



DOST Form 3
NON-R&D PROJECT PROPOSAL

(Technology Transfer, S&T Promotion and Linkages, Policy Advocacy,
Provision of S&T Services, Human Resource Development and Capacity-Building)

I. PROJECT PROFILE

(1) Program Title: Grants in Aid Project Title: Packaging Development for Marble Novelty Products: Part 2-Branding				
(2) Project Leader/Sex: Dr. Bilshan F. Servañez Agency (smallest unit): Center for Innovative Learning and Enterprise Development (CiLearnED@RSU) Address/Telephone/Fax/Email (Barangay, Municipality, District, Province, Region): Liwanag, Odiongan, Romblon				
(3) Cooperating Agency/ies (Name/s and Address/es): LGU-Romblon				
(4) Implementing Agency (Name of University-College-Institute, Department/Organization or Company): Romblon State University Address/Telephone/Fax/Email (Barangay, Municipality, District, Province, Region): Base Station: Liwanag, Odiongan, Romblon Other Implementation Site (s): Romblon, Romblon				
(5) Project Duration (number of months): 12 months Project Start Date: January 2025 Project End Date: January 2026				
(6) Total Project Cost: P720,000.00 (indicate Counterpart Funds; use Form 4 for the Line-Item Budget)				
Implementing Agency/ies	PS	MOOE	EO	Total
A. Requested Fund				
DOST-MIMAROPA		Php50,000.00	Php670,000.00	Php720,000.00
B. Counterpart Fund 1				
RSU		Php100,000.00	Php500,000.00	Php600,000.00
TOTAL		Php150,000.00	Php1,170,000.00	Php1,320,000.00
Sustainable Development Goal (SDG) Addressed: #4. Quality Education, #9. Industry, Innovation and Infrastructure				

II. PROJECT SUMMARY

(7) Executive Summary (not to exceed 200 words)

The project is an extension of an earlier project with almost the same title, this time taking the packaging of Romblon marble to another level: designing laminated bamboo boxes and crates for Romblon marble and enhancing branding utilizing laser technology to etch the marble producer's names in the crates. These crates are intended for heavier marble novelty items; the ones that cannot be supported by the packaging boxes in the first project. The crates will be made of laminated bamboo that will be manufactured using the equipment earlier provided by DOST and NEDA in separate projects. Beneficiaries are marble producers that create big marble novelty items like figurines, jars, urns, and furniture items. LGU Romblon will be enjoined for the project to create a pool of players in the government sector that supports the marble industry in the province. Bamboo is the material of choice due to its highly renewable nature and to prevent the cutting of trees just for packaging. Laser etching will provide crisp package brands that will be more appealing to discerning customers.

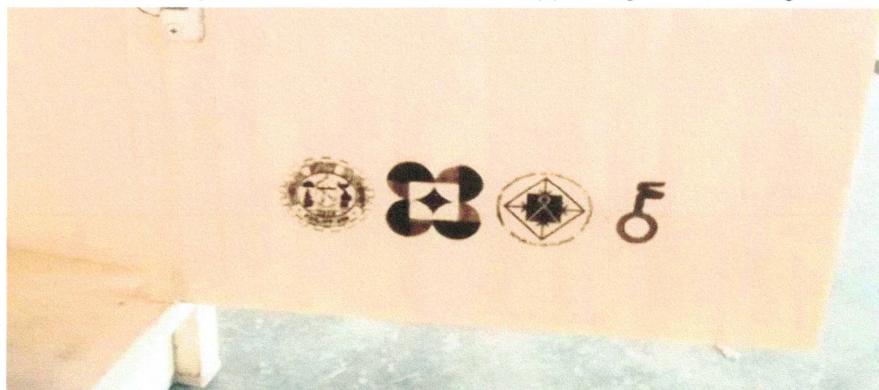


Figure 1. Sample laser etched logos of RSU, DOST, NEDA and Filippinnovation made at the Woodworking School Factory of the Romblon State University, CiLearnED. Precision etching may still be improved with better laser capabilities.

(8) Introduction (Not to exceed 15 pages)**Rationale/Significance** (Not to exceed 300 words)

The marble industry had recently been given a boost by the RSU in partnership with government line agencies like the DOST, NEDA and CHED. State-of-the-art equipment for marble processing as well as for processing marble cutting plant wastes are now in place. Training on the utilization of these equipment had been conducted to industry players and their workers. Researches on the utilization of ground calcium carbonate as paint additive, concrete strength enhancer, soil ameliorant are also ongoing. Other completed researches are on marble spool insulator. This last research has generated a utility model for the spool design. The RSU and the industry have benefitted from these endeavors through modern equipment acquisition and new knowledge generated particularly on the use of numeric controlled equipment. Research publication as well as community application of these researches are also expected. New products and designs may also be generated. Packaging of marble novelty items have also been done with beautifully-made cardboard packaging materials that will protect the product and enhance the marble appeal and salability. The proposal will enhance the products further by packaging the marble products in laminated bamboo boxes and crates and etching the manufacturers' logo or brand name to the boxes. A nicely boxed product will not only increase the price of the total product by incorporating the price of the box and the product but also put an extra premium price for the benefits of packaging. This had been observed before in the numerous products with packaging assisted by DOST-MIMAROPA. The products have become household names due to good packaging and have commanded good pricing. Packaging with crates made of bamboo will also ensure that environmental protection is observed in the marble product development process.



Figure 2. Sample packaging boxes made of laminated bamboo. The RSU has the capability to mass produce this design and others like it.

Objectives (General and Specific):

The general objective of this project is to further enhance the branding of Romblon marble products through innovative use of materials and design.

Specifically it seeks to:

1. Introduce innovative packaging through design and production of laminated bamboo boxes and crates for marble novelty items.
2. Bring bamboo packaging to the next level by incorporating brand and logo markings using

- precision laser etching.
3. Bring price increase through synergistic pricing with an added 15-30% markup due to the innovative packaging
 4. Strengthen collaboration between academe, NGAs and the industry.

Methodology:

Technology Description. Crates for packaging are usually made of wood that are light and easily workable. In this project wood for crates and boxes will be replaced with bamboo. The RSU had been capacitated by NGAs with state-of-the-art equipment for bamboo lamination. DOST have provided pole cutter, bamboo slicer, and thickness planer. NEDA provided additional pole cutter, 5 thickness planers, and also a slicer. The DBM provided a heated hydraulic press. The university is doing product development for laminated bamboo tabletops for student desks and chairs. These facility plus expertise will be brought to the max by creating another product that will serve the packaging industry. Using the existing equipment, the RSU will develop boxes and crates for marble products. These boxes and crates will be manufactured from slats derived from the butt portion of the bamboo culm. These are usually about $\frac{1}{2}$ -inch thick when processed. The processed slats will then be laminated and later on fashioned into boxes or crates. These boxes and crates will be etched with logo design using laser printing technology. Turned bamboo boxes will also be included as a product of this project.

Value Proposition. The main value propositions are product protection and enhanced appearance for products placed inside the boxes and crates. Environment protection through the use of a highly renewable resource is another plus proposition. Brands that put the manufacturers' logo in the package will provide assurance to buyers that the products they are getting are backed by the manufacturer.

Marketing and Sales Strategy Including Customer Segments and Marketing Channels. Customer segments are the marble processors with products to box. Corporate giveaways may also be targeted for the products. Custom etching may also be provided with the customer providing the logo of his/her company. Products may be sold directly to marble processors or at the CiLearnED@RSU. Online marketing channels like MIMAROPA Ventures, One Store, or Lazada may also be accessed.

Organizational Structure. The project will be undertaken by CiLearnED personnel with students serving as the labor force doing paid piecework. The 3 regular workers of the CiLearnED will supervise production. Laser printing may be done by trained and authorized personnel so as to safeguard the equipment.

Cost and Return. Boxes may range in price from 100 to 500. With a 30% markup, operations is expected to be sustained, all OPEX taken cared of. The production cost per unit depends on the size of the box. The estimated production cost for laminated bamboo is P180 per square foot, which will be used to determine the cost per unit based on the total surface area. The production capacity is projected at 1000 to 5000 boxes per month, with total production costs expected to be sustainable through the anticipated markup and demand.

Risks and Strategies for Elimination. Non-revenue risks may be eliminated through flyers and intensive media marketing campaign. RSU personnel will be encouraged to use the products for gift-giving and giveaways. Product deterioration risk through infestation by bamboo powder-post beetle may be eliminated with proper treatment.

Expected Outputs (6Ps):

Publication	At least one news article, one flyer, and one research paper on product development.
Patent/ Intellectual Property	Industrial design for the boxes
Product	Innovative bamboo-laminated boxes and crates, lathe turned bamboo boxes and canisters.
People Service	Marble shop owners and other product producers
Place and Partnership	LGU-Romblon
Policy	RSU policy for making the boxes part of its corporate giveaways

Potential Outcomes:

1. Execution of at least 1,000 boxes and crates per month for sale to marble processors and other vendors.
2. A study on the strength of the boxes, acceptance, and gaps for product improvement.
3. Strengthened the branding and marketability of marble products and other products that may be contained in the boxes and crates.
4. Increased revenues by marble processors by at least 15-30%; also increased production revenue of the RSU bamboo processing school factory.
5. Strengthened collaboration among project stakeholders.

Potential Impacts (2Is):Social Impact

1. Proper packaging provides protection for products and promotes ease of transporting that could benefit both trades and customers of marble products.
2. As the packaging is sturdy it may be reused by the customers for other purposes.
3. With branding, customers are assured of quality products coming from the known producers.

Economic Impact

1. Proper packaging can increase profits as it will not only provide protection but enhance final appearance of product being protected; for these a premium may be added to the usual cost.
2. Packaging will improve reputation of Romblon marble products and may promote word of mouth promotions thereby increasing consumer base.
3. Proper identification of source will lead to customer loyalty leading to increased sales.

Discussion on the results of related project handled by the same proponent (if any):

The proponent have handled several projects from DOST-MIMAROPA from the school factories, research activities, and the recent packaging project that had been successfully bid out, implemented and properly liquidated. The school factories have been operating and providing revenue to the university not to mention its usefulness in creating furniture for institutional use.

Target Beneficiaries:

Target beneficiaries of the project are the more than 47 registered marble shop owners and the 91 registered marble traders in the province. Buyers will also benefit from the enhanced product quality.

Sustainability Plan:

Funds for the project will initially support production. As sales mount, these will be utilized for the next production until sustainability is reached in a cyclical manner. For further customer satisfaction development research will be done to improve the products and create new market niches. Customization may be eliminated for ease of production. Buyers of the boxes will conform with standard sizes and designs and fit their products to it. This will not only systematize production but also improve profitability using standard procedures.

Gender and Development (GAD) Score (refer to the attached GAD checklist):

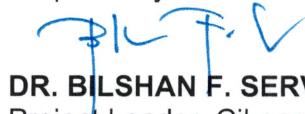
(9) Workplan (See Form 5)

(10) Project Management (not to exceed one page)

The project will be implemented by the CiLearnED@RSU in partnership with DOST PSTO Romblon. Funds will be downloaded to RSU by the DOST-MIMAROPA in close monitoring by the PSTO. Overseer functions will also be made by the DOST PSTO Romblon. LGU-Romblon and other stakeholders will also be invited to participate in the project.

III. OTHER SUPPORTING DOCUMENTS REQUIRED (Please refer to page 2 for the additional necessary documents.)

Prepared by:


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DR. MA. JOSEFINA P. ABILAY
Regional Director, DOST-MIMAROPA



DOST Form 5
A – PROJECT WORKPLAN

(1) Program Title: Grants in Aid

(2) Project Title: Packaging Development for Marble Novelty Products: Part 2-Branding

(3) Project Duration (number of months): 12 months implementation & 24 months monitoring

(4) Project Start Date: December 2024

(5) Project End Date: December 2027

DOST Form 5

(1) Program Title: Grants in Aid

(2) Project Title: Packaging Development for Marble Novelty Products: Part 2-Branding

(3) Project Duration (number of months): 12 months implementation & 24 months monitoring

(4) Project Start Date: December 2024

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DOST Form 5
C – RISKS AND ASSUMPTIONS

(1) Program Title: Grants in Aid

(2) Project Title: Packaging Development for Marble Novelty Products: Part 2-Branding

(3) Project Duration (number of months): 12 months implementation & 24 months monitoring

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OBJECTIVES	(11) RISKS AND ASSUMPTIONS	(12) ACTION PLAN (use separate sheet if necessary)
Bring price increase through synergistic pricing with an added 15-30% markup due to the innovative packaging	If LGU-Romblon fails to provide counterpart and the marble processors lack patronage on the packaging products, it would pose a significant challenge to the success of the project.	Conduct meetings and secure the commitment in the counterparts through MOA to complement the DOST-MIMAROPA's project.
Strengthen collaboration between academe, NGAs and the industry.		