



# PLASTIC WASTE FREE ISLANDS

GRENADA

BUSINESS PLAN

WASTE-TO-PRODUCT



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



Norad



# ACKNOWLEDGMENTS

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# AUTHORSHIP

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Implementing Agency



Design

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# WASTE-TO-PRODUCT

## BUSINESS PLAN

### PLASTIC WASTE FREE ISLANDS



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 Grenada. 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

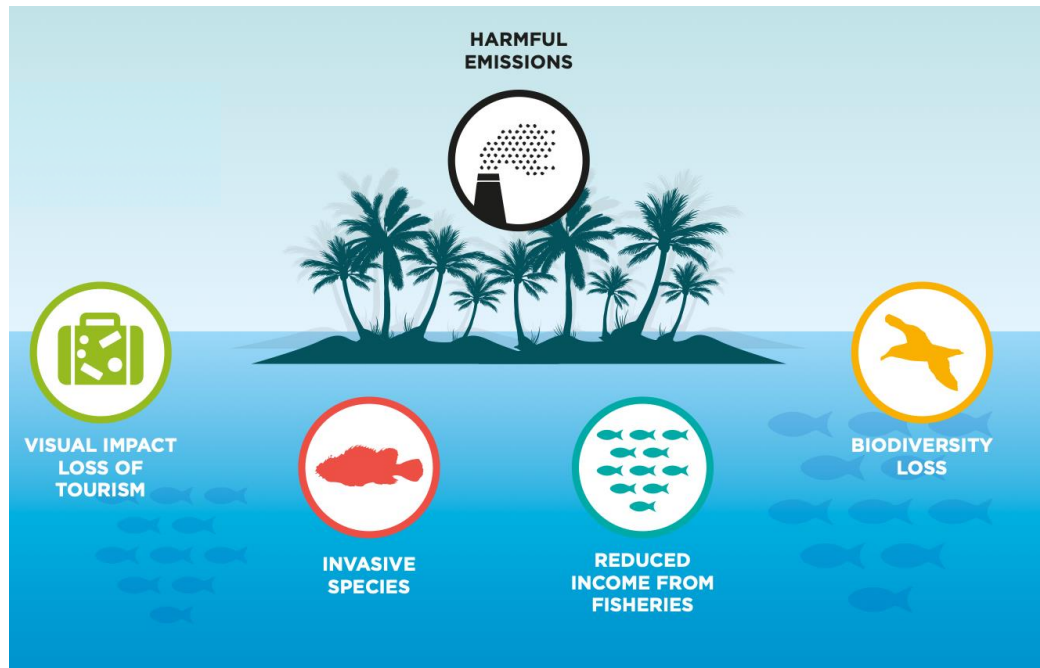
- Local business opportunity
  - Reduce Import-dependency
  - Enhance resource recovery options on-island
  - Job creation
- Reduce overfull landfills and high plastic leakage prevalence
  - Improved waste management
  - Lower environmental impact



# 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



Financial and environmental impacts of plastic leakage

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

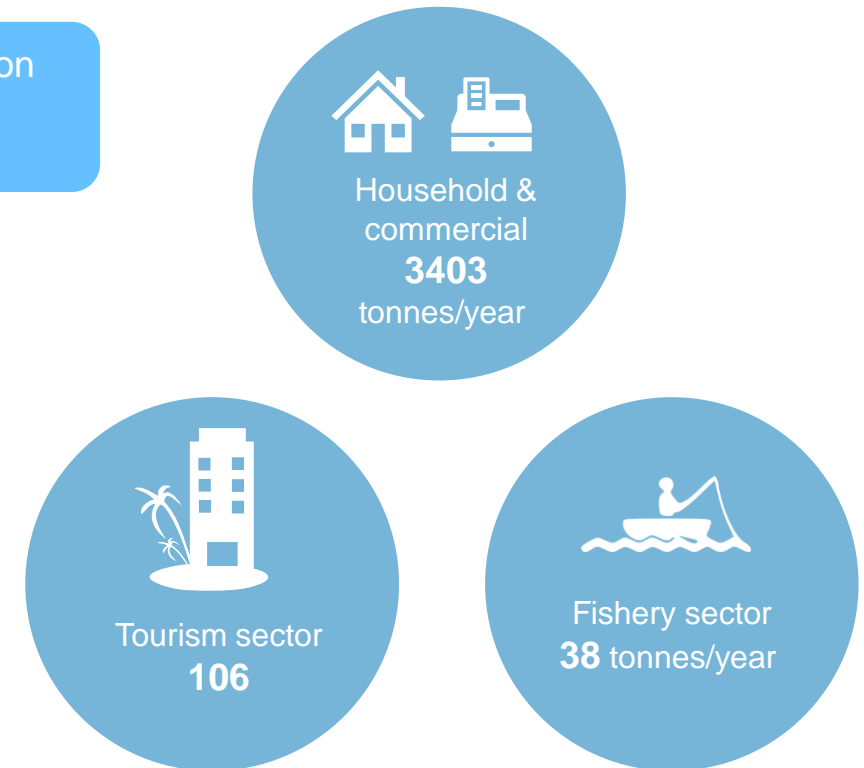
Polymer	Annual Imports 2018–2019 (T/y)	Total waste disposed 2019 (T/y)	Total recycled 2019 (T/y)	Leakage (T/y) – model-based estimate (95% credible interval)
PET (1)	1191.19	1023.66	0.8	168 (0.2–463)
HDPE (2)	1011.9	823.18	0.2	188 (0.6–471)
PVC (3)	37.53	15.42	0	22 (0.7–36)
LDPE (4)	732.66	549.02	0.2	186 (2.0–425)
PP (5)	419.77	242.11	0	178 (0.1–310)
PS (6)	343.28	135.02	0	210 (1–305)
Other (7)	1001.46	662.1	0	342 (78–727)
<b>Overall</b>	<b>4737.78</b>	<b>3450.52</b>	<b>1.2</b>	<b>1294 (739–1910)</b>

National plastic waste generation & leakage data Grenada, 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 Grenada. It evaluates actions like collection, sorting and recycling, as well as future ambitions.

- ❖ No central collection at source or segregation at landfill, no local plastics recyclers → landfill, or leakage
  - Except for PET → small scale collection for stockpiling and conversion into blocks and plant pots
  - Large volumes of rigid HDPE, PP and flexible LDPE waste that could be diverted quite easily from landfill
- ❖ National ambitions/initiatives/pipeline:
  - NSUPA: plastic recovery and recycling program to granulate recycled plastics in Carriacou
  - GSWMA anti-litter campaigns
  - GSWAMA environmentally friendly school initiative
  - PWF1 - Waste-to-product & Net-to-net recycling



**3547 tonnes plastic waste generated/year**

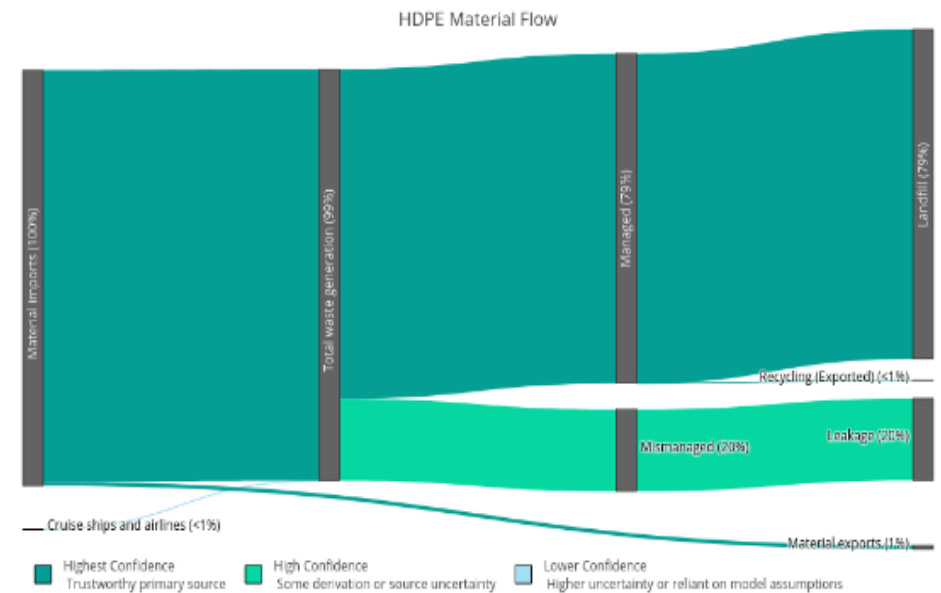
Source: Quantification report, Executive summary, APWC July 2021

# TARGETED MATERIAL(S)

## HDPE – CURRENT VALUE CHAIN

Class	Plastic Item	Household (T/y)	Commercial (T/y)	Tourism (T/y)	Fisheries (T/y)	Column 1	Total
HDPE 2	laundry detergents bottles hdpe	28.0	0.0		0.0		28.0
HDPE 2	beverage containers pvc hdpe	10.0	0.0		0.0		10.0
HDPE 2	beauty and personal care hdpe	18.2	0.0		0.2		18.4
HDPE 2	shampoo body wash hdpe	48.0	0.0		0.0		48.0
HDPE 2	light shopping plastic bags single use	290.2	0.0		0.0		290.2
HDPE 2	other hdpe	40.9	107.0		2.4		150.2
HDPE 2	home care hdpe	55.4	0.0		0.0		55.4
HDPE 2	garbage bags single use	6.6	0.0		0.0		6.6
HDPE 2	food containers hdpe	17.7	111.0		0.0		128.7
HDPE 2	cleaning agent products hdpe	57.5	29.5		7.4		94.4
							<b>830.0</b>

**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.



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



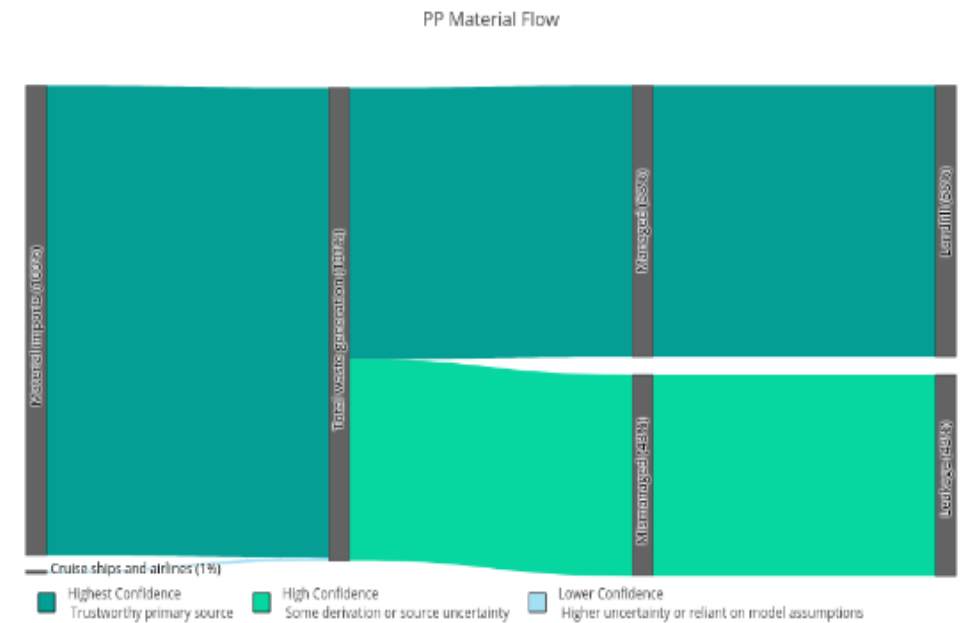
# TARGETED MATERIAL(S)

## PP – CURRENT VALUE CHAIN

Class	Item	Household (T/y)	Commercial (T/y)	Tourism (T/y)	Fisheries (T/y)	Total (T/y)
PP 5	straws single use	3.6	0.0		0.0	3.6
PP 5	food containers pp	15.0	2.5		0.2	17.7
PP 5	food semi rigid containers e.g. trays pp	7.3	13.4		0.0	20.7
PP 5	container lids pp	104.7	54.1		0.9	159.6
PP 5	other pp	16.1	0.0		0.0	16.1
PP 5	furniture houseware pp	1.1	0.0		0.0	1.1
PP 5	medicine bottles pp	0.9	0.0		0.0	0.9
PP 5	rope pp	3.8	0.0		0.9	4.7
PP 5	glossy shopping bags single use plastics	5.6	0.0		0.0	5.6
PP 5	single use take away food containers pp single use	9.6	2.8		0.1	12.5
						<b>242.6</b>

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.



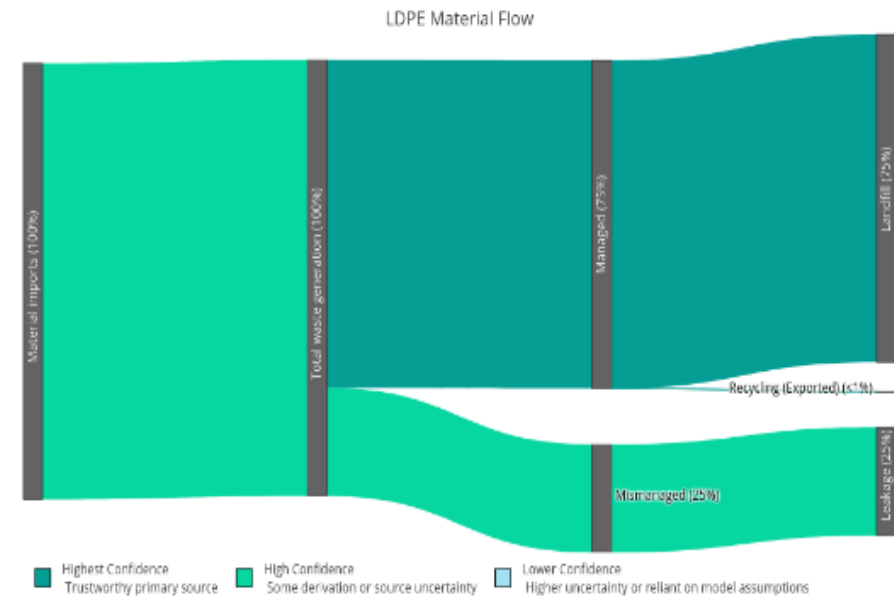
# TARGETED MATERIAL(S)

## LDPE – CURRENT VALUE CHAIN

Class	Item	Household (T/y)	Commercial (T/y)	Tourism (T/y)	Fisheries (T/y)	Total (T/y)
LDPE 4	other ldpe	5.9	0.0		0.0	5.9
LDPE 4	wrap foils cling films ldpe	0.0	48.0		0.0	48.0
LDPE 4	bubble wraps foils ldpe	3.6	19.7		0.0	23.3
LDPE 4	food containers ldpe	24.8	0.0		0.0	24.8
LDPE 4	soft plastic packaging single use plastics	263.1	90.3		0.2	353.5
LDPE 4	glossy shopping bags single use plastics	93.5	0.0		0.0	93.5
						<b>549.0</b>

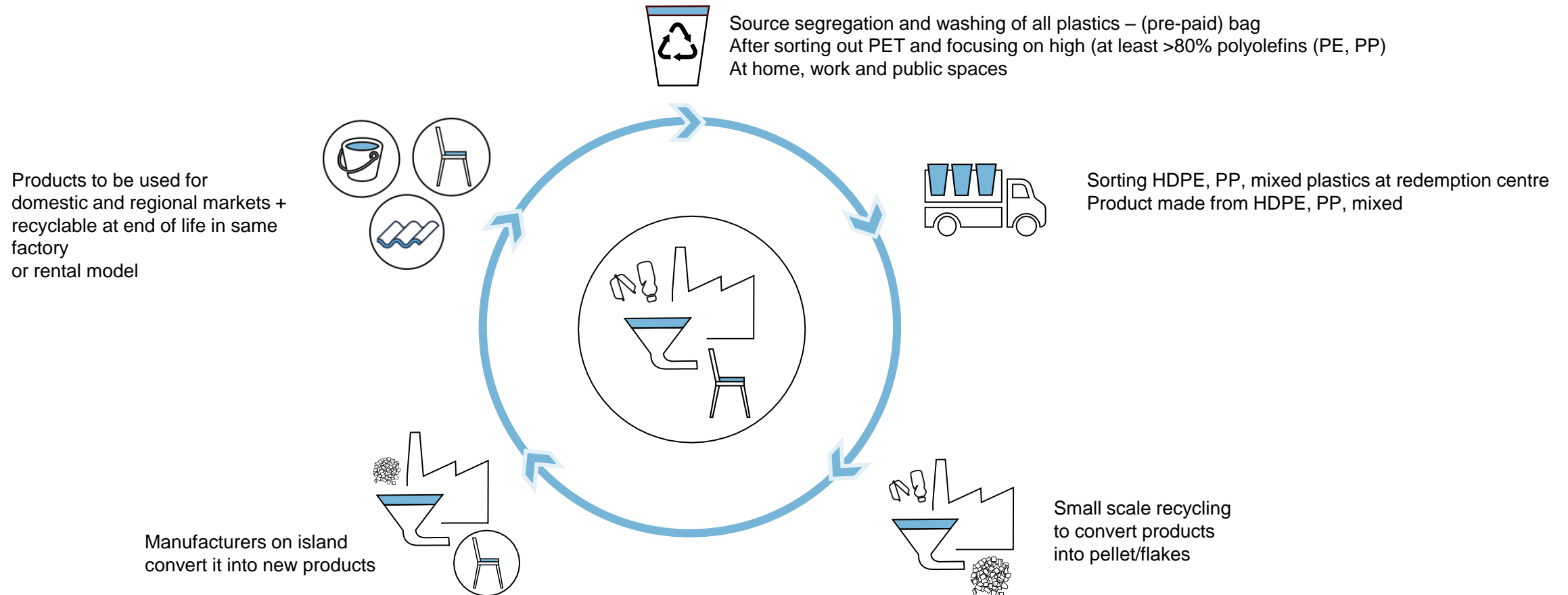
Source: Quantification report, Final data, All sectors plastics breakdown, APWC July 2021

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



# OUTLINE WASTE TO PRODUCT

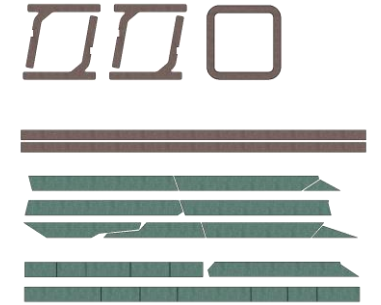
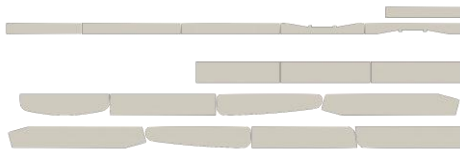
## ALTERNATIVE VALUE CHAIN



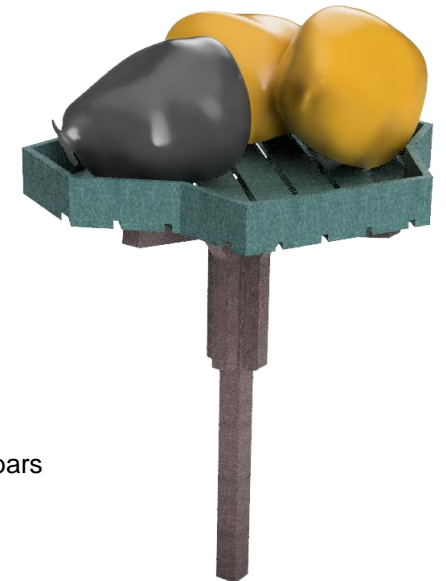
# PRODUCT CONCEPT

## MIXED EXTRUSION PRODUCTS

- Beams, planks, tiles and parts (semi-finished product)
- Outdoor public and private furniture (end product)
- Example Prototypes:
  - Park bench (mainly polyolefins)
    - Dimensions: L650 x W1520 x H825 mm
    - Weight: 75 kg
    - Intended use: Garden, park, wharf, public space (outdoor)
  - Trash tree / trash nest (mixed plastics)
    - Dimensions: L1280 x W1320 x H1545 mm
    - Weight: 43 kg
    - Intended use: public space (central collection points (outdoor))
  - Lounge chair (recycled HDPE)
    - Dimensions: L 805 x W 733 x H 729 mm
    - Weight: 14 kg
    - Intended use: garden, park, wharf, public space (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, doghouse
  - Garden, patio, terrace furniture
  - Exercise equipment
  - Traffic control: Wheel stops, speed humps, and rumble bars





# USER SCENARIOS

## Furniture



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



# 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 furniture, timber,



Cheap plastic furniture



Hardwood lumber / timber



Fencing



Lounge furniture



Street furniture



Park/picnic furniture

- More durable and longer lasting than cheap plastic import patio chairs
- High-end design
- Lasting look
- Easy repair with local service and parts from producer
- Added sustainable image value



# CONCEPT DESCRIPTION

## MIXED PLASTIC EXTRUSION BASED

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

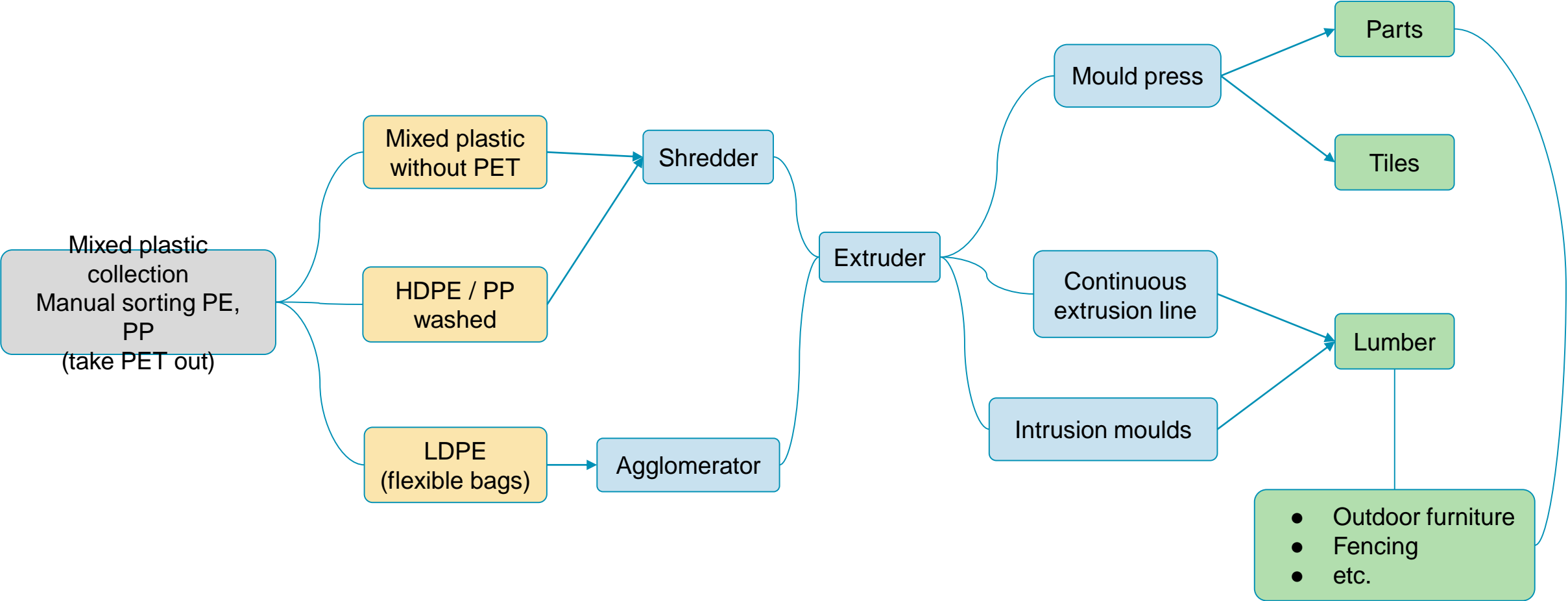
- Machines: shredder and/or agglomerator, extruder, press + molds, intrusion moulds, or continuous extrusion line
- Woodworking equipment: Saw table / crosscut saw, mill, hand tools.
- Types of plastic converted:
  - High-end product: HDPE sorted & washed
  - Lower-end product: Mixed unwashed plastics 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 75 kg per Bench
- 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 = 12% of total PE/PP stream, 6.33% 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

### Drop off points

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

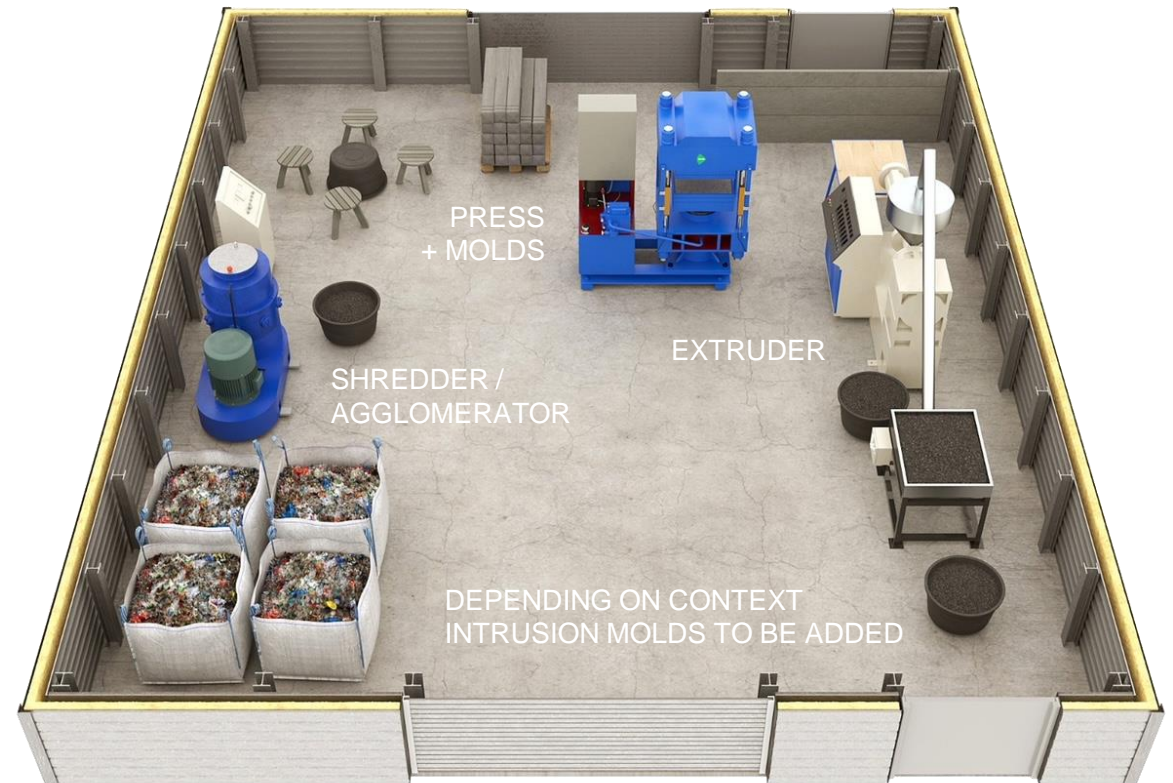
### Collaboration with existing waste management structures is crucial

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



# MACHINERY

<b>Machines</b>	<b>USD 49.000</b>	
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.
<b>Shipping (CIF) estimate</b>	<b>USD 14.000</b>	Shipping cost are hard to predict due to fluctuations from china. Shipping costs of moulds not included; depends on local or remote production
<b>Support at distance by Technical partner (3 years)</b>	<b>USD 10.000</b>	
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		
<b>Total</b>	<b>USD 73.500</b>	



Modular production hall layout example



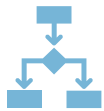
# SELECTION FACTORS

## 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
<b>Processing capacity</b> • 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	★ ★ ★ ● ●	★ ★ ★ ★ ★	★ ★ ★ ★ ★	★ ● ● ● ●	★ ★ ★ ● ●	★ ★ ★ ★ ●	★ ★ ★ ● ●
<b>Marketability</b> • Can the product compete with other products? • Will it replace a product for the better?	2	★ ★ ★ ● ●	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ● ● ●	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ★ ★ ●
<b>Costs</b> • Investment to set up machinery • Energy consumption in use • Expected revenue	2	★ ★ ★ ● ●	★ ★ ★ ● ●	★ ★ ★ ● ●	★ ★ ★ ★ ●	★ ● ● ● ●	★ ● ● ● ●	★ ● ● ● ●
<b>Environmental safety during / after use</b> • Non-toxic risk during production • No leakage (microplastics) • Recyclable at EOL	2	★ ★ ★ ★ ●	★ ★ ★ ● ●	★ ★ ★ ● ●	★ ★ ★ ● ●	★ ★ ★ ● ●	★ ★ ● ● ●	★ ★ ★ ★ ●
<b>Ease of implementation</b> • Preparation of the input material • less sorting • less influence of contamination • Complete and ready setup of the machinery • Low skill and easy learning	1	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ★ ● ●	★ ★ ★ ● ●	★ ● ● ● ●	★ ● ● ● ●	★ ● ● ● ●
<b>Product value</b> • Product with long life-span • A high value end-product	1	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ★ ★ ●	★ ★ ● ● ●	★ ★ ★ ● ●
<b>Overall score</b>		★ ★ ★ ☆ ☆	★ ★ ★ ★ ☆	★ ★ ★ ★ ☆	★ ★ ☆ ☆ ☆	★ ★ ☆ ☆ ☆	★ ★ ☆ ☆ ☆	★ ★ ★ ☆ ☆

# MARKET ANALYSIS

## HOSPITALITY

### Primary market

- Tourism - Hospitality Outdoor furniture and Construction, i.e. dinner chairs, fencing, plastic lumber

### 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
- Public works, Infrastructure + construction: governmental, public furniture, e.g. park bench, picnic table, signage, fencing

### Market size hospitality furniture

- 130+ hotels, resort, with 3222 apartments and rooms

### Estimated annual expenditure on furniture

- USD 225,540 (3222 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 sustainable focus
- Longer lasting alternatives
- Locally produced

# MARKET ANALYSIS

## HOSPITALITY + B2B

### Market segmentation

(sub target groups describing needs and wants)

- General needs
  - Durable furniture
  - Easy to maintain / keep looking new
  - Indoors and outdoors application
- Needs Hotels/resorts
  - Sustainable added marketing value
- Needs villas/apartments, consumers
  - 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 network of sub sellers (stores, DIY markets, furniture makers)
- Export potential:
  - Caribbean region with the options of expending for processing waste

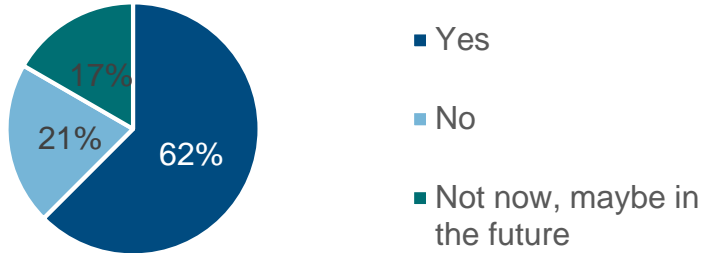
### Launching customers:

- Accommodations who collect material themselves
- Governmental bodies

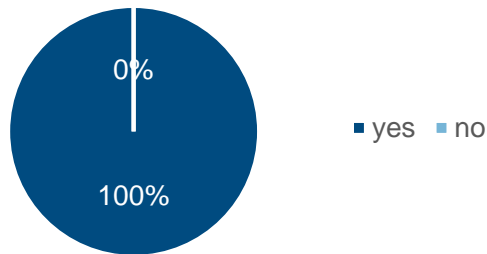


# BUSINESS DRIVERS

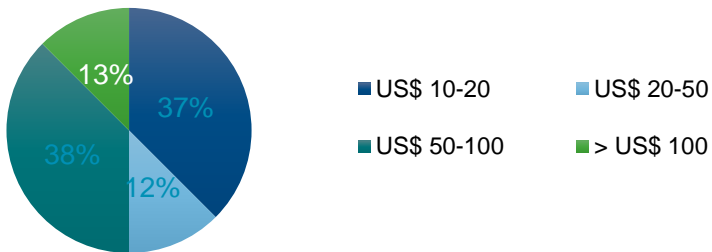
## COMMERCIAL MARKET ANALYSIS TOURISM



**62% willingness to purchase** recycled plastic furniture made from own waste  
**+ 17% considering** to purchase in the future



**100% 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  $\pm 10\%$  > average price**

\*This question was not part of the Grenada 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



# 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

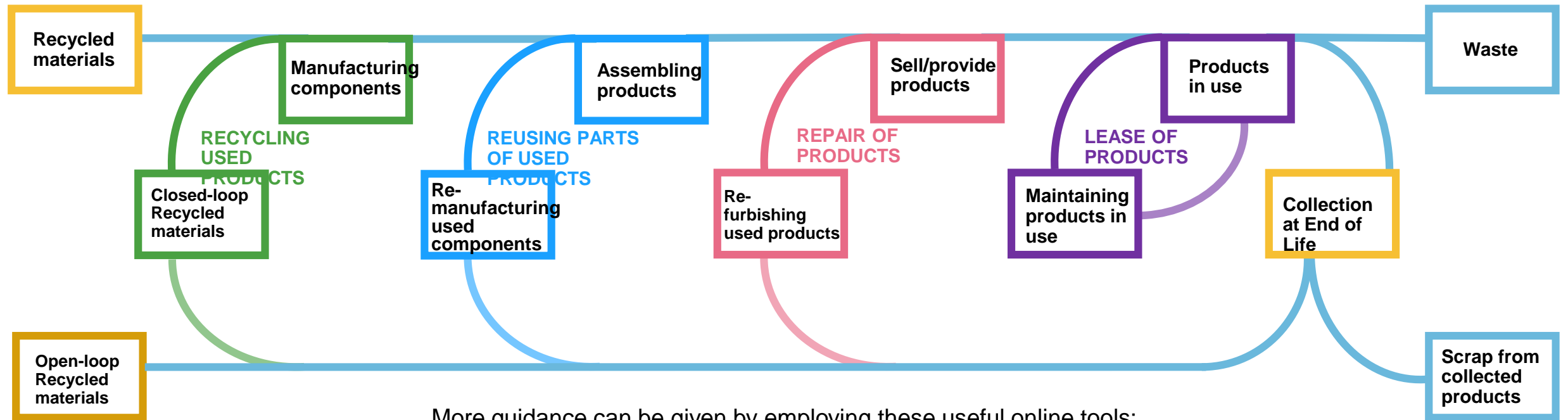
### Engagement & Sales

- Sales approach
  - Personal sales contact
  - Online order and service website
- Sales channels
  - Sales person
  - Web shop
  - Furniture Stores
  - DIY 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 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 - 9.4 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.

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	13.67	-100.00%
mixed Beam 2800 x 40 x 80 mm	16.00	300.0	14.58	9.72%
mixed Plank 2800 x 28 x 130 mm	17.90	180.0	16.25	10.19%
Pavement tile	10.70	460.0	9.65	10.87%
wide HDPE plank 2800 x 18 x 130 mm	14.80	180.0	13.51	9.55%
narrow HDPE plank 2800 x 18 x 65 mm	10.00	90.0	9.24	8.21%
Bench parts	0.00	12.0	34.60	-100.00%
Park bench	160.00	12.0	89.86	78.05%
Trash nest	230.00	30.0	129.09	78.17%
Lounge chair	49.00	30.0	27.57	77.71%
Side table / foot bench	32.00	15.0	17.77	80.09%
Dining chair	37.50	60.0	20.71	81.06%
Dining table	70.00	15.0	38.79	80.47%

Summary	
Starting capital	181,320.17
Months to Pay Back Investment	34
Full Time Employees Needed	7.5
Revenue Earned Per Month	30,578.00
Fixed Costs Per Month	1,560.00
Material Costs Per Month	17,639.83
Total Wages Paid Per Month	5,783.34
Total Profit Earned Per Month	5,594.83

# 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)	181,320.17	32,298.19	39,613.21	46,928.23	54,243.25	61,558.27	68,873.29	76,188.32	83,503.34	90,818.36	98,133.38	105,448.40
Initial Investment	181,320.17											
Revenue	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00
Total Cash In	211,898.17	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00	30,578.00
Investment Costs	(156,337.00)											
Variable Costs	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)	(21,702.98)
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	(179,599.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)	(23,262.98)
Net Cashflow	32,298.19	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02	7,315.02
Money In Bank (End of Month)	32,298.19	39,613.21	46,928.23	54,243.25	61,558.27	68,873.29	76,188.32	83,503.34	90,818.36	98,133.38	105,448.40	112,763.42

# 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	366,936.00	403,629.60	443,992.56
Cost of Sales	260,435.75	286,479.32	315,127.25
Net Revenue	106,500.25	117,150.28	128,865.31
Fixed Costs	18,720.00	18,720.00	18,720.00
Gross Income from Operations	87,780.25	98,430.28	110,145.31
Business Taxes	26,334.08	29,529.08	33,043.59
Net Income	61,446.18	68,901.19	77,101.71

Yearly Growth Rate

10%

(conservative scenario)

Business Tax Rate

30.00%

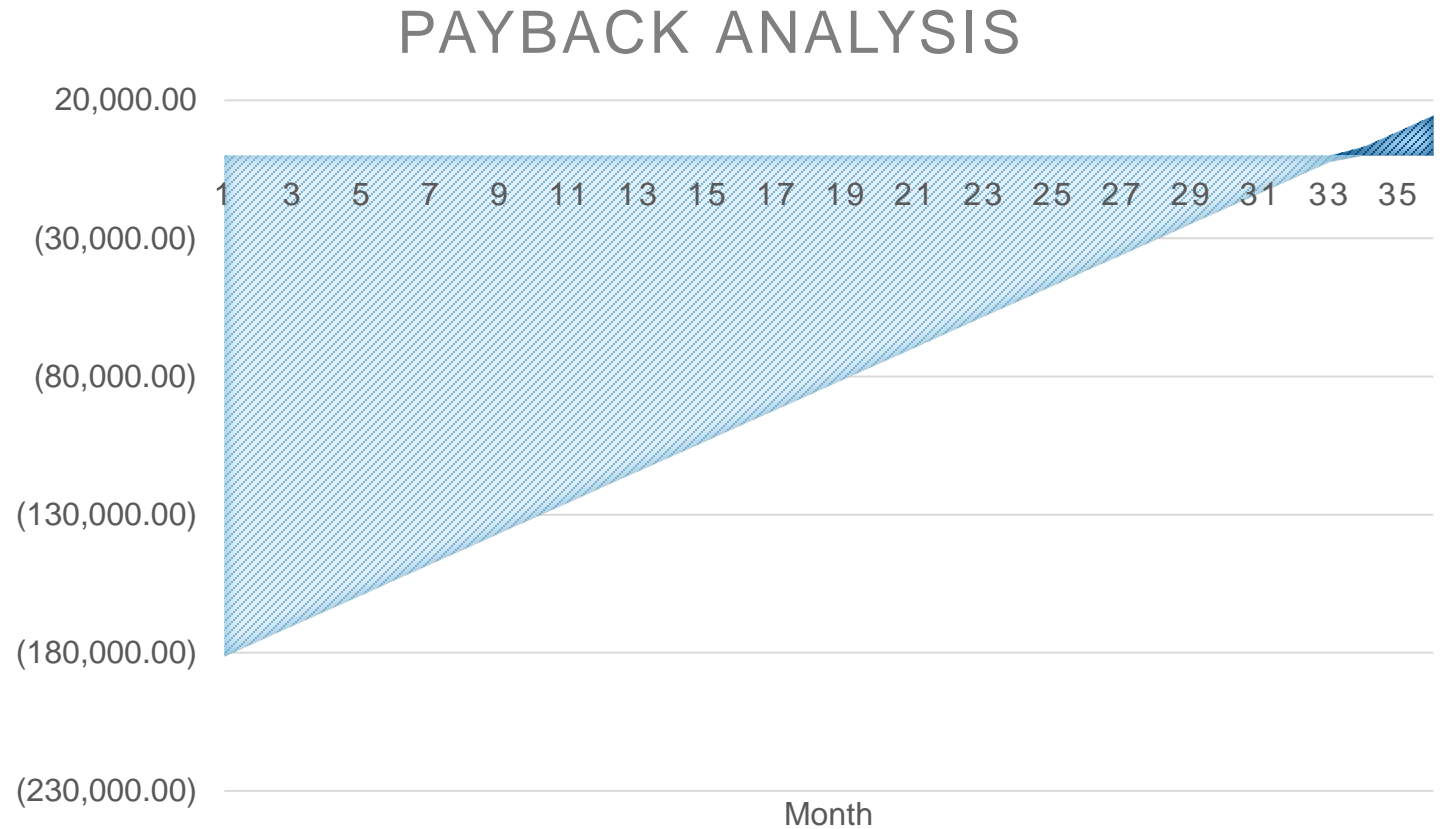


# FINANCIALS

## FUNDING & ROI

Starting capital: US \$ 181,320  
ROI 34 months

- Mostly machines and personnel






# FINANCIALS

## FUNDING PLAN

- Private money
- (Development) Bank loans: de-risking partner, e.g. offering loan guarantees)  
Incl. IADB, ADB, IFC, CEB
- Investors/business accelerators ((pre)-seed, angel investment, early stage)
  - Caribbean Export Development Agency
  - Caribbean Business Angels Network
  - Blue Bio Value
  - Blue Natural Capital Finance Facility
  - Ennovent
  - For Good Venture
  - LatitudR (the extension of the Inclusive Regional Recycling Initiative (IRR))
  - SAGANA
  - Sky ocean ventures
- (Governmental) grants
  - Development Cooperation partners, incl. UK, Norway, Italy, US, Germany, Swiss, France, China, Japan,
  - UNDP Innovation Fund
  - IUCN
  - World Bank - ProBlue. NGOs could become a third party within a governmental program
- Caribbean Biodiversity Fund (Endowment Fund)
- OECS
- WWF
- Alliance to End Plastic Waste
- The Nature Conservancy Caribbean
- Ocean Foundation
- Plastic Solutions Fund
- Bill & Melinda Gates Foundation
- 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 – 34 months	Lower landfill pressure for government: up to 150 tonnes / year or 9% of HDPE/PP/LDPE waste diverted from landfill/dumping sites	Develop recycling market - Create more jobs in island in collection, sorting, cleaning, recycling – 7.5-11 FTE when converting 4% of total 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 XCD 40,074		

# FOR MORE INFORMATION

## IUCN



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



#CloseThePlasticTap

## Searious Business



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#PlasticWasteFreeIslands #CloseThePlasticTap

