



## IMPLEMENTATION OF CONTINUOUS BAND SEALER TO IMPROVE THE QUALITY OF PACKAGING FOR MSMEs DAPUR SANGIT WANDAPURO VILLAGE BULULAWANG

**Heru Wahyu Herwanto <sup>1\*</sup>, Muhammad Afnan Habibi <sup>2</sup>, Sujito Sujito <sup>3</sup>, Arya Kusumawardana <sup>2</sup>, Dimas Jundan A <sup>2</sup>, Shandy Krisnawan <sup>2</sup>**

<sup>1</sup> Department of Informatics Engineering Education, State University of Malang, **Indonesia**

<sup>2</sup> Department of Energy Generation Engineering Technology, State University of Malang, **Indonesia**

<sup>3</sup> Department of Electrical Engineering, State University of Malang, **Indonesia**

<https://doi.org/10.58330/khidmatuna.v3i1.405>

Accepted: 16 November 2023. Approved: 26 December 2023. Published: 26 December 2023.

### ABSTRACT

The post-pandemic era is a post-pandemic era where all MSME players are maintaining their businesses and must even be able to increase their businesses. The obstacles experienced by the MSME Dapur Sangit, Wandanpuro Village, Bululawang, Malang Regency, which operates in the catering sector and produces processed milkfish meat products, occurred in the inefficient and sloppy product packaging process. Apart from that, the product packaging process still applies conventional technology using a manual hand sealer. The impact of the packaging process using conventional tools is of course that the packaging becomes sloppy and there are defects in the packaging, which will affect the quality of the product and result in reduced quality and selling value on the market. The aim of this community service program is to implement Appropriate Technology (TTG) in the form of machines. Automatic Continuous Band Sealer which functions to improve packaging quality, reduce costs if still using conventional technology and increase product durability.

**Community Service Paper**

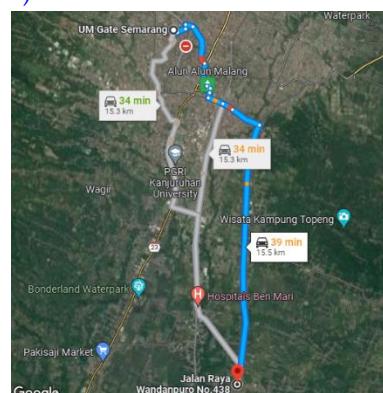
**Khidmatuna: Journal of Research and Community Service**

**Keywords:** MSME, Continuous Band Sealer, Appropriate Technology (TTG).

### INTRODUCTION

Since the emergence of Covid-19, it has had a major and devastating impact on various sides of the economy, including industry, large companies and MSME. Of course, this makes MSME players at a stage of significant anxiety, but most are still able to survive by expanding the digitalization of MSME, namely by adding types of sales and marketing channels (Wijoyo et al., 2021). Currently, the world is in a post-pandemic era where MSME have transformed into a digital ecosystem (Wijoyo, 2020). Even MSME players can combine online and offline marketing. Micro, Small and Medium Enterprises (MSME) are one of the small-scale

business entities that can help boost the community's economy (Kadeni, 2020; Faiz et al., 2022).



**Figure 1.** Location of MSME Dapur Sangit Partners

\* Correspondence Address

E-mail: heru\_wh@um.ac.id

MSME Dapur Sangit was founded by Sofia Hakim R. in 2018. MSME "Dapur Sangit" is an MSME that operates in the field of processed food production with a production capacity of up to 3 kg per day. This MSME can help housewives to get jobs and also knowledge that can be used to help their family's economy (Said & Azhar, 2021).

Wandanpuro Village is a harmonious blend of tradition and modern aspirations, located within the natural beauty of Bululawang. With people mostly engaged in Micro, Small and Medium Enterprises (MSME), this village resonates with an entrepreneurial spirit and local expertise. Among these businesses, "Sangit Kitchen" stands out as a significant MSME, producing a variety of culinary delights and local delicacies that carry the essence of the village's heritage.



**Figure 2.** Manual Packing Tools Used

Although Dapur Sangit's culinary creations have gained local recognition, the packaging of these products poses challenges that impact both product quality and marketability (Herdianti et al., 2023). In the context of this service activity "Implementation of a Continuous Band Sealer Machine to Improve Packaging Quality for MSME Dapur Sangit in Wandanpuro Village, Bululawang" emerged as a community-based solution to overcome this packaging problem (Suryono et al., 2021).

The obstacle experienced by partners during the packaging process is that the tools

used are not optimal, which causes reduced efficiency and takes a lot of time to package the product (Nuraini & Sulistyono, 2019). This is what makes it necessary to have an automatic packaging tool that is fast, efficient, and can improve the business owner's packaging system so that it can provide maximum results that are able to increase the quantity and quality of production and have good selling points to compete in the market (Faiz et al., 2023; Prasetya et al., 2023; Rasa et al., 2023).

This initiative is based on the importance of packaging quality for MSME (Sufaidah et al., 2022), especially those rooted in traditional craftsmanship. In an increasingly competitive market, attractive and functional packaging increases product visibility, maintains product freshness and communicates brand identity. However, the lack of advanced packaging equipment at Dapur Sangit has led to problems such as inadequate sealing, exposure to contaminants, and less than optimal serving. As a result, these challenges hamper the growth potential of MSME and reduce the quality of their products (Asfar et al., 2023).

The problems faced by MSME Dapur Sangit can be overcome with tools that can make work easier and achieve maximum results according to the partners' needs. Therefore, in this community service activity, we offer training on automatic packaging equipment or continuous sealers which are equipped with sealing height regulators (Sujito et al., 2023). To make it easier to package packages with different contents, so that the packaging is consistent and efficient, and can increase sales interest and the amount of output produced by consumers (Pramaningsih et al., 2022).

There are two aims of community service. Primarily, this aims to introduce and implement the Continuous Band Sealer machine in the Dapur Sangit packaging process. This machine, equipped with advanced sealing capabilities, ensures airtight sealing of packaging materials, extends product shelf life and improves product presentation. Second, the initiative seeks to empower communities by providing training and capacity building sessions. By providing knowledge about machine operation,

maintenance, and packaging best practices, community service seeks to improve the skills of Dapur Sangit's workforce, promoting independence and entrepreneurship.

The importance of this effort goes beyond direct packaging improvements. This is aligned with broader development goals, including economic growth, market access and preservation of local traditions. The implementation of community service has the potential to have a positive impact on the continuity of Dapur Sangit's business, opening the door to new markets and income streams. Furthermore, improving packaging quality translates into consumer trust and loyalty, fostering a positive brand image for MSME.

Placing community service in the context of community engagement underscores the participatory nature of sustainable development. By involving Dapur Sangit stakeholders, including MSME management and employees, in decision making and implementation, this community service fosters a sense of ownership and commitment. This approach is very relevant considering the spirit of cooperation and communal support of Wandanpuro Village.

In addition to improving packaging processes, this initiative achieves economic empowerment, skills enhancement and local heritage preservation. As the next section examines the methodology, activities, outcomes, and lessons learned, the collaborative efforts and shared aspirations of the community and community service teams will be revealed, demonstrating the partnership's extraordinary capacity to drive positive change in the fabric of Wandanpuro Village and beyond.

## IMPLEMENTATION METHOD

### Time, Location, and Activity Participation

Service activities will be carried out in June 2023 located at MSME Dapur Sangit, Sidomulyo 438 Street, Wandanpuro Village, Bululawang District, Malang Regency. The people involved in this service activity are the MSME Dapur Sangit. The MSME Dapur Sangit has two employees who are residents of the area of the production house. This micro, small and medium enterprise operates in the

catering sector and produces processed shredded milkfish food.

### Tools and Materials

The tools and materials used in service activities are automatic packaging equipment or continuous sealers. This tool will be used as a form of innovation to improve packaging quality and product efficiency in the production packaging process.

### Methods of Implementing Activities

The implementation method used in this service activity is by handing over tools and providing training on the use of continuous sealer machines. Training activities on how to use continuous sealer machines and equipment maintenance. This aims to ensure that the MSME Dapur Sangit can use the tools properly and be able to carry out regular maintenance on the machines.

The method for socializing training on tool use is explaining and asking questions. Explanations are carried out by demonstrating the use and repair of tools, while questions and answers are a form of lack of understanding of the demonstration delivered by giving time to ask questions.

### Socialization Techniques

The socialization was carried out for one day, with the aim of increasing the knowledge of the MSME Dapur Sangit regarding the use of automatic packaging tools or continuous sealers. This activity also simulates how to operate the tool, maintain the tool and repair the tool if damage occurs. This socialization activity was also attended by community leaders and local people who own businesses. The public was also given the opportunity to ask questions about this automatic packaging tool or continuous sealer.

## RESULT AND DISCUSSION

Community service is an effort to disseminate science, technology and art to society. These activities must be able to provide added value to society, both in economic activities, policies and behavioral (social) changes. Describes that service activities have been able to provide change for individuals/communities and institutions both in the short and long term.

This section explains how activities are carried out to achieve the goal. Explain the indicators for achieving goals and benchmarks used to state the success of service activities that have been carried out. Reveal the advantages and disadvantages of the external or main focus of the activity if it is deemed appropriate to the conditions of the community at the location of the activity. Also explain the level of difficulty in implementing activities and producing goods as well as opportunities for future development. Articles can be strengthened with relevant documentation related to services or goods as output, or the main focus of activities. Documentation can be in the form of implementation or implementation process images, product prototype images, tables, graphs, and so on.

### General Description

The partner for community service activities is the Dapur Sangit Micro, Small and Medium Enterprises (MSME) which is located on Jalan Sidomulyo 438 Street, Wandanpuro Village, Bululawang District, Malang Regency, and is approximately 15.5 km from Malang State University. MSME Dapur Sangit is a regional specialty food and beverage producer that has been established since 2010. The production produced by MSME Dapur Sangit is engaged in catering and processing shredded milkfish. From the results of the observations that have been made, the problems experienced by the MSME Dapur Sangit are in the packaging process, where the process still uses conventional technology in the form of a hand sealer so that partners often experience various problems with packaging, the sealing part of the food packaging is not neat, not tight enough, even the plastic the packaging sometimes melts. Thus, it does not meet food product packaging standards.

### Socialization Activities to Partners

The socialization activity was carried out at the MSME Dapur Sangit office, which is located on Sidomulyo 438 Street, Wandanpuro Village, Bululawang District, Malang Regency. The material presented was installation of continuous sealers in 2 models, namely vertical and horizontal, automatic labeling settings on the tool, demonstration of packaging using a continuous sealer, and its maintenance, as well as handing over of the tool. With the continuous sealer tool at the MSME Dapur Sangit, it is hoped that it can

help improve the quality and time efficiency of production results which were previously hampered in the packaging process due to the use of conventional tools.



**Figure 3. Contonuous Sealer Socialization to MSME Dapur Sangit.**

**Figure 3** is a socialization activity related to the use and settings of continuous sealers, demonstration of the packaging process using tools, labeling of tools, and repair of tools delivered to the MSME Dapur Sangit.

### Devotional Activities



**Figure 4. Handover of equipment to MSME Dapur Sangit**

**Figure 4** is an activity of handing over continuous sealer equipment to the MSME Dapur Sangit to help overcome obstacles in the product packaging process, so as to improve the quality and efficiency of the production process. The community service initiative entitled "Implementation of a Continuous Band Sealer Machine to Improve the Packaging Quality of MSME Dapur Sangit in Wandanpuro Village, Bululawang" has produced transformative results, reshaping the packaging process of local MSME and encouraging economic empowerment.

The introduction of the Continuous Band Sealer machine has resulted in significant

improvements in the quality and efficiency of Dapur Sangit packaging. The advanced sealing capability of the machine ensures a tight seal of the packaging material, effectively extending the shelf life of the product and maintaining its freshness. This improvement is especially important for Dapur Sangit, as their culinary offerings depend on maintaining optimal taste and texture. Improved packaging not only protects the product but also increases market appeal, contributing to increased consumer trust and loyalty.

This community-driven approach of community service has delivered good results in terms of capacity building and skills enhancement. Training sessions held for Dapur Sangit employees have equipped them with comprehensive knowledge about machine operation, maintenance and troubleshooting. This knowledge transfer empowers the workforce to handle the machines effectively, ensuring consistent, high-quality packaging. In addition, the training also facilitates the development of a sense of ownership and responsibility among employees, fostering a commitment to maintaining machines and following best practices.

By overcoming packaging challenges, this community service has created a positive ripple effect on the growth of Dapur Sangit's business. With improved packaging quality and better aesthetics, MSME have gained a competitive edge in the market. This newfound market advantage has translated into increased demand, an expanded customer base, and increased sales opportunities. As a result, Dapur Sangit's revenue streams have diversified, allowing investment for further business expansion and product diversification.

In addition, the results of community service are in line with broader sustainability goals. The application of the Continuous Band Sealer machine has significantly reduced packaging waste, as airtight sealing minimizes the risk of product spoilage. This waste reduction is in line with environmental conservation principles and in line with contemporary consumer preferences for environmentally friendly practices. The positive environmental impact of community service places Dapur Sangit as a responsible and conscious business in society.

Collaboration between the community service team and MSME Dapur Sangit has created

a platform for knowledge exchange and mutual learning. The community service team's expertise in machine and packaging implementation is combined with MSME understanding of local market preferences and product requirements. This synergy has contributed to adapting machine operations to the specific needs of Dapur Sangit products, optimizing packaging quality while maintaining the essence of their culinary creations.

Challenges encountered during community service, such as machine calibration and initial adjustments, are addressed through ongoing communication and technical support. The community service team's commitment to solving problems and providing real-time solutions ensures seamless machine integration into MSME operations. These challenges underscore the importance of ongoing support and collaboration, highlighting the dynamic nature of community engagement initiatives.

**Table 1. Comparison of Pre and Post PKM**

No	Before PKM	After PKM
1.	The packaging process still uses conventional technology so product packaging and packaging quality require further checks	Has used automatic packaging equipment (continuous sealer) so that product packaging complies with specified standards and the packaging quality is better
2.	The time required for the packaging process using conventional sealers takes a lot of time	The time required for the packaging process using a continuous sealer is faster and saves time

## ACKNOWLEDGMENTS

We would like to thank LPPM UM for supporting this activity, the entire community service team for participating in the team's activities. We don't forget to thank our partner MSME Dapur Sangit.

## CONCLUSION

Community service activities run smoothly. This socialization activity which took place at MSME Dapur Sangit, took the form of socializing the use of tools and

equipment maintenance so that partners could understand it. It is hoped that with assistance in the form of an automatic packaging tool (continuous sealer) it can improve the quality, efficiency of the production process, and the products produced by the MSME Dapur Sangit can compete in the marketing process.

#### Author's declaration

#### Authors' contributions and responsibilities

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

#### Funding

Write down the research funding, if any.

#### Availability of data and materials

All data are available from the authors.

#### Competing interests

The authors declare no competing interest.

## REFERENCES

Asfar, A. H., Mahendra, Y., Riyanto, A., Fadillah, S. N., & Rohmah, S. (2023). Pendampingan Pengembangan Design Packaging Produk UMKM Olahan Sambal Ikan Asin Siap Saji Di Kelurahan Banten Dalam Meningkatkan Daya Saing Dan Penjualan. *Seminar Umum Pengabdian Kepada Masyarakat*, 1(1), 118-127. <http://conferences.ippmbinabangsa.ac.id/index.php/seumpama/article/view/14>

Faiz, M. R., Ismail, H., Wibowotomo, B., Sujito, S., Kurniawan, R., Falah, M. Z., & Mufti, A. S. (2023). Optimizing Instant Herbal Drink Production with IoT-Based Sachet Forming Machines to Increase Productivity and Quality. *Bulletin of Community Engagement*, 3(2), 109. <https://doi.org/10.51278/bce.v3i2.886>

Faiz, M. R., Sujito, S., Muladi, M., Hadi, M. S., Falah, M. Z., Bharotoyakti, A., & Lestari, D. P. (2022). Peningkatan Kualitas Produk Dengan Mesin Pengemas Otomatis pada UMKM Syarimpion Di Masa Pemulihan Ekonomi Dampak Pandemi Covid-19 Di Kecamatan Singosari Kabupaten Malang. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat (SINAPMAS)*.

Herdiyanti, H., Anwar, M. A., Mere, K., Apriyono, T., & Suyatno, A. (2023). Pengaruh Kualitas Produk dan Persepsi Harga Terhadap Keputusan Pembelian: Literature Review Manajemen Pemasaran. *COSTING: Journal of Economic, Business and Accounting*, 7(1), 795-801.

Kadeni, N. S. (2020). Peran UMKM (Usaha Mikro Kecil Menengah) Dalam Meningkatkan Kesejahteraan Masyarakat. *Equilibrium: Jurnal Ilmiah Ekonomi Dan Pembelajarannya*, 8(2), 191-200.

Nuraini, I., & Sulistyono, S. W. (2019). Pendampingan Pengelolaan Usaha Es Thong Berbasis Entrepreneurship. *SNHRP*, 82-92.

Pramaningsih, V., Wahyuni, M., & Suryawan, S. H. (2022). Peningkatan Kualitas Kemasan Tempe Menggunakan Mesin Continuous Sealer: Improving the Quality of Tempe Packaging Using Continuous Sealer Machine. *PengabdianMu: Jurnal Ilmiah Pengabdian Kepada Masyarakat*, 7(Special-1), 187-192.

Prasetya, D. D., Sendari, S., Ashar, M., Falah, M. Z., Sujito, S., & Handoko, W. T. (2023). Implementation of a Vacuum Sealer to Improve the Quality and Quantity of Neng Nana's UMKM. *TRIDARMA: Pengabdian Kepada Masyarakat (PkM)*, 6(1), Article 1. <https://doi.org/10.35335/abdimas.v6i1.4064>

Rasa, I. N. M. A. G., Astuti, M. P., Eryani, I. A. A. P., Yudiastari, I. N. M., & Semaryani, I. A. A. M. (2023). *Pentingnya kemasan dalam pemasaran produk*. Scopindo media pustaka.

Said, S., & Azhar, A. (2021). Peran Usaha Mikro, Kecil Dan Menengah (UMKM) Dalam Meningkatkan Ekonomi Keluarga Di Kelurahan Mande Kecamatan Mpunda Kota Bima. *Jurnal PenKomi: Kajian Pendidikan Dan Ekonomi*, 4(1), 29-41.

Sufaidah, S., Aminah, N., Prasastii, M. A., & Oktavianti, D. (2022). Pengembangan Kualitas Produk UMKM Melalui Inovasi Kemasan dan Digital Marketing. *Jumat Ekonomi: Jurnal Pengabdian Masyarakat*, 3(3), 152-156.

Sujito, S., Faiz, M. R., Aripriharta, A., Hadi, A. A., & Falah, M. Z. (2023). Pemanfaatan Teknologi Continuous Band Sealer Guna Meningkatkan Efisiensi Packing UMKM Kopi Wali Desa Toyomarto. *Jurnal Pengabdian Pendidikan Masyarakat (JPPM)*, 4(2), 293-298.

Suryono, H. F., Nazihah, H., Deviani, M. A., Utami, P. A., Fausi, S., & Rusdiyana, E. (2021).

Introduksi Teknologi Tepat Guna (TTG) untuk Menunjang Produktivitas Usaha Tani Jamur Desa Gondangmanis. *Prosiding Seminar Nasional Pertanian*, 3(1). <https://www.ejurnalunsam.id/index.php/psn/article/view/3323>

Wijoyo, H. (2020). Digitalisasi umkm pasca pandemi covid-19 di riau. *Prosiding Konferensi Nasional Administrasi Negara Sinagara*, 12.

Wijoyo, H., Ariyanto, A., & Wongso, F. (2021). Strategi Pemasaran UMKM di masa pandemi. *Insan Cendekia Mandiri*.