) Projects
(Support for Joint Pilot Projects (PoC) between ASEAN and Japan)

- This program covers expenses for demonstration projects by ASEAN and Japanese companies jointly to contribute to solving the socio-economic challenges in ASEAN region with innovative technologies such as digital tech.
- Through the implementation of the projects, Japanese companies will proactively contribute to further disseminating innovations and to improving a business environment in collaboration with the governments and private sector in the region.

Target Countries

10 ASEAN member states
（Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam)

Support measures & Maximum subsidy amount, subsidy rates

- To subsidize joint pilot projects between ASEAN and Japanese companies

【Normal Subsidy】
Small and medium companies：maximum 20 million yen, less than one-half of the subsidy-eligible expenses
Large companies　　：maximum 10 million yen, less than one-third of the subsidy-eligible expenses
【Special Subsidy(For projects which equipment cost exceeds 1/2 of the total project amount)】
Small and medium companies and Large companies：maximum 50 million yen, less than one-third of the subsidy-eligible expenses

- To coordinate with government and related organizations in order to facilitate the projects

Project Requirements

- To specifically identify socio-economic challenges in the country and contribute to solution of them
- To use innovative technologies, such as digital technology
- To identify Japanese company / institution as the project partner
- To be expected that the business operation will start or continue early (generally within two years after the completion of the PoC) in the target country or other ASEAN region

Project Period

Date when the grant is decided – Wednesday, January 31, 2024

The Result of the Call

- The call was opened from May 9 to June 30, 2022 and received 57 applications.
- As a result of the examination, it adapted 28 projects.

Total 28 projects (12 large companies, 16 SMEs)

	CAM	IND	MAL	PHI	SIN	THA	VIE	MAL/ SIN	IND/ ASEAN	
Medical / Nursing			2			4		1		7
Environment/ Energy			1			3				4
Tourism						1			1	2
Education/ Human resources			1			1	1			3
Construction	1				1					2
Mobility							2			2
Logistics	1	1					2			4
Others		2		1		1				4
Subtotal	**2**	**3**	**4**	**1**	**1**	**10**	**5**	**1**	**1**	**28**

Asia Digital Transformation (ADX) projects(2022) Selected Projects

Medical / Nursing

Company Name	Project Country	Company Size	Project Name
FUJIFILM Corporation	Thailand	Large	Demonstration project related to the construction of a gastrointestinal cancer diagnostic platform in Thailand
gsport, inc.	Thailand	Small/medium	Project for the online multilingual platform of physical functions assessment for care prevention DX
Kao Corporation	Thailand	Large	The Project to build the prediction model of mosquito-born virus spread by using AI technology and improve the forecast system as UX for preventing dengue fever cases in Thailand
Melody International Ltd.	Thailand	Small/medium	Development of a platform for improving the prenatal checkup rate in rural Thailand using mobile fetal monitors
Suncreer Co,. Ltd.	Malaysia Singapore	Small/medium	Development and implementation of privacy-conscious high-precision watchdog using AI and non-contact sensing
TXP Medical Co. Ltd.	Malaysia	Small/medium	DX Demonstration Project in Emergency Medicine at Tertiary Care Hospitals in Malaysia
Well Consul. Co., Ltd.	Malaysia	Small/medium	Demonstration project of home care support utilizing IoT / AI in Malaysia

Environment/Energy

Company Name	Project Country	Company Size	Project Name
Energy Solutions Inc.	Malaysia	Small/medium	Demonstration of smart security (Drones & AI) to achieve carbon neutrality
Harada Vehicle Design Co., Ltd.	Thailand	Small/medium	Project of Marine Debris Tracking System in Thailand
Naturanix Co., Ltd.	Thailand	Small/medium	Development & demonstration of a data platform for next-generation rapid charging system that enables electric motorcycles to be charged within a few minutes in Bangkok, Thailand.
Nomura Research Institute, Ltd.	Thailand	Large	Introduction demonstration of SCOPE3 data sharing solution (NRI-CTS) in the ASEAN region

Tourism

Company Name	Project Country	Company Size	Project Name
Kotozna, Inc.	Indonesia ASEAN	Small/medium	PoC for middleware between hotel business applications and Property Management Systems (PMS) for the travel industry in Indonesia.
NITA CONSULTANT Co.Ltd	Thailand	Small/medium	Development and implementation of DX promotion tools for Tourism SC (Supply Chain) resilience considering the risk of natural disasters.

Education/Human resources

Company Name	Project Country	Company Size	Project Name
Gakken Holdings Co., Ltd.	Vietnam	Large	Individualized childcare service and C2C matching platform(PF) business in Vietnam
GLODAL, Inc.	Thailand	Small/medium	Services on HRD of AI for space utilization to accelerate digital industries in Thailand
TOY EIGHT HOLDINGS Inc.	Malaysia	Small/medium	Early Childhood Education Digital Transformation Data System Enhancement for Post Covid-19 learning Project

Construction

Company Name	Project Country	Company Size	Project Name
KOBELCO ECO-SOLUTIONS CO., LTD.	Cambodia	Large	Demonstration for optimizing water supply business through DX promotion using digitalization system in Cambodia
Obayashi Corporation	Singapore	Large	Demonstration project of drone electromagnetic survey (geophysical survey) in Singapore

Mobility

Company Name	Project Country	Company Size	Project Name
Murata Manufacturing Co., Ltd.	Vietnam	Large	POC project on IoT platform implementation for real-time traffic monitoring
WILLER Inc	Vietnam	Small/medium	Digital Transformation of the platform for passenger and cargo transportation (mixed freight/passenger) at the Southern Intercity Bus Terminal in Hanoi, Vietnam.

Logistics

Company Name	Project Country	Company Size	Project Name
AEON MALL Co., Ltd.	Cambodia	Large	Promotion of economic revitalization by creating an EC platform scheme in the Kingdom of Cambodia
NAGASE & CO., LTD.	Vietnam	Large	Project for the reduction of greenhouse gas emissions by improving distribution efficiency using DX in Vietnam
Nippon Koei Co., Ltd.	Vietnam	Large	Project for establishment of a distribution system for safe vegetables in Vietnam
SENRI Ltd	Indonesia	Small/medium	Project of AI order management for distribution optimization of FMCG industry in Indonesia

Others

Company Name	Project Country	Company Size	Project Name
AI inside Inc.	Thailand	Large	Development and introduction of AI-OCR contributing to business automation in Thailand
LONG TERM INDUSTRIAL DEVELOPMENT CO., LTD.	Philippines	Small/medium	New AI Driven Agriculture Machine Finance
Regional Fish Institute, Ltd.	Indonesia	Small/medium	Project of Introducing Genome Editing Breed Improvement on Aquaculture Scene in Indonesia
Scala, Inc.	Indonesia	Large	Digital agricultural cooperative platform centered on credit scoring for farmers

Medical / Nursing

FUJIFILM Corporation

FUJIFILM

- Address: Minato-ku, Tokyo
- Employees: 36,279 (consolidated)
- Established in 1934
- Business: Providing products and services related to healthcare, materials, and imaging

https://www.fujifilm.com

Outline of the demonstration project

- Demonstration project related to the construction of a gastrointestinal cancer diagnostic platform in Thailand

Cooperation with local companies/governments

- Local Partners: Thai Association for Gastrointestinal Endoscopy (TAGE), J.F. Advance Med, Science Engineer International, K Performance
- Details of cooperation and collaboration: Pilot study and roadmap development for building a diagnostic PF

Targeted economic/social issues

- In Thailand, there is a growing need for endoscopic diagnosis and treatment, but due to the shortage and maldistribution of specialists and inefficient clinical workflows, efficient diagnosis and treatment are not possible.

Details of demonstration

- In collaboration with TAGE, the Ministry of Health, etc., we organize a project team related to the construction and operation of a diagnostic platform.
- Utilizing endoscopes and IT systems, we build a PF that enables sharing and analyzing of case and medical data, while reducing the workload of endoscopists.
- A pilot study is conducted at a local hospital to verify the effectiveness of workflow improvement and data sharing/analysis.

Expected outcome of beneficiary effects

- Achieve efficient medical care, and contribute to early detection and treatment of gastrointestinal cancer, and reduce mortality
- Through the utilization of medical data, it is possible to make policy proposals and train endoscopists to improve cancer treatment.

gsport, inc.

ジースポート
Healthcare IT & Services

- Address: 2-2-17 Sotokanda, Chiyoda-ku, Tokyo
- Employees: 10
- Established in 2000
- Business: Software R&D and global distribution

https://www.gsport.co.jp/en/

Outline of the demonstration project

- Project for the online multilingual platform of physical functions assessment for care prevention DX

Cooperation with local companies/governments

- Local partners: Hitachi High-Tech (Thailand) Ltd.
  Healthcare Workshop Co., Ltd.
- Details of cooperation and collaboration:
  Market research and technology & know-how transfer of the proposed platform through trials

Targeted economic/social issues

- Thailand's population is aging rapidly, with per capita health care costs increasing from US$152 in 2008 to US$276 in 2018 (WHO 2021).
- The Second National Plan for the Elderly has identified the urgent need for long-term care prevention, which encourages citizens to prepare for aging.

Details of demonstration

- Develop a multilingual platform for online posture and movement assessments and exercise guidance for Dxing of care prevention to reduce the burden on instructors at senior centers and rehabilitation centers at a low cost.
- Conduct market research and trials of the above platform with long-term care prevention facilities operated by municipalities and/or private companies.

Expected outcome of beneficiary effects

- Contribute to mid- to long-term policies for the elderly by spreading the importance and necessity of long-term care prevention in Thailand.
- Confirmation of regulations related to the promotion of this project, discovery of potential bottleneck issues, and their application in other fields such as product development.
- Deploy the results of this project in Thailand to other ASEAN countries with similar aging populations.

Kao Corporation

- Address: Chuo-ku Tokyo, Japan
- Employees: 8,505
- Established in 1887
- Business: Manufacturing Industry

https://www.kao.com/global/en

Outline of the demonstration project

The Project to build the prediction model of mosquito-born virus spread by using AI technology and improve the forecast system as UX for preventing dengue fever cases in Thailand

Cooperation with local companies/governments

■Local partners:

・DDC Department of disease control under Ministry of Public Health

・NECTEC National Electronics and Computer Technology Center

■Details of cooperation and collaboration:

Construction of a prediction system for dengue fever sources and provision of informing to consumers

Targeted economic/social issues

■ While facing COVID-19 pandemic, dealing with dengue virus in tropical regions is also an urgent issue. The number of people infected with dengue fever in Thailand is 50,000 to 150,000 every year. High-risk areas include densely populated Bangkok and its surrounding areas, and industrial areas. Also, school children between the ages of 4 and 15 are the most commonly infected. Avoiding health and physical risks of young people and in urban areas contributes not only to the foundation of stable economic growth, but also to the realization of a healthy and sustainable society. In addition, dengue fever is a common issue among ASEAN countries, and solving social issues has a great ripple effect.

Details of demonstration

■ Build an early and accurate prediction model of the spread of dengue fever via mosquitoes through the analysis of the dengue fever cases from DDC and the acquisition/AI analysis of monitoring information on dengue virus prevalence in mosquitoes.

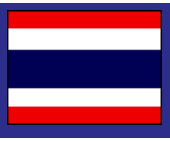
■ In order to inform consumers about the risk of dengue fever through communities such as hospitals and schools and encourage preventive actions, establish and install a high UI/UX forecast system in collaboration with NECTEC, which develops and operates an application that provides information on affected persons data to consumers.

Expected outcome of beneficiary effects

■ Reduction in the number of dengue fever cases by improving risk awareness and preventive behavior, reduction of Thai government's dengue fever countermeasure costs, and awareness-raising in ASEAN countries, etc.

■ Contribution to the market expansion/creation with the increase of usage/frequency of repellents by raising awareness of preventive behavior (secondary effect).

Melody International Ltd.



Melody International

- Address: Takamatsu, Kagawa 761-0301 JAPAN
- Employees: 19
- Established in 2015
- Business: Manufacture, development, and sale of telemedicine service platforms and medical devices

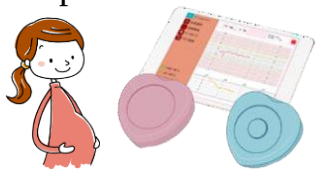
https://www.melodyi.net/

Outline of the demonstration project

- Development of a platform for improving the prenatal checkup rate in rural Thailand using mobile fetal monitors

Cooperation with local companies/governments

- Local partner: CHIANG RAI PROVINCIAL PUBLIC HEALTH OFFICE (“MOPH”)
- Details of cooperation and collaboration: Establishment of a platform that contributes to improving the rate of prenatal checkups using fetal monitoring for the purpose of promoting DX in the field of perinatal care, and on-site operational support and verification.



Targeted economic/social issues

- The prenatal checkup rate in Chiang Rai Province has been declining, and according to a survey by the local Ministry of Health, only about half of pregnant women have received a checkup at least once by 12 weeks of pregnancy.
- Furthermore, only 7.2% of pregnant women received a total of 5 prenatal checkups (the standard in Japan is 14) by 2022, indicating that poor access to checkups is contributing to the worsening perinatal mortality rate.

Details of demonstration

- By using iCTG, a highly portable delivery monitoring device compared to conventional ones, fetal monitoring can be widely conducted even in rural areas where there are no specialist doctors, making it possible for midwives and nurses to determine which expectant mothers require medical intervention based on their measurements, which will lead to a safe and secure delivery.

Expected outcome of beneficiary effects

- In the future, by promoting the use of inexpensive iCTG, we can expect new introductions of the device at clinics that are currently unable to install such equipment due to its high cost, thereby expanding the market and raising the level of quality of medical care.

Suncreer Co,. Ltd.

SUN CREER

- Address: Sapporo City
- Employees: 30
- Established in 1989
- Business: Software development

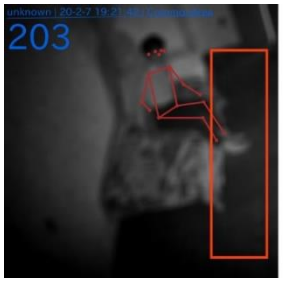
https://www.suncreer.co.jp/

Outline of the demonstration project

- Development and implementation of privacy-conscious high-precision watchdog using AI and non-contact sensing

Cooperation with local companies/governments

- Local Partner: Glueck Technologies
- Details of cooperation and collaboration:
  Development of a platform and smartphone apps for notification reference, introduction of local care facilities



Privacy-conscious monitoring system

smartNexus®care

Targeted economic/social issues

- ASEAN countries are rapidly aging.
- Elderly population is expected to exceed 100 million by around 2040 in ASEAN countries.
- Number of caregivers has not kept pacel
- Digitalization has not progressed.
- Promotion of remote sensing is needed.

Details of demonstration

- Privacy-conscious monitoring by recording skeletal seating chart (international patent pending)
- Real-time detection of vital information by non-contact sensing
- Real-time detection by environmental sensing (Heat stroke prevention)
- 24-hour monitoring

Expected outcome of beneficiary effects

- Privacy-conscious high-precision 24-hour monitoring
- Immediate SNS alert to medical institutions
- Expansion to private homes (home care)
- Expansion to ASEAN countries is also expected.
- Contributing to solving issues in Japan by addressing home care

TXP Medical Co. Ltd.

- Address: Chiyoda-ku, Tokyo
- Employees: 47
- Established: 2017
- Business: Development of information management systems related to medical care, etc.

https://txpmedical.jp/

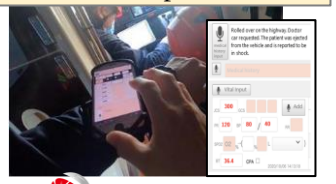
Outline of the demonstration project

- DX Demonstration Project in Emergency Medicine at Tertiary Care Hospitals in Malaysia

Cooperation with local companies/governments

- Potential Local Partners:Universiti Sains Malaysia Hospital, Malayan National University Hospital and University Malaya Medical Center
  In discussion with 3 other hospitals
- Details of Cooperation and Collaboration:
  On-site operational verification to strengthen the pre-hospital and in-hospital emergency care system and improve the quality of medical care in Malaysia.

Pre-hospital



In-hospital

Targeted economic/social issues

- Workload of Documentation in the medical field
- Paper documents are still the main means of information sharing in the emergency department and pre-hospital emergency services, imposing a significant workload on medical staff (equivalent to about 50% of their work time).

Details of demonstration

- Reduce workload by introducing an information system specialized for emergency medical services
- Reduce the burden of documentation work and contribute to strengthening the emergency medical care system and improving the quality of medical care in the country by introducing our system.

Expected outcome of beneficiary effects

- Improve the quality of emergency medical care as a whole through the increased opportunities to treat difficult cases.
- Effects of providing an appropriate emergency medical care system on human resource development of medical personnel
- Improve the possibility of developing other medical peripheral services (such as acute phase clinical trial services for pharmaceutical companies, and services in the field of oncology, which we have already developed in Japan).

Well Consul. Co., Ltd.

- Address: Nara City, Nara Pref.
- Employees: 371
- Established in 2001
- Business: Long-term care facility management, medical long-term care consulting

http://www.wellgroup.jp/

Outline of the demonstration project

- Demonstration project of home care support utilizing IoT / AI in Malaysia

Cooperation with local companies/governments

- Local Partner: KL WELLNESS CITY SDN. BHD
- Details of Cooperation and Collaboration:

Local adaptation of health management system and demonstration to medical institutions/home patients in local medical towns.

Targeted economic/social issues

- Although many elderly people and patients with lifestyle-related diseases prefer home care, daily health care and preventive services which support them have not been established in Malaysia.
- The local government encourages IT healthcare services, but they are used only in limited areas such as in hospitals.

Details of demonstration

- We demonstrate our original system with IoT health data measurement, ICT connected to medical institutions, and AI health risk management.
- We introduce our system to people receiving care at home so that local medical institutions can observe their health situation, thereby building a medical and long-term care service infrastructure.

Expected outcome of beneficiary effects

- We can provide appropriate medical care and long-term care tailored to individual patients, and realize monitoring at home and improvement of care quality.
- Since it can be used as a platform for healthcare DX, it will contribute to the expansion of the entire market as well as new development of IT service.

Environment/Energy

Energy Solutions Inc.

- Address: Chiyoda-ku, Tokyo
- Employees: 37
- Established in 2010
- Business: Renewable Energy Solutions, Energy Management Solutions, System Development

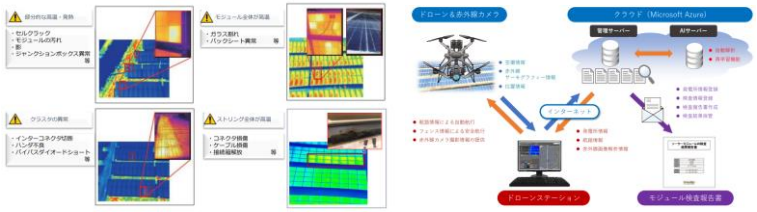
http://www.energy-itsol.com/e/index.html

Outline of the demonstration project

- Demonstration of smart security (Drones & AI) to achieve carbon neutrality

Cooperation with local companies/governments

- Local partners:
  Selangor Human Resource Development Centre (SHRDC), The Malaysian Photovoltaic Industry Association (MPiA), and TK International Sdn. Bhd.
- Details of cooperation and collaboration:
  (1) Demonstration of solar module infrared inspection by drone (2) Opening of on-site training program (3) Establishment of drone eye partner system



Targeted economic/social issues

- The Malaysian government has declared its goal to achieve carbon neutrality by 2050 and is promoting the construction of large-scale solar (LSS) power generation facilities, but if defects in the solar panels are left unchecked, the planned amount of electricity generation will not be achieved. Maintenance and inspections associated with the LSS expansion plan are an urgent issue.

Details of demonstration

- Develop and deploy “Drone Eye”, a drone & AI solar module infrared inspection service, in Malaysia, and verify solar O&M cost reduction at the same level as in Japan.
- Also, training for Malaysian solar O&M operators is conducted to deploy Drone Eye Partner System.

Expected outcome of beneficiary effects

- The system can complete an infrared inspection of a 2 MW solar farm in about 10 minutes, instead of the 2 days required for a ground-based inspection, reducing the inspection time to about 1/100.
- The planned amount of electricity can be secured through the appropriate long-term generation of electricity from solar power generation facilities and the introduction of smart security.

Harada Vehicle Design Co., Ltd.

- Address: Miyoshi-shi, Aichi Prefecture
- Employees: 100 people
- Established in 1998
- Business: Manufacturing Solution Provider

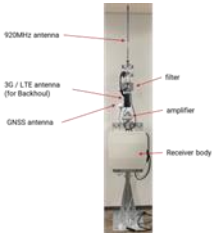
https://www.hvd.co.jp/

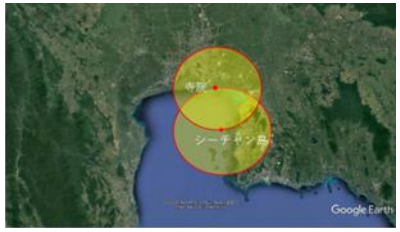
Outline of the demonstration project

- Project of Marine Debris Tracking System in Thailand

Cooperation with local companies/governments

- Local Partner: Asia Technology Industry Co., Ltd.
- Details of Cooperation and Collaboration: Establishment of demonstration system and carrying out the experiment. Building a cooperative relationship with the local government and Chulalongkorn University.





Targeted economic/social issues

- It is estimated that about 8 million tons of marine plastic waste is discharged every year, with about 30% of this coming from Southeast Asian countries. In Thailand, use LPWA (Low Power Wide Area - low power consumption and long-distance communication) to track and collect garbage.

Details of demonstration

- The unique and differentiating features of the products and services developed in this project are the inexpensive public network service developed by Sony that utilizes GNSS, and the connection of various devices over a wide area.
- Efficient survey and collection of marine debris is realized by releasing drifting PET bottles loaded with GNSS receivers and LPWAs from rivers to grasp the inflow routes, drifting/casting ashore and the abundance of marine plastic waste within a 100 km radius.

Expected outcome of beneficiary effects

- If the demonstration experiment confirms its effectiveness, it will open up a new business market for collecting marine plastic litter in Thailand and other ASEAN countries. It is expected to spread by providing low-cost services.

Naturanix Co., Ltd.

- Address: Sumida-ku, Tokyo
- Employees: 5
- Established in 2015
- Business: Development and sales of electric parts for e-mobility

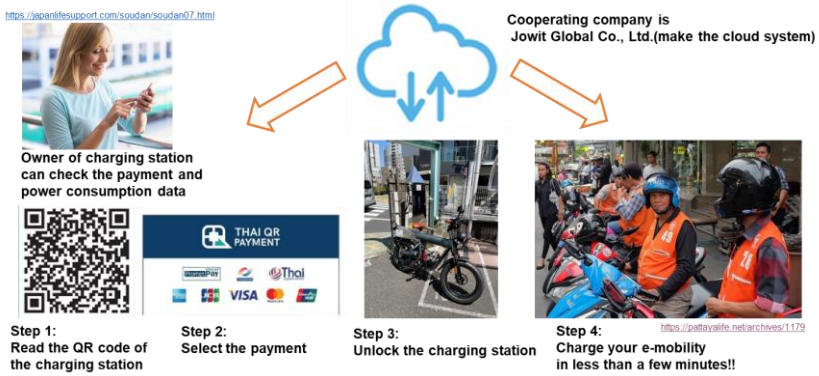
https://naturanix.co.jp/

Outline of the demonstration project

- Development & demonstration of a data platform for next-generation rapid charging system that enables electric motorcycles to be charged within a few minutes in Bangkok, Thailand.

Cooperation with local companies/governments

- Local Partner: Jowit Global Co., Ltd.
- Details of cooperation and collaboration: Local support, development partner



Targeted economic/social issues

- The number of registered motorcycles in Bangkok exceeds 20 million for a total population of about 68 million, and the percentage of households owning motorcycles is the highest in the world in 2019.
- There is an urgent need to electrify motorcycles in order to reduce CO2 emissions.

Details of demonstration

- From April 2022, we will demonstrate the reduction of charging time for electric motorcycles using our battery packs and charging stations that can be fully charged in a few minutes, which we have started demonstrating in Sumida-ku, Tokyo.
- By managing the charging reservations at charging stations in the cloud, the power required for charging is stored in the batteries at the charging station in advance, reducing the load on the wiring network. We aim to promote the electric motorcycle infrastructure business.

Expected outcome of beneficiary effects

- Spread of electric motorcycles in ASEAN countries, enabling the calculation of the amount of CO2 reduction.
- Equalization of the power load on the grid due to the high power consumption of quick-charging stations.
- Promotion of the spread of electric motorcycles even in areas where electricity is unstable without a power distribution network.

Nomura Research Institute, Ltd.

NRI
Nomura Research Institute

- Address: Chiyoda-ku, Tokyo
- Employees: 6,488
- Established in 1965
- Business: Consulting & IT Solutions

https://www.nri.com/en

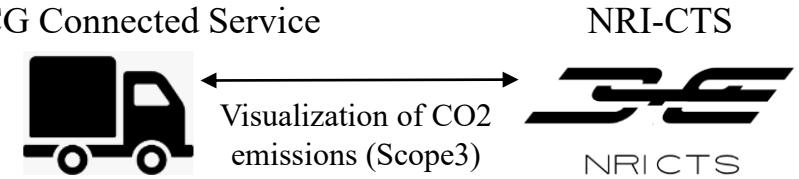
Outline of the demonstration project

■ Introduction demonstration of SCOPE3 data sharing solution (NRI-CTS) in the ASEAN region

Cooperation with local companies/governments

■ Local partner:
SCG LOGISTICS MANAGEMENT CO., LTD.

■ Details of cooperation and collaboration:
Visualization of CO2 emissions (Scope 3) from trucks using data from SCG Logistics Management's Connected Service on NRI's carbon tracking system.



Targeted economic/social issues

■ Thailand plans to achieve "Carbon Neutrality by 2050" based on the bio-circulation green (BCG) economic model. For this goal, in the transportation sector where CO2 emissions are high, small and medium sized logistics companies have to grasp their CO2 emissions, which is a big burden for them and needs to be reduced.

Details of demonstration

■ In order to reduce the work for CO2 emission reporting by small and medium sized logistics companies in Thailand, NRI-CTS and SCG Logistics Management's Connected Service will be linked each other. This combined solution will apply for logistics companies.

Expected outcome of beneficiary effects

■ This combined solution is expected to reduce the work required for visualizing CO2 emissions in the manufacturing supply chain ASEAN.
NRI-CTS from Japan will be able to contribute to carbon neutralization of manufacturing sector in ASEAN.

Tourism

Kotozna, Inc.

- Address: Metlife Moto-Akasaka WEST 1F, 1-7-20 Motoakasaka, Minato-ku, Tokyo 107-0051 Japan
- Employees: 25
- Established in 2016
- Business: Development of multi-lingual communication services

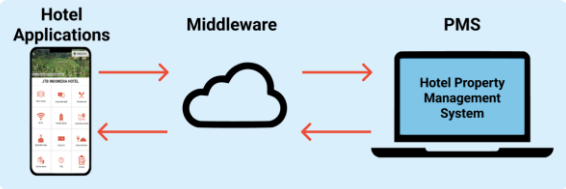
https://kotozna.com/en

Outline of the demonstration project

- PoC for middleware between hotel business applications and Property Management Systems (PMS) for the travel industry in Indonesia.

Cooperation with local companies/governments

- Local Partners:
  Artotel Group: Hospitality business in Indonesia
  JTB Pte Ltd / JTB Asia Pacific Headquarters
- Details of Cooperation and Collaboration:
  Artotel Group: Providing a venue for data linkage PoC
  JTB Pte Ltd / JTB Asia Pacific Headquarters: Introducing potential hotels in ASEAN region as PoC for this project



Targeted economic/social issues

- Preparing for post-COVID-19 operations, productivity improvement is an urgent issue as labor shortage has become apparent in accommodation facilities.
- Lack of common API due to different PMS specifications
- Diversified hotel business apps and lack of PMS linkage hinder productivity improvement in hotel operations.

Details of demonstration

- Development of middleware to standardize APIs of PMS, which simplifies the PMS integration with business systems.
- Horizontal development in a variety of PMS/hotel business apps after building a small-scale middleware.
- With the proven record that we developed middleware for PMS integration in Japan in 2020 with JTB, we can develop a system tailored to Indonesia.

Expected outcome of beneficiary effects

- Improved productivity in hotel operations
- Improved productivity in the development of PMS and hotel business apps.
- Improved customer service for hotel guests
- Expected to develop horizontally and expand sales to hotel and tourism operators throughout ASEAN.

NITA CONSULTANT Co.Ltd

- Address: Tokushima Pref.
- Employees: 133 persons
- Established in 1954
- Business: Construction consultant

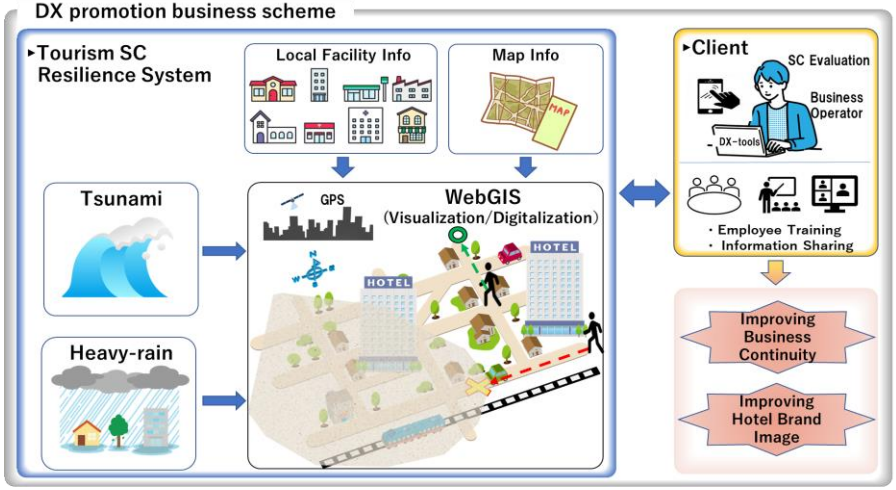
https://www.nita.co.jp/company/profile/

Outline of the demonstration project

- Development and implementation of DX promotion tools for Tourism SC (Supply Chain) resilience considering the risk of natural disasters.

Cooperation with local companies

- Local partner: TK9 Engineering Co., Ltd.
- Details of cooperation and collaboration:
  A local agent working for information gathering, translation, interviews, business development, etc.



Targeted economic/social issues

- Reduction of indirect damage such as reduced hotel occupancy rates after a tsunami or heavy rain inundation.
- Improvement of the tourism SC resilience through a clear evacuation system and emergency response training.
- Visualization and digitalization of inundation risk is an urgent task as a solution.

Details of demonstration

- Analise inundation from tsunami/heavy rain and display the maximum inundation area and depth in digital data.
- Visualize inundation risk by superimposing inundation range and inundation depth distribution on WebGIS with local facility information.
- Develop a detection tool for vulnerable parts of the Tourism SC that can be used to study countermeasures and share risks.

Expected outcome of beneficiary effects

- Provide more comprehensive Tourism SC resilience system through optional services by request and maintenance service such as updating information.
- Expected to develop as a phase-free platform that can be used not only for disaster response but also for everyday use.
- Improving the hotel's brand in terms of safety against natural disasters.

Education/
Human resources

Gakken Holdings Co., Ltd.

- Address: 2-11-8 Nishigotanda, Shinagawa-ku, Tokyo
- Employees: 13,296
- Established in 1947
- Business: Education, Medical and welfare services

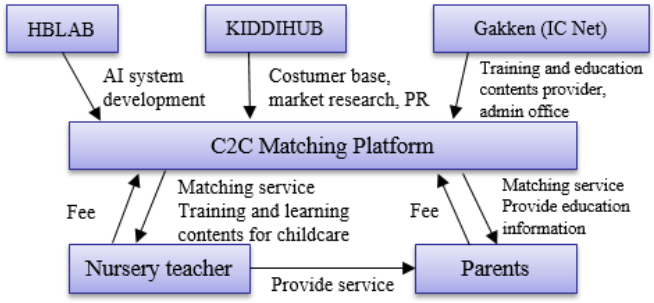
https://ghd.gakken.co.jp/english/

Outline of the demonstration project

- Individualized childcare service and C2C matching platform(PF) business in Vietnam

Cooperation with local companies/governments

- Local Partners: KIDDIHUB and HBLAB
- Details of cooperation and collaboration: Platform development etc.



Business scheme

Gakken's nursery contents

Targeted economic/social issues

- Although the demand for individualized childcare is high in Vietnam, there are issues such as a lack of affordable and appropriate services, a shortage of nursery teachers, and a high hurdle for nursery skill development. Our C2C matching business is expected to solve this problem..

Details of demonstration

- C2C business keeps intermediate costs down so that more people can use the service at an affordable price.
- Unlike other services that have only a matching function, contents used in individual childcare and how to use them are provided free of charge (partly charged) to nursery teachers on the PF as a training program.
- In addition to the information on nursery teachers and parents, children's nursery data is accumulated, and programs that tailored to each child based on the growth records are also provided through the PF.

Expected outcome of beneficiary effects

- Lower fees make it available to a wider range of people.
- Reduced intermediate fees improve the teachers' income.
- Contribute to the creation of a sound business environment by communicating the matching results and high-quality services.
- The findings in this project can contribute to improving the business environment in Vietnamese education industry.

GLODAL, Inc.

GLODAL

- Address: Yokohama, Kanagawa
- Employees: 1 with 17 overseas contractors
- Established in July 2020
- Business: R&D, HRD, and consultation on AI

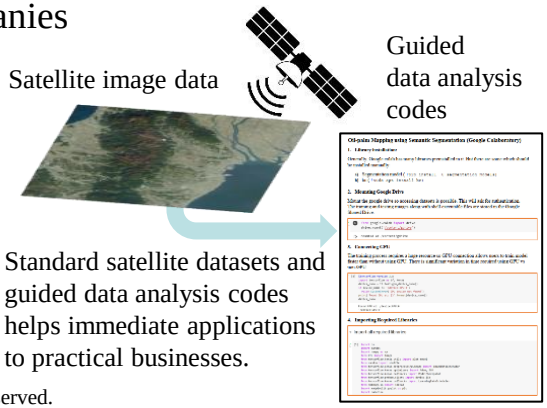
https://glodal-inc.com/en/

Outline of the demonstration project

- Services on HRD of AI for space utilization to accelerate digital industries in Thailand.

Cooperation with local companies/governments

- Local Partner: PASCO (Thailand) Co., Ltd.
- Details of Cooperation and Collaboration: Provision of HRD programs for AI to local government agencies and private companies



Standard satellite datasets and guided data analysis codes helps immediate applications to practical businesses.

Targeted economic/social issues

- Although the Thai government focuses on digital industry, the opportunities to learn core AI technologies are limited, delaying the expansion of the base.
- While Japan-Thailand cooperation is accelerated, there is a lack of HR in the field of satellite data applications.

Details of demonstration

- Demonstration of HRD programs on AI for space utilization finely designed in line with client operations, which helps minimizing learning costs.
- Designing of HRD programs with technical specifications finely tuned based on our experience of R&D and HRD for satellite data utilization in a wide range of fields, including urban planning, disaster prevention, logistics, tourism, and agriculture.
- Demonstration of HRD programs at the Land Development Department (LDD) of the Thai government and perform marketing activities for potential customers in Thailand.

Expected outcome of beneficiary effects

- Enhancement of AI human resources in Thai industries to promote DX and improve productivity.
- Japan-Thailand cooperation to integrate space industries from satellite manufacturing to data utilization.
- Promotion of regional capacity development to achieve economic growth where no one is left behind in DX.

TOY EIGHT HOLDINGS Inc.

TOY ∞ EIGHT

- Address: Shinagawa-ku, Tokyo
- Employees: 24 (including a Malaysian subsidiary)
- Established in: May, 2020
- Business: EdTech

https://www.toyeight.com/

Outline of the demonstration project

■ Early Childhood Education Digital Transformation Data System Enhancement for Post Covid-19 learning Project

Cooperation with local companies/governments

■ Local Partner:
National Child Research Development Centre

■ Details of Cooperation and Collaboration:
Linkage between NCDC database and the TOY8 system.

Targeted economic/social issues

■ Education DX is one of the priority policies of the Malaysian government. On the other hand, the digital infrastructure of early childhood education has not been upgraded since 2017, and the existing database has lost substance as the collection of fundamental data is insufficient due to the lack of an observation basis of developmental assessment system in place.

Details of demonstration

■ Developmental screening of 3-5 years old will be conducted using a system developed by TOY8 in collaboration with the University of Malaya and Sunway University. The acquired data will be jointly analyzed with the National Data Centre to enhance the existing assessment system.

Expected outcome of beneficiary effects

■ The World Bank estimates, Malaysia has had one of the highest learning losses among developing Asian nations. The implementation of TOY8 screening is expected to significantly reduce losses by understanding the current growth level. In addition, it has been shown that the cost of a screening itself can be reduced to less than a quarter of the current cost.

Construction

KOBELCO ECO-SOLUTIONS CO., LTD.

- Address: Chuo-ku, Kobe
- Employees: 2,912
- Established in 1954
- Business: Engineering of environmental facilities

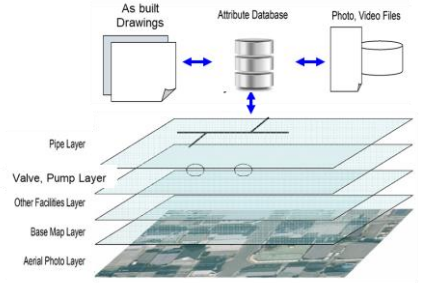
https://www.kobelco-eco.co.jp/english/

Outline of the demonstration project

- Demonstration for optimizing water supply business through DX promotion using digitalization system in Cambodia

Cooperation with local companies/governments

- Local partner: Kampong Thom Water Supply
- Details of cooperation and collaboration:
  Demonstration of digitalization system to be carried out in the local partner's water treatment facility.



Targeted economic/social issues

- National Strategy "100% urban water supply coverage by 2025"
- 13 public and over 300 private water supply entities exist.
- Increasing demand for renewal of aging water supply facilities in the future.
- Inefficient management of water utilities.

Details of demonstration

- Improvement of water supply management from the viewpoint of hardware, software and services by applying the following feasible digitalization system to the local partner's water facility.
  - Data management system using GIS
  - IoT data collection system using instruments
  - Water leakage detection system
  - Smart water meter reading and tariff collection system
  - Remote monitoring and advisory services
- Kobelco Eco Solutions Co., Ltd., Kitakyushu Water Service Co., Ltd. and Nihon Suido Consultants Co., Ltd. organize a consortium and carry out this project jointly.

Expected outcome of beneficiary effects

- Reduction of non-revenue water ratio, electricity consumption, labor costs, and administrative costs, as well as improvement of human resource capacity are expected.
- Utilization of data for water supply operation planning
- Improvement of water tariff collection

Obayashi Corporation

- Address: Tokyo, Japan
- Employees: 9,026
- Established in: Dec. 1936
- Business: General Contractor

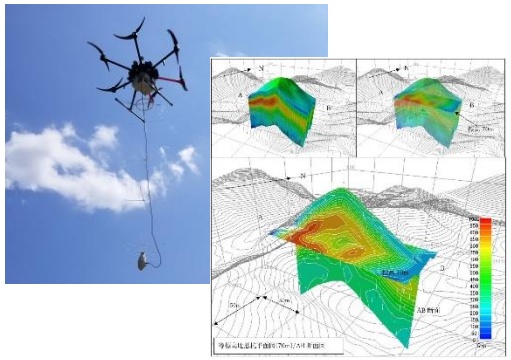
https://www.obayashi.co.jp/en/

Outline of the demonstration project

- Demonstration project of drone electromagnetic survey (geophysical survey) in Singapore

Cooperation with local companies/governments

- Local Partner: EASEPECT
- Details of cooperation and collaboration: Conduct of drone operation certified and approved by local authority, providing equipment, certified drone operators and project management of the operation in Singapore. Assisting data processing for 3D plotting.



Targeted economic/social issues

- In the ASEAN region, there are some cases where the geophysical investigations that form the basis of construction projects are not sufficiently executed, or the quality of the investigations is inferior. Lack of ground information can bring about unknown construction risks.

Details of demonstration

- The project will promote improvements in the quantity and quality of geophysical investigations by deploying airborne electromagnetic surveys by drone, recently developed in Japan, to the ASEAN region.
- Even in areas where access is difficult, geophysical survey can be carried out quickly and easily by drone.
- Airborne electromagnetic surveys provide continuous three-dimensional digital data.

Expected outcome of beneficiary effects

- The introduction of drone-based electromagnetic survey is expected to improve the quantity and quality of geophysical investigations. Furthermore, as an improvement of the construction industry as a whole, it is expected to reduce construction risks due to the poor quality of the geophysical investigation and to reduce environmental impact compared to geophysical surveys.

Mobility

Murata Manufacturing Co., Ltd.

- Address: Nagaokakyo-shi, Kyoto
- Employees: 9,771
- Established in 1950
- Business: Research, production and sales of electronic devices

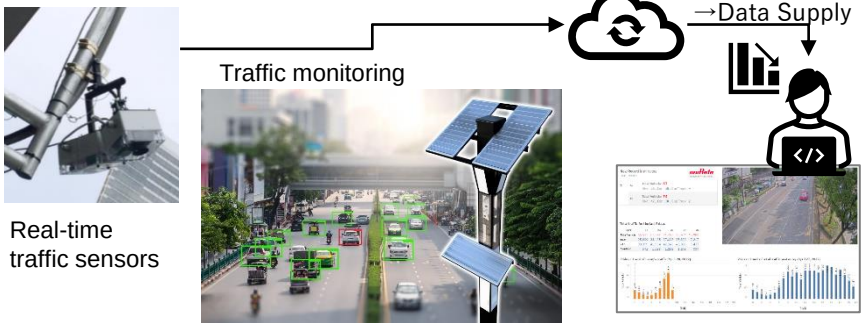
https://www.murata.com/

Outline of the demonstration project

- POC project on IoT platform implementation for real-time traffic monitoring

Cooperation with local companies/governments

- Local partners: NIINUMA VIETNAM CO., LTD.
- Details of cooperation and collaboration: Installation work and co-evaluation of system



Targeted economic/social issues

- Vietnam suffers from air pollution and economic losses (about $1B a year in Hanoi) caused by urban traffic congestion.
- Since DX in the mobility and logistics sector is a priority area for the Vietnamese government, there is a strong need to collect accurate traffic data as a basis for DX.

Details of demonstration

- Conducting fixed-point observations of traffic data, we evaluate usefulness of real-time high-resolution traffic data and identify issues in our system development for its penetration in Vietnam
- Starting with a proven system in Indonesia, we develop a system that can acquire more accurate data to suite local traffic conditions.
- In collaboration with a company who has experience in street-lighting installation in Hanoi, we develop a system that can be installed in a short period of time and at low cost.

Expected outcome of beneficiary effects

- High-resolution field data is expected to be used for advanced applications in various industries such as road and transportation administration, logistics and mobility.
- The market is expected to expand through the establishment of global supply chain that will enable the sale of data overseas.
- Local enterprises and industries are expected to grow with O&M business for the installed digital infrastructure.

WILLER Inc

WILLER

https://willers.com.sg/

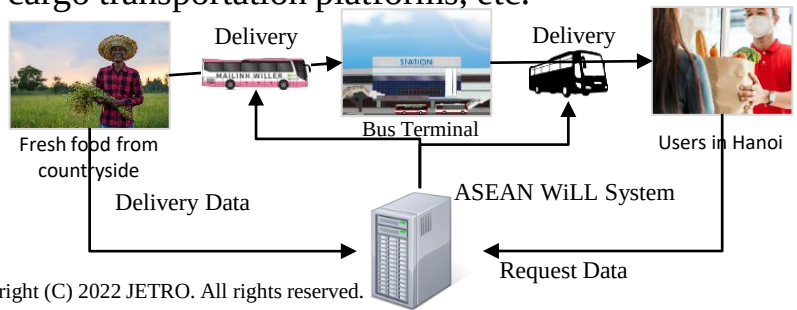
- Address: Osaka City, Osaka Prefecture
- Employees: 138
- Established in 2005
- Business: Development of mobility services with marketing and technology.

Outline of the demonstration project

- Digital Transformation of the platform for passenger and cargo transportation (mixed freight/passenger) at the Southern Intercity Bus Terminal in Hanoi, Vietnam.

Cooperation with local companies/governments

- Local Partners: Hanoi Southern Intercity Bus Terminal Operator (WEDICO) and others
- Details of Cooperation and Collaboration: Business cooperation and promotion for DX of passenger and cargo transportation platforms, etc.



Targeted economic/social issues

- In Vietnam, the demand for safe and fresh food is increasing as people's incomes rise, but much of the supply chain remains manual, and as a result, it is difficult to obtain desired foods and the logistic costs are high.
- In addition, transportation operators are under pressure due to Covid-19, making it difficult for them to continue their business with passenger transportation alone.

Details of demonstration

- ASEAN WiLL System developed by WILLER Group is introduced to build and operate a platform for passenger and cargo transportation centered on terminals.
- The data collected is used to provide users with a system that enables them to easily obtain safe, secure, and fresh food through clear transportation routes, and transportation operators with improved operational efficiency and profitability through freight consolidation and joint transportation.

Expected outcome of beneficiary effects

- The platform DX business modeled in this project is expected to be scalable by expanding to other businesses.
- By building a platform for passenger and freight transportation and utilizing data, it is possible to optimize vehicles and demand, routes and demand, ensure traceability of food, and optimize demand and supply.

Logistics

AEON MALL Co., Ltd.

- Address: Chiba City, Chiba Prefecture, JAPAN
- Employees: 5,338
- Established in November 1911
- Business: Development of large-scale shopping malls, tenant leasing and operation/management

https://www.aeonmallcambodia.com/

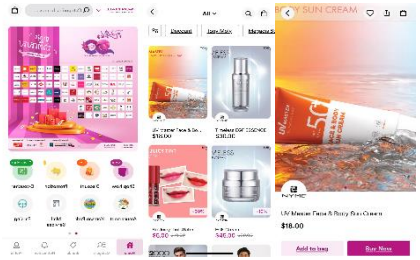
Outline of the demonstration project

■ Promotion of economic revitalization by creating an EC platform scheme in the Kingdom of Cambodia

Cooperation with local companies/governments

■ Local partner：COOLBEANS DIGITAL CO., LTD.
■ Details of cooperation and collaboration：Cooperation in the development of EC application system

Mobile APP conceptional drawing



CBW conceptional drawing

Targeted economic/social issues

■ In terms of its market size, there are almost no major EC platformers in Cambodia, making it difficult for foreign companies to start their business compared to other ASEAN countries, and the country's economic growth has hit a plateau.

Details of demonstration

■ Based on the brand power and experience cultivated through operation of commercial facilities, we develop the first EC platform capable of handling cross-border products in Cambodia with a local partner, offering a new lifestyle in the country where all kinds of products can be purchased online. At the same time, CBW in an international seaport is built in cooperation with the government, reducing the risks of companies entering the market and encouraging more active participation.

Expected outcome of beneficiary effects

■ Hurdles for starting new businesses in Cambodia will be reduced, and business opportunities will be expanded for companies that have already established operations as sales channels are expanded. In addition, by establishing our CBW scheme, it is expected to expand the EC market in the ASEAN region with Cambodia as its center, including Laos where the EC market has not been expanded, and attracting companies from neighboring countries.

NAGASE & CO., LTD.

NAGASE
NAGASE & CO.,LTD.

- Address : Chiyoda, Tokyo
- Employees : 7,113 (consolidated)
- Established in 1832
- Business : Trading Company

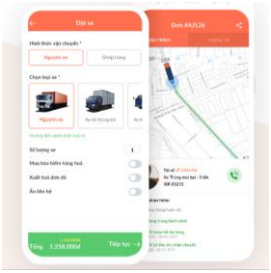
https://www.nagase.co.jp/english/

Outline of the demonstration project

Project for the reduction of greenhouse gas emissions by improving distribution efficiency using DX in Vietnam

Cooperation with local companies/governments

- Local partner: LOGIVAN VIETNAM TECHNOLOGY COMPANY, LTD.
- Details of cooperation : To visualize and reduce CO2 emissions by adding functions to LOGIVAN's DX logistics service and linking it with Zeroboard.



Targeted economic/social issues

- In Vietnam, the logistics infrastructure is inadequate, and it is said that the transportation industry accounts for about 20% of GDP.
- Many of the carriers are small-scale sole proprietors, with multiple layers of brokerage between them and customers, keeping the freight rates high, while the profits for the end carriers are small.
- Small-scale carriers manually issue transportation instructions, resulting in inefficient delivery and no digital logistics data.
- It is said that the CO2 emissions of corporate logistics in SCOPE3 are around 10%, and it is an urgent task for Vietnam to reduce them.

Details of demonstration

- Propose optimal logistics to customers by digitally connecting a large number of carriers and customers and digitizing logistics data.
- Aim to streamline logistics operations throughout the industry in the future.
- Reduction of greenhouse gas emissions through efficient delivery.

Expected outcome of beneficiary effects

- By linking with the system of Zeroboard (https://zeroboard.jp/), which Nagase & Co., Ltd. has a joint business with, the amount of greenhouse gas emissions and reductions can be visualized, boosting carbon neutrality for the entire industry.

Nippon Koei Co., Ltd.

- Address: Chiyoda-ku, Tokyo
- Employees: 2,537
- Established in 1946
- Business: Development, and engineering consulting and engineering evaluation services

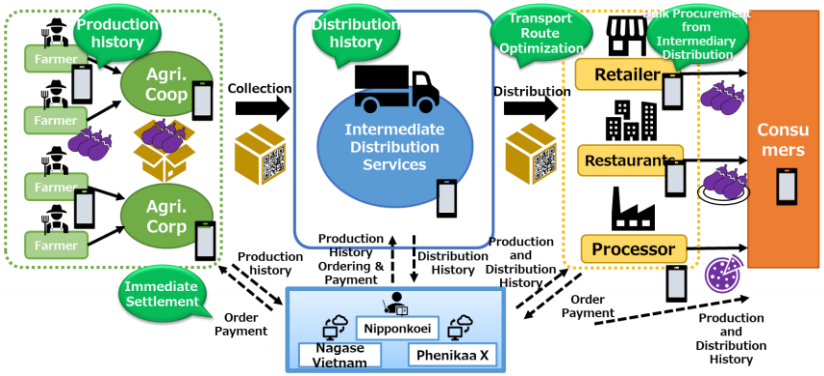
https://www.n-koei.co.jp/english/

Outline of the demonstration project

- Project for establishment of a distribution system for safe vegetables in Vietnam

Cooperation with local companies/governments

- Local Partners: Phenikaa X, Nagase Vietnam
- Details of Cooperation and Collaboration: Traceability system and application development



Targeted economic/social issues

- High consumer concern about food safety due to agricultural product safety issues.
- Food loss and increased procurement costs for distributors due to a complex multi-step distribution structure.
- Complicated payment procedures in cash between distributors and farmers.

Details of demonstration

- Ensure traceability of safe agricultural products through production and distribution management systems.
- Reduce procurement costs through bulk procurement from intermediary distributer services.
- Provide optimal transportation routes according to the delivery destination and time of day.
- Improve convenience by simplifying payments with online ordering and settlement systems.

Expected outcome of beneficiary effects

- Contribute to the creation of a platform, including common coding of agricultural products and standardization of traceability systems, for Vietnam's agricultural product distribution system.
- Contribute to the improvement of distribution efficiency and expansion of B-to-B business of safe agricultural products in Vietnam.

SENRI Ltd

- Address: Meguro-ku, Tokyo
- Employees: 7
- Established in 2015
- Business: Information technologies

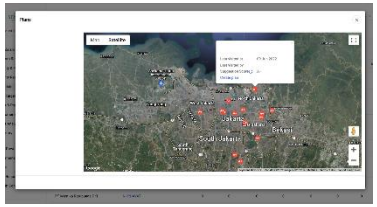
https://senriltd.com/

Outline of the demonstration project

- Project of AI order management for distribution optimization of FMCG industry in Indonesia

Cooperation with local companies/governments

- Local Partner：PT. Mustika Ratu (cosmetics manufacturer listed on the Indonesian Stock Exchange)
- Details of cooperation and collaboration：
  Provision of feedback of product usage and collection of data for monitoring and evaluation



Targeted economic/social issues

- In the Indonesian retail market, about 70% of sales are made through traditional trade, mainly kiosks. As a result, it is extremely difficult for manufacturers to build a distribution network and reach their customers.

Details of demonstration

- SENRI ltd has provided order management system “SENRI” mainly in African nations, and has developed demand projection AI based on data from 1 millions retail stores and 4 millions visits.
- Based on the AI algorithm above, this project aims to deploy AI algorithm for Indonesian retail market and optimize order and distribution system with local partners.

Expected outcome of beneficiary effects

- Increase productivity of local manufactures mainly in FMCG and facilitate growth with improved predictability of business.
- Activate traditional retail through the visualization of transaction Information of Warung (kiosks) and small and medium retailers.

Others

AI inside Inc.

AI inside

- Address: Shibuya-ku, Tokyo
- Employees: 116
- Established in 2015
- Business: Development and provision of artificial intelligence and related information services

https://inside.ai/en/

Outline of the demonstration project

- Development and introduction of AI-OCR contributing to business automation in Thailand

Cooperation with local companies/governments

- Local Partner: C.S.I. (THAILAND) COMPANY LIMITED
- Details of corporation and collaboration: Verification of the introduction of AI-OCR to end-users in Thailand.

DX Suite

Targeted economic/social issues

- If the country neglects efforts to upgrade its industrial structure and technological innovation, it will fall into the "middle-income country trap," which Thailand is already facing.
- In addition, the rapid aging of the population is expected to aggravate labor shortages, making the introduction of automated systems and measures for an aging society an urgent necessity.

Details of demonstration

- Promote the development and commercialization of AI-OCR which converts all kinds of information into digital data.
- Build an infrastructure based on local laws and business customs, including security, and create a foundation for market development, first targeting structured-type formats for automated business operations.
- Next, a highly versatile AI model will be developed for unstructured-type formats to achieve further business automation.

Expected outcome of beneficiary effects

- By automating labor-intensive data entry and other tasks, the project will encourage a shift to knowledge-intensive goods and services and contribute to the promotion of DX.
- Business scalability is also expected through linkage with PRA, ERP, accounting software, electronic medical records, and other business software, as well as expansion into other ASEAN countries.

LONG TERM INDUSTRIAL DEVELOPMENT CO., LTD.

- Address: 2-24-8, Jindaiji, Mitaka-shi, Tokyo, Japan
- Employees: 6
- Established in 2020
- Business: AI, FinTech, Trading

https:///www.ltid.jp/

Outline of the demonstration project

- New AI Driven Agriculture Machine Finance

Cooperation with local companies/governments

- Local partners: KUBOTA Philippines/CROPITAL
- Details of Cooperation and Collaboration: Pilot implementation in the Philippines/introduction of rice farmers participating in the project/provision of farm equipment

Targeted economic/social issues

- In the Philippines agricultural industries, mechanization is delayed and has led to low productivity and rural poverty. Also given the human resource cost increase and a decreasing agricultural population in recent years, the need for mechanization of crop produce and the finance for it is getting strong, especially agriculture machine finance is almost requisite because the farmers who can buy in cash are rare.

Details of demonstration

- In collaboration with local partners, about 100 participants from medium-sized rice farmers with a cultivated area of 3-5 hectares are selected and financing for the purchase of agricultural equipment is provided by pledging the crop as collateral. Our AI calculates credit risk values from photos of the farms, and credit management is conducted based on these values.
- Since rice in the Philippines can be harvested in 3-4 months, this process is repeated 1-2 times to accumulate data and improve the accuracy of AI, which will be gradually introduced to the field around the third harvest season about 1 year later.

Expected outcome of beneficiary effects

- The farm equipment is introduced to medium-sized rice farmers, who account for about 40% of the farmers in the country and have a cultivated area of 3-5 hectares. It has been proven that agricultural machinery improves productivity and increases farm net income by 2-3 times. If about 60% of the country's rice farmers adopt the equipment, the harvest would increase by 2-3%, and the self-sufficiency rate is expected to improve.

Regional Fish Institute, Ltd.

- Address: Kyoto-shi, Kyoto
- Employees: 30
- Established in 2019
- Business: (1) Genome editing breed improvement on aquatic species (2) production and sales of aquatic products

https://regional.fish/en/

Outline of the demonstration project

- Project of Introducing Genome Editing Breed Improvement on Aquaculture Scene in Indonesia

Cooperation with local companies/governments

- Local Partner: Pt Aruna Jaya Nuswantara
- Details of cooperation and collaboration:
  (1) Farming and hatchery activities
  (2) Test sales/marketing to consumers
  (3) Communication with governmental regulatory bodies

Targeted economic/social issues

- In order to cope with the coming protein shortage problem, super-efficient protein production is needed.
- Although the Indonesian government aims to strengthen aquaculture industry, the production in 2020 was only 75% of the target volume. Development of strong breeds is an urgent task.

Details of demonstration

- Introduce and validate genome editing breed improvement method which can complete breeding in only a few years, instead of traditional method that takes about 30 years.
- Develop “fast growth tilapia” and “large filet red snapper” as pilot cases by applying our experience of commercialization of genome edited fish, which is the world’s only successful case.

Expected outcome of beneficiary effects

- By applying both “fast growth” and “large filet” traits, aquaculture cost can be reduced to only 2/3 of current levels.
- By extending the breed improvement to other traits and species, it can contribute to solving protein shortages, creating employment, and enhancing export.
- In the long term, a “breed improvement platform” is expected to be established to develop breeding based on the needs of consumers/producers.

Scala, Inc.

- Address: Shibuya-ku, Tokyo
- Employees: 52
- Established in 1991
- Business: IT/AI/IoT Business

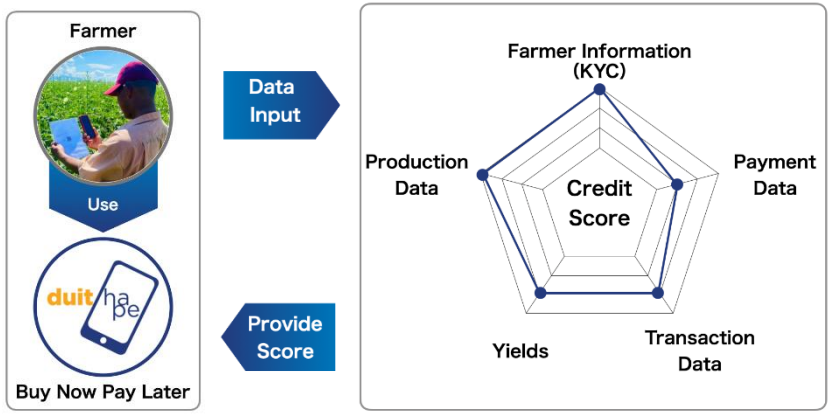
https://scalagrp.jp/en/

Outline of the demonstration project

- Digital agricultural cooperative platform centered on credit scoring for farmers

Cooperation with local companies/governments

- Local partners: Duithape, MASTANI, etc.
- Details of Cooperation and collaboration:
  Joint product development and provision of pilot sites



Targeted economic/social issues

- There are 92 million unbanked people in Indonesia, and most farmers do not have access to adequate capital.
- Due to financial problems, farmers' production efficiency is low compared to its neighboring countries.

Details of demonstration

- Promote to establish a digital agricultural cooperative that provides agricultural guidance, material supply, financial services, and assists sales in one single platform.
- Create and demonstrate a credit scoring for farmers based on a proprietary algorithm by integrating a production history database construction system (already deployed to approximately 100 farmers in two countries), a Buy Now Pay Later (BNPL) system (currently being tested with 200 farmers), and a farm management guidance service (which improves production efficiency by an average of 20%).

Expected outcome of beneficiary effects

- Creation of a financial market for the unbanked through the credit scoring system.
- The company will create a new economic sphere with the ecosystem by expanding not only farming support, BNPL, and credit scoring, but also financing and sales support businesses.