NU LAGUNA

Title:	**TOPIC ABSTRACT FORM**
College	**National University of Laguna**
Proponent/s	**Andresa, Rev Andrei** **Dagooc, Bryan** **Laurente, Vien Melvic**
Program	**Bachelor of Science in Information Technology**

Proposed Title

SIMS+: Smart Inventory Management System with Supplier Integration and Reorder Intelligence for Manson Trading

Background of the Proposed Topic:

Inventory management is essential for businesses to maintain optimal stock levels, avoid overstocking or stockouts, and support efficient operations. Manson Trading, a supplier of raw materials for bag production—such as zippers, leather, linen, buttons, and others—currently relies on manual inventory tracking. This outdated approach poses several challenges, including delayed stock updates, potential item misplacement, and procurement inefficiencies. These issues can lead to operational confusion, stock discrepancies, and potential revenue loss.

Significance:

The proposed system, SIMS+ (Smart Inventory Management System with Supplier Integration and Reorder Intelligence), aims to modernize and streamline inventory processes for businesses like Manson Trading. By automating stock tracking and integrating real-time supplier data—such as availability, pricing, and delivery lead times—SIMS+ addresses common inefficiencies in traditional inventory systems. Key features such as a Smart Reorder Dashboard will help minimize human error, prevent stockouts, and enhance procurement decisions. This innovation contributes to the field of Information Technology by providing a scalable and cost-effective solution that supports the digital transformation of small enterprises.

Research Gap:

Existing inventory systems used by small and medium businesses typically focus on internal stock monitoring and basic alert mechanisms, but they often lack integration with external supplier data. This disconnects limits real-time, data-driven decision-making in procurement. While recent studies emphasize the benefits of integrating technologies like IoT and automation to improve inventory accuracy and reduce costs, adoption among SMEs remains low due to limited resources and implementation challenges. This gap highlights the need for practical, easy-to-deploy solutions tailored to the needs of resource-constrained businesses.

NU LAGUNA

Addressed Research Agenda:
This study aligns with the Philippine Development Plan (PDP) 2023–2028 by advancing digital transformation among micro, small, and medium enterprises (MSMEs), aiming to boost operational efficiency and competitiveness. It also supports CHED's National Higher Education Research Agenda (NHERA) by promoting industry-driven IT solutions. By developing an affordable, smart inventory system tailored for local businesses, the project helps bridge the digital divide and encourages sustainable inventory practices—contributing meaningfully to the Philippine digital economy.

TOPIC EVALUATION COMMITTEE
The topic abstract has been thoroughly reviewed by the Topic Evaluation Committee.

	Signature	**Remarks**
Chair, Research and Knowledge Management		
College OIC-Dean		
Program Chair		
Faculty Experts		

REFERENCES:

Haider, G., & Lucas, E. (2024). Smart Inventory Management for SMEs: Leveraging IoT and Automation to Streamline Stock Control and... ResearchGate. https://doi.org/10.13140/RG.2.2.33042.57282

Rashid, H. (2023). BRIDGING GAPS IN INVENTORY MANAGEMENT THROUGH HYBRID VENDOR MANAGEMENT SYSTEMS. 7(5), 301–312. https://doi.org/10.5281/zenodo.14862238