

Remigo Electric Outboards: Our Approach to Sustainable Design

Sustainable Designs: Innovation and Creativity in the EU

// Session 3: Showcasing Sustainable Design Practices



All-Invest Verde IPR / Remigo

September 2024

Outboard design
hasn't changed much
for 100 years



1917



1935



2020



Why electric in the first place?

Zero direct emissions

Silent operation = noise reduction

Higher overall efficiency = higher torque at lower speeds

Require less maintenance

Rise in bans and regulations on the use of gasoline outboards in protected areas and city centers

Emission-free zone for pleasure craft

From 1 January 2025, an emission-free zone for pleasure craft applies in Amsterdam. Only emission-free pleasure boats will be allowed in the zone in the city centre. There will be transitional arrangements and an exception for through waterways.

Emission-free boats

- Electric or hand-propelled emission-free boats holding a valid [green vignette](#) are welcome in the zone.
- Hybrid boats with both an electric motor and a fuel engine, holding a valid [yellow vignette](#), are also welcome, if using the electric motor.

Currently, emission-free pleasure craft benefit from a 70 per cent discount on mooring fees.



VeniceAgenda2028

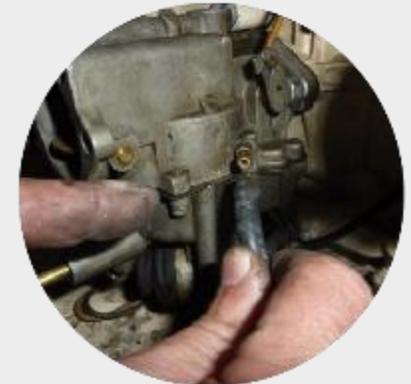
Let's make Venice's fleet of motorboats zero-emission, low-wash electric!

LEARN MORE

Why?

- Unreliable
- Maintenance heavy
- Noisy and vibrating
- Stinky and greasy
- Bulky and heavy
- Difficult to store
- Cause frustration and even fear
- Polluting water and air directly

**Small gasoline
outboards are
out -**



- Heavy and bulky
- Corrosion on cables
- Require quite some maintenance
- (Plastic) housing degradation
- Fixed lengths demand producing variants of the same model
- Look unappealing – are perceived as garden appliances

- And electric options aren't seen as a viable solution





How?

By knowing our users,
eradicating their pains one by one,
and following circular design principles.



Meet RemigoOne.

World's first 1000W electric outboard in form of a rudder.

A simple, honest, frustration free boating experience for anyone – boaters, sailors and learners.



Key differences

- Works as a rudder
- Aluminium IP67 watertight housing
- Lightest on the market
- Integrated all vital components and cables
- Innovative 2-part mounting system
- Intuitive interaction and operation
- Easy to handle



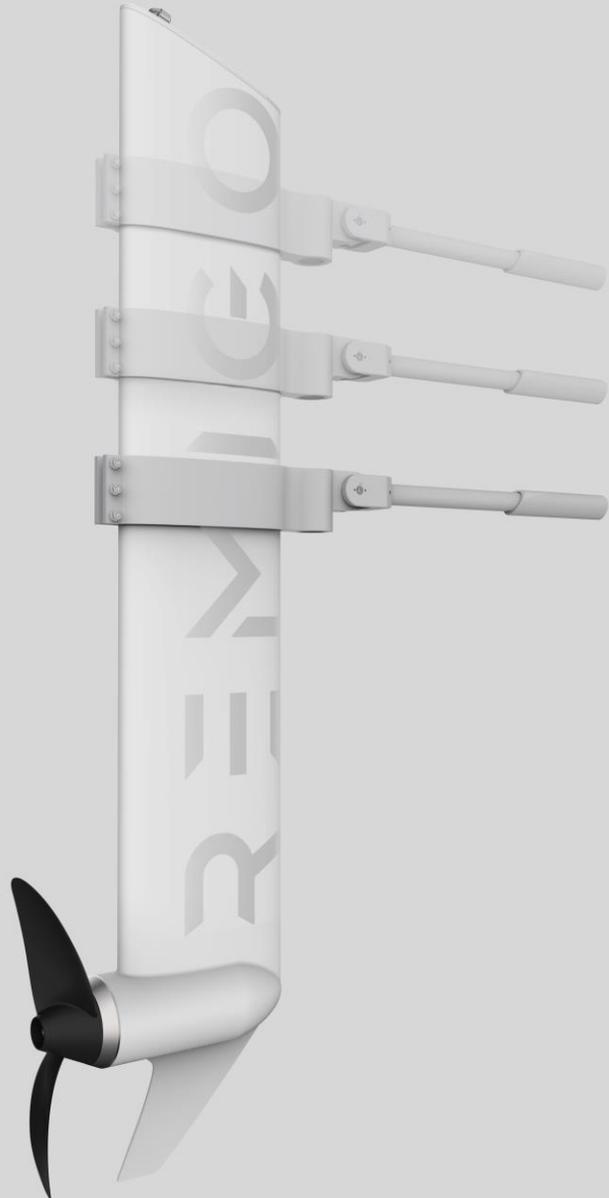
It is versatile

One model covers the needs of 5 different segments

Fits in saltwater and freshwater

Perfect for experienced boaters, but also learners

One size fits on all small vessels



One-size-fits-all design

- Fits to any boat up to 8m or 1.5 tons
- eliminates the need for producing different size versions
- gives users freedom to switch boats
- makes it perfect for rentals



Built to last

- Premium quality where it matters
- Durable aluminium housing
- Vitals parts safe from harmful environment
- Near zero maintenance
- Extended product lifespan



and remove
the propeller

REMIGO
electric outboards

Modular and repairable

- Vital parts designed as modular blocks
- Easy maintenance
- Components easily replaceable
- Reducing full product replacements



Supports charging from renewable energy sources

- Via solar panels
- Via existing solar panels on boat
- Hydro regeneration (future plan)



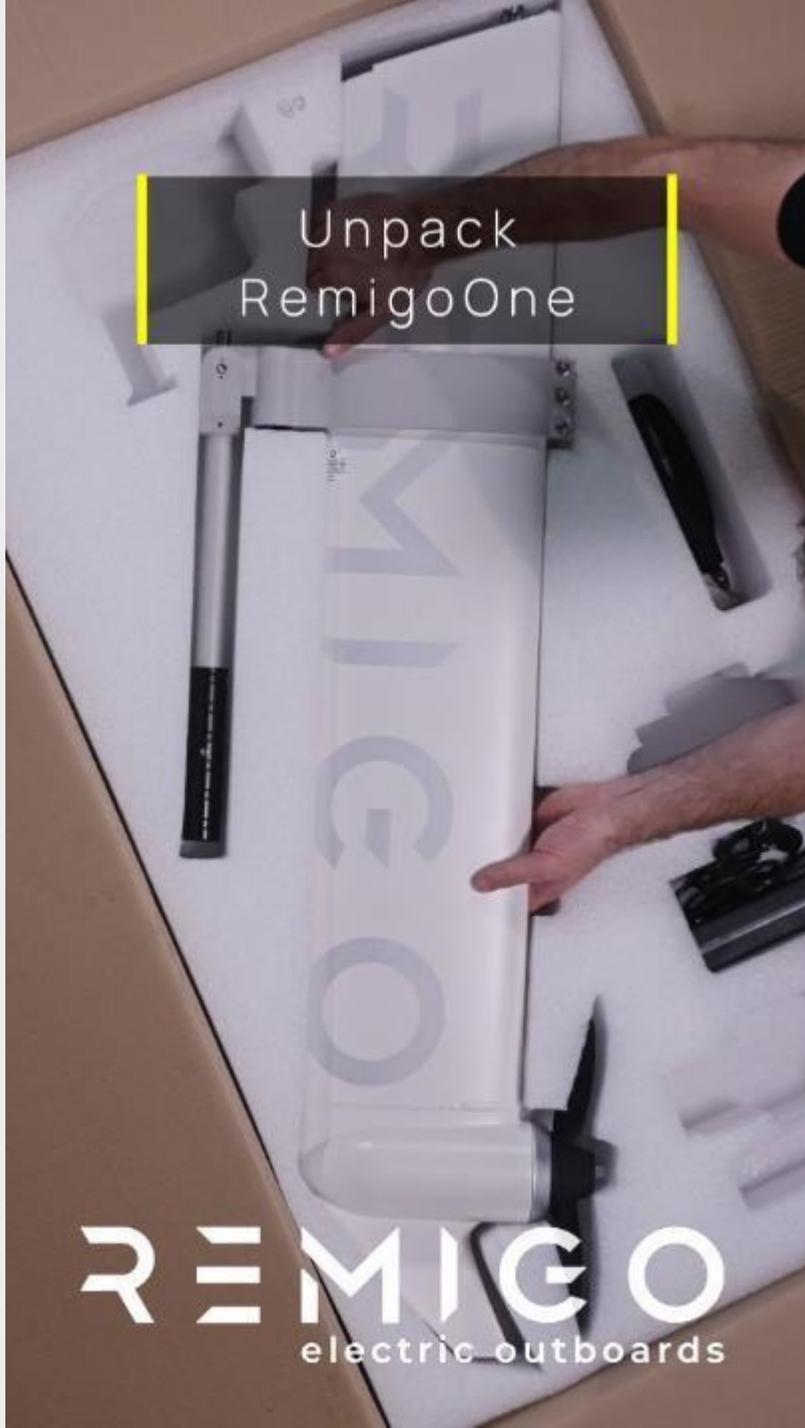
Supports
life-cycle extension

Battery replacement along with a system upgrade



Builds emotional attachment

A well-designed, visually pleasing product encourages user to maintain it and take better care of it.



Unpack
RemigoOne

REMIGO
electric outboards



Comes in multifunctional
packaging

PE foam – perfect material qualities for safe
storage and transport

Transitioning to pulp-mold



With responsibly designed accessories

Search for material alternative

Locally sourced

Building a new circular business model

Supporting local employment

IP & Sustainability

// Startup founders' view



Why sustainability?

Entrepreneur's personal ethics (do no harm)

Market driver (especially in the up-market segments)

- customers expect companies to be responsible
- no harm to fellow humans
- no harm to animals
- no harm to environment
- longer product lifespan
- the use of (a more sustainable) product enables customer to reduce his pressure on the environment

Unsustainable companies are finding it increasingly hard to be successful on the market



Sustainability has a price

- Higher cost of materials
- Higher cost of services
- More expensive production process
- More expensive MKTG efforts
- The cost of certificates (sustainable, circular...)
- Bureaucratisation



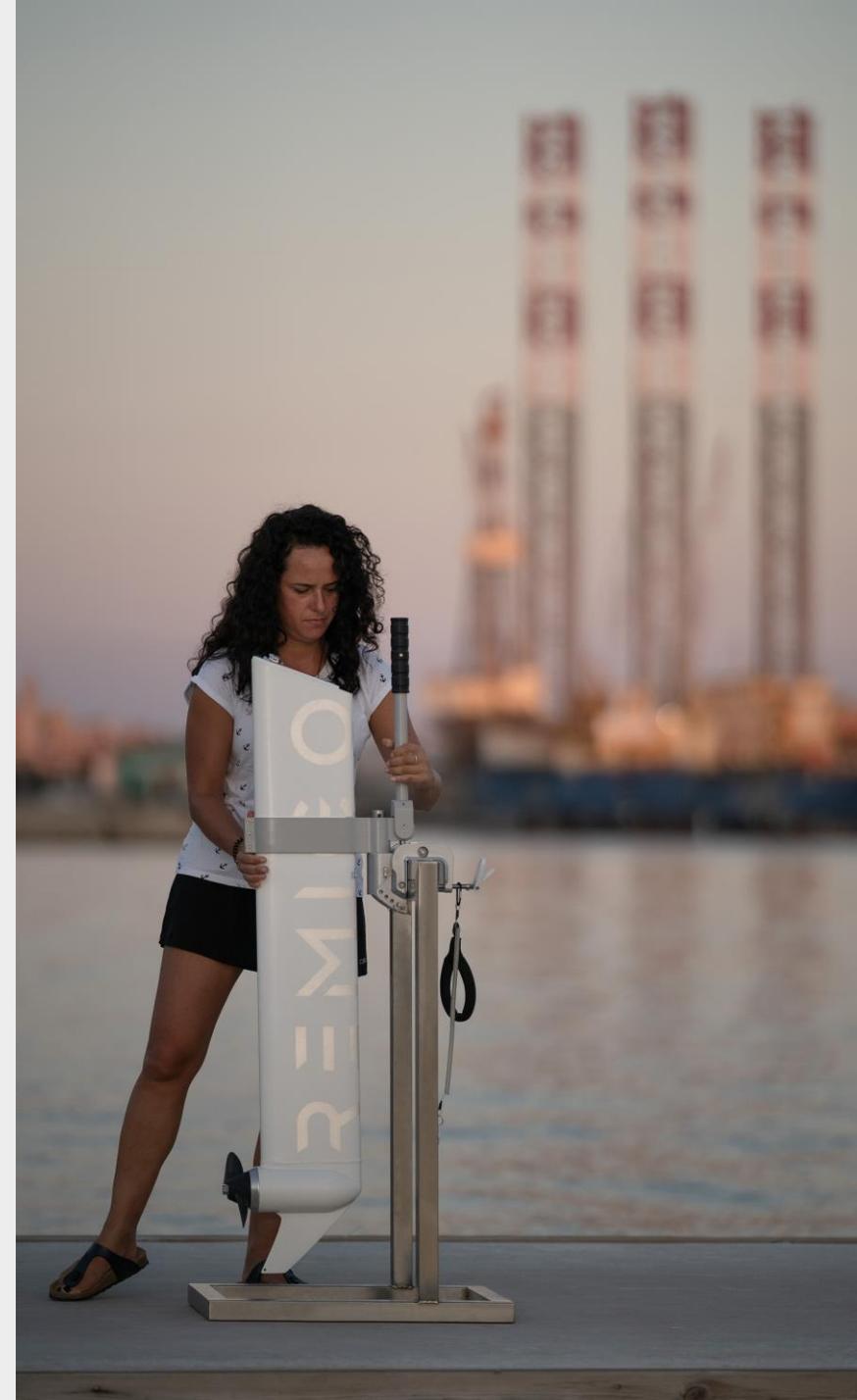
Is it feasible to pay for more sustainable outcome

Yes!

- it pays off on the long term (brand equity, better products, better optimised production)
- easier entry to certain (developed) markets
- ethical superiority

Caution! - Threats to sustainability

- Many of these expenses go to “wrong” hands
- Fake sustainability, Greenwashing
- Threat to lose a competitive edge with pricing
- Threat of overregulation (happening in EU right now)



Why protecting the IP

1. Freedom to operate
2. Protect the investment in R&D, design, know-how
3. Increase the value of the enterprise / company

EST. 1906

YACHTING

MONTHLY

Best electric outboard motor



Remigo

Specifications

Outboard weight: 12kg

Overall weight with outboard and bracket: 14.5kg

Battery capacity: 1085Wh

Top speed: 5kts

Thrust: 30kg / 66lbs

Designed along the lines of a dinghy rudder, this Remigo outboard is incredibly easy and intuitive to use. No external cables or anything to be snagged, it clips onto a bracket pre-mounted to your tender or dinghy, in a similar way that you'd attach a dinghy rudder.

Sustainable industry production = no IP protection?

With no IP protection other companies /
competition will spend less (= use less resources)
to develop the product or service they are copying

YET:

Customers get confused / are buying inferior
products

Innovative companies get out of business:
copycats can be cheaper – no R&D costs

Innovation potential of the society is crippled

No innovation = no increase in sustainability



IP protection is just the beginning

- IP protection = significant cost for a startup
- The real costs emerge when needing to protect IP from counterfeiters
- It is hard to win a dispute with a big corporation

Temo Vs Remigo : Hors-bord électrique, un concept, deux produits !

Paul Gury • Le 19/07/24

Partager: f t e p



D'un côté, le Remigo One, distribué depuis le début de l'année par Plastimo et lauréat du prix « Design Award » du Mets 2021, de l'autre le tout nouveau Temo 1000, de la société vannetaise éponyme, longtemps attendu mais enfin disponible...



Introducing eLite

The ePropulsion eLite 500W electric outboard redefines your on-water experience with innovative features and commitment to sustainability. Designed to be the most compact and lightweight electric outboard in its class, it is an easy-to-use alternative to small internal combustion engines for enthusiasts worldwide. Perfectly blending efficiency and mobility, it represents a new era in clean, quiet, and eco-friendly marine propulsion.

RemigoOne IP protection case

We protected some elements

- Model / design of the product (so that customers don't get confused / mislead)
- Integration of the components (a lot of engineering hours invested)
- Brand name

And left some elements unprotected

- Console mounting system (the ambition to become industry standard). The goal = interchangeable gear on the same mount.
- UX; handling, user controls – it is immoral to patent the most natural way of human interaction with a (propulsion) system

REMIGO®
electric outboards





Committed to marine innovation. Miles ahead.

REMIGO[®]
electric outboards

Marko Vrtovec, CEO and Founder
Ajda Bertok, Lead Designer and Co-Founder

www.remigo.eu
info@remigo.eu

