



INCREASING DIGITAL VISIBILITY OF BIOFERTILIZER PRODUCTS AT PT. MANUNGGAL MERDEKA MAKMUR

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<p>Info Article</p> <p>Received : 01 Maret 2026</p> <p>Revised : 03 April 2026</p> <p>Accepted : 02 Mei 2026</p> <p>Publication : 31 Mei 2026</p>	<p>Abstract: <i>This community service program (PKM) aims to enhance the digital visibility of PT. Manunggal Merdeka Makmur, a biofertilizer manufacturing company in Nganjuk, East Java, Indonesia. Prior to this program, the company lacked an official digital presence to effectively promote its product to broader markets. The program employed Design Science Research (DSR) methodology combined with a participatory approach, encompassing socialization, training, technology implementation, mentoring, and evaluation stages. Results demonstrate that an e-company profile website was successfully developed and deployed at manunggalmerdekamakmur.com, providing the company an official digital identity and online product information platform. Additionally, company human resources received training in digital marketing and website content management. The program contributes to the digital transformation of fertilizer SMEs and confirms that integrated digital media development combined with human resource capacity building effectively enhances market reach and competitive advantage.</i></p>
<p>Keywords: <i>Digital Marketing, E-Company Profile, Biofertilizer, Community Service, Design Science Research.</i></p> <p>Kata Kunci: Pemasaran Digital, E-Company Profile, Pupuk Hayati, Pengabdian Masyarakat, Design Science Research.</p>	<p>Abstrak: Program pengabdian kepada masyarakat (PKM) ini bertujuan meningkatkan visibilitas digital PT. Manunggal Merdeka Makmur, perusahaan pupuk hayati di Nganjuk, Jawa Timur. Sebelum program ini, perusahaan belum memiliki kehadiran digital resmi untuk mempromosikan produknya secara efektif. Program menggunakan metodologi Design Science Research (DSR) yang dipadukan dengan pendekatan partisipatif, mencakup tahap sosialisasi, pelatihan, penerapan teknologi, pendampingan, dan evaluasi. Hasil menunjukkan bahwa website e-company profile berhasil dikembangkan dan dipublikasikan di manunggalmerdekamakmur.com sebagai identitas digital resmi perusahaan. SDM perusahaan juga mendapatkan pelatihan pemasaran digital dan pengelolaan konten website. Program ini berkontribusi pada transformasi digital UMKM pupuk hayati dan membuktikan bahwa pengembangan media digital terpadu disertai penguatan kapasitas SDM merupakan strategi efektif untuk memperluas jangkauan pasar dan meningkatkan daya saing.</p>
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INTRODUCTION

The agricultural sector remains a fundamental pillar of Indonesia's national economy, contributing significantly to gross domestic product, employment, and food security. Fertilizer, as one of the most critical agricultural inputs, plays an indispensable role in sustaining crop productivity and supporting the long-term viability of the agricultural sector. PT. Manunggal Merdeka Makmur is a biofertilizer manufacturing company strategically located in Pandantoyo Village, RT.001/RW.004, Kertosono District, Nganjuk Regency, East Java Province, Indonesia. The company participates actively in both the national production and distribution of various types of fertilizer products aligned with market demand, offering high-quality products at competitive prices.

Despite its active participation in the national fertilizer market and the strategic importance of its products in supporting Indonesian agriculture, PT. Manunggal Merdeka Makmur has historically operated without an integrated digital media infrastructure. Initial observations and communications with company management revealed that the company did not process an official digital platform particularly an e-company profile website or an e-catalog that could present product information comprehensively and accessibly to potential customers and business partners through the internet. This condition resulted in suboptimal dissemination of product specifications, competitive advantages, and usage benefits to the broader marketplace.

The rapid advancement of digital technology has brought transformative changes across all industrial sectors globally, including the fertilizer industry. Digitalization has evolved beyond merely affecting production and distribution processes, it has become fundamentally integral to corporate identity building, information dissemination strategy, and sustained customer service excellence. In the contemporary business landscape, organizations that fail to establish a digital presence risk being eclipsed by competitors who leverage digital platforms to communicate value proposition more effectively and efficiently (Tamila Kartsivadze, 2025). This digital transformation imperative is particularly pressing for companies operating in highly competitive industrial markets such as the fertilizer sector.

Digital marketing has increasingly become a cornerstone of modern business success, driven by the fundamental shift in consumer behavior toward online information-seeking before purchasing decisions. Consumers and business actors alike demonstrate an increasing tendency to research product information, compare

alternatives, and assess corporate credibility through digital channels before engaging in transactions (Yola Roudhatun Ainy, 2025). This behavioral shift renders traditional, convention-based marketing approaches such as direct communication, printed documents, and limited business networks increasingly inadequate in reaching and converting potential customers in the current market environment (Shefali Verma, 2025). Companies that rely exclusively on conventional marketing methods consequently face significant limitations in their ability to exploit broader market opportunities.

Empirical research consistently demonstrates that organizations implementing effective digital marketing strategies achieve substantially wider audiences, target consumer segments with greater specificity, and engage in direct, real-time interactions through multiple platforms including social media, search engines, email, and websites (Saluja, 2025). Studies focusing on small and medium enterprises (SMEs) in various industries confirm that the adoption of digital marketing strategies encompassing social media marketing, search engine optimization (SEO), content marketing, and data-driven campaigns significantly elevates brand awareness, customer engagement levels, sales conversion rates, and overall competitive standing (Tochukwu Ignatius Ijomah et al., 2024). The analytical capabilities inherent in digital marketing platforms furthermore enable organizations to develop deeper insights into consumer preferences and behavioral patterns, facilitating the design of more personalized and contextually relevant communications that drive long-term customer loyalty (Hollebeek & Macky, 2019).

In the context of PT. Manunggal Merdeka Makmur, two interrelated primary challenges were identified through initial analysis and stakeholder discussions. The first challenge concerns the complete absence of digital media infrastructure specifically, the lack of an official company website and digital product catalog leaving potential customers and business partners without reliable online access to company and product information. The second challenge pertains to limited human resources (HR) capacity within the organization in the domain of digital marketing management. Research underscores that HR capability constitutes a critical enabling factor for successful digital technology implementation: even well-designed digital platforms will fail to generate sustainable business value if the organization's personnel lack the competencies necessary to manage, update, and strategically leverage those platforms (Latifah Ayu Tiarani et al., 2025). A comprehensive situational analysis of PT. Manunggal Merdeka Makmur was conducted using the SWOT (Strengths, Weaknesses, Opportunities,

Threats) analytical framework to systematically identify internal capabilities and external environmental factors relevant to the digital transformations program. The analysis outcomes are presented I Table 1.

Table 1 SWOT Analysis of PT. Manunggal Merdeka Makmur

Factor	Description
Strengths (S)	The company operates in the fertilizer industry with stable and sustainable market demand. Fertilizer products play a strategically important role in supporting Indonesian agriculture. Company management demonstrates openness to innovation and modern marketing approaches. High-quality products are available and ready for broader market disseminations.
Weaknesses (W)	No official website for company profile and digital marketing currently exists. While some company information appears online, its accuracy cannot be verified. HR capacity remains highly limited, both in organizational structure and in digital marketing management skills. The company continues to rely on conventional marketing methods. No standards exist for managing digital content.
Opportunities (O)	Growing digital technology adoption and expanding internet access nationwide. Rising trends in consumers seeking product and company information through online media. Websites offer cost-effective promotional media with long-term benefits. Potential for website integration with e-catalogs and other digital platforms.
Threats (T)	Intensifying competition in the fertilizer industry. Competitors have established digital presence earlier. Rapid technological change requires continuous adaptation. Risk of website mismanagement if HR readiness remains insufficient.

Additionally, an analysis of key business impact points was conducted to provide quantifiable justification for the digital transformation initiative. Table 2 summarizes the expected business impacts across four critical dimensions that would result from successful digital marketing implementation.

Table 2 Key Business Impact Points of Digital Marketing Implementation

Key points	Business impacts
Marketing reach	Product marketing reach will expand significantly, audience targeting will become more specific, and marketing expenditure will yield greater efficiency and long-term value.
Performance improvement	Product sales are expected to increase substantially. Increased product sales will generate significant improvements in employee performance, UMKM partner capabilities, and overall enterprise competitiveness.
Customer loyalty	Digital product marketing will reach customers and build trust through real-time system utilization, fostering long-term business relationships and repeat purchase behavior.
Decision making	The company will have access to accurate marketing and purchase statistics, enabling more precise and evidence-based strategic decision-making aligned with market trend adaptation.

Source : Primary Data (2026)

The two identified priority challenges absence of digital media infrastructure and limited HR capacity in digital marketing were mutually agreed upon with the partner organization as the primary focus of this PKM program. These challenges span two key domains: digital marketing and business management, both of which are fundamentally interconnected in supporting the sustainable upstream-downstream development of the biofertilizer enterprise. The successful implementation of digital marketing tools such as an e-company profile website is contingent upon adequate HR readiness, while HR capacity alone generates limited value without the requisite digital infrastructure in place.

This community service program (PKM) was designed, planned, and executed by Sekolah Tinggi Ilmu Ekonomi Surabaya (STIESIA) Surabaya in formal partnership with PT. Manunggal Merdeka Makmur. The program was structured to address the identified challenges through an integrated approach combining technological artifact development with human resource capacity building. The primary objectives of this program are :

1. To develop and deploy a professionally designed e-company profile website for PT. Manunggal Merdeka Makmur as an official digital identity and product promotion platform.
2. To strengthen the digital marketing competencies of company HR through structured training and mentoring
3. To equip the organization with sustainable digital marketing management capabilities that can be maintained and developed independently beyond the program period.

METHOD

Design Science Research (DSR) Methodology for Website Development

The development of the e-company profile website within this community service program was grounded in the Design Science Research (DSR) methodology. DSR was selected as the primary methodological framework because it is specifically oriented toward the design, development, and evaluation of technological artifacts that address practical organizational problems in a systematic, rigorous, and purpose-driven manner. Unlike purely observational or explanatory research approaches, DSR emphasizes the creation of innovative artifacts including constructs, models, methods, and instantiations that deliver measurable value to organizational contexts. The artifact generated in this program is an e-company profile website functioning as a digital information, promotion, and representational medium for PT. Manunggal Merdeka Makmur.

The DSR methodology was operationalized through six sequential and interconnected stages as follows. The first stage, Problem Identification and Motivation, involved conducting a thorough analysis of PT. Manunggal Merdeka Makmur's existing operational and marketing conditions through direct observation, structured interviews with management, and focus group discussions with key stakeholders. This stage identified the central pain points: the absence of an official digital identity for the company and the resulting inability to present product information professionally to online audiences. The motivational basis for developing the e-company profile website was established by documenting the competitive disadvantage created by this digital gap.

The second stage, Define objectives of a solution, translated the identified problems into clear, measurable design objectives for the artifact to be developed. The primary objective was to create an e-company profile website that provides an official digital identity presenting the company profile, comprehensive product information with specifications and benefits, and accessible contact details. Secondary objectives included ensuring the website is professionally designed, visually engaging, mobile responsive, and easily maintainable by company HR personnel with limited technical backgrounds.

The third stage, Design and Development, constituted the core implementation phase of the DSR methodology. This stage encompassed the complete design and technical development of the e-company profile website, including: information architecture design specifying the structural organization of content across website pages user interface (UI) and user experience (UX) design ensuring intuitive navigation and professional visual presentation, front-end development using the Vue.js JavaScript framework to create a responsive, modern web application, content development and curation, including the writing of company profile narratives, product descriptions, specifications, and imagery, and deployment configuration on professional hosting infrastructure.

The fourth stage, Demonstration, involved presenting the completed website artifact to company stakeholders including the board of directors and operational staff for direct hands-on use and evaluation. This demonstration was conducted during the main PKM activity on January 26, 2026, at the company premises. The fifth stage, Evaluation assessed the extent to which the developed website fulfilled the established objectives and resolved the identified problems, primarily through structured feedback from internal users and management observations during the demonstration session. The sixth stage, Communication, encompassed the formal dissemination of program findings,

website handover documentation, and management guidelines to ensure the artifact's sustainable utilization.

PKM Implementation Methodology

The community service implementation methodology was designed to ensure achievement of all proposed solutions through a participatory, applicative, and sustainable approach, actively involving PT. Manunggal Merdeka Makmur personnel at every stage of the program. This participatory engagement was intentional: by involving company HR in the development, training, and deployment processes, the program aimed not only to deliver a completed digital artifact but also to build enduring organizational competencies that persist after the formal program period concludes. The implementation proceeded through five main phases.

Phase 1 Socialization : The initial phase established a shared understanding and mutual commitment between the STIESIA Surabaya team and PT. Manunggal Merdeka Makmur stakeholders. This phase comprised an opening meeting with company management and HR representatives to explain the program objectives, scope, and implementation plan comprehensively, present the planned e-company profile website development as the primary program output, clarify the roles and responsibilities of each party throughout the implementation, agree on the activity schedule, venue, and participant composition, and identify specific data requirements regarding fertilizer product information and HR readiness for digital training.

Phase 2 Training: The training phase was designed to elevate the knowledge and practical skills of PT. Manunggal Merdeka Makmur's HR personnel in digital marketing and e-catalog management. Training content encompassed: foundational digital marketing concepts and their strategic relevance to the fertilizer industry, the functional role and strategic value of company profile websites and e-catalogs as digital promotion and information tools, fundamentals of digital content management, including principles of effective product description writing and visual content presentation, and practical instruction on website content update procedures applicable to non-technical users.

Phase 3 Technology Implementation: This phase operationalized the e-company profile website development, with company HR actively involved in key stages to facilitate knowledge transfer. Key activities included: comprehensive collection and verification of product data encompassing product names, specifications, active ingredients, application benefits, and usage instructions for all major fertilizer product

lines, collaborative structuring and formatting of e-catalog content to meet both technical requirements and audience accessibility standards, visual design and user interface development ensuring professional presentation aligned with the company’s brand identity, technical website development and testing using the Vue.js framework, and publication of the completed website on professional hosting infrastructure with registered domain.

Phase 4 Mentoring and Evaluation: Following website deployment, structured mentoring and evaluation activities were conducted to ensure effective and sustainable utilization. Activities encompassed technical mentoring sessions focused on practical website management skills, post-implementation consultation to gather evaluative feedback from management and operational users, structured discussion sessions to assess the effectiveness of e-catalog integration in supporting marketing activities, and identification of areas for further development based on user experience observations.

Phase 5 Program Sustainability: The final phase focused on ensuring the long-term continuity of program impacts. Activities included the formal handover of the e-company profile website with comprehensive management and update guidelines, reinforcing the organization’s commitment to sustained digital platform utilization through agreed digital channels, and providing strategic recommendations for future website and digital marketing development.



Figure 1 Research Methodology Scheme

The complete program implementation schedule, spanning the preparation through publication phases, is documented in Table 3.

Table 3 PKM Activity Implementation Schedule

Type of Activity	Oct	Nov	Dec	Jan
Survey and initial observation				
Focus Group Discussion (FGD)				
Problem mapping and needs analysis				
E-Company profile development				
HR Digital marketing training				
E-Company profile socialization				
Monitoring and evaluation				
Financial report preparation				
Activity result publication				

The program was conducted across two locations: (1) STIESIA Surabaya campus for the planning, design, and development phases, and (2) PT. Manunggal Merdeka Makmur premises in Pandantoyo Village, Kertosono District, Nganjuk Regency, for the socialization, demonstration, and mentoring phases. The program involved a team of five faculty members (three from the Information Systems and Computer Science faculty and two from the Economics faculty) and two students from STIESIA Surabaya, in collaboration with the company's management team and operational staff.

RESULTS AND DISCUSSION

Program Implementation Overview

The community service activity was formally conducted on January 26, 2026, commencing at 10.00 WIB at PT. Manunggal Merdeka Makmur's premises in Pandantoyo Village, Kertosono District, Nganjuk Regency. The activity was attended by company HR comprising the board of directors and operational staff. The primary deliverable of this activity was the formal presentation, demonstration, and handover of the developed e-company profile website to the partner organization. Additionally, the session incorporated practical orientation on website management, content updating procedures, and digital marketing strategy implementation.

E-Company Profile Website Development Results

The primary output of this community service program is the e-company profile website for PT. Manunggal Merdeka Makmur, which is currently publicly accesible at <https://manunggalmerdekamakmur.com/>. The website hosting and domain service is provided by Biznet, a professional Indonesian hosting provider, under a subscription arrangement that ensures reliable, long-term online accessibility

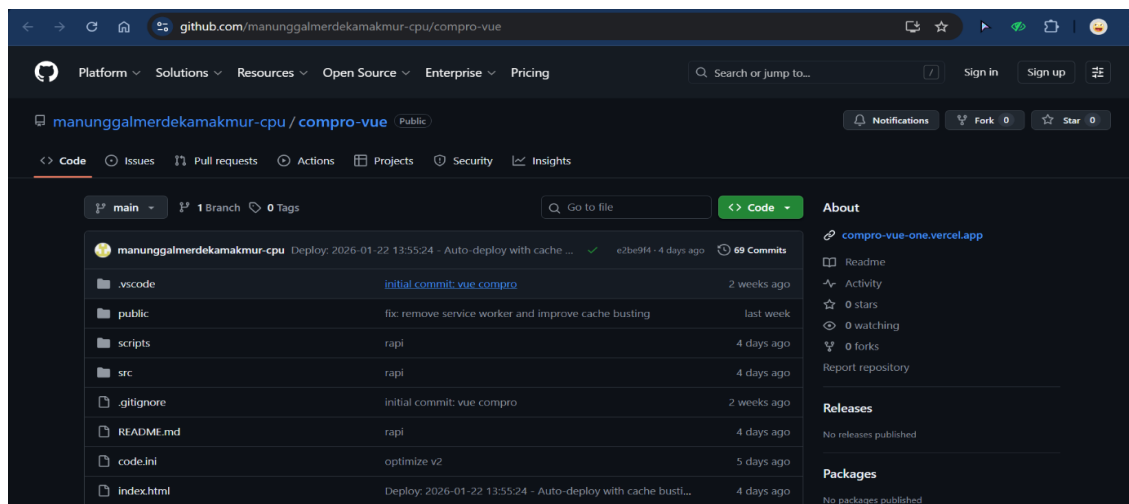


Figure 2 Code Repository E-Company Profile

All source code, development assets, and technical documentation are maintained in a version-controlled public repository accessible at <https://github.com/manunggalmerdekamakmur-cpu/compro-vue>, enabling future development iterations and technical maintenance. The website was developed using the Vue.js JavaScript framework, selected for its component-based architecture that facilitates maintainability, its excellent performance characteristics for content-rich websites, and its active ecosystem of supporting libraries. The website architecture comprises three primary pages, each serving a distinct function in the company's digital communication strategy.

The Homepage serves as the primary entry point for all website visitors, presenting the company's digital identity through a professionally designed landing page that communicates the company's core value proposition, market positioning, and overarching brand narrative. The homepage is designed to create an immediate positive first impression on potential customers and business partners while providing clear navigational pathways to more detailed product and company information.

The company profile page provides comprehensive organizational information about PT. Manunggal Merdeka Makmur, including the company's founding history and corporate background, organizational mission, vision, and core values, operational scope and geographic coverage, and the company's role and commitment within Indonesia's national agricultural support ecosystem. This page addresses the fundamental need identified in the initial analysis: providing verifiable, authoritative, and professionally presented organizational information to stakeholders who previously had no reliable online source for such information.

To our products page constitutes the e-catalog component of the website, presenting the complete range of PT. Manunggal Merdeka Makmur's fertilizer products in a structured, visually accessible format. For each product, the page presents product names and visual representations, active ingredient composition and technical specifications, documented agricultural benefits and application contexts. This comprehensive product information architecture directly addresses the identified gap in the company's ability to communicate product value to potential purchasers and distribution partners.

The website development process followed a rigorous quality assurance protocol encompassing functional testing across multiple device types and screen sizes to ensure full mobile-responsiveness, cross-browser compatibility testing on major web browsers, content accuracy verification in collaboration with company technical staff, user

experience testing with representative end-users from the target audience, and page load performance optimization to ensure accessibility across varying internet connection speeds.



Figure 2 Homepage Display of E-Company Profile

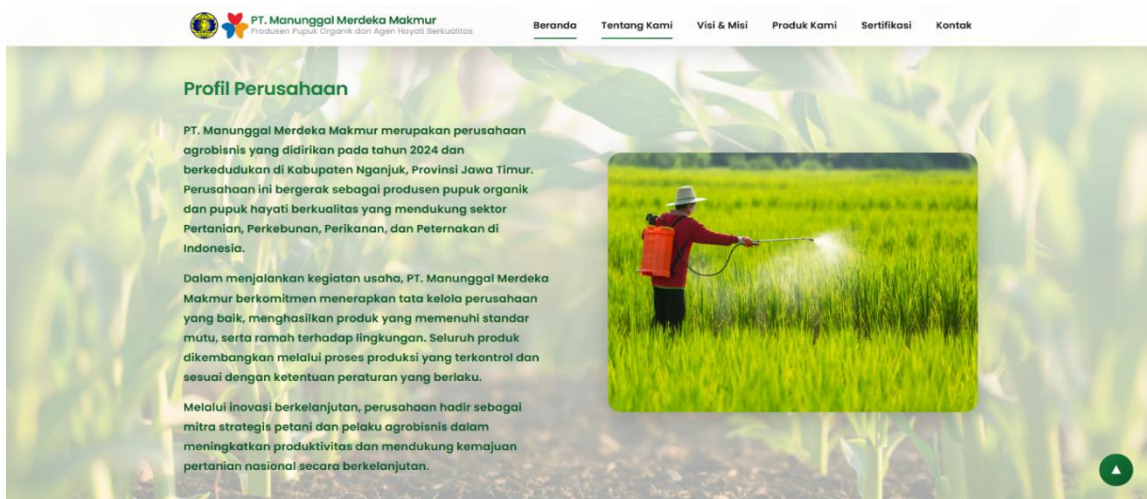


Figure 3 Profile Page Display

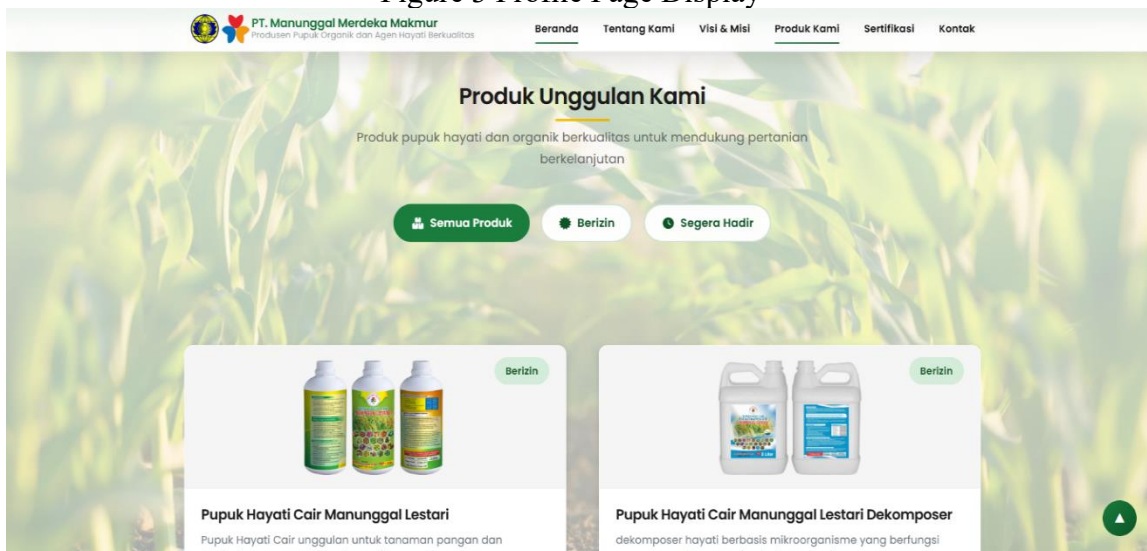


Figure 4 Our Products Page Display

Human Resource Capacity Building Results

The HR capacity building component of this program addressed the identified limitation in digital marketing knowledge and website management skills among PT. Manunggal Merdeka Makmur's personnel. The training workshop conducted during the January 26, 2026 activity session was attended by a minimum of five HR staff members, exceeding the established target indicator of five trained participants. The workshop delivered structured training content across three main modules.

The first module, Digital Marketing Foundations, provided participants with a comprehensive introduction to digital marketing concepts and their strategic relevance to the fertilizer business context. Content covered the evolution of consumer information-seeking behavior toward digital channels, the competitive landscape implications for companies without digital presence, the key components of an effective digital marketing strategy, and specific applications of digital marketing tools in agricultural product promotion. Participants demonstrated measurable improvement in their understanding of digital marketing concepts through pre- and post-training knowledge assessments.

The second module, Website and E-Catalog Management, provided practical, hands-on instruction in the operational management of the developed website. This module covered content update procedures for product information pages, visual asset management including product photography guidelines, structured approach to maintaining content accuracy and currency, and troubleshooting procedures for common technical issues. The hands-on format ensured that participants gained direct practical experience with the website management interface, building confidence in their ability to independently maintain and update content.

The third module, Digital Marketing Strategy Application, guided participants in understanding how to leverage the developed digital assets as components of a broader marketing strategy. This module addressed the integration of the website with social media marketing activities, basic principles of search engine visibility improvement, and strategies for using the e-catalog in customer engagement and sales support contexts. Upon completion of this module, participants expressed significantly improved confidence in their ability to manage and strategically utilize the company's digital assets.



Figure 5 Digital Marketing Workshop Activity



Figure 6 Product Production Process Explanation



Figure 7 Product Production Process Explanation

Program Outcome Achievement

The program outcomes were evaluated against five pre-established target indicators that were mutually agreed upon with the partner organization during the initial planning phase. Table 4 presents a comprehensive summary of the program outcomes relative to each target indicator, demonstrating full achievement across all specified performance dimensions.

Table 4 Program Outcomes Against Target Indicators

No	Priority problem	Solution offered	Target output	Achievement status
1	No digital promotion media for products	Digital e-catalog development	1 fertilizer product e-catalog	Achieved ✓ — 1 digital e-catalog containing all major product lines developed and published
2	Limited marketing reach	Online e-catalog publication	Active digital promotion media	Achieved ✓ — E-catalog accessible globally via manunggalmerdekamakmur.com
3	Low HR capacity in digital marketing	Digital literacy and marketing training	Trained HR staff	Achieved ✓ — Minimum 5 HR staff completed digital marketing training workshop
4	HR unable to manage e-catalog	E-catalog management mentoring	HR capable of managing content	Achieved ✓ — HR demonstrated independent content update capability post-mentoring
5	No management guidelines available	E-catalog management guide preparation	Guideline document	Achieved ✓ — Comprehensive management guideline document prepared and handed over

Source : Primary Data (2026)

Discussion

The outcomes of this community service program align with and corroborate findings from an extensive body of empirical research on digital marketing adoption in SME contexts. The successful development and deployment of the e-company profile website has directly addressed PT. Manunggal Merdeka Makmur's primary structural disadvantage the absence of an official digital presence and has created the foundational infrastructure necessary for sustainable digital marketing activities. This achievement is consistent with (Tamila Kartsivadze, 2025), who demonstrates that internet marketing enables organizations to establish credibility, build brand identity, and reach markets that are inaccessible through conventional channels. The integrated approach combining digital infrastructure development with HR capacity building represents a particularly important design feature of this program. Research by (Latifah Ayu Tiarani et al., 2025) emphasizes that digital marketing development and business ethics together constitute complementary determinants of competitive advantage for SMEs an insight that underscores the necessity of ensuring that digital tools are accompanied by the organizational competencies needed to utilize them effectively. The program's

participatory methodology, which actively involved company personnel in every stage from design through publication, proved instrumental in ensuring that the resulting website is not merely an external deliverable but an organizationally embedded asset with genuine sustainable utility.

The decision to use the Vue.js framework for website development reflects a deliberate strategic choice aligned with long-term sustainability considerations. Vue.js produces efficient, maintainable code with a relatively accessible learning curve, reducing the technical barriers to future website updates and feature additions by company personnel with developing technical skills. The public GitHub repository furthermore ensures that development continuity is not dependent on any single technical contributor, supporting long-term resilience of the digital infrastructure.

The hosting arrangement with Biznet, a reputable professional Indonesian hosting provider, ensures reliable uptime, appropriate data security, and technical support access all critical factors for maintaining the credibility and accessibility of a corporate digital presence. The subscription model adopted provides a financially predictable and manageable ongoing cost structure appropriate for a company of PT. Manunggal Merdeka Makmur's size and operational scale. From a theoretical perspective, this program demonstrates the applicability of the Design Science Research paradigm to community service contexts. The DSR framework provided a structured approach to translating organizational problems into design requirements, developing purpose-built technological solutions, and evaluating artifact utility in real-world settings. The six-stage DSR methodology proved particularly well-suited to the community service context because it maintains a persistent focus on practical problem resolution rather than purely theoretical knowledge generation, ensuring that program outcomes deliver tangible value to the partner organization (Hollebeek & Macky, 2019).

The program outcomes also carry implications for the broader discourse on digital transformation in the Indonesian agricultural supply chain. PT. Manunggal Merdeka Makmur's transition from complete digital absence to a professionally deployed online presence with trained HR personnel represents a model that can be adapted and applied to other fertilizer companies and agricultural input suppliers facing similar digital development challenges. The program demonstrates that resource-efficient digital transformation is achievable for SMEs through structured academic-industry collaboration, without requiring substantial internal technical expertise or large capital investment (Sharabati et al., 2024).

Looking forward, the next recommended development stage for PT. Manunggal Merdeka Makmur's digital presence involves the optimization and expansion of existing digital assets. Priority initiatives include the development of advanced e-catalog features incorporating interactive product comparison tools, integration with digital communication channels such as WhatsApp Business for customer inquiry management, implementation of basic search engine optimization techniques to improve organic discovery by potential customers and business partners, and establishment of a systematic content update schedule to ensure information currency. Additionally, the company should consider integrating web analytics tools to monitor visitor behavior, traffic sources, and content engagement patterns, generating actionable insights that can inform ongoing marketing strategy refinement (Hollebeek & Macky, 2019)

CONCLUSION

This community service program successfully addressed the two primary challenges identified at PT. Manunggal Merdeka Makmur: the absence of an official digital media infrastructure and limited HR capacity in digital marketing management. Prior to program implementation, the company relied exclusively on conventional marketing methods direct communication, printed documents, and limited business networks which severely constrained its ability to reach broader market segments and communicate product value effectively in an increasingly digital marketplace.

Through the application of Design Science Research methodology and a participatory community service approach, the program produced two primary outcomes:

1. A professionally designed and deployed e-company profile website, now publicly accessible at manunggalmerdekamakmur.com, serving as the company's official digital identity, information platform, and product promotion medium; and
2. Measurably improved digital marketing competencies among company HR personnel, demonstrated through successful completion of structured training and independent website management capability. All five pre-established program target indicators were fully achieved.

The program demonstrates that the integration of artifact-focused technological development with human resource capacity building constitutes an effective and sustainable approach to digital transformation for SMEs in the Indonesian agricultural sector. The participatory methodology adopted involving company personnel throughout the design, development, and deployment stages ensured not only a technically sound

digital output but also genuine organizational ownership and management capability, thereby substantially increasing the likelihood of sustained post-program utilization.

The theoretical contribution of this program lies in its application of the DSR methodology to a community service context, demonstrating the framework's utility in generating practical artifacts that address real organizational needs while maintaining methodological rigor. The program furthermore contributes to the empirical evidence base supporting the proposition that integrated digital marketing development combining platform creation with HR competency building is more effective than either component implemented in isolation.

Based on the program experience and outcomes, the following recommendations are offered for PT. Manunggal Merdeka Makmur's continued digital development: First, the company should designate a dedicated HR responsible for ongoing website content management and establish a regular content update schedule to maintain information accuracy and site relevance. Second, the website should be progressively developed to incorporate additional features supporting customer engagement, including product comparison tools, a customer inquiry form, and integration with social media platforms.

Third, the company should systematically utilize web analytics data as a basis for evidence-based marketing decisions, monitoring visitor patterns and content engagement to identify opportunities for product promotion improvement. Fourth, continued collaboration with academic institutions and participation in future community service programs is recommended to sustain the momentum of organizational digital transformation and ensure adaptability to evolving technological and market requirements.

Fifth, the company should consider developing an independent e-commerce or marketplace presence as a longer-term objective, enabling direct digital sales transactions and further extending market reach beyond the capabilities of an informational website alone.

The implementation of this PKM program by STIESIA Surabaya has delivered substantial and measurable benefits in enhancing PT. Manunggal Merdeka Makmur's digital visibility, professional profile, and strategic readiness for competition in an increasingly digital marketplace. The program model developed and applied here offers a replicable framework for addressing similar digital transformation needs in other fertilizer companies and agricultural-sector SMEs across Indonesia.

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