



UNIVERSITI
TEKNOLOGI
MARA

ICEBIV

3rd International Competition of Entrepreneurship Business Innovation

**“ Promoting Innovative Entrepreneurship for a Sustainable Economy:
Pioneering Tomorrow’s Business Models”**



EXTENDED ABSTRACT

UiTM *di hatiku*

اوسها تقوى موليا



EXTENDED ABSTRACT



"Promoting Innovative Entrepreneurship for a Sustainable Economy: Pioneering Tomorrow's Business Models"

5th September 2024

In the joint collaboration involving:

Faculty of Business and Management,
Universiti Teknologi MARA Kedah Branch,

Faculty of Economics and Business,
Universitas Islam Bandung, and

Malaysian Academy of SME &
Entrepreneurship Development (MASMED)



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalammu'alaikum Warahmatullahi
Wabarakatuh.. Salam UiTM Dihatiku..

It is with immense pride and enthusiasm that I welcome you to the 3rd International Competition of Entrepreneurship Business Innovation (iCEBIV) 2024, hosted by the Faculty of Business and Management, UiTM Kedah Branch. This prestigious event is organized in collaboration with the Malaysian Academy of SME & Entrepreneurship Development (MASMED) and the Faculty of Economic and Business, Universitas Islam Bandung (UNISBA), Indonesia. This competition exemplifies our deep commitment to advancing creativity, entrepreneurship, and a spirit of innovation among our students and the wider community.

In today's rapidly evolving world, the ability to innovate has become a fundamental necessity rather than a mere option. Our institution understands the critical importance of innovative thinking in propelling economic growth, addressing urgent societal challenges, and paving the way for a sustainable future. This competition is designed to encourage participants to think critically, challenge conventional ideas, and develop groundbreaking solutions that can leave a meaningful impact in various areas.

This competition is not merely a challenge; it is a valuable platform for learning, collaborating and exchanging ideas. It brings together talented individuals from diverse disciplines, fostering an innovative culture that extends beyond academic boundaries. We encourage our students to apply their knowledge, channel their creativity, and turn their ideas into actionable business solutions.

As the Rector of UiTM Kedah Branch, I am deeply committed to supporting initiatives that help students reach their full potential. This competition provides them with a unique opportunity to showcase their abilities, gain critical experience, and establish networking that will be instrumental in their future careers. I am confident that the skills and insights gained from this experience will empower them to excel in an increasingly competitive and dynamic global landscape.

I would like to extend my heartfelt thanks to everyone who has contributed to the success of this event, including our dedicated faculty and staff, esteemed judges, sponsors, and partners. Your unwavering support and commitment have been integral to the successful realization of this initiative.

To all participants, I urge you to approach this competition with passion, creativity, and determination. This is your moment to shine, to challenge the limits of what is possible, and to create a lasting impact. Regardless of the outcome, your participation itself is a significant achievement, demonstrating your commitment to innovation and excellence.

Let us come together to make this competition a celebration of ideas, creativity, and the entrepreneurial spirit that embodies UiTM and UNISBA. I wish you all the best in your endeavours.

With warmest regards,

Profesor Dr Roshima Haji Said

Rector

Universiti Teknologi MARA (UiTM) Kedah Branch

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Bismillaahirrahmaanirrahiim

Assalamu'alaikum Warahmatullahi
Wabarakatuh

Every participant in the third International Competition of Entrepreneurship Business Innovation (ICEBIV) 2024 deserve my heartfelt congratulations and warmest regards. I extend these to the organizing committee and every one of them. This initiative is a demonstration of the productive collaboration that exists between universities in the ASEAN region. Maintaining a positive relationship between the two institutions, UNISBA and UiTM, will result in the production of academic programs and community service works that are both productive and innovative. In future collaboration, the implementation of this program is something that Universitas Islam Bandung (UNISBA) is strongly advocating for.

Universitas Islam Bandung (UNISBA) has reaffirmed its commitment to the internationalization program and has stated that it will continue offering assistance for various initiatives. It has been beneficial for the university to gain experience by participating in this program. The big ideas instilled in ICEBIV 2024 are thriving.

They will be ensured by the presence of entrepreneurs who have a global perspective and positively impact the surrounding community. Being an Islamic university, UNISBA, is obligated to establish a halal business ecosystem on a global scale by addressing contemporary issues such as the idea of innovation for sustainable business. This obligation is a requirement of the university. In light of this, the electronic proceedings that have been presented will prove to be advantageous for the development of scientific research and technological innovation. For their insightful and enthusiastic efforts in the successful implementation of the Memorandum of Agreement (MoA) between the two institutions, we would like to express our deepest gratitude to the Faculty of Economics and Business at UNISBA, the Malaysian Academy of Small and Medium Enterprise and Entrepreneurship Development (MASMED), and the Faculty of Business and Management at Universiti Teknologi Mara (UiTM) Kedah Branch. To be more specific, this partnership will result in many innovations, particularly in entrepreneurship, which is becoming an increasingly desirable occupation for the younger generation. When it comes to better understanding the global needs and challenges of today, international cooperation is evolving into an increasingly necessary requirement. Allah blesses the constructive actions that are being taken to generate benefits for society and universities. May Allah continue to bless these actions and our international collaboration for giving beneficial for our society and for the future.

Wassalamu'alaikum Warahmatullahi Wabarakatuh.

Warmest regard,

Prof. Dr. H. Edi Setiadi, S.H., M.H.
Rector Universitas Islam Bandung



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalamu'alaikum Warahmatullahi
Wabarakatuh

Alhamdulillah, under the grace and mercy of Allah Subhanahu Wata'ala, for this extraordinary occasion of the 3rd International Competition of Entrepreneurship Business Innovation (ICEBIV) 2024. This event is a testament to the strong bond between two great institutions which are Universiti Teknologi MARA (UiTM) and Universitas Islam Bandung (UNISBA). I am proud that our Faculty of Business and Management and MASMED have played a crucial role in bringing this collaboration to life.

I would like to express my heartfelt appreciation to everyone involved in making this event a reality. The 3rd ICEBIV 2024 is more than just a competition. It's a unique platform where we come together to celebrate creativity, unleash potential, and explore business ideas that have the power to impact our communities positively. It's inspiring to see so many bright minds gathered here today and ready to make a difference.

This year's competition offers three key categories namely Business Model Canvas Battle, Business Idea Battle, and Business Plan Battle. Each of these categories will serve as an invaluable platform for participants to validate their business ideas before turning them into successful ventures in the future.

These battles are not just about competition but about providing you with the feedback, guidance, and confidence to take your innovative ideas to the next level.

The theme of this year's competition, "Promoting Innovative Entrepreneurship for a Sustainable Economy: Pioneering Tomorrow's Business Model," resonates deeply with our mission. We live in a time where innovation and entrepreneurship are key to building a resilient and sustainable future. This competition is our way of nurturing that entrepreneurial spirit, encouraging you to think creatively and develop solutions that are not just innovative but also relevant to the challenges we face today.

To all the participants, I wish you a truly rewarding experience. Remember, every great idea starts with the courage to think differently and the willingness to take risks. Don't be afraid to dream big and this competition is your opportunity to do that. I hope you leave here with not just memories but valuable lessons that will guide you in your future endeavors.

As we look forward to the future, I sincerely hope that this won't be our last gathering. I'm already excited about the possibility of organizing the 4th ICEBIV next year. Let's keep this momentum going and continue to strengthen our collaboration in promoting entrepreneurship on a global scale.

Wassalamu'alaikum Warahmatullahi Wabarakatuh.

With Warmest Regard

Dr. Junaidah Ismail

Deputy Rector of Academic Affairs
UiTM Kedah Branch

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalamu'alaikum Warahmatullahi
Wabarakatuh,

Dear respected Rector of Universitas Islam Bandung (UNISBA),
esteemed Rector of Universiti Teknologi MARA (UiTM),
distinguished lecturers, talented competition participants,
and ladies and gentlemen.

First, let us thank Allah Subhanahu Wata'ala, because by His grace
and mercy, we can all gather in this prestigious event, the
3rd International Competition of Entrepreneurship Business
Innovation (ICEBIV) 2024. This event is one of the collaborations
between two educational institutions strongly committed
to building an innovative and globally competitive young
generation, the Faculty of Economics and Business of Universitas
Islam Bandung and Universiti Teknologi Mara (UiTM).

On this occasion, I express my highest appreciation to all the
committees and parties involved in organizing this event. The 3rd
ICEBIV 2024 is not just a competition but also an extraordinary
platform to develop potential, explore creativity, and explore
business ideas that can positively impact society, especially
students and professionals.



We are all aware that innovation and entrepreneurship are crucial to building a resilient and sustainable economy
in this era of globalization. Therefore, this competition has a crucial role in fostering the spirit of entrepreneurship
among students and professionals while encouraging the creation of business solutions that are creative,
innovative, and relevant to the needs of the times.

To the participants, I wish you enjoy and happiness by participating in this competition. Do not be afraid to
dream big and take risks when developing your ideas. Remember that every great innovation always starts with
the courage to think outside the box and take the first step. Hopefully, through the 3rd ICEBIV 2024 competition, all
of you can gain valuable experience that will help you in your future career journey.

Finally, I hope the 3rd ICEBIV 2024 can run successfully and benefit all participants and institutions involved. Let us
make this event a momentum to strengthen the cooperation between FEB Unisba and UiTM and advance the
world of entrepreneurship internationally.

Allow me to provide a "pantun" to encourage the organizers and participants of the 3rd ICEBIV 2024, which
characterizes literature and culture in Indonesia.

Jalan jalan ke Semanggi
Jangan lupa membeli batik bermotif
Ayo mahasiswa ramaikan ICEBIV bergengsi
Dikancah internasional dengan penuh ide inovatif

Wassalamu'alaikum Warahmatullahi Wabarakatuh

Sincerely,

Prof. Dr. Nunung Nurhayati, SE., M.Si., Ak., CA.
Dean Faculty of Economic and Business
Bandung Islamic University, Indonesia

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MIGGY BUDDY: A HOUSEHOLD-LEVEL FOOD WASTE MANAGEMENT INNOVATION USING MAGGOT BIOCONVERSION FOR A ZERO WASTE FUTURE

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Abstract

"Miggy Buddy" is an innovative household-scale solution designed to address the challenges of organic waste management through bioconversion using Black Soldier Fly (BSF) larvae. This kit, equipped with tools, media for maggot breeding, and an interactive consultation website, effectively reduces organic waste by up to 56%. Additionally, the product includes ecoenzyme to prevent unpleasant odors. With the increasing volume of organic waste in Indonesia, "Miggy Buddy" offers an environmentally friendly and efficient approach to processing organic waste, aligning with public interest in sustainable waste management.

1. INTRODUCTION (Location Survey: Semarang)

Waste is a complex global issue that impacts both the environment and public health. As the population increases, the volume of waste also increases (Afriandi et al., 2020)¹. The population of Semarang city in 2022 is recorded as 1,659,975 people. Of the total 431,534.65 tons of waste produced, 76.90% is organic waste, with food waste as the largest contributor at 60.80% (SIPSN, 2023)². According to Rabbani (2020), 68% of household waste is organic waste, including food waste.

Organic waste, especially food waste, not only causes environmental problems but also has the potential to create health problems if not handled properly. In response to this challenge, various technological innovations have been developed to process organic waste effectively and efficiently. One of them is the use of maggots from Black Soldier Fly (BSF), which is an innovative and environmentally friendly bioconversion method. This technology not only significantly reduces the volume of organic waste but also transforms it into valuable products³.

¹ Afriandi, M. N., Harahap, R., & Sarifah, J. (2020). Masyarakat dan Kesadaran Mengelola Sampah (A Descriptive Study of One RW in Leuwigajah Urban Village, Cimahi City). *Jurnal Buletin Utama Teknik*, 15(3), 287-293.

² SIPSN. (n.d.-a). SIPSN - Sistem Informasi Pengelolaan Sampah Nasional. Retrieved from <https://sipsn.menlhk.go.id/sipsn/>

³ Rabbani, A. R. D. M. (2020). Takakura Sebagai Solusi Penanganan Sampah Organik Rumah Tangga. *Abdimas Galuh*, 2(1), 165-174.

One solution to overcome organic waste is using the bioconversion technology using BSF larvae. BSF larvae can reduce organic waste by up to 56% (Handayani et al., 2021)⁴. Research by Putra & Ariesmayana (2020) shows that 100 grams of maggot can decompose 250 grams of organic waste in 7 days⁵. Maggots can be sold or used as compost, but maggot cultivation at the household scale often faces obstacles such as maggot death, maggot escape, and unpleasant odors from maggot feces (Aisy et al., 2024)⁶.

To address these challenges, the innovative product “Miggy Buddy” was designed to overcome these obstacles by providing an organic waste processing kit on a household scale. This kit is equipped with various tools and media for maggot breeding as well as support from an interactive website for consultation. In addition, this product is equipped with ecoenzyme to prevent unpleasant odors.

The increasing volume of organic waste in Indonesia necessitates source-based processing solutions. The public needs to be educated on self-managing waste. Organic waste processing, particularly food scraps, is crucial as it can significantly increase methane (CH₄) emissions, which contribute to 8% of global emissions (World Resources Institute, 2021). Research indicates that the public holds a positive perception of waste management using BSF maggots, with a perception score of 104.2 (Zuhdirabbani et al., 2023). This suggests a market demand for organic waste processing solutions utilizing maggot bioconversion⁷.

2. MATERIALS AND METHODS

2.1 Materials

Materials needed to make an EcoMunch Bin:

- Custom Box S;
- Costum Box XI;
- Plywood 30 x 10 cm;
- Bucket;
- Eggies;
- Small scope;
- Wire;
- EM4 Liquid;
- Baby Maggots;
- Trigger sprayer bottle (500 ml);
- Pipe elbow;
- PVC pipe;
- Saw dust;
- Wood glue;
- Net;

⁴ Handayani, D., Naldi, A., Larasati, R., Khaerunnisa, N., & Budiarmaka, D. (2021). Management of increasing economic value of organic waste with Maggot cultivation. IOP Conference Series: Earth and Environmental Science, 1-9.

⁵ Putra, Y., & Ariesmayana, A. (2020). Efektifitas Penguraian Sampah Organik Maggot (BSF). *Jurnal*, 3(1), 11-24.

⁶ Aisy, R., Bagaskara, K. S., Suari, G. A. P. R., Salsabilah, Alfinaini, N. A. D., Rahmawati, D. A., & Putra, M. A. (2024). Sosialisasi Budidaya Maggot sebagai Pengolahan Sampah Organik di Desa Mayang, Jember. *Journal of Community Service*, 7(01), 16-24.

⁷ Zuhdirabbani, G., & Sapanli, K. (2023). Analisis Persepsi dan Kelayakan Finansial Pengolahan Sampah Menggunakan Maggot Black Soldier Fly. *Indonesian Journal of Agricultural, Resource and Environmental Economics*, 2(1), 53-63.



- Shelf bracket;
- Nylon string rope (9 meters);
- Used bottle (350ml);
- Double Headed Zipper (50 cm).

To construct a maggot EcoMunch Bin, begin by cutting four PVC pipes to a height of 90 cm each, which will serve as the legs. Additionally, cut two PVC pipes to lengths of 60 cm and 40 cm for the frame's length and width. Assemble the frame by connecting the pipes with T-connectors, ensuring the structure stands upright. Next, prepare a Custom Box L with dimensions of 55 cm x 35 cm x 15 cm, which will sit on this frame. Secure L-brackets, each 12 cm in height, inverted along the left and right sides of the box at 5 cm and 20 cm from the edge to create supports for a smaller Custom Box S. Use a mini drill to make small holes in the main box, aligning them with the L-bracket placements, and secure the brackets with 5 cm wire pieces threaded through the holes and tightened externally. Position the Custom Box S (25 cm x 35 cm x 15 cm) on top of the Custom Box L, resting it on the secured L-brackets. Once the box assembly is complete, prepare the mesh by cutting it to a height of 100 cm and a length of 185 cm, which is calculated as twice the sum of the box's length and width plus an additional 5 cm. Sew the mesh using double stitching along the length to create a cover, then cut a piece measuring 42 cm x 62 cm to serve as the top cover, securing it similarly. For added stability, fold and sew the bottom edges. To create and 3D print a "Miggy Buddy" text in Blender, open Blender, add and edit a text object with "Miggy Buddy," then convert it to a 3D mesh and extrude it. For a cylindrical container, add a cylinder with a 6 cm diameter and 10 cm height to hold a pungent odor. Place it in Custom Box L to attract black soldier flies. Print both designs using a 3D printer and filament. Attach the 3D printed text to the left side of the box facing the zipper. To create an egg-laying medium for black soldier flies, start by cutting plywood boards into five pieces, each with dimensions of 10 cm in length and 5 cm in width. Drill two holes at both ends of the left and right sides of each piece. Next, connect the plywood pieces with wire, ensuring there is a 0.3 cm gap between each board. This will form the egg-laying medium. Finally, place the assembled medium into the Custom Box L. To construct a wooden slide by cutting a plank to 20 cm x 10 cm and connecting it to another piece measuring 10 cm x 5 cm at a 45-degree angle using wood glue. In the Custom Box S, cut a 5 cm deep and 10 cm wide opening on the front to fit the slide securely. Finish the structure by adding rubber caps to the bottom of each PVC leg. For the maggot farming process, use a fermentation bucket to decompose organic waste, spraying it with an EM4 solution. Place baby maggots in a ventilated bottle and use a small scoop to handle decomposed material. The maggot EcoMunch Bin is now ready for use.

2.2 Methods

2.2.1 Market Size (Survey Location: Semarang)

The market size for Miggy Buddy primarily consists of mothers, resulting in a wide age range. According to data from BPS in 2023, out of 838,670 female residents in Semarang City, 385,429, or 45.9%, are mothers aged between 25-49 years, who have the potential to manage organic waste from



their households⁸. This number is expected to continue growing. With the introduction of innovative products and a website by Miggy Buddy to help address environmental issues such as waste generation, Miggy Buddy has a strong potential for business success.

2.2.2 Market Strategy

To market “Miggy Buddy,” we will adopt a community-based approach targeting households, schools, and environmental communities. We will organize workshops and seminars in residential areas, collaborating with local RT/RW leaders to provide direct education on the importance of organic waste management. In schools, we will involve students in environmental education programs using “Miggy Buddy” as a practical tool, and launch the “Green School” campaign.

Additionally, we will partner with local environmental organizations to disseminate information and educate the public about using maggots in organic waste management. We will also participate in various environmental events and festivals to introduce “Miggy Buddy” to a broader audience.

In terms of digital marketing, we will utilize social media platforms such as Instagram, Facebook, and YouTube for engaging and educational campaigns. We will develop an informative and interactive website, featuring a blog, FAQ section, and online consultation services, along with an online store to facilitate product purchases. Collaboration with environmental influencers will help promote “Miggy Buddy” through inspiring content and reviews that build trust with potential customers.

We will also attend local environmental exhibitions and fairs to market “Miggy Buddy” directly to visitors. Promotional discounts and bundling packages will be offered for first-time purchases, and incentives will be provided to customers who refer the product to others.

This approach ensures that “Miggy Buddy” reaches a wider range of communities and households, making a significant contribution to organic waste management in Indonesia.

2.3 Methods

2.2.3 Market Size (Survey Location: Semarang)

The market size for Miggy Buddy primarily consists of mothers, resulting in a wide age range. According to data from BPS in 2023, out of 838,670 female residents in Semarang City, 385,429, or 45.9%, are mothers aged between 25-49 years, who have the potential to manage organic waste from their households⁹. This number is expected to continue growing. With the introduction of innovative products and a website by Miggy Buddy to help address environmental issues such as waste generation, Miggy Buddy has a strong potential for business success.

⁸ Badan Pusat Statistik. (2023). Semarang City in Figures 2023 (Edition 1).

⁹ Badan Pusat Statistik. (2023). Semarang City in Figures 2023 (Edition 1).

2.2.4 Market Strategy

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3. RESULTS AND DISCUSSION

3.1 “Miggy Buddy” Product Specifications:



Figure 1. EcoMunch Bin (Miggy Buddy Product)

This kit has dimensions of 1 m x 1 m x 1.5 m and is equipped with various equipment, including a cultivation box, net, BSF eggs, hatching media (sawdust), fermentation bucket, fermenter (ecoenzyme), and spray bottle. Ecoenzyme in this kit helps reduce odor and accelerate the fermentation process of organic waste. In addition, this kit is equipped with a guidebook and QR Code that directs users to an interactive website for further information and consultation support.



With these features, “Miggy Buddy” is designed to make it easier for users to manage organic waste at home practically and efficiently.

3.2 Product Benefits

- Reducing household organic waste through the use of a maggot kit.
- Implementing the circular economy concept at the household level.
- Assisting the government in managing food waste.

3.3 Business Environment Conditions (Survey Location: Semarang)

This business will be located in Semarang City, which has an urgent need for organic waste processing. Of the total 431,534.65 tons of waste in the city, 60.8% comes from food scraps (Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia, 2023)¹⁰. Therefore, "Miggy Buddy" has significant potential not only from a business perspective but also in contributing to environmental problem-solving through a sustainable business approach. This product not only provides a solution for organic waste issues but also promotes environmental awareness and sustainability through the use of eco-friendly technology.

4. CONCLUSION

The implementation of "Miggy Buddy" reveals that bioconversion using Black Soldier Fly (BSF) larvae is an effective method for managing organic waste, reducing its volume by up to 56% and supporting circular economy principles. However, challenges such as maggot mortality, escape, and odor issues can impact its efficiency and user experience. Theoretically, this approach aligns with sustainable waste processing concepts, while practically, "Miggy Buddy" offers a scalable solution for household waste management, enhancing environmental and public health benefits. To optimize the product, further research should address these challenges, and expanded educational and community outreach efforts are recommended. Strengthening partnerships with local environmental organizations and utilizing digital marketing can also support the broader adoption and success of "Miggy Buddy."

5. ACKNOWLEDGMENT

We would like to extend our heartfelt gratitude to our mentor, Ms. Patricia Evericho Mountaines, S.T., M.Cs, for her unwavering support and guidance. Her invaluable contributions have been instrumental in the development and success of our maggot growth kit business. We are deeply appreciative of her belief in our vision and her commitment to sustainability. Her support has not only provided us with the necessary resources but also inspired us to strive for excellence in our mission to reduce household organic waste. Thank you for being an integral part of our journey. We look forward to continuing this partnership and achieving greater milestones together. We also wish to express our sincere thanks to all our team members for their dedication, hard work, and collaboration. Your collective efforts have been crucial in bringing this project to life. Additionally, we are grateful to the organization that organized the business plan competition. Your

¹⁰ Kementerian Lingkungan Hidup dan Kehutanan. (2024). National Waste Management Information System. Retrieved from <https://sipsn.menlhk.go.id/sipsn/>

platform has provided us with the opportunity to showcase our ideas and receive valuable feedback. Thank you for fostering an environment that encourages innovation and entrepreneurship.

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ATTACHMENT:

Financial Projection

COGS CALCULATION						
Expense	Price	Quantity	Unit	Amount	Total/month	Total/year
Variable Costs						
Raw Materials:						
Custom Box S	Rp 8.000	30	pcs	Rp 240.000		
Costum Box XI	Rp 21.000	30	pcs	Rp 630.000		
Plywood 30 x 10 cm	Rp 10.000	30	pcs	Rp 300.000		
Bucket	Rp 8.000	30	pcs	Rp 240.000		
Eggies	Rp 2.000	30	pcs	Rp 60.000		
Small scope	Rp 8.000	30	pcs	Rp 240.000		
Wire	Rp 8.000	6	M	Rp 48.000		
EM4 Liquid	Rp 21.000	5	L	Rp 105.000		
Baby Maggots	Rp 4.000	30	packs	Rp 120.000		
Trigger sprayer bottle (500 ml)	Rp 5.000	30	pcs	Rp 150.000		
Pipe elbow	Rp 1.000	120	pcs	Rp 120.000		
PVC pipe	Rp 32.000	30	pcs	Rp 960.000		
Saw dust	Rp 150.000	1	box	Rp 150.000		
Wood glue	Rp 20.000	2	bottle	Rp 40.000		
Net	Rp 250.000	3	pcs	Rp 750.000		
Shelf bracket	Rp 3.000	120	pcs	Rp 360.000		
Nylon string rope (9 meters)	Rp 1.500	30	pcs	Rp 45.000		
Used bottle (350ml)	Rp 100	30	pcs	Rp 3.000		
Double Headed Zipper (50 cm)	Rp 15.000	30	pcs	Rp 450.000		
Supporting Costs:						
Print stickers	Rp 1.500	60	pcs	Rp 90.000		
Cardboard box	Rp 10.000	30	pcs	Rp 300.000		
Duct tape	Rp 10.000	2	pcs	Rp 20.000		
Print the guidebook	Rp 2.000	30	pcs	Rp 60.000		
Plastic Clipper	Rp 1.000	30	pcs	Rp 30.000		
Needle and thread	Rp 10.000	1	pcs	Rp 10.000		
Total Variable Costs					Rp5.521.000,00	Rp 66.252.000

Figure 2. Cost of Goodsold (COGS) - Miggy Buddy

Fixed Costs						
Electricity and water	Rp 100.000	1	month	Rp 100.000		
Internet	Rp 300.000	3	month	Rp 100.000		
Adsense	Rp 500.000	5	month	Rp 100.000		
Hostinger	Rp 400.000	5	month	Rp 80.000		
Maintenance & Depreciation	Rp 958.000	12	month	Rp 79.833		
Filamen roll	Rp 250.000	5	month	Rp 50.000		
Total Fixed Costs					Rp 509.833	Rp6.118.000,00
Total Production Costs					Rp 6.030.833	Rp 72.370.000
Other Costs:						
Wordpress	Rp 60.000	1	account	Rp 60.000		
Google Web Designer	Rp 150.000	1	account	Rp 150.000		
					Rp 210.000	
REVENUE CALCULATION						
Production	Price	Quantity	Unit	Amount	Total/month	Total/year
EcoMunch Bin (Miggy Buddy Product)	Rp 325.000	30	box	Rp 9.750.000		
Total Revenue					Rp 9.750.000	Rp 117.000.000
Initial Investment:						
Pliers	Rp 120.000	4	unit	30000	Rp 120.000	
Mimi drill	Rp 520.000	2	unit	260000	Rp 520.000	
Grinding	Rp 500.000	2	unit	250000	Rp 500.000	
Scissors	Rp 50.000	5	unit	10000	Rp 50.000	
3D Printer	Rp3.600.000,00	1	unit	3600000	Rp 3.600.000	
				Initial Investment:	Rp 4.790.000	

Figure 3. Cost of Goodsold (Continued) – Miggy Buddy

INITIAL INVESTMENT			
Total Investment	Rp	4.790.000	
Depreciation per Year	Rp	958.000	
REVENUE PROJECTION			
		1 Month	1 Year
Sale	Rp	9.750.000	Rp 117.000.000
Production cost	Rp	6.030.833	Rp 72.370.000
Other cost	Rp	210.000	Rp 210.000
Depreciation	Rp	79.833	Rp 958.000
Income	Rp	3.429.333	Rp 43.462.000

Figure 4. Revenue Projection (Continued)

Miggy Buddy		
Projected Profit and Loss Statement		
for the Period Ending December 31, 2024		
Revenue Projections		
Sales Projections	Rp117.000.000	
Total Revenue Projection		Rp117.000.000
Projected Cost of Goods Sold (COGS)		
Projected Cost of Goods Sold	Rp66.252.000	
Total Projected Cost of Goods Sold (COGS)		Rp66.252.000
Total Projected Gross Profit		Rp50.748.000
Load Projections:		
Fixed Expenses	Rp5.160.000	
Depreciation Expenses	Rp958.000	
Other Expenses	Rp210.000	
Total Projected Load		Rp6.328.000
Projected Profit/Loss Before Tax		Rp44.420.000
Tax (15%)		Rp6.663.000
Net Profit/Loss Projection		Rp37.757.000

Figure 5. Profit and Loss Statement

Profit and Loss Projections						> Estimated Revenue in Percentag
Description	80%	90%	100%	100%	100%	
Description	Year 1	Year 2	Year 3	Year 4	Year 5	
Reception						
Total Sales	Rp 93.600.000	Rp 105.300.000	Rp 117.000.000	Rp 117.000.000	Rp 117.000.000	
Expenditure:						
a. Variable Costs	Rp 53.001.600	Rp 59.626.800	Rp 66.252.000	Rp 66.252.000	Rp 66.252.000	
b. Fixed cost	Rp 5.160.000	Rp 5.160.000	Rp 5.160.000	Rp 5.160.000	Rp 5.160.000	
c. Depreciation	Rp 958.000	Rp 958.000	Rp 958.000	Rp 958.000	Rp 958.000	
d. Other expenses	Rp 210.000					
Total Expenditures	Rp 59.329.600	Rp 65.744.800	Rp 72.370.000	Rp 72.370.000	Rp 72.370.000	
Earning Before Tax	Rp 34.270.400	Rp 39.555.200	Rp 44.630.000	Rp 44.630.000	Rp 44.630.000	
Tax (15%)	Rp 5.140.560	Rp 5.933.280	Rp 6.694.500	Rp 6.694.500	Rp 6.694.500	
Earning After Tax	Rp 29.129.840	Rp 33.621.920	Rp 37.935.500	Rp 37.935.500	Rp 37.935.500	
Profit On Sales	31.12%	31.93%	32.42%	32.42%	32.42%	
BEP (Rupiah)	Rp 14.589.265	Rp 14.105.108	Rp 14.105.108	Rp 14.105.108	Rp 14.105.108	
BEP (Units)	40,53	39,18	39,18	39,18	39,18	
Until BEP is reached	3,377					
BEP will be reached in	3.4 year					
ROI	82%	> with expected rate of return on investment 40%				

Figure 6. Profit and Loss Statement (Continued)

Miggy Buddy Cash Flow Projections Period 2024 - 2025					For example, Funding: Rp 10 Million
	2024 Q2	2024 Q3	2024 Q4	2025 Q1	
Cash from Operational Activities					
a. Cash Receipts from Sales	Rp 29.250.000	Rp 29.250.000	Rp 29.250.000	Rp 29.250.000	
b. Cash Disbursements to Suppliers	-Rp 15.033.000	-Rp 15.033.000	-Rp 15.033.000	-Rp 15.033.000	
c. Cash Expenditures for Other Operations	-Rp 1.530.000	-Rp 1.530.000	-Rp 1.530.000	-Rp 1.530.000	
d. Other Expenses	-Rp 1.319.500	-Rp 1.799.500	-Rp 1.799.500	-Rp 1.799.500	
Net cash from Operating Activities	Rp 11.367.500	Rp 10.887.500	Rp 10.887.500	10,887,500	
Cash from Investment Activities					
a. Cash Expenditures from Purchase of Fixed Assets	-Rp 4.790.000	-	-	-	
Net cash from Investment Activities	-Rp 4.790.000	-	-	-	
Cash from Financing Activities					
a. Cash Receipts from Funding	Rp 2.500.000	Rp 2.500.000	Rp 2.500.000	Rp 2.500.000	
b. Investment Installment Expenditure	-	-	-	-	
Net cash from Financing Activities	Rp 2.500.000	Rp 2.500.000	Rp 2.500.000	Rp 2.500.000	
Total Net Cash	Rp 9.077.500	Rp 13.387.500	Rp 13.387.500	Rp 13.387.500	
Cash Flow to Calculate IRR	-Rp 4.790.000	Rp 13.387.500	Rp 13.387.500	Rp 13.387.500	
Business Feasibility Analysis					
NPV (20%)	Rp 20.952.083				
IRR	179%				
Net B/C	8.38				
Payback Period	0.36 year				

Figure 7. Cashflow Statement

Miggy Buddy – Website



Figure 8. Miggy Buddy – Website (Home Page)



Figure 9. Miggy Buddy - Website (Our Team Page)

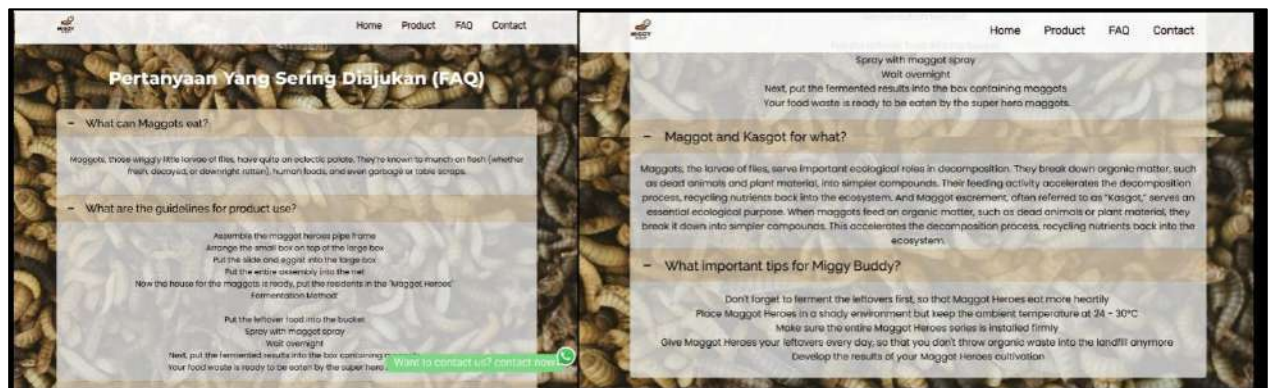


Figure 10. Miggy Buddy - Website (FAQ Page)



Figure 11. Miggy Buddy - Website (Contact and Address Page)

Miggy Buddy Product – Prototype



Figure 12. Miggy Buddy Product - Prototype



Figure 13. Illustration of Miggy Buddy Product Placement Using IBIS Paint X



Figure 14. Miggy Buddy Logo

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