

Manage Waste organic with Bioconversion Black Soldier Fly on Business Mega Maggot

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Abstract. Management waste in developing countries is causing environmental concerns, particularly food waste. The study explores the use of the Black Soldier Fly (BSF) in managing organic waste and food waste in the business of Mega Maggot. The research aims to promote BSF as a potential and economical alternative to recycling biological waste. The study also discusses the challenges faced in changing the traditional feed model for maggot production, which relies on factory-made or subsidized feed. The authors utilized the Classic Life Cycle to create Mega Maggot's website, a sequential software development process that minimizes errors and allows for easy modifications during testing. This method ensures accurate results and publishability. The author created a prototype website for Mega Maggot, serving as an informative learning media and purchasing platform for products and services. Activity diagrams on this website illustrate users as companies, individuals, and agents. This website offers a user-friendly interface with an earth-tone base color and sufficient fonts. Users can perform various activities, including purchasing menus and accounts. The Mega Academy offers three programs: Mega classes, workshops, and visits, focusing on waste management, organic waste management, and BSF breeding. The company also provides products like fresh, dried, and organic fertilizers.

1 Introduction

Management waste in the developing country still needs to fulfill the standard there. Management waste is causing problems in level locally and globally [1,2]. All over the world, it generates waste, particularly food waste [3]. The Black Soldier Fly (BSF) is valuable for reducing the challenge of managing feed and organic waste. Therefore, concerted efforts are directed at promoting BSF [4]. BSF includes the insect saprophagous, which is more scientifically and economically desirable because, during this stage, the larvae are very voracious and can consume various organic ingredients [5].

BSF use may affect supplementation for enriching proteins as ingredients cattle reluctantly quality feed and appearance, which is interesting [6]. Method bioconversion,

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which BSF mediates, looked at the wrong promising technology in efforts to manage organic waste [7]. Utilizable cultivation can increase the Public's devotion to score economically on the environment Public [8]. Nutrition larvae BSF is very influenced by media breeding. Nutrition, which different will cause different content nutrition in larvae [9].

Problems that arise in the business Mega Maggot (cultivation and sale of maggot products) come from engineering existing waste treatment in developing countries, which still needs to fulfill standard system management waste corresponding. Management waste causes serious environmental concerns at local and global levels [10,11]. Effective and sustainable waste disposal systems are very needed. Because of the ability degradation waste and proven biotransformation, BSF provides a potential and economical alternative to recycling biological waste.

The second problem we face is changing habit breeder conventional which already dozens of years depend on feed factory-made or subsidized feed from the government. It naturally needs an approach emphasizing the awareness aspect of switching to model feed organic, which forms maggot and does not depend on a feed artificial factory. Therefore, they must first be convinced and show the results that breed in a manner organic have a number excess and profit, good social, economy nor technology [1].

A website is a gathering page containing information that could easily be accessed by anybody, anytime, anywhere via the internet [12]. Activity businesses in use websites could expand activity and easily reach the consumer [13,14]. The website's influence in business is used to validate a business that stands up and knows the standing time, description, and address of the business [15,16]. As a form of support for the environment, the website is a place good for growing knowledge about environmental concerns [17].

Based on exploring the previous study results, this study finds several earlier studies relevant to the research. This study is still very different from the previous study because the discussion is related to website marketing. Target the target for exciting people interested in something product or service company-specific. More visitors means more opportunities to place a value proposition.

The research we will be conducting will lead to our website design, especially on the steps manufacturing steps from start to finish and any tools we use to support making the website. In designing a website, the Thing that needs to be noticed is the feature used or how the relevant information is explained with facts, which there are, so that grows the knowledge audience. The description company is also applied to the site's website, which is useful as validation for an established company. This website is expected to influence later sales in the country and outside the country or as a place for learning for those who want to breed maggots.

2 Methodology

In this study, the authors used the Classic Life Cycle to make Mega Maggot's website. The requirements and progress from the client are the first step in this sequential and sequential software development process [18]. The Classic Life Cycle model is used in this study to minimize errors that will occur when building models one at a time. Starting from problem, requirements analysis and definitions, design, implementation, test, and operations, and ending with maintenance. This Classic Life Cycle paradigm does not allow for many changes if an error is made in the middle of the process. Since the method has entered the testing phase, it is challenging to modify everything incorrectly defined in the previous stage.

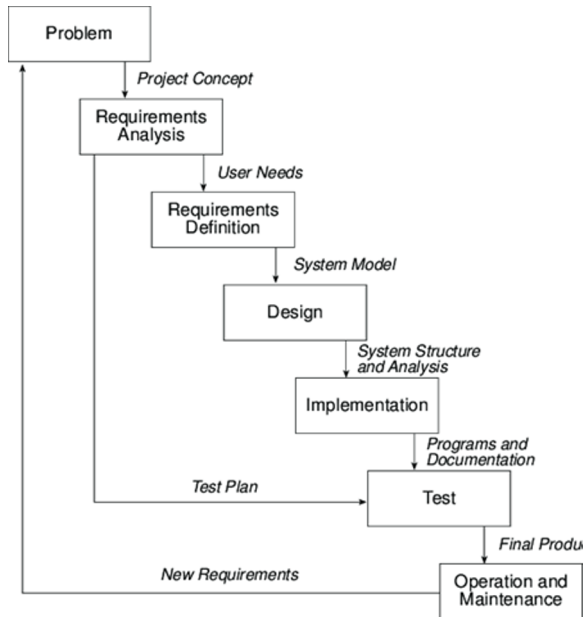


Fig. 1. Classic Life Cycle Mega Maggot Website

This study uses the method of classic life cycles. The method is a model development device that goes on in a manner sequentially from analysis and need (problem and need) until design, coding, testing, integration, implementation, and maintenance. Thus, the results can be reviewed and published [19]. On study, this website was built until step design.

3 Results and Application

Previously, the author has made a prototype in website display form. The Mega Maggot website has the main function as an informative learning media, as well as making purchases of both products and services offered. The website covers included products and services. My cart, and log in. Besides this website's uniqueness, website visitors' role is divided into two categories, namely as individuals or companies. That matter is done with the aim of differences in input and output to support the circulation business in managing organic waste rubbish.

3.1 Planning System

The website is used as media deployment information, which can be accessed easily and quickly via the internet by all users. The access process can be done without existing limited time and location. The website contains several an element that displays data from text, picture, animation, statistics, and dynamic. So that connected page with page other based on brand image (logos).

3.2 Diagram Activity

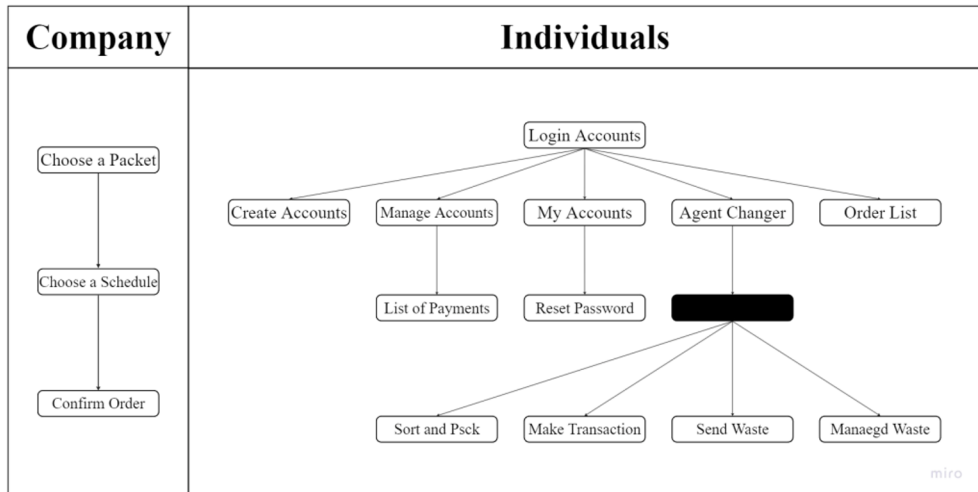


Fig. 2. Activity Diagram of the Mega Maggot Website

Activity diagrams on this website can be illustrated in two corner views as seen in Fig. 2: (a) users Act as the company that could do election package academic or Cooperation, choose timetable and confirmation order, and (b) users Act as an individual who becomes part of agent change.

3.3 Apply Connection Diagram

Entity Relationships Diagram (ERD) is a manipulation-based data to produce a high-quality framework used for making, management, and maintenance [20]. Following is a picture diagram (ERD) on the website Mega Maggot, as in Figure 3 below. In this picture, the author includes three main pages, namely the header, home page, and footer.

3.4 Apply Users Interfaces

User Interface (UI) is a visual representation of the product in a system for use on a website. Mega Maggot site users are made as friendly as possible for their users. Mega Maggot uses an earth tone base color as a green business representative. With the use of sufficient fonts so that it can be read comfortably by the user. On this main page, users can perform several activities to choose from. Such as purchase menus, accounts, and use individually or by companies, as shown in Figure 4.

Visitors can get academy programs for adding insight via Mega Academy. On the program, we offer 3 programs: Mega classes, Mega workshops, and Mega visits. Mega class is an expert service for waste management in Indonesia. In this class, there will be discussion and training material. To increase understanding of waste and environmental phenomena. Mega Workshop's service aims to broaden knowledge in organic waste management. Mega visit is a service for visitors to see the BSF production process to become a maggot so that it can be marketed as a high-quality product. This service is intended to explain waste management and BSF breeding in detail.

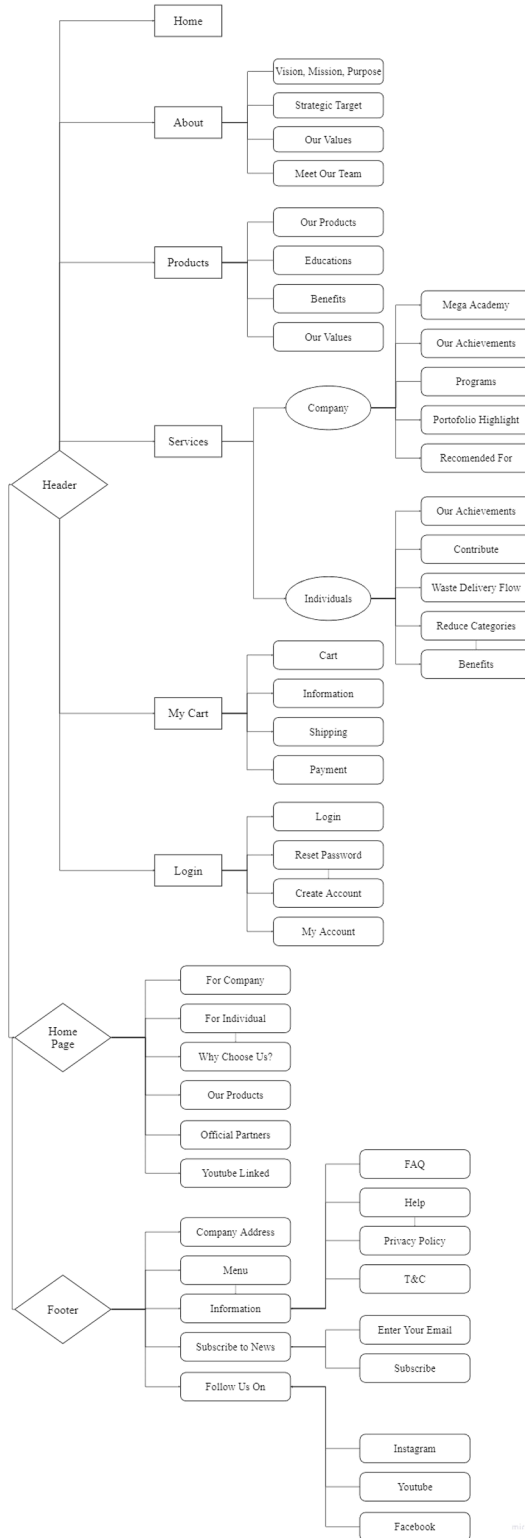


Fig. 3. Entity Relationship Diagram (ERD) of the Mega Maggot Website



Fig. 4. Mega Maggot Website Home Page

They can also contribute significantly to becoming agents of change for the environment around them. Activity following could be conducted with the method of sending organic rubbish through the system which has been made. First, sorting waste according to category. Second, make payment transactions until the pick-up schedule. Third, the courier will pick up the trash. Fourth, waste will be managed optimally.



Fig. 5. Services for Individuals

In addition to the services we offer for companies and individuals, we also provide three main products, namely fresh maggot, dried maggot, and maggot organic fertilizer. These three products have their uniqueness with high product quality. Fresh maggot is used for chicken or catfish breeders. Dried maggot for ornamental fish alternative feed. At the same time, maggot organic fertilizer is used for plant lovers. These three products are produced simultaneously in one maggot cycle so that they use all the elements and maximize the existing ones without leaving any other residue, as shown in Figure 6.



Fig. 6. Mega Maggot Products

3 Conclusion

At this writing, we authors want to share the work of the Mega Maggot website. This site is expected to help expand the outlook on the management of waste rubbish. Besides that, it also could become agent changes for the surrounding environment, especially in managing organic waste from household waste. In the future, the website will also be capable of media transaction products and services so that this business can run in the long run.

In the future, users and site visitors can also work together as business partners. This startup will start with social media promotion media with the purpose of adding visitors to the site website Mega Maggot.

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