PLASTIC WASTE FREE ISLANDS

ANTIGUA AND BARBUDA

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 Antigua and Barbuda. 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

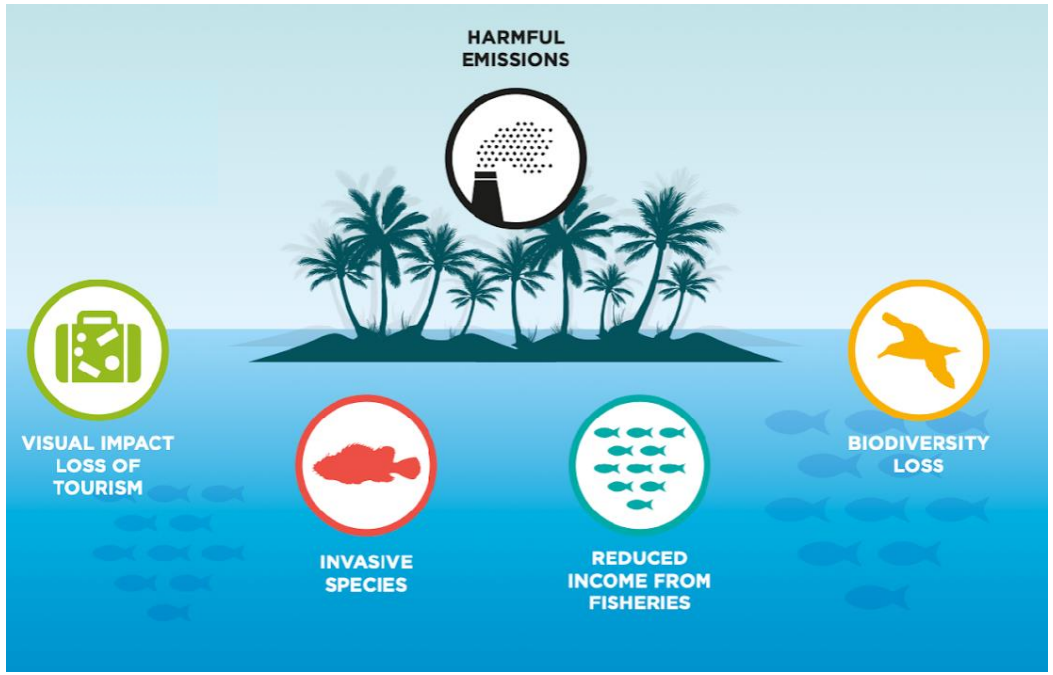
- Local business opportunity
  - Reduce import dependency
  - Enhance resource recovery options on-island
  - Job creation
- Reduce overfull landfills and high plastic leakage prevalence
  - Improved waste management
  - Lower environmental impact

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	Total waste produced 2019	Leakage (T/y) - model based estimate (95% credible interval)
PET	892	796	130 (0.4-281)
HDPE	629	535	95 (0-213)
LDPE	449	401	69 (0.1-171)
PP	181	148	41 (0-98)
PVC	272	118	153 (0.3-116)
PS/EPS	111	83	28 (0-58)
Other Plastic	1,314	1,177	170 (0.2-362)
Overall	**3,847**	**3,258**	**684 (302-952)**

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

GENERAL STATUS OVERVIEW & SECTORAL DATA

ANTIGUA AND BARBUDA

The contextual analysis of waste management practices summarizes the current situation of waste management on Antigua and Barbuda. 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 export
  - Large volumes of rigid HDPE and PP waste that could be diverted quite easily from landfill
- National ambitions/initiatives/pipeline:
  - Collection of PET bottles by Antigua and Barbuda Waste Recycling Corporation (ABWREC). Export to the USA without economic viability
  - Incentivised PET bottle return program with one water brand (collaboration Oasis and ABWREC)
  - Advanced Recovery Fee system for recyclables, incl. PET and possibly HDPE is envisioned
  - PWFI PET bottles collection and export trial to ALPLA, Mexico
  - Green Corridor Sustainable Tourism Initiative (Green Tourism Initiative) expansion to more hotels / resorts

3253 tonnes plastic waste generated/year

Source: Quantification report, Executive summary, APWC July 2021

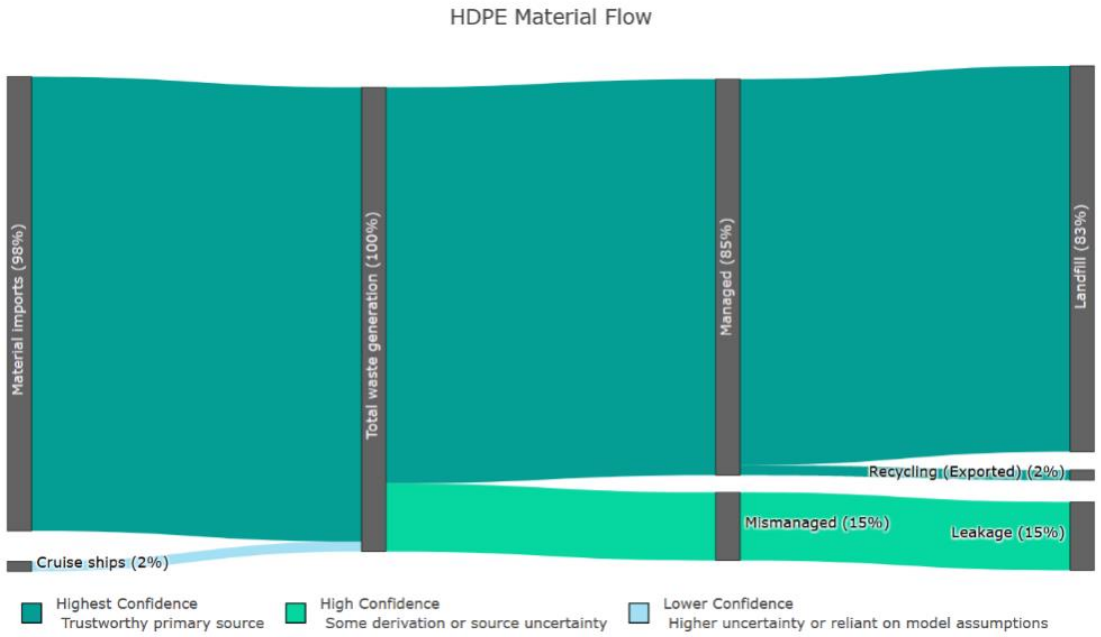
TARGETED MATERIAL(S)

HDPE – CURRENT VALUE CHAIN

Category	Material type	Household (T/y)	Commercial (T/y)	Tourism (T/y)	Fisheries (consumption based) (T/y)	Total (T/y)
HDPE 2	garbage bags single use	63,8	27,1	80,3	0,0	171,3
HDPE 2	lightweight plastic bags single use	64,2	53,8	27,7	0,0	145,7
HDPE 2	laundry detergents bottles hdpe	41,0	0,0	12,2	0,0	53,2
HDPE 2	cleaning agent products hdpe	31,5	4,1	4,3	0,0	39,9
HDPE 2	food containers hdpe	35,6	0,0	2,4	0,0	38,0
HDPE 2	other hdpe	21,1	0,0	10,3	0,0	31,4
HDPE 2	beauty and personal care hdpe	14,0	0,0	2,3	0,0	16,3
HDPE 2	light shopping plastic bags single use	1,4	10,1	0	0,0	11,5
HDPE 2	home care hdpe	5,7	0,0	5,1	0,0	10,8
HDPE 2	beverage containers pvc hdpe	7,6	2,2	0	0,0	9,8
HDPE 2	shampoo body wash hdpe	4,9	0,0	0	1,8	6,7
HDPE 2	shopping carrier bags hdpe	1,2	0,0	0	0,0	1,2
						535,8

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.



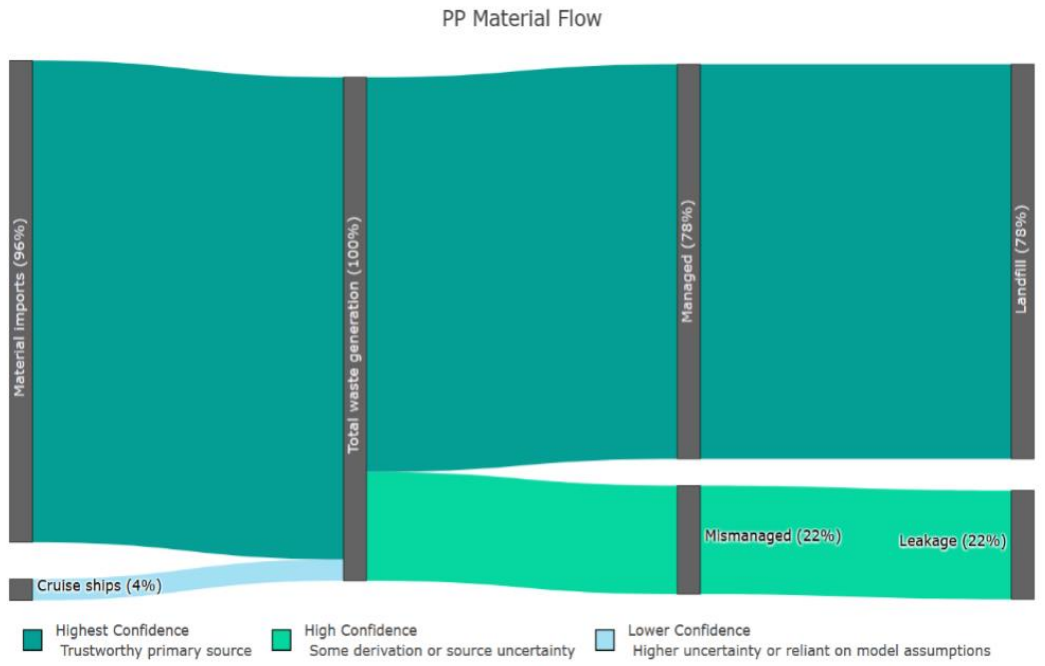
TARGETED MATERIAL(S)

PP – CURRENT VALUE CHAIN

Category	Material type	Household (T/y)	Commercial (T/y)	Tourism (T/y)	Fisheries (consumption based) (T/y)	Total (T/y)
PP 5	container lids pp	40,2	17,6	25	0,5	83,2
PP 5	bags resusable supermarket bags pp	17,8	0,0	0	0,0	17,8
PP 5	food containers pp	9,7	0,5	2,9	0,0	13,1
PP 5	food flexible packaging pp	4,0	3,9	1,7	0,0	9,6
PP 5	other pp	7,6	0,0	0	1,8	9,4
PP 5	food semi rigid containers e g trays pp	7,0	0,0	0	0,0	7,0
PP 5	straws single use	1,8	3,6	0,3	0,0	5,8
PP 5	glossy shopping bags single use plastics	3,5	0,0	0	0,0	3,5
PP 5	medicine bottles pp	0,2	0,0	0	0,0	0,2
PP 5	single use take away food containers pp single use	0,0	0,0	0	0,0	0,0
						149,6

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.



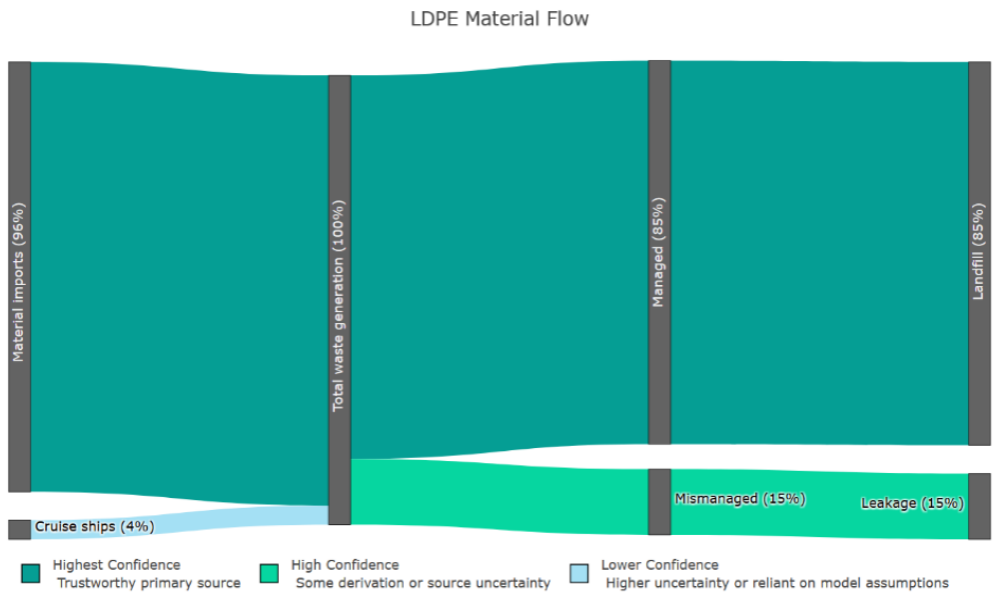
TARGETED MATERIAL(S)

LDPE – CURRENT VALUE CHAIN

Category	Material type	Household (T/y)	Commercial (T/y)	Tourism (T/y)	Fisheries (consumption based) (T/y)	Total (T/y)
LDPE 4	soft plastic packaging single use plastics	179,8	164,3	42,8	0,0	386,8
LDPE 4	wrap foils cling films ldpe	7,2	0,0	0,2	0,0	7,4
LDPE 4	glossy shopping bags single use plastics	3,2	0,0	0	0,0	3,2
LDPE 4	other ldpe	1,0	1,9	0	0,0	2,9
LDPE 4	container lids ldpe	0,2	0,0	0	0,0	0,2
						400,6

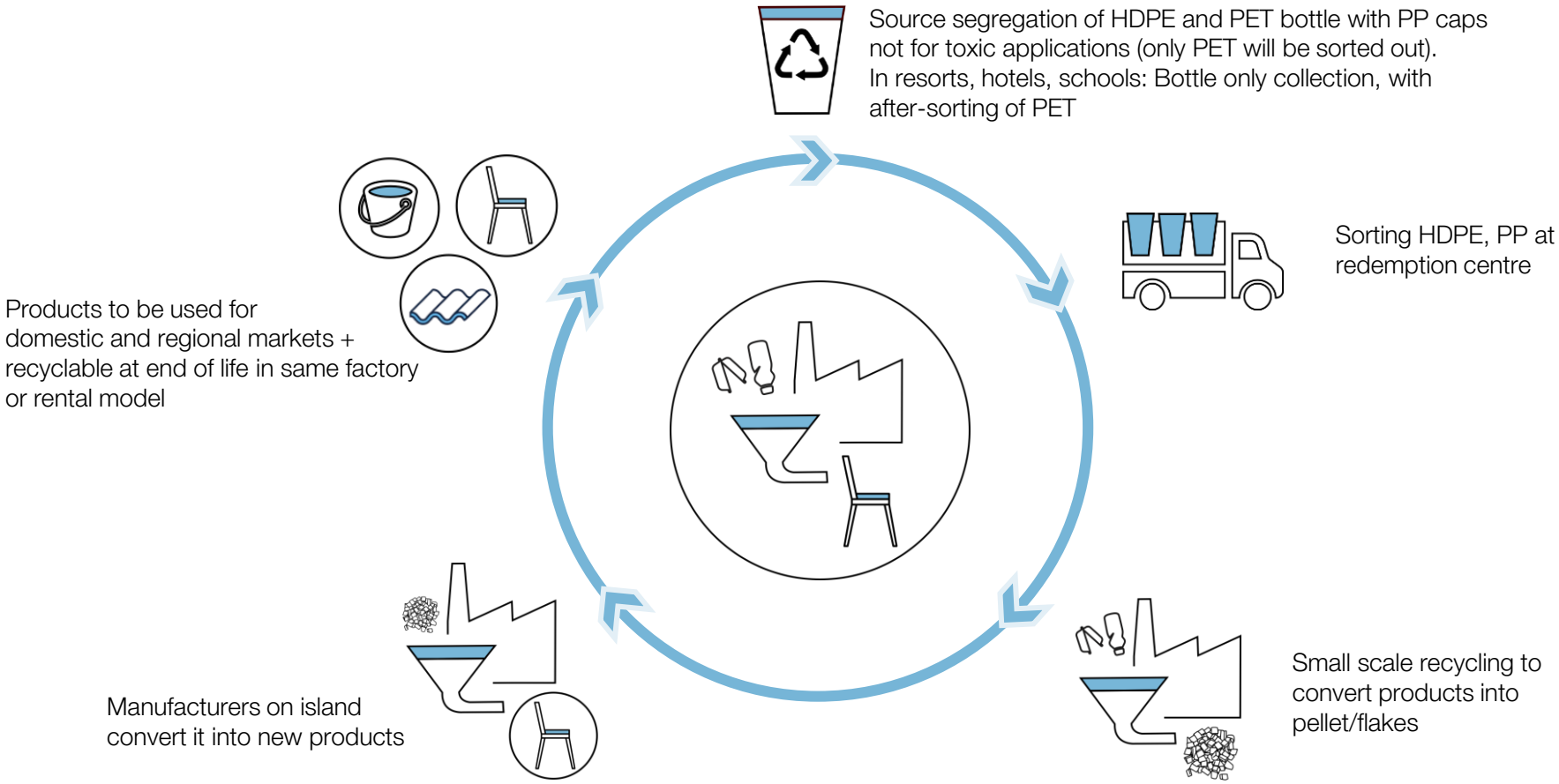
Source: Quantification report, Final data, All sectors plastics breakdown, APWC July 2021

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



WASTE TO PRODUCT

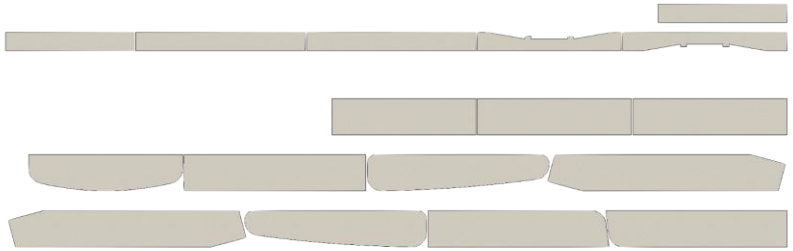
ALTERNATIVE VALUE CHAIN



CONCEPT DESCRIPTION

EXTRUSION BASED FURNITURE

- Plastic lumber, beams, planks, tiles and parts (semi-finished product)
- Outdoor furniture (end-product)
- Example Prototype : 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 related products
  - Table
  - Lounge chair
  - Side table
  - Park bench
  - Patio furniture



USER SCENARIOS

Furniture

- Comfortable
- Durable
- Climate/weather-proof
- Modular, repairable
- Locally manufactured

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

HOSPITALITY SECTOR

Cheap plastic furniture

Cheap metal

Wicker

Pool lounge furniture

Picknick furniture

Hardwood 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

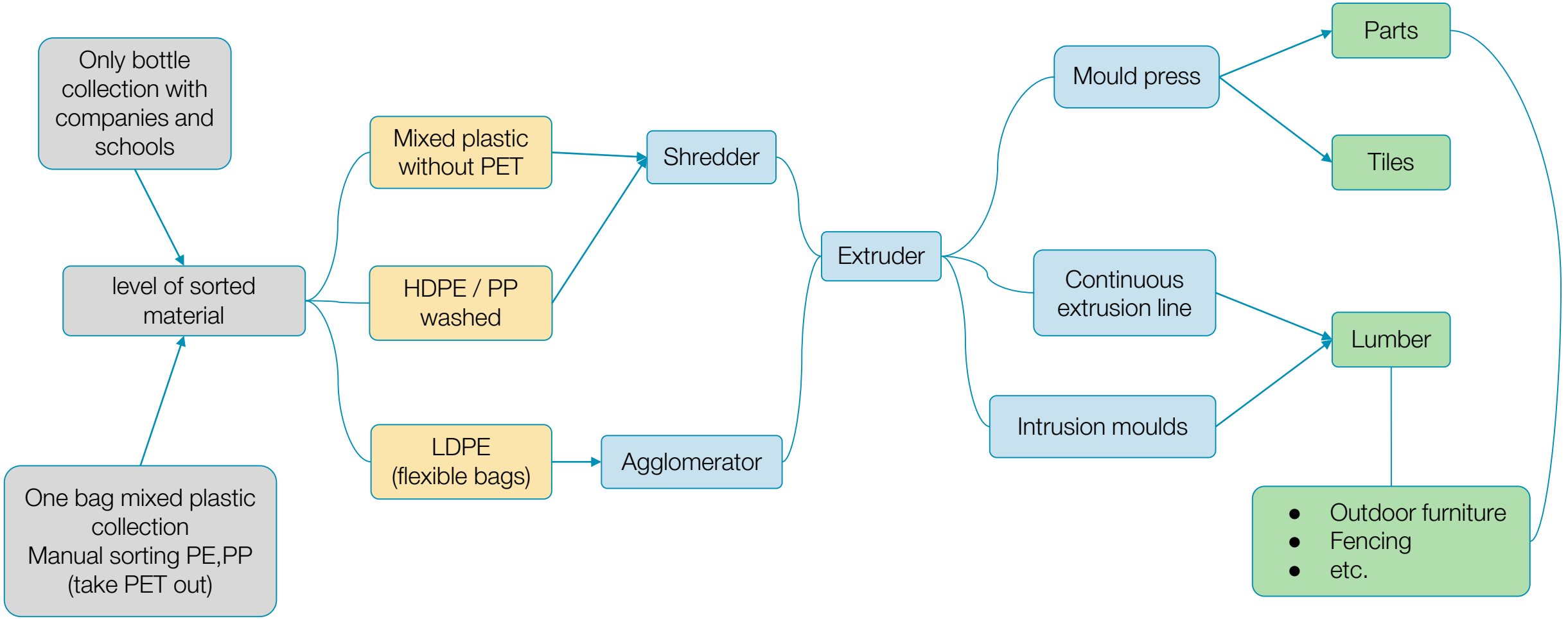
MIXED PLASTIC EXTRUSION BASED

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

- Machines: shredder and/or agglomerator, extruder, press + moulds, 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
  - Source segregation in resorts, hotels, schools:
    Bottle only collection HDPE + PP caps, with after-sorting of PET
  - to be expanded in a later stage with public collection points
  - bags can be added for LDPE, if an agglomerator is added
- Impact: up to 150 tonnes / year = 15% of total HDPE + PP + LDPE stream, 5% of total plastic generated

OUTLINE WASTE TO PRODUCT

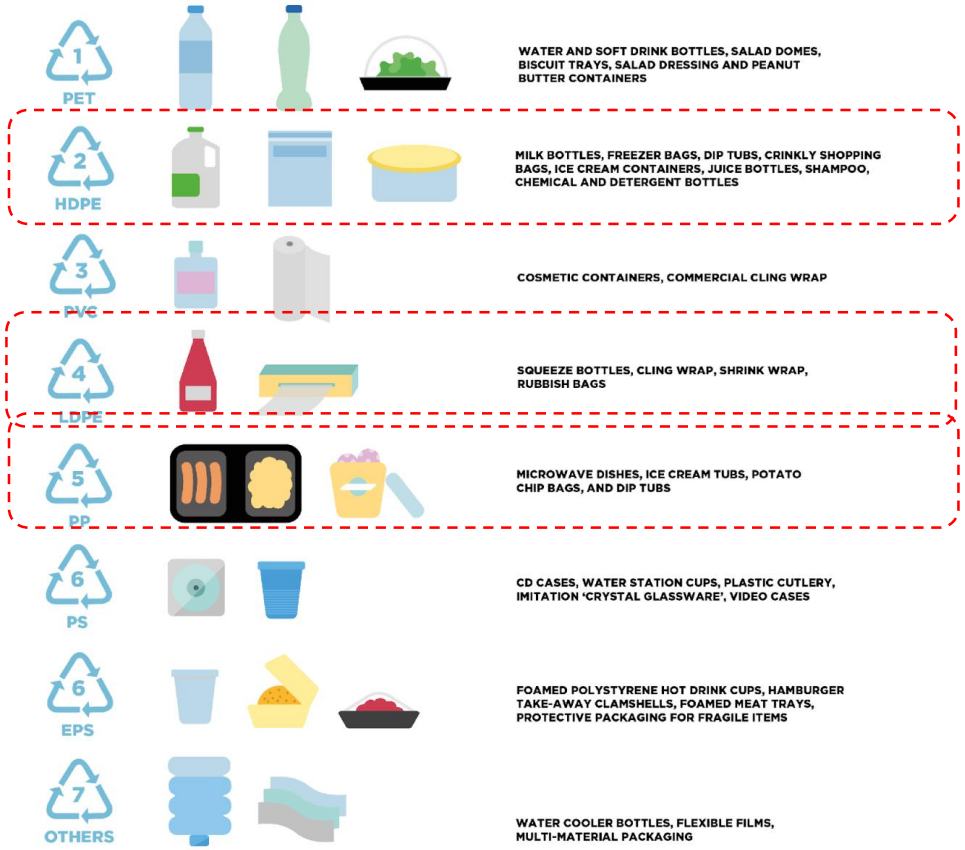
RECYCLING PROCESS



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

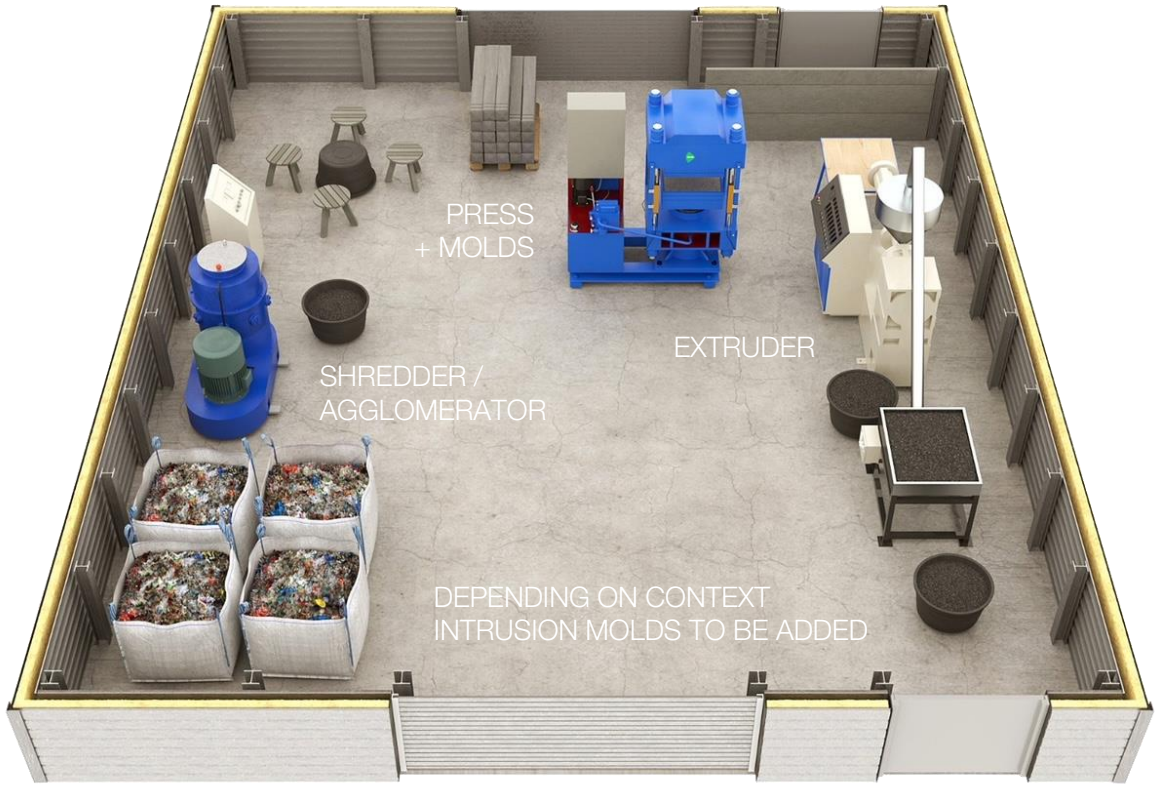
- E.g. schools, supermarkets, public buildings, or resorts
- Incentives for consumers to sort and return plastic products
  - E.g. Discounts on end product
- Educational programmes and awareness campaign

Collaboration with existing waste management structures is crucial

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

MACHINERY

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

SELECTION APPROACH

Recycling technology

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 + B2B

Primary market

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

Secondary markets

- B2C:hHigh-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

- 60+ hotels & resorts with over 3,000 rooms

Estimated total annual expenditure on furniture

- USD 210,000 (3000 rooms and accommodations with an 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 needs

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

Buying patterns

- Current yearly renew due to poor quality and extreme weather conditions

Locations of potential customers

- Mostly coastal area

Specify domestic vs export markets

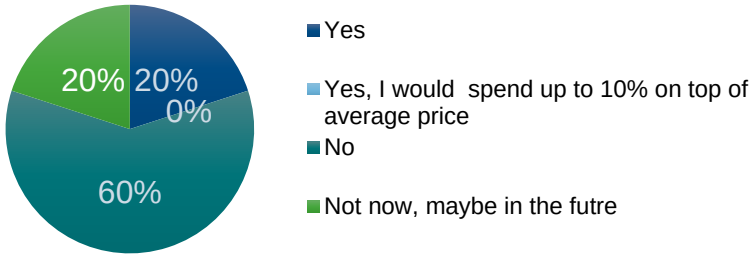
- Domestic: local network of sub sellers (stores, Do-It-Yourself markets, furniture makers)
- Export potential:
  - Caribbean region: local furniture production based on recycled plastic lumber

Launching customers

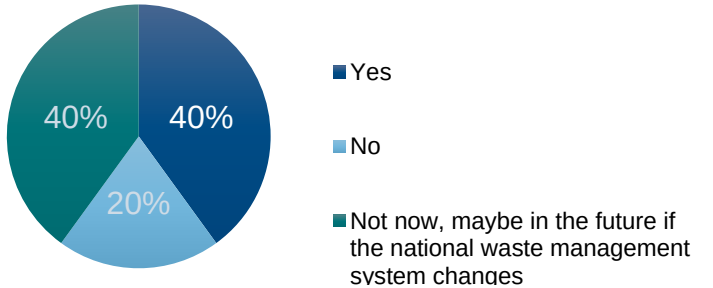
- Accommodations that collect material themselves
- Governmental bodies

BUSINESS DRIVERS

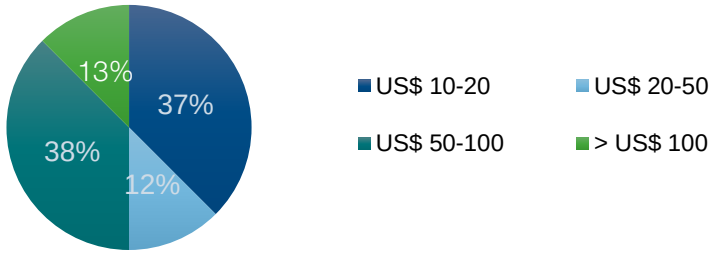
COMMERCIAL MARKET ANALYSIS HOSPITALITY



20% willingness to purchase recycled plastic furniture made from own waste **+ 20% willing to consider** purchasing in the future



40% willingness to source-segregate recyclable plastics + 40% if the national waste management system changes - 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 Antigua & Barbuda survey

BUSINESS DRIVERS

INDUSTRY SUPPORT – INNOVATION AWARDS

Recycled HDPE dining chair made from Caribbean plastic waste streams is already recognized by industry experts as a promising and innovative business plan:

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

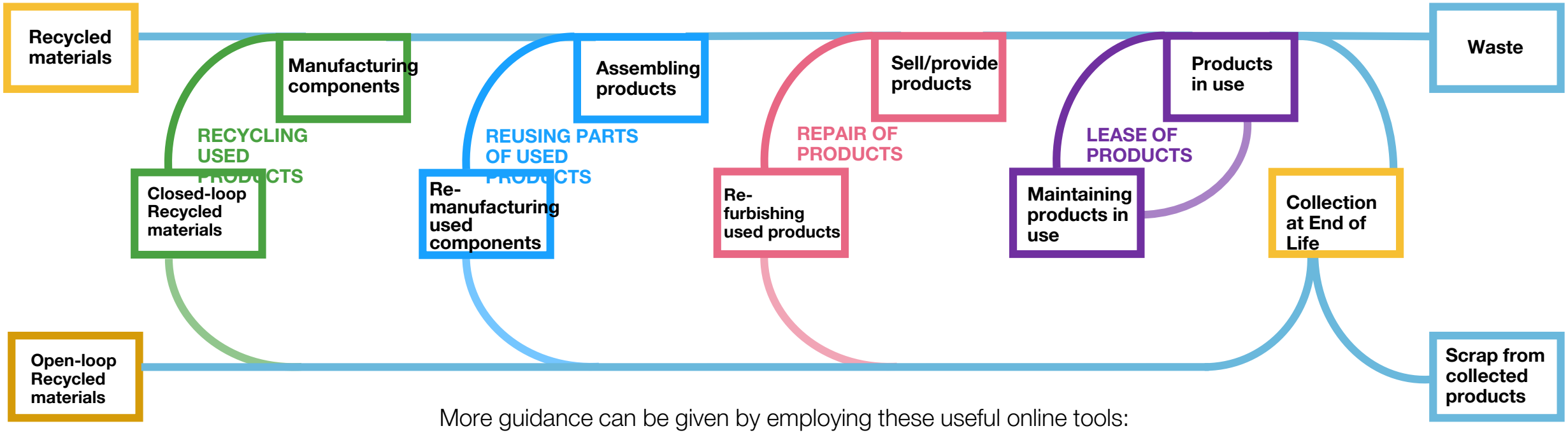
Engagement & Sales

- 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 11 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	183,532.06
Months to Pay Back Investment	33
Full Time Employees Needed	7.5
Revenue Earned Per Month	32,931.0
Fixed Costs Per Month	1,560.00
Material Costs Per Month	17,639.83
Total Wages Paid Per Month	7,995.24
Total Profit Earned Per Month	5,735.94

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	17.73	-100.00%
mixed Beam 2800 x 40 x 80 mm	17.00	300.0	15.32	10.96%
mixed Plank 2800 x 28 x 130 mm	19.00	180.0	16.98	11.87%
Pavement tile	11.70	460.0	10.51	11.30%
wide HDPE plank 2800 x 18 x 130 mm	17.40	180.0	15.48	12.42%
narrow HDPE plank 2800 x 18 x 65 mm	12.30	90.0	10.96	12.19%
Bench parts	0.00	12.0	36.08	-100.00%
Park bench	165.00	12.0	91.58	80.17%
Trash nest	240.00	30.0	131.89	81.97%
Lounge chair	53.00	30.0	29.49	79.74%
Side table / foot bench	34.00	15.0	18.78	81.08%
Dining chair	40.00	60.0	22.05	81.37%
Dining table	74.00	15.0	40.47	82.87%

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)	183,532.06	35,309.09	43,423.12	51,537.15	59,651.18	67,765.21	75,879.24	83,993.27	92,107.30	100,221.33	108,335.36	116,449.39
Initial Investment	183,532.06											
Revenue	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00
Total Cash In	216,463.06	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00	32,931.00
Investment Costs	(156,337.00)											
Variable Costs	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)	(23,256.97)
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	(181,153.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)	(24,816.97)
Net Cashflow	35,309.09	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03	8,114.03
Money In Bank (End of Month)	35,309.09	43,423.12	51,537.15	59,651.18	67,765.21	75,879.24	83,993.27	92.107.30	100,221.33	108,335.36	116,449.39	124,563.42

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	395.172.00	434,689.20	478,158.12
Cost of Sales	279,083.65	306,992.01	337,691.21
Net Revenue	116,088.35	127,697.19	140,466.91
Fixed Costs	18,720.00	18,720.00	18,720.00
Gross Income from Operations	97,368.35	108,977.19	121,746.91
Business Taxes	24,342.09	27,244.30	30,436.73
Net Income	73,026.27	81,732.89	91,310.18

Yearly Growth Rate
10%

(conservative scenario)

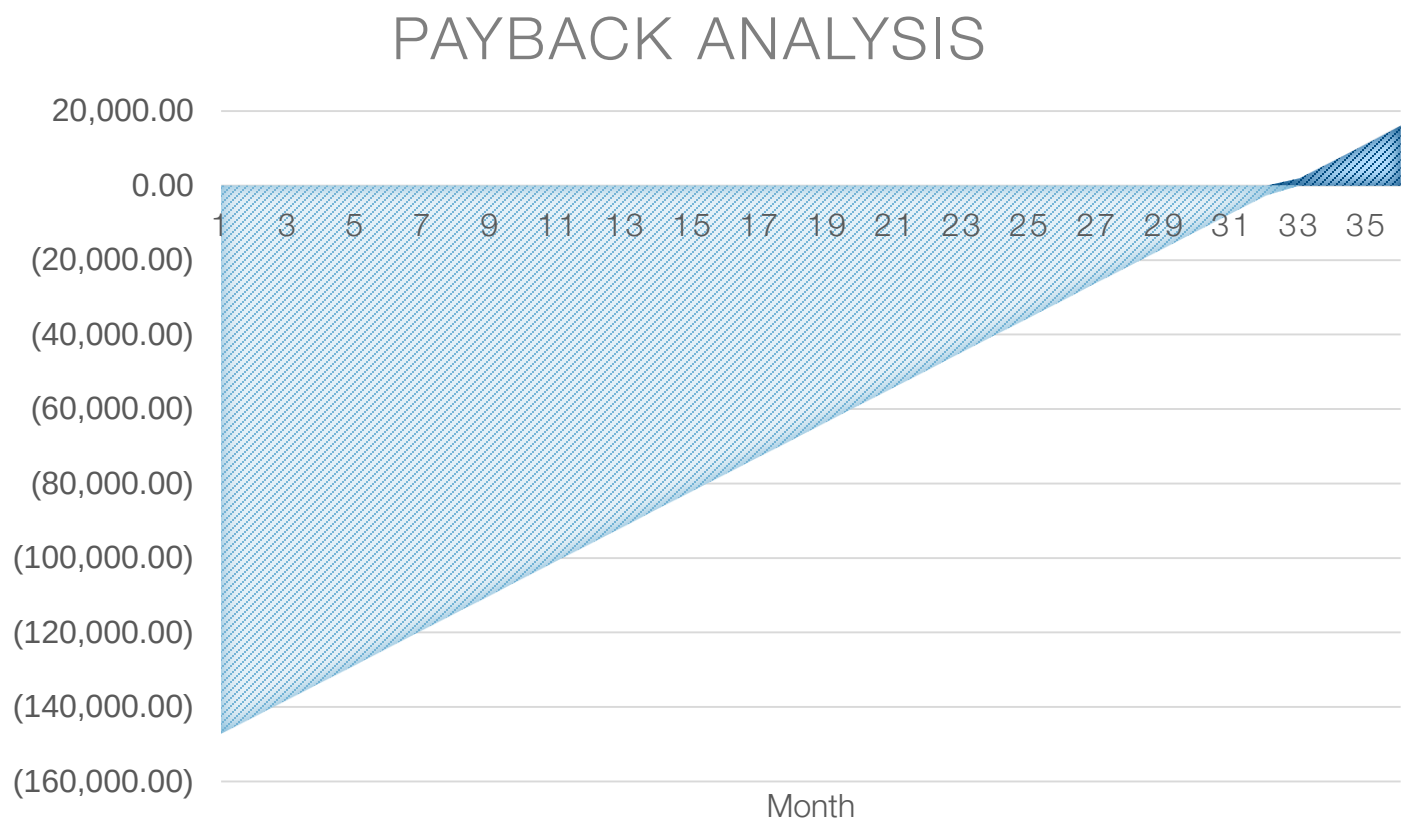
Business Tax Rate
25.00%

FINANCIALS

FUNDING & ROI

Starting capital: US $ 183,532,
ROI 33 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

FACTSHEET

BENEFITS

Financial benefits	Environmental benefits	Social benefits
ROI – 33 months	Lower landfill pressure for government: up to150 tonnes / year or 14% HDPE/PP/LDPE waste diverted from landfill/dumpsites	Develop recycling market - Create more jobs in island in collection, sorting, cleaning, recycling – 7.5-11 FTE when converting 5% 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. up to 150 tonnes / year diverted from potential leakage	
Lower waste disposal and clean-up costs for government: Approx. savings XCD 21,323 /year		

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