

분야별 해외 기술 수요 세부내용

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(1) LSPR Institute of Communication & Business

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **LSPR Institute of Communication & Business**
3. Country: **Indonesia**
4. Organization Type: **Institution**
5. Website (if available): **<https://www.lspr.ac.id/>**

Part II. 해외기술 수요 정보

Technology Requirements:

A. Functional Requirements: #1 ~ #6

1. Which tech sector applies to your needs? (Select all that apply)
Edu-Tech (e.g., learning platforms, HR training, language education)
2. What are the key functions of the technology you wish to introduce?
 - **The AI solution must be capable of automatically responding to students' course-related inquiries, providing relevant source materials to support its answers, and clearly highlighting the specific sections referenced to facilitate deeper understanding and self-directed learning.**
 - **The AI solution must recommend similar previously asked questions along with their corresponding answers to minimize redundant inquiries and improve the efficiency of the Q&A process.**
 - **All student interactions should occur within the system, and communication data related to the course must be analyzed to generate actionable insights and statistical reports.**
3. What are the key problems your company aims to solve through AI / digital transformation?
Data Analysis & Utilization, Customer Service Enhancement

4. Describe the key problem that the technology must ultimately solve

- **Although classes are conducted online, the lack of a centralized learning management system hinders the efficient sharing and access of learning materials.**
- **Students are unable to receive real-time answers to their course-related questions, and even when responses are provided, the lack of source verification limits their ability to engage in deeper, independent learning.**
- **Instructors spend a significant amount of time addressing repetitive student inquiries, which limits their capacity to focus on research and provide meaningful academic support.**
- **A substantial amount of learning-related data is not being collected through a centralized channel, leading to missed opportunities to leverage it for enhancing the overall learning environment**
- **The institution is currently unable to provide adequate support for students to enhance their AI literacy and naturally develop the ability to utilize AI in their daily lives**

5. Who are the primary users of this technology?

Internal Staff, Customers

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

- **The system must be compatible Chrome, Safari, and others.**
- **The system should be available as a mobile application or, at a minimum, offer full functionality through mobile web browsers if a dedicated app is not provided.**

Technology Requirements: **B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

Must comply with ISO certification (27001, 27701)

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

Technology Requirements: **C. Technical Requirements: #11 ~ #15**

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

AWS cloud-based infrastructure should be used; Infrastructure environment should be further discussed

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

N/A

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Integration with the existing student learning management system may be required and should be further discussed to determine feasibility and scope.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

The provider utilizing AWS cloud-based infrastructure is preferred; Should ensure compatibility with all browsers supporting JavaScript ES5

Technology Requirements: D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

- **Instructors may require time to become familiar with the new system, so appropriate support from a Customer Success Manager is essential.**
- **A clear implementation guide is required to support student engagement and promote the active use of the new technology.**
- **Effective onboarding processes are essential to ensure the accessibility of the new system, including seamless integration with existing platforms if necessary.**

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users

18. If there are additional requirements for the technology provider, please specify.

- **The system should include a variety of features for effective learning management, particularly those that help motivate students and facilitate communication between students and instructors, as well as among students themselves.**
- **It would be helpful to receive and refer to case studies or examples where the system and technology have been successfully utilized.**

19. Please send/attach any reference materials that help explain the required technology.

N/A

(2) Eduboard (Pty) Ltd

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **Eduboard (Pty) Ltd**
3. Country: **South Africa**
4. Organization Type: **Private Company**
5. Website (if available): **www.eduboard.co.za**

Part II. 해외기술 수요 정보

Technology Requirements: A. Functional Requirements: #1 ~ #6

1. Which tech sector applies to your needs? (Select all that apply)
Edu-Tech (e.g., learning platforms, HR training, language education)
2. What are the key functions of the technology you wish to introduce?
Clicker based classroom assessment solution with built in Ai for teachers.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction.
To offer a cost effective and efficient technology solution for student assessment in the classroom.
4. Describe the key problem that the technology must ultimately solve
Offer engaging and powerful cost effective technology to schools that do not have wide access to internet and electricity. And it is powerful but easy to use.
5. Who are the primary users of this technology?
Customers
6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Need multiple OS compatibility and with a portal for pushing work to students and having a global dashboard to share data and results of the student assessments.

Technology Requirements: **B. Operational Requirements:** #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?
Real-time Monitoring, System Availability (24/7 operation, server stability, etc.), Other (please specify)
Must work with both wireless and Bluetooth communication protocols
8. Are there any legal or regulatory compliance requirements the system must meet?
POPI Act of South Africa (similar to GDPR), ICASA certification for wireless devices
9. What is the budget range for adopting this technology?
Below \$30,000
10. What is the target timeline for implementing this technology through the PoC project?
6 to 12 months

Technology Requirements: **C. Technical Requirements:** #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
Both local device as well as cloud environments and on multiple different OS's
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
No

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Low internet and electricity availability

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Only integration with the existing system is required

15. What are the qualifications required for the technology provider to be matched?

To have several years of industry experience of developing and utilising the technology in the education sector

Technology Requirements: **D. Transition Requirements: #16~#18**

16. What challenges are expected during the adoption and transition process of the new technology?

Comprehensive training to be given to the customer

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users

18. If there are additional requirements for the technology provider, please specify.

Technical and training support

19. Please send/attach any reference materials that help explain the required technology.

N/A

(3) Polytechnic Cyber Institute

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **Polytechnic Cyber Institute**
3. Country: **Luxembourg**
4. Organization Type: **Research Institute**
5. Website (if available): **<https://polytechniccyber.institute/>**

Part II. 해외기술 수요 정보

Technology Requirements: **A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Edu-Tech (e.g., learning platforms, HR training, language education)
2. What are the key functions of the technology you wish to introduce?
Our institute is an NGO dedicated to breaking barriers in education, offering accessible, unbiased, high-quality learning experiences 24/7 to students worldwide. By focusing on cutting-edge technology and innovative teaching methods, we empower learners to develop essential skills for the digital age. We are eager to expand our curriculum and global reach through partnerships.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Customer Service Enhancement, Efficiency Improvement & Cost Reduction, Other (please specify).
Through this digital transformation, we seek to find a relevant technology that can significantly improve the current process in terms of diverse educational programs and offers.
Working with a South Korean company that could offer such platform would enable our organization to improve, expand and increase our educational offer and reach. Expanding our curriculum could optimize our potential client acquisition, and diversify course types.

4. Describe the key problem that the technology must ultimately solve

The key problem we're hoping this PoC to solve is the market potential reach by emphasizing bilateral opportunities, and gain access to Korean platforms. Through this PoC, our organization also aims to expand our reach to South Korea.

5. Who are the primary users of this technology?

Internal Staff, Customers, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Web platform, interoperability

Technology Requirements: **B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

Must comply with EU GDPR, ISO 27001

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

Technology Requirements: **C. Technical Requirements: #11 ~ #15**

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration? **No**
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
Software interoperability capacity
14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?
Discussion with the technology provider is required
15. What are the qualifications required for the technology provider to be matched?
None

Technology Requirements: D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
Product integration and interoperability. UI/UX
17. What considerations should be made when adopting new products or technology into an existing system?
Providing training and manuals for users.
Regarding integration requirements with our existing system, we would like to discuss with a South Korean IT training and assessment platform provider who can be matched with our company for this PoC.
18. If there are additional requirements for the technology provider, please specify.
Provide technical support and assistance.

Please send/attach any reference materials that help explain the required technology.

N/A

(4) NCBS (Nile Centre Business Support)

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **NCBS (Nile Centre Business Support)**
3. Country: **Uganda**
4. Organization Type: **Private Company**
5. Website (if available): **www.ncbs.io**

Part II. 해외기술 수요 정보

A. Functional Requirements: #1 ~ #6

1. Which tech sector applies to your needs? (Select all that apply)

Edu-Tech (e.g., learning platforms, HR training, language education)

2. What are the key functions of the technology you wish to introduce?

"NCBS, a Ugandan-based training center specializing in remote Business Support functions, aims to equip young Ugandans for junior roles in the global market. Recognizing the increasing demand for AI literacy and digital competency in IT and Accounting, NCBS seeks to enhance its "Hire, Train, Deploy" model. To achieve this, NCBS plans to implement a South Korean AI-powered IT talent training and assessment SaaS (Software as a Service) platform, designed to drive digital transformation and ensure scalable growth.

This strategic partnership with a South Korean IT talent training and assessment specialist will enable NCBS to optimize hiring decisions, personalize trainee development, and facilitate seamless placement of qualified talent with international employers. The goal is to establish a robust digital infrastructure that improves operational efficiency, elevates training quality, and fosters greater transparency and trust with global hiring partners.

To realize these objectives, the platform must provide the following core functionalities:

- **Smart Talent Screening & Skills Diagnostics (Hire Phase):**

- **AI-driven assessments evaluating logic, coding proficiency, problem-**

- solving abilities, and learning agility.
 - Role-specific filters to accurately identify trainees best suited for specialized tracks, including IT Automation, Data Analysis, Digital Marketing, and Accounting & Finance.
 - A scalable and unbiased recruitment tool designed to optimize selection from Uganda's expanding talent pool.
- **Personalized & Scalable Training Programs (Train Phase):**
 - Structured learning pathways progressing from beginner to advanced levels in high-demand fields such as Web Development, Data Science, and AI.
 - Real-world simulation projects, automated assignment grading, and AI-driven feedback mechanisms to enhance learning outcomes.
 - Instructor dashboards providing real-time learner performance tracking, skill gap identification, and adaptable coaching strategies.
- **Integrated Learning Management System (LMS):**
 - A centralized system for efficient management of course content, attendance records, assessment results, and certification processes.
 - Web-based and fully mobile-accessible platform, supporting hybrid training models that blend online and offline learning.
 - Multilingual support, with English as the mandatory default language.
- **Employer-Facing Dashboards & Deployment Readiness (Deploy Phase):**
 - Transparent, real-time performance tracking, providing hiring partners with clear visibility into trainee progress and job readiness.
 - Intelligent matching engine aligning graduate skill sets with job requirements from international clients.
 - Post-deployment tracking tools for evaluating long-term performance, client satisfaction, and enabling continuous feedback integration.

This platform is expected to significantly enhance NCBS's capacity to deliver highly skilled talent to the global market, thereby contributing to economic growth in Uganda."

3. What are the key problems your company aims to solve through AI / digital transformation?

Productivity Improvement, Process Automation, Data Analysis & Utilization,

Customer Service Enhancement, Efficiency Improvement & Cost Reduction.

NCBS is applying to the 2025 AI & Digital Transformation PoC Support Program to address critical challenges in scalability, standardization, and transparency when preparing young African talent for global remote roles, particularly in IT and Accounting. To overcome these limitations and fully realize the potential of our “Hire, Train, Deploy” model, NCBS seeks to collaborate with a South Korean company specializing in AI-powered IT talent training and assessment SaaS platforms.

Specifically, NCBS aims to solve the following key problems through digital transformation:

- **Scalability of Trainee Onboarding and Skills Evaluation:**
 - Currently, NCBS lacks a data-driven, scalable system to efficiently identify, assess, and onboard trainees across multiple job roles, hindering expansion into European and other African markets.
 - AI-powered tools are needed to automate assessments, enhance talent filtering, and standardize hiring decisions at scale.
- **Consistency and Visibility in Training Outcomes:**
 - Manual training workflows, fragmented systems, and limited learning analytics impede real-time progress tracking and personalized learning.
 - A digital platform is required to ensure consistent curriculum delivery, real-time feedback, and adaptive support, leading to better-trained professionals.
- **Demonstrating Job Readiness and Building Employer Confidence:**
 - The inability to provide standardized performance dashboards and digital certifications limits the demonstration of real-time job readiness.
 - An integrated system is needed to offer employers transparent visibility into candidate progress and capabilities, fostering trust.
- **Efficiency in Deployment and Client Matching:**
 - Manual matching processes based on resumes and interviews are inefficient.
 - A technology platform with intelligent matching features and post-deployment tracking is necessary to optimize candidate placement, improve retention, and monitor long-term performance.

■ **Digital Consistency for Pan-African Expansion:**

- Expansion into markets like Kenya, Nigeria, Ghana, Rwanda, and South Africa requires a cloud-based platform for centralized and standardized training operations.

A South Korean IT talent training SaaS solution can enable localized delivery while maintaining global quality standards.

Through this digital transformation, NCBS aims to establish a robust technological foundation to enhance operational efficiency, training quality, and global client satisfaction.

This platform will enable us to serve a greater number of African youth, meet increasing global demand, and reinforce our mission to provide transparent, unbiased, and skill-based remote job opportunities through scalable innovation.

Partnering with a South Korean company offering an AI-driven training and assessment platform will not only streamline internal operations but also directly contribute to our ability to expand across Africa, integrate into global supply chains, and provide international employers with a transparent, competency-based hiring pipeline."

4. Describe the key problem that the technology must ultimately solve
 "The core challenge this Proof of Concept (PoC) must address is NCBS's limited capacity to scale and digitize its training and placement pipeline to meet the growing international demand for skilled remote professionals, particularly in IT and Accounting. Current manual trainee selection, offline training tracking, and limited employer visibility hinder consistent outcomes, job readiness demonstration, and regional scalability. An AI-powered platform is crucial to resolve these bottlenecks through data-driven hiring, hybrid training, and transparent deployment tracking.

■ **Current System Limitations:**

- Manual trainee selection lacking data-driven validation for long-term job success.
- Offline training programs with coaching tracked via spreadsheets.
- Limited employer visibility into trainee progress and capabilities pre-deployment.

- Constraints on scaling to new locations due to a lack of standardized systems.
- **Solution through Digital Talent Training and Assessment Platform:**
 - Enabling data-driven hiring via intelligent trainee evaluation.
 - Supporting hybrid (online/offline) training models to reach underserved populations.
 - Providing real-time performance tracking and comprehensive trainee portfolios for clients.
 - Improving deployment efficiency, facilitating smoother onboarding by international clients.
- **PoC Objectives:**
 - Demonstrate the scalable and effective training and deployment of young African talent using appropriate technology.
 - Establish measurable KPIs for training duration, client satisfaction, job placement success, and long-term retention.
- **Pan-African Vision:**

This PoC serves as the foundation for NCBS's pan-African expansion, not just operational digitization in Uganda. Following successful implementation, NCBS intends to replicate its "Hire, Train, Deploy" model in countries with high IT talent potential, including:

 - Kenya: Leveraging its dynamic tech ecosystem and leading ICT institutions.
 - Nigeria: Capitalizing on its vast, digitally engaged youth population.
 - Ghana: Establishing a hub for software development and digital innovation.
 - Rwanda: Supporting rapid digital transformation and youth employment initiatives.
 - South Africa: Utilizing its mature IT training environment and strong English proficiency.

NCBS aims to create a pan-African network of training centers and partnerships, building a scalable pipeline of remote-ready professionals equipped to serve global clients, beginning with Europe and expanding internationally."

5. Who are the primary users of this technology?

Internal Staff, Customers.

"This Proof of Concept (PoC) will directly benefit the following key stakeholders:

- **Trainees: Enhanced access to high-quality training and improved job placement opportunities.**
- **Trainers/Instructors: Streamlined workflows and data-driven insights to optimize training delivery.**
- **Internal Management Team: Increased operational efficiency and scalability through digital transformation.**
- **Hiring Partners/Employers (Europe and Global): Access to a transparent and competency-based pipeline of skilled remote professionals."**

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

The platform must be a responsive, web-based application accessible via desktop and mobile devices. Key features include:

- **Intuitive, Multilingual Interface: English as the mandatory default language.**
- **User-Specific Dashboards: Tailored dashboards for trainees, trainers, administrators, and employers.**
- **Real-time Progress Tracking: Immediate visibility into trainee performance.**
- **Notification Features: Timely alerts and updates for all users.**

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

- **Data protection and privacy are paramount. The system must comply with:**
 - **Uganda's Data Protection and Privacy Act, 2019: Due to NCBS's local operations and trainee data management.**

- **EU GDPR: To facilitate cross-border data transfers and employer interactions with European companies.**
- **ISO/IEC 27001 (or equivalent): To ensure high-level data security and privacy.**
- **Essential data management features include:**
 - **Role-Based Access Control: Limiting data access to authorized users.**
 - **Secure Cloud Storage: Protecting data integrity and confidentiality.**
 - **Audit Logging: Maintaining a record of data access and modifications for accountability.**

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

■ **Core Infrastructure:**

- **NCBS maintains a foundational infrastructure using Windows-based computers for essential administrative tasks.**
- **Reliable internet connectivity is paramount, supporting both internal operations and the delivery of cloud-based training programs.**

■ **Cloud-Centric Training:**

- **A key aspect of NCBS's current operations involves the delivery of IT and accounting training through various cloud-based software platforms.**
- **This reflects a strategic move towards leveraging the accessibility and scalability of cloud technologies for educational purposes.**
- **This removes the need for expensive on site software, and allows trainees to access the software from a variety of locations.**

■ **Adaptation to the Ugandan Context:**

NCBS remains mindful of the local infrastructure landscape, implementing

measures to ensure consistent service delivery.

This involves:

- **Addressing potential power fluctuations through backup power solutions.**
- **Managing internet reliability through diversified connectivity options.**
- **The high usage of mobile phones in Uganda, means that NCBS may also provide training that is able to be accessed via mobile devices.**

■ **Focus on Educational Cloud Services:**

The primary use of cloud infrastructure is for the delivery of educational services.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

- **Cloud-based (preferred)**
- **Must be compatible with standard web browsers and accessible from low-bandwidth environments**
- **Should support integration with NCBS's existing tools (Google Workspace, Excel-based trackers, etc)**

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

NCBS has come to next phase to focus on systems and IT development to scale. With Proof of Concept for ability to train (and deploy) trainees from Uganda to traineeships and clients abroad this is the next step in development. Implementing key technical challenges:

■ **Network Infrastructure:**

- **Internet Reliability: Uganda may have areas with inconsistent or slow internet connectivity. Cloud-based solutions rely on a stable internet connection, which could be a challenge.**

■ **Bandwidth Limitations:**

- **Even with generally reliable connections, there might be bandwidth limitations that could affect the performance of the solutions, especially if they involve large data transfers or real-time interactions. NCBS is using a high-speed fiber internet provider which is main supplier in Uganda currently.**

■ **Hardware and Software Compatibility:**

- **Device Diversity:** NCBS's trainees might use a wide range of devices (laptops, desktops, tablets, smartphones) with varying specifications. Ensuring the solutions function seamlessly across all these devices could be a challenge.
- **Operating System Compatibility:** While NCBS uses Windows, ensuring solutions are fully compatible with different versions of Windows, and potentially other operating systems if used, is important.

■ **Technical Expertise:**

- **User Training:** NCBS staff and trainees will need adequate training to effectively use and troubleshoot the IT solutions.
- **Technical Support:** Access to timely and effective technical support for the IT solutions is crucial. This includes both initial setup and ongoing maintenance.

■ **Data Management and Security:**

- **Data Storage:** IT solutions might generate significant amounts of data. NCBS needs to have adequate data storage infrastructure and management practices in place.
- **Data Security:** Protecting sensitive data related to trainees and their progress is paramount. NCBS needs to ensure the IT solutions meet the necessary security standards and implement appropriate security measures.

■ **Power Stability:**

- **Power Outages:** Uganda may experience power outages. This could disrupt the use of cloud based solutions. Therefore, backup power solutions are already in place.

These challenges highlight the need for careful planning, robust infrastructure, and adequate technical support to ensure the successful implementation of IT solutions at NCBS in Uganda.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

- **Proven track record in AI-based training and assessment platforms**
- **Experience in international deployment and cross-cultural user adaptation**
- **Ability to support hybrid learning (online/offline) in low-resource settings**

- **Willingness to co-develop features that enhance transparency and job-readiness**

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
- **Ensuring trainers and staff are onboarded quickly and effectively**
 - **Trainees may require orientation for digital platforms, especially if unfamiliar with self-paced learning**
 - **Language and UI simplicity will be important for user engagement**
 - **Change management support and initial technical training will be needed**
17. What considerations should be made when adopting new products or technology into an existing system?
- Providing training and manuals for users.**
- Regarding integration requirements with our existing system, we would like to discuss with a South Korean IT training and assessment platform provider who can be matched with our company for this PoC.**
18. If there are additional requirements for the technology provider, please specify.
- **Ongoing technical support for at least 3-4 months after PoC launch**
 - **Capability to localize content and provide flexible reporting tools**
 - **Transparency in learning analytics and customizable dashboards**
 - **Clear documentation and user manuals for trainers and internal teams**
19. Please send/attach any reference materials that help explain the required technology.

(5) Watchmegrow(WMG)**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Watchmegrow(WMG)**
3. Country: **USA**
4. Organization Type: **Private Company**
5. Website (if available): **<https://watchmegrow.com/>**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Edu-Tech (e.g., learning platforms, HR training, language education)
2. What are the key functions of the technology you wish to introduce?
**Provides daily updates on children's activities to both teachers and parents.
Automatically compiles and summarizes behavioral patterns into integrated reports based on relevant timeframes (e.g., weekly, monthly).
Allows users to access reports and updates via mobile app.**
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Data Analysis & Utilization, Customer Service Enhancement
4. Describe the key problem that the technology must ultimately solve
The key challenge is the lack of automated tools to observe, analyze, and report children's behavior in childcare centers. The goal is to validate AI-powered observation and reporting tools that improve communication between centers and families, while enhancing staff efficiency.
5. Who are the primary users of this technology?

Internal Staff, Customers, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

A user-friendly mobile app or web-based platform is required to display behavior analysis results. The system must provide quantifiable reports that can be reviewed through the app/web or exported as PDFs.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Automated Data Backup, Specific Hardware or Software Development Requirements, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?
Yes. The system must comply with U.S. data protection standards (e.g., COPPA for children's data) and follow internal security protocols based on AWS architecture.

9. What is the budget range for adopting this technology?
\$100,000 and above

10. What is the target timeline for implementing this technology through the PoC project? **6 to 12 months**

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

The technology will operate in a secure cloud environment. All data processing and storage should be cloud-based for scalability and compliance.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Not required during the PoC phase. However, depending on future service expansion, there may be a need to integrate with internal systems via API, particularly for behavior data management.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

The most critical challenge is whether the technology provider has the core capability to develop or already possesses a vision AI model that can effectively analyze children's behavior. Additionally, it would be beneficial if the provider can build the capacity to install and maintain necessary hardware in the target service regions through the PoC.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

- **Proven expertise in computer vision and AI-driven video analytics, preferably with prior experience in behavioral analysis or child-related environments.**
- **Capability to customize or fine-tune vision AI models to detect, interpret, and categorize children's behavior patterns accurately and ethically.**
- **Strong communication and collaboration skills to work with our internal teams on potential system integration and future scaling.**

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Staff adaptation may require training. In addition, video-data-based insights need to be communicated in a way that is clear and actionable for parents and teachers.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Conducting integration tests with the

existing system

18. If there are additional requirements for the technology provider, please specify.
The provider should be able to offer remote technical support, establish a clear maintenance plan, and demonstrate a willingness to collaborate throughout and beyond the PoC phase.

19. Please send/attach any reference materials that help explain the required technology.

(6) Astrea corp PLC.**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Astrea corp PLC.**
3. Country: **Kazakhstan**
4. Organization Type: **Private Company**
5. Website (if available): **<https://astrea.kz/en>**

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Legal support (including) for digital platforms and cross-border projects (Kazakhstan–Korea), transaction structuring, regulatory compliance, and protection of parties' rights.
Ensuring legal security of data processing and digital services, with a focus on compliance with international standards and client data protection
3. What are the key problems your company aims to solve through AI / digital transformation?
Process Automation, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The key problem to be solved through the PoC project is the lack of a clear and secure legal framework for cross-border digital platforms operating between Kazakhstan and South Korea.
The technology should help identify and resolve legal risks in data handling, compliance, and partnership structuring, ensuring that digital services can scale

safely and legally across jurisdictions.

5. Who are the primary users of this technology?

Customers, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Currently, there are no specific UI/UX development requirements.

Technology Requirements: **B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?

Security Issues & Requirements (e.g., Encryption, Access Control)

8. Are there any legal or regulatory compliance requirements the system must meet?

Must comply with EU GDPR

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

Technology Requirements: **C. Technical Requirements: #11 ~ #15**

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

cloud

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Currently, information about external systems requiring integration is unknown.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Ensuring compliance with data security requirements, including encryption and access control, in accordance with international standards.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

In-depth understanding of data security standards and regulations, such as GDPR, as well as the ability to integrate solutions with existing systems.

Technology Requirements: **D. Transition Requirements: #16~#18**

16. What challenges are expected during the adoption and transition process of the new technology?

Employees may require significant time to adapt to the new system, so a comprehensive training program is needed

17. What considerations should be made when adopting new products or technology into an existing system?

Data migration and integration

18. If there are additional requirements for the technology provider, please specify.

N/A

19. Please send/attach any reference materials that help explain the required technology.

N/A

(7) Vytautas Magnus University Agriculture Academy**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Vytautas Magnus University Agriculture Academy**
3. Country: **Lithuania**
4. Organization Type: **Public Institution**
5. Website (if available): **www.zua.vdu.lt/en**

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Ag-Tech (e.g., climate resilience, food security, agricultural automation)
2. What are the key functions of the technology you wish to introduce?
Equipment sensor data is continuously collected (e.g., temperature, humidity, CO₂, pH, EC, light levels, nutrient flow) in controlled environment agriculture systems - greenhouses. Anomalies are detected (e.g., a sudden temperature spike, nutrient imbalance, sensor failure). Strategic view, trend analysis, anomaly logs, system overrides (managers). Task list, real-time alerts, device status, corrective action prompts (operators).
3. What are the key problems your company aims to solve through AI / digital transformation?
Process Automation, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
Greenhouses built over a decade ago were designed with limited or no real-time data collection and lack intelligent monitoring systems. As a result, operators rely heavily on manual inspections and reactive maintenance, which often leads to: Inefficient climate control (temperature, humidity, CO₂ levels fluctuate beyond

optimal ranges).

Delayed detection of equipment failures (e.g., pumps, ventilation, nutrient dosing systems).

Suboptimal plant growth conditions (affecting yield and quality).

High energy and water waste due to imprecise manual adjustments.

In modern Controlled Environment Agriculture (CEA), real-time sensor data and AI-driven anomaly detection enable proactive decision-making and system automation, maximizing plant health, resource efficiency, and operational stability.

5. Who are the primary users of this technology?

Internal Staff, Plant scientists - researchers

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Real-time Data Visualization, Anomaly & Alert System, Historical Data & Analysis, Mobile & Desktop Compatibility, Audit Trail & Logging are required.

Technology Requirements: **B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, Specific Hardware or Software Development Requirements, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

ISO Certification

9. What is the budget range for adopting this technology?

\$30,000 ~ \$50,000

10. What is the target timeline for implementing this technology through the PoC

project?

Over 1 year

Technology Requirements: C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
There is a program to collect info about environmental conditions, but it might be outdated and do not respond to hydroponics.
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
There is a climate (environmental parameters) system.
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
Software needs a new AI solution.
14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?
Discussion with the technology provider is required
15. What are the qualifications required for the technology provider to be matched?
Proven experience with real-time sensor networks (e.g., temperature, humidity, pH, EC, light, CO₂) in industrial or agricultural environments. Familiarity with time-series databases (InfluxDB, TimescaleDB, Prometheus) and efficient handling of large sensor datasets. Experience designing machine learning pipelines for real-time anomaly detection, preferably in Controlled Environment Agriculture or industrial systems. Ability to deliver user-friendly dashboards for both operators and managers, with mobile and desktop responsive design.

Technology Requirements: D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Training program is needed.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Data migration and integration, Conducting integration tests with the existing system, Parallel running with the existing system

18. If there are additional requirements for the technology provider, please specify.

N/A

19. Please send/attach any reference materials that help explain the required technology.

N/A

(8) JHY international Limited company**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **JHY international Limited company**
3. Country: **Vietnam**
4. Organization Type: **Private Company**
5. Website (if available): N/A

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Ag-Tech (e.g., climate resilience, food security, agricultural automation)
2. What are the key functions of the technology you wish to introduce?
There is a need for an integrated program for pig and poultry farms that uses a plant-based antiviral agent called "Mineral-Polyphenol Compound (MPC)" to prevent and manage animal diseases, while monitoring livestock behavior patterns and farm management data in real time to provide immediate feedback to producers.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The key problem we aim to solve through the PoC project is the difficulty of early detection and prevention of diseases in livestock farming. Currently, the health status of animals is often assessed based on visual inspection or the experience of farm workers, which frequently leads to delayed responses after the disease has already spread. Our goal is to address this issue using AI-based behavioral

analysis and real-time data monitoring technologies, enabling early warnings and instant feedback to producers. This will help prevent the spread of disease and improve both productivity and biosecurity on the farm.

5. Who are the primary users of this technology?

Customers, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

A web-based platform is required for real-time monitoring, data visualization, and system feedback. The UI/UX should be intuitive and easy to use, allowing farm managers and producers to access livestock behavior data, farm condition trends, and alerts without requiring technical expertise. The platform should support efficient decision-making through clear dashboards and actionable insights.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

ISO certification required

9. What is the budget range for adopting this technology?

\$50,000 ~ \$100,000

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

The specific infrastructure environment has not been finalized yet. However, we

are considering a cloud-based system for scalability and accessibility. The choice of operating system and other technical environments will be determined based on compatibility with existing farm systems and future expansion plans.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

At this stage, it is not yet confirmed whether specific external systems such as APIs, ERP, or IoT sensors will require integration. Further discussions with the client are needed to clearly identify any integration requirements.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

A key technical challenge is ensuring that the new technology integrates smoothly with the customer's existing systems without causing disruptions. Compatibility with current software platforms, data formats, and farm management tools is essential to avoid operational inefficiencies. The solution must be designed to work alongside existing infrastructure, minimizing the need for major changes or replacements. In addition, the application of MPC-based disinfectants requires a system that can support and manage their usage effectively, including integration with behavioral monitoring and environmental data to maximize preventive effects.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

The specific qualifications required for the technology provider have not been clearly defined yet. Further discussions will be needed to determine the appropriate criteria based on the project's technical scope and goals.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

One of the main challenges in adopting the new technology is gaining trust within the closed environment of livestock farms. To ensure successful transition, it is essential to build confidence in the reliability of the data provided by the system. This requires not only a clear and intuitive UI/UX but also user education and training that help farm staff understand and trust the technology. Without trust in the data, effective adoption and utilization will be difficult.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Conducting integration tests with the existing system, Parallel running with the existing system. Additional considerations may arise, and further on-site discussions will be necessary to ensure smooth integration and operation within the existing system.

18. If there are additional requirements for the technology provider, please specify.

This is not clearly defined at the moment, but additional requirements may be discussed if needed during the project implementation.

19. Please send/attach any reference materials that help explain the required technology.

N/A

(9) Kaunas University of technology

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **Kaunas University of technology**
3. Country: **Lithuania**
4. Organization Type: **Research Institute**
5. Website (if available): <https://food.ktu.edu/>

Part II. 해외기술 수요 정보

A. Functional Requirements: #1 ~ #6

1. Which tech sector applies to your needs? (Select all that apply)

Ag-Tech (e.g., climate resilience, food security, agricultural automation)

2. What are the key functions of the technology you wish to introduce?

The proposed AI-based system will perform the following key functions:

Data harmonization and integration of over 20 years of nutrition, microbiological, and chemical data collected at the Food Institute, including data cleaning, normalization, and annotation across diverse product categories.

AI-driven classification and scoring algorithms to establish food health and sustainability indexes based on scientific criteria and aligned with current and anticipated EU legal frameworks (e.g., Farm to Fork, Sustainable Food System Regulation, Nutri-Score, etc.).

Pattern recognition and predictive modelling to uncover causal and correlative relationships between ingredient composition, processing technologies, and health/sustainability outcomes.

Interactive database and user interface (UI) to provide tailored information to stakeholders (e.g., food producers, policymakers, consumers) for voluntary or regulated product labeling.

Threshold and limit generation system to define acceptable levels and optimal

ranges of nutritional, microbiological, and sustainability parameters for different product categories.

3. What are the key problems your company aims to solve through AI / digital transformation?

Data Analysis & Utilization.

- Underutilization of legacy data:

Despite two decades of valuable analytical data, no integrated digital system currently enables advanced insight extraction or regulatory application.

- Lack of digital infrastructure for future-proof food labeling:

There is no robust digital mechanism to support transparent, evidence-based labeling systems incorporating both health and sustainability attributes.

- Gaps in traceability and impact assessment:

Existing systems do not allow comprehensive traceability or multi-criteria decision-making regarding food product healthfulness and environmental impact.

4. Describe the key problem that the technology must ultimately solve

To create a functional proof of concept, the AI technology must:

Ingest and analyze large-scale, heterogeneous food datasets (including legacy lab data in various formats and units).

Apply advanced machine learning techniques, including unsupervised and supervised learning, to categorize and score products according to nutritional value and environmental performance.

Ensure compliance and compatibility with emerging legal and regulatory frameworks related to food health and sustainability claims in the EU.

Include a modular, user-friendly interface that allows different stakeholder access levels (e.g., researchers, regulatory bodies, food producers).

Enable validation against new product data to ensure scalability and relevance for new food innovations, including those incorporating novel ingredients or processing technologies. The central problem is the absence of a scientifically validated and regulation-aligned digital system capable of transforming long-term analytical data into actionable, transparent, and legally applicable health and sustainability indicators for food products.

The technology must enable the transition from fragmented data storage to intelligent data utilization, thereby allowing food system actors to quantify and communicate the healthfulness and sustainability of products based on standardized, traceable metrics. This supports informed decision-making across the food value chain, contributes to consumer trust, and prepares the groundwork for mandatory or voluntary labeling schemes at national and EU levels.

5. Who are the primary users of this technology?

The AI-driven system and its resulting food health and sustainability database will serve multiple user groups across the food system, each benefiting from tailored access and insights:

- Policymakers and regulatory authorities:

Will use the system to establish and validate evidence-based criteria for food labeling schemes, policy development, and legislative compliance monitoring (e.g., for sustainability labeling under the EU Sustainable Food Systems framework).

- Official control bodies and food safety inspectors:

Will benefit from AI-powered reference values and thresholds to support risk assessment, compliance verification, and consistency across inspection protocols and enforcement.

- Food business operators (producers, processors, retailers):

Will access product-specific insights and recommendations to improve product formulations, align with sustainability targets, and develop

competitive, health-oriented food innovations. The system will support voluntary and future mandatory labeling initiatives, enabling differentiation in the market.

- Academic and R&D institutions:

Will use the harmonized dataset and AI models to conduct further research, improve product design, and evaluate interventions along the food chain for health and environmental outcomes.

- Consumers and citizen science communities:

Through simplified interfaces and visualization tools, consumers will gain transparent, accessible information on the health and sustainability aspects of foods, enabling informed purchasing decisions and promoting behavior change toward healthier and more sustainable diets.

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

No need

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, Specific Hardware or Software Development Requirements, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

The system must align with current and emerging European Union legal and regulatory frameworks in the domains of food labeling, health claims, and sustainability communication. The system being developed will be retrospectively harmonized, scientifically validated, and structured to support future legal applications.

Key compliance areas include:

EU Regulation (EU) No 1169/2011 on the provision of food information to consumers, particularly nutritional labeling.

Regulation (EC) No 1924/2006 on nutrition and health claims made on foods, ensuring any AI-derived health indicators or scores are compatible with claims regulation.

Planned Sustainable Food System Framework Regulation (expected 2025–2026), particularly with respect to sustainability labeling and environmental performance metrics.

General Food Law Regulation (EC) No 178/2002, ensuring traceability, transparency, and scientific integrity in data usage and system outputs.

National food safety and labeling guidelines, where relevant, to enable national-level policy support and control activities.

The system will incorporate data protection and ethical AI design principles, ensuring that no confidential or personally identifiable information from the historical dataset is exposed. While the data originated from voluntary submissions, its secondary use in an AI-based system will be legally reviewed and aligned with the principles of FAIR data (Findable, Accessible, Interoperable, Reusable), as promoted by the European Food Safety Authority (EFSA) and European Commission initiatives.

9. What is the budget range for adopting this technology?

\$100,000 and above

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Key infrastructure components:

- Cloud Environment. The system will utilize a secure, GDPR-compliant cloud platform (e.g., Microsoft Azure, AWS, or Google Cloud) to host AI models,

databases, and user interfaces. The cloud environment will support:

Scalable data storage and processing.

Real-time API connectivity to external data sources.

Web-based dashboards for different stakeholder groups (e.g., regulators, industry, researchers).

- **On-Premises Infrastructure (Food Institute). Historical datasets currently reside on secured institutional servers. A local data processing environment (Linux/Windows-based) will be used for:**

Initial data extraction, harmonization, and preprocessing.

Secure backup and data governance of sensitive research and client-related information.

- **AI and Data Tools:**

AI development and deployment will rely on Python-based frameworks (e.g., TensorFlow, PyTorch, Scikit-learn), integrated with data pipelines and ETL processes for cleaning and model training.

- **User Access Environment:**

Front-end applications and databases will be designed as web-accessible platforms, compatible with all major browsers and operating systems (Windows, macOS, Linux) for broad accessibility across institutions and business units.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Yes, the envisioned system will require integration with several external systems to ensure data enrichment, traceability, and future interoperability. While the historical dataset has been internally collected, the long-term functionality of the platform relies on linkages with external systems, including:

- **Food industry ERP systems and quality management platforms:**

Integration via API will be essential to allow food companies to submit new product data (nutritional, microbiological, environmental) directly into the system for automated evaluation and labeling recommendation.

- **Public databases and regulatory portals (e.g., EFSA OpenFoodTox, EuroFIR, EU Food Classification and Description System – FoodEx2):**
API-based connections will enable harmonization with official classification, risk data, and nutrient reference values, ensuring legal and scientific alignment.
- **IoT or digital lab instrumentation:**
In the future, the system may also interface with digitally enabled food analysis equipment (e.g., NIR, Q-TOF, HPLC data outputs) to allow real-time or semi-automated data ingestion, especially for newly produced samples.
- **Sustainability databases and LCA platforms (e.g., Agribalyse, Ecoinvent):**
For the environmental dimension of sustainability labeling, integration with Life Cycle Assessment (LCA) databases or tools will allow cross-referencing of ingredients and processes with verified environmental impact indicators.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Several technical challenges must be addressed to ensure the successful implementation of the AI-based health and sustainability assessment system:

- **Legacy Data Structuring and Standardization:**
The historical analytical data (~20+ years) were collected using different methodologies, formats, and terminologies. A significant effort is required to digitally harmonize and standardize this data (e.g., units, methods, metadata) to make it usable for AI training and regulatory evaluation.
- **Software Integration and Interoperability:**
The current internal data management systems are not natively compatible with advanced AI frameworks or modern APIs.
Custom-built ETL (Extract, Transform, Load) pipelines and data adapters will be required to integrate the legacy infrastructure with the AI engine and external regulatory or industry systems.
- **Network and Cloud Infrastructure Development:**
Existing institutional network infrastructure is not yet fully optimized for real-time cloud communication, external API usage, or remote collaboration across

stakeholders (e.g., industry and regulators).

Secure, high-bandwidth, and firewall-compliant configurations will be necessary for reliable operation, especially for future web-based system usage.

- **Hardware Scalability and Computing Resources:**

High-performance computing (HPC) resources or GPU-accelerated environments will be necessary to process large volumes of analytical and sustainability data using machine learning algorithms.

The current infrastructure may require upgrades to accommodate scalable model training and data storage.

- **Data Governance and Privacy:**

As some historical data are client-provided and potentially commercially sensitive, the system must incorporate strict access control mechanisms and comply with GDPR and institutional data protection protocols.

Implementing role-based access and encryption will be essential for secure, lawful use and integration.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

The technology provider must possess strong multidisciplinary expertise and proven capacity in the following domains to ensure successful development and implementation of the system:

- **Artificial Intelligence and Machine Learning:**

Demonstrated experience in applying AI/ML to large-scale, heterogeneous datasets.

Competence in developing explainable AI (XAI) models suitable for regulatory and scientific validation.

- **Data Engineering and System Architecture:**

Proven capability in building data pipelines, integrating legacy datasets, and managing complex data environments (structured, semi-structured,

unstructured).

Experience with ETL processes, cloud-based platforms (e.g., AWS, Azure, Google Cloud), and scalable system design.

- Regulatory and Scientific Data Integration:

Understanding of EU food legislation (e.g., nutrition labeling, sustainability claims, traceability).

Ability to work with public databases (e.g., EFSA, FoodEx2, LCA repositories) and map AI outputs to regulatory frameworks.

- Software Development and User Interface Design:

Skills in developing modular systems with multi-stakeholder interfaces (e.g., dashboards for policymakers, business users, and consumers).

Proven track record in delivering secure, interoperable, web-based platforms with strong user experience design.

- Data Security and Ethical AI:

Familiarity with GDPR and data privacy compliance in Europe.

Implementation of data governance protocols, role-based access control, and secure data exchange mechanisms.

- Cross-sectoral Collaboration:

Experience in joint projects with research institutions, government bodies, and industry stakeholders, particularly in food, health, or sustainability domains.

Strong communication and project management skills to ensure effective coordination throughout the proof-of-concept and scale-up phases.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Several key challenges are anticipated during the adoption and transition to the new AI-driven system, primarily due to the complexity of legacy data, cross-sectoral stakeholder involvement, and the novelty of AI applications in the regulatory food domain:

- Human Capacity and Skill Gaps:

Current staff (scientists, analysts, and technical personnel) may lack experience with AI systems, data science tools, or digital platforms.

A comprehensive and ongoing training program will be required to build internal competence in data interpretation, system use, and results validation.

- Change Management and Internal Alignment:

Transitioning from traditional, manual analysis workflows to a data-driven, semi-automated AI system may encounter resistance or hesitation, particularly if the perceived value is not immediately visible.

Clear communication of benefits, responsibilities, and user roles is critical for successful internal adoption.

- Data Harmonization and Legacy Integration:

The diversity and heterogeneity of 20+ years of data (different formats, terminologies, and analytical protocols) will pose a technical and organizational challenge for initial system setup.

Significant effort will be required for data curation, annotation, and standardization to ensure model readiness and scientific accuracy.

- Interdisciplinary Collaboration:

Effective collaboration between AI developers, food scientists, legal experts, and public stakeholders will be necessary to define meaningful parameters and ensure regulatory compatibility.

Bridging domain-specific language and expectations may require facilitated coordination and iterative validation.

- Stakeholder Onboarding:

Industry partners, policymakers, and consumers will require clear onboarding protocols, tailored user interfaces, and evidence of system reliability before trusting and using the system in practice.

Piloting, usability testing, and trust-building will be necessary components of the adoption strategy.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Data migration and integration, Conducting integration tests with the existing system, Parallel running with the existing system, Other (please specify below)

- Validation and scientific verification of AI-generated outputs:

Since the system will be used for evidence-based food labeling and potentially regulatory decision-making, it is essential to conduct scientific validation of the AI models' outputs to ensure credibility and acceptance.

- Legal and ethical data governance framework:

Implementation must consider GDPR compliance, data confidentiality (especially for industry-submitted data), and ethical AI practices, including transparency, fairness, and auditability.

- Stakeholder-specific customization:

The system will be used by diverse stakeholders (e.g., policymakers, food producers, official control bodies, consumers). Therefore, user interface design and access functionalities must be tailored to meet varying levels of technical literacy, roles, and expectations.

- Long-term maintenance and scalability planning:

Consideration must be given to future-proofing the system through modular design, continuous model updates, and capacity for expansion as legal requirements, data inputs, and product categories evolve.

18. If there are additional requirements for the technology provider, please specify.

Technical Support and Maintenance Plan:

The provider must offer a comprehensive technical support and maintenance package, including regular updates, system monitoring, troubleshooting, and performance optimization.

A Service Level Agreement (SLA) should define response times, update schedules, and critical incident management protocols.

19. Please send/attach any reference materials that help explain the required technology.

N/A

(10) Glo-Biotech Link, LLC**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Glo-Biotech Link, LLC**
3. Country: **United States**
4. Organization Type: **Private Company**
5. Website (if available): N/A

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Ag-Tech (e.g., climate resilience, food security, agricultural automation)
2. What are the key functions of the technology you wish to introduce?
AI technology in livestock farm that monitor the domestic animals' behavior pattern:
 - **Must detect abnormal behavior and analysis of data**
 - **Must present the real-time data to the management**
 - **Prefer an easy user experience e.g., user interfaces, reporting, etc.****An anti-viral agent to prevent and manage animal diseases.**
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The livestock farms are facing higher risks of biological threats as the customers prefer an organic brand, cage-free environment, and no hormones. While it is considered as a healthier measures, it also requires higher control of livestock. We wanted to find a solution to reduce the risks of facing biological threats while

maintain the customer preferences, such as an organic, cage-free environment. The new AI system/solution will help us to monitor/assess livestock behavior and ultimately help us detect any abnormal behavior and prevent any harm to the livestock.

5. Who are the primary users of this technology?

Customers, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

A web-based platform is required for real-time monitoring, data visualization, and system feedback. The UI/UX should be intuitive and easy to use, allowing farm managers and producers to access livestock behavior data, farm condition trends, and alerts without requiring technical expertise. The platform should support efficient decision making. A mobile app is a plus.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

N/A

9. What is the budget range for adopting this technology?

\$50,000 ~ \$100,000

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
The specific system requirements is not yet decided. However, we wanted to have the system integrated with our current system and prefer a cloud based system for scalability and accessibility.
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
Further discussions with the client are needed to clarify identify any integration requirements.
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
A key technical challenge is ensuring that the new technology integrates smoothly with the customer's existing systems without causing disruptions. Compatibility with current software platforms, data formats, and farm management tools is essential to avoid operational inefficiencies. The solution must be designed to work alongside existing infrastructure, minimizing the need for major changes or replacements. In addition, the application of MPC-based disinfectants requires a system that can support and manage their usage effectively, including integration with behavioral monitoring and environmental data to maximize preventive effects.
14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?
Discussion with the technology provider is required
15. What are the qualifications required for the technology provider to be matched?
The specific qualifications required for the technology provider have not been clearly defined yet. Further discussion is expected as the program is identified and the provider is selected.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

A comprehensive training program is needed.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Conducting integration tests with the existing system, Parallel running with the existing system

Ensure smooth progress and integration, onsite discussions will be necessary, and operation within the existing systems.

18. If there are additional requirements for the technology provider, please specify.

This is not clearly defined at the moment, but additional requirements may be needed during the project.

19. Please send/attach any reference materials that help explain the required technology.

N/A

(11) Sarawak Digital Economy Corporation (SDEC)**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Sarawak Digital Economy Corporation (SDEC)**
3. Country: **Malaysia**
4. Organization Type: **Government Agency**
5. Website (if available): **<https://sdec.com.my/web/>**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Ag-Tech (e.g., climate resilience, food security, agricultural automation)
2. What are the key functions of the technology you wish to introduce?
It is an integrated program to prevent and/or control animal diseases with a plant-based anti-viral solution named by "Mineral-Polyphenol Compound (MPC)" and monitoring flocks' behavioral patterns and farm management data to instantly give real-time feedback to producers.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
Lack of real-time data and automation in traditional pig farming, which leads to inefficiencies, higher mortality rates, disease outbreaks, and poor resource management. The PoC will validate the benefits of digital transformation in livestock farming and its scalability across the industry.
5. Who are the primary users of this technology?
State Government Owned Modern Facility for Pig Farming (PFA- Pig Farm Area)

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Yes

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, Specific Hardware or Software Development Requirements, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

Yes

9. What is the budget range for adopting this technology?

Below \$30,000

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

- **Cloud Platform: For centralized data storage, analytics, reporting, and remote access via web and mobile applications.**
- **On-site IoT Devices & Gateways: Installed at the farm to collect real-time data on animal health, environmental conditions, and equipment status.**
- **Operating System: The system operates and is compatible with Android/iOS devices for mobile access.**
- **Connectivity: Utilizes Wi-Fi, LTE, or LoRa networks to ensure reliable data transmission from farm to cloud.**

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
- **IoT Sensors: Integration with temperature, humidity, ammonia, weight, and motion sensors for real-time data collection.**
 - **CCTV & Environmental Controllers: For automated monitoring and control of ventilation, lighting, and feeding systems.**
 - **API Integration: Supports API connectivity for potential linkage with third-party ERP systems, veterinary platforms, or government compliance systems.**
 - **Mobile & Web Interfaces: Integrated with mobile apps and dashboards for farm managers and stakeholders.**
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
- **Network Connectivity: Ensuring stable internet access (Wi-Fi/LTE) in remote farm locations for real-time data transmission.**
 - **Hardware Reliability: Maintaining sensor accuracy and durability in harsh farm environments (e.g., humidity, dust, ammonia).**
 - **Power Supply: Guaranteeing uninterrupted power for IoT devices and gateways, especially in rural areas.**
 - **System Integration: Seamlessly connecting diverse hardware (sensors, feeders, CCTV) with the cloud platform and APIs.**
 - **User Training & Adoption: Ensuring farm operators can effectively use and maintain the system through a user-friendly interface and proper training.**
 - **Data Security & Privacy: Protecting farm data from unauthorized access through secure protocols.**
14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?
- Discussion with the technology provider is required**
15. What are the qualifications required for the technology provider to be matched?
- **Proven Experience: Demonstrated track record in developing and deploying IoT-based smart farming or livestock management systems.**
 - **Technical Expertise: Skilled in IoT hardware integration, cloud-based platforms, and real-time data analytics for agricultural applications.**

- **Localized Knowledge:** Understanding of local farming practices, environmental conditions, and regulatory requirements.
- **Support & Training Capabilities:** Ability to provide on-site installation, technical support, and user training in Bahasa Malaysia and/or English.
- **Cybersecurity Compliance:** Adherence to secure data handling practices and system protection protocols.
- **Scalability & Customization:** Able to tailor the solution for different farm sizes and integrate with other farm management or ERP systems.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
- **Resistance to Change:** Farmers and workers accustomed to manual processes may be hesitant to adopt digital systems.
 - **Learning Curve:** Users may require time and training to understand and operate the new system effectively.
 - **Infrastructure Limitations:** Inadequate internet connectivity or unstable power supply in rural areas could affect system performance.
 - **Data Accuracy and Calibration:** Ensuring all sensors and devices are correctly installed and calibrated for reliable data capture.
 - **Ongoing Maintenance:** Regular technical support and maintenance will be needed to ensure long-term system efficiency.
17. What considerations should be made when adopting new products or technology into an existing system?
- Providing training and manuals for users, Data migration and integration, Conducting integration tests with the existing system**
18. If there are additional requirements for the technology provider, please specify.
- **Provide Local Support:** Collaborate with local partners or establish a local presence to ensure timely technical assistance, troubleshooting, and system servicing.
 - **Capacity Building & Knowledge Transfer:** Conduct structured training programs to upskill local farm personnel and technical teams on system usage, basic

maintenance, and troubleshooting.

- **Handholding During Transition: Offer close guidance and on-site support during the initial adoption phase to ensure smooth operational transition and user confidence.**
- **Support Localization Needs: Adapt system interfaces, user manuals, and training materials to local farming practices where necessary.**

19. Please send/attach any reference materials that help explain the required technology.

(12) : IOWC Sdn Bhd

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **IOWC Sdn Bhd**
3. Country: **Malaysia**
4. Organization Type: **Private Company**
5. Website (if available): **<https://iowc.co>**

Part II. 해외기술 수요 정보

A. Functional Requirements: #1 ~ #6

1. Which tech sector applies to your needs? (Select all that apply)
Ag-Tech (e.g., climate resilience, food security, agricultural automation)

2. What are the key functions of the technology you wish to introduce?

To apply AI and IoT sensor to detect the broiler farm environmental data such as Ammonia level, co2, temperature and humidity to ensure the chickens are live in good environment condition to create less stressful living for chickens in the farm. This is increase the chickens happiness to reduce the FCR

To apply computer vision AI monitoring the broiler farm put putting on the CCTV at the farm house, with CCTV video streaming and images capture of chickens behavior to send to AI server to analyst the chicken behavior such as eating trends, drinking trends, chicken distribution movement trends, any chicken standstill trends and any anomalies behavior which will alert farmer immediately via digital alert message such apps alert or WhatsApp alert message

Eventually with the AI analysis with the anormal incidents happened, the AI should have some sort of autonomous action plan to instruct the farm equipment eg to increase the ventilation fans speed when the temperature, ammonia gas level increase

3. What are the key problems your company aims to solve through AI / digital

transformation?

Productivity Improvement, Process Automation, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction

4. Describe the key problem that the technology must ultimately solve

The PoC Project to handle the initial digital transformation for broiler farm to apply IoT and computer vision AI technologies to have AI consolidated analysis Digital dashboard for farmer to know the insight of the chicken healthcare in his/her farm so that to solve their data silo issue which unable to know the health condition of the farm without digital data analytic by AI and IoT.

To aim for reducing Feed Conversion Rate (FCR) which the major production cost in broiler farm is feed cost which will be around 70% of total production cost. With AI digital solution which can record the potential root cause of high FCR and reduce the FCR which will increase their profit with less feed consumption.

To reduce the mortality rate by using AI and IoT sensors to monitor the farm environment and chickens behavior which can lead to potential disease spread to entire farm if abnormal chicken behavior not detected early stage and fast action taken for isolation and proper treatment plan

5. Who are the primary users of this technology?

Customers

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Mobile apps and web application can be acceptable.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

Not required

9. What is the budget range for adopting this technology?

\$50,000 ~ \$100,000

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Can be AI on the cloud or Edge computing

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Can consider farm equipment such as ventilation fans, automatic feeding, automatic water, eco-sensors, weight machine

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

The key technical challenges related to 4G/5G internal coverage and upload speed which will determine the data upload especially video streaming data to AI cloud server or alternative way to have AI edge computing which the AI analysis of video streaming from CCTV can be analysis at the edge (farm area) to avoid fully dependance MUST have good 4g/5G internet coverage.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Only integration with the existing system is required

15. What are the qualifications required for the technology provider to be matched?

The technology provider need to have some sort of ready developed AI solution so that minimum development will be needed to run the PoC project

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Normally the stakeholder of the project need to get the team who involve in this PoC project to share the key pain points, expected the solution value proposition, objective of the PoC to address the pain points and the user training to drive and use the solution in the day to day operation.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Conducting integration tests with the existing system

18. If there are additional requirements for the technology provider, please specify.

The technical support and warranty clause to ensure the client is comfortable especially post implementation period

19. Please send/attach any reference materials that help explain the required technology.

(13) Ligare Biotech Farms**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Ligare Biotech Farms**
3. Country: **Malaysia**
4. Organization Type: **Private Company**
5. Website (if available): **www.Ligno.com.my**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Ag-Tech (e.g., climate resilience, food security, agricultural automation)
2. What are the key functions of the technology you wish to introduce?
To get predictive operational AI technology in an indoor cultivation environment where by management and all levels of involved personnel are able to make instant decisions with the real time data analysis of positive or negative anomalies.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction.
Scheduling for the optimal harvest via constant monitoring by AI for color of flower high value crop to be synchronized with the pickers, and subsequently for ageing drying to a specific moisture content level before delivery to customer.
4. Describe the key problem that the technology must ultimately solve
Optimisation of time to identify colour of high value crop flower and to harvest , as the weekly operating costs saved with proper AI monitoring is anticipated to save 15% per 10 week cycle of costs or a calculated usd25k.

5. Who are the primary users of this technology?

Internal Staff, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

A UI using mobile will ensure all users are continually updated in realtime and advised beforehand of any potential disruptions for eg carbon dioxide gas insufficiency , or other nutrients , or if the growth pattern of the high value crop and flower is abnormal to allow for immediate and optimal corrections.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.),

Availability of sensors to provide immediate where possible, feedback to provide best growth trajectory, time to harvest versus scheduling of labor thereon.

8. Are there any legal or regulatory compliance requirements the system must meet?

None other than standard sensor equipment calibration and safety.

9. What is the budget range for adopting this technology?

\$30,000 ~ \$50,000

10. What is the target timeline for implementing this technology through the PoC project?

Within 3 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

There is basic computing system, CCTV, high speed Wi-Fi internet connectivity, security alarms, HVAC

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

No

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Lack of visibility of growth patterns and real time data of sufficiency of nutrients and other key growth factors , to enable a comprehensive and traceable trackable and immediate action taken approach to anomalies, that is envisioned to be resolved with the assistance of AI and sensors.

Labour costs are high and deployment is ineffective due to conflicting timings and work holidays clashes vs deliverables, unable to profit maximize or cost minimize

Utilities cost are very high as in the desert areas, temperatures and humidity can be extreme. Hence to maintain the stability condition indoors for our high value crops could be better managed with the different cycles, and cost minimized centric.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

A new system needs to be developed

15. What are the qualifications required for the technology provider to be matched?

Industry wise for this tech provider will be expertise in AgTech specifically in the cultivation of Cannabis in the USA using both AI and nutrients.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

As the new tech is envisioned to be used as a complementary system to enhance the current cultivation practices, performed manually by visual, the expectation of training is anticipated to be resolved within a 4-8 week period. Whereby all the anticipated AI data selected to assist in the crucial choke points of the respective time stage processes, are agreed upon and fine tuned.

17. What considerations should be made when adopting new products or technology into an existing system?

Conducting integration tests with the existing system.

Initial Resistance by key staff who remain experienced of cultivation by ' sight and feel' versus ability to effectively trust usage of the time based AI data anomalies requiring action by respective stagg functions, and prognosing ideal maturity to harvest by AI colour confirmation , again versus manual gut feel of harvest.

18. If there are additional requirements for the technology provider, please specify.

An explanation of the correlation between the optimal harvest time with allowable variance, and the next plant cycle which should continue in the next 24 hour after cleaning. Basic Operational Research allowing for maximum profit and minimized cost, to capitalize on the prognosis.

19. Please send/attach any reference materials that help explain the required technology.

N/A

(14) Hiroshima University**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Hiroshima University**
3. Country: **Japan**
4. Organization Type: **Research Institute**
5. Website (if available):

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Camera-attachable optical film for the high-functional imaging toward AI based Gait analysis system
3. What are the key problems your company aims to solve through AI / digital transformation?
Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
Improvement of computer vision AI products for the healthcare
5. Who are the primary users of this technology?
Internal Staff
6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?
No

Technology Requirements: B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Automated Data Backup, Specific Hardware or Software Development Requirements

8. Are there any legal or regulatory compliance requirements the system must meet?

ISO certification

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

Technology Requirements: **C. Technical Requirements: #11 ~ #15**

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

On-device AI Technology for Medical Device Security

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Web based data dashboard

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

The current multi-sensor based Gait measuring is not compatible for the compact system implementation, so cost effective AI based system (such as smart image recognition system) is required.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

Medical device manufacturing experience

Technology Requirements: **D. Transition Requirements: #16~#18**

16. What challenges are expected during the adoption and transition process of the new technology?

Computer vision AI data analysis automation for the research

17. What considerations should be made when adopting new products or technology into an existing system?

Data migration and integration

18. If there are additional requirements for the technology provider, please specify.

Experience of developing Gait analysis algorithms

19. Please send/attach any reference materials that help explain the required technology.

(15) Tecnológico de Monterrey**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Tecnológico de Monterrey**
3. Country: **México**
4. Organization Type: **Research Institute**
5. Website (if available): **<https://enmantenimiento.tec.mx>**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (AI, Immersive Simulation, Emergency Medicine, Healthcare Analytics)
2. What are the key functions of the technology you wish to introduce?
 - **VR-Based CPR Education: Multi-user immersive CPR training via XR headsets.**
 - **Real-Time AI Feedback: Performance analytics, AI- instructor guidance, and speech recognition for in-scenario interaction.**
 - **AI-Education: AI- instructor support and performance dashboards for scalability across geographic regions**
3. What are the key problems your company aims to solve through AI / digital transformation?
 - **Limited access to high-quality CPR training due to geographic, logistical, and economic constraints.**
 - **Lack of real-time, personalized feedback in current CPR training methods.**
 - **Outdated and analog training approaches that do not engage modern learners effectively.**
 - **High operational costs related to instructor time, equipment, and facility use.**
 - **Fragmented data and poor trainee tracking.**

4. Describe the key problem that the technology must ultimately solve

The key problem this technology aims to solve is the lack of scalable, high-quality CPR training with real-time, personalized feedback. Through the PoC, we aim to demonstrate that an immersive VR system, powered by an AI instructor, can simulate realistic emergency scenarios, provide immediate performance guidance, and support remote learning while making CPR training more effective, engaging, and accessible.

5. Who are the primary users of this technology?

Internal Staff, Medical students, and nursing students,

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

- **VR interface optimized for Meta Quest devices (standalone, no PC required)**
- **Bluetooth-integrated CPR mannequins with real-time performance feedback (depth, rate, recoil, etc.)**
- **Multi-user support for simultaneous training in shared virtual environments**
- **Web-based analytics dashboard for instructors:**
 - **Real-time monitoring of mannequin data**
 - **Session summaries, performance scores, and trainee progress**
 - **Remote access and user management**
 - **Intuitive, low-friction user experience for trainees and instructors**
- **Minimal setup with plug-and-play functionality and no external PCs required**

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

- **Must provide real-time feedback from Bluetooth-integrated CPR mannequins**
- **Must maintain stable multi-user VR connectivity (6+ headsets per session)**
- **Must support cloud-based data storage and synchronization**
- **Must allow remote instructor access to analytics and session monitoring**
- **Must ensure secure Bluetooth communication between VR headsets and mannequins**
- **Must operate with minimal setup and no need for external PCs or complex hardware**

- **Must be compatible with institutional LMS or academic systems for data integration**
 - **Must comply with data privacy regulations and ensure encrypted transmission**
8. Are there any legal or regulatory compliance requirements the system must meet?
- **Must comply with LFPDPPP (Ley Federal de Protección de Datos Personales en Posesión de los Particulares) for personal data protection**
 - **Must ensure encrypted data transmission and secure storage of user information**
 - **Must obtain institutional research ethics approval for academic or clinical use**
 - **Must follow any local medical training standards if used in certified healthcare education**
 - **Must provide secure access controls for instructors and administrators**
9. What is the budget range for adopting this technology?
Below \$30,000
10. What is the target timeline for implementing this technology through the PoC project?
6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
- **Cloud-based backend for real-time data synchronization and storage**
 - **Web-based dashboard accessible via standard browsers (Chrome, Firefox, Edge)**
 - **VR system running on Meta Quest (Android-based OS), fully standalone**
 - **Bluetooth Low Energy (BLE) communication with integrated CPR mannequins**
 - **Secure cloud hosting with encrypted data transmission and access control**
 - **Compatibility with institutional Wi-Fi networks for seamless operation**
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
- **Bluetooth-integrated CPR mannequins (IoT sensors) for real-time performance**

data

- **Cloud-based analytics platform with API endpoints for data access and reporting**
- **Learning Management Systems (LMS) for academic integration and progress tracking**
- **Speech recognition API for voice interaction with the AI instructor and virtual scenarios**

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

- **Bluetooth connectivity stability between mannequins and multiple VR headsets during simultaneous sessions**
- **Ensuring low-latency real-time feedback and analytics in cloud-based environments**
- **Cross-platform VR compatibility, with optimization primarily for Meta Quest devices**
- **Speech recognition accuracy in noisy or multi-user environments**
- **Network bandwidth and Wi-Fi stability in institutional settings to support real-time multi-user sessions**
- **Integration with diverse academic systems (LMS/ERP) that may vary across institutions**
- **User onboarding and training for faculty and students unfamiliar with XR-based platforms**

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

A new system needs to be developed, as Tec de Monterrey does not currently have an existing platform that supports immersive, multi-user VR CPR training with real-time feedback and AI integration.

15. What are the qualifications required for the technology provider to be matched?

- **Proven experience in XR (VR/AR) development, ideally in medical or educational training**
- **Expertise in IoT integration, particularly with Bluetooth-enabled mannequins or sensors**

- **Capability to build AI-driven platforms with real-time feedback and speech recognition**
- **Strong background in cloud infrastructure and performance analytics**
- **Ability to support multi-user immersive environments**
- **Understanding of data security and compliance regulations**
- **Access to healthcare professionals or prior collaboration with medical experts to ensure clinical accuracy and relevance of training content**

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
- **Initial resistance to VR-based training from instructors or students**
 - **Need for comprehensive onboarding and training programs**
 - **Users unfamiliar with immersive or AI-driven systems**
 - **Variations in institutional IT infrastructure affecting deployment**
 - **Requirement for technical support during initial rollout**
 - **Ensuring smooth Bluetooth and network setup across multiple sites**
17. What considerations should be made when adopting new products or technology into an existing system?
- **Compatibility**
 - **Data privacy and security compliance (e.g., encrypted storage, access control)**
 - **Scalability for multi-campus or national-level deployment**
 - **User training and change management for faculty and students**
 - **Technical support and maintenance for hardware and software**
 - **Cloud infrastructure readiness to ensure smooth integration and performance**
 - **Ongoing evaluation and feedback loops to improve adoption and outcomes**
18. If there are additional requirements for the technology provider, please specify.
- **Must provide a clear technical support and maintenance plan**
 - **Should offer training materials and onboarding sessions for instructors and users**
 - **Must ensure regular updates and system improvements based on user**

feedback

- **Ability to assist with pilot testing and iterative refinement of the platform**
- **Should have a strong project management framework to ensure timely delivery**
- **Must comply with data protection regulations relevant to Mexico and academic institutions**

19. Please send/attach any reference materials that help explain the required technology.

N/A

(16) Faculty of Veterinary Medicine, Kasetsart University**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Faculty of Veterinary Medicine, Kasetsart University**
3. Country: **Thailand**
4. Organization Type: **Public Institution**
5. Website (if available): **<https://kuvacb.com/>**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Automated Veterinary Clinical Data Analysis Services including diagnostic process
3. What are the key problems your company aims to solve through AI / digital transformation?
Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The number of clinical cases for cancers and chronic diseases are increasing due to global pet aging trends. Consequently, the workload of veterinarians is also increasing. Introducing disease screening technologies or automated diagnostic interpretation methods could enhance clinical efficiency and diagnostic accuracy. In this project, we want to check whether we can introduce a novel cancer screening solution for veterinary uses.
5. Who are the primary users of this technology?
Internal Staff, Customers
6. Are there specific UI/UX development requirements (e.g., mobile app, web platform,

etc.)?

A web platform is required.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring

8. Are there any legal or regulatory compliance requirements the system must meet?

IACUC Approval

9. What is the budget range for adopting this technology?

\$100,000 and above

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

- **Machine Learning AI algorithm should be applied for data analysis**
- **Those who have SOP guideline for biological sample preparation (blood, urine, etc.)**

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

None.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Not now (Only need Veterinary Practice-assistant solution)

14. Does the technology need to be integrated with an existing system, or does a new

system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?
- **Those who can interpret raw clinical data and objective data (Data labelling process)**
 - **Those who can provide SOP guideline for sample preservation and preparation.**
 - **Those who can provide eligibility for compliance process with the Thailand Government after PoC.**

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
- Veterinarians may require minimum 8 weeks to adapt to the new system, so a comprehensive training program is needed.**
17. What considerations should be made when adopting new products or technology into an existing system?
- Providing training and manuals for users**
18. If there are additional requirements for the technology provider, please specify.
- An explanation of the technical support and maintenance process is required.**
19. Please send/attach any reference materials that help explain the required technology.
- N/A**

(17) Universidad Javeriana and Hospital Universitario San Ignacio

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **Universidad Javeriana and Hospital Universitario San Ignacio**
3. Country: **Colombia**
4. Organization Type: **Private Company**
5. Website (if available): **<https://www.javeriana.edu.co/inicio>**

Part II. 해외기술 수요 정보

Technology Requirements: A. Functional Requirements: #1 ~ #6

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
 - **3D anatomical information from chest X-rays**
 - **Quantitative analysis from chest X-rays**
 - **Cardiovascular analysis from chest X-rays**

3. What are the key problems your company aims to solve through AI / digital transformation?

Additional utilization of chest X-rays for 3D anatomical information and cardiovascular diseases, leading to cost-effective care in remote or underserved areas.

Less reliance on advanced imaging such as CT and MRI which have limited availability and high costs.

This innovative application of chest X-rays for 3D reconstruction and cardiovascular diagnosis not only democratizes access to advanced medical imaging in remote areas of Colombia—reducing costs and dependence on complex equipment like CT/MRI—but also enhances medical education at Javeriana University. Integrated into undergraduate and graduate programs, it

trains future professionals in emerging diagnostic technologies while driving applied research in telemedicine and public health. This aligns technological innovation with social impact, embodying Javeriana's educational mission.

4. Describe the key problem that the technology must ultimately solve

The key problems that we would like to solve through the Proof of Concept project are healthcare and educational challenges in the field of cardiovascular diseases. In healthcare, there is over-reliance on CT scans and MRIs, which have limited accessibility and high cost, but are essential for detecting cardiovascular conditions related to 3D anatomical information like aortic aneurysms. If standard 2D chest X-rays can be analyzed with AI for this problem, it will make advanced diagnostics more accessible and cost-effective, especially in remote or underserved areas. Simultaneously, in the educational sector, tool for augmenting chest X-rays to show the 3D anatomical information can enhance the training of medical students and professionals by providing them with practical, real-time diagnostic skills. Traditional education methods often lack hands-on experience, which is crucial for understanding complex cardiovascular conditions. Through the PoC, we will pilot using AI to augment chest X-rays into 3D visualizations and using it for cardiovascular diseases, offering an interactive learning tool that bridges the gap between theoretical study and practical application, thereby improving learning outcomes and preparing students for real-world clinical settings.

5. Who are the primary users of this technology?

Internal Staff

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Indication of the location and length corresponding to the maximum diameter of the aorta on the X-ray

Technology Requirements: B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

DICOM format compatibility

8. Are there any legal or regulatory compliance requirements the system must meet?

ISO13485:2016

9. What is the budget range for adopting this technology?

\$100,000 and above

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

Technology Requirements: C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Computer with a GPU of 8GB or more

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

No external system integration is required

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

One major challenge is reducing the reliance on CT/MRI by enabling accurate 3D anatomical and cardiovascular analysis using standard 2D chest X-rays. This requires robust AI models capable of high-performance inference on local machines with limited GPU resources ($\geq 8\text{GB}$). Additionally, the system must be compatible with DICOM images and provide an intuitive UI for visualizing aortic structures. Another challenge is developing this solution in a way that supports both clinical use and educational applications, ensuring ease of integration with existing hospital systems and training workflows.

14. Does the technology need to be integrated with an existing system, or does a new

system need to be developed?

Only integration with the existing system is required

15. What are the qualifications required for the technology provider to be matched?

- **Proven experience in AI-based medical imaging, particularly chest X-ray analysis**
- **Compliance with medical device standards such as ISO13485:2016**
- **Capability to handle DICOM data and ensure system compatibility**
- **Ability to deliver a functional PoC within 6 months**
- **Experience in developing intuitive UI/UX for medical applications**
- **Strong collaboration skills to work with clinical and technical teams**

Technology Requirements: **D. Transition Requirements: #16~#18**

16. What challenges are expected during the adoption and transition process of the new technology?

One of the key challenges is the varying level of understanding and familiarity with AI technology among end-users. Medical staff may require time and training to fully trust and effectively utilize AI-driven tools,

especially when transitioning from conventional imaging interpretation methods. Bridging this knowledge gap is essential to ensure smooth adoption and to maximize the clinical and educational value of the system.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Conducting integration tests with the existing system

18. If there are additional requirements for the technology provider, please specify.

Capability to develop educational content that helps users understand anatomical structures such as the aorta and surrounding organs

19. Please send/attach any reference materials that help explain the required technology. **N/A**

(18) SingHealth Polyclinics

Part I. 해외기술 수요처 정보

1. 소개
2. Company/Institution Name: **SingHealth Polyclinics**
3. Country: **Singapore**
4. Organization Type: **Public Institution**
5. Website (if available): **HTTPS://polyclinic.singhealth.com.sg**

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Smart sensors on diaper for pediatric and geriatric healthcare
3. What are the key problems your company aims to solve through AI / digital transformation?
Data Analysis & Utilization, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
Lack of objective assessment of hydration of neonates using home phototherapy for neonatal jaundice; supervision and wound care of bed bound older adults with sacral sore
5. Who are the primary users of this technology?
Customers
6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?
A mobile app for monitoring of hydration based on soaked diaper in neonates and

wound care for older adults**Technology Requirements: B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup

8. Are there any legal or regulatory compliance requirements the system must meet?

Local regulations on cloud based data storage and processing

9. What is the budget range for adopting this technology?

\$30,000 ~ \$50,000

10. What is the target timeline for implementing this technology through the PoC project?

Over 1 year

Technology Requirements: C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Cloud

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

API, IOT

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Integration with current IT system in institution

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?
Language compatibility in instruction to use the technology and system. Needs validation and Ux.

Technology Requirements: D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
Interoperability and integration of technology to systems
17. What considerations should be made when adopting new products or technology into an existing system?
Providing training and manuals for users, Conducting integration tests with the existing system, Parallel running with the existing system
18. If there are additional requirements for the technology provider, please specify.
To be reviewed
19. Please send/attach any reference materials that help explain the required technology.
N/A

(19) Institute of Geriatrics and Active Ageing, Tan Tock Seng Hospital**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Institute of Geriatrics and Active Ageing, Tan Tock Seng Hospital**
3. Country: **Singapore**
4. Organization Type: **Research Institute**
5. Website (if available): <https://www.ttsh.com.sg/Patients-and-Visitors/Medical-Services/Institute%20of%20Geriatrics%20and%20Active%20Ageing/Pages/default.aspx>

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Technology that automates and digitalizes physical performance measurement especially for frail and sarcopenic older adults in both clinical and community settings.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
Currently, in clinical and research settings, administration of the SPPB requires training and is subjected to possible inter-rater and intra-rater variability. The need for trained staff to manually perform the SPPB for evaluation of physical performance in older adults limits the widespread use and scalability in clinical practice. The technology we seek to adopt must overcome the above barriers by reducing the variability during measurements and avoid the need for specially

trained staff to perform the assessment, thereby improving accuracy of measurement and allowing for the extension for its use in both the clinical and community settings.

5. Who are the primary users of this technology?

Internal Staff

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

The technology should offer a hybrid solution comprising both a mobile application and a web platform. The mobile application can be used for the staff conducting the physical performance. Meanwhile, the web platform can be used for a more detailed data analysis by other staff members, including our researchers, on a separate occasion.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Specific Hardware or Software Development Requirements

8. Are there any legal or regulatory compliance requirements the system must meet?

No special requirements

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

For the initial Proof of Concept (PoC) stage, the technology can be a standalone system. Upon successful validation of the PoC, we might explore its potential for more institutional-wide implementation within the clinic and inpatient setting of the hospital.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

No, not for the PoC Stage

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

As institutional infrastructure support is not available during the initial PoC stage. The technology needs to be a standalone system, that is fully operational. This includes the hardware installation, and ensuring the seamless interaction between the software, mobile, and PC devices.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

No specific qualifications

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

The main challenge would be the buy-in of stakeholders.

As the resources within the hospital are limited, the technology should be designed with these limitations in mind. E.g. The manpower operation of the technology must be minimal, and the technology needs to be compact due to space constraints.

In addition to increase the uptake of the technology, the interface needs be

intuitive with minimal training required on the use of the technology.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Data migration and integration

18. If there are additional requirements for the technology provider, please specify.

We welcome the possibility of a research collaboration with the technology provider. Such collaborations can potentially yield significant academic accomplishments and contribute to the advancement of geriatrics care.

19. Please send/attach any reference materials that help explain the required technology.

(20) Hydro Dog**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Hydro Dog**
3. Country: **USA**
4. Organization Type: **Private Company**
5. Website (if available): **www.hydrodog.com**

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
 - **Must enable mobile groomers to scan a pet's eyes, skin, ears, and teeth using a mobile app during appointments.**
 - **Must automatically analyze image data in real-time and provide instant health assessments.**
 - **Must generate personalized insights and actionable care recommendations (e.g., recommend a vet visit, hygiene improvements, product suggestions).**
 - **Must store scan history for each pet and enable progress tracking over time.**
 - **Must support multi-user access for groomers, supervisors, and pet owners with different interfaces or permission levels.**
 - **Must integrate seamlessly with HydroDog's scheduling and customer management tools.**
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve

The core issue is the inability to detect early signs of health issues in pets during grooming appointments, which often results in delayed treatment and reduced trust between pet owners and service providers. The PoC aims to prove that real-time AI-powered health scans can enhance service value, increase early disease detection rates, and improve customer retention by offering preventative care insights during mobile grooming sessions.

5. Who are the primary users of this technology?

Internal Staff

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

A mobile app with real-time scanning and reporting functionality is required for groomers. A simple dashboard or companion app for pet owners to view results, history, and recommendations is also preferred. Web access for administrators is desirable for analytics and user management.

Technology Requirements: **B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Automated Data Backup, Specific Hardware or Software Development Requirements, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?

Yes. The system must comply with data privacy laws applicable to pet owner information (e.g., CCPA in California), and it must be transparent in how AI decisions are made if used in health-related assessments. Any claims regarding health diagnostics must align with veterinary telehealth regulations in the regions served.

9. What is the budget range for adopting this technology?

\$50,000 ~ \$100,000

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

Technology Requirements: C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

The application will be deployed in a secure cloud-based infrastructure. The app will run on Android and iOS mobile devices used by HydroDog groomers. Admin access will be web-based, with cloud storage and analysis performed on aligned server where possible.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Yes. Integration is required with HydroDog's existing customer management and scheduling system. API access is necessary to link scan results to individual pet profiles and service records.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Yes. Integration is required with HydroDog's existing customer management and scheduling system. API access is necessary to link scan results to individual pet profiles and service records.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Only integration with the existing system is required

15. What are the qualifications required for the technology provider to be matched?

The provider should demonstrate:

- **Proven experience in AI vision technology for animal health or related domains**
- **Mobile app and cloud-based system integration capabilities**
- **Strong data privacy and security protocols**
- **Ability to customize features based on grooming business workflows**

- **Reliable support, documentation, and maintenance services**

Technology Requirements: D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?
Staff may require training to correctly capture high-quality images of pets in mobile environments. Ensuring accurate and reliable scans for a variety of breeds, sizes, and behaviors may require initial model tuning. Pet owner education and trust-building in AI-driven health suggestions will also be key.
17. What considerations should be made when adopting new products or technology into an existing system?
Providing training and manuals for users, Data migration and integration, Conducting integration tests with the existing system, Parallel running with the existing system
18. If there are additional requirements for the technology provider, please specify.
The provider must offer clear documentation of the AI model's validation process and performance accuracy. Ongoing updates and model improvements based on real-world data should be included. Additionally, a tiered pricing model and flexible API/SDK usage options should be available for future scale.
19. Please send/attach any reference materials that help explain the required technology.
N/A

(21) Hospital of Lithuanian University of Health Sciences Kauno klinikos**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Hospital of Lithuanian University of Health Sciences Kauno klinikos**
3. Country: **Lithuania**
4. Organization Type: **Public Institution**
5. Website (if available): **www.kaunoklinikos.lt**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Apply AI solutions to improve diagnostics in cardiovascular healthcare.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Customer Service Enhancement
4. Describe the key problem that the technology must ultimately solve
Currently, the diagnosis of acute coronary syndrome is made by the physician based on their evaluation of the ECG. However, when subtle changes are present, less experienced physicians may overlook them, potentially leading to delayed treatment. This is particularly critical in cases of acute coronary syndromes, where every minute counts.
5. Who are the primary users of this technology?
Internal Staff

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)? **Not necessarily.**

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?
Specific Hardware or Software Development Requirements, Security Issues & Requirements (e.g., Encryption, Access Control), System Availability (24/7 operation, server stability, etc.)
8. Are there any legal or regulatory compliance requirements the system must meet?
EU GDPR
9. What is the budget range for adopting this technology?
Not sure
10. What is the target timeline for implementing this technology through the PoC project?
6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
Dedicated server on premises.
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
No.
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
Lack of available technologies.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

Fully capable of performing all necessary integrations to ensure the technology functions effectively.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Requires dedicated staff time, adjustments to personnel workflows, and trust in the technology.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Conducting integration tests with the existing system

18. If there are additional requirements for the technology provider, please specify.

Support during implementation and maintenance, and a strong partnership.

19. Please send/attach any reference materials that help explain the required technology.

N/A

(22) Victor Buck Services SA (Joaneo)**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Victor Buck Services SA (Joaneo)**
3. Country: **Luxembourg**
4. Organization Type: **Private Company**
5. Website (if available): **www.joaneo.com**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Healthcare (e.g., telemedicine, AI diagnosis, healthcare analytics)
2. What are the key functions of the technology you wish to introduce?
Scientifically repeatable accurate sensing (passive RFID and/or NFC technology) and data transmission via handheld devices or smartphones
 - **Must capture accurate data at a minimal variance**
 - **Must work with different devices in various environments.**
 - **Must reliably transmit data that translates into information**
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Data Analysis & Utilization, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The PoC should demonstrate the use of RFID/NFC and sensor integration in Healthcare illustrating value such as improved patient diagnostics and gained efficiencies in logistics/processing of test & analysis .
5. Who are the primary users of this technology?

Internal Staff, Customers, Partner Companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Software application is required to show results and manage and translate electronically captured (via RFID/NFC) data into usable information.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring, Specific Hardware or Software Development Requirements, Security Issues & Requirements (e.g., Encryption, Access Control)

8. Are there any legal or regulatory compliance requirements the system must meet?

GDPR; MDR; NFC Communication protocol; FCC/ETSI/..., RoHS, CE.

9. What is the budget range for adopting this technology?

\$50,000 ~ \$100,000

10. What is the target timeline for implementing this technology through the PoC project?

6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Software application could be by cloud or on premise. NFC applications are Android or IOS. In case of logistic application in laboratories, specific hardware is required for UHF-based deployment.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Depending on the scope of the PoC, could create a stand-alone environment OR could deploy with some integration to existing software / database at Client.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Captive application is passive technology, (no battery required), need to prove precision / accuracy of the application and what is required in a real onsite application.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

Accuracy, repeatability, quality of read range.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

- **Healthcare professionals may be resistant to change. Comprehensive training and demonstrable benefits are essential to overcome this.**
- **Navigating healthcare regulations and ensuring data security will be critical. Working closely with legal experts and compliance officers will be necessary.**
- **Ensuring the NFC technology is reliable and secure against cyber threats is vital to maintain trust among users.**

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Data migration and integration, Conducting integration tests with the existing system

18. If there are additional requirements for the technology provider, please specify.

N/A

19. Please send/attach any reference materials that help explain the required technology.

N/A

(23) National University of Engineering**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **National University of Engineering**
3. Country: **Peru**
4. Organization Type: **Public Institution**
5. Website (if available):

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)
2. What are the key functions of the technology you wish to introduce?
We want a traffic management system that uses technology to improve traffic flow and safety. ITS can also help with congestion, emergency response times, and reducing carbon emissions. and agricultural automation as autonomous navigation by robots without human intervention, providing precise information to help develop agricultural operations. Others define it as accomplishment of production tasks through mobile, autonomous, decision-making, mechatronic devices.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Efficiency Improvement & Cost Reduction. System integration in industrial automation is the process of connecting hardware, software, and networks to work together. This allows the components to function as a unified system to achieve a common goal
4. Describe the key problem that the technology must ultimately solve
How can technology be used to solve through to supply advance technology

system, which is the Data and Analysis. Technology can help us collect vast amounts of data from sensors, surveys, social media, and other sources. Automation, Collaboration, Modeling to design ed and Innovation etc.

5. Who are the primary users of this technology?

Partner Companies, the primary users of technology can be students, teachers, or teacher educators. and small companies

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

To entire interaction with a product, including how you feel about the interaction. While UI can certainly impact UX, the two are distinct, as are the roles that user experience designers and user interface designers

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?
Specific Hardware or Software Development Requirements

8. Are there any legal or regulatory compliance requirements the system must meet?

Regulatory compliance requires companies to analyze their unique requirements and any mandates specific to their industry and then develop processes to meet these requirements. Typical steps to achieve regulatory compliance include the following: Identify applicable regulations. Ministry of Production, Ministry transportation and communication, Ministry of Energy etc.

9. What is the budget range for adopting this technology?

\$100,000 and above

10. What is the target timeline for implementing this technology through the PoC project?

Over 1 year

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Smart environment in a smart city is the changes of a city and shape the pure environment with the element to achieve a human settlement. This change is achieved by extensive and persuasive infrastructure and building which give a big impact on the environment.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

APIs that are used in the creation of IoT solutions are known as IoT APIs. They are the web services application programming interfaces. They work in a similar fashion and make seamless data flow, with HTTP being the medium

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Technical challenges in agricultural and transportation systems include data management, security, and hardware maintenance. Data management Integrating data from many different devices and systems can be difficult. Data quality, security, and privacy are also concerns. Intelligent Transportation Systems (ITS) installing

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

When looking for a technology provider in Peru, you can consider their skills, experience, and certifications.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

If the operation of the system to be introduction and comprehensive training program can help employees adapt to new systems and technologies. Effective training programs are relevant, engaging, and tailored to the needs of the employees.

17. What considerations should be made when adopting new products or technology into an existing system?

Production technology is the use of equipment and methods to turn research into products. It involves using scientific knowledge to create efficient production systems.

18. If there are additional requirements for the technology provider, please specify.

Includes criteria covering clinical safety, data protection, technical security, interoperability, plus usability and accessibility

19. Please send/attach any reference materials that help explain the required technology.

[Refer to Attachment]

(24) Elinta Robotics**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Elinta Robotics**
3. Country: **Lithuania**
4. Organization Type: **Private Company**
5. Website (if available): www.elintarobotics.com

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)
2. What are the key functions of the technology you wish to introduce?
Computer vision quality system
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
Fast system training without manual annotating of the object
5. Who are the primary users of this technology?
Internal Staff, Customers
6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?
No

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?
Real-time Monitoring, Automated Data Backup, System Availability (24/7 operation, server stability, etc.)
8. Are there any legal or regulatory compliance requirements the system must meet?
NO
9. What is the budget range for adopting this technology?
\$50,000 ~ \$100,000
10. What is the target timeline for implementing this technology through the PoC project?
6 to 12 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
Local server or PC
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
Yes, the system must be integrated into the customer EMS systems
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
Very time consuming and expensive training of the AI system for quality control
14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?
Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

Good knowledge of AI in quality control systems with computer vision

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Lack of skills of the personnel using the technology

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users

18. If there are additional requirements for the technology provider, please specify.

N/A

19. Please send/attach any reference materials that help explain the required technology.

N/A

(25) Teles Hidraulica**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Teles Hidraulica**
3. Country: **Brazil**
4. Organization Type: **Private Company**
5. Website (if available): **www.teleshidraulica.com.br**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)
2. What are the key functions of the technology you wish to introduce?
AI technology applied to PPC and MES, so that it can monitor the evolution of production orders in real time, avoiding assembly downtime due to delays in the punctual production of parts.
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The AI tool to be developed must predict in advance possible delays in the assembly line caused by delays in the production of parts, optimizing production and avoiding stoppages in the industry's assembly line.
5. Who are the primary users of this technology?
Internal Staff

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Web platform

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Real-time Monitoring

8. Are there any legal or regulatory compliance requirements the system must meet?

No

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC project?

Within 6 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

Cloud

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Yes, (ERP, MES and IoT sensors)

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Although the company uses an ERP system with PPC and MES for production management, these management systems do not predict in advance that a future

delay may occur on the assembly line, so integration with a new AI solution is necessary.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

A new system needs to be developed

15. What are the qualifications required for the technology provider to be matched?

AI Development

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Employees may require significant time to adapt to the new system, so a comprehensive training program is needed

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Parallel running with the existing system

18. If there are additional requirements for the technology provider, please specify.

19. Please send/attach any reference materials that help explain the required technology.

[Refer to Attachment]

(26) Hospilux**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Hospilux**
3. Country: **Luxembourg**
4. Organization Type: **Private Company**
5. Website (if available): **<https://hospilux.lu/>**

Part II. 해외기술 수요 정보**A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)
2. What are the key functions of the technology you wish to introduce?
 - **Must enable seamless data transfer from the dentist's 3D scan to the technology provider in South Korea.**
 - **Must automate the 3D design and production of dental crowns based on 3D scan data, ensuring speed, precision, and quality in the final product.**
3. What are the key problems your company aims to solve through AI / digital transformation?
Process Automation, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The key problem that the technology must ultimately solve through the PoC project is the inefficiency and high cost of traditional dental crown production. Current processes involve labor-intensive steps, extended production times, and the need for multiple patient visits, which can be especially challenging for elderly patients and those with limited mobility. Additionally, the lack of automation in the design and production process leads to longer waiting periods, higher

treatment costs, and reduced accessibility to timely dental care. The technology aims to address these issues by automating the 3D design and production of dental crowns, reducing production time, cutting costs, and enabling faster delivery. This will improve the overall patient experience, especially for elderly or remote patients, by minimizing the number of clinic visits required and ensuring more efficient, precise, and cost-effective dental restoration.

5. Who are the primary users of this technology?

Dental clinics across Luxembourg and Belgium

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

Web Platform – A centralized platform where dentists can easily upload 3D scan data, place orders, and track the production and delivery status of the crowns.

Seamless Data Transfer Integration – The system should enable secure, efficient transfer of 3D scan data from the dentist's equipment to the South Korean production facility, ensuring smooth collaboration.

B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Automated Data Backup, System Availability (24/7 operation, server stability, etc.)

Real-time dental data exchange between Luxembourg/EU and South Korea

8. Are there any legal or regulatory compliance requirements the system must meet?

EU GDPR Compliance – The platform must ensure the protection of patient data, complying with the EU's General Data Protection Regulation (GDPR) to safeguard personal and sensitive information.

9. What is the budget range for adopting this technology?

Not sure

10. What is the target timeline for implementing this technology through the PoC

project?

Within 6 months

C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

The technology will be applied in a cloud-based infrastructure to ensure scalability, accessibility, and security. The platform should be compatible with Windows and Linux operating systems for both back-end management and user interfaces, allowing flexibility for dental clinics and production facilities.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

The system will need to integrate with dental clinic management software for order placement and patient data management. If technology supplier in South Korea has its own software we are ok to integrate. Additionally, it must support integration with 3D scanning devices used by dentists for capturing patient scans. The system may also need to connect with logistics and tracking systems (e.g., FedEx) for real-time shipping and order tracking.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

Data Transfer and Security: Ensuring secure and reliable transmission of sensitive patient data from clinics to the production facility in South Korea, especially given data protection regulations (e.g., GDPR).

System Integration: Integrating with diverse dental clinic management systems and 3D scanning devices, which may use different protocols or data formats.

Production Scalability: Managing the scalability of the production process to handle varying volumes of orders, especially during peak times, without compromising quality or efficiency.

14. Does the technology need to be integrated with an existing system, or does a new

system need to be developed?

Discussion with the technology provider is required

15. What are the qualifications required for the technology provider to be matched?

Proven Expertise in Digital Dentistry Solutions: The provider should have extensive experience in developing and deploying digital dentistry platforms, specifically for crown production, 3D scanning, and design automation.

Strong Data Security and Compliance Knowledge: The provider must be able to ensure data protection compliance, especially with regulations like GDPR and other relevant data privacy laws in the EU and Luxembourg.

Ability to Integrate with Existing Systems: The provider should demonstrate the capability to integrate seamlessly with existing dental clinic management systems, 3D scanners, and logistics tracking platforms (e.g., FedEx for shipping).

Scalable Production Capabilities: The provider should have the capacity to handle varying order volumes while maintaining high-quality standards, especially for international shipping and tight turnaround times.

Experience with International Logistics: The provider must have experience or partnerships with reliable logistics companies (such as FedEx) to ensure timely delivery of completed crowns to Luxembourg and Belgium.

D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

Training and Familiarization: Dental professionals, including dentists and technicians, may require training to become proficient in using the new 3D scanning, design, and production tools. A comprehensive training program will be necessary to ensure smooth adoption and utilization of the technology.

Integration with Existing Systems: Integrating the new technology with current clinic management software and 3D scanning equipment may present technical challenges, requiring customized solutions and possibly system downtime during

the integration phase.

Logistical Coordination: Managing the flow of data between dental clinics, the technology provider in South Korea, and logistics services like FedEx could be complex, requiring robust coordination to ensure timely and accurate delivery of crowns.

Data Privacy Concerns: Handling patient data securely across international borders may raise privacy and compliance concerns. Ensuring that the system meets all regulatory requirements, such as GDPR, will be essential to address these challenges.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Data migration and integration, Conducting integration tests with the existing system

18. If there are additional requirements for the technology provider, please specify.

- **Provide detailed technical support and maintenance processes, including response times for issues and troubleshooting procedures.**
- **Offer comprehensive training and user manuals for smooth implementation and adoption of the technology.**
- **Ensure clear communication channels for ongoing support, especially for addressing system updates or modifications.**

19. Please send/attach any reference materials that help explain the required technology.

(27) Adaept Engineering GmbH**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Adaept Engineering GmbH**
3. Country: **Germany**
4. Organization Type: **Private Company**
5. Website (if available): **<https://adaept.engineering/>**

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)

Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)

2. What are the key functions of the technology you wish to introduce?

Must enable seamless integration and real-time data acquisition from a wide range of industrial machines using OPC UA's standardized companion specifications, allowing for plug-and-play connectivity and comprehensive process coverage.

Must generate actionable insights for process optimization, quality enhancement, and throughput improvement through AI-driven analysis, ensuring interoperability and scalability by maintaining consistent data models and semantic clarity across various applications.

Must use a user-friendly data interface that simplifies the integration of the AI solution with OPC UA-enabled machines, accelerating the adoption and integration of the AI technology and showcasing the potential to enhance decision-making and operational efficiency.

3. What are the key problems your company aims to solve through AI / digital transformation?

Productivity Improvement, Data Analysis & Utilization, Efficiency Improvement & Cost Reduction.

Our company aims to break down data silos in industrial environments by enabling seamless data exchange and interoperability through OPC UA's standardized communication protocols, facilitating more integrated and efficient operations. We collaborate with both SMEs and global industry leaders such as Walki Folian and Demag Cranes and Components, providing us with deep insights into Germany's manufacturing landscape and strong connections to key stakeholders.

With the PoC we want to address the need for real-time monitoring and optimization of manufacturing processes by leveraging AI to analyze process data and provide actionable insights for improving efficiency, quality, and throughput.

We want to enhance decision-making capabilities by providing managers and operators with real-time, data-driven insights and recommendations, thus improving operational efficiency and productivity across manufacturing systems.

For this we want to jointly develop a PoC that overcomes barriers to scaling AI solutions by developing flexible, scalable interfaces that allow easy integration of AI technologies with existing industrial systems, supporting diverse applications and reducing deployment complexity. We aim to involve our customers and partners in the manufacturing industry for user acceptance testing and requirements engineering.

4. Describe the key problem that the technology must ultimately solve

Currently, integrating AI into industrial processes needs custom interfaces to get the needed data and (manual) annotation of this data through expert knowledge. This is a lengthy and thus costly process for every project and machine. A first step to overcome this is the industry standard OPC UA. This is a semantic communication protocol that provides structured machine data for seamless interconnection of industrial systems. The integration of OPC UA is a core offering of our company - Adept Engineering.

An important driver of process optimization, cost reduction etc. in industrial manufacturing are AI solutions. AI requires structured, annotated data. OPC UA provides structured data. However, the interface between OPC UA and the AI ingest is not harmonized and still requires expert knowledge and individual adaptation.

The PoC project aims to solve the problem of integrating AI solutions into existing industrial systems by leveraging OPC UA's standardized communication protocols for seamless data exchange and interoperability. We are looking for an AI solution provider as a partner to develop a solution that automatically transforms OPC UA data into a format that is easily digested by the AI-application for training and inference. The result would be a tooling and/or middleware that allows the AI company to interface seamlessly with OPC UA enabled machinery using existing standardized data models. Adept Engineering aims to offer value added AI services to their industrial manufacturing partners with the Korean AI company as a partner.

5. Who are the primary users of this technology?

Internal Staff, Customers

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

There are no specific UI/UX requirements. The PoC would aim to develop and demonstrate the tooling to interface AI-applications with machines in a plug and play fashion.

Technology Requirements: B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?

Specific Hardware or Software Development Requirements, Security Issues & Requirements

Typical German industrial manufacturing operators are very concerned about data leaving the local network of a production plant. The AI solution should run in the

local network (i.e. on the edge, not the cloud). Alternatively a secure solution for data exchange between customer and AI solution provider must be established, observing EU regulations (e.g. Manufacturing-X).

As detailed earlier, the solution must support OPC UA Companion Specifications for seamless integration. This standardized data interface shall be developed jointly as part of the PoC.

8. Are there any legal or regulatory compliance requirements the system must meet?
Ultimately, the system must comply with EU data regulations: EU Data Act and EU Cyber Resilience Act. This should be acknowledged in the PoC design but is not a 'must' for a successful PoC.
9. What is the budget range for adopting this technology?
\$50,000 ~ \$100,000
10. What is the target timeline for implementing this technology through the PoC project?
6 to 12 months

Technology Requirements: C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
The local OT/IT network of the manufacturing plant. Alternatively a secured cloud environment conforming to EU regulations.
12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
The interface between our system and the AI system shall be a OPC UA connection via ethernet or wi-fi. In addition to the machine itself, IoT-Sensors (e.g. for predictive maintenance) can be included using the same interface.
13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

- **Aligning OPC UA's variable semantic data models with AI data structures:** Even though companion specifications provide domain-specific elements (e.g., for cranes, robots, etc.), an additional mapping or transformation layer may be needed so AI algorithms can interpret these semantics accurately.
- **Designing a robust data ingestion pipeline:** Retrieving real-time and historical data from OPC UA servers in a standardized format and feeding it into AI frameworks requires well-defined interfaces, potentially requiring a middle-tier application or adapter.
- **Managing storage and data persistence:** Determining whether data should be stored in a database (and if so, how to preserve the semantic context) or streamed directly to AI applications (for real-time inference) is crucial for performance and scalability.
- **Preserving semantic annotations in AI workflows:** Ensuring the companion specification's contextual details remain

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

A new system needs to be developed

15. What are the qualifications required for the technology provider to be matched?

- **Strong background in AI/ML model development and deployment:** They should be capable of applying advanced analytics and optimization techniques to manufacturing data once ingested, ensuring practical and actionable insights.
- **Familiarity with industrial processes and data semantics:** While OPC UA expertise is not strictly required, having a foundational understanding of semantic data models in manufacturing contexts will help them effectively map and utilize machine data.
- **Experience in various industrial domains to ensure a good fit to a broad customer base and the engineering of a generic interface.**

Technology Requirements: **D. Transition Requirements: #16~#18**

16. What challenges are expected during the adoption and transition process of the new technology?

- **Aligning the new OPC UA–based interfaces and AI ingestion layers with existing industrial infrastructure may require additional adapters or middleware that is provided by us (Adaept Engineering).**
- **Data Quality and Standardization: Ensuring data is consistently modeled and annotated according to companion specifications is critical to maintaining semantic clarity for AI analytics.**
- **Training and Skill Gaps: Operational staff and IT teams may need education on semantic data models and AI workflows leading to an initial learning curve.**
- **Security and Compliance: New data pipelines and AI systems introduce additional access points, requiring rigorous security measures to protect sensitive industrial information and to comply with EU Data regulations (i.e. EU Data Act; EU Cyber Resilience Act).**

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users, Data migration and integration,

Conducting integration tests with the existing system

Data Standardization and Semantic Clarity: Verify that the solution can handle domain-specific companion specifications while preserving data annotation/semantics for AI and analytics.

18. If there are additional requirements for the technology provider, please specify.

For future adoption as a product, a data handling and security strategy is needed to comply with EU regulations and earn trust of industrial plant operators.

19. Please send/attach any reference materials that help explain the required technology.

(28) PT. AMANDAJA MULTIFORTUNA PERKASA**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **PT. AMANDAJA MULTIFORTUNA PERKASA**
3. Country: **INDONESIA**
4. Organization Type: **Private Company**
5. Website (if available): **www.amandjaja.id**

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)
2. What are the key functions of the technology you wish to introduce?
AI deep learning Vehicle identification, monitoring & tracing in the supply chain
 - **Identify a Vehicle (shape, color, brand, license plate) that pass by a check point in the supply chain**
 - **Monitor the current location of the Vehicle**
 - **Trace the Vehicle movement from one check point to another**
3. What are the key problems your company aims to solve through AI / digital transformation?
Productivity Improvement, Process Automation, Data Analysis & Utilization, Customer Service Enhancement, Efficiency Improvement & Cost Reduction
4. Describe the key problem that the technology must ultimately solve
The technology introduced must ultimately solve the following challenges
 - **Unable to automatically & accurately identify a Vehicle that pass by a check point**
 - **Unable to confirm the current location of the Vehicle in the supply chain**

- **Unable to know the path taken (position history) of the vehicle**

5. Who are the primary users of this technology?

Customers

6. Are there specific UI/UX development requirements (e.g., mobile app, web platform, etc.)?

There are no specific UI/UX development required, the system only need to be easily integrated to different types of MES & ERP system.

Technology Requirements: **B. Operational Requirements: #7 ~ #10**

7. What are the key conditions required for the smooth operation of this technology?
Real-time Monitoring, System Availability (24/7 operation, server stability, etc.), Other (please specify).

The system needs to be easily integrated to different types of MES & ERP system.

8. Are there any legal or regulatory compliance requirements the system must meet?

There are no legal or regulatory compliance requirement the system must meet

9. What is the budget range for adopting this technology?

\$50,000 ~ \$100,000

10. What is the target timeline for implementing this technology through the PoC project?

Within 3 months

Technology Requirements: **C. Technical Requirements: #11 ~ #15**

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?

- **On Premise System MES & ERP system**
- **Operating System: Microsoft windows system is acceptable, but LINUX system is preferred**

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?

Yes, the system needs to be easily integrated to different types of MES & ERP system.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?

There are no specific technical challenges.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

Only integration with the existing system is required

15. What are the qualifications required for the technology provider to be matched?

Microsoft Windows system is acceptable, but Linux system is preferred.

Technology Requirements: D. Transition Requirements: #16~#18

16. What challenges are expected during the adoption and transition process of the new technology?

The is no specific challenge during the adoption and transition process of the new technology.

17. What considerations should be made when adopting new products or technology into an existing system?

Conducting integration tests with the existing system

18. If there are additional requirements for the technology provider, please specify.

Providing user manual and technical manual that include product maintenance.

19. Please send/attach any reference materials that help explain the required technology.

(29) Tradehaus Pte**Part I. 해외기술 수요처 정보**

1. 소개
2. Company/Institution Name: **Tradehaus Pte**
3. Country: **Singapore and Vietnam**
4. Organization Type: **Private Company**
5. Website (if available): N/A

Part II. 해외기술 수요 정보**Technology Requirements: A. Functional Requirements: #1 ~ #6**

1. Which tech sector applies to your needs? (Select all that apply)
Digital Manufacturing (e.g., process optimization, predictive maintenance, automation)
2. What are the key functions of the technology you wish to introduce?
We need MES and HACCP program to export to Korea market.
3. What are the key problems your company aims to solve through AI / digital transformation?
Process Automation, Other (please specify)
We need MES and HACCP program to export to Korea market.
4. Describe the key problem that the technology must ultimately solve
To export our food product to Korea market, we need to get the HACCP certification and manage by Korea HACCP standard. So we need to clear the regulation and standard of Korea Food and Drug Administration. And want to manage our factory with Korea HACCP system.
5. Who are the primary users of this technology?
Internal Staff
6. Are there specific UI/UX development requirements (e.g., mobile app, web platform,

etc.)?

We need Web base HACCP system operating by Korea HACCP regulation.

Technology Requirements: B. Operational Requirements: #7 ~ #10

7. What are the key conditions required for the smooth operation of this technology?
Real-time Monitoring, System Availability (24/7 operation, server stability, etc.)

8. Are there any legal or regulatory compliance requirements the system must meet?
It must comply with KOREA HACCP regulation and certification.

9. What is the budget range for adopting this technology?
Not sure

10. What is the target timeline for implementing this technology through the PoC project?
6 to 12 months

Technology Requirements: C. Technical Requirements: #11 ~ #15

11. What is the infrastructure environment where the technology will be applied (e.g., cloud, operating system)?
Need Web base system setting at cloud server.

12. Are there any external systems (API, ERP, IoT sensors, etc.) that require system integration?
No need.

13. What are the key technical challenges (hardware, software, network, etc.) that need to be addressed for implementing this technology?
The core should be in accordance with the KOREA Ministry of Food and Drug Safty's Haccp standard. And should be possible to audit annual regular evaluation with the program.

14. Does the technology need to be integrated with an existing system, or does a new system need to be developed?

A new system needs to be developed

15. What are the qualifications required for the technology provider to be matched?

The company should have lots of experience to set the program to the food factory in Korea food industry and have experience smart factory system too.

Technology Requirements: **D. Transition Requirements: #16~#18**

16. What challenges are expected during the adoption and transition process of the new technology?

After the program settled it seems that our employees should have the field training to operate well. And if possible few of our employees want to visit to Korea factory to see and learn.

17. What considerations should be made when adopting new products or technology into an existing system?

Providing training and manuals for users

18. If there are additional requirements for the technology provider, please specify.

We need this program to export to Korea, so we need a partner who has a lot of experience in HACCP and understands the site of the food factory well.

19. Please send/attach any reference materials that help explain the required technology.

N/A