**Digital Public Service Innovation Pilot Project**

**◈ Background**

In the digital transformation era, the world recognizes ICT as the foundational SOC (Social Overhead Capital) for all industries. By integrating the latest ICT with various sectors such as agriculture, healthcare, education, and culture, countries are focusing their national capabilities to enhance efficiency and productivity in operations. In line with these digital transformation trends, governments worldwide strive to integrate advanced ICT into public administration to improve administrative efficiency and provide more convenient services to citizens. Since the early 2000s, the Korean government has implemented various pilot projects to incorporate the latest ICT into administrative services. Korea aims to share its knowledge and experiences by selecting the most successful pilot projects and promoting collaborative initiatives with interested countries.

**◈ Project Objective**

This project aims to support partner countries in integrating the latest ICT into their public administration, thereby innovating their work processes, increasing operational efficiency, and addressing urgent social issues within their nations.

**◈ Project Overview**

This project, one of Korea's Official Development Assistance (ODA) programs, aims to integrate the latest ICT technologies into public administration to address social issues and innovate public services. Partner countries will select one of the pilot projects that Korea has successfully implemented and collaborate with Korea to establish the pilot project jointly.

The pilot project includes establishing an Information Strategy Plan (ISP), implementing and operating a pilot digital public service, and training operators and administrators from 2026 to 2027.

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| **Category** | **Contents** |
| Improving Administrative Efficiency | Public sector innovation services to enhance public administration efficiency through the convergence of digital technologies |
| Improving Citizen’s Convenience | Services for enhancing citizen convenience and happiness through education, culture, and welfare using digital technologies |
| Citizen Safety | Services for a safe and healthy life by solving societal risk factors directly related to citizen’s lives with ICT |
| Promoting New Technologies | Services for creating new value through leading the use of the latest technologies |

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| Artificial Intelligence | Robotics | Digital Twin | Big Data | Metaverse |

**◈ Project Description**

**1. Information Strategic Planning (ISP)**

First, the NIA will analyze the overall status of public services in the partner country and conduct an assessment to determine the level of suitability for applying public services that best fit the partner country. This will involve an analysis of the partner country's ICT status (such as broadband penetration rate, internet speed, and number of internet users) and public service-related conditions (such as enterprises, legal systems, and organizational structures). Based on the results of this analysis, an Information Strategic Planning (ISP) will be developed to apply a Korean digital public service model in the partner country.

The scope of digital public services applicable to the partner country will be defined, and a systematic plan for implementing this will be developed, including strategies for ICT infrastructure, systems, and data management. Specific action plans will be prepared through goal setting and strategic planning. The principle is to build digital public services based on cloud and modular methodologies.

**2. Digital Public Service Pilot Implementation**

This phase involves developing digital public services requested by the partner country. Based on pilot projects developed by Korea using the latest ICT, such as AI, IoT, and Big Data, services will be tailored to the specific circumstances of the partner country. While introducing cloud solutions will be prioritized, the development will remain flexible to accommodate the partner country's needs and environment. However, to ensure successful development and future service expansion, the partner country must establish and regularly operate a "service development promotion system" involving participation from industry, academia, research institutes, and government.

**3. Establishment & Operation of the Project Governance**

The involvement of top decision-makers is paramount to successfully establishing national-level public services. Therefore, a "Digital Public Service Innovation Project" Governance structure needs to be formed around the top decision-makers participating in this project. This governance will also include experts from the partner country's industry, academia, research institutes, and government. Additionally, detailed operational plans for this governance structure will be developed.

**4. Education & Training**

After establishing public services with the partner country, the NIA will provide education and training to system administrators. Customized education programs will be designed, including the development of teaching materials, based on the roles, levels, and modes of training (online, offline, hybrid) for both system users and administrators.

**◈ Application Process**

**Submit the Project Concept Paper and the official letter with an authorized signature and seal to the Embassy of the Republic of Korea in your country** **by October 31st, 2024**. The MSIT and NIA will review the submitted proposals and conduct feasibility studies in potential countries. Based on the results of the feasibility studies and the contents of the Project Concept Paper, the Korean Government approved the project in 2026.

1. **PCP Submission (~October 2024)**- Please submit **the PCP and the official letter from your organization** to the **Ministry in charge of ODA** in your country. If you don’t know which ministry is in charge of ODA in your country, please send us an e-mail.
2. **Approval for ODA project (~October 2024)**- Please get approval for the ODA project from the Ministry in charge of ODA and send three documents **(PCP, an official letter from your organization, and the other official letter from the ministry in charge of ODA)** to the Korean Embassy in your country. Also, please send the PCP and two official letters to us(dps@nia.or.kr) so that we can select the candidate organizations. If you do not submit one of those documents, you will be disadvantaged in the evaluation.
3. **Evaluation & Selection (~November 2024)**- The MSIT and the NIA will evaluate the PCPs from partner countries and select two candidate organizations to implement the projects in 2026.
4. **Pre-feasibility Study (December 2024 ~ February 2025)**- The MSIT and the NIA will conduct a pre-feasibility study based on the contents of the PCP.

For additional information regarding the project, please send an e-mail to dps@nia.or.kr.

**Project Concept Paper**

**for Digital Public Service Innovation Project**

**Section I. Overview**

*※ Read the instructions and examples written in blue carefully and complete the form in detail. Before submitting the form, please delete the instructions and examples. Handwriting is not acceptable.*

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| **Basic Information** | | |
| **Name of country** |  | |
| **Ministry**  **in charge of ODA** | *Write the name of the ministry*  *(e.g., Ministry of Finance)* | |
| **Ministry**  **in charge of this project** | **Ministry** | *Write the name of the ministry*  *(e.g., Ministry of Digitalization)* |
| **Name** | *Write the name of the person in charge of this project implementation in the ministry* |
| **Department/division** |  |
| **Telephone number** | *Write a reachable number for communication.* |
| **Mobile number** |  |
| **E-mail address** | *Write a reachable address for communication.* |
| **Position** |  |

**Section II. Service Proposal**

*※ Select one digital public service that your country hopes to introduce. Please click or check the box that you want. If you would like more detailed information about each service, please refer to the appendix below.*

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| **No** | **Select** | **Service** | **Domain** | **Tech** | **Details** |
| **1** |  | Mobile-Based Smart Notification | Administration | Fintech | Replacing traditional paper notifications sent by mail with smartphone-based electronic notifications to significantly reduce administrative costs and achieve a paperless administration |
| **2** |  | Intelligent Air Pollutant Management and Forecasting | Environment | IoT,  Big Data | Real-time monitoring of fine dust emissions and status, and establishment of a data-driven fine dust forecasting. |
| **3** |  | Nation-wide Health Information Network Based AI Health Service | Healthcare | Big Data,  Data Platform | Establish a national health information network by implementing and connecting Electronic Medical Record systems across hospitals nationwide, and provide AI-based medical services utilizing the accumulated data. |
| **4** |  | National Water Resource Integrated Management | Agriculture,  Environment | IoT,  Big Data | An IoT-based real-time management service for dams and reservoirs nationwide to proactively respond to extreme water resource changes caused by climate change. |
| **5** |  | ICT-based Selection and Analysis of Superior Varieties | Agriculture | IoT,  Big Data | Develop and implement ICT-based technologies, including EMR systems, 3D and spectral imaging for crop analysis, and big data analysis for water resources, to enhance administrative efficiency and disaster response in agriculture and related sectors |
| **6** |  | Online-based Auctions for Agricultural Products | Agriculture | Big Data, AI | Introduce an ICT-based image auction system for agricultural products in public wholesale markets to enhance logistics and auction efficiency, reducing costs and improving space efficiency |
| **7** |  | IoT-based Smart Livestock Farm Integrated Management System | Livestock | IoT,  Big Data | Develop an IoT-based integrated management platform for smart livestock farming to enable interoperability among heterogeneous equipment, enhance facility operations through data analysis, and implement biosensor-based disease surveillance for cattle, resulting in increased production efficiency, cost reduction, and improved disease management |
| **8** |  | Establishment of a Foundation for Remote Healthcare | Healthcare | IoT,  Big Data | Establish remote healthcare services using IoT and big data to improve healthcare accessibility and management for underserved populations, focusing on chronic diseases, through pilot projects, development of a remote healthcare fee structure, and security technology guidelines |
| **9** |  | Remote Healthcare Service for Ocean-going Vessels | Healthcare | IoT,  Big Data | Enhance healthcare access for crew members on ocean-going vessels by installing remote healthcare equipment and providing remote medical consultations, prescriptions, and medication management, thereby reducing costs and improving the welfare of maritime workers |
| **10** |  | After-care Services for Patients with Severe Illnesses Post-discharge | Healthcare | IoT,  Big Data | Develop and validate a smart technology-based After-Care service for patients with severe illnesses post-surgery or discharge, integrating sensor data, life log analysis, management systems, and rehabilitation education to enhance recovery, improve quality of life, and facilitate commercialization and global collaboration. |
| **11** |  | K-Smart Factory Pilot Project | Manufacturing | IoT,  Big Data, Cloud | Enhance the competitiveness of domestic SMEs by developing and piloting smart factory technologies using IoT, big data, and cloud computing in a die-casting factory, focusing on real-time communication, integrated management, and cloud services to optimize production and reduce costs |
| **12** |  | Drone-based Automated Forest Pest and Disease Detection | Environment | IoT,  Big Data, Drone, AI | Combat the spread of pine wilt disease by utilizing drones for data collection and AI for spread prediction, thereby reducing labor and costs while enhancing management and control efforts through integration with existing forest management systems |
| **13** |  | Smart Campus Pilot Project | Education | IoT,  Big Data | Create a smart campus environment using NFC and GPS technologies integrated with smartphones to manage facility usage, track student attendance, and streamline asset management, thereby reducing hardware costs and improving operational efficiency and convenience |
| **14** |  | Store and Market Evaluation Services through Data Analysis | Small Business | IoT,  Big Data | Improve startup success for small businesses by providing comprehensive, data-driven store and market evaluations using information from credit transactions, real estate data, and business licensing records, thus offering tailored insights for better decision-making and expanding analysis coverage for various sectors |
| **15** |  | AI-based Electronic Monitoring Service for Preventing Violent Crimes | Administration, Safety | IoT,  Big Data, AI | Prevent violent crimes by automating routine alerts, enhancing the efficiency of control personnel and probation officers, and providing personalized support for monitored individuals, ultimately reducing labor costs and improving crime prevention through early risk prediction |
| **16** |  | Sign Language Interpretation System | Welfare | Big Data, AI | Provide AI-based sign language interpretation services to address the high illiteracy rate and shortage of interpreters among the hearing impaired, translating government information into sign language videos, and developing a motion recognition system for real-time communication, thereby reducing communication barriers and administrative costs |
| **17** |  | Big Data-based Home Solar Management System | Energy | IoT,  Big Data, AI | Optimize home solar power usage and maintenance by developing a mobile web service that uses IoT to collect and manage generation and usage data, analyze and predict solar power trends with AI, and provide real-time alerts for proactive maintenance, thereby reducing power loss, maintenance costs, and social costs |
| **18** |  | Intelligent Cultural Information Curating Bot | Culture | IoT,  Big Data, AI, Robot, Cloud | Develop autonomous robots equipped with natural language processing to provide multilingual exhibition guidance and translation services in cultural spaces, thereby increasing visitor satisfaction and promoting the use of AI and robotics technology in the private sector |
| **19** |  | AI-based subsurface environment pollution prediction and management | Environment | IoT,  Big Data, AI | Establish an AI-based system for predicting and managing subsurface environmental pollution by installing real-time monitoring sensors, building a comprehensive spatial big data database, and developing AI models to forecast pollution scenarios, thereby reducing management and remediation costs by 30% and enhancing the analysis of vulnerable areas. |
| **20** |  | Iris and Video-based Automated Immigration Inspection for Crew | Administration | IoT,  Big Data, AI | Streamline immigration processing for crew members by developing an intelligent automated immigration inspection system using iris recognition and intelligent CCTV technology, reducing waiting times and operational costs while enhancing security and efficiency |
| **21** |  | Intelligent Road Pavement Condition Prediction and Prevention | Transportation, Safety | IoT,  Big Data, AI | Modernize road pavement management by implementing an AI-based system that uses IoT to collect and analyze road condition data, predict pavement deterioration, and provide automated maintenance recommendations, thereby reducing costs, enhancing public safety, and improving the efficiency of road maintenance |

**Section III. Background & Status**

**1. Describe the background and need for the service in your country**

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| *○* *Describe what led you to choose the service, including need, urgency, etc.* |

**2. Describe current problem and restrictions related to the service in your country**

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| *○ Describe the problems with the current service and how to improve it*  *○ Identify constraints, such as risks that may affect service delivery or require consultation* |

**3. Describe the current status of the target service in your country**

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| *○ Describe service-related tasks (business name, performance entity, main content) and processing procedures (processes)* |

**4. Describe the system related to the target service in your country.**

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| *○ Describe the system development and operational status related to the service in detail* |

**Section Ⅳ. Implementation Plan**

**1. Describe the purpose of implementing the public service**

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| *○ State what you want to accomplish with the public service and what you hope to achieve with it* |

**2. Describe the conceptual diagram of the target service**

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| *○ Describe the target system identifying the service users, target, etc.* |

**3. Describe the details of the target service that you want to develop**

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| *○ Write specific details of each component of the system to be developed through the project* |

**4. Describe the legal framework related to the target service (If necessary)**

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| *○ Describe the specific response plan (implementation content, timing, method, etc.) to improvements, such as laws, systems, and standardization, as suggested in* "Section III -2*"* |

**5. Describe the governance regarding the project and target service in your country**

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| *○ Write the performance management system and role sharing with the stakeholders involved in the project* |

**6. Describe the project implementation schedule**

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| *○ Make a draft schedule from planning to development and operational stages of the project* |

**7. Describe the expected results from the digital public service innovation**

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| *○ (Performance Indicators) Discovering performance indicators that can confirm the achievement of the project objectives and presenting annual goals*  *○ (Expected outcomes) Presenting the overall quantitative and qualitative expected effects of the improvements obtained from the perspective of beneficiaries according to the provision of services developed through the project* |

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| **This report is prepared by**   |  |  |  |  | | --- | --- | --- | --- | | **Name** |  | **Position** |  | | **Ministry or organization** |  | **Telephone number** |  | | **Department/division** |  | **Mobile number** |  | | **Fax number** |  | **E-mail** |  |   **I confirm that I thoroughly read and understand the project overview, and the information given in this concept paper is true, complete, and accurate.**  *(Signature)*  *(Name of the signee)*  *DD/MM/YYYY* |

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| *(Signature)*  *(Name of the person representing the ministry)*  *(Position)*  *(Name of the* ***ministry*** *in charge of the IAC)*  *DD/MM/YYYY* |