



# PLASTIC ODYSSEY

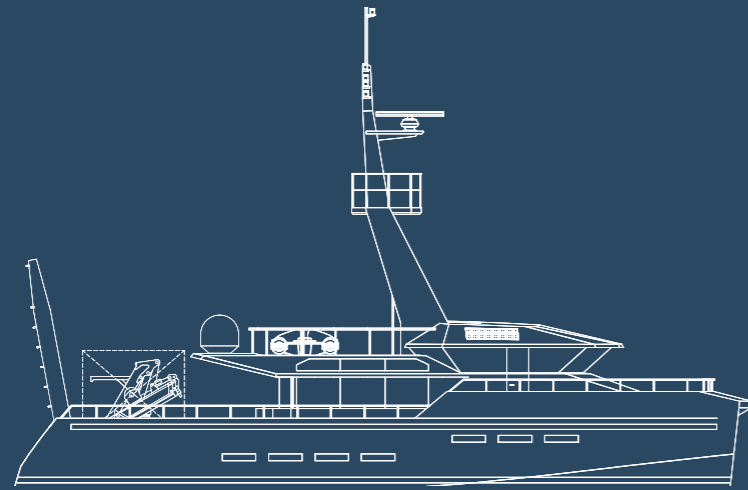
AROUND THE WORLD POWERED BY PLASTIC



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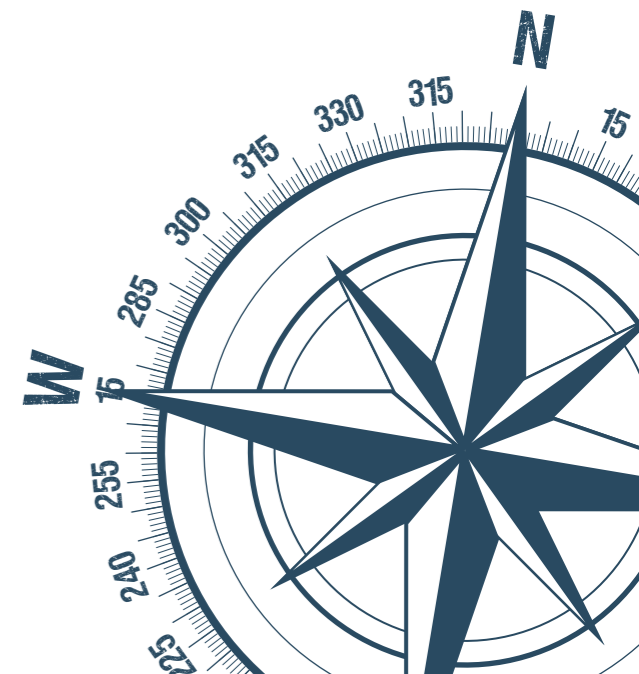
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ACHIEVING THE FIRST ROUND-THE-WORLD  
EXPEDITION ABOARD A VESSEL THAT USES  
PLASTIC WASTE AS A FUEL

# PLASTIC ODYSSEY

AROUND THE WORLD POWERED BY PLASTIC



“

AN AMBASSADOR OF RECYCLING TECHNOLOGIES  
INITIATING HUMAN-SCALE SOLUTIONS TO  
PLASTIC POLLUTION AND ALLEVIATING POVERTY  
AT THE SAME TIME.

”



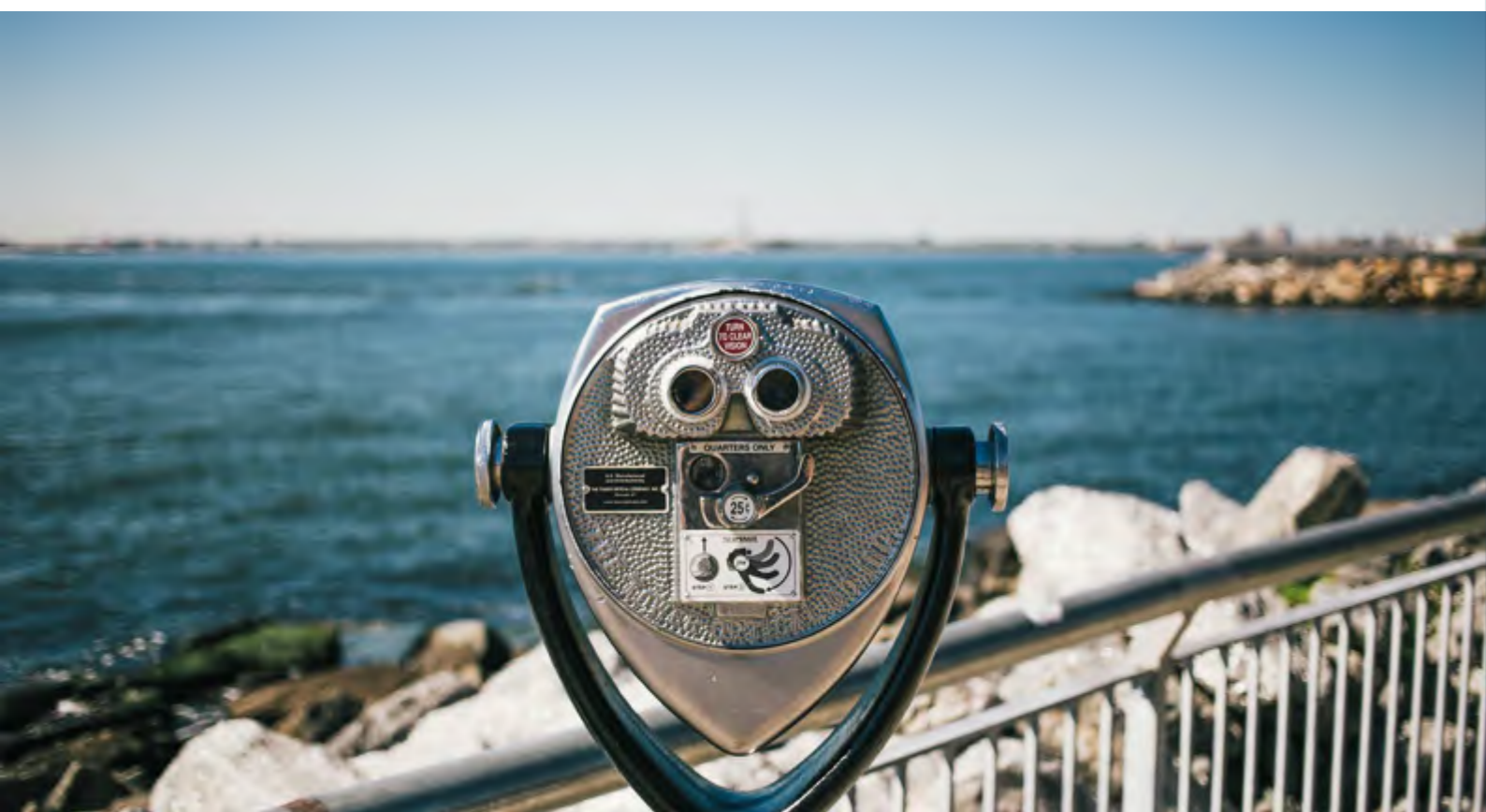
## VISION

Our oceans are home to more than 700,000 species and are vital to human health, providing jobs and food to billions of people. Half of the oxygen we breathe comes from the oceans. This indispensable resource and common good is threatened by massive anthropogenic assault. Pollution from petroleum products such as plastic is among the most critical. Every day, around 30,000 tons of plastic are dumped into the sea.

We believe that the fossil fuel era must come to an end as quickly as possible. However, several decades will pass

before that can actually happen. Without a transition phase, this global change is unlikely to become a reality. We must limit the damage until we reach a completely sustainable era.

The transition has already started: local solutions are emerging all around the world, acting as social and economic levers. Yet these systems need to gain momentum in order to impact our society on a global scale. To achieve that, making the choice of innovation is a great vehicle for progress as long as we put the human beings at the center of our concerns.



## SUPPORT



**CLAUDIE HAIGNERÉ**  
Astronaut, the European Space Agency

“Planet Earth is the spaceship of our humanity. Each one of us is a member of the crew, citizen of today, and explorer of tomorrow. To better develop our common future, let’s bring the human adventure together with the scientific and technical ones. Plastic Odyssey is driven by this fascinating lifestyle choice. Thank you for following this path. ”



**SABINE ROUX DE BÉZIEUX**  
President of the Fondation De La Mer

“The fight against plastic pollution in the oceans is a key issue. This struggle for marine life starts on the ground, and Plastic Odyssey is leading the way. ”



**CATHERINE CHABAUD**  
Sailor, Sea and Coastal Areas delegate, Ministry of the Environment, France

“The world finally rallies to fight against plastic pollution in the oceans, the cause of my own personal commitment for 15 years. Plastic Odyssey’s idea is very smart and coupled with a strong determination. I will follow their journey closely and wish them fair winds and following seas ahead! ”

# PROJECT FACT SHEET

## A unique boat...

Plastic Odyssey is a 25 m long vessel that will be solely powered by plastics. The wastes will be harvested onshore during each call, then stored onboard, to finally be transformed into fuel and power the ship's engines.



## ...on a world premiere expedition...

The vessel will achieve the first round-the-world expedition using plastic waste as a fuel, to show that it's too valuable to enter our oceans.



## ...to reduce plastic pollution and alleviate poverty at the same time.

Behind this challenge, a panel of open source plastic-recycling machines will be built and tested onboard. The expedition is an opportunity to face realities on the ground and adapt the solutions to local needs. These technologies will be spread all over the world to create jobs locally while cleaning up our environment.



## FACTS & FIGURES

**3**

years expedition

**33**

major ports of call around the world

**40,000**

nautical miles

## GOALS



Demonstrate and raise awareness

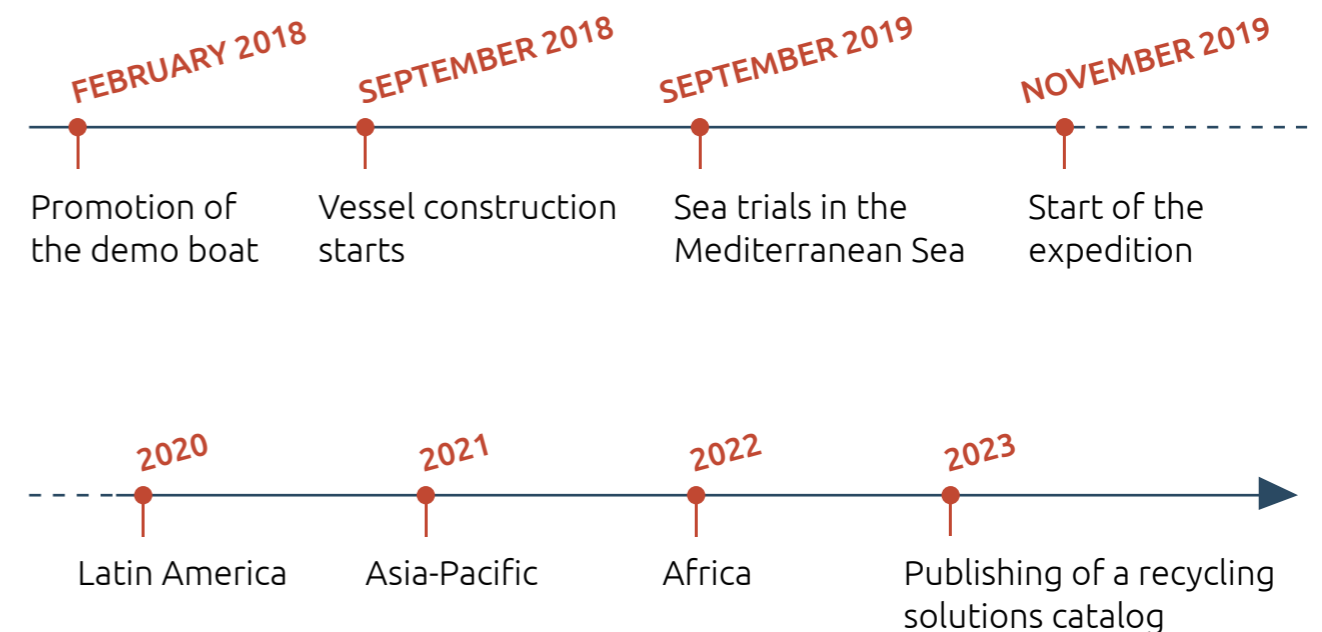


Understand local recycling cultures



Initiate human scale projects

## TIMELINE



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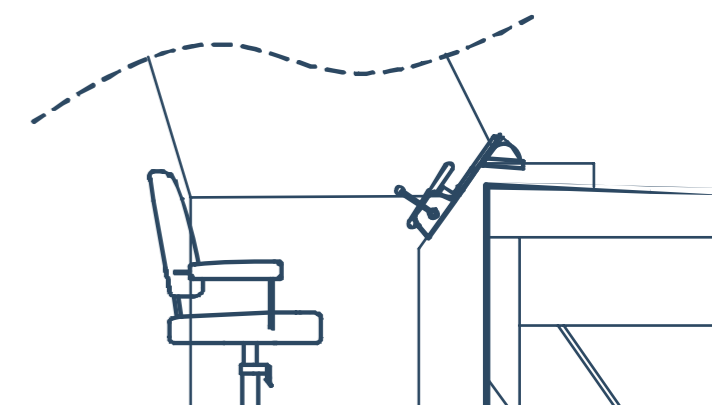
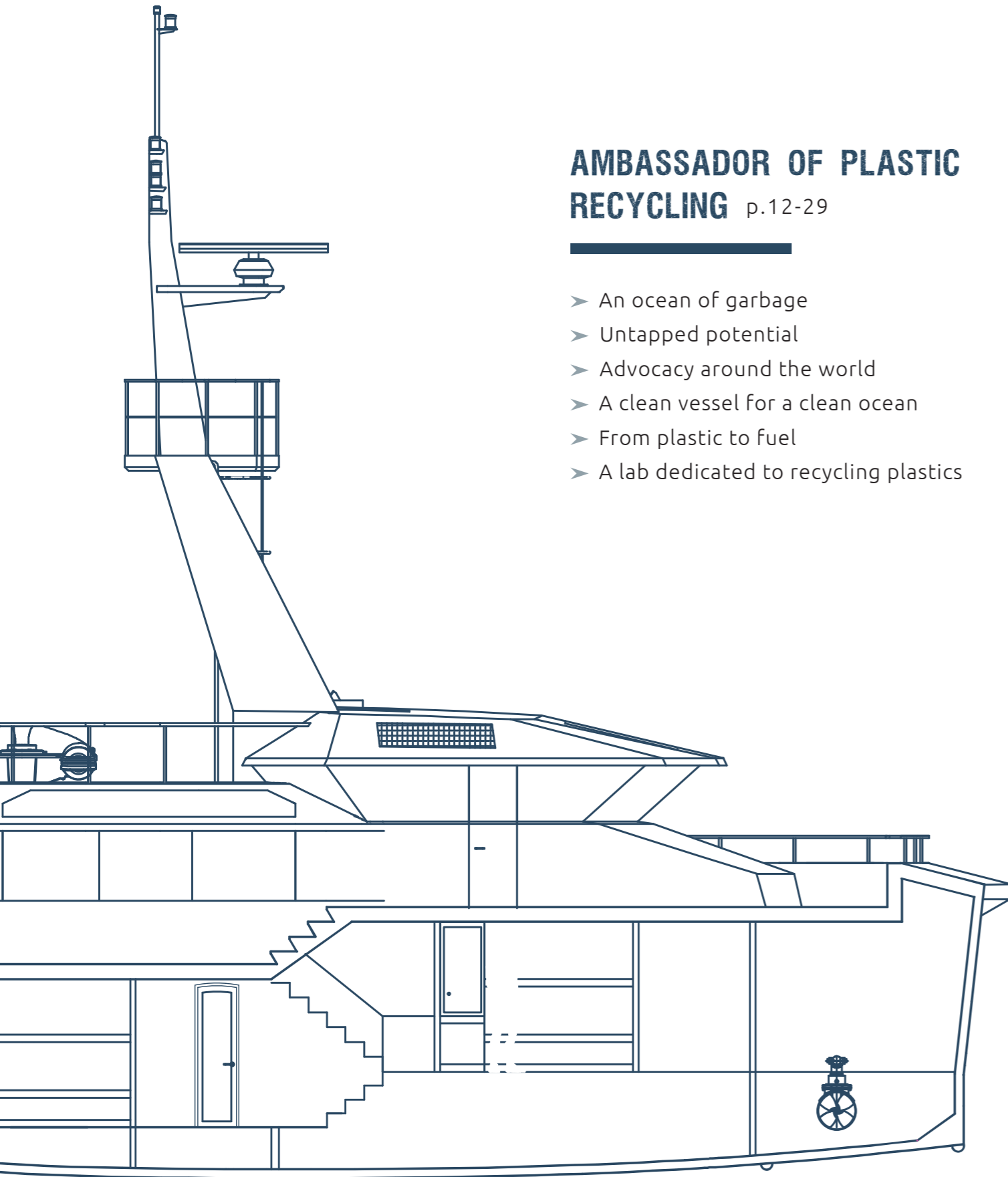
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# AMBASSADOR OF PLASTIC RECYCLING



## AN OCEAN OF GARBAGE

### 10 million tons of plastic enter our oceans every year

At this pace, scientists predict that by 2050, plastic in the oceans will outweigh fish. This accumulation of debris - bags, bottles, nets, and different forms of packaging - is gradually transforming our oceans into open dumps.

### Once at sea, it's too late

A few initiatives are now being initiated to clean up the oceans directly, unfortunately only 1% of these wastes actually float on or near the surface. The remaining 99% sink or break down into microparticles to litter the deep sea, becoming impossible to collect while working their way into our marine food chain. This pollution has a lasting effect on health, climate, and maritime economies.

Today, the oceans are filled with **165** millions tons of plastic.

### Stop the leakage of plastics at the root

While cleaning up the ocean is almost impossible, we can still eradicate the problem at its root to prevent further damage. 80% of ocean plastic comes from land runoff; therefore, we need to act on the coasts to stop plastic before it enters the sea.



## UNTAPPED POTENTIAL

### Considering plastic as a resource

What if collecting trash was profitable? What if waste was actually a resource? Hundreds of people could collect plastic for a living while cleaning coasts at the same time and stopping plastic from entering the seas.

### Transitional solutions are needed

Change our consumption patterns, stop the use of packaged products, and choose sustainable alternatives (bioplastics, edible packagings). All these transformations are necessary but require a lot of time. Meanwhile, we need to find transitional solutions.

Today, many solutions are emerging to either reemploy, recycle, or recover plastic waste, but they are either unknown or not adapted to countries most affected by plastic pollution.

### Unveiling opportunities

To highlight the potential of these solutions, they will be displayed on the vessel, allowing us to communicate about them even in the most remote coastal areas affected by such pollution.

“ Make plastic too valuable to enter the seas. ”





## ADVOCACY AROUND THE WORLD

Plastic Odyssey is the first boat to be solely powered by a fuel made out of plastic debris. Following the concept of the DeLorean in *Back to the Future*, the ship will provide concrete proof that it is no longer necessary to talk about waste but rather about resources.



The route of the expedition

### 3 years around the world to promote plastic recycling

Plastic Odyssey will make its own historic trip around the world to co-develop and spread technologies based on plastic recycling in order to clean up shores and boost coastal economies.

The boat will set sail in 2020 to cruise the coasts of Latin America, Asia-Pacific, and Africa, the 3 continents most affected by plastic pollution, during 3 years of a unique adventure.

### Turning problems into opportunities

At each port of call, Plastic Odyssey will first clean the coastlines affected, and then transform waste into valuable materials and convert non-recycled plastic into fuel to power the ship.

Existing recycling systems will be introduced while new ones are jointly developed with local institutions. Every solution will be tailored to meet the specific needs of each community, and then shared among the local people.



## A SOCIAL AND ENVIRONMENTAL IMPACT

### Fighting poverty to reduce plastic pollution

There is a saying in Africa that : “pollution is poverty”. Plastic Odyssey’s advocacy role is to prove plastic recycling is an economically profitable solution which could solve both pollution and poverty problems at once. Therefore, the economic approach is likely the best to make a difference: collect plastic because it is a valuable resource, not just because it is a major concern for the future of our planet.

### Impact measurements

The impact of Plastic Odyssey will be measured and assessed based on environmental, economic, and social criteria. Following the departure of the vessel “Plastic Odyssey”, a wide range of data will start to be collected: the quantity of plastic recycled during each call, the number of people involved, media coverage, the number of small businesses started, etc.

### “Be the change you want to see in the world.”

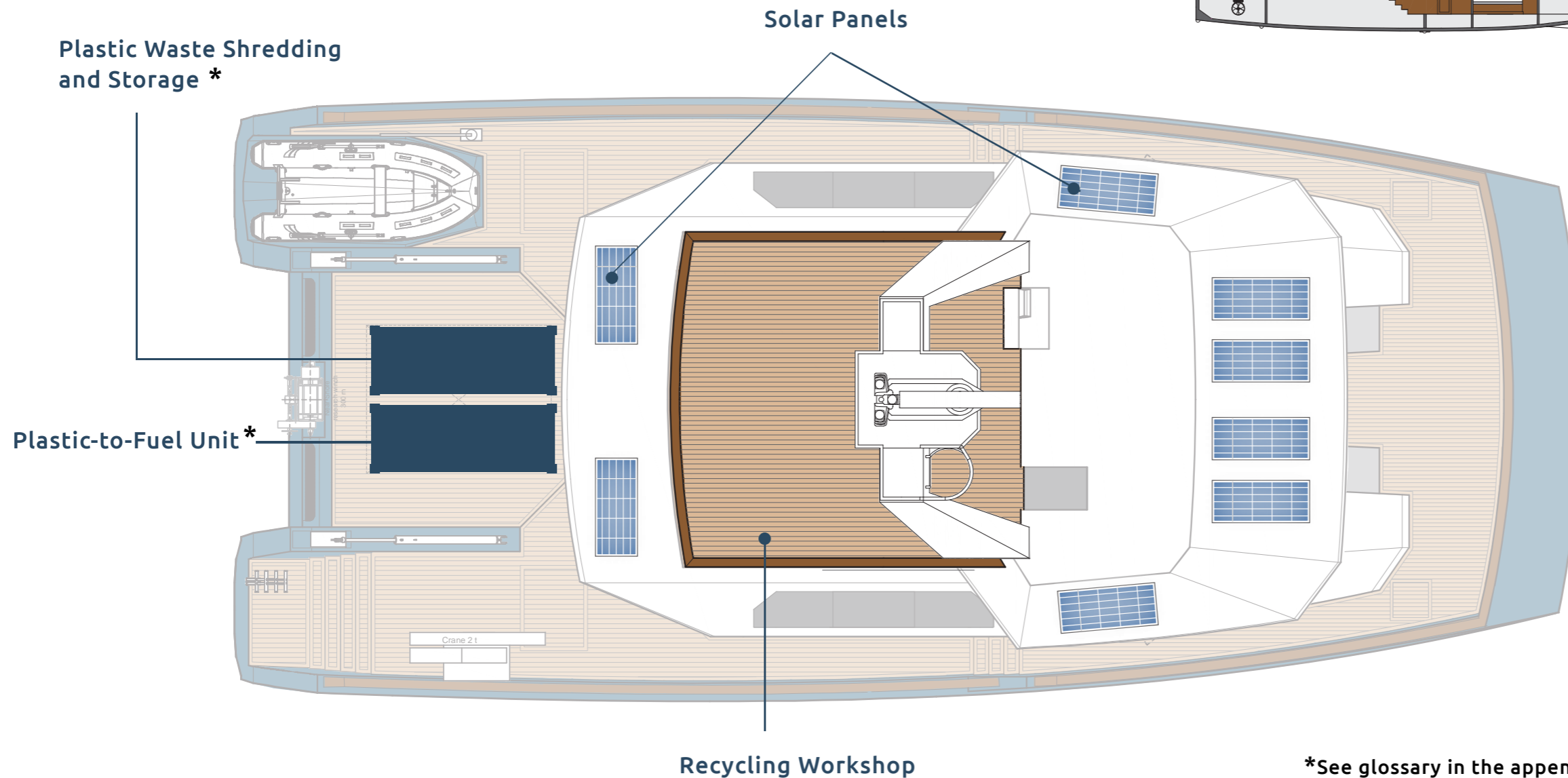
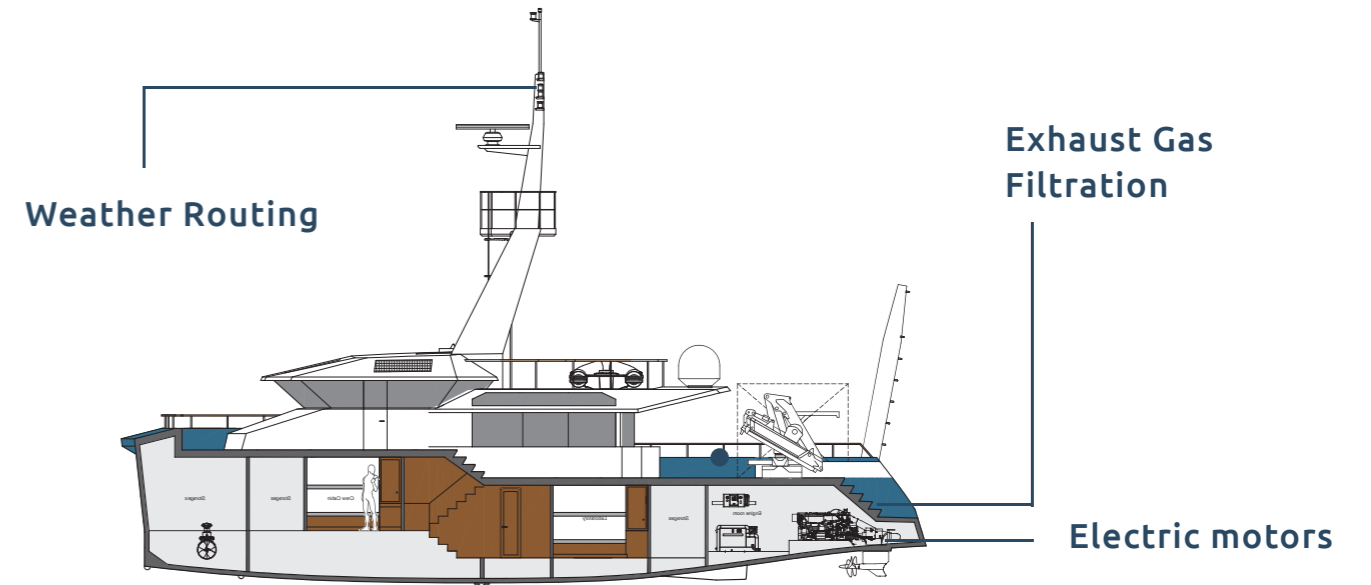
This world premiere will allow us to better highlight the issue of plastic pollution in the oceans while proving that all types of plastic debris can be a resource and thus create real value and jobs.



## A CLEAN VESSEL FOR A CLEAN OCEAN

The vessel is designed for efficient energy use: solar panels for electrical equipment, efficient hull design, optimal weather routing, and energy monitoring system.

This oceanographic catamaran is built and operated by Ship-As-A-Service®, a maritime services company. It will be chartered and refitted for the time of the expedition.



### On Board Plastic Odyssey:

4 professional sailors, 2 system engineers, 1 documentary Filmmaker and camera operator, 1 soundman and photographer, 1 event manager, + 3 to 5 guests (partners, media, scientists, artists...)

LOA (length): 23,9 m (78 ft 4 in)  
 Beam (width): 9 m (29 ft 5 in)  
 Displacement: 70 tons  
 Target Speed: 7-9 knots  
 Capacity: 8-14 people

\*See glossary in the appendices

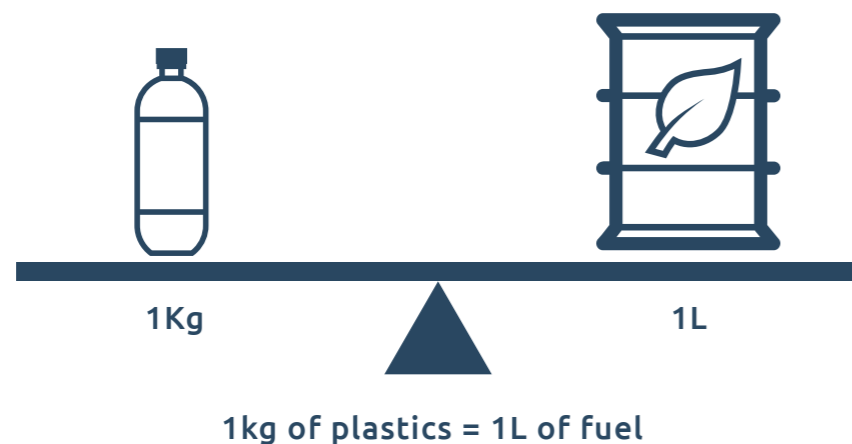
## FROM PLASTIC TO FUEL

### Around 91% of plastic debris is not recycled\*

While reducing and recycling are the preferred methods of plastics recovery, it's not always technically possible or economically feasible.

Today, the world recycles only a tiny portion (around 9%)\* of the plastic packaging it uses. The rest is burnt or ends up in landfills where

it may take up to 1,000 years to decompose, and potentially leak pollutants into the soil and water. This illustrates the opportunity for other economical means of recovering plastics.



### Plastic waste into fuel: a positive substitute for fossil fuel

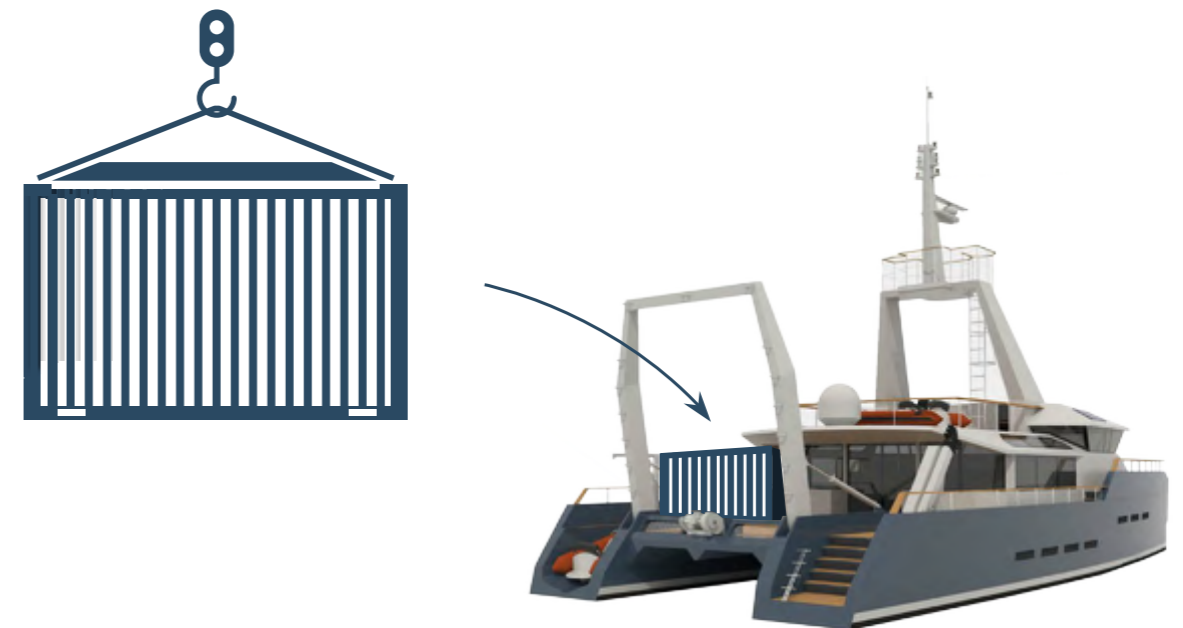
Plastic-to-fuel system transforms abundant non-recycled plastics into diesel and gasoline by means of heat. This process is self-sufficient in energy and produces one liter of fuel per kilogram of plastic treated.

The fuel produced could be a valuable source of energy for small fishing boats, motorcycles, or diesel generators used in rural areas.

\* Production, use, and fate of all plastics ever made. *Science Advances* 3:e1700782 (<http://advances.sciencemag.org/content/advances/3/7/e1700782.full.pdf>)

### Fight against climate change

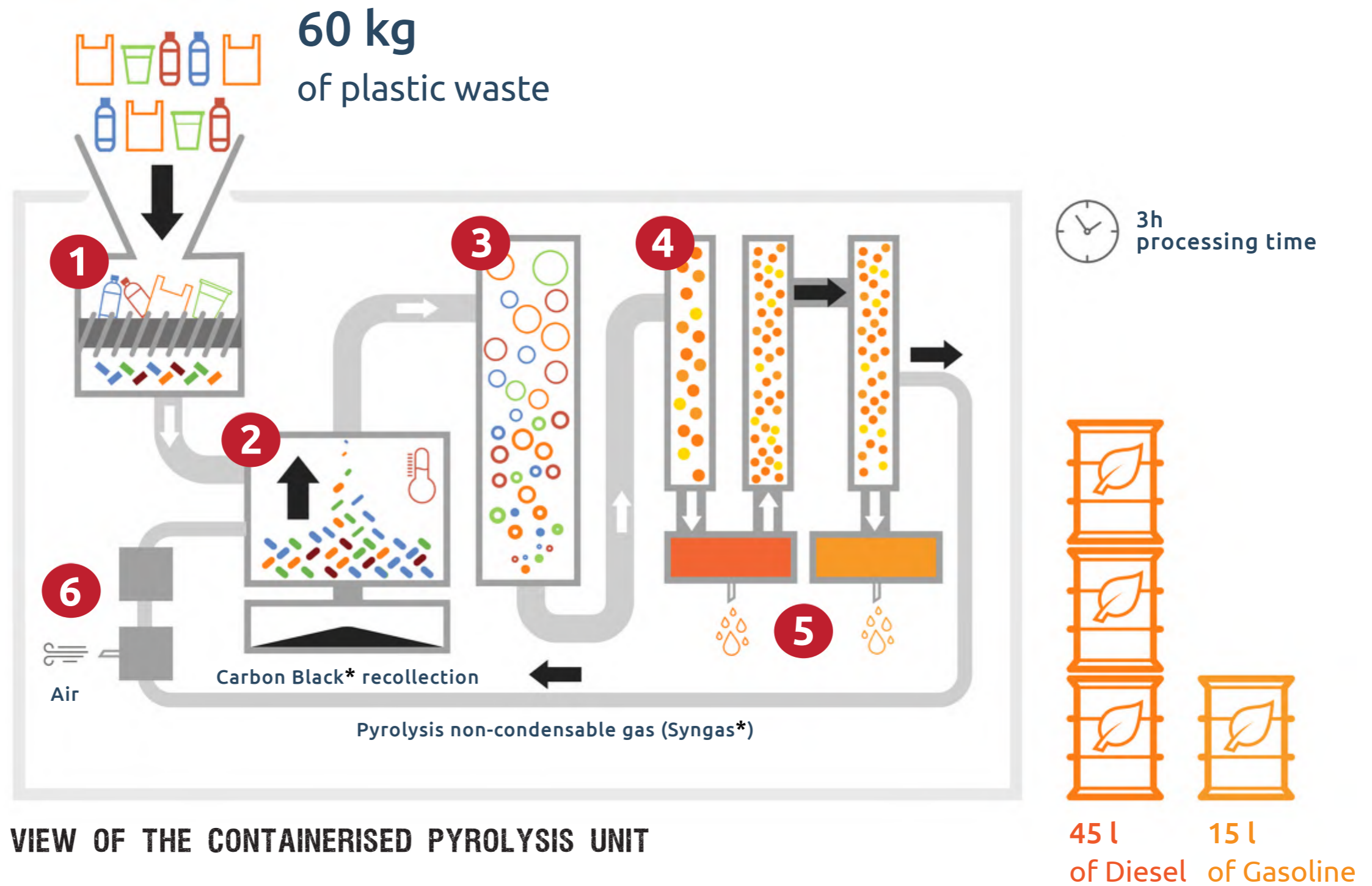
As a substitute for fossil fuel, it avoids further oil extraction and thus CO2 emission and other hazards related to it. Furthermore, because plastic is already a refined material, the fuel made out of it emits 20% less CO2 emission than fossil fuels. This technology provides a good transition that limits the damage until we reach a completely sustainable era.



The containerized pyrolysis unit that will be developed then used onboard. It will transform plastic waste harvested onshore into fuel to power the ship's engines.

### An open-hardware & crowdsourced technology

The plastic to fuel technology used onboard is developed thanks to a unique partnership with several world players from the pyrolysis industry. It results in a crowdsourced, low-technology system designed to fit in a standard 20-foot container. After having been tested and approved on the ship, blueprints of the system will be released. It will then be replicated before being deployed and handed over to local partners.



**1 Plastic shredding**

Plastic waste is poured into the shredder and broken down into flakes.

**2 Pyrolysis**

Flakes are heated at 430°C without oxygen and decompose to obtain fuel vapors, syngas, and carbon black.

**3 Catalysis**

Big molecules are broken into smaller ones to get more fuel.

**4 Fractional condensation**

Diesel and gasoline are separated then collected through two columns of condensation. From 320°C to 200°C for the diesel and from 200°C to 20°C for the gasoline.

**5 Liquid collection**

The gasoline and diesel obtained are collected in two separate tanks.

**6 Syngas recollection and use**

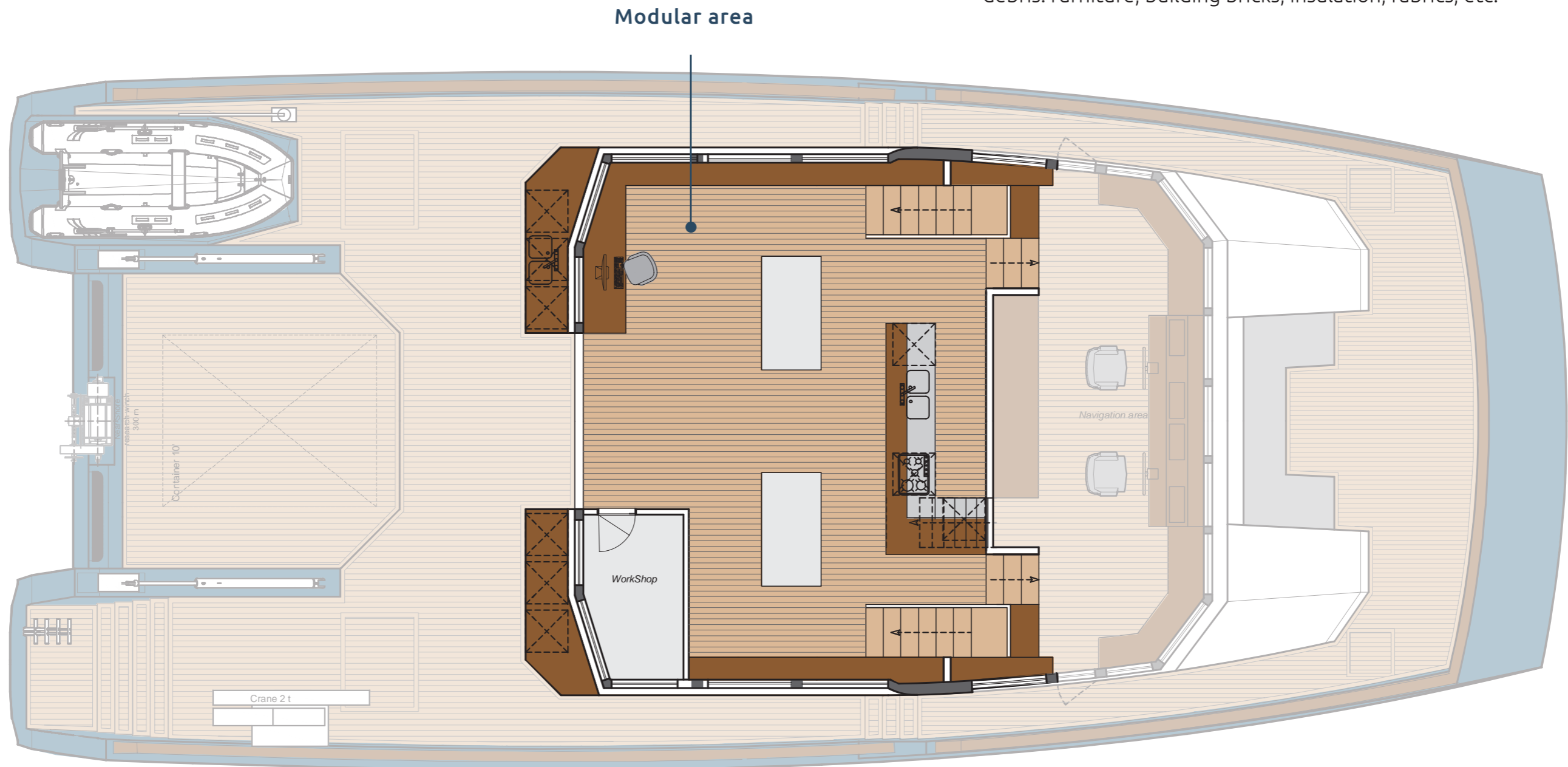
Non-Condensable Flammable gases (Syngas) that did not liquified are collected. They are mixed with air and combusted, providing heat to the pyrolysis reactor.

## A LAB DEDICATED TO RECYCLING PLASTICS

Behind the challenge of completing the first round-the-world journey fueled by plastic waste, the Plastic Odyssey will be an ambassador of plastic recycling.

### A floating workshop dedicated to recycling

The vessel is fitted with a workshop area dedicated to plastic recycling. The space is modular, serving as a living space for the crew at sea, but turning into a workshop during calls. Extruders, presses, weavers, and other micro recycling plants will be used to give a new life to plastic debris: furniture, building bricks, insulation, fabrics, etc.



### A catalog of recycling tools and machines

The objective is to come up with technologies that are efficient, easy to build, use, and repair. Once tested and improved onboard, they will be disseminated. On the one hand, open-source blueprints and tutorials will be provided. On the other hand, DIY kits or ready-to-use machines will be sold for the benefit of the association. The catalog will range from simple tools to more complex, containerized recycling systems such as the plastic-to-fuel unit.



Injection molding



Extrusion machine



Shredder



Compressor

Machines by Precious Plastic



Examples of products made out of plastic debris

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# EXPEDITION





## THE EXPLORERS

Pioneering for a plastic-free ocean



**SIMON BERNARD**  
Cofounder & Expedition Leader

A merchant navy officer and a discoverer, Simon has received multiple awards for environmental and marine conservation engagement (Ministry of environment, French Maritime Institute, Ocean and Climate Platform, Fondation de la mer, Hydros Foundation). Always optimistic and willing to make a positive difference, his vision, oratory skills, and strong willpower are the fuel of the expedition. His ambition is to turn Plastic Odyssey into more than just a boat - into a true media outlet for plastic recovery.



**ALEXANDRE DECHELOTTE**  
Cofounder & Head of Social Impact

A graduate of the Maritime Academy, Alexandre has spent 2 years sailing the oceans on merchant navy ships. As a young father, his determination to protect the planet for the next generation is limitless. Passionate about circular economy and social entrepreneurship, Alexandre has the seriousness and passion to lead the expedition to its success.

*"The ocean is both the cradle of life and the lung of the earth. However, it is terribly harmed and still largely considered as a convenient dumping ground. The good news is that solutions do exist, they just need to be widely spread."*

**Simon**



*"I believe that the most efficient way to solve global issues is by initiating socio-economic projects at local scale. With Plastic Odyssey, our dream is to stimulate job creation all over the world while fighting two major types of pollution of our time: poverty and plastics in the ocean."*

**Alexandre**



**BENJAMIN DE MOLLIENS**  
**Head of Partnerships**

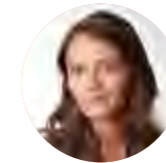
Benjamin is a seasoned digital sales and project manager who has lived and worked in many countries, including 2 years in the U.S. as country director for a fast-growing startup, Agorize. His vast experience of long-distance adventure travel coupled with his strong business skills and entrepreneurial mindset, provide a unique advantage for Plastic Odyssey. Benjamin is a graduate of ESSEC Business School.



**BOB VRIGNAUD**  
**Head of Engineering**

Bob is a mechanical engineer and a strong advocate of social inclusion. After spending 6 months in Peru where he built and managed a network of social entrepreneurs, he now uses his technical skills to coordinate the manufacturing of the most specific equipments needed for the expedition. His determination and versatility make him a natural choice for the position of technical manager of the project.

## Communication & Web Marketing



**ANNE PONTY**

Founder of Vide Déco and graduate from Kedge Business School, Anne is responsible for our marketing and communication efforts.

## UX & Graphic Design



**JULIE MILHAU**

The youngest of the crew, Julie is a fresh graduate from ESTEI, a bachelor of graphic design. Endowed with talent, she designs all visual supports.



**MICKA TOUILLAUD**

Micka is a seasoned UX Designer & entrepreneur with 3 years of experience in startups and non-profits in San Francisco.

## Engineering and Project Expansion



**MATHIEU RUILLET**

Mathieu has spent the last 12 years working for a non-profit NGO (GERES) with a focus on sustainable energy in emerging countries. His career has taken him to many countries, including Afghanistan, Morocco, Cambodia, and Myanmar.

And dozens of volunteers: Denise Hyatt Clover (Proofreader), Gregg Mierow (Proofreader), Jean Malbezin (Graphic Design), Mathieu Gay (Proofreader), Louise Plaquevent (Digital Marketing), Jean de Salins (Google SEO), Chloé Boiteux (Filmmaker and Camerawoman), and many more.

## MISSION

Waste Management has created local economies for decades: in many countries, pickers, wholesalers, and craftsmen make a living thanks to these activities, which are often informal. However, a great quantity of plastic trash is unused due to the lack of known opportunities in the recycling business and with plastics.

Plastic Odyssey is a non-profit organization that aims to highlight these opportunities in order to boost social entrepreneurship and create jobs all over the world.

To achieve that, Plastic Odyssey will:



### DISCOVER

the local population's know-how, needs, and resources to better understand the impact of plastic pollution, and thus to better encourage potential solutions.



### DEVELOP AND EXPERIMENT

technologies onboard and onshore in different environments and conditions in order to optimise them for a simple and efficient use.



### DEMONSTRATE

the value of plastic waste by directly using this resource both to power the engines of the vessel and to manufacture valuable objects during workshops that will take place at each port of call.

All these actions will be documented and shared to serve as a powerful medium of communication in order to increase awareness and to inspire the public, including students, entrepreneurs, and political leaders of our planet.

### Plastic Odyssey's impact is threefold:



#### ENVIRONMENTAL

Encouraging the dissemination of effective alternatives to pollution abatement, thus preserving marine wildlife.



#### HEALTH

Avoiding debris accumulation in standing water that increase the threat of diseases. In the long run, reducing micro-particles in the ocean that cause food contaminations.

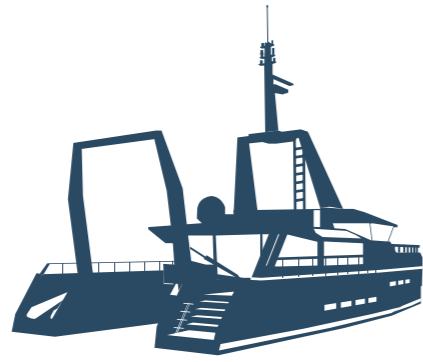


#### SOCIAL

Valuing and creating jobs to revitalize coastal economies and encouraging people to protect their quality of life.



# TIMELINE



## 1. PREPARATION

- November 2017** Start of the demo boat construction
- December 2017** Manufacturing of the small pyrolysis unit
- February 2018** See trials and presentation
- March 2018** Inauguration of the fab lab
- May 2018** Crowdfunding and crowdsourcing campaigns
- September 2018** Vessel construction starts
- November 2018** Plastic-to-fuel containerized unit construction starts

**January 2019**

Tests and assembling

**September 2019**

See trials in the Mediterranean Sea

## 2. EXPEDITION

**November 2019**

Start of the expedition

**2020**

Latin America

**2021**

Asia-Pacific

**2022**

Africa

## 3. EXPANSION

**March 2023**

Online publishing of a catalog of recycling solutions

**2024**

Mass production and scaling-up

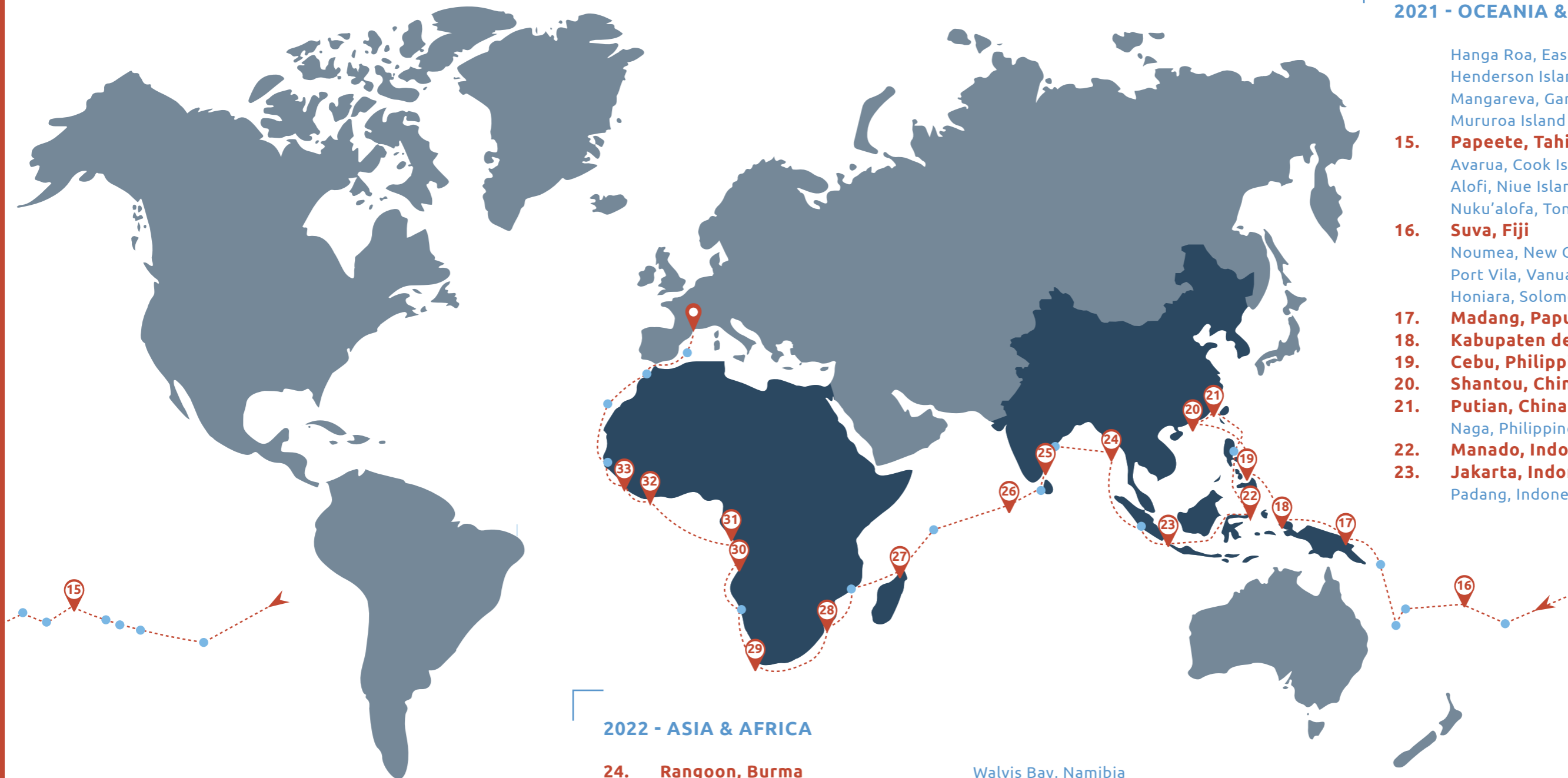
# THE JOURNEY

## 2020 - AFRICA & LATIN AMERICA

1. **Marseille, France**
2. **Casablanca, Morocco**  
Santa Cruz De Tenerife, Canarias, Spain
3. **Praia, Capo Verde**
4. **Dakar, Senegal**
5. **Bissau, Guinea-Bissau**  
Conakry, Guinea
6. **Freetown, Sierra Leone**
7. **Natal, Brazil**  
Fortaleza, Brazil
8. **Belem, Brazil**  
Cayenne, French Guiana  
Paramaribo, Suriname  
Georgetown, Guyana
9. **Scarborough, Trinidad and Tobago**  
Pointe-a-pitre, Guadeloupe  
Ponce, Puerto Rico
10. **Port-Au-Prince, Haiti**  
Santiago de Cuba, Cuba
11. **Kingston, Jamaica**  
Limon, Costa Rica
12. **Barranquilla, Colombia**  
Panama Canal, Panama  
Galapagos Islands
13. **Guayaquil, Ecuador**
14. **Lima, Peru**



📍 2 to 3 weeks call: organization of social events, workshops, and conferences  
● 5 to 7 days stop: collect of plastic to refuel the vessel and shootings



2021 - OCEANIA & ASIA

- Hanga Roa, Easter Island
- Henderson Island, Pitcairn
- Mangareva, Gambier Islands
- Mururoa Island
- 15. Papeete, Tahiti**
- Avarua, Cook Islands
- Alofi, Niue Island
- Nuku'alofa, Tonga
- 16. Suva, Fiji**
- Noumea, New Caledonia
- Port Vila, Vanuatu
- Honiara, Solomon Island
- 17. Madang, Papua New Guinea**
- 18. Kabupaten de Sorong, Indonesia**
- 19. Cebu, Philippines**
- 20. Shantou, China**
- 21. Putian, China**
- Naga, Philippines
- 22. Manado, Indonesia**
- 23. Jakarta, Indonesia**
- Padang, Indonesia

2022 - ASIA & AFRICA

- 24. Rangoon, Burma**
- Visakhapatnam, India
- 25. Chennai, India**
- Colombo, Sri-Lanka
- 26. Thilafushi, Maldives**
- Victoria, Seychelles Islands
- 27. Mahajanga, Madagascar**
- 28. Maputo, Mozambique**
- 29. Cape Town, South Africa**
- Walvis Bay, Namibia
- 30. Luanda, Angola**
- 31. Conakry, Guinea**
- 32. Ziguinchor, Sénégal**
- 33. Nouakchott, Mauritania**
- Maspalomas, Gran Canaria
- Rabat, Morocco
- Palma, Mallorca
- Marseille, France

## ONSHORE ACTIVITIES

Behind the world premiere around the world, every call is a unique opportunity to have unprecedented impacts on coastal areas, even the most remote ones. Each call will last for two to three weeks to provide the time to:

- Collect plastic debris along the coastline
- Transform debris into valuable objects
- Spread this knowledge among the local people



### 1. Collect

Cleanup sessions will be organized on the coasts and in nearby towns before and during the stay of the vessel. To make that happen, partnerships will be built with local institutions: NGOs, universities, and schools will be involved in order to increase the range of Plastic Odyssey's action to every level of society.

As many people as possible will be mobilized. The objective is to make this action part of the local economy. Events will be organized before the arrival of the boat.

Collected debris will then be sorted out separate the recyclable from the nonrecyclable material.

### 2. Transform

Some collected plastics will be transformed during workshops held with local entrepreneurs and craftsmen. Each country has its own culture, resources, and challenges. It will therefore be necessary to adapt to everyone's needs. These events will allow us to co-develop easily reproducible systems, as well as promote local knowledge.

### REUSE

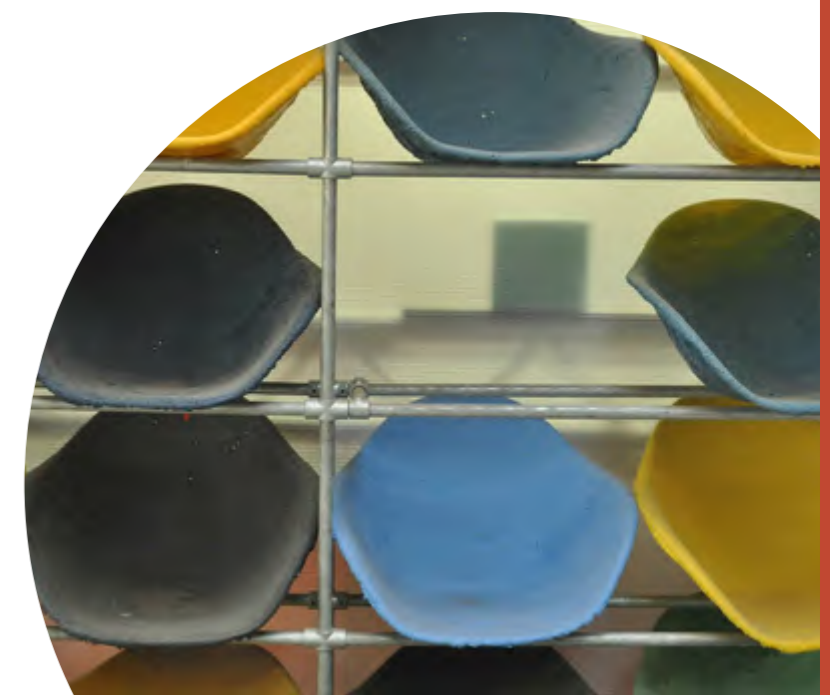
The most efficient way to avoid waste is the reutilization of plastics, a step up from recycling. A chair made out of tires or fabric made of woven plastic bags are two examples of reusing materials.

### RECYCLE

When plastic cannot be reused, it can be recycled. Various simple processes such as shredding, melting, extruding or injecting make it possible to obtain new materials (insulating material building bricks, tiles or even furniture).

### RECOVER

The remaining non-recyclable waste will be stored onboard and converted to energy to run the boat.



### 3. Spread

In order to have the greatest impact and reach as many people as possible, Plastic Odyssey has chosen two modes of action :

#### Awareness & Display

Not only workshops but also conferences, exhibitions, and film screenings will be organized with local partners (schools and universities, NGOs, municipalities, etc.) at all long stopovers. These events will demonstrate the value of plastic debris and promote social entrepreneurship in the circular economy of plastics.

The expedition will be filmed, broadcast, and followed all around the world, thanks to a panel of media partners.



### Sharing & Implementing

On the fly, a feed will catalog the reusing, recycling, and recovering solutions, ranging from the simplest tool up to the more complex containerized unit. The systems will be deployed wherever needs are identified or expressed.

Two ways are possible for this deployment :

- We will sell machines as kits or assembled and ready for use. The sale will benefit the association. Plastic Odyssey will also provide training to help operate the machines.
- Open-source blueprints and tutorials will be made available for the machines to be rebuilt, repaired, or improved.





## CASE STUDY

Turning trash to cash with Lorna Rutto :  
A scenario that could be replicated with the help of Plastic Odyssey.

### Problems

Nairobi, the capital of Kenya, generates 560 tons of waste every day, a big part of which finds its way into nature.

At the same time, Kenya, which has barely 2% of forest cover, has a high demand for fencing around the country's houses, plantations, and huge game reserves. For years this fencing was made from red cedar trees, which are now an endangered species; a presidential directive has made it illegal to chop them down since 2007.

### Opportunity

Every month, EcoPost uses approximately 20 tons of plastic waste to manufacture durable fence posts using plastic waste, an environmentally friendly alternative to timber. Utilizing dirty plastic to make a product that saves wood is not just an environmental plus, it also boosts employment.

### Results

So far, EcoPost has removed 3,000 tons of plastic waste from the natural environment while creating 40 direct jobs and 5,000 indirect ones.



Lorna Rutto, Founder of EcoPost, Kenya

## MEDIA COVERAGE



To communicate its actions, expose issues, and introduce emerging solutions, Plastic Odyssey will produce innovative and high-quality media content through the use of films, photography, articles, and posts on social media.

The content will be broadcast on the internet, as well as on major national and international media outlets. Film screenings, exhibitions, and conferences will complete this media campaign.

That's why almost a third of the Plastic Odyssey operating budget will go to communication and the production of images.

### Documentary Film

A team of videographers (1 filmmaker & camera operator and 1 soundman) will film the Plastic Odyssey expedition for a documentary movie. It will recount this extraordinary voyage to fight plastic pollution in the oceans and alleviate poverty at the same time.

The film will investigate and illustrate the solutions that emerge around the world in order to reuse, recycle, or recover plastics. Beautiful shots of the marine environment will be contrasted with footage of heavily polluted cities and dumps full of plastic rubbish. Dozens of interviews with people from around the world who are both agents of change and victim of plastic pollution will be included.

*Length: 90 min.*  
*Broadcast: video-on-demand platforms (ex: Netflix), movie theaters, Plastic Odyssey digital platforms, social media networks, partner sites on- and offline.*

*Length: 26 min.*

*Broadcast: national or cable channels.*

*Frequency: 5 movies a year*

### Documentary TV Series

Exclusive public documentaries for French and international TV channels will be developed. These programs will be produced in collaboration with renowned companies such as ARTE or National Geographic.

Throughout the series, the Plastic Odyssey team will be followed during its encounters with the men and women around the world who fight plastic pollution using low-technologies. The series will depict various strategies that can be implemented to reduce the impact of plastic debris.

### Live Follow-Up

An encounter with cetaceans, a traditional ceremony, a collection of waste on an uninhabited island, or the repair of broken equipment: live sequences will share the crew's daily life, plus their more unusual experiences.

*Frequency: around 2 per week*



### Virtual Reality Experiences

360° cameras will be embarked to offer VR experiences to the public, sharing closely the daily life of the crew on land and at sea. Experience the life of a crew member onboard, swim with dolphins in the deep blue sea, or discover the extent of plastic pollution in the world.

### News

Short pieces for newspapers, television, and radio will be produced reporting major accomplishments and memorable moments of the expedition. This fresh content will be posted on social media and the website regularly and made easily downloadable by media players.

*Length: 3-5 min.*

*Broadcast:  
Press agencies,  
TV/Radio  
appearances*

### Press Relations & Communications

The crew, people encountered, local entrepreneurs, as well as scientists and experts will be regularly interviewed to provide further insight into some of the problems derived from plastic pollution and the solutions that could be developed. An in-house team responsible for communication will coordinate this effort with the local press during ports of call and with the international press before, throughout, and after the journey.

This approach will help scale the impact and expand the reach of Plastic Odyssey's communication campaign.

### Record

Conferences and workshops will be held at Plastic Odyssey partners' premises, in universities, and at major events around the world during and after the expedition. These events will help to disseminate the information and knowledge gathered this epic journey.



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# SUPPORT

PLASTIC ODYSSEY  
EXPEDITION

## EXPERT PANEL OF ADVISORS



### Marc VAN PETEGHEM

Founder of VPLP, an architectural firm specialises in multihulls design. He is one of the international points of reference in the field of naval architecture. He also co-founded Watever, a non-profit that supports underprivileged populations living on coastal areas.



### Roland JOURDAIN

Famous French skippers, he is a two-time winner of the Route du Rhum. He is a dedicated and plain-speaking defender of our planet. A seasoned entrepreneur, he has founded Explore, an endowment fund that offers support and visibility to new explorers inventing solutions to change our world for the better.



### Pasquine ALBERTINI

A graduate in Political Science and Philosophy of Law, Pasquine Albertini used to be Press and Communication Consultant in the Cabinet and then at the Hôtel de Ville in Paris. Since 2012, Pasquine Albertini is Head of Communications and Public Relations at Armateurs de France.



### Daniel FROËLICH

Professor at ENSAM, Daniel Froëlich has 25 years of experience in the field of sorting and recycling polymers. He is responsible for academic and entrepreneurial collaboration with Africa and head of the ParisTech "Urban Mines" Chair on the recycling of WEEE.



### Jean-Pierre NICOLAS

Anthropologist and Doctor of Science, Jean-Pierre Nicolas has more than 25 years of experience in the field of international solidarity in Guatemala, Honduras, Burkina Faso and Tibet. He is a consultant to various national and international organizations.



### Vincent FORGET

Materials Science Engineer. Vincent Forget is an expert in the development of recycled & recyclable plastics materials. He is also a specialist in environmental impact assessment and in indexing CO2 data on recycled activities and products. Vincent Forget is a graduate from INSA Lyon and holds a masters degree in Materials Engineering.



## INSTITUTIONAL PARTNERS



### **Fondation de la Mer** - Paris, France

Non-profit foundation, endowment fund, and think tank dedicated to marine preservation.

[www.fondationdelamer.org](http://www.fondationdelamer.org)



### **Darwin Ecosysteme** - Bordeaux, France

Incubator for sustainable development through fun eco-friendliness to impact sustainable behavior.

[www.darwin.camp](http://www.darwin.camp)

## STATION F

### **Station F** - Paris, France

Biggest startup campus in the world, backed by Xavier Niel (telecoms tycoon).

[www.stationf.co](http://www.stationf.co)



### **Ponts Alliance** - Paris, France

Alumni Association of the ENPC (AAENPC). It gathers a community of over 17,000 MBA graduates, engineering graduates, Master's degree graduates, PhD graduates, and members of the Pont Corpus (« Corps des Ponts »).

[www.ponts.org](http://www.ponts.org)



### **Atlanpole** - Nantes, France

Science based business incubator for the whole region Pays de la Loire. It fosters the emergence, creation and development of innovative start-up companies.

[www.atlanpole.com](http://www.atlanpole.com)



### **Explore** - Concarneau, France

Endowment fund created by Roland Jourdain (famous french skipper) that offers support and visibility to new explorers who try to understand our world and invent solutions to change it.

[www.explore-jourdain.com](http://www.explore-jourdain.com)



### **Digital Campus** - Bordeaux, France

School specializes in multimedia, web marketing, and web development.

[www.digital-campus.fr](http://www.digital-campus.fr)

## TECHNICAL PARTNERS



**IMOS** - La Rochelle, France

(Industrial Modular Oceanographic Ship) A consortium of nautical companies that develop a new kind of multi-mission oceanographic ship adapted to scientific activities and ocean monitoring. They will oversee the construction of the ship, IMOS 2400.

[www.imos-lr.com](http://www.imos-lr.com)



**Ship As A Service** - Lorient, France

One-stop maritime services company that offers a wide range of intellectual, technical, and operational services to support seaborne projects, especially in the oceanography & marine energy fields. They will oversee the operation of the ship, IMOS 2400, and provide maritime services throughout the project and the journey.

[www.serenmar.com](http://www.serenmar.com)



**Balance Energy** - San Isidro, Costa Rica

Cleantech developer of waste plastic to fuel technologies. Current system in use is capable of treating 600 Kg of plastic wastes per day. They will take part in the development and the rollout of the Plastic-to-Fuel Unit.

[www.b-energy.cc](http://www.b-energy.cc)



**PK Clean** - Salt Lake City, USA

Cleantech developer of waste plastic to fuel technologies. Their main facility is able to treat up to 10 tons of plastics a day. They will take part in the development and the rollout of the Plastic-to-Fuel Unit

[www.pkclean.com](http://www.pkclean.com)



**SDS - Sustainable Design School** - Nice, France

International institute of higher education in design and sustainable innovation. They come up with ideas of products to be made out of plastic waste and imagine the best scenarios on how to involve local communities during ports of call.

[www.the-sds.com](http://www.the-sds.com)



**Precious Plastic** - Amsterdam, Netherlands

Community organization that develops DIY machines that enable everyone to build a little plastic workshop. They manufacture and design the precious plastic machines that will be onboard.

[www.preciousplastic.com](http://www.preciousplastic.com)



**Low Tech Lab** - Concarneau, France

Collaborative research and documentation project that aimed at disseminating and promoting low-tech technologies. They provide access to their global network of Low Tech projects.

[www.lowtechlab.org/en](http://www.lowtechlab.org/en)



**Collectif VOUS** - Nantes, France

Collective of architects who focus on design-build and action-research projects in the city. They help design the communication toolkit.

[www.collectifvous.fr](http://www.collectifvous.fr)

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# APPENDICES





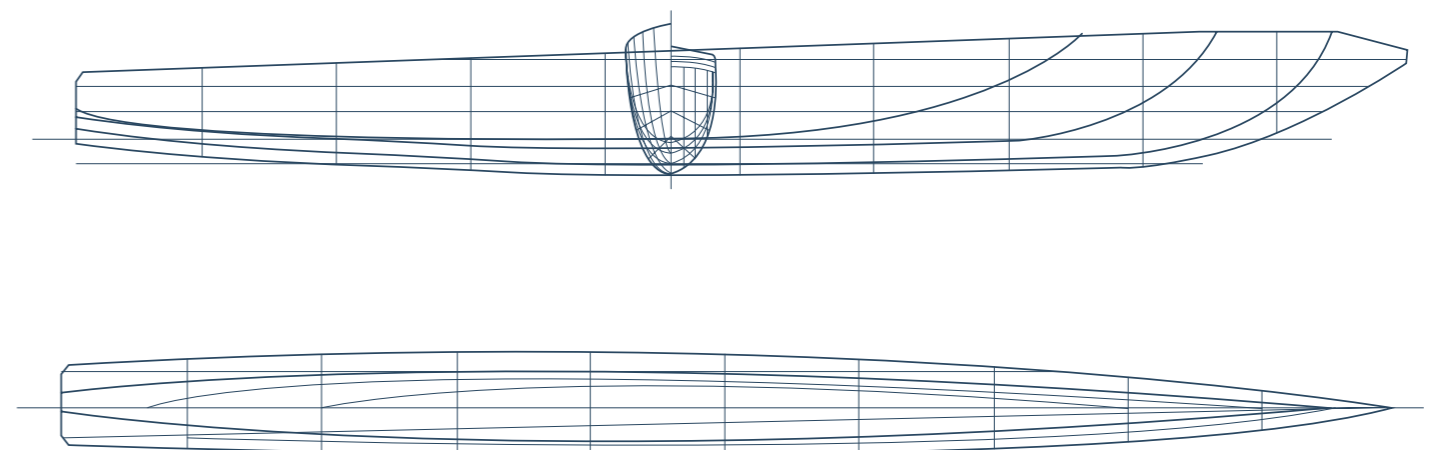
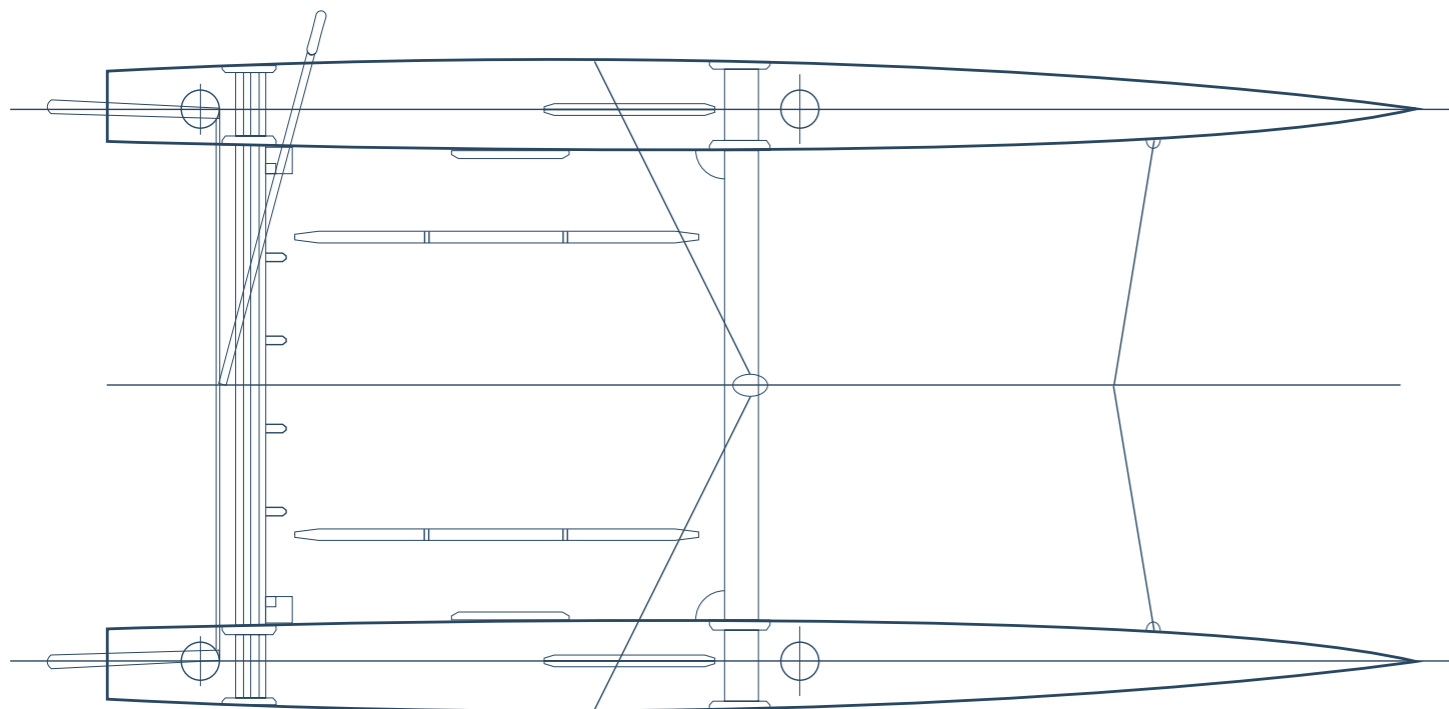
## DEMONSTRATION

### Experimentation and test

A scale model (1:4 scale) of the vessel will be built and used to tune the Plastic-to-Fuel technology in real conditions.

The hull is that of a Tornado, a double-handed multihull class. It will be the first prototype of the P2F system, sized to fit the deck of the Tornado, with a capacity to treat 5 Kg of plastic per hour.

It will be developed by Balanced Energy, a company specialized in waste recovery and based in Costa Rica.



LOA (length): 6,09 m (20 ft)  
 Beam (width): 3,08 m (10 ft 1 in)  
 Displacement: 342 lbs (155 Kg)  
 Target Speed: 4-5 knots  
 Capacity: 2 people

### Gain exposure and trust

In addition to being a real test run for the P2F system, this scale model will help Plastic Odyssey's team to gain visibility and credibility ahead of the expedition. The boat will appear in a short instruction video in order to demonstrate technical feasibility.

Built in Mer Agitée, the shipyard of Michel Desjoyeaux located in Port-la-Forêt, the vessel will test-sail along the coast of Brittany. At each port of call, it will serve as an educational tool.

## GLOSSARY

### Carbon black

One of the amorphous and elementary forms of carbon, carbon black is found in soot. It is often used in the rubber industry and as a pigment in inks and paints.

### Engines

The vessel is propelled by 2 electric motors that can produce up to 100 kw each.

### Exhaust gas filtration

Particulate and catalytic filters make it possible to purify the exhaust gases.

### Generators

The vessel has four electrical generators of 75 hp each. At cruising speed, two of them work, the other two serve as backup generators in the event of a downtime or bad weather.

### Meteorological routing

High-performance weather-routing software minimizes vessel consumption by taking advantage of wind and favorable currents.

### Plastic-to-Fuel unit

Plastic flakes are converted into fuel thanks to an innovative technology developed by the Plastic Odyssey team and its partners. Fuel supplies the generators.

### Plastic waste crushing and storage

Non-recyclable plastics (fine packagings, plastic bags, etc.) are shredded using grinders before being stored in the ship. A space of 30cubic meters is dedicated to the storage of this future fuel, to enjoy the autonomy needed for ocean crossings.

### Recycling workshop area

The front space is modular. It serves as a living space for the crew while at sea and turns into a recycling workshop during stopovers. Extruders, presses, weavers, and other micro recycling plants will be installed to give a new life to plastic debris.

### Solar panels

Provide energy for electronic equipment onboard and shredders used at each port of call to crush the plastic collected.

### Syngas

Syngas is combustible produced by pyrolysis and often used as a fuel of internal combustion engines. This combustion makes the process self-sufficient in energy.

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# CONTACT



## CONTACT

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