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SUSTAINABLE DEVELOPMENT GOALS

日本企業からの技術移転を通じた新事業創造によるウクライナのグリーン産業復興プロジェクト

Green industrial recovery project for Ukraine through technology transfer from and the co-creation of new businesses with Japan's private industries (#230356)

国連工業開発機関　事務次長　安永 裕幸

2025年5月27日

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Agenda

1. Project information
2. Approved F/S proposals from 1st CfP (Batch 1)

1. Project information

(1) Background of the project

Japan's former Prime Minister Kishida visited Ukraine and had a summit meeting with President Zelenskyy in March 2023.

> *"Japan reaffirmed its commitment to the post-war recovery and reconstruction of Ukraine. The leaders shared the view that the private sector should play an important role in the recovery and reconstruction process."*
> (Joint Statement on Special Global Partnership between Japan and Ukraine, Para 17)

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1. Project information

(2) Industrial Diagnostic Study for Ukraine (2023)

- UNIDO has collected and analyzed high quality data through an industrial diagnostic study (2023), which was funded by BMZ, Germany.
- This is a unique knowledge product with primary data collected by UNIDO through analysis, surveys (200+ firms) and consultations with public-/private-sector stakeholders.
- UNIDO has developed four chapters focusing on macro, meso, micro analyses and product diversification.
- The study is used as a base for all the UNIDO's interventions, including this project.

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1. Project information

(3) Focus area

Determined based on Ukraine's industrial potential and Japan's technological comparative advantages.

Agribusiness, food value-chain and water infrastructure
Manufacturing from biomass and unused primary products and enhancement of circular economy
Digital transformation, active use of ICT, data analytics and artificial intelligence
Sustainable energy systems, energy conservation, industrial decarbonization, energy infrastructure management and mitigation of and adaptation to climate risks
Green Hydrogen/Ammonia
SME productivity enhancement and advanced logistics
Assistive equipment, telemedicine and medical services

1. Project information

(4) Project outline

a. Objective

Facilitation of technology transfer from Japan to Ukraine for industrial recovery, creation of new employment opportunities and co-creation of new businesses in cooperation with Japan's private industries

b. Total budget

USD 188 million funded by the Ministry of Economy, Trade and Industry of Japan (METI)

c. Project period

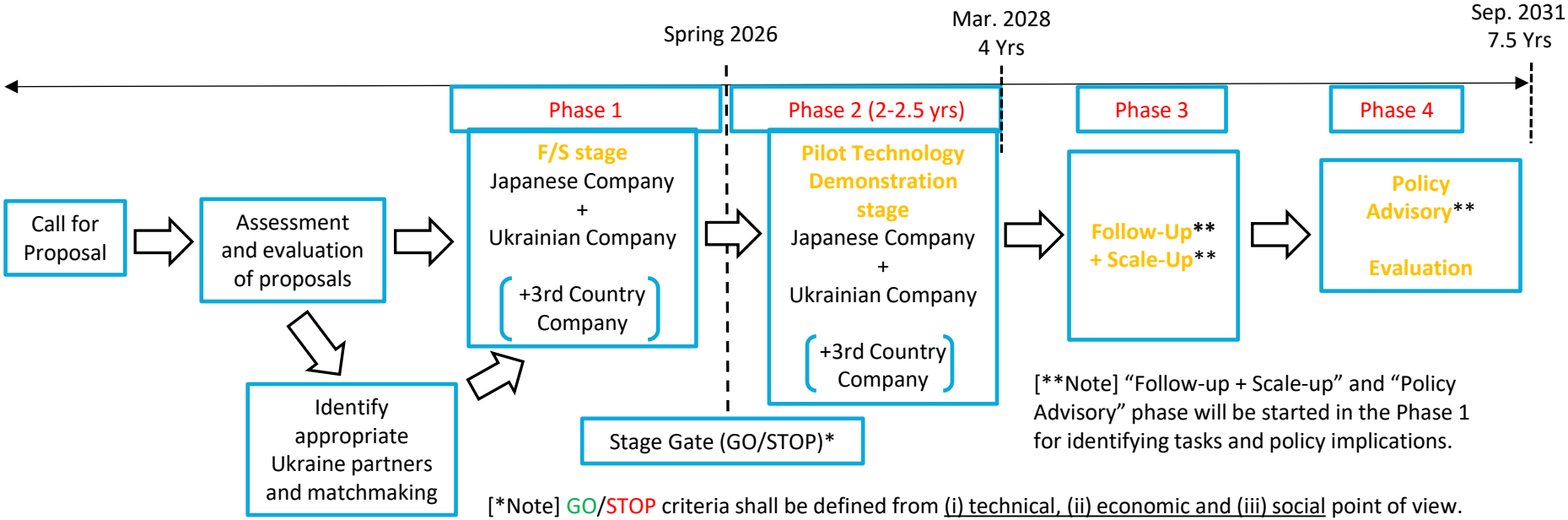
Overall period: 7.5 years (1 April 2024 - 30 September 2031)

d. Implementation conditions

- Only Japanese private companies with technologies developed in Japan can apply.
- Japanese private companies must cooperate with Ukrainian partner companies.
- Partners from third countries can apply if required.

1. Project information

(5) Implementation timeline



[**Note] "Follow-up + Scale-up" and "Policy Advisory" phase will be started in the Phase 1 for identifying tasks and policy implications.

[*Note] GO/STOP criteria shall be defined from (i) technical, (ii) economic and (iii) social point of view.

2. Approved F/S proposals from 1st CfP (Batch 1)

	Applicant's name	Proposals of F/S
1	Cognitive Research Labs	Landmine location identification
2	Cold Storage Japan	Solar-powered mobile refrigerator with trailer
3	GVE	Secured real time banking system (inter-bank fund transfer)
4	Japan Dome House	Expanded Polystyrene-based dome structure for agricultural/community usage
5	Plus Lab	Water purification system based on shell-originated CaO
6	Sagri	Identification of farmland-originated GHG emission using satellite data and soil sample
7	Instalimb	Enhancement of 3D printed prosthetics production capacity
8	Allied Carbon Solutions	Production of sophorolipids (surfactant) from sunflower oil and value addition
9	Allm	Deployment of integrated portable medical devices and telemedicine support system
10	Greein	Data-driven agribusiness in sunflower seed production using AI-based IoT solution
11	LocationMind	Visualization and monitoring of human flow by using mobile phone communication data
12	PicoCELA	Deployment of robust wireless communication infrastructure using mesh-Wifi technology
13	Sansei	Deployment of medical container to enable people's access to medical service

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2. Approved F/S proposals from 1st CfP (Batch 1)

	Applicant's name	Proposals of F/S
14	Aldagram	Deployment of construction management software for expedited reconstruction
15	ALISys	Deployment of metal detector and ground penetrating radar for detecting landmines and deployment of SAR for detecting small vibration of building
16	Eco Pork	AI-based optimization of pig breeding using camera image (increase pig production, improve feed efficiency and reduction of GHG)
17	Kurei	Use a chemical agent extracted from coffee and apply supercooling technology for avoiding agricultural product's damage from late frost
18	Mebiol	Deployment of hydrogel-based film for value-added farming system
19	Prodrone	Deployment of drone technology of low-and-stable flying capability for detecting landmines in combination with AI predictive modeling
20	Serendix	Deployment of an advanced 3D printing technology to construct concrete houses in a quick manner
21	Tagawa Shikkui Labs	Deployment of a production technology of non-baked ceramic tiles/blocks using war debris as raw materials
22	Thermalytica	Deployment of aerogel paint made from SiO2 for heat insulation of buildings and industrial facilities
23	Smart City Research Institute	AI-driven social infrastructure maintenance platform to assess the conditions of road surface
24	Tromso	Biochar production technology from agricultural residues

2. Approved F/S proposals from 1st CfP (Batch 1)

	Applicant's name	Proposals of F/S
25	Company A	Human resource development in annotation technology (web-based image, text, etc.)
26	Company B	Deployment of 3D model of cities by using digital twin tech for reconstruction of infrastructures
27	Company C	Deployment of advanced vulnerability assessment of key infrastructures (electricity, gas, heat and water)
28	Company D	Deployment of a culture solution from Bacillus Velezensis YBL2 strain for improvement of soil and water qualities
29	Company E	Deployment of superheated steam for plastic waste treatment technology
30	Company F	Deployment of production technology of biodegradable plastics molded products from agricultural residues

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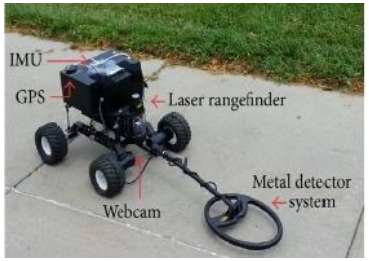
Cognitive Research Labs

Mine location detection



Data collection and fusion

Sharing of safety information

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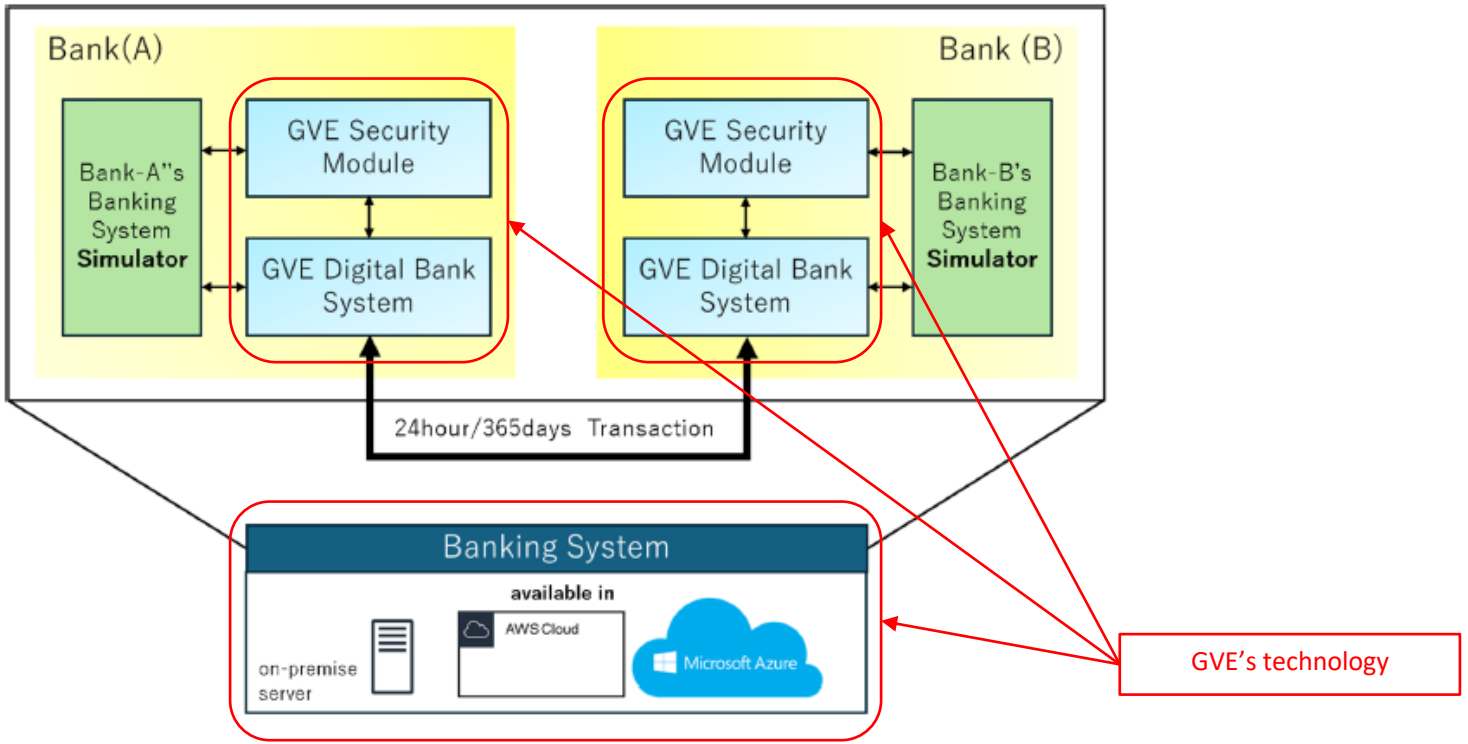
Cold Storage Japan

<For reference>

Total size	5,458mm(L) x 2,520mm(W) x 2,693mm(H)
Box size	3,700mm(L) x 2,020mm(W) x 2,220mm(H)
Capacity	1460kg
Temp range	-25 deg C～15 deg C
Power supply (external)	100V～260V
Solar panels output	420W X 3 sets
Battery	400Ah / 5,120Wh
Other	Automatic defrost function IoT remote monitoring Dual temperature bands

GVE


Bank(A)
Bank (B)
Bank-A"s Banking System Simulator
GVE Security Module
GVE Digital Bank System
GVE Security Module
GVE Digital Bank System
Bank-B's Banking System Simulator
24hour/365days Transaction
Banking System
available in
on-premise server
AWS Cloud
Microsoft Azure
GVE's technology

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Japan Dome House

Community Use

Height: 4,050mm
Diameter: 7,700mm

Agricultural Use

Mushroom

Vegetable

Height: 4,050mm
Width: 7,700mm
Length: 13,000mm

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Plus Lab

BiSCaO

Contaminated water

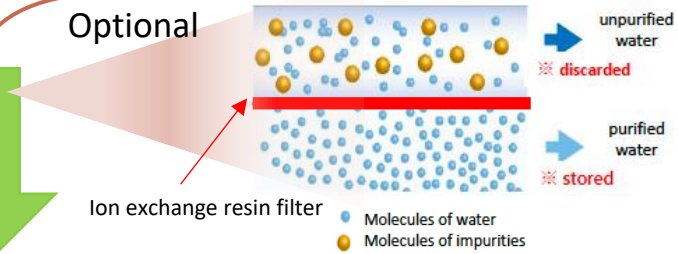
Polluted water mixing equipment

Coagulation sedimentation equipment

Filtration process

Decontaminated water for agricultural and domestic use

Optional



In the future

A mobile vehicle (40ft container basis)

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Sagri

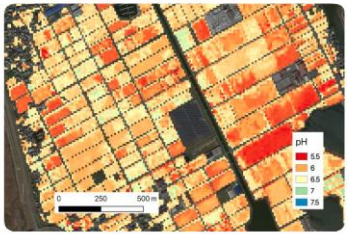
Automatic polygon generation by AI.

AI-based model that enables highly accurate digital soil mapping using satellite imagery and soil samples.

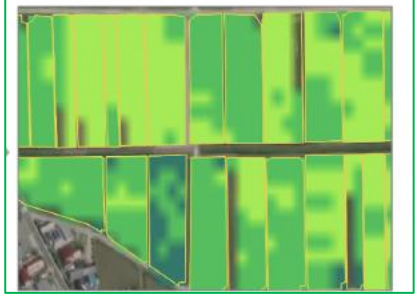
Technology for predicting waterlogging conditions or water levels from satellite images.

Auto-determination of field plots from satellite data

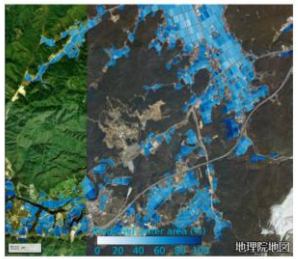
Total carbon, Total nitrogen, pH, CEC, etc. can be analyzed



Visualization of GHG emission as well as reduction potential



Waterlogging/water level estimation



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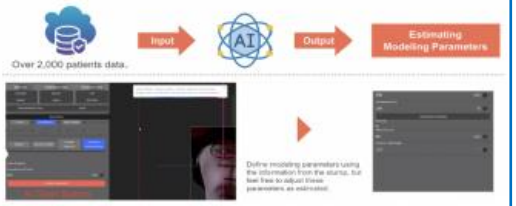
Instalimb



Intalimb Modeller

Estimating modeling parameters driven by data, standardized by AI

High-speed 3D Printer

Print in 2-3 hours
with stable conditions
and uninterrupted printing.

Original Filament

Delivered 3000 prosthetics;
rigorously tested filaments ensure
highest quality and reliability.

3D Printed
Prosthetics

Allied Carbon Solutions

Vegetable oil
(Lipid source)

Sugar
(Glucose source)

Fermentation

Extraction

Sophorolipids
(Biosurfactants)

Possible applications

- Livestock production enhancement
- Agriculture yield enhancement
- Detergent
- Cosmetics
- Oil recovery enhancement
- Removal of red tide organism and algae

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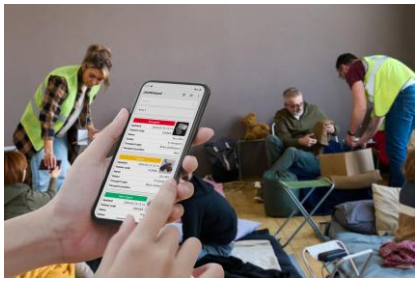
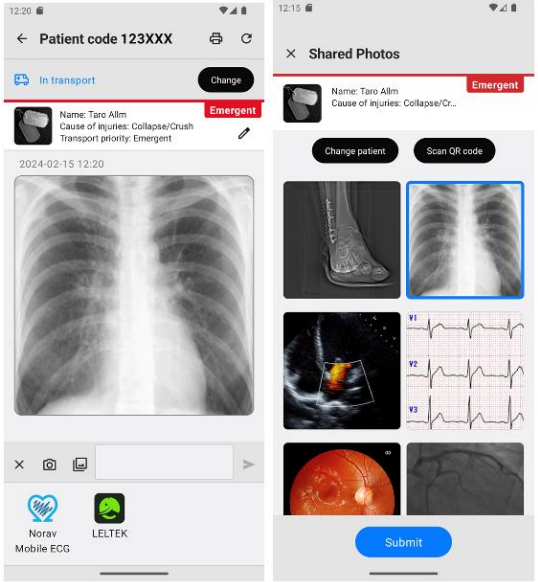
Allm



Patient information

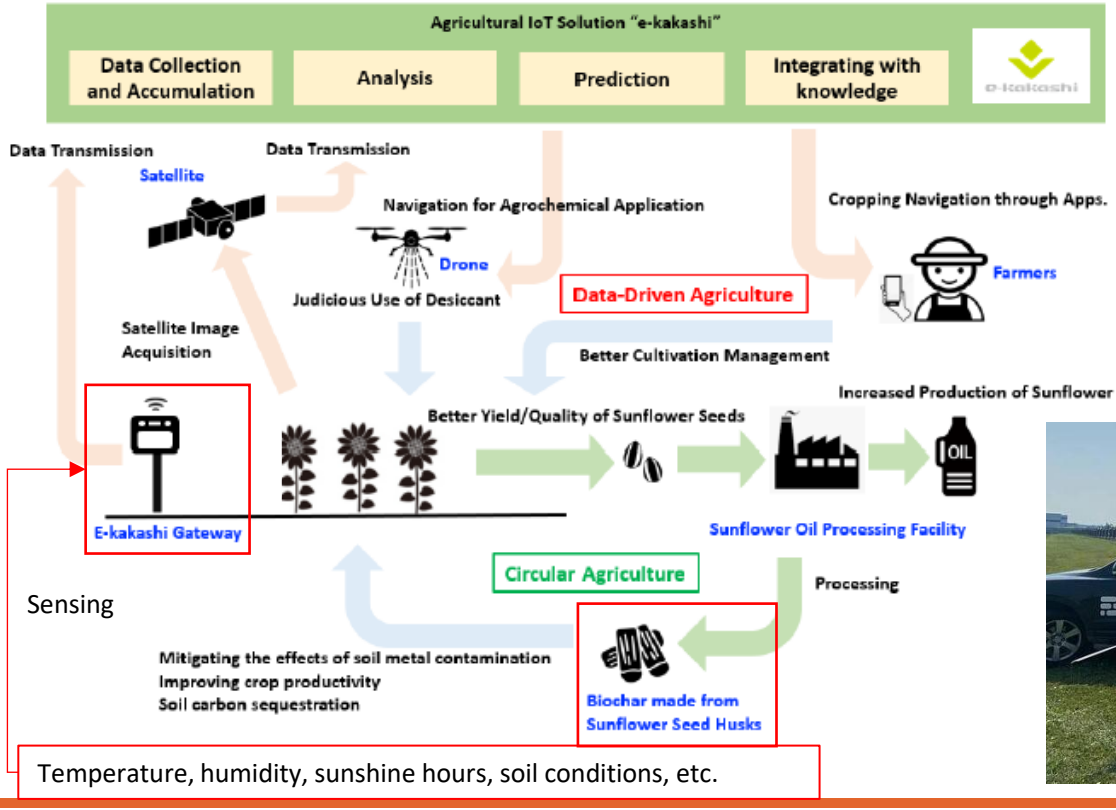


Patient information

Doctor Network

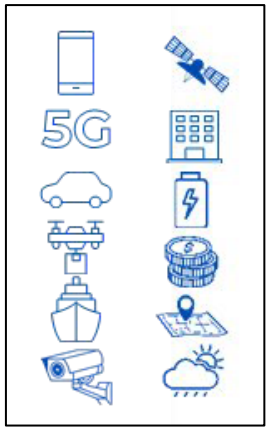
Instructions / guidance / support

Greein


Agricultural IoT Solution "e-kakashi"
Data Collection and Accumulation
Analysis
Prediction
Integrating with knowledge
e-kakashi
Data Transmission
Satellite
Data Transmission
Navigation for Agrochemical Application
Drone
Cropping Navigation through Apps.
Farmers
Judicious Use of Desiccant
Data-Driven Agriculture
Satellite Image Acquisition
Better Cultivation Management
Increased Production of Sunflower Oil
Better Yield/Quality of Sunflower Seeds
OIL
E-kakashi Gateway
Sunflower Oil Processing Facility
Circular Agriculture
Processing
Sensing
Mitigating the effects of soil metal contamination
Improving crop productivity
Soil carbon sequestration
Biochar made from Sunflower Seed Husks
Temperature, humidity, sunshine hours, soil conditions, etc.


FARM
XAG

LocationMind



Location Big Data Partner

Data

Analyzed Data

LocationMind

Revenue Share

Data Subscription

Local Partner

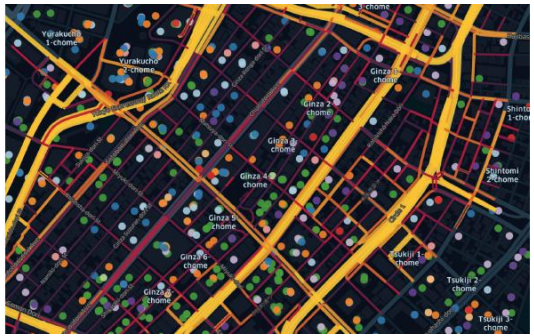
Bisness Development

Our Customers

International Customers

Local Customers

- Transportation
- Urban City Development
- Anti Disaster
- Logistics
- Real Estate
- Commercial



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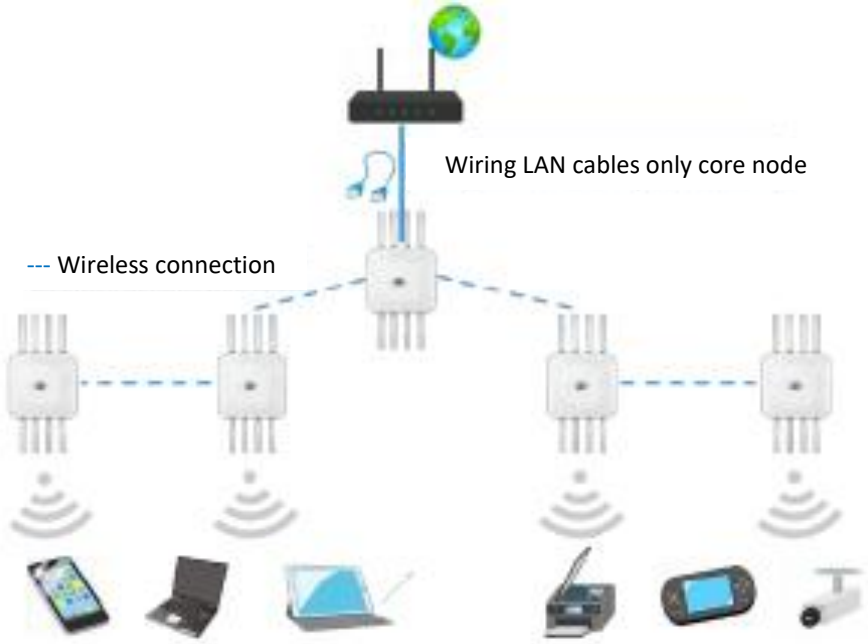
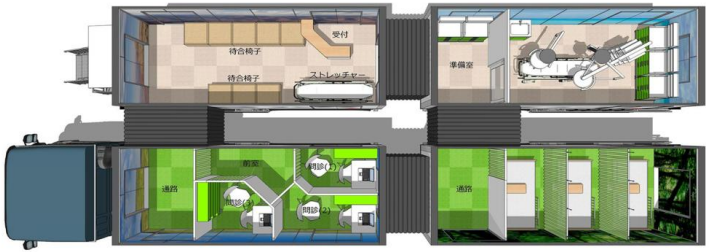
PicoCELA



Sansei

20/40ft container



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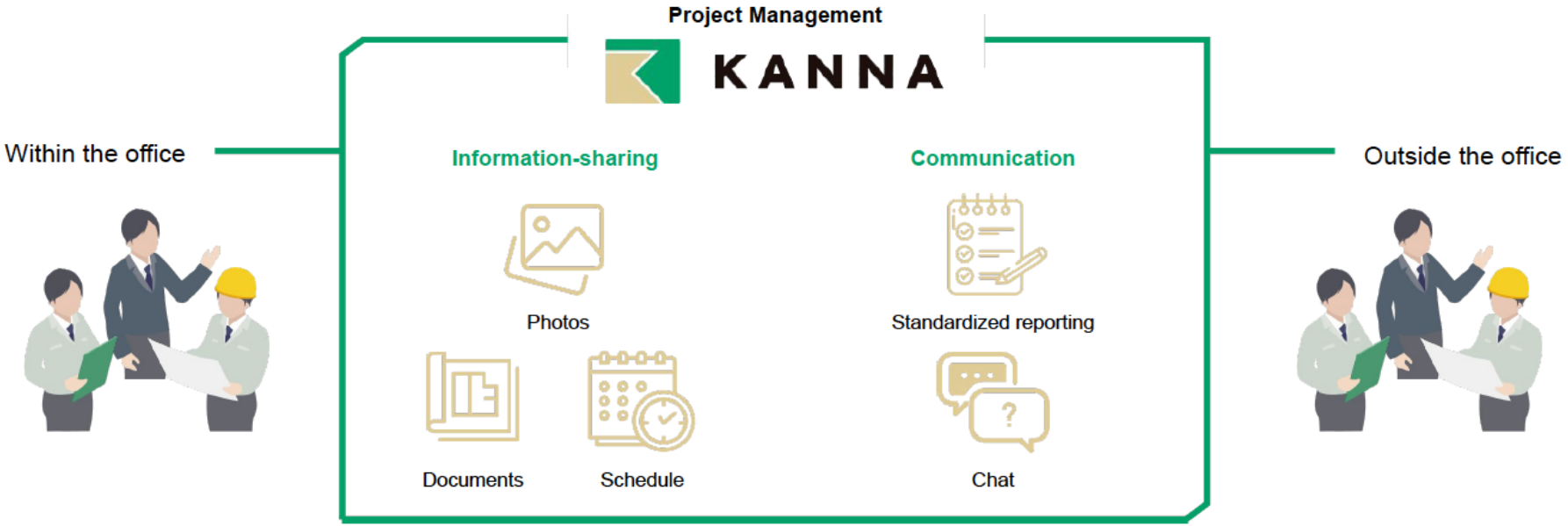
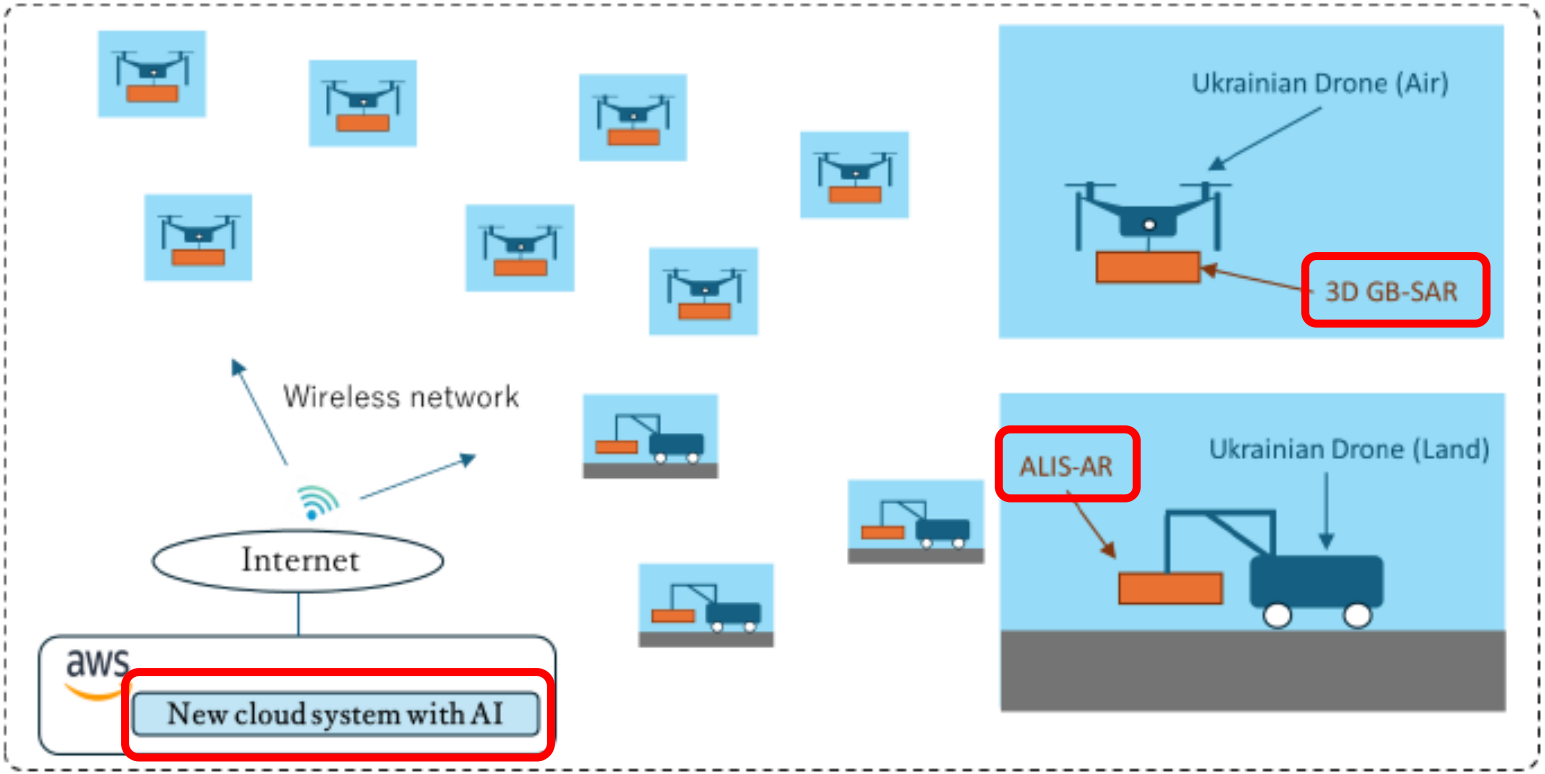
Aldagram



To streamline and facilitate project management and team interaction with simple UI design

Alisys


Ukrainian Drone (Air)
3D GB-SAR
Wireless network
Internet
aws
New cloud system with AI
ALIS-AR
Ukrainian Drone (Land)

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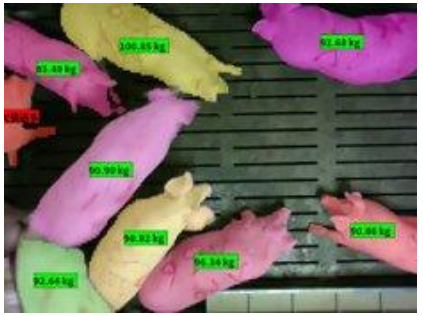
Eco Pork

AI Biosensing camera

Growth and health data (weight, carcass weight, disease, abnormalities, etc.)

Operational data

Data management and analysis system (Porker)



Visualization of growth status

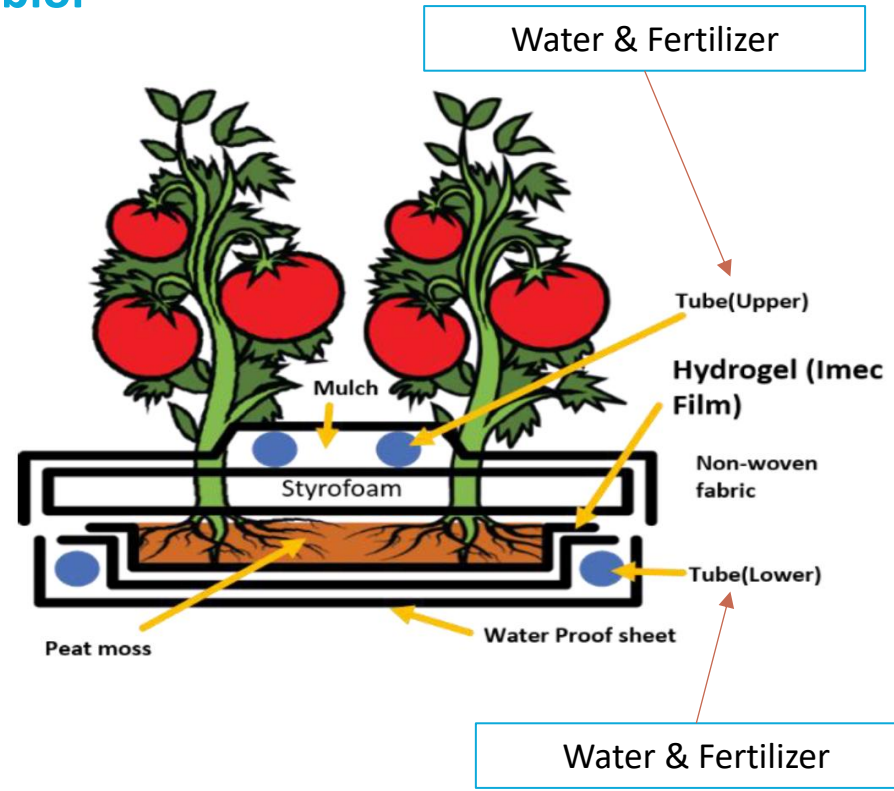
Info generation for operational sophistication (Feed conversion rate, antimicrobial administration inputs, proper shipping date, GHG reduction, etc.)

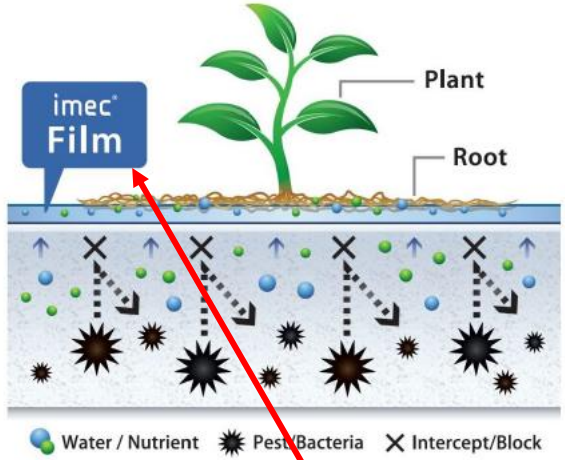
KUREi

Frostbuster → Spray → Impurity (Nucleus) → Polyphenol → Supercooling (Stay as water state)

Nucleus covered by polyphenols that cannot be a core for ice creation

Mebiol





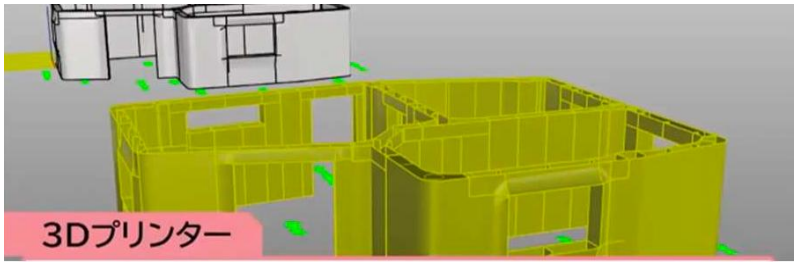
Hydro-membrane film made of hydrogel having water-absorbing property that has nanosized pores
→ Only water and nutrients penetrate, and harmful germs and viruses are prevented.

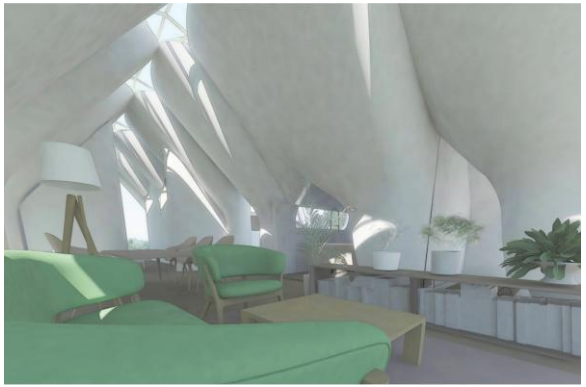
Prodrone

Mine detection equipment (Metal detector)
AI-based satellite monitoring
AI-based aerial drone photography

- Height: 600 mm
- Propeller diameter: 780 mm
- Weight (drone only): 12.3 kg
- Max payload: 10.0 kg
- Flight duration: 30 min (with 5 kg equipment)
- Max speed: 60 km/h
- Wind speed: 12 m/s

Serendix





Tagawa Shikkui Labs

Mixing raw materials in powder form

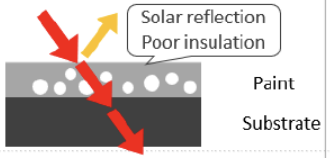
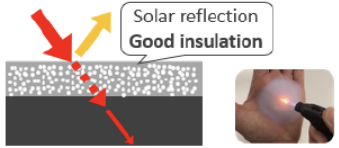
Adding optional components for custom design

Putting mixed Limix powder into mold

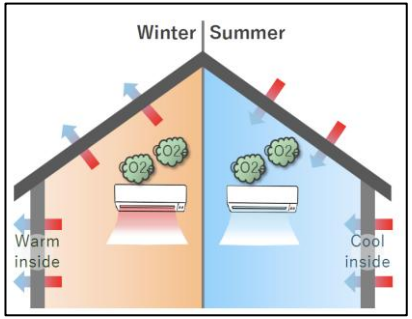
Applying 4,000 tons of pressure

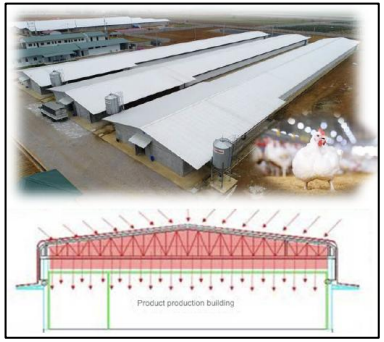
Curing with captured carbon dioxide

Thermalytica

Competitor's Paint	TIISA® Superinsulation Paint
	
✓Effective only in summer	✓**Effective in both summer and winter**
✓Approx. 10 years lifetime	✓**Approx. 15 years lifetime**
✓Requires three or more coating steps	✓**Two coating steps are sufficient (30% labor cost reduction)**
✓Fixed performance	✓**Tailored performance to match geological climates**

Aerogel	TIISA®
SiO_2 particles	SiO_2 nano particles
Continuous network	Loose structure
Porosity : 85% SiO_2 : 15%	Porosity : 99.4% SiO_2 : 0.6%
Poor fluidity	Liquid like
Expensive	Economical





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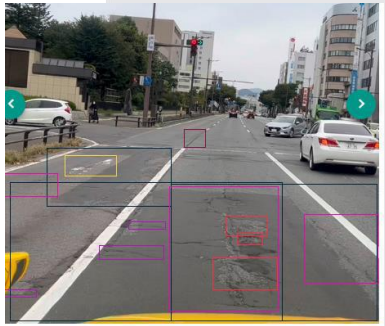
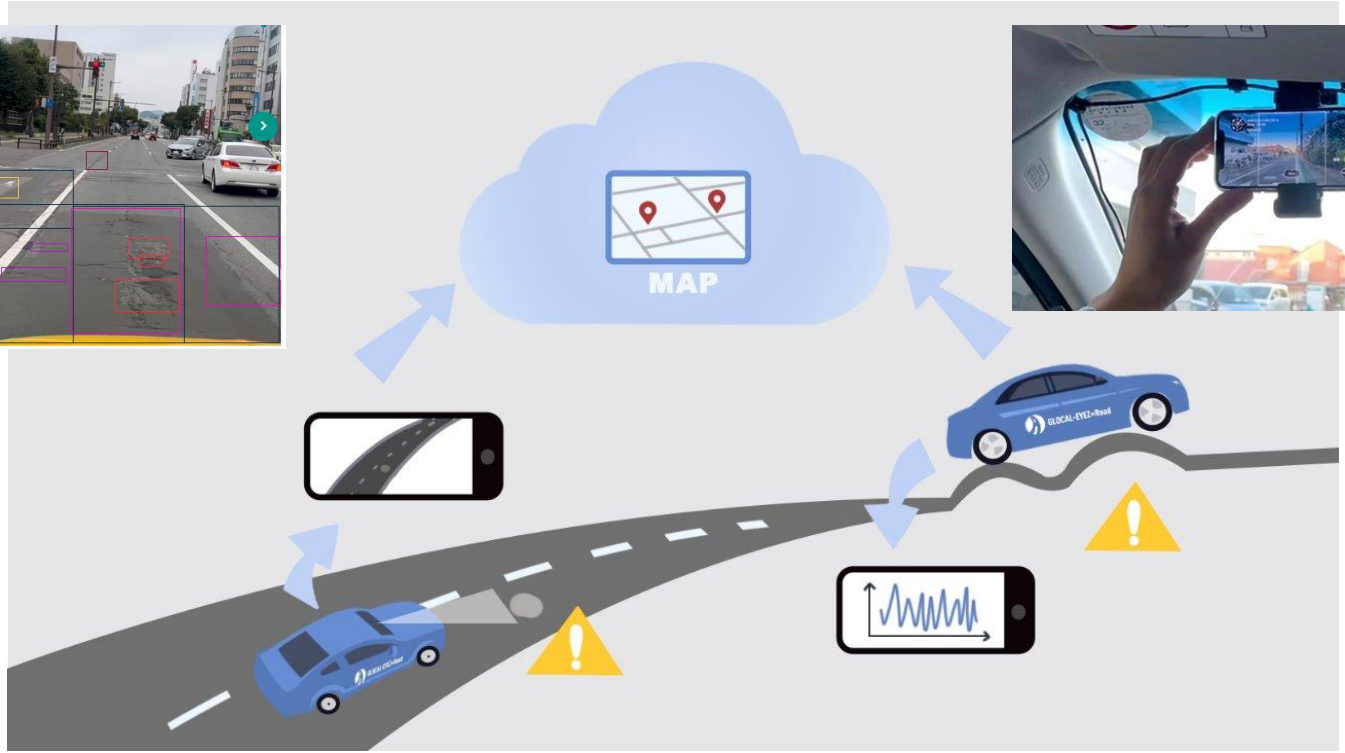
SmartCity Research Institute





Tromso

Application

Biochar

Agricultural residues

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Thank you.