PLASTIC WASTE FREE ISLANDS

VANUATU

BUSINESS PLAN

WASTE-TO-PRODUCT

An initiative supported by Norad managed by IUCN and co-implemented by Searious Business

ACKNOWLEDGMENTS

IUCN Plastic Waste Free Islands (PWFI) project wishes to thank the various partners from government, private sector and industry, academia and research, civil society and nongovernmental organisations that contributed to this work through their participation in workshops, meetings, field excursions, and related consultations within the country.

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AUTHORSHIP

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WASTE-TO-PRODUCT

BUSINESS PLAN

The **Plastic Waste Free Islands (PWFI) Project** is part of the *Close the Plastic Tap* Program of IUCN. PWFI is a three-year project working in six islands in the Caribbean and Pacific.

Implemented in Fiji, Vanuatu and Samoa in Oceania and Antigua and Barbuda, Saint Lucia and Grenada in the Caribbean, the project seeks to promote island circular economy and to demonstrate effective, quantifiable solutions to addressing plastic leakage from Small Island Developing States (SIDS).

This business plan focusses on the **"Waste-to-product"** solution, in the geographic context of Vanuatu. It demonstrates how the solution can be realized, allowing for the creation of an alternative value chain.

MISSION

WHAT & WHY

What

- A successful business in Furniture and semi-finished products
  - Made from recycled plastic
  - Locally sourced and locally produced

Why

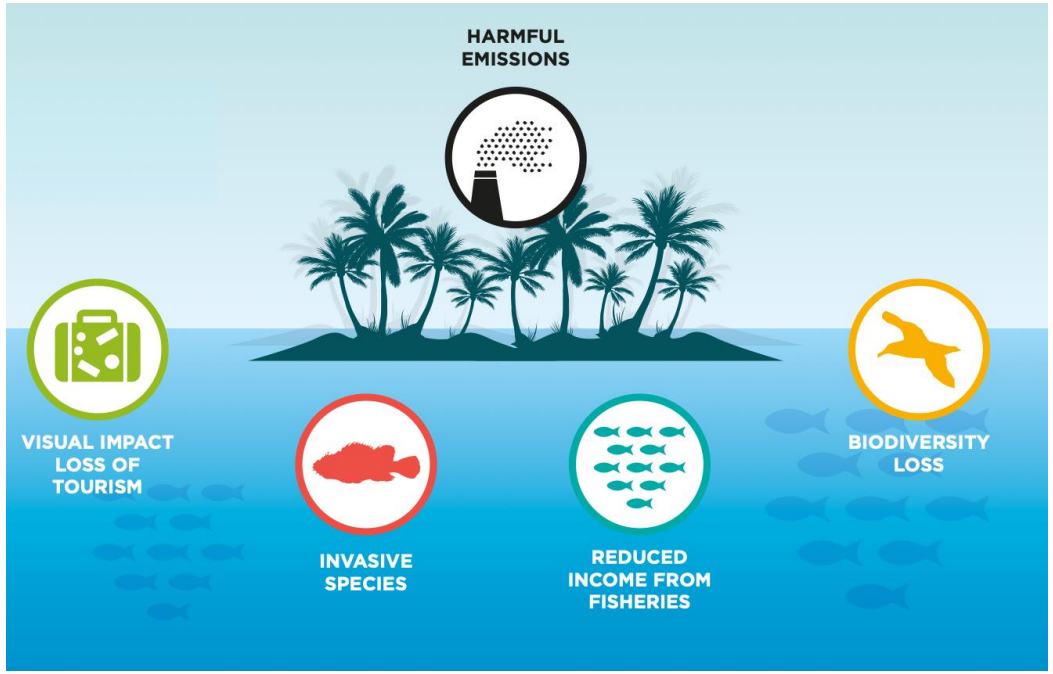
- Local business opportunity
  - Reduce Import-dependency
  - Enhance resource recovery options on-island
  - Job creation
- Reduce overfull landfills and high plastic leakage prevalence
  - Improved waste management
  - Lower environmental impact

WHY START THIS BUSINESS

PLASTIC WASTE GENERATION & LEAKAGE

Plastic Waste Generation: The total amount of plastic waste that is produced on an annual basis, per plastic material type

Plastic Waste Leakage: The amount of unaccounted waste that is calculated by the difference of plastic material imported and plastic waste disposed.



Financial and environmental impacts of plastic leakage

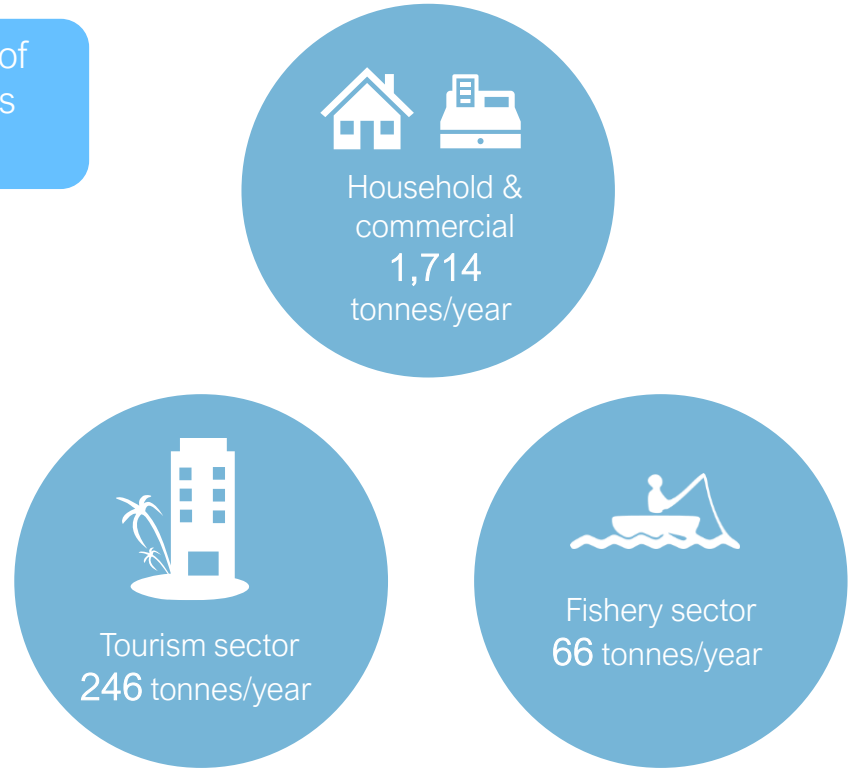
	Annual Imports 2018-2019 (T/y)	Total disposed 2019 - landfill (T/y)	Total disposed 2019 – dumpsite (T/y)	Total recycled 2019 (T/y)	Leakage (T/y) (95% credible interval)
PET (1)	868	347	113	0	454 (86-656)
HDPE (2)	686	173	49	0	468 (192-633)
PVC (3)	123	36	18	0	69 (16-107)
LDPE (4)	1106	494	154	0	463 (29-741)
PP (5)	438	129	33	0	296 (133-404)
PS (6)	534	214	27	0	296 (60-427)
Other (7)	1006	209	32	0	799 (439-960)
Overall	**4760**	**1602**	**426**	**0**	**2846 (938-4018)**

National plastic waste generation & leakage data Vanuatu with polyolefins in blue.
Source: Final quantification report – Executive summary APWC July 2021

CONTEXTUAL ANALYSIS OF WASTE MANAGEMENT PRACTICES

The contextual analysis of waste management practices summarizes the current situation of waste management in Vanuatu. It evaluates actions like collection, sorting and recycling, as well as future ambitions.

- Prepaid bag collection at source, no segregation at landfill, no local plastics recyclers → landfill, or leakage
  - Large volumes of rigid HDPE, PP and flexible LDPE waste that could be diverted quite easily from landfill
- Recyclers and relevant business partners united in the Vanuatu Recyclers Waste Management Association (VRWMA)
- Key developments:
  - Wan Smol Bag, No plastic bag, plis, Mama's Vanuatu, Pango Green Force and 300 Coconut bag.
  - The Department of Environmental Protection & Conservation (DEPC) is working with SPREP-PAC Waste Plus on exploring W2P solutions
  - Advanced Recovery Fee system policy paper is being developed by VRWMA for recyclables, incl PET and possibly HDPE
  - Vess/Recyclecorp/VRWMA in collaboration with World Vision Vanuatu clean up campaign June 2021
  - RecycleCorp and PWFI PET export trial to Visy, Australia
  - Waste to Product, PWFI



2,026 tonnes plastic waste generated/year

Source: Quantification report, Executive summary, APWC July 2021

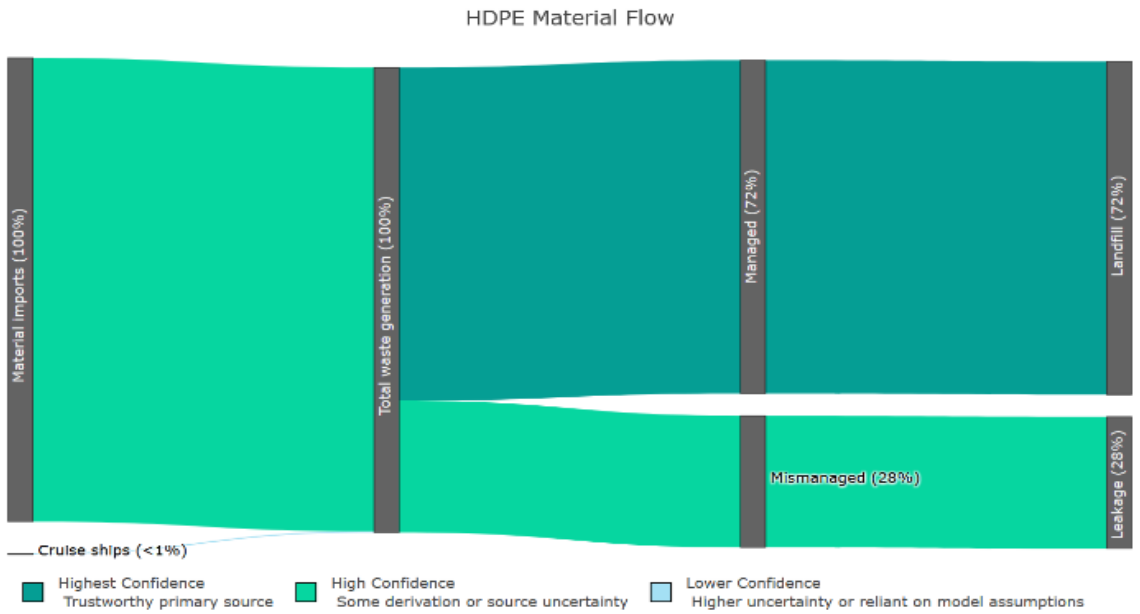
TARGETED MATERIAL(S)

HDPE – CURRENT VALUE CHAIN

Class	Item	House T/y	Commercial T/y	Tourism	Fishing T/y	TOTAL
HDPE 2	beverage containers pvc hdpe	135.8	27.98	No data	0.00	163.8
HDPE 2	home care hdpe	15.2	18.53		0.00	33.7
HDPE 2	beauty and personal care hdpe	35.2	15.59		0.00	50.8
HDPE 2	other hdpe	4.3	14.62		0.00	18.9
HDPE 2	garbage bags single use	7.1	13.77		0.00	20.9
HDPE 2	light shopping plastic bags single use	3.4	2.16		0.37	6.0
HDPE 2	food containers hdpe	24.2	0.00		7.02	31.2
HDPE 2	cleaning agent products hdpe	36.5	0.00		0.00	36.5
HDPE 2	shampoo body wash hdpe	4.0	0.00		0.00	4.0
HDPE 2	laundry detergents bottles hdpe	0.0	0.00		0.00	0.0
						365.8

Source: Quantification report, Final data, All sectors plastics breakdown, APWC July 2021

High-density Polyethylene (HDPE): A thermoplastic polymer used in a wide variety of applications, e.g. shampoo bottles and milk containers. HDPE is easily recyclable.



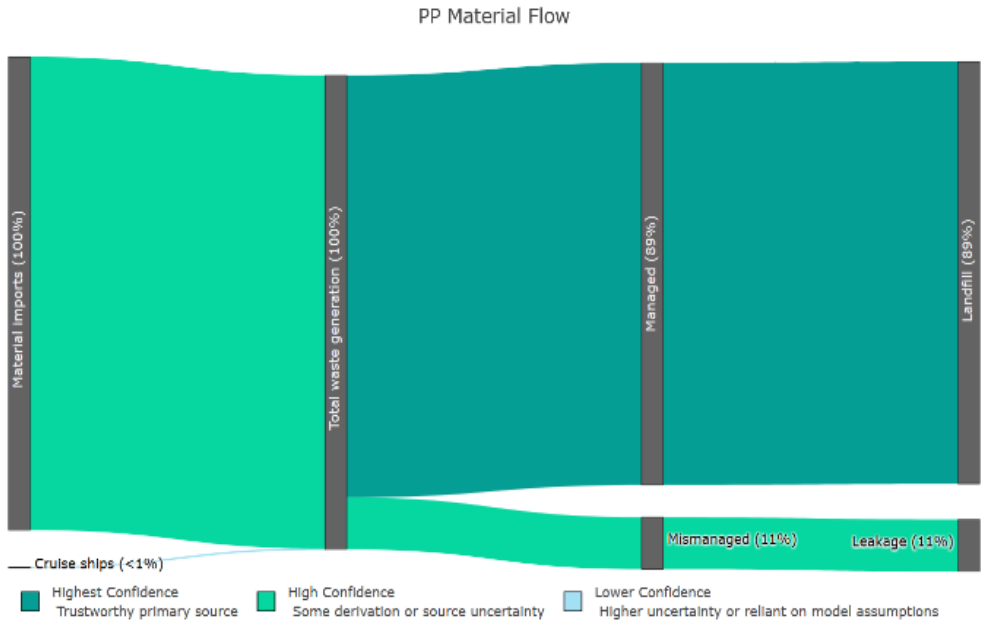
TARGETED MATERIAL(S)

PP – CURRENT VALUE CHAIN

Class	Item	House T/y	Commercial T/y	Tourism	Fishing T/y	TOTAL
PP 5	food semi rigid containers e.g. trays PP	5.7	15.50		0.00	21.2
PP 5	glossy shopping bags single use plastics	0.0	8.92		3.88	12.8
PP 5	single use take away food containers PP single use	19.6	7.04		0.46	27.1
PP 5	straws single use	0.6	5.48		0.00	6.1
PP 5	container lids pp	1.0	5.38		0.00	6.4
PP 5	other pp	9.6	2.77		5.22	17.6
PP 5	furniture houseware pp	0.0	0.00		1.87	1.9
PP 5	rope pp	6.2	0.00		1.63	7.8
PP 5	food containers pp	0.0	0.00		0.00	0.0
PP 5	medicine bottles pp	0.0	0.00		0.00	0.0
PP 5	automobile parts pp	30.9	0.00		0.00	30.9
						131.8

Source: Quantification report, Final data, All sectors plastics breakdown, APWC July 2021

Polypropylene (PP): A thermoplastic polymer used in a variety of applications. PP is sturdy can be used in a flexible or rigid form. PP can potentially be recycled.



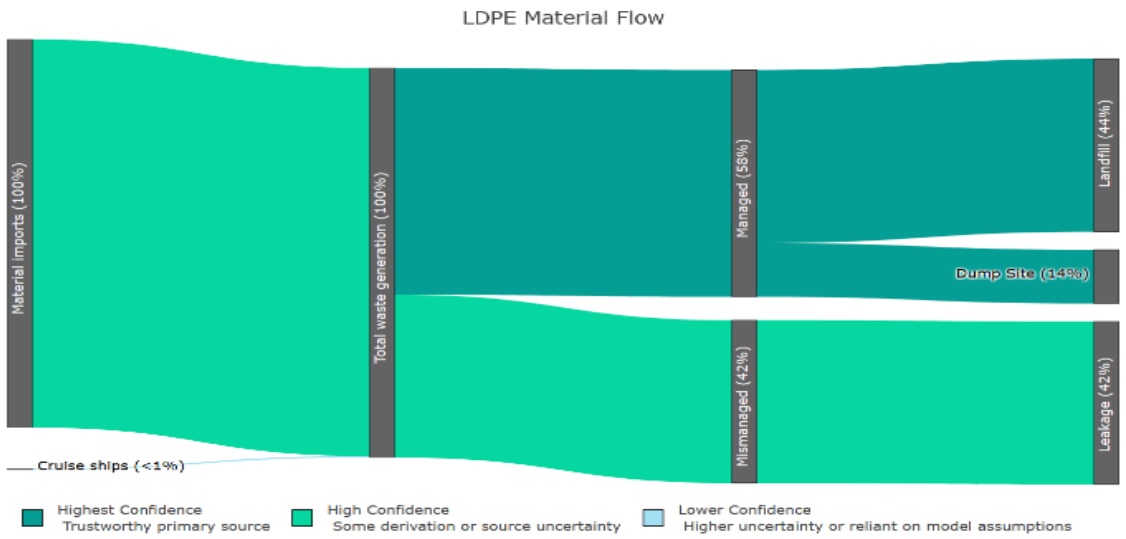
TARGETED MATERIAL(S)

LDPE – CURRENT VALUE CHAIN

Class	Item	House T/y	Commercial T/y	Tourism	Fishing T/y	TOTAL
LDPE 4	soft plastic packaging single use plastics	5.4	199.53		0.00	204.9
LDPE 4	other ldpe	9.2	99.76		0.00	108.9
LDPE 4	glossy shopping bags single use plastics	10.3	12.07		0.00	22.4
LDPE 4	food containers ldpe	4.0	9.18		0.00	13.2
						349.5

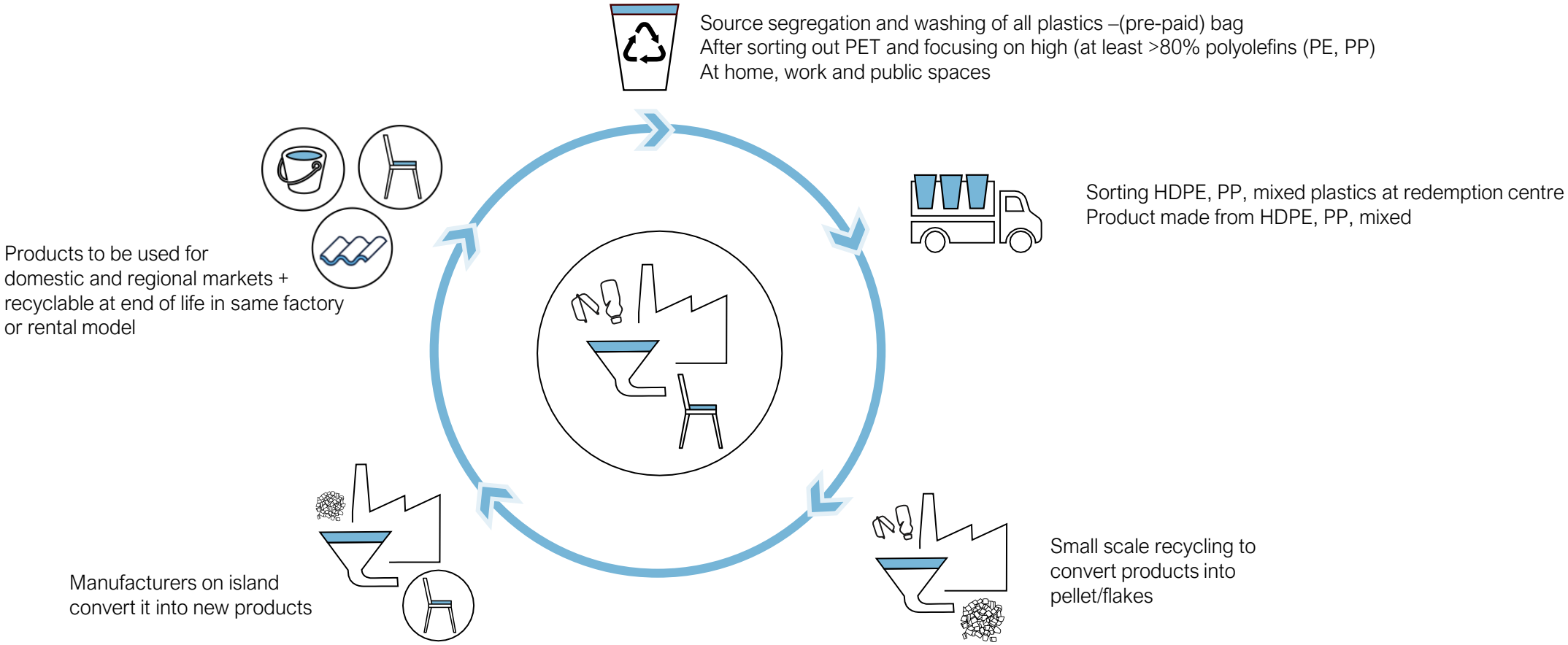
Source: Quantification report, Final data, All sectors plastics breakdown, APWC July 2021

Low-density Polyethylene (LDPE): A thermoplastic polymer, which is a soft, flexible, lightweight plastic material, oftentimes used for plastic bags. LDPE is recyclable.



OUTLINE WASTE TO PRODUCT

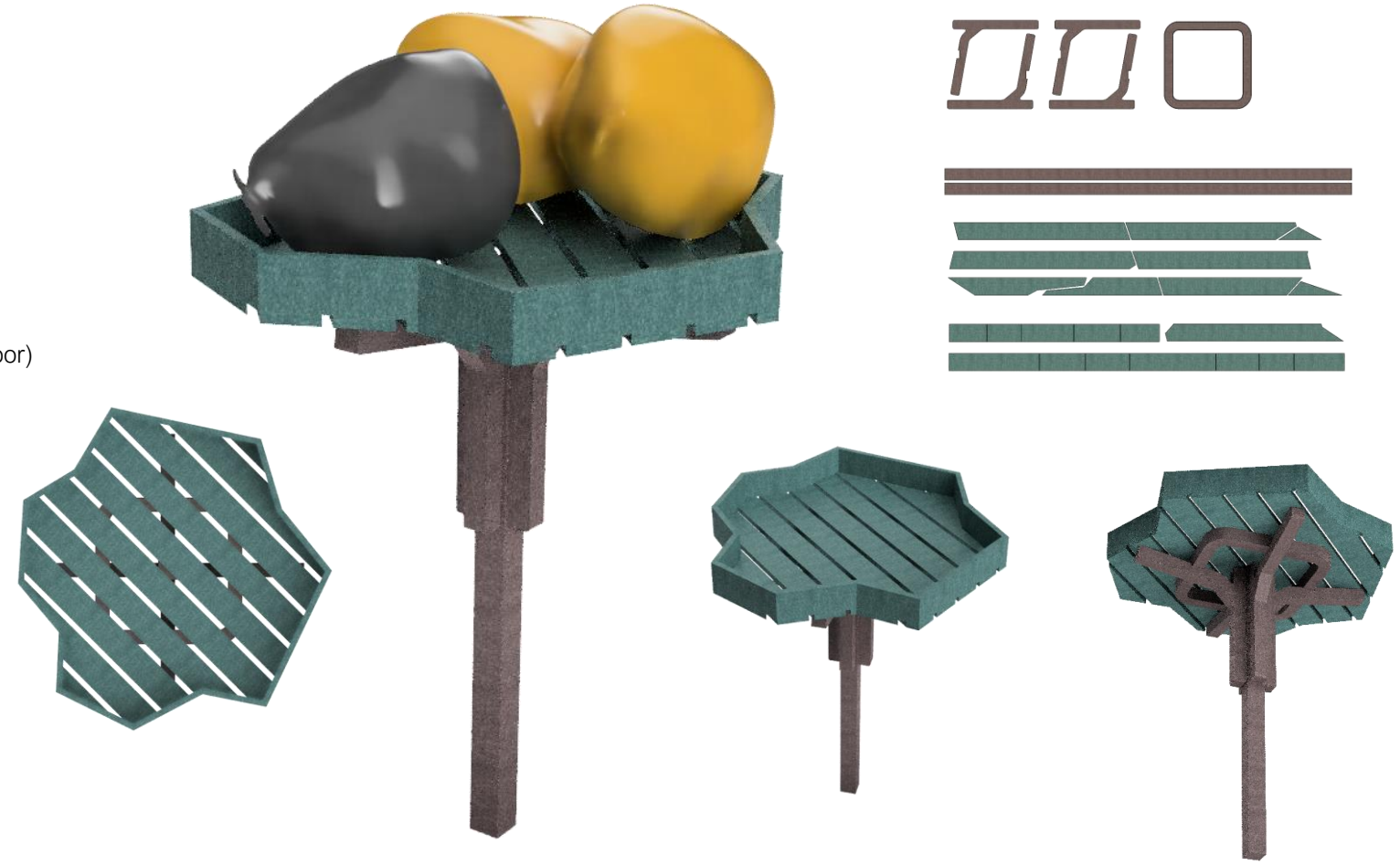
ALTERNATIVE VALUE CHAIN



PRODUCT CONCEPT

MIXED EXTRUSION PRODUCTS

- Beams, planks, tiles and parts (semi-finished product)
- Public furniture (end product)
- Example Prototype: raised waste platform (end product)
  - Trash tree / trash nest
  - Material: (mixed plastics)
  - Dimensions: L1280 x W1320 x H1545 mm
  - Weight: 43 kg
  - Intended use: public space (central collection points (outdoor)
- Other potential products
  - Lumber/timber, planks, posts
  - Purlin, rubbing styles
  - Street furniture, benches, picnic tables
  - Decking, cladding, siding
  - Fencing, bollards, palisade, edging
  - Shed foundation blocks, water side sheeting
  - Bridges, wharfs
  - Signage, litter bins, planters, raised waste platforms
  - Pergola, dog house
  - Garden, patio, terrace furniture
  - Exercise equipment
  - Traffic control: Wheel stops, speed humps, and rumble bars



USER SCENARIOS

TRASH TREE

Road-side, private, or public

- Modular, repairable
- Produced locally
- Durable: Weather & climate-proof
- Comfortable

UNIQUE SELLING POINTS

SUSTAINABLE & DURABLE

Technology

- Producibility: can process flakes directly so no high machine investments needed
- Scalability: Semi-finished products can be stored, and once machines reach their maximum capacity, an extra machine can be added
- Risk & compliance: Quality performance, with health and safety compliant setup

Product performance

- Sustainability – longer life: material vs wood based sheet
  - Lifespan: 40+ years r-plastic lumber vs 20 years hardwood
- Sustainability: green image – local waste converted
- Sustainability: easily repaired / parts replaced / recyclable
  - Recyclable: r-plastic sheets 7x recyclable
- Superior performance: weather proof / termite proof / UV-resistant
- Convenience: easily cleaned
- Superior Design: high end product/ distinctive design / high quality surface finish

Market

- Marketability: Completely circular product
- Marketability: Different furniture for different markets; tourism (i.e. hotels, restaurants), public (schools), private
- Marketability: Locally made vs imported
- Flexibility: Semi-finished products which can be sold directly or made into different end products with existing wood working techniques

DIFFERENTIATION FROM COMPETITION

CHEAP AND HARDWOOD CONSTRUCTION SECTOR

Hardwood lumber / timber

Stilt builds

Public raised waste platform

- More durable and longer lasting than wooden alternatives
- Easy repair with local service and parts from producer
- Added sustainable image value

Street furniture

Fencing

Private raised waste platform

CONCEPT DESCRIPTION

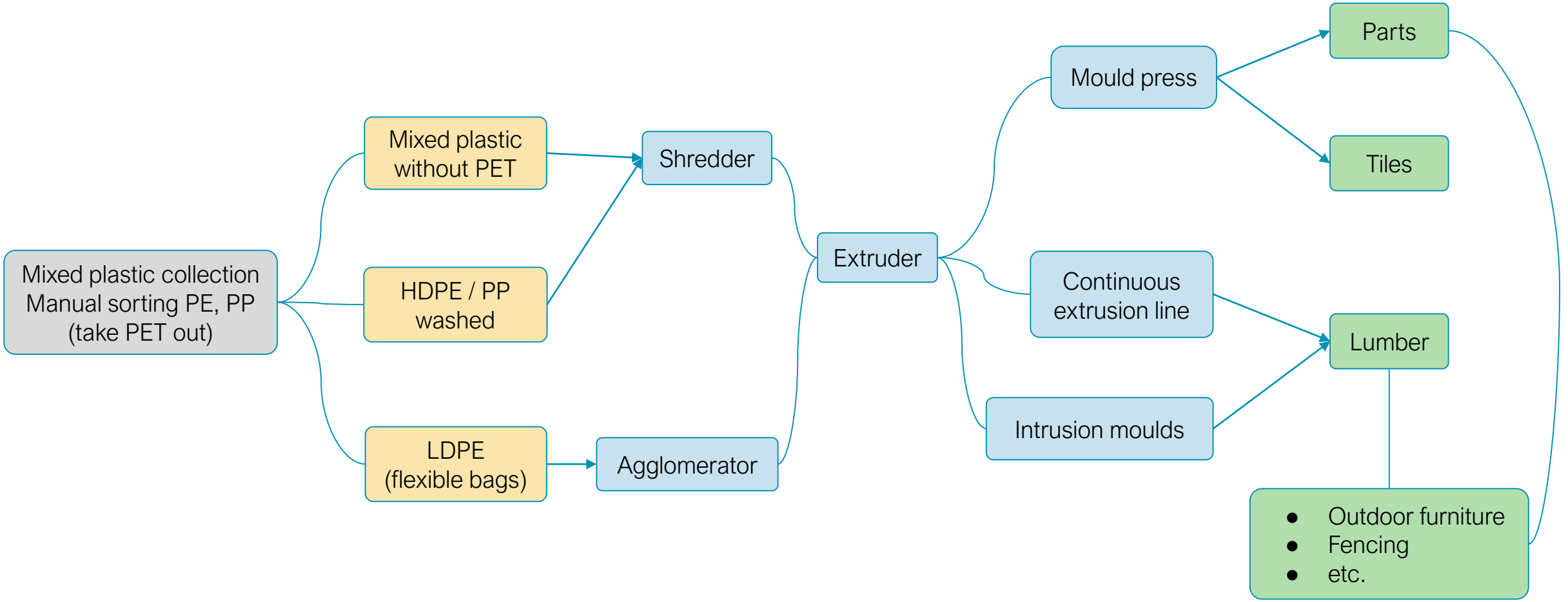
MIXED PLASTIC EXTRUSION BASED

Technique: Extrusion based (setup around extruder) + add-on moulding options

- Machines: shredder and/or agglomerator, extruder, press + molds, intrusion moulds
- Woodworking equipment: Saw table / crosscut saw, mill, hand tools.
- Types of plastic converted:
  - High end product: HDPE sorted & washed
  - Lower end product: Mixed unwashed plastics with >70% PE/PP
- Amount of plastics used: e.g. 8.53 kg per 40x80x2800 beam, or 4.59 kg per 18x130x2800mm HDPE plank, or 65 kg per Trash Nest
- Source of input materials: Collection of HDPE, PP, LDPE or all mixed plastics
  - through (pre-paid) bag with all plastics collection and after sorting
  - Island wide stimulation through Advanced Recovery Fee scheme / Container deposit Legislation (CDL)
- Impact: up to 150t/y = 18% of total PE, PP stream, 7.32% of total plastic generated

EXTRUSION BASED

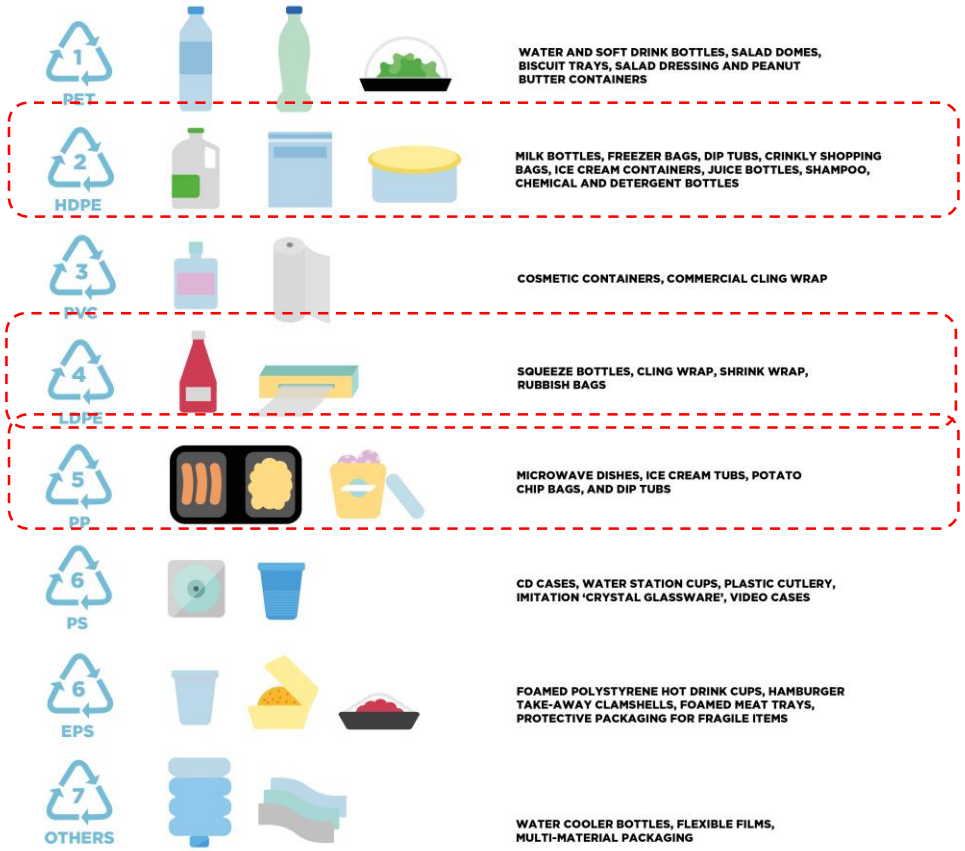
RECYCLING PROCESS



COLLECTION AND SORTING

IDENTIFYING

FIGURE 2: MAIN PLASTIC RESIN TYPES AND THEIR APPLICATIONS IN PACKAGING



Source: Project MainStream analysis.

Plastics have different properties
The focus in this business plan lays on:

- HDPE, PP and LDPE for their melting properties & easiness to recycle
- Slide 6-8 give an overview of what kind of applications are typically made of the targeted materials in the local context

COLLECTION AND SORTING

COLLECTION

While working towards public collection schemes for source-segregated plastic, strengthening and building on existing collection initiatives is recommended, including:

Drop off points

- E.g. schools, supermarkets, public buildings, redemption centers or resorts
- Incentives for consumers to sort and return plastic products
  - E.g. Discounts on end product
- Educational programmes and awareness campaign

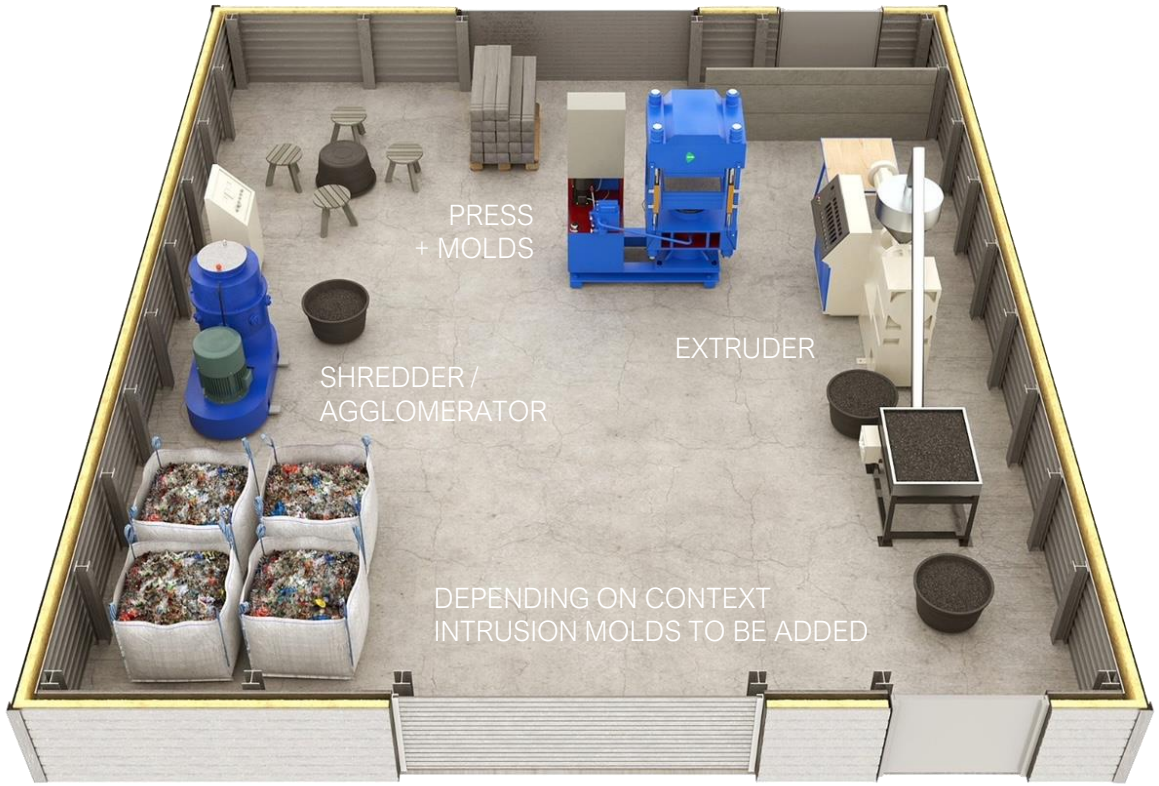
Scale up collection of recyclables at commercial enterprises

Collaboration with existing waste management structures is crucial

- E.g. partnership with municipal and private solid waste management
- Collaboration with ministries and government

MACHINERY

Machines	USD 49.000	
Shredder, 5 kW	USD 5.000	
Optional: shredder with washer		At a capacity of 250 kg/h 80kW is needed and will cost around 30.000 USD
Agglomerator	USD 5.000	
Extruder, 35 kW	USD 15.000	Spare parts like heating element and screw removal tool included
Intrusion moulds, on cart system	USD 10.000	
Press, 3 kW	USD 7.000	
Two moulds	USD 7.500	Mould costs are estimated because they depend on product design, and related production method (mill/laser/waterjet)
Optional: For 220V3P or 440V3P there will be extra costs (estimate) USD 2.00		Standard voltage of the machines is 380V, 50 or 60Hz.
Shipping (CIF) estimate	**USD 14.000**	Shipping cost are hard to predict due to fluctuations from china. Shipping costs of moulds not included; depends on local or remote production
Support at distance by Technical partner (3 years)	**USD 10.000**	
Detailed machine specification		
Support RFQ process		
Verification Factory acceptance test (FAT)		
Mould drawings		
Remote support for setting up facilities incl. unpacking and installing equipment		
Remote training and support machines start up		
Provide manuals, maintenance and user instructions		
Support on input mix and additives		
Total	**USD 73.500**	



Modular production hall layout example

SELECTION FACTORS

TECHNIQUE AND PRODUCT

Impact

- (semi-) Industrial set-up and machinery to
  - Convert enough plastic to keep from landfill and (ocean) leakage
  - Get quality output that can compete with existing products
  - Create durable business
  - Create local employment

Flexibility

- Create different (mix of) semi-finished and end-products
- Create output material for different markets
- Enable sector-specific contribution to reduce waste
- Enable to convert different plastics

Viability

- Durable business plan / calculation
- Fitting the volumes on the island
- Ready for investors to step in
- Scalable: capacity aim is 150 tonnes / year

Complementarity to existing initiatives

- Utilizing local recycler's machinery, if compatible
- Tailor-made for local situation and market

TECHNOLOGY COMPARISON

MATRIX

This table provides a structured approach on how the recycling technology is selected. It is a general comparison example used for the technology selection, in which island specific factors have been considered.

PWFI - WASTE TO PRODUCT - TECHNOLOGY COMPARISON

Categories	Weighing factor	Sheet press	Intrusion	Mixed extrusion + moulding	Mould melting	Roto moulding	mixed extrusion additives	Injection moulding
Processing capacity • What volume of plastic can be converted (connect to volume on the island) small: < 20 tonnes / year **Aim:** medium: 20-500 tonnes / year large: > 500 tonnes / year In general the better the fit, high the score	3	★★★••	★★★★★	★★★★★	★••••	★★★••	★★★★•	★★★••
Marketability • Can the product compete with other products? • Will it replace a product for the better?	2	★★★••	★★★★•	★★★★•	★★•••	★★★★•	★★★★•	★★★★•
Costs • Investment to set up machinery • Energy consumption in use • Expected revenue	2	★★★••	★★★••	★★★••	★★★★•	★••••	★••••	★••••
Environmental safety during / after use • Non-toxic risk during production • No leakage (microplastics) • Recyclable at EOL	2	★★★★•	★★★••	★★★••	★★★••	★★★••	★★•••	★★★★•
Ease of implementation • Preparation of the input material ◦ less sorting ◦ less influence of contamination • Complete and ready setup of the machinery • Low skill and easy learning	1	★★★★•	★★★★•	★★★••	★★★••	★••••	★••••	★••••
Product value • Product with long life-span • A high value end-product	1	★★★★•	★★★★•	★★★★•	★★★★•	★★★★•	★★•••	★★★••
Overall score		★★★½☆	★★★★☆	★★★★☆	★★½☆☆	★★½☆☆	★★½☆☆	★★★☆☆

MARKET ANALYSIS

HOSPITTALITY

Primary market

- Tourism - Hospitality Outdoor furniture and Construction, i.e. dinner chairs, fencing, plastic lumber
- Public works, Infrastructure + construction: governmental, public furniture, e.g. park bench, picnic table, signage, fencing

Secondary markets

- B2C: High-end consumer design furniture has similar product characteristics and demands (overlap villas and apartments)
- B2B: semi-finished products, i.e. Timber, lumber, Sheets for furniture makers. i.e. countertop
- Public: governmental, school furniture

Market size Public furniture

- 30+ Hotels, resorts and accommodations of different class ±1500 rooms

Estimated annual expenditure on furniture

- USD 105,000 (1500 rooms and accommodations with a average spending of $70/year/room on outdoor furniture)

Global expected CAGR (Compound Annual Growth Rate) tourism after Covid-pandemic

- 3.1% (2021-2026)

Longer term market fundamentals

- Shorter supply chains decrease need for imports
- Less pressure on landfill

Demand-drivers

- Showing green/sustainable focus
- Longer lasting alternatives
- Locally produced

MARKET ANALYSIS

HOSPITALITY

Market needs

- Durable furniture
- Easy to maintain / high quality
- Indoors and outdoors application
- Sustainable/green
- High end design

Buying patterns

- current yearly renew due to poor quality and extreme weather conditions (market research)

Locations of potential customers

- Mostly coastal area

Specify domestic vs export markets

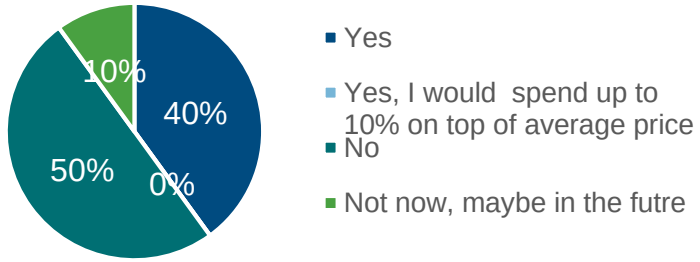
- Domestic: Local distribution network (stores, DIY markets, furniture makers)
- Export potential:
  - Caribbean region with the option of expending for processing waste locally

Launching customers:

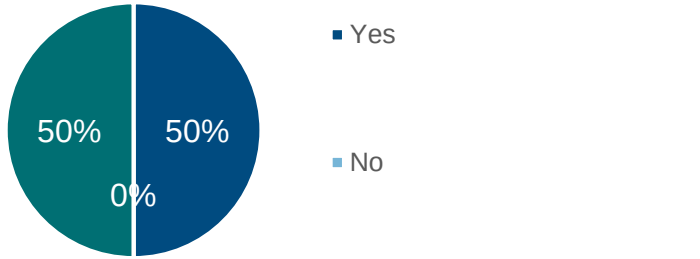
- Accommodations who collect material themselves
- Governmental bodies

BUSINESS DRIVERS

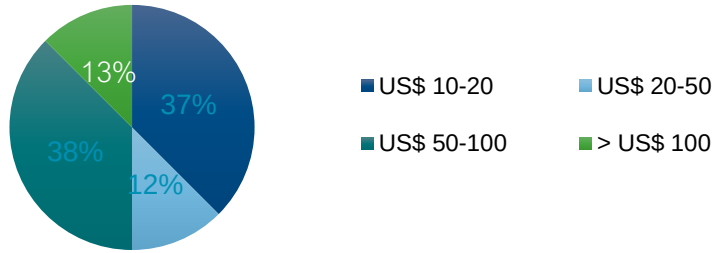
COMMERCIAL MARKET ANALYSIS HOSPITALITY



40% willingness to purchase recycled plastic furniture made from own waste _
10% considering to purchase in the future



50% willingness to source-segregate recyclable plastics - place a separate bin for collecting HDPE/PP shampoo, body wash and detergent bottles at hotel/resort



Current budget for outdoor furniture (e.g x1 plastic chair)?*
Saint Lucia survey results: 75% willingness to spend ±10% > average price
*This question was not part of the Vanuatu survey

BUSINESS DRIVERS

INDUSTRY SUPPORT – INNOVATION AWARDS

rHDPE dining chair made from Caribbean plastic waste streams:

shortlisted for the prestigious **Plastics Recycling Awards Europe 2021**

- Household and Leisure products category

PLASTICS RECYCLING AWARDS EUROPE 2021

FINALIST

MARKET INTRODUCTION PLAN

FROM FUNCTIONAL PROTOTYPE TO MARKET INTRODUCTION

Timeline for key milestones of product development

PHASE 1- has been completed

- Extrusion testing
- Feedstock preparations
- Product interest inventory
- Design concept for products
- Engineering
- Prototyping
    - assembly testing
    - impression and use testing
- Improving based on feedback

PHASE 2

- Securing finances; procurement of machinery; staff recruitment

PHASE 3

- Production testing
- Production procedures development
- Packaging development
- Commercial production based on staged approach

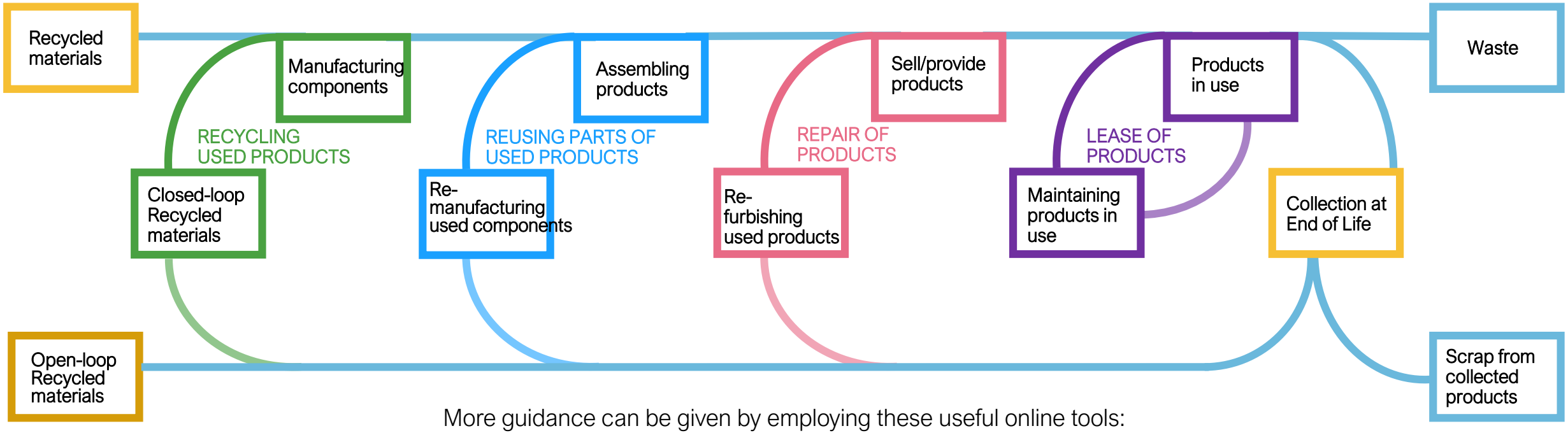
Engagement & Sales

- Sales approach
    - Personal sales contact
    - Online order and service website
- Sales channels
    - Sales person
    - Web shop
    - Furniture stores
    - Do-It-Yourself stores
    - Workshop showroom/store
- Engagement (communication with target groups)
    - Sales person
    - Website
    - Showroom
    - Exhibition

POTENTIAL FOR CIRCULARITY

INCREASING CIRCULARITY

The below graph guides you on how to achieve maximum circularity for your product – on every step of the value chain!



More guidance can be given by employing these useful online tools:

Circularity Calculator and Circularity Pathfinder

OPERATIONS

KEY RESOURCES, ACTIVITIES, PEOPLE

Tools & Machines

- Shredder
- Optional agglomerator if collection is expanded for flexibles processing
- Extruder
- Intrusion moulds
- Press + press moulds
- CNC mill
- Woodworking tools
- Pick up truck

Space & Permits

- 20 sqm stock
- 50 sqm production
- 20 sqm wood workshop

Key Tasks /activities

- Feedstock preparation
  - Collection
  - Washing
  - Shredding / agglomeration
- Production
  - Extrusion + intrusion + press moulding
  - Machine maintenance
- End product making
  - Cutting
  - Edge routing
  - CNC milling
  - Finishing
  - Packing
  - Servicing and repairs
- Sales and Distribution
  - Sales contact
  - Transportation: pick up and delivery

People

- Personnel: 7.5 up to 10 FTE
  - Sales person
  - Technician
  - Admin + online
  - Collection & Distribution - Transport
- Collaborators
  - Retailers, stores
  - Tourism sector
  - Government
  - IUCN/Searious Business

Running costs

- Space rent
- Electricity, water
- Staff costs
- Transport

FINANCIALS

SUMMARY AND SALES OVERVIEW

Diversifying the product portfolio is necessary to build a sustainable business model. The sales overview example provides ideas for possible other products.

Summary	
Starting capital	180,898.91
Months to Pay Back Investment	31
Full Time Employees Needed	7.5
Revenue Earned Per Month	30,655.00
Fixed Costs Per Month	1,560.00
Material Costs Per Month	17,639.83
Total Wages Paid Per Month	5,362.08
Total Profit Earned Per Month	6,093.09

Sales Overview				
Products & Services	Selling Price Per Unit	Number of Expected Sales Per Month	Total Product Cost	Profit Margin
50 kgs of Medium Shredded Plastic	0.00	166.7	12.90	-100.00%
mixed Beam 2800 x 40 x 80 mm	16.00	300.0	14.44	10.79%
mixed Plank 2800 x 28 x 130 mm	17.90	180.0	16.10	11.15%
Pavement tile	10.60	460.0	9.49	11.74%
wide HDPE plank 2800 x 18 x 130 mm	14.80	180.0	13.13	12.68%
narrow HDPE plank 2800 x 18 x 65 mm	10.10	90.0	8.91	13.32%
Bench parts	0.00	12.0	34.32	-100.00%
Park bench	162.00	12.0	89.53	80.94%
Trash nest	233.00	30.0	128.56	81.24%
Lounge chair	50.00	30.0	27.21	83.76%
Side table / foot bench	32.00	15.0	17.58	82.05%
Dining chair	37.00	60.0	20.46	80.88%
Dining table	70.00	15.0	38.47	81.97%

FINANCIALS

CASH FLOW

Cash Flow

A cash flow analysis shows that you have enough money throughout your first year to buy materials, pay your employees, or make an investment into a new machine.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Money In Bank (Beginning of Month)	180,898.91	32,249.89	39,937.87	47,625.85	55,313.84	63,001.82	70,689.80	78,377.78	86,065.76	93,753.74	101,441.73	109,129.71
Initial Investment	180,898.91											
Revenue	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00
Total Cash In	211,553.91	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00	30,655.00
Investment Costs	(156,337.00)											
Variable Costs	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)	(21,407.02)
Fixed Costs	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)	(1,560.00)
Total Cash Out	(179,304.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)	(22,967.02)
Net Cashflow	32,249.89	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98	7,687.98
Money In Bank (End of Month)	32,249.89	39,937.87	47,625.85	55,313.84	63.001.82	70,689.80	78,377.78	86.065.76	93,753.74	101,441.73	109,129.71	116,817.69

FINANCIALS

PROFIT, LOSS

Profit and Loss

This table is to show how much money the company is projected to make each year. It assumes that you paid yourself for the hours you worked, so the "Net Income" at the bottom is the remaining profit made by your company. It is greatly influenced by the "Monthly Sales Improvement Rate" on the Dashboard page. This table is also useful to show your bank or include in grant applications.

	Year 1	Year 2	Year 3
Revenue	367,860.00	404,646.00	445,110.60
Cost of Sales	256,884.22	282,572.64	310,829.91
Net Revenue	110,975.78	122,073.36	134,280.69
Fixed Costs	18,720.00	18,720.00	18,720.00
Gross Income from Operations	92,255.78	103,353.36	115,560.69
Business Taxes	0.00	0.00	0.00
Net Income	92,255.78	103,353.36	115,560.69

Yearly Growth Rate
10%

(conservative scenario)

Business Tax Rate
0%

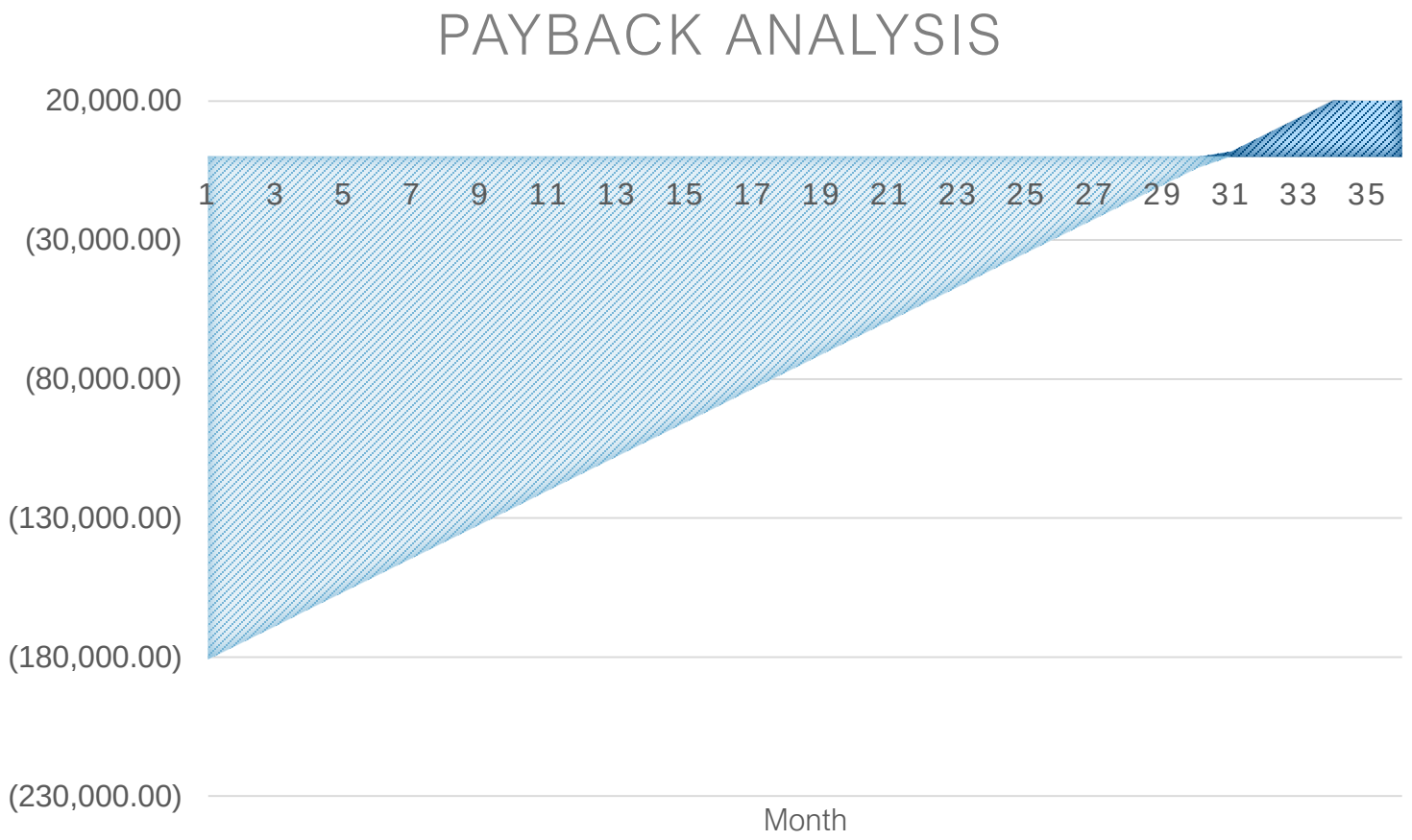
FINANCIALS

FUNDING & ROI

Starting capital: US $ 180,899

ROI 31 months

- Mostly machines and personnel



FINANCIALS

FUNDING PLAN

- Private money
- (Development) Bank loans: de-risking partner, e.g. offering loan guarantees) Incl. ADB, IFC, CEB
- Investors/business accelerators ((pre)-seed, angel investment, early stage)
  - Blue Bio Value
  - Blue Natural Capital Finance Facility
  - Ennovent
  - For Good Venture
  - SAGANA
  - Sky ocean ventures
- (Governmental) grants
  - Development Cooperation partners, incl. UK, Norway, Italy, US, Germany, Swiss, France, China, Japan,
  - UNDP Innovation Fund
  - World Bank - ProBlue. NGOs could become a third party within a governmental program
  - IUCN
  - WWF
- Alliance to End Plastic Waste
- Ocean Foundation
- Plastic Solutions Fund
- Bill & Melinda Gates Foundation
- Minderoo, no 'Plastic Waste'-programme
- Australian National Product Stewardship fund
- Commonwealth Clean Ocean Alliance
- Dow Business Impact Fund
- Handelens Miljofond
- Plastics Solutions Fund
- Gallifrey foundation
- Oak Foundation
- PRIMAT (Didier and Martine Primat Foundation)
- The Fondation SUEZ
- Waitt Foundation
- For Good Foundation
- Onepercentfortheplanet

FACTSHEET

BENEFITS

Financial benefits	Environmental benefits	Social benefits
ROI – 31 months	Lower landfill pressure for government: 150 tonnes / year or 18% of PE/PPwaste diverted from landfill/dumping sites	Develop recycling market - Create more jobs in island in collection, sorting, cleaning, recycling – up to 11 FTE when converting 8% of all plastic waste generated
Better license to operate for construction and furniture market. And allows for green/circular public procurement	Approx. 164.7 tonnes of CO2 emissions saved by redirecting plastic waste into products	Contribution to cleaner island and attractiveness for local population and visitors
Customer loyalty for producers	Reduced amount of plastic waste that might leak into the environment. 150 tonnes / year diverted from potential leakage	
Lower waste disposal and clean-up costs for government: Approx. savings VUV 1,082,829		

FOR MORE INFORMATION

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https://www.iucn.org/theme/marine-and-polar/our-work/close-plastic-tap-programme

#ClosethePlasticTap

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#PlasticWasteFreeIslands #CloseThePlasticTap