

Empowering Home-Based Bakery Industry in Probolinggo through Production Capacity Enhancement and Digital Marketing Training

Andy Rachman^{1, a)}, Faza Wahmuda², and Rachman Arief³

¹Departement of Informatics Engineering, Institut Teknologi Adhi Tama Surabaya, Surabaya, Indonesia

²Department Industrial Design, Institut Teknologi Adhi Tama Surabaya, Indonesia

³Department Information Systems, Institut Teknologi Adhi Tama Surabaya, Indonesia

^{a)}Corresponding author: andy.rach1910@itats.ac.id

ABSTRACT

Micro, small, and medium enterprises (MSMEs) in the bakery sector often face production and marketing limitations that reduce competitiveness. Wijaya Bakery, a home-based bakery in Probolinggo, experienced inefficiency in production and reliance on traditional promotion. This program introduces an empowerment model integrating production technology enhancement, business management training, and digital marketing activation. The approach addresses immediate operational issues while supporting long-term sustainability. Using a user-centered design approach, the program followed four stages: identifying target users, analyzing needs, designing solutions, and evaluation. Interventions included the provision of equipment (oven, mixer, proofer, trolley), training in production and business management, digital marketing workshops, and continuous mentoring. Evaluation relied on production records, social media monitoring, and customer satisfaction surveys. The program increased production capacity by 88.6%, from 700 to 1,320 breads per day, and reduced production time for small breads (2.8 to 1 day) and large breads (5 to 3 days). Training improved partner competence in hygiene, quality control, financial recording, and medium-term planning. Digital marketing activation on Instagram, WhatsApp, and YouTube Shorts raised customer engagement by 20% in two months. A customer satisfaction survey indicated high ratings (>85%) with 100% willingness to recommend products. The integration of production technology, management training, and digital marketing effectively empowered Wijaya Bakery and strengthened its competitiveness. This model offers a replicable approach for similar MSMEs to improve resilience and market reach.

ARTICLE INFO

Article History:

Submitted/Received: 10-12-2025

First Revised: 21 January 2026

Accepted: 25 January 2026

First Available online: 31 January 2026

Publication Date: 31 January 2026

Keyword :

SMEs

Bread Production

Digital Marketing

Community Empowerment

Probolinggo

INTRODUCTION

Currently, Indonesia has formulated a sustainable national development plan while simultaneously implementing programs to improve public welfare (Faizah et al., 2025). The nation's development agenda is structured around three main pillars as outlined in the National Research Master Plan (Rencana Induk Riset Nasional, RIRN) (Saragih et al., 2025). In addition, Asta Cita represents eight national development agendas, one of which emphasizes achieving economic self-reliance through the strengthening of domestic sectors, including micro, small, and medium enterprises (MSMEs) (Lestari et al., 2025). Furthermore, the Sustainable Development Goals (SDGs) encompass 17 objectives categorized into four main pillars: Social, Economic, Environmental, and Governance (Setiawan et al., 2025) (Andini & Boer, 2025).

MSMEs serve as a vital driver of economic development, job creation, and poverty alleviation in both developed and developing countries (Weilbach, 2025). In Indonesia, there are 30,178,617 MSMEs in the non-agriculture and non-fisheries sectors, accounting for approximately 50.7%, while the remainder belongs to agriculture and fisheries (Indonesia, 2025). MSMEs constitute the backbone of the Indonesian economy, contributing 61.9% of the national gross domestic product (GDP) (Abdullah, 2025). On the island of Java—particularly in West Java, Central Java, and East Java—MSMEs play a central role in poverty reduction and economic inclusion through entrepreneurial activities (Wibowo et al., 2025). East Java ranks as one of the largest contributors to the MSME sector in Indonesia, accounting for 25.07% after the Special Capital Region of Jakarta at 29.39% in the first quarter of 2024 (Kominfo, 2024). Indonesia's experience during the COVID-19 pandemic illustrates this significance: while many corporations went bankrupt (Lee & Eom, 2024), and widespread layoffs occurred due to the inability to sustain business operations (Fackler et al., 2024), MSMEs demonstrated resilience and were able to survive the crisis (Canwat, 2024), despite facing considerable challenges overall. In response, the Regional Government of East Java implemented sustainable policies and governance initiatives aimed at fostering people-centered economic development, prioritizing the enhancement of value-added economic activities in tourism through the strengthening and optimization of MSMEs (Susyanti & Pardiman, 2022). One such MSME in East Java is Wijaya Bakery, which specializes in bread production and sales.



FIGURE 1. The Bread Production Process at Wijaya Bakery.

Wijaya Bakery, a micro, small, and medium enterprise (MSME), was established by Inge Dien Safitri in 2023. The bakery is located in Bucor Kulon Village, Pakuniran District, East Java. Wijaya Bakery faces challenges in bread production, particularly in meeting customer demand during peak orders. This limitation arises because the available equipment is insufficient, both in terms of quantity and production

speed, often resulting in order cancellations or prolonged processing times. According to available information, Wijaya Bakery once received an order of up to 1,000 loaves of bread, which required more than one week to complete.

Before receiving the grant, Wijaya Bakery operated with limited production equipment, which constrained both the volume and efficiency of bread production. The lack of adequate facilities often resulted in unmet customer demand, longer processing times, and frequent cancellations of large orders. This condition highlighted the urgent need for technological and equipment support to enhance productivity and competitiveness.



FIGURE 2. Condition of Wijaya Bakery Before Receiving the Grant.

In addition to the production challenges faced by Wijaya Bakery, there is another issue related to marketing. At present, the bakery's market reach is limited only to the local community and the Pakuniran sub-district. This limitation is mainly due to the reliance on conventional marketing methods, namely, through the physical store and word-of-mouth from previous customers. Although Wijaya Bakery already owns Instagram and WhatsApp accounts as marketing tools, these platforms have not been utilized effectively.

The absence of a neon box at Wijaya Bakery limited its visibility to potential customers, as the storefront did not stand out from the surrounding buildings. This condition reduced the effectiveness of marketing efforts, causing the bakery to rely primarily on word-of-mouth promotion and walk-in customers from the local community. The lack of prominent signage highlighted the need for branding and visual marketing improvements to expand market reach.



FIGURE 3. Exterior Condition of Wijaya Bakery Before the Installation of a Neon Box.

Production refers to the process of creating finished goods or semi-finished goods, industrial materials, spare parts, and components (Tambunan et al., 2025). M. Aris Pujiyanto et al., in their study, applied science and technology through the use of a spinner machine for the Safnur MSME, which successfully increased production by 50% and reduced drying time by up to 60% (Pujiyanto et al., 2024). Dani Anggoro et al., in their research, assisted the Telogo Wungu MSME in East Lampung in enhancing production capacity by providing a flour milling machine (300%) and a draining machine (75%), along with marketing digitalization through website optimization with SEO and the use of Google Business Profile (Anggoro et al., 2024). Firdaus Al Maidah et al., in their study, supported Dharma Wanita Persatuan of SMPN 1 Rowokangkung by procuring new machinery, which increased production from 95 products/day to 150 products/day, reflecting a 58% rise (Al Maidah et al., 2024). Nur Irmayanti et al., in their research, provided a rengginang molding machine and a modern oven that improved production capacity by 30% and made the production process more efficient and sustainable (Irmayanti et al., 2024). Ida Bagus Ngurah and Ni Komang Rahayu Widianari, in their study, emphasized that suboptimal production capacity can hinder a company's ability to meet market demand, while improvements in production capacity and energy efficiency significantly affect operational success (Ngurah & Widianari, 2024).

Based on the challenges faced by the partner, this community engagement program integrates production technology interventions, digital marketing training, and quantitative evaluation in the form of increased production and customer satisfaction into a single comprehensive program.

METHOD

In this community engagement activity, the researchers implemented a user-design approach along with production technology interventions, training, and quantitative evaluation, as illustrated in Figure 4.

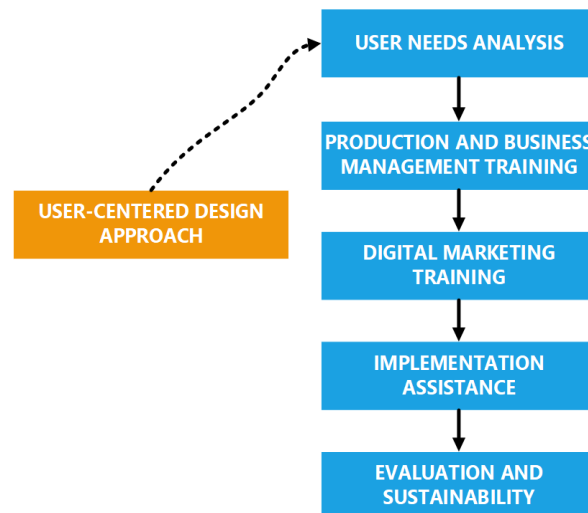


FIGURE 4. Methodological Framework for Community Engagement Implementation.

User Needs Analysis

This section reflects the researchers' understanding of the challenges faced by the partner, Wijaya Bakery. For this activity, the researchers employed a User-Centered Design (UCD) approach. The user-centered approach consists of four main activities (Figure 5), namely: Identify the Target User, Analyze the User Needs, Design the Systems, and Evaluate the Systems.

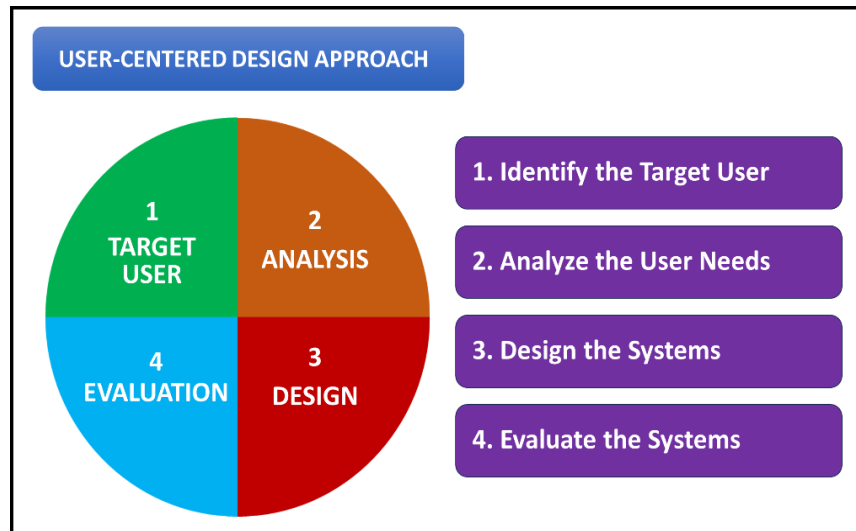


FIGURE 5. User-Centered Design Approach

As shown in Figure 5, although the stages are depicted linearly, the UCD process is iterative, where evaluation outcomes can feed back into earlier design or analysis stages to ensure system relevance and usability.

Identify the Target User

The first step undertaken by the researchers was to identify the target users to be selected as community engagement partners. A total of eight partners were identified, as shown in Table 1, and their eligibility was verified by the researchers based on the requirements set by the Directorate of Research, Technology, and Community Service (DRTPM). The survey results, including location information, year of establishment, number of employees, and key challenges faced, are presented in Table 1.

TABLE 1. Data of Partners Surveyed by the Researchers

No	Partners	City	Year Established	Employees	Problem 1	Problem 2	Distance
1	Widuri Snack	Surabaya	2022	2	Marketing	Management	9.6 Km
2	Asyifah Dimsum	Sidoarjo	2022	4	Production	Marketing	28.9 Km
3	Ebuk Penyetan	Madura	2023	3	Production	Management	48.9 Km
4	Laundry Adinda	Surabaya	2019	4	Production	Marketing	6.1 Km
5	Wijaya Bakery	Probolinggo	2023	10	Production	Marketing	153 Km
6	Dina's Healty	Surabaya	2020	5	Production	Marketing	7.7 Km
7	Roggut & Pastry Lima Sekawan	Surabaya	2022	4	Production	Marketing	10.3 Km
8	Nur Ima Sambel	Lamongan	2023	4	Production	Management	3.7 Km

As shown in Table 1, most of the partners are micro-enterprises established between 2019 and 2023, with fewer than ten employees. The most frequently encountered issues are related to production and marketing, while some partners also face management challenges. Among the eight partners, Wijaya Bakery in Probolinggo has the largest number of employees (10) but is located the farthest from the researchers, approximately 153 km away. The survey results provide an initial overview of the variations in partner characteristics and the problems that serve as the basis for selecting and designing the community engagement program.

Analyze the User Needs

From Step 2.1.1, the data indicated that Wijaya Bakery was the most eligible partner for community engagement, as the primary requirements were that the partner must employ at least 10 employees and be located within 200 km. The next step was for the researchers to conduct a needs analysis of Wijaya Bakery. To achieve this, interviews were carried out with the partner to identify the key challenges experienced by the bakery.

The requirements set by DRTPM include: the partner must employ at least 10 workers, the location must not exceed 200 km from the university, and the partner's problems must fall within the areas of Production, Marketing, or Management.



FIGURE 6. Coordination Between Researchers and the Owner of Wijaya Bakery for Needs Analysis

As shown in Figure 6, the researchers coordinated with Wijaya Bakery regarding the challenges it faces. The interviews revealed that although Wijaya Bakery already possesses production equipment, the quantity remains limited; as a result, the bakery struggles to fulfill large orders during peak occasions such as Maulid Nabi, aqiqah ceremonies, and weddings. The second issue is that Wijaya Bakery still relies on conventional marketing methods, primarily word-of-mouth from previous customers. This information serves as the basis for designing appropriate technological solutions and marketing strategies tailored to the partner's needs.

Design the Systems

In this section, the researchers evaluated the second step, which broadly identified two major problems faced by Wijaya Bakery: production and marketing issues. To address these challenges, the researchers designed a production system solution by providing bread-making equipment (a two-deck oven, a 30-liter mixer, a BFR-G16S proofer, and a 15-tray Getra bread trolley). In addition, a marketing management system was designed, which included the installation of a 90×90 cm neon box, reactivation of Instagram, regular updates on WhatsApp Status, and the activation of YouTube Shorts, TikTok, and Facebook. The proposed solutions are summarized in Table 2.

TABLE 2. Problems and System Solution Design for Wijaya Bakery

Problem	Production System Solution	Marketing System Solution
Production	Procurement of bread production equipment (two-deck oven, 30-liter mixer, BFR-G16S proofer, 15-tray Getra bread trolley)	-
Marketing	-	Installation of a 90×90 cm neon box, activation of Instagram, updates on WhatsApp Status, and optimization of YouTube Shorts, TikTok, and Facebook

As shown in Table 2, the production solution focuses on the procurement of equipment to improve bread capacity and quality, while the marketing solution is directed toward the installation of a neon box and the utilization of social media to expand promotional reach.

Evaluate the Systems

In this section, the researchers evaluated the planned system. This process was carried out after receiving information on the approved community engagement funding, from the proposed budget of IDR 49,924,750, the approved amount was IDR 39,994,000, reflecting a reduction of 19.89%. Based on the approved funding, the researchers and Wijaya Bakery held a meeting to discuss the outcome of the grant approval.

TABLE 3. Finalizing system Issues and solutions for Wijaya Bakery

Problem	Production System Solution	Marketing System Solution
Production	Procurement of bread production equipment (one-deck oven, 15-liter mixer, 15-tray stainless steel proofer, 15-tray bread trolley)	-
Marketing	-	Installation of a 70×70 cm neon box, activation of Instagram, updates on WhatsApp Status, and optimization of YouTube Shorts

As shown in Table 3, adjustments were made to the procurement of bread production equipment in accordance with the grant funds received. In addition, the marketing activities were focused on Instagram, WhatsApp Status, and YouTube Shorts, while the activation of TikTok and Facebook was scheduled for 2026

Production and Business Management Training

In this section, the researchers provided training on production management and business management. Both training programs were designed to address the key challenges faced by the partner, namely, limited production capacity and the lack of effective marketing strategies and business management. The details of the focus and stages of each training program are presented in Table 4.

TABLE 4. Mapping of Training Activities for Wijaya Bakery

Field	Activity Focus	Activity Stages
Production Management	Increasing production capacity, work efficiency, and product quality	1) Analysis of production processes and identification of constraints.
		2) Introduction to production technology (oven, mixer, proofer, bread trolley)
		3) Preparation of production and hygiene SOPs
		4) Quality management (quality control)
		5) Production evaluation through simulation
Business Management	Strengthening marketing, financial management, and business development	1) Business model analysis using the Business Model Canvas.
		2) Digital marketing strategies (Instagram, TikTok, YouTube Shorts, WhatsApp Status)
		3) Basic financial management (transaction recording, cost of goods sold, profit and loss)
		4) Business operations management (employee tasks, inventory, capacity)
		5) Business development planning (sales targets, product diversification, reseller collaboration)

As shown in Table 4, the production management training focuses more on technical aspects and work efficiency, while the business management training emphasizes digital marketing strategies, financial management, and business development. The combination of the two is expected to enhance production capacity while simultaneously expanding the market reach of Wijaya Bakery.

Digital Marketing Training

The researchers provided digital marketing training to assist Wijaya Bakery in boosting promotion and marketing, which had previously been carried out through traditional methods. The details of the digital marketing training are presented in Table 5.

TABLE 5. Details of Digital Marketing Training for Wijaya Bakery.

No	Activity Focus	Activity Stages
1	Introduction to Digital Marketing Basics	1) Mindset of online vs. traditional marketing. 2) The importance of branding and content consistency.
2	Social Media Optimization	1) Activation and improvement of profiles (Instagram, YouTube Shorts, WhatsApp). 2) Posting strategies (scheduling, hashtags, visual content).
3	Digital Content Creation	1) Product photography and videography techniques. 2) Basic copywriting (promotional captions, product storytelling).
4	Promotion & Engagement Strategies	1) Methods to increase interaction (replying to comments, Q&A). 2) Utilization of paid advertisements (YouTube Ads and Instagram Ads).

As shown in Table 5, this training not only equipped the partner with a fundamental understanding of digital marketing but also provided practical skills such as social media account optimization, creative content creation, and the utilization of paid advertisements. Consequently, the partner is expected to expand its promotional reach and enhance business competitiveness.

Implementation Assistance

The mentoring process was carried out by the researchers for the partner (Wijaya Bakery) starting in May 2026. Every activity undertaken by the partner was consistently reported to the researchers to obtain feedback, particularly regarding production quality and marketing effectiveness. The details of the mentoring provided are presented in Table 6.

TABLE 6. Details of Implementation Mentoring for Wijaya Bakery

No	Activity Focus	Activity Stages
1	Production Problems	<ol style="list-style-type: none"> 1) Coordination on the utilization of the production equipment purchased for bread production at Wijaya Bakery. 2) Mentoring for the development of premium bread products at Wijaya Bakery. 3) Mentoring on hygiene practices in bread production at Wijaya Bakery. 4) Mentoring to improve the taste quality of bread at Wijaya Bakery. 5) Mentoring for the creation of new bread products aligned with consumer trends. 6) Mentoring through benchmarking against similar products from well-known brands (e.g., JCO, BreadTalk, Dunkin' Donuts, Pizza Hut, and Holland Bakery)
2	Marketing Problems	<ol style="list-style-type: none"> 1) Mentoring to ensure product delivery is timely and consistent with commitments made to customers. 2) Mentoring for the creation of a neon box as a promotional medium. 3) Mentoring for updating WhatsApp Status at least every two days. 4) Mentoring for utilizing Instagram to update information every two days. 5) Mentoring for updating information through YouTube Shorts. 6) Utilization of paid advertisements (YouTube Ads and Instagram Ads). 7) Mentoring for the design of bread boxes and bread bags for Wijaya Bakery. 8) Mentoring for the development of a web-based sales application for Wijaya Bakery. 9) Mentoring for the development of a sales recording application.

As shown in Table 6, the mentoring covered not only production aspects such as quality and hygiene but also digital marketing and information system development. This approach aims to enable Wijaya Bakery to enhance its competitiveness by improving internal processes while simultaneously expanding its market reach.

Evaluation and Sustainability

The final stage in this methodology is Evaluation and Sustainability. The evaluation was conducted to assess the extent to which the community engagement program contributed to enhancing the partner's production capacity and marketing effectiveness. The evaluation process included quantitative measurements, such as production volume before and after the intervention, frequency of digital promotion, and the level of customer engagement on social media. In addition, qualitative evaluation was carried out through interviews and discussions with the partner regarding perceived challenges and successes.

The sustainability aspect focused on ensuring that the outcomes of the program would be maintained after the mentoring activities ended. This included the preparation of production SOPs, the appointment of internal personnel responsible for social media operations, and the development plan for new products aligned with market trends. Through this approach, the partner is expected not only to gain short-term benefits but also to establish a strong foundation for independently continuing improvements in production capacity and marketing.

RESULTS AND DISCUSSION

The results of the community engagement program conducted in collaboration with Wijaya Bakery demonstrated significant improvements in both production and digital marketing aspects.

Improvement of Production Capacity

Following the procurement of new equipment, including a one-deck oven, a 15-liter mixer, a 15-tray proofer, and a bread trolley, bread production capacity increased from 700 to 1,320 loaves per day, representing an improvement of approximately 88.6%. This demonstrates that the production technology intervention had a significant impact on business efficiency.

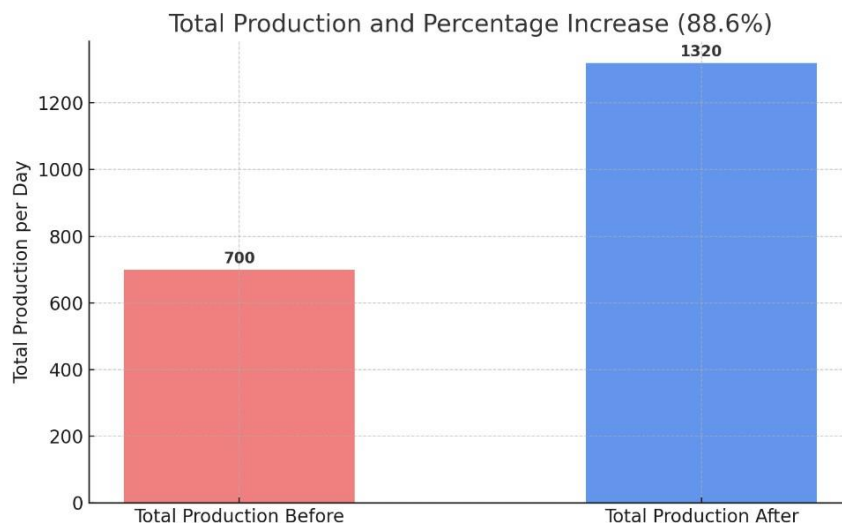


FIGURE 7. Increased Production Capacity of Wijaya Bakery after the Intervention of Production Equipment.

The improvement in production capacity is consistent with the findings of Pujiyanto et al. [16], who reported that the provision of production equipment for food-related MSMEs could increase daily output by more than 70%. Similarly, Irmayanti et al. [19] demonstrated that simple technological interventions, such as high-capacity mixers and modern ovens, could accelerate the production process and result in

more consistent product quality. Thus, the 88.6% increase achieved by Wijaya Bakery confirms that strengthening the production aspect through the provision of appropriate equipment is an effective strategy for enhancing the competitiveness of small-scale bakery MSMEs.

In addition to the increase in overall capacity, an analysis was also conducted on the types of products produced. A comparison of small bread and jumbo bread production before and after the provision of equipment, as well as production time efficiency, is presented in Figure 8.

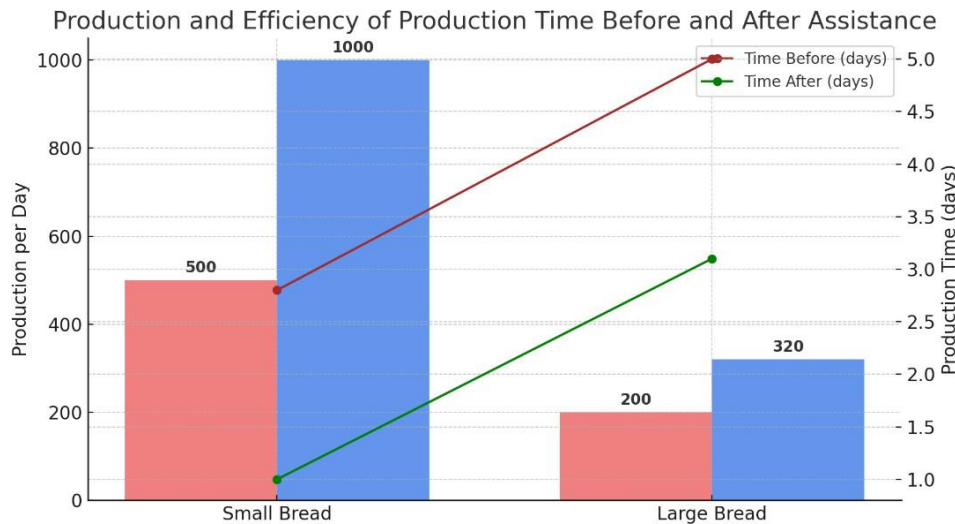


FIGURE 8. Comparison of Production and Time Efficiency Before and After Mentoring

As shown in Figure 8, the production of small bread increased from 500 to 1,000 units per day, while jumbo bread rose from 200 to 320 units per day. Production time also became more efficient, with the completion of small bread reduced from 2.8 days to just 1 day, and jumbo bread from 5 days to 3 days. This indicates that the equipment intervention not only enhanced production capacity but also improved the efficiency of the production process.

Improvement of Production and Business Management Competencies

Production management training provides partners with new insights into the importance of hygiene, quality control, and capacity planning. Meanwhile, business management training equips partners with skills in basic financial management and operational strategies. Partners are able to develop medium-term business growth plans, including new product diversification. These outcomes demonstrate that management training not only enhances internal capacity but also fosters a more strategic entrepreneurial mindset. A summary of the training achievements is shown in Table 7.

TABLE 7. Summary of Production and Business Management Training Outcomes

No	Training Focus	Partner's Achievements
1	Production Hygiene	The partner began implementing cleanliness standards in the production area and equipment.
2	Quality Control	The partner understood the importance of testing bread samples before distribution.
3	Capacity Planning	The partner was able to calculate raw material requirements according to production targets.
4	Financial Management	The partner started simply recording daily income and expenses.
5	Business Development Strategy	The partner developed a medium-term plan for product diversification.

As shown in Table 7, the production and business management training not only provided conceptual understanding but also encouraged tangible changes in the partner's operational practices. The implementation of hygiene and quality control improved the consistency of product quality, while simple financial recording became the foundation for business transparency. In addition, the formulation of a product diversification plan indicated that the partner has begun to develop a medium-term vision for business growth. Thus, the training proved effective in strengthening the foundation of internal management while fostering a more strategic entrepreneurial mindset.

Digital Marketing Transformation

Before the program, Wijaya Bakery relied solely on word-of-mouth promotion. After the digital marketing training, the partner reactivated Instagram, WhatsApp Status, and YouTube Shorts. These activities were scheduled regularly, at least every two days, featuring content such as product photos, customer testimonials, and short videos of the production process. Customer engagement showed improvement, as evidenced by a 20% increase in Instagram followers within the first two months. This approach aligns with the study of Maulana et al. [5], which emphasizes the importance of digital marketing in expanding the market reach of MSMEs.

Continuous Mentoring and Evaluation

During the mentoring period, the partner received feedback on aspects such as taste quality, packaging design, and benchmarking against products from well-known brands such as JCO and BreadTalk. Joint evaluations indicated that consumers were more satisfied with the improved taste and new packaging. Sustainability was ensured through the development of production SOPs, the appointment of internal personnel responsible for social media, and plans for the activation of TikTok and Facebook in 2026. This demonstrates that the program not only provided short-term benefits but also established a foundation for business sustainability.

Customer Survey Result

In addition to conducting quantitative evaluations of production and marketing, the researchers also carried out a partner satisfaction survey. A total of 10 questions were administered to 33 customers of Wijaya Bakery in Bucor Kulon, Pakuniran, Probolinggo. The survey results are presented in Figure 9.

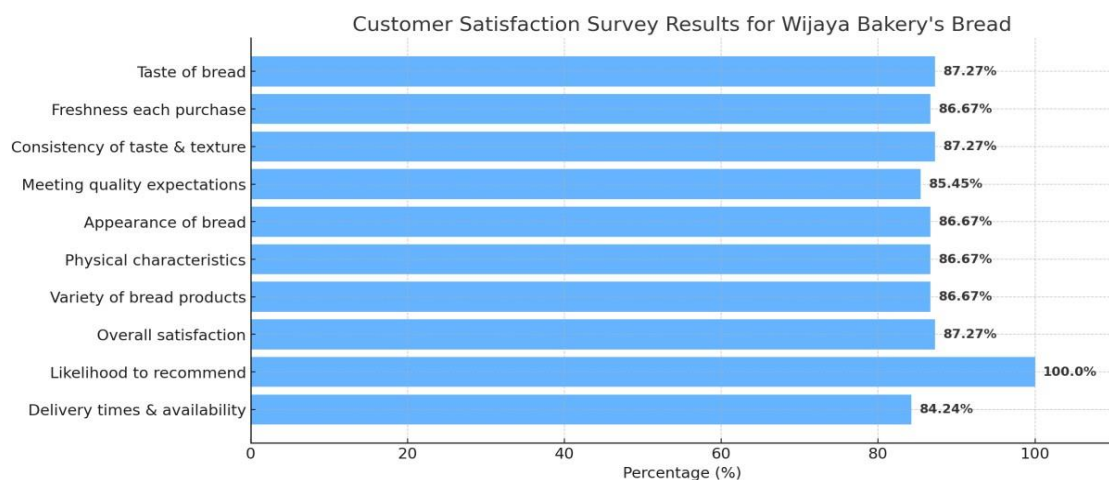


FIGURE 9. Wijaya Bakery Customer Satisfaction Survey.

As shown in Figure X, customer satisfaction with Wijaya Bakery's bread products indicated positive results. The highest-rated aspect was the likelihood to recommend (100%), which demonstrates that all respondents were willing to recommend the products to others. High levels of satisfaction were also recorded for taste and texture consistency (87.27%) as well as overall satisfaction (87.27%). Meanwhile, the lowest scores were observed in delivery timeliness and product availability (84.24%), suggesting that there is still room for improvement in the distribution system. These findings show that the mentoring program successfully enhanced product and service quality while also strengthening customer loyalty.

Overall, the program results indicate that the combination of production technology interventions and digital marketing training was effective in enhancing the competitiveness of small-scale bakery MSMEs. The main challenges that remain are the partner's consistency in managing social media and limited capital for new product development. Nevertheless, this activity model has proven to be replicable for other MSMEs with similar characteristics.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The community service program carried out with Wijaya Bakery successfully demonstrated that the integration of production capacity enhancement and digital marketing training can significantly strengthen the competitiveness of home-based SMEs. The provision of appropriate production equipment increased daily bread output from 700 to 1,320 units, representing an 88.6% improvement, while also reducing production time for both small and large bread. Training in production and business management improved partner competencies in hygiene, quality control, financial recording, and medium-term business planning. Digital marketing training enabled Wijaya Bakery to reactivate social media platforms, resulting in greater customer engagement and expanded market reach. Continuous mentoring and evaluation further supported product quality improvement and sustainability, with customer satisfaction reaching an average of above 85% and a strong willingness to recommend (100%).

Overall, this program proves that a combined approach of technology intervention, management training, and digital marketing assistance is effective in empowering SMEs. The model can be replicated for other micro and small enterprises with similar characteristics to enhance resilience and competitiveness in the local economy.

Recommendation

Based on the results achieved by Wijaya Bakery, several recommendations can be applied to enhance sustainability and expand the impact of this program on other micro-enterprises. Firstly, the successful approach in improving production capacity and digital marketing should be implemented in other micro-enterprises facing similar challenges. This will help them strengthen their competitiveness in an increasingly competitive market. Additionally, to ensure the sustainability of the results, it is crucial to continue improving social media management. While there has already been progress, consistency in managing social media accounts such as Instagram and WhatsApp Status, as well as expanding reach on other platforms, will significantly help maintain and broaden customer engagement.

It is also important to support businesses by providing further training in digital marketing management, considering the existing budget constraints. Allocating additional resources for paid advertisements or collaborating with local influencers could be an effective step in accelerating visibility and engagement with customers. Lastly, alongside the product diversification that has already begun, businesses need to

continue developing new products that align with market trends in order to stay relevant and appealing to consumers. This will expand the market and provide an added competitive edge. By following these recommendations, SMEs can improve their long-term performance and adapt to the evolving needs of the market.

ACKNOWLEDGMENTS

The researchers would like to express their gratitude to YPTS and the Institut Teknologi Adhi Tama Surabaya (ITATS) for their continuous support of the DRTPM Community Service Grant under the Community Partnership Empowerment Scheme. This grant was funded by the Directorate of Research, Technology, and Community Service under DIPA Number: SP DIPA-139.04.1.693320/2025, Revision 04, dated April 30, 2025, with the Community Service Grant Contract Number 078/LL7/DT.05.00/PM/2025 dated May 28, 2025, and Contract Number 01/05.PKM/LPPM/ITATS/PM/2025 dated May 28, 2025.

REFERENCES

- Abdullah, A. S. A. (2025). The Impact of E-Commerce on the Growth of MSMEs in Indonesia. 9th International Conference on Accounting, Management, and Economics 2024 (ICAME 2024), 3126–3130.
- Al Maidah, F., Rizki, V. L., & Meilan, R. (2024). Peningkatan Kapasitas Produksi dan Diversifikasi Produk Melalui Mesin Baru dan Inovasi Menu Sehat. *TEKIBA: Jurnal Teknologi Dan Pengabdian Masyarakat*, 4(2), 184–194.
- Andini, O. G., & Boer, M. R. K. (2025). Indonesia's Safeguarding of Human Rights to Achieve Sustainable Development Goals: Insights from Australia's Experience. *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 3(1), 1–28.
- Anggoro, D., Darmayanti, E. F., Sholihah, S., Pratama, A. A. B., & Wahyuningrum, A. (2024). Peningkatan Kapasitas Produksi dan Digitalisasi Pemasaran UMKM Telogo Wungu untuk Mendorong Pertumbuhan Ekonomi Desa Sumbergede, Lampung Timur. *JURPIKAT (Jurnal Pengabdian Kepada Masyarakat)*, 5(4), 1567–1580.
- Canwat, V. (2024). COVID-19-related supply chain disruptions: Resilience and vulnerability of micro, small and medium enterprises. *Cogent Business & Management*, 11(1), 2315691.
- Fackler, D., Schnabel, C., & Stegmaier, J. (2024). Personnel adjustments during the Covid-19 pandemic: Did co-determination make a difference? *Journal for Labour Market Research*, 58(1), 4.
- Faizah, A. N., Nurkomariyah, R., Denova, M. A. D., & Mas'odi, M. (2025). Peran Literasi Dalam Pembangunan Nasional. *Jurnal Pengabdian Masyarakat (ABDIRA)*, 5(3), 286–292.
- Indonesia, K. (2025, September). UMKM Indonesia. <https://kadin.id/data-dan-statistik/umkm-indonesia/>
- Irmayanti, N., Muzakki, M., & Nugroho, W. (2024). Peningkatan Kapasitas dan Kualitas Produksi Usaha Rengginang Berbasis Green Economy: Menuju Industri Kreatif Yang Ramah Lingkungan. *Prosiding Konferensi Nasional Pengabdian Kepada Masyarakat Dan Corporate Social Responsibility (PKM-CSR)*, 7.

- Kominfo, D. (2024, June 4). Jatim Penyumbang Perekonomian Terbesar Kedua di Pulau Jawa. <https://kominfo.jatimprov.go.id/berita/jatim-penyumbang-perekonomian-terbesar-kedua-di-pulau-jawa>
- Lee, K.-S., & Eom, J. K. (2024). Systematic literature review on impacts of COVID-19 pandemic and corresponding measures on mobility. *Transportation*, 51(5), 1907–1961.
- Lestari, N. W. F. A., Suwandi, S., Turini, T., AKbari, S., Gitama, G. N. D. P., & Akbari, S. (2025). Digitalization of Women's Entrepreneurship In Cirebon City Through Pos Application Innovation In Supporting Asta Cita. *Journal of Advanced Multidisciplinary Studies*, 1(2), 329–340.
- Ngurah, I. B., & Widiyanti, N. K. R. (2024). Strategi Peningkatan Kapasitas Produksi dan Efisiensi Energi Pada Frozen Fruit Di Pt. Bali Food Industry. *Prosiding Seminar Nasional Pengabdian Masyarakat (SENEMA)*, 3(2), 901–907.
- Pujiyanto, M. A., Kinding, D. P. N., Solekan, M., & Setyorini, F. A. (2024). Penerapan Iptek Dalam Peningkatkan Kapasitas Produksi Keripik Pisang Pada UMKM Safnur Di Desa Lengkong Kecamatan Rakit Kabupaten Banjarnegara. *Manfaat: Jurnal Pengabdian Pada Masyarakat Indonesia*, 1(3), 60–73.
- Saragih, J., Aldyas, A. J. A., Sidabutar, M. N. A., & Purnawan, Y. (2025). Peran dan Tantangan Pemerintah Kabupaten Simalungun dalam Keterlibatan Korporasi Pada Kebijakan Inovasi Nasional. *Jurnal Ilmiah METADATA*, 7(1), 230–244.
- Setiawan, R. B., Sholikah, M., & Azizi, R. (2025). Pengendalian Kejahatan Korupsi dan Sustainable Development Goals di Indonesia. *Jurnal Ekonomi, Manajemen, Akuntansi Dan Keuangan*, 6(1).
- Susyanti, J., & Pardiman, P. (2022). Pengembangan Ekonomi Kreatif di Jawa Timur. *Jurnal Pusat Studi Jawa Timur*, 1(2).
- Tambunan, H. N., Haribowo, R., Akbar, A., Munizu, M., & Pandiangan, S. M. T. (2025). Operational Management for Business Production Processes. *International Journal of Education, Social Studies, and Management (IJESSM)*, 5(1), 161–169.
- Weilbach, N. (2025). Business Sustainability: Support Agencies' Perspectives on the Limitations SMMEs Face in the Northern Cape. *International Journal of Economics, Business and Management Research*, 9(8).
- Wibowo, A. N., Subiyantoro, H., Sugiyanto, S., & Pujiastuti, P. (2025). Factors Influencing the Growth of MSMEs and Their Impact on Employment Opportunities and Income Inequality in Java Island (2017–2019). *International Journal of Informatics, Economics, Management and Science*, 4(2), 114–122.