



Digital Marketing of Maggot Cultivation Products in Cepogo Village, Boyolali through Website Development and E-Commerce Integration

Hariyadi Fajar Nugroho^{1,*}, Fatih Kurniawan², Anung Damar Sasongko³

¹²³Digital Business Study Program, Faculty of Economics and Business, Universitas Muhammadiyah Surakarta

*Corresponding Author: hfn962@ums.ac.id

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ABSTRACT

Background: The maggot cultivation group in Cepogo Village, Boyolali has economic and ecological potential, but product marketing remains conventional and lacks an integrated digital medium.

Contribution: This program strengthens partner capacity by developing a website-based and e-commerce-oriented promotion model for maggot products.

Method: The activity was implemented through needs observation, website design, product catalog development, WhatsApp Business and marketplace integration, training, and evaluation.

Results: The outputs include a marketing website design, a digital product catalog, an online ordering flow, an admin dashboard concept, and activity documentation.

Conclusion: Digital marketing helps organize product information, strengthen business identity, and facilitate online ordering access for potential customers.

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INTRODUCTION

Digital technology has transformed the way community-based enterprises market products, communicate with customers, and manage transactions. Digital marketing enables small businesses to expand market reach through websites, social media, marketplaces, and faster digital communication channels [1], [2]. For micro, small, and medium enterprises (MSMEs), the adoption of e-commerce and digital marketing can reduce market-access limitations and increase the added value of local products [3].

Cepogo Village in Boyolali has local potential for developing maggot cultivation. Maggots, or Black Soldier Fly (*Hermetia illucens*) larvae, can process organic waste and produce biomass that can be used as an alternative feed source, while the cultivation residue can be used as organic fertilizer [4], [5]. This potential is aligned with circular economy principles because organic waste can be converted into products with both economic and ecological value.

Despite this potential, the marketing capacity of the partner group remains limited. Product information, benefits, prices, quality, and ordering procedures have not been documented in a structured digital medium. Marketing activities still rely on local networks, direct communication, and personal relations. In addition, the partner did not yet have a website as an official information center and was not systematically connected to WhatsApp Business, social media, or e-commerce platforms.

In this community service program, the website is positioned as a digital information hub containing the business profile, product catalog, maggot benefits, educational articles, activity gallery, ordering contact, and e-commerce links. Integrating the website with WhatsApp Business and marketplace channels is expected to create a more practical promotion and ordering flow. This approach follows the concept of e-commerce as the use of internet technology to support transactions, communication, and value exchange between sellers and customers [7].

Based on these problems, this program aimed to design a marketing website, create a digital product catalog, integrate the website with digital ordering channels, and improve the partner's capacity to manage digital marketing content independently. This article presents the implementation process, outputs, and implications of digital marketing for maggot cultivation products in Cepogo Village, Boyolali.

METHOD

This community service activity used a participatory approach by involving the partner in needs identification, content preparation, website design, product information validation, and content-management training. This approach was selected to ensure that the solution was not merely technical but also aligned with the partner's context, capacity, and business needs.

The program was carried out with a maggot cultivation group in Cepogo Village, Cepogo District, Boyolali Regency. The target group consisted of local maggot producers who needed digital promotional media to strengthen business identity, organize product information, and expand market access. Partner needs were identified through observation, discussion, product documentation, and mapping of existing marketing practices.

The implementation consisted of six stages. First, the team observed and identified partner needs, including product types, existing marketing patterns, product documentation, and digital integration requirements. Second, the team designed the website structure, including menu hierarchy, page layout, visual style, main content, ordering buttons, and integration flow. Third, the team developed the website concept and digital product catalog, including the home page, profile, products, benefits, articles, gallery, and contact page. Fourth, the website was integrated with WhatsApp Business, social media, and marketplace/e-commerce channels. Fifth, the partner received training on content management, photo uploading, product-description writing, educational-article preparation, and customer-message handling. Sixth, evaluation was

conducted to assess output achievement, usability, and partner readiness to manage digital marketing independently.

The success indicators included the availability of a website design, a digital product catalog, a connected digital ordering flow, improved partner understanding of digital marketing, and a simple website-management guide. The evaluation was descriptive and focused on output achievement, ease of use, and partner response to the mentoring process.

RESULTS AND DISCUSSION

1. Partner Condition and Digitalization Needs

The partner group produces fresh maggots, dried maggots, organic frass/fertilizer, and potential cultivation-education services. These products have a strong marketing narrative because they relate to alternative feed, organic waste processing, and sustainable farming. Studies on Black Soldier Fly larvae show that the larvae can convert organic waste into protein-rich biomass and produce residues that may be used as fertilizer [5], [6].

The needs assessment indicated that the main problem was the absence of an integrated digital medium. Product information had not been transformed into a digital catalog, product documentation had not been optimized, and customer orders were not yet directed through clear online channels. As a result, potential customers could not easily access complete information about product types, benefits, package sizes, or ordering procedures.

2. Marketing Website Design

The website design was created to be simple, responsive, and easy to use. The website functions not only as a promotional medium but also as an information and educational hub for maggot cultivation. Figure 1 shows the homepage design, which presents business identity, product information, product benefits, and a WhatsApp ordering button.

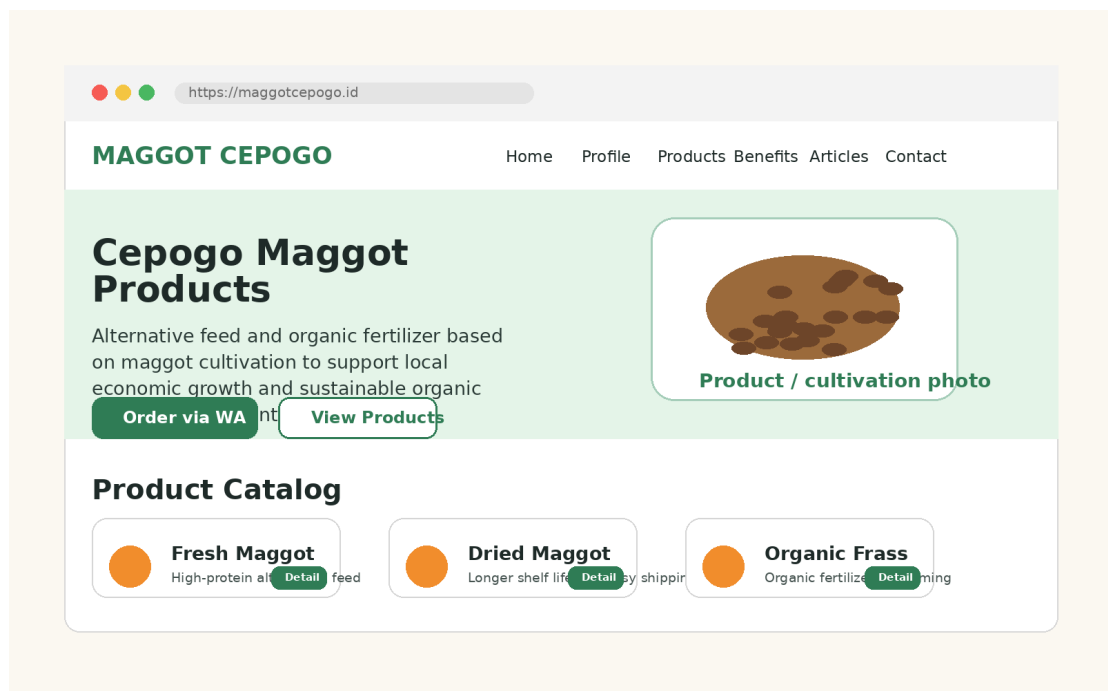


Figure 1. Homepage design for the Maggot Cepogo marketing website

The homepage emphasizes the core value of the products: alternative feed, organic fertilizer, and an environmentally oriented local business. It also includes a call-to-action button so that potential customers can immediately view the product catalog or place an order. Functionally, the website becomes the first step in building digital trust because business information, product details, and communication channels are presented in one accessible location [1], [7].

3. Digital Product Catalog

The digital product catalog was prepared to present product information neatly and make it easy to distribute across online channels. The catalog includes fresh maggots, dried maggots, organic frass, and cultivation-training packages. Clear product information is an important part of digital marketing because it helps potential customers understand product benefits, package sizes, and purchasing procedures [1].

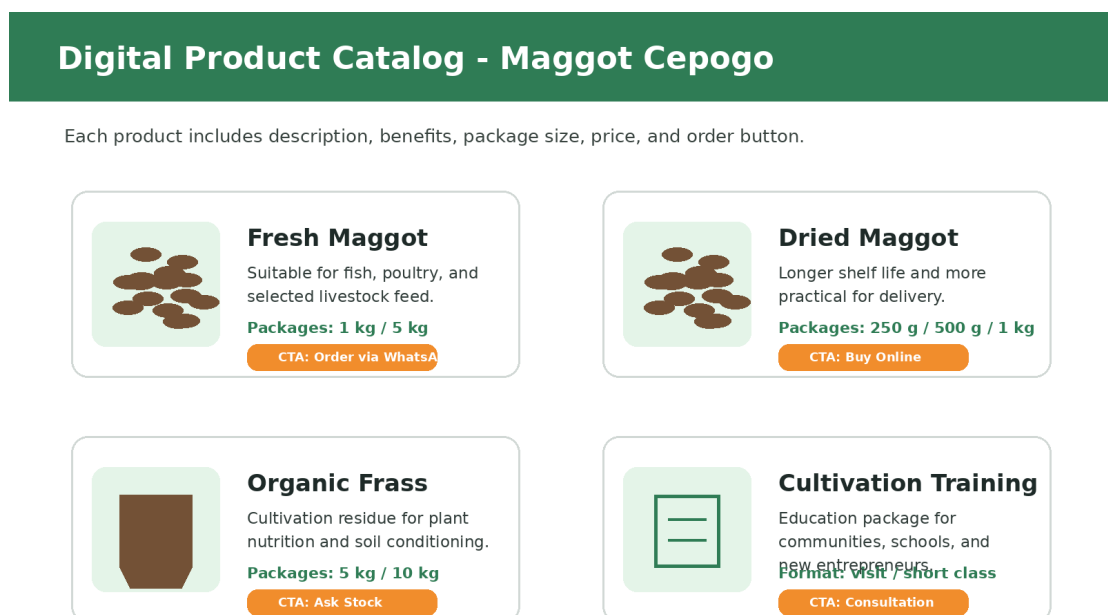


Figure 2. Digital product catalog design for Maggot Cepogo

The catalog was designed for use not only on the website but also on WhatsApp Business, social media, and marketplace pages. Thus, one catalog asset can support multiple promotional channels. This strategy helps the partner maintain consistency in product information and respond more quickly to customer inquiries.

4. Website, WhatsApp Business, and E-Commerce Integration

The integration model places the website as the main information hub, WhatsApp Business as a fast communication channel, marketplace/e-commerce as the transaction channel, and social media as the recurring promotion channel. This model enables potential customers to move from product information to ordering more easily. Similar community service initiatives have shown that e-commerce and digital marketing can help MSMEs increase product exposure and market opportunities [3].

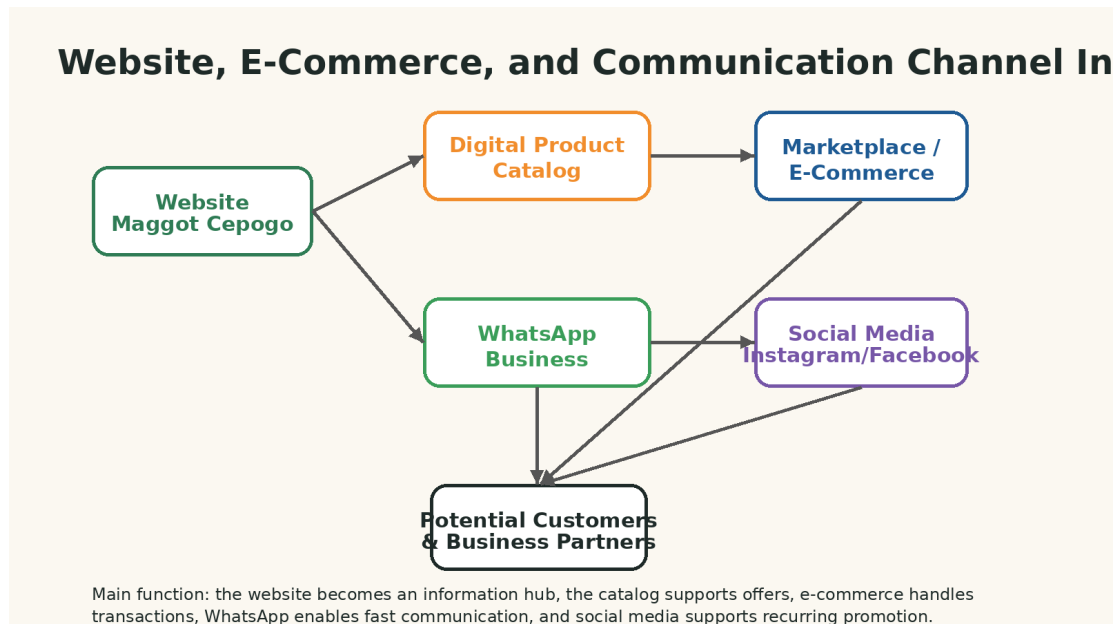


Figure 3. Integration flow of website, WhatsApp Business, marketplace, and social media

The integration flow makes the marketing process more practical. Potential customers can read product information, view the catalog, contact the partner, and make purchases through digital channels. This model reflects the nature of digital marketing, which emphasizes access convenience, measurable interaction, and direct customer communication [2], [7].

5. Admin Dashboard and Content Management

For the website to remain useful, the partner needs to understand the admin dashboard. The dashboard concept was designed to simplify updates to product catalogs, educational articles, gallery images, and ordering links[8]. Consistent content management is important so that the website remains relevant and does not become a static promotional page.

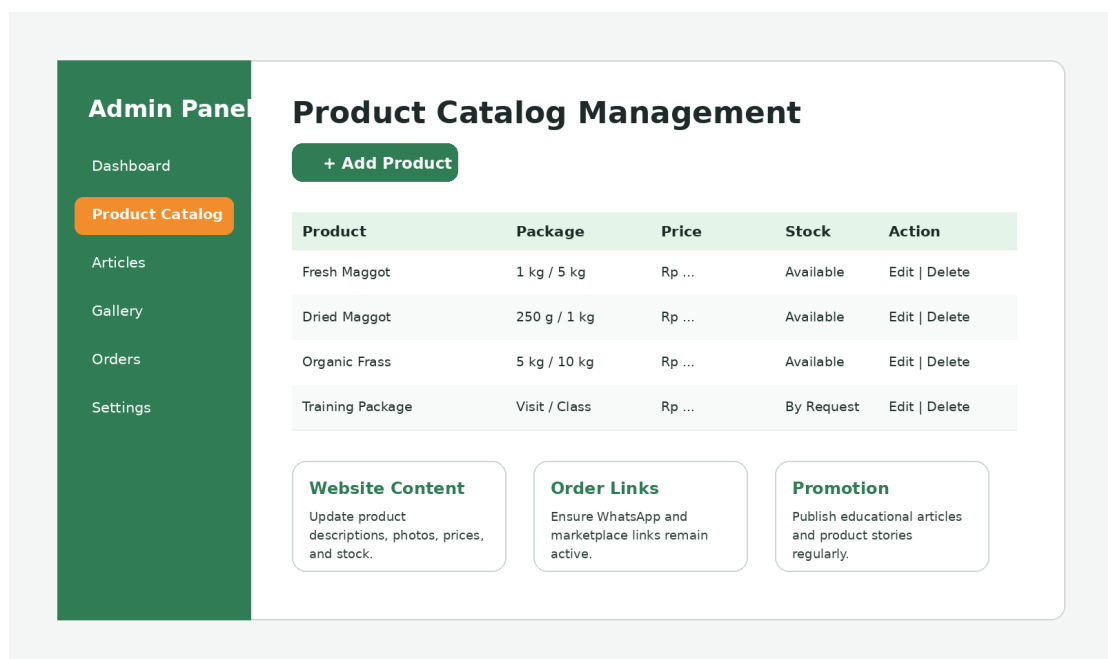


Figure 4. Admin dashboard concept for product catalog management

Training materials focused on practical skills, including updating product photos, writing brief product descriptions, revising price or stock information, adding educational articles, and ensuring that WhatsApp and marketplace links remain active[9]. These skills are expected to enable the partner to manage website content independently after the community service program has ended.

6. Mentoring Documentation and Program Impact

The mentoring process included field observation, discussion of digitalization needs, product and location documentation, and development of the digital marketing concept with the partner. Figure 5 presents several documentation points from the needs-assessment and mentoring process that supported the website and catalog design.

Community Service Activity Documentation



Figure 5. Documentation of observation, discussion, and mentoring for digital marketing development

The initial impact of the program can be seen in the availability of more structured digital promotional media, improved partner understanding of website functions, and a clearer ordering flow[10]. For the partner, the website and digital catalog strengthen business identity and simplify product-information delivery. For the local community, the program supports the development of an environmentally oriented business based on organic waste management and value-added products[11].

Although the website design, digital catalog, and channel integration were prepared, the long-term success of the program depends on the partner's consistency in updating content, responding to customers, maintaining product quality, and activating marketplace channels [12]. Therefore, follow-up mentoring should focus on product branding, social media optimization, digital transaction recording, and simple sales analysis[13].

CONCLUSION

The community service program on digital marketing for maggot cultivation products in Cepogo Village, Boyolali produced a website design, digital product catalog, e-commerce integration flow, admin dashboard concept, and activity documentation. These outputs were developed to help the partner strengthen business identity, organize product information, and facilitate online ordering access for potential customers.

The novelty of this activity lies in the simple integration of website, digital catalog, WhatsApp Business, marketplace, and social media for maggot products based on local potential. The program benefits the partner by improving digital marketing readiness and benefits the community by supporting an environmentally oriented local enterprise. Further mentoring is recommended in product branding, search engine optimization, digital financial recording, and sales evaluation so that the economic impact of the program can be measured more sustainably.

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