



PROJECT SUMMARY

Ref No.: MRIC/PCS-2401	Title: Upcycling of wastepaper combined with 3D printing technology
Local Company: Studio Aurore Co Ltd	
Collaborating Company: Amalgam Watches Co Ltd	
Project Leader	
Mr Ridwaan Hosany	Studio Aurore Co Ltd
Research Collaborator	
Name	Organisation
Mr Afzar Sk-Hossein	Amalgam Watches Co Ltd
TECHNICAL ABSTRACT	
<p>Mauritius exported \$ 9 million worth of waste paper products in 2019. This project seeks to develop the process of collection and upcycling of paper to on-demand products with higher demand value at a competitive pricing. Moulds are designed and 3D printed to create unique designs and shapes. Depending on the intended use, ratioed eco-friendly fixing additives are added in a propriety process. Additional materials like fabric, wood and metals are mixed to improve durability, aesthetics and functionality. Processed paper pulp are loaded into 3D moulds. Resulting objects can be assembled and mixed with other collected materials to produce innovative objects. We're focusing on luxury eco-furniture with a carbon neutral process. Products are QR labelled where customers can view production details (ingredients source, special instructions, carbon removal factor) via an APP gauging their impact transparently. The APP includes a marketplace. A sustainable zero-inventory model is adopted where objects/furniture is made on order only. The goal is to enhance the paper lifecycle in Mauritius by creating a circular economy involving public and private stakeholders. An upcycling business model ensures profitability from above-described processes and competitiveness from internal developments with IP potential in the form of utility patent and industrial registration.</p>	
Key Words: 3D design and printing, Paper upcycling, Innovative business model, Pulp molding	