



INTRODUCTION.

Tanaruz Boats is a young scale up:

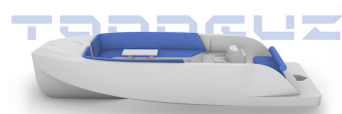
- Combines 3D printing production methods with advanced engineering.
- Produces from post consumer polypropylene waste.
- Ensures fast production times and price competitiveness.

Current stage:

- R&D and establishing the production.

Shareholder and director:

- Hans Franke, 100% owner.
- 20 years of business development experience.



Purpose

Scale-up the company to meet market requests with Tanaruz Boats and services

- New large scale 3D printers and recycling equipment.
- Add CNC machines servicing higher market segments.
- Increase our R&D capacity with increasing our R&D capacity, we would also expand our engineering team.

FOOTPRINT

Tanaruz Boats is making a significant impact on the market with its innovative designs and sustainable technology. Our electric powered boats offer a greener alternative, reducing emissions and minimizing our carbon footprint.



Social impact

- Create revolutionary methods and new knowledge of engineering, design & production.
- Ease the process of boat customization.



Economic

- Employ fulltime employees and interns.
- A new industry leader as an example.
- Creating competitive knowledge on world markets.



Environmental

- Fully electric (0% CO2).
- Made from recycled polypropylene.
- Can be recycled and reprinted.
- Incorporation of smart and environmentally-friendly features



Key achievements

- Creation of 2 models that were modified for the manufacturing process to launch a library of designs.
- Implementation one of Europe's largest fully integrated 3D production printer.
- Development of Tanaruz App to allows for boat customisation, tracking of clients and client assistance.
- Printing 6.5m length boat in a week.

PRODUCT

CUSTOMISABLE

Tanaruz aims to manufacture boats in a variety of shapes, lengths and outfitting

AFFORDABLE

Owing to reduced labor expenses and automation

SCALABLE

Manufacturing can be scaled up in different locations

ENVIRONMENTALLY SUSTAINABLE

Low emission in production and usage

SAFE

Boat are designed for class C/D. FEM calculations were performed and demonstrated the materials safety and strength for Tanaruz Boats.

R&D

See next page



Technology

Applied innovative technologies:

- Built our production line from scratch, including one of the biggest 3D robot printers in Europe, allowing us to produce any hull up to 10m in length.
- Have developed a novel method to combine 3D printing with boat design to address the major issues with uninterrupted closed layers, material strength, warping and printing fractures.
- The engineering teams main focus was on determining the precise printing parameters, such as printing temperatures, layering speed, material pump pressures and printer accelerations

The aim of our team is to create and develop a new technology that will enable the printing of boats and other maritime objects.



Application

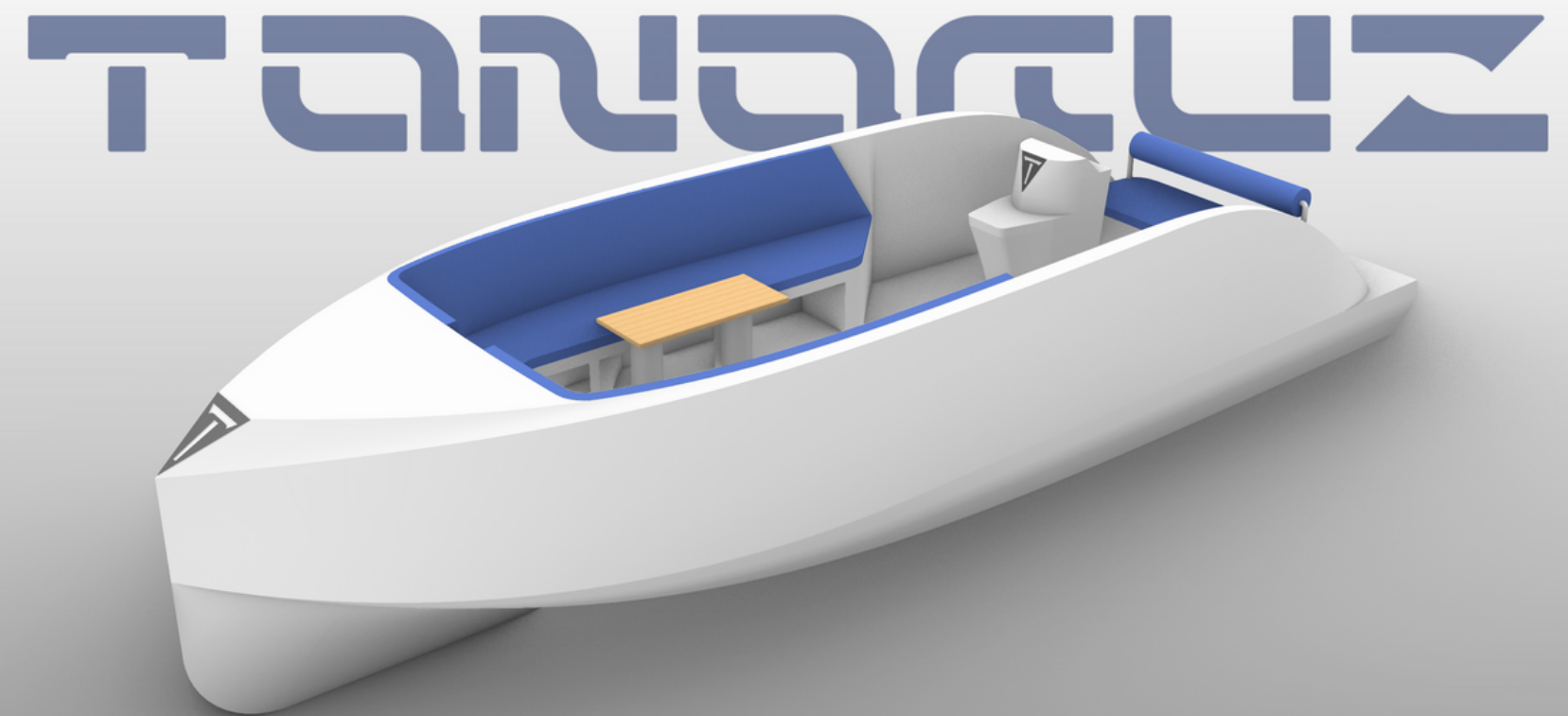
Description of IP and IP protection

To ensure the safety of operations, Tanaruz Boats has invested in the following IP protection:

- Brand name is registered as EU trade mark.
- Working on IP for (structural) boat designs.
- 3D printing calibration parameters are kept as company secrets.

To further ensure commercial growth and to protect our distribution channels, we have invested in the development of our Tanaruz Application:

- Available online for IOS/Android users.
- Allows users to quickly order and customise available Tanaruz Boats.



Timeline and development

We made FEM calculations based on actual use and performed independent material testing

Our goal is to print enough successful hulls to establish a track record and predictability in the outcomes

We engineered innovative boat structures with unique features adopted to 3D printing

We used recyclable materials for the boat production

We built one of the largest 3D printing production lines and calibrated it for sufficient printing

We introduced new boat designs

We evaluated all required equipment on board and performed critical water trials



DEVELOPMENT PLANS

Technical

- EU safety certification.
- Increase number of designs available for customization.
- Start production of different types of Tanaruz boats.
- IP protection and patenting technology.
- Introduce milling machines.
- Reach average target lengths of 8 – 10m.
- R&D and production optimization.
- New designs for customization.
- Reduce production time of the smallest boats.
- Further enlargement of production manufacturing.

Market

- Sell a minimum of 60 boats.
- Full scale brand introduction to the Dutch market.
- Growth of brand recognition through PR campaigns.
- Brand introduction EU markets
- Increase sales to 100 boats minimum.
- Brand recognition and development international.
- Reach brand recognition.
- Establish production outside the EU.

Production

- Expand our production and R&D team.
- New production facility/facilities.
- Material recycling facilities.
- IP protection.
- A minimum production of 150 boats a year.
- Expand design teams.

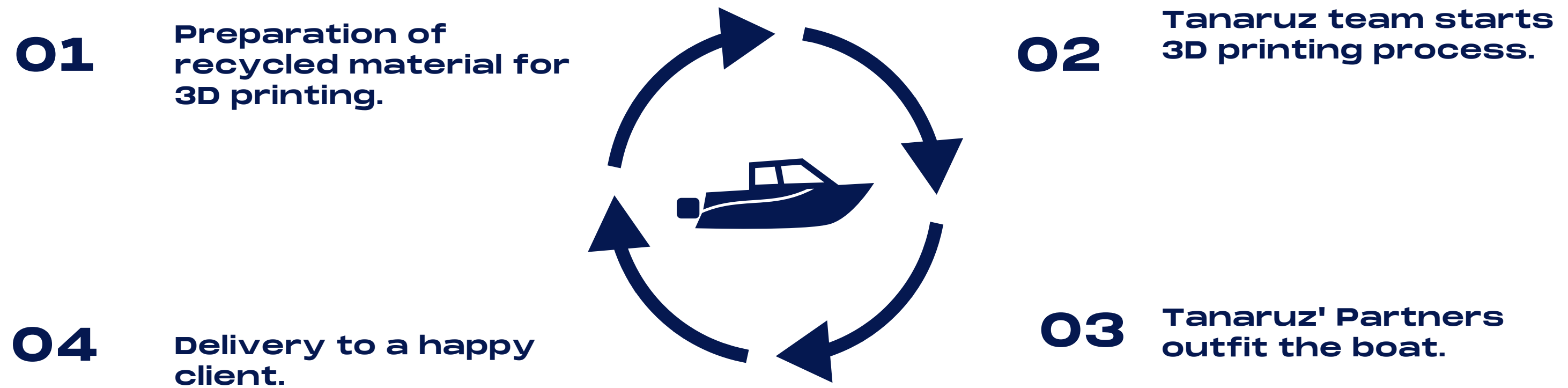
2024

2025

2026



Production process



One of the R&D goals is to be able to shred Tanaruz Boats to the original polypropylene and then use this raw material to print a new boat.



Business plan and revenue model

Utilizing 3D manufacturing technology reduces the amount of manual labor required. Since Tanaruz manufacturing costs are much lower than those of traditional methods, consumers will pay less for the product.

Raw materials, electricity, labor, spare parts, third-party materials and equipment maintenance costs are all included in the selling price of the product.

	2024	2025	2026
Sales targets (boats)	60	100	150
Revenue	430.000	4.000.000	8.600.000
New markets	EU	Asia, Australia	US, Africa



Commercialisation strategy

- **Tanaruz Boats has the ambition to generate orders EU-wide, to be followed up with the American and global markets.**
- **To insure such growth, Tanaruz is implementing scaled-up marketing, sales and PR strategies.**
- **Marketing strategy is based on brand awareness and recognition.**
- **To insure it Tanaruz enjoys regular press publications.**
- **Tanaruz Boats is a member of "HISWA Recron".**
- **Tanaruz Boats organizing PR campaigns and participating in trade shows.**
- **Tanaruz Boats has a dedicated sales and marketing team.**
- **In order to communicate with our customers directly, we created the Tanaruz application. This complex tool enables our customers to select their boat and place an order for it right away.**



Our team

Team incentives

To keep the spirit of the company, Tanaruz applies horizontal relationships. Team managers and junior team members are working together in one office space. There are no fixed working hours. Communication within the team permits to improve working relationships and motivation in stressful times.

Team growth perspective

The coming years the company will acquire:

- New 3D printers.
- CNC machining.
- Recycling machines to develop our own facilities of polypropylene production.
- Expand the engineering team.
- Hire operational staff.



Hans Franke
Owner



Seth James Haringa
Marketing Director



Joyce Pont
Commercial director



Zander Tocher
Production and design engineer



**Thomas Docters van
Leeuwen**
Print specialist



Nick Ijsseldijk
Investor relations



Market overview

New products development and adaption

Tanaruz Boats, with its established name recognition and base of loyal customers, can easily conduct market research and develop the new product at its facilities while putting it on the market.

With two engineers working fulltime, we anticipate finishing the development of a completely new boat type in 4 to 6 months. To maintain our competitive advantage as a company we are constantly working on improving design and production methods, investing time in research of new materials (including biodegradable products).

Press coverage

Tanaruz Boats made the technological contribution that laid a solid foundation for future national and international prosperity.

In addition to 3D printing magazines, we have also received excellent publicity in the maritime and lifestyle press on a national and international level.

RTL, AD, Omroep Rijnmond, Hart van Nederland, 3D Printing Magazine and many others have all written about our progress.



Market possibilities and threats

Potential for market growth

The use of 3D printing technology is spreading.

More consumers are utilizing 3D-printed items in daily life and are confident in their quality.

Our choice of material is more advantageous now that polyester prices have lately soared by 60%. Contrarily, polypropylene prices have remained steady in recent years. Additional cost advantages have been produced for us by this advancement.

Due to Covid-19, people spend less money on traveling and more on domestic leisure and recreation.

Potential threats

Tanaruz Boats 'greatest challenge is competing on the global market, so we must grow swiftly.

Instability in the market brought on by political or safety concerns has a considerable impact on the costs of the merchants Tanaruz Boats presently relies on.

• "The 3D printing market was valued at USD 13.7 billion in 2020 and it is expected to reach a value of USD 63.46 billion by 2026. At a CAGR of 29.48% over the forecast period (2021 – 2026)."

(Source: <https://www.mordorintelligence.com/>)



Competition and peers

We compete with other boat manufacturers.

Affordably priced, 3D-printed, customisable boats are something that no other company can provide.

Our unique selling propositions are part of our negotiating position with clients and suppliers.

- All Tanaruz boats are made-to-order using recycled polymers, which eliminates production material waste and lowers pollution.
- Tanaruz Boats also use solar panels and electrical motors for propulsion.
- Tanaruz Boats possesses both engineering and printing capabilities.

Features:

- PET recycled cushions.
- Seawood table top
- Design for disassembly

Name	Strong points	Weak points
Royal 3D	11 years on the engineering market.	Only has production facilities
10XL	Established 3D printing production company	No design capabilities
Impacd Boats	Young design company of making 3D-printed boats traditional designs.	No production facilities, total dependence on suppliers.



Market possibilities and threats

Greenhouse gas reduction

- Tanaruz Boats are manufactured using environmentally friendly technology that emit very little carbon gas.
- The raw material for 3D printing is obtained from plastic recycling facilities.
- Tanaruz Boats is looking into the idea of recycling all printed material up to five times. By doing this, environmental contamination will be reduced and prevented

R & D

Our design and production team is constantly improving the boat. Our main reasearch production rearch is into:

- Printability
- Less material usage/printing time
- Warping of surfaces
- New types of structures
- Heat distribution during printing
- Recycling

Employment

To perform at the highest level possible, our team is always growing. In 2 years our company from 2 to 6 employees, including dedicated subcontractors.

Each new printer requires on average 2 FTE in production support. We are open to all talents from all around the world without prejudice to their nationality, gender and orientation.

Other impact

- We are developing cutting-edge techniques that enable the development of clean technology.
- In order to work with interns, we collaborate with engineering colleges.
- Through publications and conferences, we intend to share the knowledge we have gained.



Risk analysis

Strengths

- **Competitive pricing.**
- **Entrepreneurs have a vast network in the sector and are very engaged and eager.**
- **Partnerships.**
- **Unique product with unlimited expansion potential.**
- **The boat is made of consumer waste and is potentially recyclable.**
- **Product is customisable.**
- **Newest equipment and technologies.**

Weaknesses

- **Overhead and development costs are high in comparison to current production levels.**
- **The product is one-of-a-kind. The consumer is still skeptical of 3D printing.**
- **The consumer must be informed that a 3D-printed yacht is just as safe and brings additional benefits.**
- **Every new business goes through a significant start-up phase and incurs significant initial costs.**
- **Building a strong brand name and reputation for quality takes a lot of effort, time and money.**
- **Production establishment is capital-intensive.**
- **Plastic does not have the same allure and refinement as traditional materials such as wood in boat building.**



Risk analysis

Opportunities

- Because there are chances for collaboration between retail and recreation, online visibility and communication are consequently becoming more and more crucial.
- Increasing awareness of social issues and regard for marine life.
- Applying innovative techniques and materials.
- Licensing, franchising and export.
- Global incentives to cut (plastic) trash production in half during the next 10 years.
- Customers expect to customise products delivered to their need.
- The manufacturing process is simple to reproduce, allowing us to print directly for the new market without having to ship from the Netherlands.

Threats

- There will be competition and copycat businesses with better funding anywhere in the world.
- In maritime industry, laws and regulations are frequently strengthened which requires permanent engineering work.
- Future competition may become more intense, including from abroad.
- There is pressure on prices.





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Thank you