

STRATEGIES TO ENHANCE THE BUSINESS COMPETITIVENESS OF MSMES : THE CASE OF NOGOSARI KNITTING BUSINESS UNIT IN PROMOTING JOB CREATION AND SUSTAINABLE ECONOMIC GROWTH

Hamidah¹, Rd. Tuty Sariwulan², Puji Wahono³, Monica Dewi⁴, Siti Hafsa Zulkarnain⁵, Nadine Prisila Maharani⁶, Melda Yanti⁷

¹ Doctoral Management Sciences, Faculty of Economics and Business, State University of Jakarta, Indonesia

² Doctoral Management Sciences, Faculty of Economics and Business, State University of Jakarta, Indonesia

³ Doctoral Management Sciences, Faculty of Economics and Business, State University of Jakarta, Indonesia

⁴ Management, Faculty of Economics and Business, State University of Jakarta, Indonesia

⁵ College of Built Environment, Universiti Teknologi MARA, Shah Alam, Malaysia

⁶ Management, Faculty of Economics and Business, State University of Jakarta, Indonesia

⁷ Management, Faculty of Economics and Business, State University of Jakarta, Indonesia

Corresponding Author: monicadewi@unj.ac.id

Abstract.

This community engagement program aims to strengthen the competitiveness of MSMEs through the case of Rajut Nogosari, a local knitting business unit in Wukirsari Village, Indonesia. The objectives are to enhance digital financial literacy, entrepreneurial capacity, and strategic business development to support sustainable economic growth and job creation. The program adopted a participatory and collaborative approach, involving activities such as training, mentoring, technology implementation, and continuous evaluation. Qualitative methods including in-depth interviews and participant observation were employed to explore the challenges and needs of MSME actors. Thematic analysis revealed key findings in three domains. First, digital financial literacy training led to improved financial recording and awareness of financial projections. Second, the implementation of digital marketing strategies facilitated greater market reach and brand awareness, transitioning from traditional selling to an online presence. Third, the program contributed to the development of human resources by fostering innovation, fair labor practices, and performance-based incentives. Furthermore, the active participation of local entrepreneurs fostered a sense of ownership and facilitated horizontal innovation diffusion within the community. These findings suggest that strengthening MSMEs' internal capacities through targeted digital and entrepreneurial interventions can significantly improve their adaptability, sustainability, and resilience in competitive markets.

Keywords:

MSME, Financial literacy; Entrepreneurship; Strategic Management Business

I. INTRODUCTION

Nogosari knitting as a knitting business managed by the village community has great potential in developing the local economy. However, to survive in the midst of increasingly fierce competition, this business needs to implement the right strategy. One of the important aspects is

financial literacy, which includes good financial records, efficient capital management, and determining selling prices that are in accordance with production costs to remain competitive (Aminah et al., 2021; Regif et al., 2023; Yohana, 2022). In addition, the development of *Entrepreneurship* is also a key factor in increasing competitiveness (Fatah & Zumrotun, 2023). Business managers need to take part in entrepreneurship training, collaborate with other MSMEs, and innovate in design and product types to remain attractive in the market (Ir. Yunita Resmi Sari & Prof. Dr. Ilya Avianti, S.E., M.Si., Ak., CA., CPA. Prof. Dr. Amir Halid, S.E., M.Si. Dr. Asep Mulyana, 2024).

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of Indonesia's economy with a significant contribution to Gross Domestic Product (GDP), job creation, and equitable distribution of people's welfare. According to data from the Ministry of Cooperatives and Small and Medium Enterprises (Kemenkop UKM) in July 2022, there are 64.2 million MSME actors who contribute 61.07% to GDP or IDR 8.5 trillion. An indicator that reflects the development of entrepreneurship in Indonesia is the growth of Micro, Small and Medium Enterprises (MSMEs). MSMEs have a positive influence on economic development in a number of countries, one of which is measured by the contribution of MSMEs to Gross Domestic Product (Limanseto, 2023). In addition, MSMEs dominate the business structure in Indonesia, with a proportion of 99% of the total business units. In 2022, the contribution of MSMEs to national GDP was recorded at 61%.

In the current era of digitalization, technological transformation in the financial industry is accelerating. Therefore, digital financial literacy is a crucial factor that can help MSMEs survive and thrive in an increasingly dynamic market situation (Ismanto & February, 2023). In terms of labor absorption, MSMEs absorb around 97% of the total workforce in Indonesia, or around 116 million people.

However, despite having a crucial role, there are still many MSMEs that have not been officially registered. Until 2022, the number of MSMEs that have registered their businesses through the Online Single Submission (OSS) platform will reach 8.71 million units. The government targets at least 10 million MSME units to be registered in the OSS system by the end of 2023.

Based on the results of a survey conducted by the Financial Services Authority (OJK), the level of financial literacy of the Indonesian people still needs to be improved. A national survey conducted by the OJK shows that the average level of financial literacy in 2019 reached 38.03 percent (OJK, 2020). This means that out of every 100 people, only about 38 people have an understanding of conventional financial concepts. Although this figure has increased compared to 2016 which was only 29.7 percent, the level of financial literacy in Indonesia is still relatively low. These findings are reinforced by the results of a national survey conducted in 2019, involving respondents from various regions in Indonesia, and indicate that the public's understanding of financial aspects still needs to be improved.

Financial literacy is not just the ability to calculate numbers and understand financial statements (Asta Patma Nugraha et al., 2023). For MSMEs (Micro, Small, and Medium Enterprises), financial literacy is an essential foundation for sustainable growth and effective strategic decision-making (Mang'ana et al., 2023). Financial education is essential for sustainable financial management (Fitri, 2023). Indonesia is currently experiencing a demographic bonus with 182 million people of productive age (Central Statistics Agency, 2024). The financial literacy index reached 65.43% and financial inclusion reached 75.02% (Central Statistics Agency, 2024), but Indonesia is still ranked 100th globally, behind the Philippines (88), Brunei (86), and Singapore (84).

In the current era of digitalization, technological transformation in the financial industry is

increasingly rapid (Wardina, 2024). Various financial services such as transactions, account opening, and product offerings have now been digitized, so people need to have adequate skills and knowledge in using technology safely and efficiently (Fisabilillah et al., 2021). In terms of labor absorption, MSMEs absorb around 97% of the total workforce in Indonesia, or around 116 million people.

Low levels of financial literacy can result in errors in budget planning, inefficient cash management (D. P. Putri et al., 2019; Saputra, 2024), difficulties in accessing capital, and inappropriate investment decision-making (Limanseto, 2023). Data from the Financial Services Authority (OJK) consistently shows that the level of financial literacy in Indonesia still needs to be improved, especially among MSME actors and rural communities (Regif et al., 2023). This is a concern because a lack of financial understanding can hinder local and national economic growth. Financial education is essential for sustainable financial management (Financial Services Authority, 2024). The economic model emphasizes consumption decisions based on long-term resources and expectations, rather than just current income, thus encouraging saving habits and financial stability (Krissanya et al., 2024). Indonesia is currently experiencing a demographic bonus with 182 million people of productive age (Central Statistics Agency, 2024). The financial literacy index reached 65.43% and financial inclusion reached 75.02% (Central Statistics Agency, 2024), but Indonesia is still ranked 100th globally, behind the Philippines (88), Brunei (86), and Singapore (84).

Conduct training that focuses on the use of digital financial applications such as *Mobile Banking*, *E-wallet* and *platform digital bookkeeping*. This training must be tailored to the specific needs of MSMEs, with an emphasis on practical aspects and ease of use (Listiani & Soleha, 2023). This will help them monitor financial performance, identify potential issues, and make more informed decisions (Regif et al., 2023). Increase understanding of the various funding sources available, including People's Business Credit (KUR), *Peer-to-peer lending*, and other funding schemes that can support business expansion. Training should also include information about loan application requirements and processes, as well as tips for managing debt effectively (T. Putri et al., 2019). *Entrepreneurship*, or entrepreneurship, is the ability to identify business opportunities, develop innovative ideas, take measurable risks, and effectively manage resources to achieve business goals (Krissanya et al., 2024). In the context of MSMEs, *Entrepreneurship* It's not just about starting a new business, but it's also about increasing competitiveness, creating added value, and adapting to market changes (Varma, 2022).

Encouraging a creative, innovative, and solution-oriented mindset is very important for MSMEs (Faqihi & Miah, 2023). By improving managerial skills and leveraging digital technology, MSMEs can expand the market and increase efficiency (Malesu & Syrovátka, 2025). Online marketing training and collaboration with academics and mentors help in the development of a sustainable and highly competitive business (Varma, 2022).

MSME business strategy must consider internal and external factors to achieve success (Oppong et al., 2023). The use of social media and marketplaces can increase brand awareness and sales through SEO, content marketing, and data analytics (Angulo-Ruiz & Muralidharan, 2023). A strong brand identity with unique logos, slogans, and packaging helps build customer loyalty (Da Silva Freitas et al., 2017).

The Nogosari Knitting Business Unit faces various challenges in increasing the competitiveness of MSMEs, which can be categorized into three main aspects (Hamdan, 2024), namely low financial literacy, lack of entrepreneurial spirit among business actors, and lack of optimal business strategies implemented (Rajagopal, 2024). This problem not only has an impact on business sustainability, but also limits overall local economic growth (Henrekson, 2024). Low financial literacy is the main obstacle for business actors in Rajut Nogosari (Hendieh, n.d.). Many

MSME actors still have difficulties in conducting financial records, preparing budget planning, and managing cash flow properly (Kurniasari et al., 2025). Study Kustina et al. (2024) suggests that low financial literacy can increase the risk of small business failure.

In addition, access to formal financial services is still limited. Many business actors have not taken advantage of financial technology such as e-wallets, mobile banking, or digital bookkeeping applications (Matisone & Lace, 2020). In fact, financial technology can help MSMEs manage their finances more efficiently and gain access to funding sources. Therefore, financial literacy training is needed to improve the ability of business actors to manage their finances more professionally (Diéguez-Soto et al., 2022).

The lack of entrepreneurial spirit is also the main challenge in the development of Nogosari Knitting. Many businesses are still running their business traditionally without significant innovation in products or marketing strategies (Faqihi & Miah, 2023). Many MSME actors tend to avoid risks and do not have the courage to expand the market (Nasiri et al., 2020). Entrepreneurship is not only about running a business, but also the ability to see opportunities in the midst of challenges and dare to make strategic decisions (Anton & Nucu, 2020). Low insight in dealing with market changes and lack of business development strategies are factors that hinder business growth (Avelar et al., 2024; Bonfanti et al., 2024; Rosado-Cubero et al., 2024). Therefore, MSME actors need to be given entrepreneurship training that includes innovation product, modern marketing strategies (Nygaard, A., 2024) and an understanding of consumer trends in order to compete in a wider market (Merín-Rodrigáñez et al., 2024; Rosado-Cubero et al., 2024; Wei & Boudreaux, n.d.).

A less than optimal business strategy is also an obstacle in increasing the competitiveness of MSMEs in Rajut Nogosari (Yohana, 2022). Many business actors still rely on conventional marketing and have not made the most of digital technology. In fact, according to Faqihi and Miah (2023) Digital marketing strategies such as search engine optimization (SEO), content marketing, and the use of social media can help MSMEs reach a wider market and increase sales (Urbano et al., 2023).

In addition, strong branding also plays an important role in building customer loyalty and differentiating products from competitors (Wasdani, 2022). Sudirjo et al. (2024) emphasizing that a strong brand identity can increase the added value of products in the eyes of consumers. Therefore, an effective branding strategy is needed (Fritsch, 2024), such as the use of logos, attractive packaging designs, and product narratives that arouse customer interest (Wasdani, 2022). By increasing financial literacy, strengthening the entrepreneurial spirit, and optimizing business strategies, Nogosari Knitting MSMEs can be more competitive and develop sustainably in the midst of increasingly fierce market competition.

II. METHODS

II.1. Location, time, and subject of research

Community service program titled *"Strategies to Improve the Competitiveness of MSME Businesses: Nogosari's Knitting Business Unit"* is carried out with a participatory and collaborative approach that focuses on empowering MSMEs based on technology and entrepreneurial innovation. To comprehensively understand the problems faced by business actors and design relevant solutions, the methods used in this activity involve a series of systematic stages: starting from socialization, training, technology application, mentoring and evaluation, to program sustainability strategies (Hossain et al., 2024; Sahadev et al., 2024).

This community service program titled *"Strategies to Improve the Competitiveness of MSME Businesses: Nogosari's Knitting Business Unit"* was conducted in Wukirsari Village, Imogiri

District, Bantul Regency, Special Region of Yogyakarta, specifically located in Rajut Nogosari 2, which is a knitting craft center known for its local handmade products. The primary participants of this program were local knitting artisans, who are active members of the MSME community in Rajut Nogosari 2. These artisans operate small-scale home industries focused on knitted products such as bags, clothes, accessories, and souvenirs. The full program from the initial socialization to the first mentoring stage was carried out on May 20, 2025. The selection of this date was based on several considerations, including the availability of the location, the preparedness of the participants, and the strategic timing after a national holiday period that allowed for a renewed focus on business development. The purposive sampling technique was applied in selecting participants, ensuring that those involved had diverse business experiences and varying levels of digital technology adoption. This approach was used to gain comprehensive insights into the real challenges and opportunities faced by the knitting artisans as MSME actors within their specific local context.

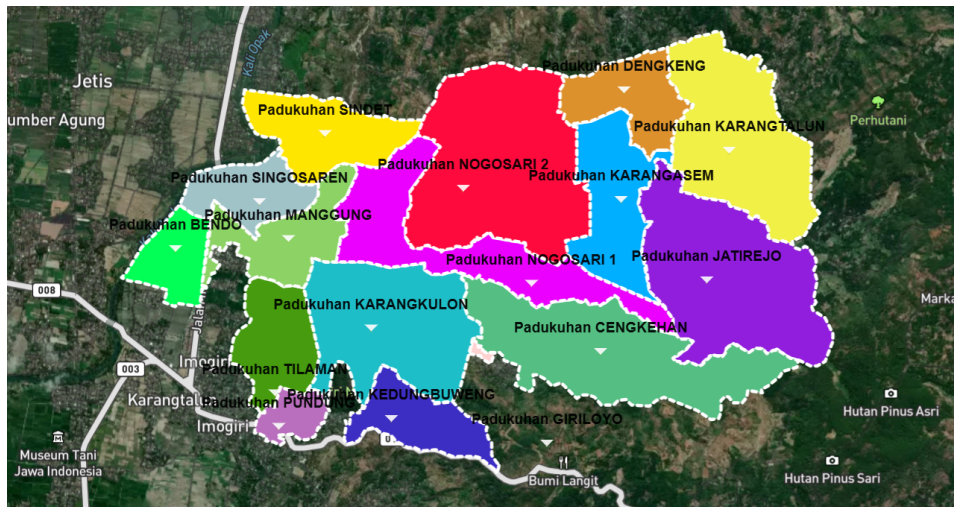


Figure II.1. Geographic Map of Wukirsari Village, Imogiri District, Bantul Regency

II.2. Data Collection Methods

Data was collected through two main techniques, namely in-depth interviews and participatory observation. In-depth interviews were conducted with a semi structured approach to MSME actors who are members of the Nogosari Knitting Business Unit in Wukirsari Village, in order to obtain rich information related to their experiences, challenges, and business needs in financial, marketing, and technological aspects. These interviews aimed to collect rich and contextual information about the participants' experiences, challenges, and business needs in the areas of finance, marketing, and technology. Participatory observation was conducted throughout the entire implementation process, during which the community service team actively engaged in training sessions, technology application, and mentoring activities. This direct involvement allowed the team to better understand the behavior, obstacles, and adaptive capacity of the MSME actors in real-life settings. The validity of the data was ensured through method triangulation by comparing the findings from interviews and observations and confirming them with insights from MSME community leaders. Data reliability was maintained through systematic recording and documentation throughout the data collection and program implementation processes (Merin-Rodríguez et al., 2024; Thornton, 2024), as well as mentoring, to understand the behavior, obstacles, and adaptation of MSME actors directly in a real context.

II.3. Data Analysis Methods

The sample selection was carried out purposively, taking into account the active involvement of business actors in the Knitting Nogosari community as well as the diversity of business types and different levels of technology adoption. This technique was chosen to ensure that the data obtained reflects the variation of experience and real needs of the business actors. The validity of the data was obtained through triangulation of methods, namely by comparing the results of interviews and observations, and confirming the findings with information from the MSME community management. Data reliability is also maintained through systematic recording and documentation during the process of collecting and implementing the program.

Data analysis was carried out using a thematic approach, namely by identifying the main patterns or themes that emerged from the results of interviews and observation notes. This analysis process involves the stages of data encoding, classification of findings, and interpretation of thematic meanings related to digital financial literacy, technology-based marketing strategies, and entrepreneurship development. Thematic analysis provides the flexibility to capture the diversity of experiences and complexity of local contexts, as well as provides a solid foundation for designing targeted program interventions.

This program was carried out in Wukirsari Village, Imogiri District, Bantul Regency, Special Region of Yogyakarta, which is the location of residence and the main activities of Nogosari Knitting MSME actors. The entire series of main activities starting from socialization to the initial mentoring stage will be carried out on May 20, 2025. The selection of time is adjusted to the readiness of partners, location availability, and post-long holiday momentum which is considered strategic to start increasing community business capacity.

The initial conditions before the implementation of the program show that MSME actors in Rajut Nogosari still face various fundamental challenges, including limitations in financial records, lack of use of digital technology for marketing and transactions, and the lack of a business strategy oriented towards long-term competitiveness. The majority of business actors still rely on conventional methods in managing their businesses, which makes it difficult for them to navigate changes in consumer behavior and digital market competition.

Through this program, it is hoped that significant positive changes will occur, such as increasing business actors' understanding of the importance of digital financial literacy, the ability to develop marketing strategies based on digital platforms, and skills to adopt technology as part of business operations. Anticipating the impact of the program in the short term includes increasing the capacity of MSME individuals and organizations in terms of business management, operational efficiency, and expanding market access through digitalization. In the long term, this program is aimed at forming a more adaptive, innovative, and sustainable MSME ecosystem, through synergy between business actors, academics, local communities, and village governments. The formation of a digital MSME community and the preparation of a business strategy guidebook are expected to become a legacy of knowledge that continues to be used, developed, and replicated by other business actors in various regions.

III. RESULT AND DISCUSSION

The community service program in Wukirsari Village is focused on increasing the capacity of Knitting Nogosari MSME actors in three strategic aspects: financial management, digital marketing, and human resource development. With a qualitative approach through interviews and participatory observations, data were obtained that described the transformation of post-intervention business understanding and practice.

III.1. Financial Management: Transition from Informality to Systematization

Prior to the implementation of the program, the financial system of MSME actors showed a high level of informality. The majority do not have a systematic recording mechanism; Recording cash flow is done manually, often even only based on memory. In addition to obscuring the financial position of the business, this ambiguity also causes inability to calculate the cost of production (COG) (Sitriani et al., 2025), set profit margins, and prepare income statements appropriately (Gosal & Nainggolan, 2023). This problem is exacerbated by the lack of separation between personal and business finances, which ultimately affects decision-making (Gosal & Nainggolan, 2023; Stuart & Er, 2024; Suci Damayanti et al., 2024).

To answer these problems, digital-based financial literacy training is focused on the introduction of applications such as BukuKas and QuickBooks. This intervention not only equips business actors with technical skills, but also changes their perspective on the importance of financial management (Febrianita et al., 2023). Theoretically, this process can be explained through Financial Literacy Framework, which states that changes in financial literacy include three domains: knowledge, attitudes, and behaviors (Triwiyanto et al., 2023). In this context, business actors show improvements in these three aspects, from understanding cost recording to awareness of the importance of financial projections in decision-making.

Furthermore, this program also encourages business actors to evaluate the wage system and profit sharing. This effort indicates an increase in awareness of the importance of distribution justice in the production value chain (Rahadjeng et al., 2023; Triwiyanto et al., 2023; Vinet & Zhedanov, 2011). The review of labor wages based on duration of work and product complexity reflects a shift towards a more professional and equitable financial management system (Srikarsa et al., 2024).





Figure III.1. Handcrafted Knitted Products from MSMEs in Rajut Nogosari 2, Wukirsari Village

III.2. Marketing: Transformation from Traditional Models to Digital Marketing Ecosystem

In the initial phase, the marketing of knitted products is carried out through informal and local channels, such as direct sales to consumers or through social networks around the village (Febrianita et al., 2023; Sitriani et al., 2025). No use of digital platforms such as marketplaces or social media was found (Stuart & Er, 2024). As a result, the product's exposure to regional and national markets is very limited, and the potential cultural value contained in the product is not successfully optimized as a competitive advantage (Hossain et al., 2024; Sahadev et al., 2024).

Interventions through digital marketing training have resulted in significant changes in the way MSME actors view and conduct marketing (Liu et al., 2025). Business actors have started creating business accounts on Instagram and Facebook, uploading product content, and exploring registration on marketplaces such as Shopee and Tokopedia (Malesu & Syrovátka, 2025). This process can be explained theoretically through Diffusion of Innovation Theory (Rogers, 2003), which outlines how innovation is adopted through five stages: knowledge, persuasion, decision, implementation, and confirmation (Grappi et al., 2024; Reynolds et al., 2024). Business actors in Wukirsari have gone through the initial stage to implementation, even showing indications of confirmation through the practice of sharing and disseminating experiences to fellow business actors (Stuart & Er, 2024).



Figure III.2. Briefing Session with Knitting Artisans at Rajut Nogosari 2

This change also shows a strengthening of the dimensions Market Orientation, namely awareness to understand market needs, align communication strategies, and make optimal use of digital distribution channels (Fidiantowi & Sukarno, 2023; Rahmiyati & Rachmawati, 2023). From a strategic management perspective, this is in line with Resource-Based View (Barney, 1991) which emphasizes the importance of internal resources such as digital marketing skills and product visual assets as determinants of sustainable competitive advantage (Hossain et al., 2024). Visual-based branding, more modern packaging, and digital catalogs are concrete forms of utilizing internal resources for market differentiation (Grappi et al., 2024).

III.3. Human Resources: Capacity Strengthening and Work Value

The human resources (HR) aspect also presents serious challenges before the program is implemented (Merín-Rodrigáñez et al., 2024; Sansome et al., 2024). The absence of a systematic work structure, non-competency-based division of tasks, and low labor wages are indicators of weak human resource management (Wei & Boudreaux, n.d.). Workers only receive IDR 60,000 for one pair of products, which does not represent a decent value of work. This indicates not only economic inequality, but also the absence of a merit-based performance appraisal and award system (merit-based remuneration).

After the training, business actors began to show a change in orientation in workforce management, including awareness of the importance of clear division of duties, a fair reward system, and skill improvement based on innovative practices (Bonfanti et al., 2024). In this context, behavior change can be reviewed through Theory of Planned Behavior (Ajzen, 1991) which explains that new behaviors are formed through intentions that are influenced by attitudes towards behaviors, subjective norms, and perceptions of control (Rosado-Cubero et al., 2024). Positive attitudes towards innovation, social pressure in the artisan community, and increased self-confidence play a major role in the adoption of new behaviors related to HR management (Caruelle et al., 2024).

Furthermore, design innovation training also encourages artisans to explore product differentiation (Sahadev et al., 2024). Some MSME actors have begun to adopt new techniques, choosing yarns with varied colors and textures, and updating packaging to make it more visually appealing (Caruelle et al., 2024; Ochieng et al., 2024). This shows the development of Learning orientation and Innovation Capability, two important indicators in the framework Human Capital Development. With the ability to learn and adapt sustainably, MSME actors are positioned not only as economic actors, but also as agents of social change (Hossain et al., 2024).

III.4. Participation, Innovation Adoption and Sustainability Challenges

Community participation in this program is relatively high and active (Liu et al., 2025). The facilitation process used is participatory and democratic, where MSME actors are involved from the planning stage to the evaluation stage (Hossain et al., 2024). This participation creates a sense of belonging to the program, which increases the likelihood of sustainability of the new practices introduced (Febrianita et al., 2023; Sitriani et al., 2025).

The follow-up effect created is in the form of horizontal dissemination of innovation between business actors. Some participants even started inviting their peers to use note-taking applications or create promotional content (Muhyidin et al., 2024). This process is a tangible form of Peer-to-peer innovation diffusion, which reinforces the argument Diffusion of Innovation Theory as a relevant framework in community-based interventions (Malesu & Syrovátka, 2025).

Conceptually, this program has succeeded in creating the basis for a paradigm shift from static micro businesses to adaptive and knowledge-based business models (Stuart & Er, 2024). The

collective awareness formed is an important prerequisite for long-term change, both in the context of the local economy and the strengthening of the village entrepreneurial ecosystem (Malesu & Syrovátka, 2025).

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