



The innovative case studies of SOEs and QGOs in Korea



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Preface

Public institutions took a leading role for Korea's rapid economic development by building infrastructure, training human resources, and mobilizing resources at home and abroad. Even now, public institutions are an important part of the Korean economy by providing essential public service such as electricity and water, and handling various tasks on behalf of the government.

An important change in the recent management policy of public institutions is the 'restoring the sprit of public service'. In the face of social problems such as low economic growth and polarization, there has been a lot of discussion of public institutions taking a leading role in creating social values in order to build a sustainable society.

Public institution innovation policy is one of the main policies of restoring the sprit of public service. Various attempts to develop and integrate new technologies have improved public services, and the quality of life of the people. In addition, through the linkage and collaboration between services, public institutions are increasing the convenience of the public by providing brand new services or by reducing the inconvenience. Finally, efforts are also being made to discover new ideas by listening to the citizens' voices, to more actively address the inconvenience of citizens and to develop together with local communities.

Overseas organizations have shown high interest in the innovative activities and achievements of Korean public institutions, and we have published this book to reflect this interest. This book contains various cases of innovation in Korean public institutions. Through the 30 innovative cases, we found out that innovation is not just grand and fancy as the word implies, but can also be small changes and little details that lead to better performance and social value. The examples here show that even if these innovative cases of public institutions are far from high-technology, a variety of innovations can be made by switching the methods of service delivery and institutional operation. But the most important lesson in these cases is the importance of efforts to make positive changes.

We hope that this English version will introduce the constant efforts of Korean public institutions to the people overseas. We also hope this book can be a turning point of how we view innovation. Finally, we thank all the public institutions for creating and providing good cases of innovation in their areas.

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01

The KNPS launches a lunchbox delivery service in collaboration with local communities



Korea National Park Service
(KNPS)

01

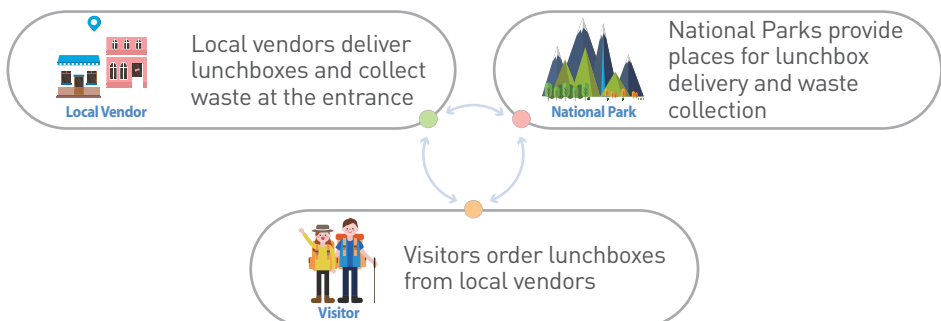
The KNPS launches a lunchbox delivery service in collaboration with local communities

BACKGROUND

- More than 70% of lunchboxes consumed by national park visitors are disposable goods. Thus, despite their reputation as a symbol of environmental protection, national parks cause the use of disposable goods.
- For visitors, preparing lunchbox for visits to national parks can be a source of stress.
- Local residents do not believe that national park visitors contribute to local economies.
- To address this issue, the KNPS developed policies to reduce the use of disposable goods at national parks, reduce the burden of visitor's preparing lunches, and contribute to local residents' economies.

ACTIONS

- The KNPS launched the Environmentally-Friendly Lunchbox Delivery Service to reduce waste and the burden of lunch preparation.



Lunchbox Delivery Service Concept

- The program was designed based on visitor surveys and opinions from within and outside the KNPS.

- > (Visitors) Conducted five surveys on visitors at lowlands, highlands, shelters, and campsites
 - > (Internal Opinions) Held 23 meetings and developed 36 improvement tasks
 - > (External Opinions) Incorporated eight recommendations from the National Park Governance Committee
- The KNPS launched a pilot service for visitors at the Sobaeksan National Park (September-December).
 - > The service was implemented in collaboration with social enterprises in Danyang.
 - The KNPS entered into delivery contracts with social enterprises that use part of their profits to help low-income household in local communities.
 - Vendors prepare lunchboxes ordered by visitors and deliver them to trail entrances at national parks. The National Parks provide places for lunchbox delivery and waste collection.
 - > The service uses a private platform to receive orders and provide information.
 - Visitors place orders using a private social network platform (KakaoTalk Plus Friend).
- Based on the result of the pilot service at Sobaeksan, the KNPS launched the service at seven other national parks starting.
 - > The parks offering this service are: Jirisan, Dadohaehaesang, Songnisan, Gyeongju, Gayasan, Taeanhaean Coast, and Woraksan National Parks.

OUTCOMES

- This service acts as a new source of income for local communities.
 - > 561 lunchboxes were sold during the four-month pilot service period at Sobaeksan National Park.
 - > Nationwide operation of the service is expected to create 3.5 billion KRW of economic growth for local economies each year.
- The service reduced the use of disposable goods.
 - > The pilot service at the Sobaeksan National Park reduced the number of disposable items used at the park by 2,805 over four months.
 - ※ An average visitor consumes five disposable items. 5×561 (no. of disposable goods sold) = 2,805
- The service created social value.
 - > Local social enterprises collaborating for the service used 5% of their profits for vulnerable groups in local communities.
- The service improved visitor satisfaction with national parks (visitor survey results).
 - > Visitor satisfaction rating rose from 86 to 93.
 - > 100% of respondents indicated that they will use the service if implemented in other national parks.

- The KNPS won several awards for the implementation of this program.
 - The KNPS won the Challenger Award at the 5th CSV Porter Awards (second place).
 - The KNPS won the Truth Award at the 11th Social Value Contest (first place).


FUTURE PLANS

- The KNPS will develop a new platform for the service.
 - The use of the private platform caused inconveniences regarding booking, refund, payment, and other functions.
 - The new dedicated platform will improve convenience for visitors using the service.



02

FACT works to support innovation-driven growth of agri-food ventures and startups



Foundation of AG Tech,
Commercialization and Transfer (FACT)

02

FACT works to support innovation-driven growth of agri-food ventures and startups

BACKGROUND

- FACT seeks to create jobs and promote innovation-driven growth by supporting agri-food ventures and startups, thereby spreading the agri-food tech venture and startup boom and fostering an agri-food ecosystem.

› Employment growth rate (2003-2013): 9.1% for ventures » 2.7% for SMEs › 2.1% for large enterprises
(Source: 2017 Economic Ministers Meeting Startup Revitalization Plan)

› The president remarked that innovative startups are the foundation for innovation-driven growth, and the government needs to provide enhanced and bespoke support across all stages from startup, growth, to re-startup. He pledged to attempt to revitalize the startup ecosystem.
(November 1, 2018 / President Moon Jae-in's address to the National Assembly regarding the 2019 budget)

ACTIONS

- **(Idea Stage)** FACT organized public participatory programs to increase employment opportunities and promote startup business in the agri-food sector.

› FACT expanded the roaster of participatory programs for collecting innovative startup ideas (2→4*).

*Startup Contest, Youth Startup Contest, (new) Advanced Agriculture Ideathon, (new) Food Tech Contest

› FACT created social value by introducing new networking projects between youths and startups (2→4*).

*Open Innovation Forum (4 times), U-Ventures (3 times), (new) Job Communication Camp (1), (new) Boom Boom Friends

- **(Startup Stage)** FACT made efforts to raise the chance of success for agri-food businesses and create jobs in the sector.

› The foundation operates six regional centers and an online startup information network for bottom-up support to address various issues in the field.

- **(Incubating)** FACT incubates businesses whose revenue growth can result in job creation.

- (Star Startups) FACT identifies and incubates market-leading startups run by young entrepreneurs.
- In 2018, FACT incubated 110 tech startups in the agri-food sector.
 - ※ [Creating Social Value] The foundation expanded support for startups run by young entrepreneurs (49%) and female entrepreneurs (27%).
- (Growth Stage) ※ Goal: FACT seeks to promote innovation-driven growth by creating new sales channels and attracting investments for ventures and startups.
 - The foundation helps startups develop sales channels and boost their sales by promoting win-win cooperation with large distributors.
 - The foundation also creates opportunities for startups to improve and promote their products by sharing experiences with, and listening to the voices of consumers.
 - The foundation helps innovative businesses secure investments by operating networking programs open to all citizens.

OUTCOMES

- (Startups with New Ideas) FACT selected outstanding convergent tech companies run by young entrepreneurs.
 - FACT selected and incubated market-leading convergence tech startups run by young entrepreneurs.
 - The foundation secured investments from eight private companies worth 4.78 billion KRW through four programs including the Startup Contest.
 - The programs were joined by 811 young entrepreneurs and university students, who carried out promotional activities on blogs, Facebook, and YouTube.
 - FACT won the Minister of Health and Welfare Award at the Corporate Social Responsibility Film Festival.
- (Startup Support) FACT focused on customer-centered and field-oriented business management and operation.
 - Result: 691 new jobs (increased by 141 or 126%), and 81.7 billion KRW revenue (up by 17.9 billion KRW or 128%)
 - FACT has been named an Outstanding Job Creating Institution (Minister of Agriculture, Food and Rural Affairs) and selected for the Outstanding Government Innovation Project (Rural Development Administration).
 - In 2018, FACT surveyed incubated startups to identify their difficulties and provided feedback to 146 startups.

| Category | Total | Direct support | Linked support | Information sharing |
|--------------------|------------------------------|--|--------------------------------------|--|
| Description | Startup fund and information | Programs, counseling, and constant support | Link with other programs and experts | Information regarding related programs |
| Amount of feedback | 146 | 32 | 24 | 90 |

- **(Growth Support)** FACT promoted innovation-driven growth through support programs open all citizens.
 - **(Investment)** FACT attracted investments from 13 private companies worth 12 billion KRW, and 300 million KRW investment through 14 crowd-funded projects.
 - **(Sales Channels)** FACT expanded sales channels for startup products by working with distributors, including an MOU with Emart Mall.
 - ※ (Result) Cooperation for sales channels between large distributors and startups generated revenue of around 4 billion KRW.
 - **(Export Support)** FACT helped incubated startups sign export contracts (Company A: 10 billion KRW/5 years; Company B: 700 million KRW).
 - FACT won a contribution award for helping the agriculture, food, and rural sector in Jeollanam-do reach 100 billion KRW sales (Jeollanam-do Governor Commendation).
 - **(Product Improvement)** FACT held product evaluation sessions with merchandisers (SEMEDI, 12 times)* and A-Startup Box Product Trial Group** (3 times).
 - * (Result) 74 vendors at the Boom Boom Market renewed their products, and four became vendors at Emart PK Market and 29CM.
 - ** (Result) FACT organized a product trial group (120 members), who posted 720 posts and had their content shared 80,340 times.
 - **(Promotion)** FACT selected 46 Boom Boom Friends for promotion activities for agri-food ventures and startups.
 - ※ (Result) Over 162 days, Boom Boom Friends created 47 promotional videos, posted 58 postings, and held 10 street promotion events.

FUTURE PLANS

- FACT plans to expand the number of beneficiaries of its startup support programs: (2018) 110 → (2019) around 260
 - FACT will revamp its incubation system by combining pre-startup support (Pre-BI), startup support (BI), and growth support (Post-BI).
- FACT plans to open an exhibition/promotion/sales center for startup products in the Jeonju Hanok Village, in addition to the existing centers (Seoul aT and Busan Youth Mall).

**KOTRA opens its business centers
around the world to Korean
companies to provide support for
their overseas business travels.**



Korea Trade-Investment Promotion Agency
(KOTRA)

03

KOTRA opens its business centers around the world to Korean companies to provide support for their overseas business travels.

BACKGROUND

- Korean companies experience various difficulties during overseas business trips.
 - The globalization of business has encouraged SMEs and middle-standing companies to expand their operations. However, they encounter various space-related problems outside of Korea.
 - Geographic and linguistic barriers prevent them from acquiring information from local sources.

ACTIONS

- KOTRA opened up its Korea Business Centers (KBCs) to business travelers free of charge.
 - Open KBC: This service allows Korean business travelers to use KOTRA's 123 overseas KBCs free of charge during overseas business travels, including meeting rooms, Internet access, and information on local markets.
- The service applies to all KBCs across the world.
 - KOTRA opened up all KBCs except four locations (including those located in the countries subject to travel bans by the Ministry of Foreign Affairs).
 - KBCs now serve as go-to places for Koreans and Korean enterprises experiencing geographic and linguistic difficulties while gaining access to overseas markets.
- The service enhances the customer experience.
 - KOTRA decided to make KBCs available for KOTRA's individual members and nonmember companies operating overseas, as well as KOTRA's corporate members.
 - KOTRA moved the deadline for booking the service from two weeks to one week before the business travel. It also receives on-site registration for customers who did not book the services.

- KOTRA conducted prior surveys to provide more meaningful counseling services.
 - KOTRA identifies each customer's need in advance to assign suitable personnel and prepare relevant information, thereby improving the service quality.

OUTCOMES


- KBC usages have expanded.
 - The number of usages in 2018 was 238, a 31.5% increase year over year (181 in 2017).
 - In particular, owing to simplified booking procedures, the number of usages in 2H 2018 rose to 195. The usage of KBCs is expected to expand further in the future.
 - ※ Usages in 2018: (1H) 43 across 18 KBCs → (2H) 195 across 57 KBCs
- Success Cases
 - (Munich, Germany) Manufacturer K used an Open KBC to collect local information before visiting a German buyer. → The company used the information from the KBC and signed a USD 100,000 contract in 2018.
 - (Abidjan, Côte d'Ivoire) Car exporter B used the Open KBC service to overcome its lack of office space and the linguistic barrier to collect local market information. → The company used the KBC to share information. As a result, the company achieved a total export of USD 33,000 in 2018.
 - (Sophia, Bulgaria) Manufacturer F had a buyer consultation together with a KBC employee to resolve a misunderstanding caused by a communication issue with the local buyer. → The company signed a contract for 400 containers (worth USD 3 million).
 - (Chennai, India) Construction material manufacturer D used the Open KBC service to interview applicants for its new liaison office in India. → The company hired four local workers for the liaison office.

FUTURE PLANS

- KOTRA plans to improve its service quality in a way that can be felt by the people.
 - KOTRA will build more overseas workspaces available for all Koreans.
 - KOTRA will improve the booking system for Open KBCs to enhance the customer experience.
 - KOTRA will revamp its KBC facilities for enhanced openness and improve them to meet customers' expectations.
 - KOTRA will carry out promotional activities for more Koreans to use the KBC services.



KoROAD promotes inclusive welfare in Korea by improving quality of life for people with disabilities.



Korea Road Traffic Authority
(KoROAD)

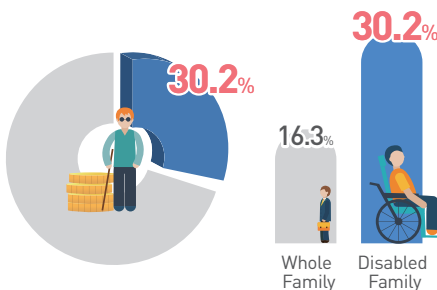
04

KoROAD promotes inclusive welfare in Korea by improving quality of life for people with disabilities

BACKGROUND

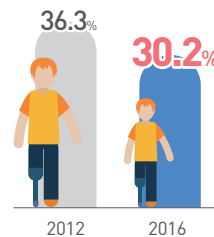
- People with disabilities face various obstacles under the current law.
 - Under the Road Traffic Act, KoROAD operates Driving Support Centers for People with Disabilities, which help people with disabilities acquire driver's licenses. However, Article 79-2 of the Enforcement Decree of the Act restricts eligibility (Disability Grades 1 to 3).
 - The centers are not allowed to provide services to people with disability grades of 4 or lower, even though many of them need assistance acquiring licenses.
- The scope of beneficiaries should be expanded to help people with disabilities become active members of society.
 - Expanding the centers' services and improving their operations will require active participation, information, and opinions from NGOs.
 - KoROAD recognized needs to help people with disabilities become active members of society by expanding beneficiaries in collaboration with NGOs (disability organizations).

Poverty Rate among Households with Disabilities



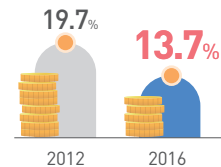
The poverty rate is 13.9% higher in the disability group.

Poverty Rate among Households with Disabilities



The poverty rate is more than 30% higher in the disability group.

Gap in Poverty Rate between Households with Disabilities and All Households



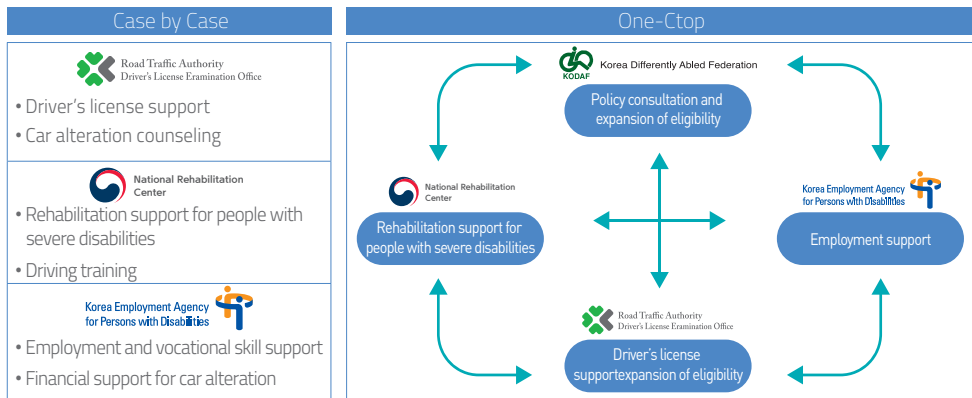
ACTIONS

- KoROAD created social value by removing obstacles through regulatory reform.
 - KoROAD and the Korea National Police Agency (KNPA) worked together to expand the scope of eligibility for driver’s license support to disability grade 4 and remove statutory red tape.
 - The reforms provided opportunities to around 370,000 persons with grade 4 disabilities to acquire licenses.

| Progress | Efforts for Legal Reform |
|---------------|--|
| July 2017 | Recommended and discussed an amendment to the Enforcement Decree of the Road Traffic Act (KoROAD and KNPA) |
| August 2017 | The proposed amendment was approved by the KNPA Commissioner General |
| December 2017 | The proposed amendment was discussed and approved by the Police Committee |
| April 2018 | The Enforcement Decree of the Road Traffic Act was amended (April 24, 2018) |

- “Not Alone, but Together” KoROAD created social value through cooperation.
 - KoROAD has been working with the Korea Differently Abled Foundation (KODAF, an MOU signed on December 26, 2017), the Korea Employment Agency for Persons with Disabilities (KEAD), and the National Rehabilitation Center (NRC) to raise awareness on policies for social participation by people with disabilities. And They help people with disabilities acquire driver’s licenses and find employment through collaborations and role-sharing.

※ KODAF’s network: local associations and 33 members across different types of disability



OUTCOMES

- The scope of eligible disability grades to get driving license has been expanded to grade 4.
 - The regulatory reform allowed people with grade 4 disabilities to receive assistance with acquiring driver’s license. As a result 133 persons with grade 4 disabilities acquired driver’s licenses.
 - The figure represents 15.4% of persons whom the support centers helped acquire licenses. Thus, KoROAD promoted “equal opportunities without discrimination,” which is one of the current administration’s policy tasks.

- KoROAD collaborated with NGOs to promote improvement of the quality of life for the disabled.
 - The collaboration allows for further expansion of beneficiaries.
 - **(Enhancement of Mobility Rights)** The number of people with grade 1 to 3 disabilities acquiring driver's license increased by 20% YoY (608 in 2017 → 728 in 2018).
 - **(Enhancement of Labor Rights)** KoROAD worked with KEAD, to refer people with disabilities who acquire driver's licenses to KEAD. As a result, job creation for people with disabilities improved by 90% YoY (14 in 2017 → 27 in 2018).
 - As a public institution, KoROAD played a leading role in improving quality of life for people with disabilities and helping them become active members of society.


FUTURE PLANS

- **(Further Expansion of Eligibility Scope)** KoROAD plans to propose statutory revisions to expand the scope of eligibility for driving license support to include all disability grades.
- **(Additional Driving Support Centers and Collaboration with NGOs)** KoROAD will open more Driving Support Centers for People with Disabilities and continue to work with NGOs to ensure the continuity and scalability of its social contribution projects, thereby improving quality of life for people with disabilities and realizing an inclusive welfare state.



05

The SSIS creates social value by identifying blind spots among charge reduction services for vulnerable groups.



Social Security Intelligence Service
(SSIS)

05

The SSIS creates social value by identifying blind spots among charge reduction services for vulnerable groups.

BACKGROUND

- The Government of Korea provide charge reduction services* for the low-income housing. However, beneficiaries should personally visit the relevant institutions with IDs and bills to apply for reduction.
 - *Electricity charges, TV license fees, gas charges, heating charges, and mobile service fees
- To address this issue, Community Centers began to offer charge reduction application services in April 2015 (through the Social Security Information System [e-Happy]).
- However, some low-income housings are still excluded from these benefits. The SSIS identified excluded beneficiaries to provide information about the services and the application procedures.

ACTIONS

- The SSIS checked data from institutions providing charge reduction services to identify e-Happy beneficiaries excluded from services, and shared the list of 284,743 households with local governments (Eup/Myeon/Dong).
 - Local governments checked the list and sent notifications to the households by mail, text messages, and personal visits to remind them to apply for services.
 - The SSIS monitored the status of information provision and applications and handled the relevant civil complaints.
- To lower electricity charges paid by low-income households during heat waves in 2018, the SSIS identified 727,158 households not benefiting from the charge reduction services and shared the list with local governments.
- As a part of the government policy for lower mobile service fees, to lower living costs of elderly citizens, the eligibility scope of mobile service fee reduction was expanded to include beneficiaries of the Basic Pension.
 - The SSIS built a system that allows beneficiaries to apply for Basic Pension benefits and charge reduction at the same time, and sent text messages to ensure that all beneficiaries are aware of the services.

※ 1st phase: 150,403 beneficiaries; 2nd phase: 136,316 beneficiaries; 3rd phase: 117,173 beneficiaries

- The SSIS worked with ministries and relevant institutions to expand the scope of the project.
 - The institution held a meeting with ministries and relevant institutions for institutional reform and expansion of the project.
 - ※ Ministry of Health and Welfare, SSIS, Ministry of Science and ICT, and Korea Association for ICT Promotion

OUTCOMES

- (1st Phase) The SSIS identified excluded beneficiaries and provided them with information, resulting in 227,797 reductions of electricity, gas, mobile service, and other charges.

- ① Identified 284,743 low-income beneficiaries not receiving reductions →
- ② Sent reminders to apply for reductions at local governments →
- ③ Resulted in 227,797 reductions (electricity, TV license, mobile service, etc.)

- (2nd Phase) To lower electricity charges paid by low-income housings during heat waves in 2018, the SSIS identified households not benefiting from the charge reduction services and sent out reminders, resulting in 891,684 reductions of electricity, gas, mobile service, and other charges.


- ① Identified 727,158 low-income beneficiaries not receiving electricity charge reductions →
- ② Sent reminders to apply for reductions at local governments →
- ③ Resulted in 891,684 reductions

FUTURE PLANS

- The SSIS will continue to identify households not receiving charge reductions in 2019.
- The SSIS will expand the scope of the project and discuss ways to improve the system.



**The YGPA improves unloading
equipment to reduce
environmental impacts at ports
of call.**



Yeosu Gwangyang Port Authority
(YGPA)

06

The YGPA improves unloading equipment to reduce environmental impacts at ports of call.

BACKGROUND

- The YGPA is working toward achieving full compliance with the government's 2030 National Greenhouse Gas Reduction Roadmap and Renewable Energy 3020, and reducing the greenhouse gas from mobile combustion (26.5 percent of greenhouse gas from all sources).
 - The YGPA aims to reflect changes in the air and energy policies, and achieve greenhouse gas reduction targets.
 - The YGPA also purposes to achieve the targets set by the government by reducing total emission by 30% and raising the percentage of power generation using renewable energy to 20% by 2022.
- The YGPA commissioned a research project to investigate greenhouse gas emission from the Port of Yeosu and the Port of Gwangyang.
 - The project analyzed the status and volume of greenhouse gas emission from the two ports.
 - Annual emission from the Port of Yeosu and the Port of Gwangyang: 60,916 tCO₂ (as of 2017)
 - Indirect emission accounted for 73.48% (electricity usage) and mobile combustion accounted for 26.5%.
 - ※ Research Project for the Establishment of a Comprehensive Plan for Clean Port Development and Use of New and Renewable Energy at the Port of Yeosu and the Port of Gwangyang (2018)

ACTIONS

- The YGPA worked with the private sector to develop electric yard tractors (E-YTs).

| Category | Role |
|----------------|--|
| YGPA | Provided product development and testing sites, and support for technology development and manufacturing |
| Operators | Provided old yard tractors for prototype development, and sites for charging stations |
| Private sector | Developed technologies for commercialization, developed prototypes, installed charging stations, and paid for development expenses |

o Comparison of Diesel Yard Tractors and Electric Yard Tractors (E-YT)

| Diesel Yard Tractors | Specifications | E-YT |
|------------------------|---------------------------------|-------------------------------|
| 177HP/2500RPM | Power | 160kW (rated)/250kW (max) |
| 15km/h (average speed) | Speed | 30km/h (max) |
| 12V/200liters | Battery/fuel capacity | 180kWh/lithium iron phosphate |
| - | Travel distance (fully charged) | 80km |
| 7,600kg/67,100kg | Curb weight/total weight | 8,980kg/68,480kg |

 **OUTCOMES**

o Economic impact of conversion to E-YTs

- The costs of purchasing diesel YTs and manufacturing E-YTs are as follows.
 - Purchasing a new diesel YT: 130 million KRW
 - Manufacturing an E-YT: 196 million KRW (plus charging station installation cost: 25 million KRW per station)

o Comparison of Operating Costs between Diesel YTs and E-YTs

- The conversion saves 24 million KRW in operating costs per year.

| Fuel cost | Diesel | Annual consumption | Consumption per vehicle | Diesel price | Fuel cost (KRW) | Amount saved per year |
|------------------|--|--------------------|-------------------------|--------------------|-----------------|-----------------------|
| | | | 2,122,260L | 20,212L | 1,340 KRW | |
| Electricity | | Consumption (kWh) | Operating hours | Electricity charge | Fuel cost (KRW) | 20,009,037 KRW |
| | | 24.8 | 8 | 97.7 KRW | 7,075,043 | |
| Consumables cost | Repair, lubricant, filters and other consumables | | | | | 4,440,877 KRW |
| Total | | | | | | 24,449,914 KRW |

o Social and Economic Effect of Conversion to E-YT

- Conversion to E-YT reduces CO2 emission as follows.

| CO2 reduction | Diesel consumption (L) | Reduction per vehicle | Emission | Total reduction |
|---------------|------------------------|-----------------------|------------|-----------------|
| | 20,212 | 35tons | 2.68(kg/l) | 2,415tons |


- Emission reduction from a single E-YT is equivalent to emission reduction from 9.2 zelkova trees.
 - ※ A single zelkova tree absorbs 2.5 tons of CO2 per year (source: Korea Forest Service), whereas a single E-YT reduces CO2 emission by 23 tons per year.
- Conversion to E-YT generates 25,760 KRW thousand in social and economic value.
 - ※ The economic value of a single zelkova tree is 2,800 thousand KRW (source: Korea Forest Service).

o Conversion to E-YT improves working environment by reducing vibration, noise, and exhaust gas.

FUTURE PLANS

- The YGPA will develop a conversion plan to replace all existing tractors.
 - (Encouragement) The YGPA will encourage port operators to participate in conversion.
 - (Subsidies) The YGPA will work with the government to create subsidies to cover the massive manufacturing cost of E-YTs, and use the subsidies to expand the use of E-YTs at the ports.
- The YGPA will accelerate transition to next-generation fuel.
 - The YGPA plans to adopt smart technologies such as smart grid and self-driving to upgrade port operation.
 - The YGPA will provide support for R&D efforts to achieve transition to next-generation fuels such as hydrogen fuel cells.

From shipbuilders to ship repairers: The UPA addresses the local labor market issue



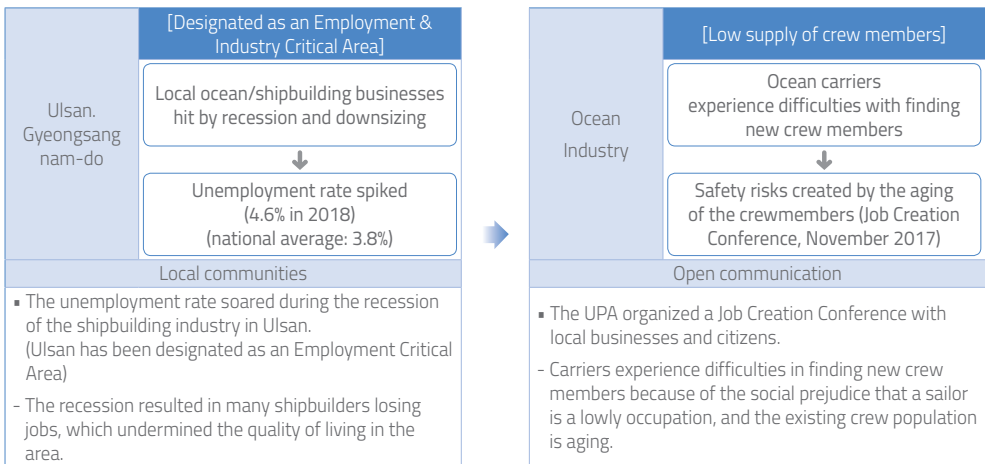
Ulsan Port Authority
(UPA)

07

From shipbuilders to ship repairers: The UPA addresses the local labor market issue

BACKGROUND

- The UPA sought to address the massive layoff of shipbuilders by maintaining open communication with citizens, to fulfill its duty as a public institution by creating social value.



ACTIONS

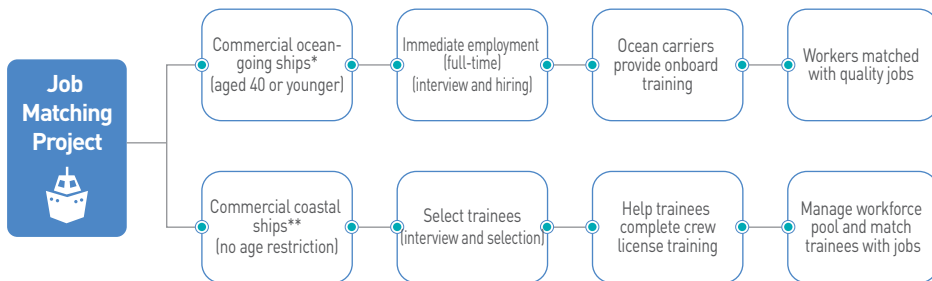
- [Step ①] The UPA linked local issues with its customers' difficulties to create new ideas.

| Unemployed shipbuilders | Ocean carriers |
|--|--|
| Hold shipbuilding experience and skills; are familiar with working with ships (however, not familiar with the characteristics and work details of ship crew positions) | Experiencing difficulties in finding new crew members; primarily looking for crew members with shipbuilding-related skills such as welding and painting. |
| ↓ | |
| Thinking outside the box: Create new jobs by combining the shipbuilding industry and the ocean carrier industry Match unemployed workers possessing shipbuilding expertise with ocean carriers looking for crew members with ship repairing skills | |

o [Step ②] The UPA worked with the relevant institutions to cooperate in overcoming the obstacles.

| Obstacle | Action | Relevant institution |
|---|---|--|
| Cannot reach all unemployed shipbuilders only through media promotion | Experiencing difficulties in verifying carriers' actual demand for workforce and encouraging them to participate in the project | Ulsan Dong-gu Shipbuilding Industry Hope Center |
| Experiencing difficulties in verifying carriers' actual demand for workforce and encouraging them to participate in the project | Seek out and build a network with carriers willing to participate in the program in cooperation with other institutions | Korea Seafarers' Welfare and Employment Center |
| Cannot provide its own training programs for crew licensing, because the UPA is not an educational institution | Provide training for unemployed shipbuilders in collaboration with certified crew training institutions | Korea Institute of Maritime and Fisheries Technology |

o [Step ③] The UPA assigned roles among the relevant entities to ensure systematic support and established the implementation process.



*Commercial ocean-going ships: Workers are immediately hired as reserve workforce for carriers (full-time).

**Commercial coastal ships: A workforce pool is formed to ensure the rapid employment of workers in case replacements are required.

o [Step ④] The UPA held the Restart! Ocean Carriers and Crew Member Applicants Meeting.

- Participants: HR managers at five ocean carriers (three ocean-going carriers and two coastal carriers) and job-seekers interested in working as crew members (around 120 in total)
- Key activities: The managers described the work of crew members, and sat with job seekers for on-site interviews.

o [Step ⑤] The UPA provided support for crew license training.

| Classification | Basic Safety Training | Basic Training for Oil & Chemical Tankers |
|----------------|--|---|
| Description | Mandatory course for applicants for crew positions under Article 116 of the Seafarers Act, Article 43 of the Enforcement Decree of the same Act, and Article 57 of the Enforcement Rules of the same Act | Created additional course considering the high number of tankers at the Port of Ulsan, which is a hub port for liquid cargo |

OUTCOMES

- > **(Job Creation)** By matching unemployed shipbuilders with carriers, the UPA created 52 high-quality jobs.

< Excerpts from interviews with an employed shipbuilder and an HR manager >

(Shipbuilder) **"The event not only resulted in 52 new jobs but also saved 52 families. I hope this program continues to give hope to my colleagues who lost their jobs."**

(HR Manager) **"These shipbuilders have a high level of expertise and understanding. I hope this program continues in the future to foster an environment that facilitates our efforts to secure skilled crew members."**


- > **(Scalability and Sustainability)** Ocean carriers were highly satisfied with the program, which allows them to recruit highly skilled shipbuilders. The program could be extended to Geoje, Tongyeong, Gunsan, and other areas with struggling shipbuilding businesses (it was benchmarked by Geoje in October 2018, which suffers from unemployment issues to Ulsan).

FUTURE PLANS

- > **(Expansion)** The UPA plans to develop a brand out of the "from shipbuilders to ship repairers" model.
 - The authority will develop ways to work with local governments to solve employment crises, and encourage ocean carriers to actively participate in the program.
 - The authority will also continue to look into the demand for crew members among carriers, and expand the Ocean Carriers and Crew Member Applicants Meeting by consulting carriers regarding the frequency of the event.
- > **(Improvement of Seafarers' Image)** The UPA plans to bolster its promotional activities regarding the seafarer occupation.
 - The authority will reinforce its efforts to improve the public's understanding of the seafarer occupation.

The IBK sets up on-site daycare centers for SME's employees

Industrial Bank of Korea
(IBK)



08

The IBK sets up on-site daycare centers for SME's employees

BACKGROUND

- Low birth rate and population aging are expected to reduce the size of Korean workforce.
 - A decline in the working age population may result in an economic crisis.
 - To address this issue, the IBK proposed "The increase of female labor force participation" as an alternative.
 - Interruption of women's careers has created various issues.
 - Korea needs to improve its childcare environment to address the issue of low birth rate and interruption of women's careers.
- To help SMEs achieve growth, the IBK launched the Co-up Financing program.
 - The Co-up Financing program consists of three phases: Growth, Rebound, and Virtuous Circle.
 - As a part of the Rebound Financing, the IBK expanded the support for welfare improvement for SME's employees.
 - The IBK provides support for welfare infrastructure so that SMEs can attract skilled workers.

ACTIONS

- The IBK signed an MOU for workplace daycare centers with the Korea Workers' Compensation and Welfare Service (KCOMWEL).
 - Workers with children have reported high satisfaction with workplace daycare centers.
 - However, SMEs lack the resources to set up childcare facilities on their own.
 - The IBK provides for daycare center sites and operating expenses pledged by the MOU.
- The IBK selected the Namdong National Industrial Complex National for the following reasons.

- ▶ The complex has more resident companies and female employees than other national industrial complexes.
- ▶ The number of daycare centers in the complex is not sufficient to meet the demand for childcare services.
- ▶ The complex offers sites and locational conditions favorable for daycare centers.
- The IBK proceeded with the project as follows.
 - ▶ September 1, 2017: Held the project briefing meeting
 - ▶ September 25, 2017: Signed an MOU with KCOMWEL
 - ▶ February 2018: Completed the design and construction of daycare centers
 - ▶ March 2018: Hired teachers and prepared teaching materials
 - ▶ March 26, 2018: Opened the daycare centers
 - ▶ April 4, 2018: Held an opening ceremony

OUTCOMES


- The project improves workers' welfare.
 - ▶ The daycare centers lower childcare burden on workers and reduce childcare costs.
 - ▶ Workers can now access high quality centers with skilled teachers.
 - ▶ The centers also offer extended hours and close proximity.
- The project helps SMEs deal with workforce shortage.
 - ▶ By providing free welfare services, the project helps SME's female workers keep on duty.
 - ▶ The services also enhance workers' loyalty toward their companies, resulting in a decrease in turnover rate.
 - ▶ The services help SMEs enhance their competitiveness in the long run.

FUTURE PLANS

- The IBK plans to set up more childcare centers on unused lots in the Gumi 4 Industrial Complex.
 - ▶ By setting up additional childcare centers, the IBK seeks to revitalize the local economy and support local SMEs.
 - ▶ The Gumi Complex employs a large number of women in need of childcare services.
- The IBK will setup and run childcare centers on unused lots in the complex that meet the suitability criteria.



**MIRECO ensures traffic safety
in urban areas with new mining
damage prevention technology.**



Mine Reclamation Corporation
(MIRECO)

09


MIRECO ensures traffic safety in urban areas with new mining damage prevention technology.

BACKGROUND

- In recent years, ground subsidence (sinkholes) in urban areas have emerged as a major cause of concern, causing massive personal and property damage.
- MIRECO has been investigating sinkholes in mining areas as one of its main projects, for which the corporation has been using its own “MIRECO EYE” technology (digital underground mine cavity figuration technology).

ACTIONS

- MIRECO developed the MIRECO EYE, a 3-Dimensional figuration equipment for underground cavities.
 - MIRECO EYE is safe since it only requires a borehole to obtain underground information without having to go in person, and it provides precise numeric and imagery information of underground cavities.
 - There are four models, each designed for different applications (mining, disaster relief, military, and civil engineering) and conditions (water, depth, etc.).

| MIRECO EYE | Model | Specifications | Applications |
|---|----------|--|--|
|  | V3.1 (A) | Multi-functional (laser, sonar, image), two-axis actuator, $\varnothing=57\text{mm}$ | Mine damage, disaster relief, military |
| | V3.1 (S) | Underwater functions (sonar, image), two-axis actuator, $\varnothing=57\text{mm}$ | Underwater cavities |
| | V3.1 (Q) | High-speed (rider), two axis actuator $\varnothing=70\text{mm}$ | Mines, tunnels, etc. |
| | V3.1 (L) | Lightweight (image, laser), single axis actuator $\varnothing=42\text{mm}$ | Cavities in urban areas and in shallow depth |

- MIRECO used MIRECO EYE to investigate sinkholes in downtown Seoul.
 - MIRECO used its advanced non-excavating investigation/restoration technique to visually identify cavities under roads with homemade equipment.
 - Road collapse risk assessment and analysis in Korea largely relies on foreign technologies.
 - Even though Korea previously developed a safety inspection robot system, it could only be used in sewage pipes or tunnels (not readily applicable to roads).
 - The use of MIRECO’s advanced detection technology allowed investigators to identify the exact location and size of cavities.

| Category | Before | After |
|---|--|---|
| Combined detection of cavities under roads | GPR Exploration → Identify abnormal areas → Drilling (verify cavity) → Restore ▶ GPR cannot effectively identify cavities if iron or wastes are buried underground (low detectable depth). ▶ It mostly provides qualitative results. | GPR Exploration → Identify abnormal areas → Drilling (verify cavity) → Use MIRECO EYE → Restore ▶ MIRECO EYE enables a complementary investigation of GPR findings. ▶ The shape and volume of cavities are available, providing them with quantitative results. |
| Large-sized cavities (0.5m ³ or wider) | Large cavities are difficult to measure without excavation, and excavation causes traffic congestion. | MIRECO EYE only requires a borehole to measure cavities, and minimizes traffic congestion. |
| Small-sized cavities (0.5m ³ or smaller) | The technique does not provide accurate information about the volume of cavities, so the cavity may not be completely filled. | Grouting is performed after accurate calculation of the required amount, which ensures complete filling. |

OUTCOMES


- MIRECO used its new technology (MIRECO EYE) in joint investigation project with Seoul metropolitan government, resulting in technological innovation and maximized synergy in road safety.
 - The Seoul metropolitan government launched a joint project involving private entities, government bodies, and research centers and discovered 2,504 cavities in 2017. Road collapses declined by 67% year on year (source: Seoul Metropolitan Government Press Release, January 29, 2018).
 - MIRECO signed an MOU with the Seoul metropolitan government to increase the efficiency of the project. The use of MIRECO EYE equipment allowed acquiring underground cavity data at 106 locations across 12 areas, of which 41 locations were immediately reinforced to help ensure safety
 - Commercialization of the new technology created jobs for younger generations (Sherpa ENC, 3 full-time employees)
- MIRECO EYE was recognized as the nation's new technology No. 1040 selected by the Ministry of Trade, Industry and Energy, and received a rating of T-2, the highest rating for technology evaluation by NICE D&B.
- MIRECO EYE also received favorable reviews from the public by earning 84 points in both technical advancement level and marketability, on technical evaluation reviewed by some 150 people and experts at home and abroad.

FUTURE PLANS

- MIRECO will share the technology with small and medium-sized enterprises (SMEs), and continue to make efforts to create more jobs.
- A joint investigation of around 70 damaged heat pipes with the Go-yang city government is in schedule.



KOEN offers, shares, and connects public data on solar photovoltaic power generation



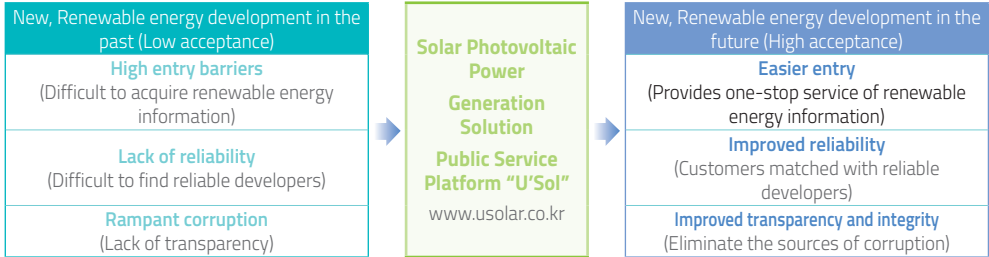
Korea South-East Power
(KOEN)

10

KOEN offers, shares, and connects public data on solar photovoltaic power generation



BACKGROUND

- KOEN developed a solar photovoltaic power generation customer support platform as part of a public service aimed at boosting the supply of renewable energy.
 - **(Quality of life)** The platform contributed to expanding the use of clean energy by providing information on renewable energy.
 - **(Reliability)** The platform linked and matched customers with reliable solar power operators, thereby expanding public participation.
 - **(Integrity)** The platform improved the national level of integrity by ensuring transparency in the renewable energy development market.

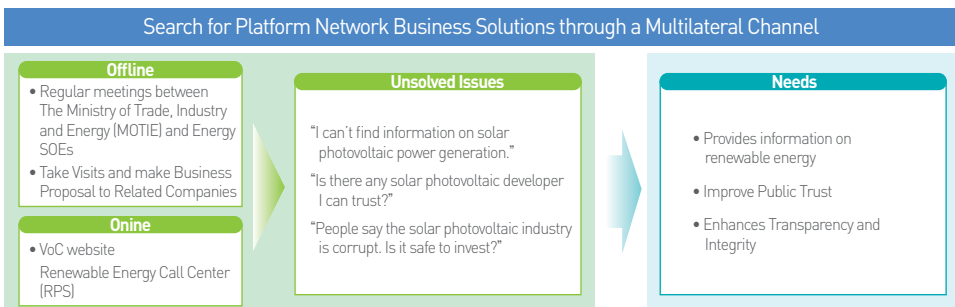


U'sol ?

U'sol stands for Your Solar, Your Solution. Users can access information on solar photovoltaic industry (costs, legislations, systems, businesses) by simply entering their addresses, and search for reliable solar photovoltaic power generation developers.

- **(Voice of Customers (VoC))** KOEN communicated with customers to identify issues regarding renewable energy and people's needs.

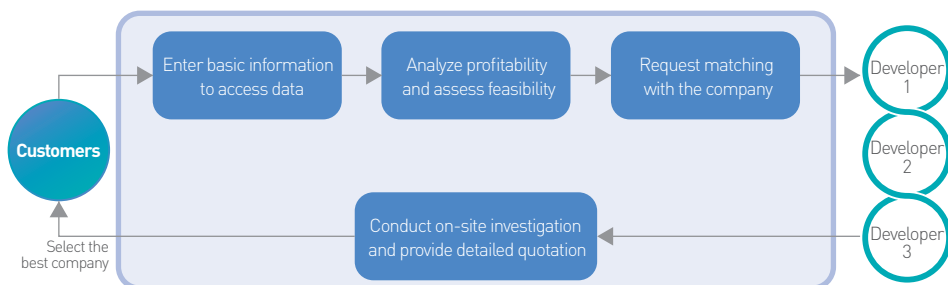


ACTIONS

- **(Goal)** KOEN set a goal of building a platform that transparently provides information on renewable energy, to provide the public with access to photovoltaic businesses and match users with reliable developers.
- **(Service Design)** KOEN developed a customized platform that reflects the opinions of market participants.

| Participants | Direction | Solution |
|---|--|---|
| KOEN, Citizens Solar photovoltaic developers, public/private data holders | Openness/Convergence/Convenience Reliability/Connectivity/Integrity | Build a platform for the public/ developers to open, connect, and share data and provide them in a reliable manner |

- KOEN developed a new market platform through market benchmarking.
 - The platform provided information tailored to customers’ needs and an open market that engaged all stakeholders.
 - The platform provided public data and ensures optimal use, thereby benefiting the public.
 - KOEN built an intensive operational system with expert task forces and long-term strategies.
- **(Providing Professionalized Information)** The platform provided detailed information on solar photovoltaic power generation industry from the public’s perspectives.
 - The platform provided graphic-based business procedure and holds a wide collection of business information (established a “solar energy learning space”).
- **(Data Disclosure & Consolidation)** The platform brought together scattered data to create high value.
 - The platform consolidated simple, scattered data and process them into an optimized data for solar photovoltaic business development and provided it for free.
- **(Open Platform)** KOEN worked toward increasing the convenience and usage of the consumer-centered platform and provided more business opportunities.



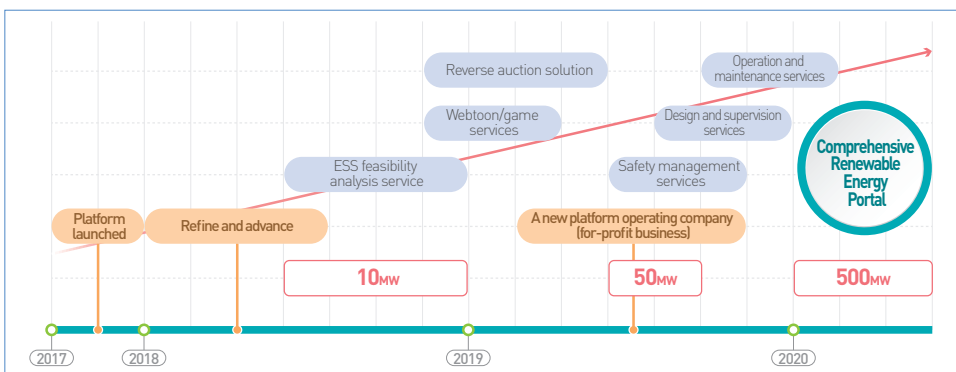
- (Expansion/Continuation) KOEN published papers, applied for patents, and registered for copyrights.
 - The company published papers in academic journals and sent speakers to academic conferences. It also conducted seminars on advancement and expansion strategies.
 - By disclosing information and building trust, the company seek to expand the supply of renewable energy and create more jobs.

OUTCOMES


- (Enhanced Convenience) KOEN offers all there is to know on solar photovoltaic power generation businesses.
 - The company addressed the asymmetry of solar photovoltaic information by sharing related information and improved the reliability of the industry.
- (Hyper-Connected and Open Market) KOEN matched solar photovoltaic business consumers with developers.
 - The company promoted renewable energy supply by matching developers with customers free of charge.

FUTURE PLANS

- KOEN plans to expand business cooperation, improve the platform's functions and services, and develop more related services.



KCA launches electromagnetic wave safety diagnose service for childcare facilities.



Korea Communication Agency
(KCA)

11

KCA launches electromagnetic wave safety diagnose service for childcare facilities.

BACKGROUND

- In the age of hyper-connected networks, the ubiquitous use of radio wave technologies has elevated people's interest in the effect of electromagnetic wave on human body.
- The World Health Organization (WHO) and the International Agency for Research on Cancer (IARC) have warned that excessive exposure to electromagnetic wave may raise the risk of brain cancer in young children.
- The United States and Europe have electromagnetic radiation safety standards in place to protect young children. Korea also has established its own safety standards on par with the international standards.
- Parents of children attending daycare centers, kindergartens, and elementary schools are increasingly concerned about children's exposure to electromagnetic wave.

< Case of Parent A >

Parent A has a child attending kindergarten. One day, he saw a telecommunication antenna near the kindergarten and thought, "How much electromagnetic wave is my kid's kindergarten exposed to?" The media report that excessive exposure may cause cancer in children only added to his worries.

※ Eight out of 10 Koreans are concerned about the health impact of electromagnetic wave (survey on 1,000 Korean adults, Research Lab).members."

ACTIONS

- To address the public concern on electromagnetic radiation and restore public trust toward the government's electromagnetic radiation policies, KCA launched the "Electromagnetic Wave Safety Civic Group" consisting of NGOs, teachers, parents, experts (medicine and engineering), and public officials.
 - The KCA worked with education offices and local governments to measure electromagnetic radiation at childcare facilities across the nation and provided consultation free of charge. The measurement results are offered in real time at the Electromagnetic Wave Safety Map website (emf.kca.kr).
 - The civic group is involved in every step, including measurement planning and selection of measurement sites and methods.
- KCA personnel took visits to facilities with the civic group to identify issues and improvement solutions, and developed new measurement systems based on people's opinions.
 - **(Electromagnetic Wave Risk Areas)** The KCA has developed an unmanned remote electromagnetic wave measurement system and monitoring/control systems capable of around-the-clock measurement and monitoring.
 - **(Heavily Populated Areas)** The KAC developed, and currently operates, electromagnetic wave patrol cars with measuring equipment, which travels around heavily populated areas measuring electromagnetic wave.
- The KCA also offers electromagnetic wave safety diagnosis services free of charge without government subsidies.
 - To enhance efficiency and save budget, the KCA secured 160 million KRW from its own budget and hired 31 additional measuring experts (full-time positions).
- The KCA offers its patented unmanned remote electromagnetic wave measurement system to private companies free of charge, thereby helping the revitalization of the related industries.

 **OUTCOMES**

- In 2018, the KCA offered its electromagnetic wave safety diagnosis services at 932 childcare facilities across Korea.
- The KCA conducted an electromagnetic wave safety perception survey from teachers and parents. The findings showed that concerns on electromagnetic wave have been relieved to a considerable degree (safety rating improved from 40.6 to 90.5).
- The company enabled around-the-clock measurement by developing 400 small-sized unmanned remote electromagnetic wave measuring equipment.
- It helped people reduce economic costs by providing electromagnetic wave measurement services (priced at KRW 20,300) free of charge.
- It also worked with citizens to implement electromagnetic wave safety policies. As a result, the agency achieved a rating of 95.7 in customer satisfaction for its electromagnetic wave-related services.
- The KCA won the Bronze Prize in the Best Innovation Practice Contest involving the central government departments, local governments, state-owned enterprises and public institutions.

 **FUTURE PLANS**

- By 2022, the KCA will conduct electromagnetic wave measurements at more than 85,000 daycare centers, kindergartens, and elementary schools.
- The KCA will broaden the scope of the program and develop new measuring equipment, to protect people from electromagnetic wave in their daily lives.

**FOWI turns forests into a new
workplace by creating forest
welfare jobs.**



Korea Forest Welfare Institute
(FOWI)

12

FOWI turns forests into a new workplace by creating forest welfare jobs.

BACKGROUND

- **(Background)** The current Moon Jae-in administration has put job creation at the center of its administrative policy. In line with the administration's focus, FOWI preemptively set its corporate objective of creating new jobs on forest welfare.
- **(External Environment)** Forests offer high potential and scalability for creating economic and social value and jobs. As the foundation of people's livelihood and public resources, forests account for 63% of Korean land. Forests has become an alternative to meet new welfare demands and provide places of residence.
- **(Increased Demand)** People seek rest, education, therapy, and other tangible and intangible services from forests. Increased interest has raised the significance of, and demand for, forest welfare jobs.
 - ☞ FOWI worked toward innovating job creation and welfare issues by using forests and their resources to create high-quality jobs and improve people's quality of life.

ACTIONS

- FOWI supported private startups in the forest welfare industry to help them improve human resources.
 - Through its startup support, FOWI created 2,522 more jobs in the private sector.
 - FOWI designed programs such as forest guide tours, forest experience education for children, and forest therapy activities.
 - It also increased the number of registered forest welfare businesses by operating job counseling offices and holding local startup information sessions.
 - It developed business models in forest welfare industry, and provided consulting service regarding taxes, accounting, and labor relations.
 - FOWI provided tailored training courses to improve the professional competency of 2,138 forest welfare experts.
 - The training courses offered various curriculum designed for different types of experts, which enhanced the effectiveness of the courses.
 - The courses offered level-based training programs according to working experiences.
 - The courses utilized outstanding case studies that won awards at contests.

- ▶ FOWI organized a “Forest Welfare Startup Camp” for younger generations to foster future experts and entrepreneurs.
 - Through this camp, new ideas were discovered, implemented and awarded.
 - FOWI provided camp participants with internship opportunities at forest welfare facilities and office space to help them start their own businesses.
- FOWI established a job-creating infrastructure by building more forest facilities for welfare service.
 - ▶ It created 143 new forest welfare facilities for the disabled and vulnerable groups who find it difficult to visit forests, thereby creating new welfare jobs.
 - Private recreational forests and forest welfare providers worked together to build more facilities for the disabled and vulnerable groups, which enhanced accessibility to forests and expanded the areas of forest welfare businesses.
 - ▶ FOWI built local forest welfare facilities that possess different characteristics based on different targets to meet diverse demands.
 - National Center for Forest Education, Deajeon was built especially for toddler and children, National Center for Forest Education, Chuncheon for teenagers, National Center for Forest Education, Naju for middle-aged and elderly.
- FOWI created demand for forest welfare services by developing diverse contents.
 - ▶ The institute worked with local communities to develop a wide range of new projects such as pilot project on forest tourism and expanded its business.
 - The contents and pilot projects were mainly carried out by forest welfare facilities, and utilized various ecological, historic, cultural, and tourism resources of the relevant local communities (in collaboration with five institutes including the Amisan Mountain Forest Center).
 - ▶ FOWI developed and provided various customized programs to expand the demand for forest welfare services.
 - In collaboration with government ministries and private companies, the institute worked together to develop and provide programs for socially disadvantaged groups (people with disabilities and children requiring protection) and specialized workers such as firefighters (certified as Outstanding Education Donator in 2018).
 - It also provided various programs certified by the government or honored with contest awards (130 programs).
 - The institute developed and distributed a guidebook on forest welfare jobs for younger generations and job seekers.
 - ▶ FOWI improved public awareness through strategic promotion focused on the implementation of government policy projects (on 183 cases).


OUTCOMES

- **(Improved Quality of Life)** FOWI improved the quality of life for forest welfare professionals by providing them with stable jobs.
 - The institute created a new industrial ecosystem for private jobs in the forest welfare sector and created 2,522 new stable jobs.
- **(Improved National Happiness)** FOWI improved national happiness by providing forest welfare services.
 - According to the study of effectiveness of forest healing, forest programs have positive effect on people by lowering stress and negative feelings while enhancing positive emotions.
- **(Created Social Value)** FOWI fulfilled its social responsibilities by creating jobs and social value.
 - Won the Minister of Agriculture, Food and Rural Affairs Minister Prize in Best Creator of Jobs in the Private Sector.

FUTURE PLANS

- **(Systematized Support)** FOWI will develop a customized support system to ensure stable operation of the forest welfare businesses and improve management and service capabilities.
- **(Expanded Scope)** FOWI will utilize forest welfare related businesses such as forest leisure, gardening care, and village restoration project to support startups, create new business areas and expand the forest welfare industry.
- **(System Reform)** FOWI lowered entry barriers by reducing the personnel and capital requirements for startups in the forest welfare sector to encourage startups.

K-Water develops local products out of ecosystem-disturbing species.



Korea Water Resources Corporation
(K-Water)

13

K-Water develops local products out of ecosystem-disturbing species.

BACKGROUND

- The spread of ecosystem-disturbing species* in dams and flood plains has posed a threat to indigenous species and the aquatic ecosystem, and inflicted damage on farmers and fishermen.

*Ecosystem-disturbing species are invasive species designated and announced by the Minister of Environment among species that may disturb the balance of the ecosystem, such as alien species and genetically modified species.

- Excessive Breeding of invasive predators (bass, blue gill, etc.) and uneconomical species (lake skygagers and Korean piscivorous chubs) disturb the ecosystem and reduce the profit of licensed fishermen at dams.
- 90% of ecosystem-disturbing species caught and purchased are buried or thrown away because of the lack of technology to utilize them, which causes secondary pollution such as odor.
- There was a need for innovation on sustainable management based on the citizens playing a leading role.
 - Temporary removal was not a feasible option to prevent the spread of ecosystem-disturbing species. For this reason, K-Water developed an utilizable technology and new projects that engage citizens.

ACTIONS

K-Water launched the "Ecosystem-disturbing Species Resourcification (or resource utilization) Program" where local residents are key participants as well as beneficiaries, to protect aquatic ecosystems and create jobs.

- (Idea Development) K-Water collected residents' opinions on overall process such as collecting and utilizing ecosystem-disturbing species (local representatives, communities, and task forces).
 - The corporation transformed these species from a nuisance that had to be removed or eradicated to a useful resource, and launched a pilot project to develop an eco-friendly fishmeal fertilizer.

- **(Product Development)** K-Water developed a suitable technology and a manufacturing process based on technological cooperation with the private sector, consultation with local communities, and stage-by-stage monitoring.
 - The corporation worked with research centers and institutions for multiple years (2016-2018) to identify issues* with existing fertilizer manufacturing technologies, improving user convenience, reducing manufacturing process, and developing other customized technologies (acquired 2 patents).
 - *The identified issues include the time required for manufacturing and the lack of marketability due to bad odor and decomposition.
 - The corporation worked with domestic small and medium-sized enterprises (SMEs) to develop and install mobile manufacturing equipment (for household use) and automated factory equipment (for sales).
 - ※ The equipment is capable of packaging and supplying fish meal fertilizers within two hours.
- **(Commercialization)** K-Water successfully sold and supplied test batches, and demonstrated its quality, demand, and feasibility, thereby expanding and commercializing the fishmeal fertilizer manufacturing technology.
 - **(Demonstration and Safety Test)** The corporation held public demonstrations in front of local residents and fishermen to prove the product's effectiveness on five crops (including nanpa cabbage) and its safety.
 - K-Water supplied test batches to farmers at arable land areas on upstream of dams and the water source protection areas to replace chemical and livestock fertilizers, thus protecting water quality.
 - 10 tons of test batches have been sold through collaboration with farmers, fishermen, local governments, and the National Agricultural Cooperative Federation (Nong-hyup).


OUTCOMES

- **(Environmental Protection)** K-Water improved the preservation of aquatic ecosystems by effectively, and continuously removing ecosystem-disturbing species.
 - By removing alien species and predators, the corporation restored aquatic ecosystems and prevented secondary pollution by using ecosystem-disturbing species previously buried or thrown away.
- **(Boost Regional Economy)** K-Water created a new source of income for local residents through fish purchases and fertilizer sales.
 - ※ (Fish Meal Fertilizer) The product is expected to generate annual income of KRW 50 to 60 million for fishermen (fish purchases) and KRW 40 to 50 million for farmers (fertilizer sales).
- **(Job Creation)** K-Water built factories for fertilizer manufacturing and distribution, and created jobs for local communities.

 **FUTURE PLANS**

- (Factory Construction and Transfer of Operating Rights) K-Water plans to build manufacturing factories (to be completed in January 2019) and transfer the operating rights to local residents, to ensure that the project engages local residents and generates more income.
- > The corporation will ensure successful transfer of the operating rights by systematizing the process (production, material acquisition, government certification, follow-up, etc.) and providing training and manuals on maintenance and safety.

KEA provides a compact energy service that combine welfare and safety.



Korea Energy Agency
(KEA)

14

KEA provides a compact energy service that combine welfare and safety.

BACKGROUND

- KEA is operating an energy voucher service to vulnerable groups.
 - Despite its efforts to increase the issuance rate and the usage rate of energy vouchers, the vouchers' usage rate was relatively lower than its issuance rate.
- KEA also recognized the need to use its experience and expertise as an inspection agency of heat using equipment (boilers and pressure containers) to create social value as part of corporate social responsibility.
 - In particular, through the energy voucher program, the agency provided compact public services that combine safety and welfare.
- Frequent fire and safety accidents have made life more difficult for socially disadvantaged groups during winter.
 - ※ (Jeonbuk Ilbo - October 29, 2018) Public Rental Apartments Found Unsafe in a Safety Inspection
 - ※ (Asia Today - November 6, 2018) Prime Minister Lee Stress the Need to Protect Vulnerable Groups during Cold Seasons

< Segye Ilbo >

Politicians in Mourning after a Fire in Jongno...“Urgent Need for Safety Measures for Vulnerable Groups”

In response to the fire that hit a gosiwon (small, budget friendly study room type accommodation) in Jongno, Seoul... both the ruling party and the opposition stressed the need to prepare safety measures to prevent accidents that affect vulnerable groups...

(November 9, 2018)

ACTIONS

- KEA looked into benefit eligible households not using energy vouchers and took a follow-up action.
 - After identifying non-voucher users, KEA worked with local governments to take visits to the households to verify the cause. In total, 115 households were not using

vouchers because their boilers or electric pads were broken.

- The company paid visits to household with broken heating equipment to examine the equipment and provide diagnosis and consulting services.

(Energy Voucher Plus) KEA worked with regional KEA offices, related institutions, and local governments for company-wide efforts to promote the use of energy vouchers among vulnerable groups

- ※ On-site inspection and actions → appropriate measures and follow-up result reporting (end of November)
- ※ Inspected and took actions at 31 households, provided new equipment and supplies to 5 households, and provided repair services

- To promote the use of energy vouchers, KEA inspected the safety and efficiency of worn out boilers for vulnerable groups living in permanent rental apartments.
 - The company signed a multilateral MOU to share the identified problems with related institutions and jointly find solutions.
 - It examined worn out boilers at permanent rental apartments and shared data on equipment conditions to prevent accidents and reduce maintenance cost.

OUTCOMES


- Both the issuance rate and the usage rate of energy vouchers improved (90% → 94.5% and 83.7% → 90.0%, respectively).
 - KEA built a compact energy welfare safety net for vulnerable groups.
- Preventive inspections at permanent rental apartments reduced maintenance costs and fuel costs by 690 million KRW.
 - KEA addressed the issue of discontinued heating or hot water caused by boiler malfunction.

FUTURE PLANS

- KEA plans to issue “cooling vouchers” during summer seasons to protect socially disadvantaged groups from heat waves, and inspect boilers in all permanent rental apartment units across Korea.



KESCO runs the “EBER” service program for emergency recovery of apartment blackouts using IoT safety helmets.



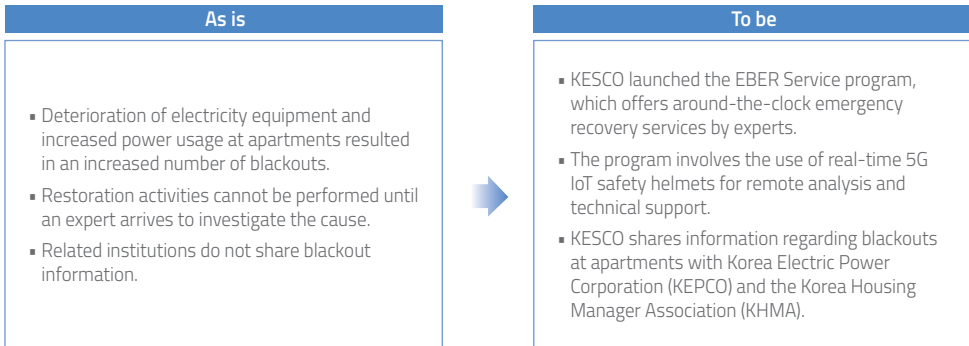
Korea Electrical Safety Corporation
(KESCO)

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KESCO runs the “EBER” service program for emergency recovery of apartment blackouts using IoT safety helmets.

BACKGROUND

- The number of blackouts at apartments during the summer increased from 72 in August 2017 to 134 in August 2018, a 186% increase.
 - In August alone, around 134,000 residents were affected by blackouts.
 - 61% of Koreans live in apartment units, and 36% of all apartments have poorly maintained electricity equipment.
 - Problems with transformers, fuses, and other electricity equipment caused 80% of all blackouts at apartments.



ACTIONS

- **(Emergency Restoration Service)** To address the inconveniences caused by apartment blackouts, KESCO launched the EBER Service program, which offers around-the-clock emergency power restoration in case of blackouts.
- **Electrical Breakdown Emergency Recovery (EBER) Service**
 - Experts are on hand around the clock to provide recovery services in case of electrical breakdowns at apartments free of charge.
- **(IoT Innovation)** The program uses 5G and IoT to provide technical support as if the experts were at the site, and provides accident analysis services powered by KESCO's expertise and state-of-the-art measurement devices.



Using IoT helmets, experts communicate responders or apartment staff members in real time to provide technical support and supervise recovery activities.

- EBER service launch date: November 1, 2017 / Adoption of IoT: April 30, 2018
- Cooperating Institutions and Support Structure

| Korea Electrical Safety Corporation (KESCO) | + | LGU+ | KHMA | KEPCO |
|--|---|---|--|---|
| <ul style="list-style-type: none"> ▪ Experts on hand around the clock for emergency dispatch and services | | <ul style="list-style-type: none"> ▪ Communication support through IoT safety helmets ▪ Communication relays and power generator vehicles | <ul style="list-style-type: none"> • Training and education of apartment personnel (managers and staff members) | <ul style="list-style-type: none"> • Real-time sharing of blackout information |

OUTCOMES

- **(Reduced Recovery Time)** The EBER Service program greatly reduced the time required for recovery in case of blackouts.
- **(Inter-Institutional Cooperation)** KESCO worked with the relevant institutions to share blackout information and ensure faster reception of blackout reports (30 minutes → real time reception)
- **(IoT+Safety)** KESCO created social value by offering fast recovery from blackouts through electricity safety services powered by IoT and 5G.

| | |
|--|--|
| Blackout time down | <p>An analysis showed that the average time of recovery from apartment blackouts decreased from 5.1 hours to 4.1 hours.</p> <p>The EBER Service program was rated at 94.6 in a customer satisfaction survey (target rating: 86.7).</p> <p>※ (Survey targets/period) apartment personnel who utilized the service / within 3 months</p> |
| Prevention and recovery competencies up | <p>In addition to the recovery service, KESCO provided safety managers at apartments with free safety training to improve their ability to respond to accidents (84 sessions, 4,426 participants).</p> <p>※ The Special Training for Increased Power Usage During Winter achieved a satisfaction rating of 97.1.</p> |

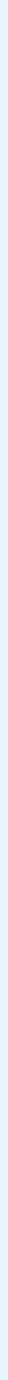
FUTURE PLANS

- KESCO will work with the relevant institutions to prevent blackouts and build a system for faster recovery.
 - The corporation will create an advanced system to share blackout information with KEPCO and the Korea Housing Management in real time.
- KESCO will launch a pilot project for the Electricity-Safe Apartment Certification Program to improve on designs and construction techniques to prevent blackouts.
 - The corporation plans to organize working groups consisting of apartment construction companies and set up a committee to determine certification criteria.
- KESCO also plans to organize special training sessions for safety managers at apartments before usage spikes in summer and winter.

HF offers construction fund guarantees for social and community housing, to restore local communities and supply budget friendly rental houses.



Korea Housing Finance Corporation
(HF)



16

HF offers construction fund guarantees for social and community housing, to restore local communities and supply budget friendly rental houses.

BACKGROUND

- Vulnerable groups face increased difficulties in paying rent. The social and community housing program alone is no longer the best option for addressing this issue.
 - **(Residents)** HF recognized the need to reduce housing expenses of socially disadvantaged groups such as younger generations and newlyweds.
 - ※ The percentage of rent in the monthly income of low-income groups: 21.8% (2012) → 23.1% (2016)
 - **(Supply)** Due to low credit ratings, vulnerable groups experience difficulty with securing funds.
 - The HF sought to build a cooperation model between local governments and the private sector, diversify the types of houses supplied, and improve the reliability and quality of the services.

ACTIONS

- **(Model)** The HF developed a model to promote the supply of social and community houses, by reducing the financial expenses by up to 4.5% percent.
 - **(HF)** The HF increased the upper limit of construction guarantee loans from 70% to 90% of total project budget, lowered the guarantee fee rate by 0.2%p, and raised the guarantee rate from 90% to 100%.
 - **(Seoul Metropolitan Government · Seoul Housing & Communities Corporation (SH))** The HF worked with Seoul and SH to lease lands owned by Seoul, provide social and community housing certification services, and paid for interests (2%p), thereby reducing the initial burden felt by constructors.
 - **(Financial Institutions)** Financial institutions provide loans for construction projects and lease deposits at low interest rates.
- **(System)** HF supplied rental houses in two types: standard and land lease. The HF also fostered social enterprises as suppliers of rental housing.
 - **(Standard)** Cooperatives and other housing lease entities supply rental community houses.

- > (Land Lease) The public sector (Seoul Metropolitan Government, etc.) lease lands for 30 years, which private entities use to build and supply rental houses.
- (Service) The HF supported social and community housing projects.
 - > (Consulting) The HF held three briefing sessions for social housing entities and provided consulting services.
 - > (Cooperation) The HF worked with Seoul to distribute guidelines on selection of social and community housing entities, and operated a community certification program.
 - > (Operation) The HF and the relevant banks handled loans and fund management.

OUTCOMES


- The HF provided guarantees for social and community housing entities leasing lands for the first time: “Create Happy Houses with Communication” project (guarantee amount: KRW 2.9 billion).
 - > Seoul leases lands for 30-year periods, and entities receive secured loans to use for construction and other activities.
 - > Only non-home owners and persons interested in joint childcare are eligible.

FUTURE PLANS

- The HF plans to supply 13,000 social and community houses over five years, starting with 24 households.
- Based on the performance of the program in Seoul, the HF plans to expand its scope to include Busan and other metropolitan cities.



**KR becomes the first public
institution to build a smart
compensation system powered
by ICT**



Korea Rural Community Corporation
(KR)

17

KR becomes the first public institution to build a smart compensation system powered by ICT

BACKGROUND

- Land Purchase Compensation program is an important process that compensates landowners for the loss caused by the acquisition or the use of lands for public projects, and it should precede public projects since it protects property rights and improves public welfare.
 - If an agreement does not, or cannot be reached with the owner during the process, the land is expropriated through an application with the relevant Land Expropriation Committee.
- The existing expropriation system had the following issues.
 - First, officials in charge of compensation work have been complaining about excessive workload and workforce shortage. The workload issues were worsened by frequent personnel changes and lack of work process improvement.
 - Second, there have been many cases of administrative errors including missing public announcements on approved (changed) projects, and due compliance with the statutory negotiation requirements has not been managed systematically.
 - Third, compensation documents were treated manually, which created risks of double payments and accounting frauds.
 - ※ Statutory negotiation requirements: at least 3 written notifications, 1 phone call, and 1 visit.
- Excessive workload and inefficient practices regarding expropriation decisions have been a major cause of delays in construction, which undermines the efficiency of national projects and adversely affects KR's business.
- In addition, if a compensation contract is not executed within a year from an appraisal, the Land Compensation Act requires another appraisal, which costs another appraisal fee and results in waste of fiscal resources.

ACTIONS

- KR became the first public institution to build an electronic expropriation decision system.
 - When a compensation officer performs the statutory negotiations regarding the object and enters the information on the progress of compensation, the system reviews whether a land owner who refused to negotiate satisfies the requirements for expropriation decision. Then, the system alerts the compensation officer to generate application documents.
 - KR's electronic expropriation decision system is linked to the decision information system of the Land Expropriation Committee, so that system-verified/generated application documents can be filed online.
- The filling system of payment slips for compensations were changed from manual to automatic.
 - To prevent possible issues caused by manual preparation, such as double issuance and arbitrary alteration of compensation details and other accounting frauds, KR banned manual preparation of payment slips and replaced it with auto-generation through inter-system links.
 - The change fundamentally prevented accounting frauds and improved KR's transparency.


OUTCOMES

- The new system reduced the time required for expropriation decisions by 135 days, and raised the number of expropriation applications by 21 fold.
 - KR standardized and computerized expropriation decision works, which reduced the time required for expropriation decisions by 135 days from the previous 240 days. In addition, reduced workload and other improvements increased the number of expropriation decision applications by 21 fold.
 - The revitalization of expropriation decisions will help land owners receive decisions and resolve possible conflicts faster, and receive just compensation for their property rights.
- The new system fundamentally prevents accounting frauds during payment slip preparation.
 - Compensation payment slips are not auto-generated through inter-system linkage (Land Purchase Compensation System ERP), which fundamentally prevents arbitrary alteration of compensation details.
 - The new system eliminated the need for additional management, saving 900 million KRW in management costs and 1 billion KRW in compensation.
 - The reduced delay in compensation is expected to save the government 1.9 billion KRW.

FUTURE PLANS

- KR continues to upgrade its systems and innovate the process by sharing and linking information with other institutions such as the Korea Association of Property Appraisers (Property Appraiser Recommendation System) and the Ministry of Land, Infrastructure and Transport (Public Compensation Support System).
- In addition, the corporation will provide landowners with information across the cycle from compensation plans, expropriation, and deposits via text messages in real time, to protect their rights by notifying the use and acquisition of personal properties and ensure just compensation.

**KEPCO works toward sustainable
innovation by developing social
network services powered by IoT.**



Korea Electric Power Corporation
(KEPCO)

18

KEPCO works toward sustainable innovation by developing social network services powered by IoT.

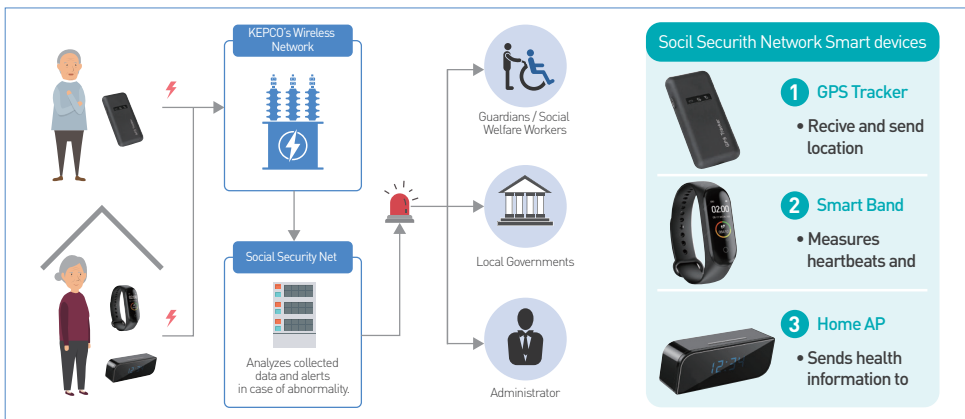
BACKGROUND

- The recent aging population has raised the number of missing Alzheimer patients and solitary deaths among elderly singles.
- Alzheimer patients and elderly singles need public services.

ACTIONS

- Service Overview: KEPCO uses its energy IoT infrastructure to provide public services at low costs.
 - Alzheimer Patient Locating
 - KEPCO's remote detection network receives GPS tracker signals, learns the patients' living ranges and provides social security workers and guardians with their locations.
 - Safety Service for Elderly Singles
 - The service system uses smart bands to acquire cardiac information of their owners and in case of abnormal signal, the system alerts the guardians or related institutions.
 - If an elderly single cannot be reached, the system uses home APs to detect motions and provide safety information.

Service Structure



OUTCOMES

- **(Cost Reduction)** The system uses KEPCO's infrastructure to provide social security services at minimum costs.

| Items | Device price | Smartphone | Service fee |
|---------|---------------------|-------------------------------------|---------------------|
| Carrier | KRW 200,000 | Hundreds of thousands of Korean Won | KRW 2,000 per month |
| KEPCO | KRW 200,000 (KEPCO) | Not required | Free |

- **(Service Improvement)** KEPCO prolonged the device's operation time and expanded its coverage.

| Category | Before | After | Effect |
|-------------------|--|--|----------------------------|
| Smart Band | Hours of use: 6 hrs | Hours of use: 3 days | Improved convenience |
| Location tracking | Included in smart band (excessive battery usage) | Separated as GPS tracker (low power/lightweight) | Dual service: |
| At home service | Not available | Motion detection | Can verify location |
| Range | 150–200 m | 500 m | Reduced installation costs |

- **(Social Values)** KEPCO works with local governments to contribute to local communities and create jobs.
 - KEPCO collaborated with local SMEs for R&D projects (400 million KRW) and created new jobs.

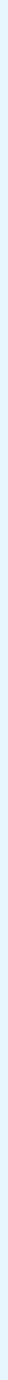

FUTURE PLANS

- KEPCO listens to feedback to improve services and expand social safety nets.
- KEPCO plans to add new features such as voice alarm and life pattern learning based on temperature and humidity. KEPCO plans to add new services powered by AI and machine learning.
- KEPCO will also expand the program nationwide through collaboration with other local governments and promotion activities.
 - Offering the program to even a half of elderly singles in Korea will benefit around 170,000 individuals.



NPS creates social values with National Pension big data.

National Pension Service
(NPS)



19

NPS creates social values with National Pension big data.

BACKGROUND

- The government has set job creation as one of its top priorities, and demands local governments to develop and take measures to address the unemployment issue.



“However, job creation projects should be developed and led by local governments, with the government taking the role of reviewer and supporter.”

(President Moon Jae-in, during the conference with 7th civilian Si/Do governors/mayors on August 30, 2018).

- However, many local governments lack the data to understand the employment status, and rely on their experiences instead, which restricts their ability to develop effective job creation measures.
- In response, to assist with the government’s efforts to resolve unemployment and boost job creation through data, the NPS has been working with local governments.



Cooperating Institutions

ACTIONS

- To help local governments address current issues, the NPS provides its data and analyses.
 - The data include nationwide employment, retirement, income activities, business establishments, and closed businesses.
 - The NPS holds around 90 billion items accumulated over the last 30 years, which include nationwide data regarding income activities and creation, closure, and relocation of business establishments.

- The data also include local residents/business establishment information for basic policy development.
- The NPS leads changes in government operations by pursuing data-based cooperation.
- The institution seeks to expand the use of the program for continuous efforts to develop cooperation models.
 - The institution also visits local governments to listen to voices from the field and improve their systems.
- The institution provides integrated job information for more efficient job matching.

OUTCOMES

- The NPS changed how governments work, which improved the efficiency of policy implementation and resulted in higher satisfaction.
 - Reliance on past practices and experience → Data-based administration
 - (National Pension) Provide data analyses ↔ (Local Governments) Develop and implement policies effectively

| Category | As Is | To Be |
|--------------------|--|---|
| Public | ▶ Did not receive sufficient support for job insecurity. | ▶ Stabilizes people's live by providing support felt by the people. |
| Central Government | ▶ Effectiveness of welfare policies undermined by limited resources (budget and manpower). | ▶ Achieve national goals by providing effective support felt by the people. |
| Local Governments | ▶ Unable to understand the status of people in need • Job matching programs focus on local businesses, resulting in businesses looking for employees. | ▶ Preemptively identify and support potentially vulnerable groups • Job-seekers are offered jobs tailored to them, and companies are provided much-needed workforce. |

- The NPS improved work efficiency by developing an integrative information model that combine NPS data and data from the public and private sectors.
 - The job information offers convenient and fast search and high reliability.
 - Job information is provided depending on various needs through diverse analyses.
- The NPS developed the NPS Block to share data without violating personal information.
 - Each area is divided into blocks (50 m x 50 m), which are mapped for data recording and sharing.
 - The NPS acquire a joint patent with an SME, thereby ensuring shared growth and technical expertise.
- The NPS shared its experience with the program at private and public forums.
 - Four presentations at Digital Public Service Innovation Forum; Benchmarked by KoRail 4 times.
 - The program is cited in the Advanced Technology Public Service Innovation Guide and


the Government 100 Innovations.

- The program provides job-seekers with security, businesses with stable employment, governments with improved welfare, and the NPS with enhanced pursuit of public interests and social values.

FUTURE PLANS

- The NPS plans to implement two-track strategies that add a support system for SMEs on top of the support system for job-seekers.
 - The NPS will build social safety nets by reducing unemployment and helping SMEs in crisis.
- The NPS will expand its cooperation with local governments to help them address issues and achieve people's happiness.

TIPA Protects Startups' Technologies With the R&D+ Patent Package



Korea Information and
Technology Promotion Agency for SMEs
(TIPA)

20

TIPA protects startups' technologies with the R&D+ patent package

BACKGROUND

- **(Social Issues)** SMEs are often robbed of their hard-earned technologies, and cannot benefit from the technologies on account of patent disputes.
- **(Government)** SMEs lack security personnel, facilities, and budget, resulting in overall poor quality of security control. They are ill-equipped to respond to technology theft.
- **(Thinking Outside the Box)** TIPA developed an innovative cooperation model to enhance cooperation among the line ministries.



ACTIONS

- **(Direction)** TIPA worked with the Korea Intellectual Property Strategy Agency (KISTA) to protect startups' technologies.



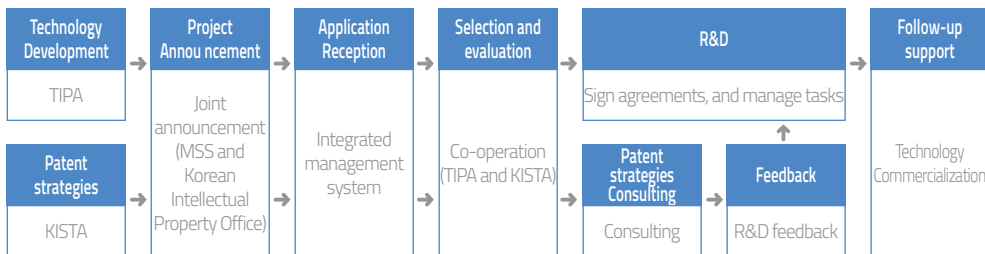
- **(Program Development)** Innovative R&D+IP = R&D Package
 - TIPA selects startups (7 years old or younger) to provide R&D and IP strategy consulting.

> A selected company receives consulting for IP strategies and R&D support for their technology development plans.



o (Process Design) The process has been designed by taking account of startups' needs and the purpose of cooperation.

- > Unified the channel for project announcement and applications → For improved convenience.
- > Simplified evaluation process → Shorter evaluation period.
- > Feed consulting results back to R&D → Improved technical expertise at SMEs.



OUTCOMES

| Objectives | Indicators | 2018 Targets | 2018 Results | Progress rate | Performance analysis |
|-----------------------|---|--------------|--------------|---------------|---|
| Technology protection | Business IP No. of strategies (average) | 10 | 14.4 | 144% | Participating companies established 260 Ip strategies. |
| Competence building | Use of IP strategies | 90% | 90.25% | 103% | 90% of the developed strategies were used. |
| Convenience | Cost reduction | 100 million | 94 million | 94% | Saved KRW 61 million budget and reduced social and economic cost by KRW 33 million. |

o (Improved Protection) The program helped businesses develop their ability to respond to IP violations.

- > 18 startups developed 260 strategies regarding IP acquisition (104), R&D (66), neutralization of problem patents (63) and other issues (14.4 average).


| IP acquisition strategies (purchase, reinforcement, new) | Issue (barrier) Patent neutralization strategies | R&D Proposed strategies (commercialization, productivity, R&D projects) | Licensing strategies | Patent infrastructure development strategies | Total |
|--|--|---|----------------------|--|------------|
| 104 (5.8) | 63 (3.5) | 66 (3.7) | 5 (0.3) | 22 (1.2) | 260 (14.4) |

- **(Cost Reduction)** The program reduced administrative costs for project selection through joint evaluation, and reduced burden on businesses by reducing evaluations to a single evaluation.
 - > **(Fiscal Improvement)** The program reduced evaluation and management budget by 61 million KRW from 173 million KRW to 112 million KRW.
 - > **(Reduced Burden)** The program streamlined administrative procedures, resulting in 33 million KRW cost reduction.

FUTURE PLANS

- TIPA plans to select 44 companies for the program in 2019.
- TIPA will use the developed strategies to provide integrative services that cover R&D project performance.

KOSMES trains vulnerable job-seekers as overseas direct sales experts to create jobs and social values.



Korea SMES And Startups Agency
(KOSMES)

21

KOSMES trains vulnerable job-seekers as overseas direct sales experts to create jobs and social values.

BACKGROUND

- Despite the rapid growth of the global e-commerce market, Korea is still in its infancy compared with the United States and China (the two countries account for more than 50% of the total global revenue, whereas Korea accounts for only 0.1%).
 - In particular, Korea desperately need more “power sellers”* that influence the global e-commerce market.
 - * In e-Bay, the percentage of power sellers among Korean vendors is below 0.2%p.
- Different institutions provide separate supports, resulting in low success rates among online export startups and job-seekers.
 - Even after training, job-seekers and startups experience various issues including information asymmetry, mismatch between employers and job seekers, and lack of follow-up management after startup and employment.

ACTIONS

- KOSMES built a public-private-academia partnership system that covers all stages from identification of job seekers and employers, support for training, to follow-up management and result sharing after employment and startup.

| Overseas direct sales | Cooperating institutions |
|---|--|
| Program planning, operation, and coordination. | KOSMES |
| Identification of job seekers and employers. | Kora Hana Foundation, Jongno Women Human Resource Development Center . Korea International Trade Association, Hankuk University of Foreign Studies. |
| Training, practical training and contests (experience sharing). | eBay, Amazon, Facebook, Google. |
| Follow-up management. | Hankuk University of Foreign Studies. |
| Public promotion and dissemination. | EBS, MBC |

- Online exporters train workers selected by themselves and share their experience to train them into experts.
 - **(Training)** Marketing know-how training by field experts at global platform providers such as eBay (30 sessions).
 - **(On-the-Job Training)** On-the-job training at online exporters through job seeker-employer matching.
 - ※ Grants KRW 10 million for six-month training per person.

- (Experience Sharing) E-commerce Hackerthon Contests with expert mentors to share knowhow among trainees.
- The program expanded the foundation for training overseas direct sales experts.
 - KOSMES worked with institutions supporting vulnerable job seekers to hold job fairs (3 events) for online exporters, provide a database of high quality human resources, and explain employment support programs.
 - KOSMES also co-produced TV programs about vulnerable job seekers becoming overseas direct sales experts.
 - ※ EBS Docu Vision 'Open, Platform', MBC Docuprime 'e-Commerce Dream'.

OUTCOMES

- The program trained 1,641 overseas direct sales experts, of which 317 have found employment at 119 firms.
 - In particular, the program created 44 new jobs for vulnerable job seekers (North Korean defectors, women with interrupted careers, and the elderly) by taking account of their expertise.

<North Korean Defector Employed by Online Exporter>

Y, a North Korean defector who experienced difficulties with finding full time jobs, participated in the e-commerce training program and the Hackerthon with Google and eBay. Y was employed by Company A, an online exporter in need of a worker proficient in Chinese with good understanding of the Chinese culture.

- KOSMES launched Korea's first two online exporter cooperatives to ensure know-how sharing among sellers result in increased profits.
 - The first cooperative focuses on joint businesses, while the second cooperative focuses on mentoring between newcomers and experienced sellers (five companies each).

| Category | Online Exporter Cooperatives (no. 1) | Online e-Commerce Cooperatives (no. 2) |
|----------------------------|---|--|
| Type | Global Marketplace Joint Business (Members: enterprises) | Power Sellers-New Comers Mentoring (Members: individuals) |
| Business registration date | November 2, 2018 | January 8, 2019 |
| Members | Five online exporters including Company G (eBay seller) and Company B (Qoo10 seller). | 5 individuals, including the CEOs of Power Seller Council members (KITA) and 2017 KOSMES Power Seller Training Program participants. |

- KOSMES created a virtuous cycle of cooperation among institutions to create direct overseas sales jobs.
 - The agency worked with other institutions under the common goal of creating direct overseas sales jobs. The institutions jointly discovered job seekers and employers, provided bespoke training programs, and created a virtuous cycle to support startups and job seekers.

FUTURE PLANS

- KOSMES plans to create jobs by training 10,000 overseas direct sales experts by 2022, and ensure that at least 3,750 of them find employment or start their own business.
- The agency also plans to provide follow-up supports including 1:1 matching with experts at global marketplaces such as Amazon, new sales training accounts, and seller startup incentives, so that they can become power sellers.

KOGAS builds a cold chain in Northeast Asia using LNG cold heat



Korea Gas Corporation
(KOGAS)

22

KOGAS builds a cold chain in Northeast Asia using LNG cold heat

BACKGROUND

- A low carbon and high efficiency energy consumption structure needs to be developed using LNG cold heat energy.
 - In line with the government's nuclear phase-out policy and eco-friendly energy policy, LNG cold heat needs to be applied to the Korean refrigeration industry.
- Demand for high-cost and high-quality LNG cold heat is rising among private companies.
 - LNG cold heat is hailed by refrigeration logistics companies as a way to improve facility efficiency and reduce operating costs.
- To boost the economy and create new jobs, a new energy industry needs to be fostered by developing ultracold heat technologies and revitalizing the related industries.

ACTIONS


- KOGAS is currently developing a refrigeration logistics complex in the hinterland of the New Port of Incheon (2018-2020).
 - Project Overview: LNG cold heat is produced by heat exchange between LNG and a refrigerant, and supplied to the Incheon Port Authority. The site area is 230,700m², and the project budget is 602.7 billion KRW.
 - Expected effects: 4.3 trillion KRW production and added value, and job creation for 26,000 workers over 10 years.

OUTCOMES

- Benefits for participating companies.
 - KOGAS: lower operating costs, and stable operation of LNG facilities.
 - Reduced LNG facility operation, thereby saving 600 million KRW of evaporation costs per year.
 - Reduced carbon emission by 24,000 tCO₂ (worth 480 million KRW in certified emission reduction).



KOTRA utilizes data to upgrade its overseas expansion support services.



Korea Trade-Investment Promotion Agency
(KOTRA)

23

KOTRA utilizes data to upgrade its overseas expansion support services.

BACKGROUND

- KOTRA recognized the need to share big data on trade investment on an open platform.
 - Korea lacks overseas expansion support for private enterprises powered by data.
 - Also lacking is the micro data required for research on trade investment environments.
- To enhance the competitiveness of Korean enterprises, data-based value creation is required.
 - Support for overseas expansion needs to be provided based on the products sold by the beneficiary enterprises and the characteristics of the areas of interest.

ACTIONS

- KOTRA built an open database containing information on overseas market access.
 - KOTRA built an open system to provide information for enterprises trying to expand their operations.
 - The effort was carried out as a part of Korea's 2018 Open Door Project for Key Data.
 - KOTRA sought to close the information gap between SMEs and middle-standing enterprises and improve Korean enterprises' competitiveness in the global market.
 - Through these efforts, KOTRA contributed to developing new growth engines and create jobs by opening up information for beneficiary enterprises so that they can use the information to expand their operations.
- The agency also built a foundation for cooperation in big data analysis.
 - KOTRA and the National Information Society Agency (NIA) built a cooperation system based on KOTRA's data and NIA's analysis infrastructure.

| Institution | Roles |
|-------------|--|
| KOTRA | <ul style="list-style-type: none"> • Select and de-identify public data on trade investment. • Build an open public data platform. |
| NIA | <ul style="list-style-type: none"> • Provide a system for integration of external data. • Provide data analysis infrastructure. |

- KOTRA built a support system for joint research projects with the private sector.
 - The agency also operates a “sandbox” for in-depth analysis.
 - With the sandbox, KOTRA helps researchers in the private sector to study in-depth analysis data.

OUTCOMES

- KOTRA completed the Open Door Project for Key Data.
 - The agency opened up information about 93 countries and 127 Korea Business Centers and other information to help businesses expand overseas.
 - The agency disclosed 1,768,841 items of data in 12 categories (as of February 2019).
- KOTRA held a contest for business ideas using public data.
 - Oafternoon won the Best Prize at the business idea contest held by the Ministry of Trade, Industry and Energy.
 - The company won the prize with “Bio Cosmetic Product Export Planning Using News on Overseas Market.”
- KOTRA continues supporting in-depth studies using the data sandbox.
 - The agency also studies the global competence level (GCL) data of KOTRA’s business customers.
 - KOTRA worked with the Smart Data Planning Team at NIA and a Sogang University research team to publish a research report on “Analysis of Factors Affecting Export Activities” and provided industrial supports.

FUTURE PLANS

- KOTRA plans to provide small and medium exporters with tailored support through analysis of unstructured data.
 - The data will be used in planning marketing activities and developing strategies for global market access.
 - KOTRA will also use data to boost export by SMEs.
- KOTRA will expand the big data platform for trade investment.
 - It will be linked with the expansion of the national trade investment big data analysis platform (2019–2020).
 - KOTRA will foster an online/offline trade-investment business ecosystem.
- KOTRA will support academic research activities and data-based startups.
 - KOTRA will publicly provide more public data and link them to business startups through idea contests.
 - KOTRA will continue to operate the sandbox to expand academic activities for enhancing trade investment competitiveness.



KDHC turns coal mines into solar photovoltaic mines, reviving local economies at former coal mining towns.



Korea District Heating Corporation
(KDHC)

24

KDHC turns coal mines into solar photovoltaic mines, reviving local economies at former coal mining towns.

BACKGROUND

- After the decline of the coal industry, former coal mining towns need new business models for economic growth.
 - In 1986, the Coal Industry Rationalization Project Team was organized, which forced coal mines to close down.
 - The coal mine restructuring policy in 2015 destroyed the local economy. (43 mines closed / 19,000 workers dismissed / 47% of population moved out).
 - The 2016 announcement of the closure of the Jangseong Mine (2021) put the area at the brink of collapse (the sense of crisis among locals reached a new height; fierce anti-government protests followed; conflict escalated).

ACTIONS

- **(Overview)** KDHC turned closed coal mines into solar photovoltaic mines to boost the local economy.
 - The "solar photovoltaic mine" project uses closed mining sites as solar photovoltaic power generation sites to generate profits for the local economy.
- **(Current Status)** KDHC is currently working toward the construction of 4 solar photovoltaic power stations (9MW + ESS 27MWh).

| Project | Capacity | Progress | Note |
|--------------------|-------------|--|---|
| Hambaek | 1MW + 3MWh | Completed in October 2019. | Purchase contract (November 2018). |
| Gangneung | 4MW + 12MWh | Permission/approval pending. | Resolved local complaints (January 2019). |
| Samcheok Coal Mine | 3MW + 9MWh | Acquired power generation business permit (August 2018). | Lack of connection. |
| Yeongwol | 1MW + 3MWh | Currently repairing defects at the restored site. | Lack of connection. |

※ Due to fires and explosions involving the Energy Storage System (ESS), the project is suspended until the government develops a policy for stabilization.

○ Progress

- (December 2016) Signed an MOU for a new and renewable energy project in former coal mining towns.
- (December 2017) Acquired solar photovoltaic station business permits at Hambaek and Gangneung.
- (April 2018) Signed an MOU for solar photovoltaic mine development at the restored forest in Hambaek.
- (August 2018) Acquired a business permit for the solar photovoltaic station business at Samcheok Coal Mine.
- (October 2018) Signed a contract for power generation facilities at the Hambaek Photovoltaic Mine (completed in October 2019).

OUTCOMES


- The KDHC proposed a new and sustainable business model for former coal mining towns.
 - Solar photovoltaic mines have emerged as an alternative source of profit for former coal mining towns
- Local residents also welcome solar photovoltaic stations.
 - Local resident representatives from Jeongseon-gun and Sindong-eup signed the MOU for photovoltaic mine development at the restored forest in Hambaek
- The KDHC pursued the solar photovoltaic power station project without damaging the environment.
 - The project uses former coal mining towns where abandoned coal and byproducts had been buried.

FUTURE PLANS

- The KDHC plans to develop a new business model based on the solar photovoltaic mine project to create more jobs.
 - The KDHC also plans to develop a two-day tour program, "Samtan Starry Camping," which combines education, cultural development, and tourism.
- The KDHC will diversify the profit sharing models for the solar photovoltaic power station project.
 - The KDHC will work with non-profit social cooperatives to carry out the project, and share the profit with the local economy.
 - ※ Social economy organizations include social enterprises, cooperatives, village enterprises, and self-help enterprises.



LH launches a house living platform “My Friend” based on its 1 million rental houses.



Korea Land and Housing Corporation
(LH)

25

LH launches a house living platform “My Friend” based on its 1 million rental houses.

BACKGROUND

- > LH is currently at an inflection point for becoming a comprehensive housing welfare service institution. The corporation plans to increase the number of rental houses from a million in 2018 to more than 2 million in the future, and improve its housing services.
- > However, LH cannot meet the diverse needs of rental housing residents alone, due to lack of financial resources and for other various reasons.

ACTIONS

- > Departing from the existing supply strategy that rely on LH alone, LH plans to build an online platform where residents, local communities, and social enterprises (LH Friends) trade and share goods and services.

<Key Services>

| Sharing market | Value Shopping | Community | Point program and rent deduction |
|---|--|--|---|
| House services among residents (care services, etc.) and job sharing. | Sales channels for local produces, SME products, and social enterprise products. | Notice Board Residents Bulletin Rent/maintenance fee search, defect reporting, questionnaire survey. Various daily information. | (Earning Points) Platform activities and product purchase (3%). (Using Points) Rent reduction, product purchase, and purchase of welfare services. |

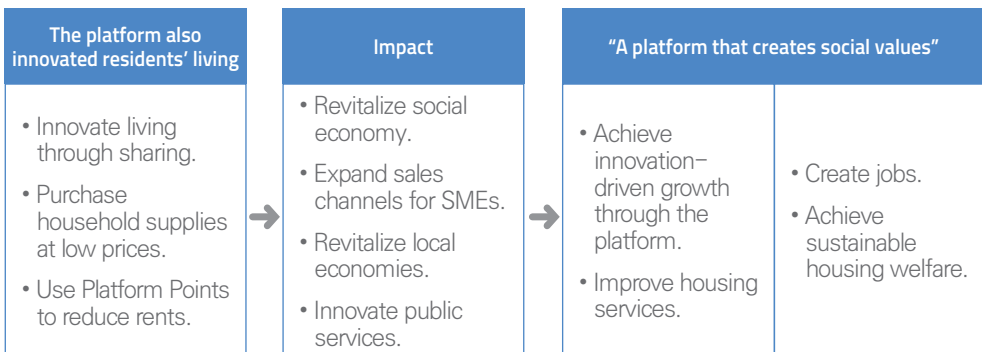
COOPERATION SYSTEM

> LH works with other institutions across various areas to develop various service contents (shopping, daily information, and welfare services).



RESULT

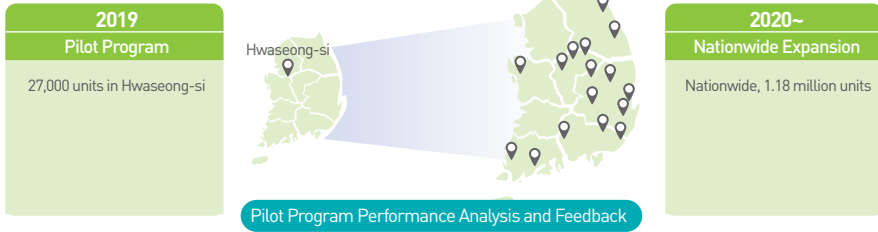
> LH worked in close collaboration with other parties to launch pilot programs covering 27,000 rental houses in Hwaseong. Based on the cooperative platform, LH created various social values by revitalizing the sharing economy, creating jobs, innovating public services, and boosting social economy.



FUTURE PLANS

> After the pilot programs in Hwaseong, LH plans to expand the programs to cover 1 million rental houses nationwide.

Nationwide Expansion



Platform Development

Enhanced Convenience and Applications

IoT-powered smart home services
Link to various housing services provided by LH and local governments

Enhanced cooperation with various LH Friends


An open platform for various players

Develop a sustainable point program

Discover various financial resources for services.
Expand the use of platform points.

**The NIE develops local ecological
assets with citizens.**

National Institute of Ecology
(NIE)



26

The NIE develops local ecological assets with citizens.

BACKGROUND

- Identifying, monitoring, and managing ecological assets* plays a crucial role in maximizing ecosystem services** in each area.
- Citizens frequently use and access ecological assets in their areas. Therefore, it is vital to identify ecological assets discovered by citizens and analyze the ecosystem services experienced by them in their areas.
- Citizen-participatory evaluation of ecosystem services raises residents' understanding and awareness of ecosystem services, and serves as a window for adopting citizens' opinions in local plans.

* Ecological assets: It refers to the spaces offering ecosystem services or the nature of such spaces that consists of biological and non-biological components and other environmental elements.

** Ecosystem services: It refers to various benefits offered by nature, such as clean water and air.

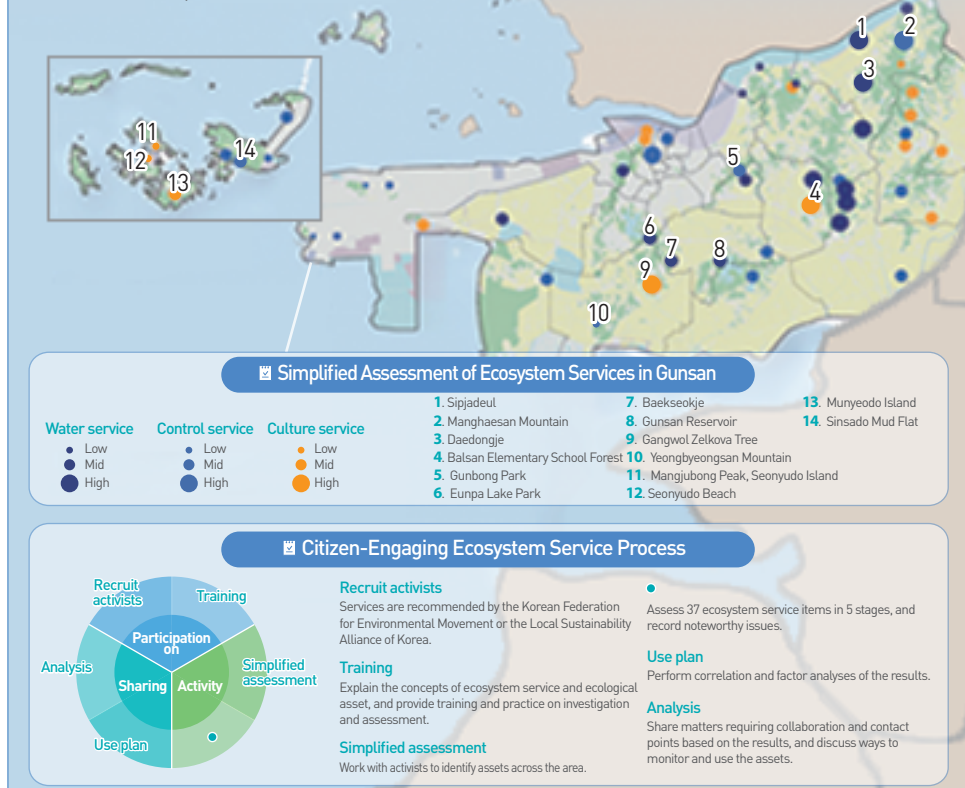
ACTIONS

- The NIE collaborated with local activists to select ecological assets and conduct "simplified evaluation" of ecosystem services in ten municipalities (Gangneung, Gunsan, Namyangju, Bucheon, Miryang, Sokcho, Suwon, Siheung, Ansan, and Changnyeong).
 - The NIE identified 50 or so of ecological assets in each area, and performed statistical, correlation, and factor analyses on results of the functional evaluation.
- The analyses showed the spatial distribution of ecosystem services, and the resulting data can be used as basis for urban planning and environmental policies.
 - Through an analysis of ecosystem services in four of the areas, the NIE derived a list of key ecosystem service items. Urban areas reported high percentages of cultural services, whereas mountainous and coastal areas reported high percentages of support services and control services.
- The NIE held workshops with local activists and public officials to discuss the findings of the assessment and ways to utilize the ecological assets.
 - The process of selecting and assessing ecological assets provided basic data that can be used for awareness-raising on ecosystem services or environmental education programs. The data can be also used for promoting local ecological assets and linking them with cultural, historic, and tourism policies.

Result of Citizen-Engaging Ecological Asset Development (Gunsan)

9 Ecosystem Service Assessment with Local Residents

Simplified assessment of ecosystem services invites citizens interested in environment and ecology to select and assess key ecological assets, thereby raising awareness on the value of the ecosystem and linking it with local education, tourism, and environmental policies.



OUTCOMES


- The NIE identified approximately 500 ecological assets and assessed ecosystem services in 10 areas.
- The NIE provided ecosystem service training for around 60 citizens and environment groups in 10 areas.
- The NIE used the assessment results to publish materials on ecotourism policies and propose environmental policies.

FUTURE PLANS

- The NIE plans to assess ecosystem services involving ecological assets linked with the web and applications so that more people may participate in the assessment, and establish a plan of ecosystem service evaluation that represents local residents' opinions.



The SSIS improves the sentiment index of welfare with citizen-participatory quality evaluation on social service.



Social Security Intelligence Service
(SSIS)

27

The SSIS improves the sentiment index of welfare with citizen-participatory quality evaluation on social service.

BACKGROUND

- The quantitative growth of the social service market raised people's interest in social service quality control.
 - Under the Act on the Use of Social Services and the Management of Vouchers (enacted in 2012), social service quality is evaluated on a regular basis in accordance with quality criteria.
 - The quality evaluation of service providers is aimed at raising the average quality of the services and improving the public's satisfaction with them.
- However, the people, who should be the actual beneficiaries of the evaluation, have been excluded from the evaluation process.
 - The evaluation process needs to be disclosed to the public and engage citizens' participation to ensure transparency and impartiality.
 - The SSIS created a foundation for ensuring citizens' participation and open communication in the evaluation process.

ACTIONS

- **(For Citizens)** The SSIS created a foundation for an open quality evaluation process.
 - The SSIS appoints citizens as members of the Quality Evaluation Committee.
 - Senior citizens with expertise in the field are appointed as citizen committee members for on-site evaluation.
 - The SSIS also formed the Citizen Participation Group, so that citizens can participate and communicate across all stages of evaluation.
- **(With Citizens)** The SSIS developed indicators reflecting social values.
 - The SSIS developed indicators for social values.
 - ※ Employment rate among vulnerable groups, citizen safety, human rights, etc.
 - The SSIS held the first Open Evaluation Indicator Public Hearing to gather citizens' opinions.

- › The SSIS also organized briefing meetings for the indicators.
- **(By Citizens)** The SSIS engaged citizens in the quality evaluation process.
 - › The SSIS carried out on-site evaluation in which citizens take part for enhanced monitoring and transparent evaluation.
 - › The SSIS opened the scenes of service quality control to the public, which improved the public trust toward the quality control process.
 - › The SSIS adopted the best proposals given by citizen participants in on-site evaluation.
- **(From Citizens' Perspective)** The SSIS discloses quality evaluation results.
 - › The SSIS expanded the channels for disclosing evaluation results, to enhance the right of users' choices (Bokji-ro, etc.).
 - › The channels provide evaluation results in a user-friendly way including terminology and visualized icons.

OUTCOMES

- The SSIS departed from its evaluator-centered evaluation system and created a quality evaluation system that engages citizens.
- The SSIS also worked with citizens to develop social value indicators that conform to users' standards.

- ① **(New Indicator)** Employment rate among vulnerable groups.
- ② **(Improved Indicators)** Citizens' safety and human rights, a right to information about services, reasonable resolution of complaints (opinions), safe work environment for service personnel.

- The SSIS plans to expand the channels for user participation and communication, and incorporate citizens' opinions in the next year's evaluation plan.

<8 Major Proposals from Citizens>

- ① To officially launch the senior on-site evaluation group in 2019.
- ② To develop specialized indicators reflecting service characteristics.
- ③ To adopt auto-measuring indicators to reduce evaluation workload.
- ④ To adopt qualitative evaluation for key service indicators.
- ⑤ To develop a monitoring questionnaire by each service to gather user opinions.
- ⑥ To enhance incentives for institutions with better quality control performance.
- ⑦ To impose penalties forcing quality control on underperforming institutions.
- ⑧ To develop sharing functions for user-tailored use of evaluation results.

- Depart from evaluation result announcement designed for service providers, and

disclose customized results in a way that expands people's choices and caters to their diverse needs.

FUTURE PLANS

- The SSIS will conduct the 2019 social service quality evaluation based on citizens' opinions (January 2019).
- The SSIS plans to expand the citizens' participatory group for social security service quality control in 2019 (April 2019).

KOICA engages citizens in its Public-Private Partnership projects.



Korea International Cooperation Agency
(KOICA)

28

KOICA engages citizens in its Public-Private Partnership projects.

BACKGROUND

- The Ministry of Economy and Finance (MOEF) requested public institutions to propose citizen participatory projects, with the aim to solve social issues through citizens' participation in the public sector and improve services provided to the public. The MOEF selected the project proposed by KOICA .
 - The Korean public does not directly feel the impact of KOICA projects, as most of them are implemented in developing countries. KOICA sought to overcome this shortcoming.
- As a part of its efforts to engage private-sector partners in all phases of public–private partnership (PPP) projects from planning to evaluation, KOICA seeks to enhance project monitoring by citizens to improve the projects' quality.
 - Citizens, who pay taxes for official development assistance (ODA) projects, personally visit and evaluate ODA sites in developing countries, thereby ensuring effective use of taxes and improving the accountability and transparency of KOICA's public–private partnership projects.
- KOICA aims to create social values by building a participatory and democratic decision-making process.
 - KOICA also seeks to build a participatory evaluation process for public–private partnership projects and expand communication channels for the projects with the people.

ACTIONS

- KOICA engaged citizens across all processes of evaluation, including the establishment of the evaluation plan.



- Citizens' participation in final evaluation of KOICA's Public–Private Partnership projects by stage
 - (Evaluation Group) KOICA issued an open call for members of the final evaluation group among citizens with a keen interest in Korea's development cooperation projects. The resulting group consisted of 5 citizen members, 3 external experts, 3 KOICA staff members, and 1 Korea Center for International Development (KIDC) staff member (12 in total).
 - (Preliminary Training) To improve people's understanding in ODAs and project evaluation and enhance their evaluation capabilities, KOICA held 8 preliminary training sessions on the overall development cooperation process, evaluation methods, and the results of similar projects.
 - (Evaluation Planning) The evaluation group selected target projects (2 projects in the Philippines) and decided on an overall evaluation plan, including evaluation methods and framework, through joint consultation.
 - (On-Site Investigation) The group visited the Filipino project site over 9 days from October 6 to 14, 2018, where they inspected the site and interviewed local personnel in accordance with the evaluation framework established by the group.
 - (Results Reporting) The evaluation group decided on the evaluation results based on the findings from the document review and on-site investigation, and shared the results with the public through publications and exhibitions, thereby expanding the scope of sharing of the information from the citizens' participatory group to the general public.

OUTCOMES

- KOICA developed a foundation for advancing the citizen-participatory aid project model.
 - Citizens and the civil society were involved throughout the process—from planning, performance to evaluation, thus establishing a model for citizen-participatory aid projects.
- By evaluating the projects from people's perspective and sharing the evaluation results with the public through publications and exhibitions, KOICA was able to
 - ① improve the public understanding on development aid and public–private partnership projects while satisfying the people's right to knowledge;
 - ② raise the public awareness on the role of KOICA and the Korean civil society in developing countries;
 - ③ improve the transparency of evaluation and the reliability of the agency;
 - ④ and expand communication with citizens.
- To share the results with the people, KOICA organized a photography exhibition in collaboration with "Together I," a preliminary social enterprise specializing in photography of development aid sites. The exhibition attracted more than 5,000 visitors, and raised people's interest in, and understanding of, development cooperation.

FUTURE PLANS

- KOICA will form the second participatory group and launch a new evaluation project in the second half.
 - The majority of Koreans with interest in development cooperation in developing countries are students. To ensure the participation of more diverse groups and the representativeness of the participants and utilize the applications of the evaluation results, KOICA will expand opportunities for participation to include civil society groups related to development cooperation as well as the public.
- KOICA also considers expanding the scope of projects subject to evaluation from Public–Private Partnership projects to ODA projects.
 - In the case of ODA projects, the scope of evaluation needs to be gradually expanded, as they require a wider range of prior consultation with beneficiary governments.

KOSHA works with the people to develop safety and health MOOC programs



Korea Occupational Safety and Health Agency
(KOSHA)

29

KOSHA works with the people to develop safety and health MOOC programs*

*MOOC: Massive Open Online Course

BACKGROUND

- A series of serious disasters increased people's interest in safety and health. However, the people lack the channels to express their opinions, which makes it difficult to provide service catering to their needs and spreading the understanding on the value of safety and health.
 - After the Sinking of the Sewol Ferry in 2014, the government and the public have come to view safety as one of the most crucial values for society. However, industrial disasters consistently occur and claim workers' lives.
 - In addition, despite the increasing public awareness of the need to provide safety and health information and services, it is difficult to provide effective education in the absence of procedures to understand people's needs for safety and health education.
- Therefore, safety and health education should be open, and organized with people's opinions to ensure systemic management of risks in the Korean society.

ACTIONS

- KOSHA organized an open contest for safety and health MOOC programs.
 - By encouraging citizens to propose e-learning topics on safety and health, KOSHA was able to understand the educational needs of the people.
 - KOSHA reviewed the proposals to select e-learning topics to develop, and conducted an internal review for development procedures.
 - As the result, KOSHA received 165 proposals, which is 10% higher than the average number of people's proposals (136 proposals) received by other institutions.
- KOSHA took measures to promote and expand people's participation in call for proposals.
 - The agency used social network platforms, outdoor billboards, monthly safety and health magazines, and blogs to encourage participation.
 - The agency also collaborated with related institutions to post advertisements at subway stations to expand its contact points.
 - Booths were set up during the Safety and Health Week to actively promote the safety and health MOOC programs.

- The agency also organized a citizens' participatory group to gather people's opinions and ensure a transparent and impartial selection in decision-making process.
 - The participatory group consisted of citizens from various groups including students, homemakers, and experts. As representatives of the people, the members actively participated in the selection, review, and feedback of MOOC program topics.
- KOSHA provided e-learning content on safety and health for enhancing communication with the people.
 - The agency developed and provided educational content and courses based on the opinions from the participatory group.
 - As a part of the feedback process for the developed content and courses, a demonstration was organized for KOSHA employees to improve content quality and user satisfaction.

OUTCOMES

- In safety and health training program, KOSHA replaced the supplier-centered approach with an approach that actively considers the people's needs, which resulted in a 10% increase in the number of users.
 - KOSHA also addressed the traffic issue at the e-learning website and improved connection by using cloud services and expanding the number of concurrent users (200 to 3,200).
- KOSHA operates 53 MOOC contents (daily safety, school safety, industrial safety, etc.) and 23 courses based on the people's opinions.
- In a national safety awareness survey, 90.4% of the respondents were satisfied with the programs and 88.5% were satisfied with the improvement in safety awareness.
- KOSHA continues to build a safer society by offering safety and health MOOC programs to general public for free.

FUTURE PLANS

- KOSHA will widen the scope of the contest and promote the development of new content.
- KOSHA also plans to organize e-learning content demonstrations for the public to gather feedbacks.
- By providing systemic programs to users at different levels, KOSHA will contribute to training safety and health professionals.
- Expanding the people's participation and improving on public services will result in public-led solution of social issues, innovation of public services, and a safer Korea.



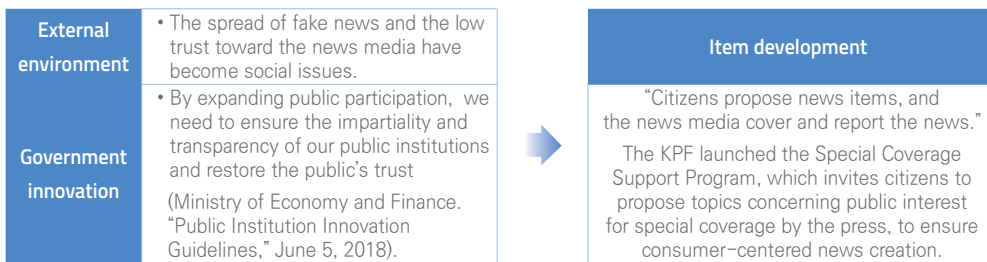
**The KPF supports news
production with citizens.
- Citizens propose news items,
and the news media cover and
report the news!**

Korea Press Foundation
(KPF)

30

**The KPF supports news production with citizens.
- Citizens propose news items, and the news media cover and report the news!**

BACKGROUND



ACTIONS

- The KPC collaborated with the Daum portal site to promote a new content on the story funding web-page titled, “The Open Call for News Items,” which allows citizens to propose news items requiring public attention or solutions.
 - ➔The Open Call page was viewed 160,000 times, with 128 comments.



- The proposed items were categorized by news topics and sent to various news media. Afterward, the news media applied for detailed proposals(plans) for news coverage.



- After reviewing the plans, the media selected by the KPF received grants from the foundation to cover and report the news items.

OUTCOMES

- > The project identified social issues from citizens' perspective, and let the issues reported by the press for public attention and solutions.
- > By engaging citizens in the news creation process, the KPF contributed to realizing participatory journalism and restoring the public trust toward the news media.
- > The project resulted in 76 special in-depth reports covering the topics proposed by citizens.

| No. | Proposed topic | Name | Covered topic | No. of reports |
|-----|--|---|---|----------------|
| 1 | Status and cause of, and solution for, fine dust. | Kyunghyang Shinmun | The answer to the fine dust issue is science, technology, and the will of the government. | 12 |
| 2 | Social issues faced by senior citizens. | The Asia Business Daily | The super-aged society is at hand: a post-retirement life with dignity. | 10 |
| 3 | | Hankook Ilbo | A society of angry elders. | 20 |
| 4 | Discrimination in the workplace, abuse of superior position (<i>gabjil</i>). | Voice of the People | The "Workplace Hell" series. | 9 |
| 5 | Life of reporters (reporter's reality and life at news media companies). | Journalists Association of Korea Newsletter | Life of reporters - conversation with journalists all around the world. | 9 |
| 6 | Pension issues | Dong-a Ilbo | The age of pension: issues and alternatives. | 12 |
| 7 | Work-life balance | Dong-a Ilbo | Finding work-life balance. | 4 |

FUTURE PLANS

- > The KPF will open a dedicated web-page to receive proposals all year round and produce more in-depth coverages.
- > The KPF will work toward securing a sufficient budget to provide full expense coverage for news media wishing to cover citizen-proposed topics after simply checking for a set of requirements without a separate review process.

The innovative case studies of SOEs and QGOs in Korea

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