Available online at: http://e-jurnal.lppmunsera.org/index.php/parahita
Wikrama Parahita: Jurnal Pengabdian Masyarakat
p-ISSN 2599-0020, e-ISSN 2599-0012

The Improvement of Quantity, Production, and the Marketing Strategy of the Products by Poklahsar Merta Nadi in Kutuh Village, Badung Regency, Bali Province

I Gede Mugi Raharja[1], I Wayan Mudra[2], I Putu Suparthana[3], I Nyoman Larry Julianto[1*], Ni Putu Elvian Andreani[4]
[1]Master's Program in Design, Institut Seni Indonesia Denpasar, Jl. Nusa Indah, Sumerta, Bali 80235, Indonesia
[2]Master's Program in Art, Indonesian, Institut Seni Indonesia Denpasar, Jl. Nusa Indah, Sumerta, Bali 80235, Indonesia
[3]Department of Food Technology, Universitas Udayana, Jl. Raya Kampus Unud, Jimbaran, Bali 80361, Indonesia
[4]School of Design, Universitas Binus Malang, Jl. Araya Mansion No. 8 - 22, Malang Regency, East Java 65154, Indonesia

Article Information

Article history

Received: September 30, 2025
Revised: November 29, 2025
Accepted: November 30, 2025

Keywords: Cottoni Seaweed; Poklahsar Merta Nadi; Product Marketing

Abstract

Poklahsar Group in Kutuh Village, South Kuta District, Badung Regency, as the producer of "Demen Mie" made based on Eucheuma cottonii, faces two main obstacles: the noodle-making process is still manual, resulting in low production capacity, and the company profile and digital promotional media are not yet effective. This community service program offers two solutions: (1) As a result, the noodle maker machine was successfully modified. (replacement of pulley set, 1.25 mm blade, food-grade lubricant, and SUS304 dough container) to speed up the process and improve hygiene; and (2) redesign of digital promotional media and company profile (mascot/visual identity, new packaging, x-banners, promotional videos, and Instagram content). The implementation results showed that daily capacity increased from around 50 to around 200 packages/day, and monthly output rose from 5 kg to 10–12 kg of processed seaweed. Improved hygiene was achieved through the use of SUS304 components and partial automation of the cutting/shaping stage. On the marketing side, the new brand identity and promotional materials strengthened visual consistency and digital content distribution readiness. These findings indicate that production process improvements based on machine modifications, combined with visual branding reinforcement, are effective in accelerating production, improving hygiene, and strengthening the marketing performance of marine-based MSMEs.

*Corresponding Author

I Nyoman Larry Julianto
E-mail: larry_smartdesign@ymail.com

INTRODUCTION

Poklahsar Merta Nadi, which belongs to Micro, Small and Medium Enterprises, in Kutuh Village, South Kuta District, Badung Regency, as the target partner and the producer of 'Demen Mie', has been ratified based on the Decree of the Head of Kutuh Village No. 53 Year 2021. This partner group produces the noodle product from the cottoni seaweed, as a choice of farmers whose quality is well known (Fathoni & Arisandi, 2020). The partner also has a skill in processing the *cottoni* seaweed to make the ready-to-eat noodle, without reducing its nutrient level or quality and adding preservatives.

Despite its potential, Poklahsar Merta Nadi faces several interrelated challenges that hinder its business growth and product competitiveness. From the production aspect, the noodle-making process is still conducted manually using outdated equipment, resulting in low productivity, high labor dependency, and inconsistent hygiene standards. The absence of food-grade components and limited mechanization increases the risk of contamination and extends the production cycle time. In addition, the packaging process often involves direct hand contact, which reduces efficiency and hygiene quality. From the marketing and communication aspect, the partner's promotional tools—such as product packaging, company profile, and social media content—lack professional visual design, brand consistency, and digital engagement strategies. The current promotional materials fail to reflect the product's unique value as a healthy seaweed-based noodle from Bali. These limitations make it difficult for Poklahsar Merta Nadi to expand its market beyond

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

Bali, despite receiving inquiries from other regions such as Jakarta, Sulawesi, Sumatra, and Papua. Therefore, a comprehensive intervention is needed to modernize the production system and strengthen digital branding to improve both capacity and market competitiveness.

The quality of the cottoni seaweed is not yet supported *by* time-saving production equipment (Kusakabe, 2022) and an eye-catching package to attract consumers (Calver, 2007). Production with the slow machine has been an obstacle *to saving* labor costs and the packaging time. Hygiene is another issue when the package frequently comes into contact with *hands.*

Partner has been capable of producing the cottoni seaweed noodle, which has been packaged and marketed, limited to Bali. The capability of the partner in processing and packaging the noodles made of the cottoni seaweed was still low, at 5 kg every month, while the market demand was quite high. Thus, it required a smart solution to solve the production and hygiene issues. For another issue, the design of the partner's promotion media was not yet optimal based on the development of digital-based social media (Ellicott, 2010). The proposing team observed that the design of the partner's company profile did not yet apply the impressive design principle, so the visual branding and media used to promote the Poklahsar product, 'Demen Mie' in particular, had to be comprehensively reviewed.

Partner's issues in the Community Partnership Empowerment program are expected to be settled. The first issue is the implementation of modern technology to produce noodles with faster rotation, so it must be modified to provide time efficiency and to maintain products' hygiene of the products during their production process. This issue is expected to make partners capable of meeting the market demand, which is quite progressive. The productivity is expected to increase from 5 kg to 10-12 kg of the processed cotonni seaweed with some variants of Demen Mie products. The second issue is that the visual branding of the company profile design in Demen Mie by Poklahsar Merta Nadi is still far from the application of the impressive Visual Communication Design principle (Bian & Ji, 2021; Lee, 2021).

The focus of the solutions offered seeks to solve two partners' issues. The first aspect is Production Aspect and Business Management, improvement of product's hygiene and quantity and human resource effectiveness as the labour for production and the packaging, thus affecting the saving of production cost. Procurement of the noodle maker machine, which has been modified, is one of the solutions to increase daily or monthly production quantity. The second is the marketing aspect, along with the quality of the Promotion Media Design, which is more professional and digital-based, and a more communicative company profile to persuade the potential buyers towards the partner's credibility.

The focus of the partner's problem-solving involves the Proposing Team with the relevant knowledge as follows: Design (related to the visual branding and work ergonomics), Food Technology (the digital-based marketing strategy, insight on the packaging, and production management), and product (related to modification on the noodle maker machine). The purpose of the SCP implementation is problem-solving related to the production quantity increase because it will be capable of completing the purchase order faster for the customers (Anderson, 2020; Ku et al., 2016).

The target market all this time is Bali, but it has met the order since last year outside of Bali Island, namely Jakarta, Sulawesi, Sumatra, and Papua. The marketing outside Bali is a demand from the partner's acquaintances, providing their recommendation about taste, quality, and benefits of consuming the instant noodle made of cotonni seaweed. Promotional media is an important aspect after improving production and the packaging through the modification of the noodle maker machine, which is faster and automatic. A higher production quantity will improve the standard of living of the cotonni seaweed farmers in the southern beach, Kutuh Village, South Kuta. Another purpose is to expand the market reach by persuading the prospective consumers towards the Demen Mie product from Poklahsar group through the improvement of design quality in the promotion media (visual branding), company profile in particular (Purhita & Rudjiono, 2024; Selvamuthukumaran, 2021).

In the context of SDGs, important aspects are as follows: 1) Healthy and Prosperous Life; cotonni seaweed is known for its nutrients, thus having benefits for maintaining body metabolism. Consuming 'Demen Mie' is a step to realize the healthy life for society and to prosper the seaweed farmers; 2) Responsible Consumption and Production; noodle product does not contain any dangerous preservatives which can harm health and it is packaged by considering the food-grade aspect, so the noodle is safe to eat as an alternative of rice in certain situations and conditions (Adejuwon et al., 2020; Perța-Crișan et al., 2023). Meanwhile, Asta Cita improves the employment opportunities, encourages entrepreneurship, develops the creative industry, and continues the infrastructure development.

This SCP program focuses on efforts to encourage the entrepreneurship progress in the scope of Micro, Small and Medium Enterprises to be more creative and competitive and to open better work opportunities (Dana et al., 2023). Efforts are carried out by improving the product quantity through machine modification (Filip & Marascu-Klein, 2015) and quality of the package design to be more

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

impressive (Vasileiadis et al., 2019). The focuses of RIRN are food and research related to food self-sufficiency.

In the case of MBKM, the involvement of the students from the Indonesian Art Institute, Bali, in SCP, they are given the opportunity to learn outside the university to improve their knowledge for solving cases (the case method and project-based), which is very significant. SCP improves the quality of the Main Performance Indicator for the college. Students get experience outside their university (IKU 2), which can be converted into at least 6 SCS. The work of lecturers is used by the community (IKU 5), namely the scientific output from lecturers and applied in society related to knowledge concerning the improvement of production quantity and the product marketing strategy; and collaborative, participative class (IKU 7). The course uses the case-solving learning method because SCP implementation makes students study in a real environment.

The purpose of this community service program is to empower Poklahsar Merta Nadi in Kutuh Village by improving both the production capacity and marketing capability of their seaweed-based noodle product, "Demen Mie." Specifically, the program aims to (1) enhance production efficiency and hygiene through modification of the noodle-making machine, (2) strengthen the partner's digital marketing and visual branding to increase product competitiveness, and (3) provide practical learning opportunities for students through real-world case and project-based experiences in the SCP framework. The expected outcomes are higher production quantity, improved product hygiene, a more professional promotional identity, and expanded market reach. The program also contributes theoretically to the application of creative entrepreneurship in community empowerment and practically to the development of sustainable MSMEs in the marine-based food sector.

MATERIALS AND METHODS

Implementation of SCP in the Kutuh Village of Badung Regency used the important materials by applying the creativepreneur method.

Materials

Materials used in this research were a pulley set, a 1.25 cm knife, a stainless steel dough container, and food-grade lubricant for modifying the noodle maker machine to work faster and automatically, thus improving daily production quantity. Cottoni seaweed was used to test the noodle maker, which has been modified.

Methods

This SCP program applied the creativepreneur-based community service method, which is structured into three major phases aligned with the SCP template: (1) Pre-Implementation, (2) Implementation, and (3) Evaluation. This method integrates ideation, co-creation, prototyping, and marketing validation to address the partner's main problems in production efficiency, hygiene, and digital marketing.

In the stage Pre-Implementation (Problem Identification, Baseline Measurement, and Co-Creation), the team conducted direct observations, semi-structured interviews, and production-flow analysis to identify the root causes of the partner's problems. Baseline data were collected, including cycle time per noodle batch, daily production capacity (50 packs/day), monthly processed seaweed output (5 kg/month), number of hand-contact points, and the condition of existing promotional materials. A co-creation session with the partner was carried out to determine priorities and agree on solution pathways: (a) machine modification with food-grade components, and (b) redesign of digital promotional media. This phase aligned the partners' needs with the expected SCP outcomes.

The stage Implementation includes modification of the KT945 noodle machine, including changing the pulley set, installing a 1.25 mm blade, adding food-grade lubricant, and replacing the dough container with SUS304 stainless steel. Trial runs were completed until stable production performance was achieved. Training was conducted to prepare operators for safe machine operation, sanitation SOPs, and an improved packaging workflow. In parallel, the visual branding and digital marketing intervention covered mascot creation, company profile redesign, new packaging development, X-banner layouting, promotional video production, and Instagram content systematization (grid, typography, color palette, CTA strategy). All designs were aligned with Visual Communication Design principles.

The stage evaluation (Production Output, Hygiene, and Digital-Media Performance) followed a pre–post approach. Production indicators included cycle time reduction, daily production increase (achieving ±200 packs/day), and monthly output increase (from 5 kg to 10–12 kg). Hygiene evaluation focused on the reduction of hand-contact points, improved sanitation SOP scores, and verification of food-grade components (SUS304). Digital marketing evaluation used Instagram Insights (reach, impressions, engagement rate, interactions), expert review of design quality, and partner-reported order increases. Between June–September 2025, monthly orders increased to 18–20 kg, showing a 70–100% growth after implementation. Qualitative feedback from customers and resellers was also used to validate branding effectiveness.

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

A descriptive pre–post comparative analysis reports means, standard deviations, and percentage changes for indicators in domains (A) and (B). Simple visualizations (run charts/bar charts) display weekly trends. Photo/video documentation serves as process evidence and supports triangulation between technical improvements and design/marketing enhancements.

Participation of the Poklahsar Merta Nadi as the partner, in empowering the production of *cottoni* seaweed from local farmers around the partner's location and the involvement of region and the related government, were truly helpful in supporting the implementation stages because the licensing process from the head of Kukuh Village and the openness of villagers from Kukuh Village, South Kuta District, Bandung Regency in approving the SCP implementation, was an indicator of success in SCP. For the Partner Commitment, besides actively contributing to real action, they also contributed to support the funding for modifying the instant noodle machine, to get a more optimum modification.

RESULTS AND DISCUSSION

Machine Modification

Results in SCP implementation in Kukuh Village were classified into two groups based on the solutions approved by the partners. Before the redesign, the existing noodle-making machine showed several operational limitations that directly hindered production efficiency and hygiene. The cycle time per batch was long, causing bottlenecks and preventing the partner from meeting increasing market demand. The machine also required frequent manual intervention along the dough-feeding and cutting stages, resulting in multiple hand-contact points that reduced hygiene consistency and increased contamination risk. Furthermore, several components—such as the original pulley ratio, non–food–grade lubricant, and non-stainless-steel dough container—were not adequate to support food-grade processing standards. These shortcomings made the machine unsuitable for achieving higher production output and safe handling of cottonii seaweed dough. For these reasons, a redesign was necessary to improve speed, stabilize material feeding, reduce manual contact, and ensure compliance with food-grade requirements. The modification of the pulley set, blade configuration, lubricant, and SUS304 container directly addressed these issues and enabled significant improvements in production capacity and hygiene.

Improvement on quantity, hygiene, product quality, and packaging quality in Demen Mie (instant noodle) through the modification of the noodle maker machine to be faster and automatic, and the assistance in using the machine. Modification of the KT945 noodle machine by replacing its pulley set, 1.25mm knife, food-grade lubricant, and dough container, using the SUS304 stainless steel (for the product's hygiene). This machine is capable of making several noodles, namely straight noodles, curly noodles, flat noodles, chicken noodles, wide noodles, *udon*, and so forth (Bayoyan Teknik, 2025). After modifying its machine, daily production capacity can be increased from 50 packages to 200 packages as ordered (Fig. 1).

Fig. 1. Pulley set replacement process

The replacement of the pulley set and the 1.25 mm knife set, which reduced the cycle time and stabilized material feeding. The added guard also lowers hand-contact points along the tray and transfer path. In short, mechanical modification plus a revised material flow layout are the keys to both acceleration and improved hygiene.

The evaluation stage for the modified machine covered both production capacity and hygiene performance. Capacity was measured through daily output comparison before and after modification, while hygiene was evaluated using several parameters: (1) reduction in the number of hand-contact points along the production flow, (2) cleanliness of food-contact surfaces based on a sanitation SOP checklist scored from 1 to 5, (3) verification that all food-contact components—such as the dough container, blade, and lubricant—met food-grade standards, and (4) operator compliance with handwashing and equipment-cleaning procedures. These indicators demonstrated a significant improvement in hygiene consistency following the machine redesign.

The redesign of both the production machine and the promotional media followed a structured process that combined partner requirements with the team's technical and design analysis. The stages began with an initial needs assessment through interviews, field observation, and workflow mapping to identify bottlenecks in cycle time, hygiene issues, and limitations in partner branding. Based on this

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

assessment, a co-creation and discussion session was conducted with the partner to define priorities for redesign, including the modification of mechanical components, improvement of hygiene standards, and enhancement of brand communication. Prototyping was then carried out in two domains: (1) the modified KT945 machine, which underwent several trial runs until stable performance was achieved, and (2) the visual branding and digital media outputs, which were tested for readability, consistency, and alignment with the identity of Demen Mie. All design outputs—machine modification, company profile, packaging, Instagram content, X-banner, and promotional video—were therefore not arbitrary, but the result of iterative collaboration between the implementation team and the partner, grounded in the partner's needs and validated through repeated feedback cycles.

Visual Branding Design

Redesigning the company profile, digital-based promotion media and Visual Branding Design as an effort to make use of social media for promotion. The purposes of the redesign of the company profile are as follows: 1) Creation of the visual identity (corporate identity) and digital-based promotion media with the improved quality and the principle of Visual Communication Design; 2). Improving the capability to create an idea of creative designing and to market the featured product through online-based media (social media); 3). The addition of Visual Communication Design Media as a promotional aspect, which is impressive, aesthetic, and expansive; 4) The increasing sales of the Demen Mie product (instant noodle) from Poklahsar Merta Nadi, which is quantitatively measured; and 5). The Letter of Creation Record (Copyright).

For the redesigned promotional media and visual branding, a user satisfaction assessment was conducted using a simple Likert-scale survey (1–5) involving consumers and local buyers. Respondents evaluated both the old and new designs in terms of clarity, visual appeal, readability, information completeness, and perceived product credibility. The new design scored higher across all aspects (average 4.3/5 compared to 2.8/5 for the old design), indicating improved audience engagement and stronger brand perception. These results confirm that the redesign not only enhanced visual identity but also increased user satisfaction compared to the previous materials.

Designing of the Mascot for "Demen Mie" produced by Poklahsar Merta Nadi

Designing the visual identity (corporate identity) for "Demen Mie" product, which is a mascot. Mascot is an element of (pictorial mark) from brand identity, a personification of the brand in a certain character with characteristics and specificity representing the brand (Lauwrentius & Fianto, 2015). The mascot "Demen Mie" was inspired from the seaweed as the main ingredient of Demen Mie. Inspiration from seaweed can be seen from its wavy hair, resembling seaweed in water. The wavy hair moves freely following the seawater flow. A human character wearing a blue top as the representation of seawater color, combined with a light yellow belt resembling the sunlight penetrating the seawater. The lower part is white with a green wave motif, imitating the texture of seaweed patterns in the seabed (Fig. 2).

Fig. 2. Mascot for "Demen Mie" produced by Poklahsar Merta Nadi

Designing Instagram Feed

The Instagram feed is a feature on the Instagram home page with posts from Instagram users. These posts can be photo or video (Mittal et al., 2017). The Instagram feed will not be lost, unless it is deleted or archived by the user. In designing the Instagram feed, the visual content structure was shown consistently with the identity of Demen Mie brand, a healthy noodle business primarily made of seaweed. Every post was designed by combining product photography and bold typography to imply the taste and uniqueness of the product.

Feed was compiled in every 1 post with the grid size of 4:5 and the alternating content pattern: product photo, promotion, and education (benefits of seaweed). The noodle was shown in real photo and illustration, for providing an appetizing, dynamic impression. Typography style used 3 font types, namely Gagalin Bold, Agranir Bold, and Luminos Marker.

Red and Orange dominate the "Fried Noodle" design. Colors used fits the noodle package colors with red color providing an appetizing, warm impression, based on a strong taste of the fried noodle. Orange color brings spirit and energy. Green color was used in accordance with the packaging for noodle soup. Green represents nature, health, and freshness from seaweed. It implies that the seaweed-based noodle is healthier than the common one. Yellow color was shown in texts, like "Order Now" or "Let's Try". Yellow color represents cheerfulness and deliciousness, encouraging the curiosity of consumers to try. Black and dark brown

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

were used as the background, providing contrast, warmth, and elegance, to make the noodle prominent in the design center.

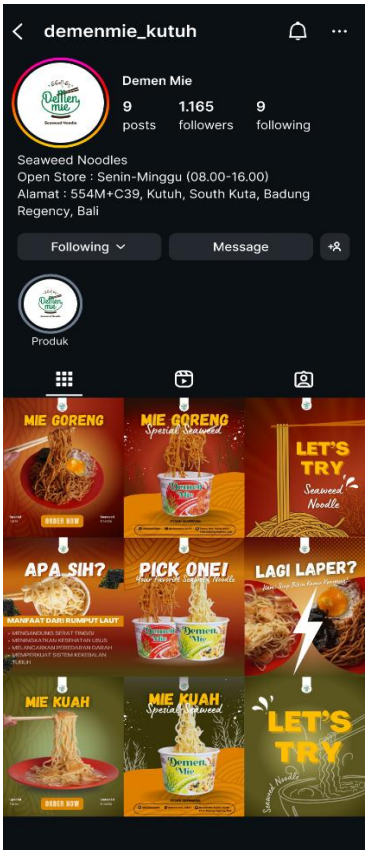

Fig. 3. Design of Instagram feed

Visual featured the product as well as delivered information about the benefits of consuming noodle made of seaweed, which were high in fiber, healthy for intestine, and good for blood flow or body immunity. Short sentences, namely "Pick One!", "Are You Hungry?", and "Let's Try" served as a *call to action* (CTA) which was straightforward, making audience interested to buy. The whole Instagram feeds of Demen served as the product display, as well as the branding media, implying the uniqueness of seaweed noodle, through a combination of color, text, and strong illustration. The designing of the company profile in the form of an Instagram feed "Demen Mie" (Fig. 3 and Fig. 4)

Package Designing

The design of Demen Mie package as a digital-based promotion media had Balinese aspect silhouette, representing that the noodle are from Bali. The design had an illustration from Noodle and Noodle Snack and a mascot from Demen Mie. Demen Mie brand was put at the top, while its logo was at the right corner. There was brief information about the noodle, halal logo, and net weight. The back of the package had composition, nutrient information, brief information about Demen Mie, benefits of seaweed, how to cook, as well as a recycling logo, a halal logo, and a production code. Text in the package used Bakso Sapi and Montserrat fonts.

Fig. 4. Variation of Instagram feed design

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

The package served as the "trigger" with its direct function, facing the consumers. The package must provide a spontaneous impression affecting the positive action of consumers at the point of sale. In a strict competition, the aesthetic aspect becomes the added value to be considered as an "emotional trap" in attracting consumers (Cenadi, 2000). The package design had three noodle types based on their function, namely a package for fried noodles, a package for noodle soup, and a ready-to-eat snack noodle (Fig. 5, Fig. 6 and Fig. 7).

Fig. 5. Mockup of the fried noodle package

Fig. 6. Mockup of the noodle soup package

Fig. 7. Mockup of the noodle snack package

X-Banner Designing

SCP in Poklahsar Merta Nadi of Kutuh Village, South Kuta, Badung Regency. X-Banner is the printing media, made for introducing or promoting a business (Maulan et al., 2023). The first information was about the title of this program, background, partners' problem to find a solution, program phases, result, and the expression of gratitude to the Directorate of Research and Social Service, Directorate General of Research and Development of the Ministry of Higher Education, Science, and Technology, funding the SCP in 2025 (Fig. 8).

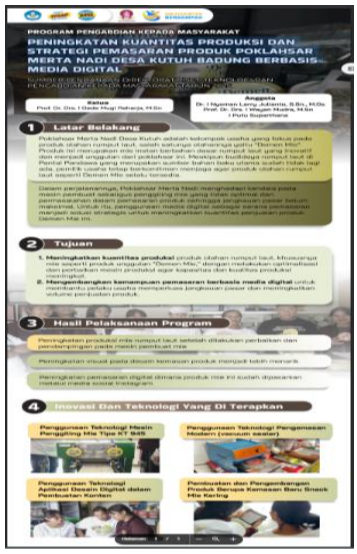

Fig. 8. XBanner design

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

Promotion Video

The video duration was three minutes, containing information about the importance of design development, the process of making noodles, opportunities, and obstacles faced by the group of Poklahsar Merta Nadi. Besides, it states the modification process on the noodle production machine and cottoni seaweed cultivation in Geger Beach, Kutuh Village, South Kuta, Badung (Fig. 9).

Fig. 9. Preview of screenshot from promotion video

The implementation of the redesigned machine and digital promotional media produced measurable positive impacts on the partner's business performance. Based on monitoring data collected between June and September 2025, monthly orders of processed seaweed noodles increased from the previous range of 5–10 kg per month to approximately 18–20 kg per month, indicating a 70–100% rise compared to the pre-intervention period. On the digital marketing side, the new Instagram content supported by improved visual branding, a clearer company profile, and consistent posting structure led to a substantial increase in audience activity. Instagram reach increased by 65% within the first six weeks, while engagement rate improved from below 1% to an average of 3.8%. These improvements reflect stronger consumer interest, enhanced product visibility, and higher credibility following the redesign.

Despite the comprehensive visual and digital marketing improvements—including the mascot, Instagram feed, packaging, X-banner, and promotional video—the current report has not yet included quantitative data on actual sales growth following the implementation of the digital marketing strategy. The reviewer also highlighted this limitation. Based on the partner's follow-up monitoring conducted between June and September 2025, there was an observed increase in monthly orders from approximately 5–10 kg of processed seaweed noodles to 18–20 kg per month, representing an estimated 70–100% rise compared to the pre-intervention period.

The increase was mainly attributed to heightened consumer engagement through Instagram posts and local reseller orders initiated after the digital promotion. Although these results are preliminary and limited to descriptive comparison, they indicate a positive correlation between improved digital branding and product sales performance. Future program evaluations are recommended to integrate detailed sales tracking and conversion analytics (reach → inquiry → order → repeat purchase) to provide a more comprehensive quantitative assessment of marketing outcomes.

CONCLUSION

This community service program successfully improved both the production system and the marketing readiness of the seaweed-based noodle product "Demen Mie" produced by Poklahsar Merta Nadi in Kutuh Village. Through the modification of the KT945 noodle-making machine (pulley set, 1.25 mm blade, food-grade lubricant, and SUS304 dough container), daily output increased from around 50 to approximately 200 packages, while monthly processed seaweed capacity rose from 5 kg to 10–12 kg. These changes indicate a substantial improvement in production efficiency and the partner's ability to respond to growing market demand. In parallel, hygiene conditions in the production process were enhanced through the use of food-grade stainless-steel (SUS304) components, the application of food-grade lubricant, the reduction of direct hand-contact points along the production flow, and the implementation of clearer sanitation standard operating procedures (SOPs). These measures led to more consistent cleaning practices and safer food-contact surfaces, which strengthen consumer trust in seaweed-based noodle products.

On the marketing side, the redesign of visual identity, packaging, company profile, X-banner, promotional video, and Instagram feed strengthened brand consistency and digital communication. A simple user-satisfaction survey using a Likert scale (1–5) showed that the new designs achieved higher scores in terms of clarity, visual appeal, information completeness, and perceived credibility compared to the previous materials, confirming that users and potential buyers received the redesigned media.

Nevertheless, this program still has several limitations. The evaluation of marketing performance and sales increase is predominantly descriptive, with limited quantitative sales tracking and no laboratory-based microbiological testing of hygiene improvements. The observation period after

implementation was also relatively short. As a follow-up plan, the team and partner have agreed to conduct advanced training on machine operation and sanitation, schedule regular preventive maintenance of the modified machine, and develop more systematic monitoring of sales and digital metrics. Future community service and research activities are recommended to integrate detailed sales-conversion analysis and food-safety testing to provide a more comprehensive picture of the long-term impact of machine modification and visual branding interventions on MSME performance.

ACKNOWLEDGEMENTS

The implementation team and the partner, Poklahsar Merta Nadi from Kutuh Village, South Kuta District, Badung Regency in the Student Creativity Program (SCP) would like to express their gratitude to the Directorate of Research and Social Service, Directorate General of Research and Development, Ministry of Higher Education, Science, and Technology for funding the SCP for fiscal year 2025. Researchers would also like to express gratitude to the Indonesian Art Institution in Bali, Institution of Research and Community Service in particular, for supporting this program, and other parties which directly and indirectly contributed to the success of this program..

REFERENCES

Adejuwon, O. H., Jideani, A. I. O., & Falade, K. O. (2020). Quality and Public Health Concerns of Instant Noodles as Influenced by Raw Materials and Processing Technology. *Food Reviews International*, *36*(3), 276–317. https://doi.org/10.1080/87559129.2019.1642348

Anderson, D. M. (2020). *Design for Manufacturability*. Productivity Press. https://doi.org/10.4324/9780429285981

Bayoyan Teknik. (2025). *KT 945 noodle maker machine*. https://bayoranteknik.co.id/PRODUCT/MESIN-PEMBUAT-MIE-KT-945

Bian, J., & Ji, Y. (2021). Research on the Teaching of Visual Communication Design Based on Digital Technology. *Wireless Communications and Mobile Computing*, *2021*(1), 8304861. https://doi.org/https://doi.org/10.1155/2021/8304861

Calver, G. (2007). *What is Packaging Design?* RotoVision SA. https://books.google.co.id/books?id=TGFovgAACAAJ

Cenadi, C. S. (2000). Peranan Desain Kemasan Dalam Dunia Pemasaran. *Nirmana: Visual Communication Design Journal*, *2*(2), 92–103. https://nirmana.petra.ac.id/index.php/dkv/article/view/16056

Dana, L.-P., Crocco, E., Culasso, F., & Giacosa, E. (2023). Business plan competitions and nascent entrepreneurs: a systematic literature review and research agenda. *International Entrepreneurship and Management Journal*, *19*(2), 863–895. https://doi.org/10.1007/s11365-023-00838-5

Ellicott, C. (2010). *Packaging essentials: 100 design principles for creating packages*. Rockport Publishers. https://books.google.co.id/books?id=KcOsOw-uaKAC&dq

Fathoni, D. A., & Arisandi, A. (2020). Kualitas Karaginan Rumput Laut (Eucheuma Cottonii) Pada Lahan yang Berbeda di Kecamatan Bluto Kabupaten Sumenep. *Juvenil: Scientific Journal of Marine Affairs and Fisheries*, *1*(4), 548–557. https://journal.trunojoyo.ac.id/juvenil/article/view/8994

Filip, F. C., & Marascu-Klein, V. (2015). Management Methods to Modify the Produced Products Volume. *Applied Mechanics and Materials*, *809–810*, 1325–1330. https://doi.org/10.4028/www.scientific.net/AMM.809-810.1325

Ku, E. C. S., Wu, W.-C., & Chen, Y. J. (2016). The relationships among supply chain partnerships, customer orientation, and operational performance: the effect of flexibility. *Information Systems and E-Business Management*, *14*(2), 415–441. https://doi.org/10.1007/s10257-015-0289-0

Kusakabe, K. T. S. (2022). *Women and men in small-scale fisheries and aquaculture in Asia: Barriers, constraints and opportunities towards equality and secure livelihoods*. Food & Agriculture Org. https://books.google.co.id/books?id=ILFuEAAAQBAJ

Lauwrentius, S., & Fianto, A. Y. A. P. Y. (2015). *Penciptaan City Branding melalui Maskot sebagai Upaya Mempromosikan Kabupaten Lumajang* [Institute of Business and Information Technology STIKOM Surabaya]. http://jurnal.stikom.edu/index.php/ArtNouveau/article/view/974

Lee, D. S. (2021). *Modified Atmosphere Packaging of Foods*. Wiley. https://doi.org/10.1002/9781119530916

Maulan, P. A., Nikhlis, N., & Kurniawan, D. (2021). Perancangan X-Banner , Spanduk dan Kartu Nama Sebagai Media Promosi Pada PT. Niti Segara Trans. *Jurnal Ilmiah Manajemen, Bisnis Dan Kewirausahaan*, *1*(3 SE-Articles), 46–68. https://doi.org/10.55606/jurimbik.v1i3.51

Mittal, V., Kaul, A., Gupta, S. Sen, & Arora, A. (2017). Multivariate Features Based Instagram Post Analysis to Enrich User Experience. *Procedia Computer Science*, *122*, 138–145. https://doi.org/10.1016/j.procs.2017.11.352

Perța-Crișan, S., Ursachi, C.-Ștefan, Chereji, B.-D., Tolan, I., & Munteanu, F.-D. (2023). Food-Grade Oleogels: Trends in Analysis, Characterization, and Applicability. In *Gels* (Vol. 9, Issue 5, p. 386). https://doi.org/10.3390/gels9050386

Purhita, E. J., & Rudjiono, D. (2024). Evaluating the Effectiveness of Interactive Multimedia in Boosting Brand Equity: A Case Study of Visual Communication Design Programs. *International Journal of Graphic Design*, *2*(2), 144–160. https://doi.org/10.51903/ijgd.v2i2.2109

Selvamuthukumaran. (2021). *Active packaging for various food applications*. CRC Press. https://books.google.co.id/books?id=z8BEEAAAQBAJ

Vasileiadis, T., Tzotzis, A., Tzetzis, D., & Kyratsis, P. (2019). Combining product and packaging design for

DOI: https://dx.doi.org/10.30656/jpmwp.v9i2.11391

increased added value and customer satisfaction. *Journal of Graphic Engineering and Design*, *10*(2), 5–16. https://doi.org/10.24867/JGED-2019-2-005