

Terms of Reference (TOR)

Procuring Entity: **Romblon State University (RSU)**

Project Title: **CONSULTANCY SERVICES FOR SMART CAMPUS PROJECT II (DIGITAL RESILIENCY DEVELOPMENT PROGRAM AND DEVELOPMENT OF SMART CAMPUS DATA SECURITY AND CYBERATTACK PREVENTION HUB)**

Approved Budget for the Contract (ABC): **Php1,500,000.00**

Subject: **Procurement of a Computer & Information Systems Expert to provide Information and Communication Technology (ICT) support services for the DIGITAL RESILIENCY DEVELOPMENT PROGRAM and DEVELOPMENT OF SMART CAMPUS DATA SECURITY AND CYBERATTACK PREVENTION HUB.**

Type of Contract: **Individual Contract**

1. Background

As a beacon of higher education in the island province of Romblon, the Romblon State University (RSU) is committed to providing a safe and secure learning environment for its students, faculty, and staff. The Digital Resiliency Development Program and the Development of Smart Campus Data Security and Cyberattack Prevention Hub envisions the creation of an advanced technological hub that is dedicated to innovation and agricultural advancement. Furthermore, it envisions to transform the campus into a secure environment through advanced cybersecurity measures for the whole RSU System. It will serve as the focal point for collaboration, experimentation, and education in the realm of smart and precision agriculture.

The specific objectives of the project are:

1. **Technological Integration.** The campus will be equipped with an array of sensors, IoT devices, and precision farming equipment that will enable real-time monitoring of crops, soil conditions, weather patterns, and more. These technologies will facilitate data-driven decision-making for optimizing resource allocation and enhancing productivity of crop yields.
2. **Data Analytics.** Machine learning models will be developed for more efficient and sustainable agricultural practices. Advanced data analytics will play a pivotal role in transforming actionable insights for disease outbreak prediction, irrigation scheduling optimization, and personalized cultivation strategy recommendation.
3. **Interdisciplinary Research.** The campus will serve as a platform for collaboration between agronomists, engineers, data scientists, environmentalists, and other experts. Interdisciplinary research projects will explore innovative approaches to crop management, pest control, soil health improvement, and more, fostering a holistic understanding of agricultural systems.
4. **Sustainability and Resource Efficiency.** Emphasis will be placed on sustainable practices that minimize environmental impact. Research will focus on reducing water usage, minimizing chemical inputs, and exploring alternative energy sources to power the

campus. The goal is to develop models that can be scaled and replicated on a larger scale to promote sustainable agriculture worldwide.

5. Cyber Security Software's: Recognizing the growing threat of cyberattacks, RSU is embarking on a transformative project to bolster its ICT infrastructure with state-of-the-art security measures. The Development of Smart Campus Data Security and Cyberattack Prevention Hub aims to create a fortified digital fortress that protects the university's valuable data, systems, and networks from malicious cyber threats.
6. Artificial Intelligence: Harnessing the power of artificial intelligence to drive innovation, enhance teaching and learning, and address local challenges. By integrating AI into our academic programs and research initiatives, we aim to equip our students and faculty with the skills needed to thrive in the digital age and contribute to the development of a smarter, more sustainable Romblon and beyond.
7. Network Monitoring and Intrusion Detection Systems: Implement advanced tools to monitor network traffic and detect anomalies or potential threats in real-time and prevent them from intruding the university's network infrastructure and systems.
8. Endpoint Security: Deploy robust endpoint protection solutions to secure devices (servers, computers, mobile devices) connected to the campus network.
9. Data Encryption: Implement strong encryption protocols to protect data both at rest and in transit.
10. Access Control: Strengthen access controls through multi-factor authentication (MFA) and role-based access policies.
11. Incident Response Plan: Develop a comprehensive plan to respond swiftly and effectively to any cyber threats or breaches.
12. Security Awareness Training: Conduct regular training sessions for staff and students to raise awareness about cybersecurity best practices. An online training and learning tool to educate and assess the awareness of all staff and students.
13. Continuous Monitoring and Improvement: Establish procedures for ongoing monitoring, assessment, and improvement of cybersecurity measures.
14. Power Supplies: To fully realize our innovation agenda and maximize the potential of artificial intelligence and security systems, Romblon State University requires a stable and substantial power supply to mitigate power interruptions or fluctuations to support the demands of advanced computing infrastructure.
15. Network Infrastructure: A robust network infrastructure that serves as the backbone of a modern university, providing stable internet and local network connectivity which is very indispensable to all students, faculty, staff, and the institution as a whole.

2. Scope of Work, Responsibilities and Description of the Proposed Work

The objective of this consultancy is to provide Information and Communication Technology (ICT) support services for the implementation of the Digital Resiliency Development Program and the Development of Smart Campus Data Security and Cyberattack Prevention Hub. The activities will be performed under the supervision of the Project Manager.

The Consultant shall perform all the services/work as necessary to fulfill the objectives of the consultancy contract.

Expected Outputs and Deliverables:

The below tasks and deliverables are expected to be undertaken by the consultant.

- Provide ICT advice to the Project Manager as needed;
- Respond to urgent ICT needs (server; network; access points; etc.) as well as urgent software needs of the Romblon State University;
- Assist in the Review the Project Plan of the Digital Resiliency Development Program and the Development of Smart Campus Data Security and Cyberattack Prevention Hub, provide recommendations, and draft procedures or guidelines as needed.
- Evaluate and assess the Infrastructure Setup to determine the adequacy of the necessary digital infrastructure required for the project.
- Assess the Software implementation to ensure full integration of all systems that form part of this project and draft these plans as needed;
- Assess and evaluate the Testing and provide results of assessment and evaluation of the various digital components and ensure that these meet the specified requirements and are free from defects and errors.
- Advice on planned activities related to client's online access to their accounts and draft terms of reference as needed and review outputs;
- Respond to other ICT related needs in relation to the Digital Resiliency Development Project and the Development of Smart Campus Data Security and Cyberattack Prevention Hub needs.
- Assess in performing penetration testing of the systems included in the projects.

3. Qualifications Required

The Consultant of the winning bidder shall have the following qualifications:

Education:

- Bachelor of Science in Computer Engineering, Electronics Engineering, or Computer Science.
- Master's in Technology Management

Experience:

- Has 25+ years of solid experience in project management, hardware, and software engineering in the field of embedded-systems, web and smartphone applications, client-server applications, and IoT.
- With experience in leading a team of 20+ developers, project managers, QAs, designers, and business users.
- With experience as Senior Manager in managing and coordinating projects for client-server applications
- With experience as System and Business Analyst on multi-tiered desktop, web, and mobile applications

- With extensive experience in software development lifecycle and software methodologies like Agile
- With experience as System Design Engineer on hardware circuit designs and IoT devices
- With experience in technology management; preferably with master's degree in Technology Management
- With consultancy experience in similar projects.

Current Workload

- Can render consultancy services as a team for at least ten (10) hours per week.

(Note: Consultant/s must present/submit statement specifying current workload)

Competencies:

- Technology Management
- Project Management
- System and Business Analysis
- Software Development
- System Architecture
- IoT and Embedded Systems

4. Duration of Contract

The contract will be for a period of **18 months**. Upon satisfactory performance and if the project is extended and there is an ongoing requirement for the services, contract might be subject for extension.

5. Deliverables Requirements

- Immediate for urgent needs as defined by the Digital Resiliency Development Program Project Manager and the Development of Smart Campus Data Security and Cyberattack Prevention Hub and possibly next business day in very urgent cases;
- Based on a provision period for other required services as defined by the Digital Resiliency Development Program and Development of Smart Campus Data Security and Cyberattack Prevention Hub Project Manager;
- Number of days allocated/needed will be determined beforehand and in coordination with the Consultant;
- The consultant is expected to work both at the premises of the Romblon State University to do on-the-job support and also from outside the premises depending on the type of support needed;
- The workload might however be distributed unequally over time with more and less intense periods of work.

6. Payment Terms

Out-of-Pocket Expenses: The fees do not include Out-of-Pocket-Expenses (OPEs). RSU shall be responsible for all OPEs such as airfare, transportation, board and lodging.

Payment Schedule: Fees to be remitted to the designated bank account after billing every end of the month.

Prepared by:

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BAC Chairperson *(On behalf of the Bids and Awards Committee)*

Approved by:

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