



CEBU INSTITUTE OF TECHNOLOGY
U N I V E R S I T Y

IT317-G8

PROJECT PROPOSAL

Proponents:

Unabia, Frances Lghe P. – Product Owner

Soldano, Serge Ylan – Business Analyst

Tan, Christian Aire D.– Scrum Master

Date: September 24, 2025

Project Proposal

Project Title: Thryve: SME Resource Sharing & Collaboration Network

Proponent(s): Frances Lghe Unabia - Product Owner, Segre Ylan Soldano - Business Analyst, Christian Aire Tan - Scrum Master

1. Executive Summary

The SME Resource Sharing & Collaboration Network is a web-based platform designed to bring together small and medium enterprises (SMEs) into a single digital space. Its primary goal is to enable SMEs to share resources, exchange services, and collaborate more effectively, thereby building stronger local business communities. The system provides a secure and centralized hub that addresses the lack of tools tailored for SME cooperation and growth.

- Business profiles for SMEs to showcase their offerings and needs.
- A resource sharing and exchange system for equipment, services, and expertise.
- A direct communication channel for businesses to connect and collaborate.
- Community boards for announcements, networking events, and partnership opportunities.

The system will be developed using **Django (Python)** for the backend and **SQL** for database management. Deployment will utilize a secure hosting service, ensuring accessibility and scalability for future growth. By promoting collaboration, the platform empowers SMEs to optimize limited resources, reduce operational costs, and create sustainable partnerships. It is expected to enhance business efficiency, strengthen local economies, and foster a culture of innovation and cooperation among enterprises. In the long term, the system will support SME growth, resilience, and competitiveness in an increasingly digital marketplace.

2. Background / Problem Statement

Small and medium enterprises (SMEs) often face a range of challenges, including limited access to essential resources, high operational costs, and difficulty in forming meaningful partnerships within their local communities. While many SMEs rely on social media groups or informal networks for connections, these platforms lack the necessary structure, verification, and specialized tools to foster effective collaboration. As a result, opportunities for growth are often missed, resources go underutilized, and businesses are left struggling with inefficiencies. The absence of a centralized platform that facilitates resource sharing, service exchanges, and direct communication prevents SMEs from competing with larger businesses that have access to more formal networks and better resources. This issue is particularly pressing in local communities, where SMEs have the potential to make a significant impact on the economy if they can collaborate more effectively. According to Mahmud et al. (2021), the barriers to collaboration and resource allocation are common among SMEs, significantly impeding their growth and competitiveness. Additionally, studies by Wiliam Buck (2021) and Vida Ho Group (2023) emphasize that inefficient collaboration networks within SMEs contribute significantly to reduced operational efficiency and missed business opportunities.

3. Project Objectives

Primary Objective

Develop and launch the SME Resource Sharing & Collaboration Network, a platform enabling local enterprises to share resources, exchange services, and communicate directly within a trusted digital environment.

Specific Objectives (SMART Framework)

- a. **Specific** – Objectives should clearly define what needs to be accomplished.
 - Implement a comprehensive business directory with SME profiles by the end of Phase 1 (October 1, 2025), ensuring functionality for SME listing, profile editing, and searchability.

- b. **Measurable** – Objectives must be quantifiable to track progress and determine when the goal is achieved.
 - Develop an equipment and resource sharing marketplace, allowing SMEs to list and browse available resources, by the end of Phase 2 (October 17, 2025).
 - c. **Achievable** – Objectives must be realistic and attainable within the available resources and constraints.
 - Enable a service exchange and bartering system that allows SMEs to offer and request services by the end of Phase 3 (November 31, 2025).
 - d. **Relevant** – Objectives must align with the overall project goals and contribute to its success.
 - Integrate direct messaging and group discussion features to facilitate secure communication between SMEs, by the end of Phase 4 (November 14, 2025).
 - e. **Time-Bounded** – Objectives must have a clear deadline or timeframe for completion.
 - Launch a community announcement board for SMEs to post events, opportunities, and updates, by the end of Phase 5 (November 28, 2025).
 - Conduct usability testing with 15–20 SME representatives during Phase 6 (December 12, 2025), achieving at least 75% positive feedback on the platform's usability and ease of use.
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4. Scope of Work

In-Scope:

- User Authentication System
- Business Profile Management
- Business Directory
- Unified Resource and Service Marketplace
- Booking System

- Direct Messaging
- Dashboard

Out-of-Scope:

- Mentorship program matching
- Business analytics and engagement tracking
- React Native mobile application
- Secure payment integration for transactions
- Advanced review and rating system
- SMS/email notification system

5. Methodology / Approach

- ❖ **Requirements** – Requirements will be identified through consultations, surveys, and interviews with SME owners and stakeholders. The focus will be on understanding collaboration needs, resource-sharing features, and communication requirements.
- ❖ **Design** – The system will be designed with emphasis on usability, scalability, and security. Wireframes and prototypes will be developed to outline the user interface for both desktop and mobile platforms. The backend will use Python with **Django**, the frontend will be built with appropriate technologies, and the database will rely on **MySQL/PostgreSQL**. Special consideration will be given to data protection and creating an intuitive SME user experience.
- ❖ **Development** –
 - **Backend & Frontend:** Developed using Python with Django (Django Templates will handle the frontend for rendering pages, ensuring a simple

and integrated system).

- **Database:** Managed with MySQL/PostgreSQL to ensure secure and reliable data storage.
- **Version control:** Managed through GitHub, with peer reviews to maintain code quality..
- ❖ **Deployment** – Track progress using Agile sprints, regular team meetings, and stakeholder updates to allow for flexibility and continuous improvement.
- ❖ **Testing** – Testing will occur continuously throughout development:
 - **Unit Testing** of backend functions and frontend components.
 - **Integration Testing** for workflows such as resource booking and messaging.
 - **Security Testing** to safeguard SME data and transactions.
 - **User Acceptance Testing (UAT):** Conducted with **15–20 SMEs**, targeting at least **75% positive usability feedback**.
- ❖ **Review** – Each sprint will conclude with a **Sprint Review** to present deliverables to stakeholders and gather feedback. This will be followed by a **Sprint Retrospective**, where the team reflects on successes, challenges, and areas for improvement. Progress will be continuously tracked through **Agile sprints, regular team meetings, and stakeholder updates** to maintain flexibility and support continuous improvement.

6. Deliverables

- Prototype SME Collaboration Web Application (desktop & mobile).
- Business directory & profile creation feature for SMEs.
- Resource sharing & service exchange system.
- Secure communication portal with commenting and posting.

- Community announcement board for SME events and opportunities.
- Usability testing report with SME feedback (75% positive).
- Technical documentation, user guide, and onboarding materials.

7. Timeline (Gantt Chart or Milestones)

Phase	Duration	Inclusive Date	Sprint Goal
Sprint 1	2 weeks	9/22/25 - 10/3/25	Conduct stakeholder interviews, finalize the list needed for SME, document functional and non function requirements.
Sprint 2	2 weeks	10/6/25 - 10/17/25	Develop ERD, draft the system architecture, review prototype screens for feedback
Sprint 3	2 weeks	10/20/25 - 10/31/25	Begin backend setup and start coding frontend interface.
Sprint 4	2 weeks	11/2/25 - 11/14/25	Continue backend and frontend development, integrate features, and conduct internal code review.
Sprint 5	2 weeks	11/17/25 - 11/28/25	Complete feature integration, refine UI/UX, and prepare for testing.
Sprint 6	2 weeks	12/1/25 - 12/12/25	Conduct functional & integration testing, resolve issues, deploy the system, prepare manuals, and train SMEs.

8. Budget Estimate

Item/Category	Quantity/Rate	Details	Cost (PHP)
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Product Owner	₱60,000 × 3 mos	Oversees project vision, ensures platform aligns with SME needs. Responsibilities includes: <ul style="list-style-type: none"> Defining and Prioritizing features in the product backlog Ensuring the platform support SME resource sharing & collaboration Communicating the vision to the development team 	₱180,000
Business Analyst	₱55,000 × 3 mos	Gathers requirements, prepares documentation, bridges SMEs & dev team. Responsibilities includes: <ul style="list-style-type: none"> Preparing documentation and use cases Translating SME needs into technical specification Supporting developers during implementation by clarifying requirements 	₱165,000
Scrum Master	₱55,000 × 3 mos	Facilitates Agile process, removes blockers, ensures smooth workflow. Responsibilities includes: <ul style="list-style-type: none"> Running daily stand ups, sprint planning. Removing blockers and ensuring smooth workflow Promoting agile practices and continuous improvement 	₱165,000
Lead Developer	₱50,000 × 3 mos	Leads technical development, ensures code quality, manages integrations. Responsibilities includes:	₱150,000

		<ul style="list-style-type: none"> • Designing systems architecture and database structure • Guiding developers 2 and 3 on implementation tasks • Ensuring successful integration of all modules 	
Developer 2	₱40,000 × 3 mos	Assists development, handles frontend & UI/UX responsibilities.	₱120,000
		Responsibilities include: <ul style="list-style-type: none"> • Supporting testing by fixing UI related issues • Building responsive web pages and user interface components 	
Developer 3	₱40,000 × 3 mos	Supports backend tasks, testing, and UI/UX adjustments.	₱120,000
		Responsibilities include: <ul style="list-style-type: none"> • Implementing fixes based on QA tester feedback • Performing unit and integration testing of backend components 	
QA Tester	₱40,000 × 3 mos	The QA tester will perform functional testing, regression testing, automated testing, and user acceptance testing.	₱120,000
		Responsibilities include: <ul style="list-style-type: none"> • Creating and executing test cases • Identifying and documenting bugs • Conducting UAT with stakeholders to ensure system meets requirement 	

Cloud Hosting & DB	₱20,000 (1 yr)	Covers hosting, database, and storage. <ul style="list-style-type: none"> Ensures availability, scalability and backup of the system Provided secure environment for SME data 	₱20,000
Collaboration Tools	₱7,000	Productivity and design tools. <ul style="list-style-type: none"> Design mockups and prototype Project documentation and communication 	₱7,000
Laptops (6 units)	₱50,000 each	Developer & design laptops. <ul style="list-style-type: none"> Used for coding, testing, design and deployment tasks Equip with necessary dev tools and IDEs 	₱300,000
Testing Devices	₱40,000	Smartphones, tablets & peripherals for web testing. <ul style="list-style-type: none"> Ensures compatibility across browsers and devices Used for performance and usability testing 	₱40,000
Electricity	₱3,000 × 3 mos	Estimated electricity consumption for dev/testing.	₱9,000
Internet	₱2,700 × 3 mos	High-speed internet for dev/testing team.	₱8,100
Coffee, Snacks & Food	₱5,000 × 3 mos	Meals and refreshments for project mgmt. and dev team.	₱15,000

SME Training & Guides	₱12,000	Training SMEs, user manuals, platform guidelines.	₱12,000
		<ul style="list-style-type: none"> Covers training sessions for SMEs, which also includes the user manual and onboarding materials 	
Post-launch Support	₱30,000	Bug fixes, updates, and feature support for 1st year.	₱30,000
		<ul style="list-style-type: none"> Include bug fixes, minor updates and user support for the first year 	
Marketing	₱20,000	Promotions, SME community outreach, digital campaigns.	₱20,000
		<ul style="list-style-type: none"> Advertising and promotional campaign to raise awareness of the platform 	
Contingency	₱40,000	Reserved for unexpected costs and scope adjustments.	₱40,000
		<ul style="list-style-type: none"> In case of a sudden need for additional resources, such as last minute purchases, it ensures that the project move forward without delay 	
Total:	₱507,033 x 3 mos	The total cost reflects the comprehensive budget needed to complete the project.	₱1,521,100

9. Risk Assessment & Mitigation

Risk	Likelihood	Impact	Mitigation Strategy
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Tight Timeline	High	High	Set a realistic 3 month roadmap, prioritize core features (user accounts, resource listing, messaging). Use Agile sprints to track progress and avoid scope creep.
Integration Issues	Medium	High	The platform requires combining features like messaging, booking, and file/resource sharing. Assign specific modules to each developer, use version control (GitHub), and conduct regular integration testing.
Scheduling Conflicts in Resource Booking	Medium	High	SMEs may try to reserve the same resource simultaneously. Build a conflict-detection and notification system (first come first serve, calendar blocking). Test thoroughly with sample SME data.
Low Adoption by SMEs	Medium	High	SMEs may not see the platform's value. Partner with local business orgs and SME associations for promotion. Highlight cost-sharing, visibility, and collaboration benefits. Provide success stories and testimonials.
Data Privacy & Security Risks	Medium	High	SMEs might share sensitive business data. Use secure logins, hashed passwords, HTTPS, and access control for shared resources. Educate users on data safety.
Verification of SME Users	Medium	Medium	Fake or non legitimate users might join to exploit resources. Implement a simple verification process (email/ID check or faculty referral).

User Experience Issues	Medium	Medium	Some SMEs may not be tech-savvy. Keep the interface clean, use familiar icons, and provide onboarding guides or short tutorials.
Team Burnout / Coordination	Low	Medium	Team members juggle academics and project tasks. Hold weekly check-ins, share workload fairly, and cut non-essential features if time runs short.
Scalability Issues	Low	High	If many SMEs adopt the platform, the system may slow down. Build with scalable hosting options (cloud-based), optimize database queries, and plan for gradual feature upgrades.

10. Stakeholders


- **Product Owner:** Frances Lghe Unabia 


- **Business Analyst:** Serge Ylan Soldano 

- **Scrum Master:** Christian Aire Tan 

- **Development Team:**

Ervin Louis Villas - Lead Back Developer 

Andre Salonga - Lead Front Developer 

Justine Vilocura - Assistance Back and Front Developer 

- **End Users:** students, faculty and staff, student organization, campus administrators
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11. Expected Benefits / ROI(in progress)

- Reduced commuter waiting times by 30%
 - Increased customer satisfaction
 - Potential for advertising revenue in the app
 - Improved resource utilization
 - Stronger SME collaboration and networking
 - Higher platform adoption rates
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12. Approval

Name & Role

Signature

Date

Joemarie Amparo, IT317 Instructor

Frederick Revilleza, CSIT327 Instructor