

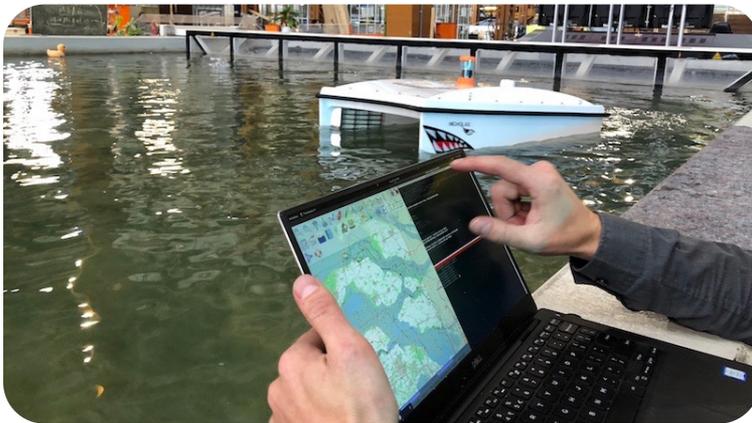
Now every city in the world can have a self-organising swarm of marine robots, keeping its water clean and gathering environmental data.

WASTESHARK
DATASHARK
OILSHARK
SHARKPOD

 **RanMarine Sharks at work in your Smart City**

Smart City Tools

AUTONOMOUS ROBOTS



Collecting environmental data

Clearing unwanted material from water
(trash, plastics, oils, invasive plants,
etc)

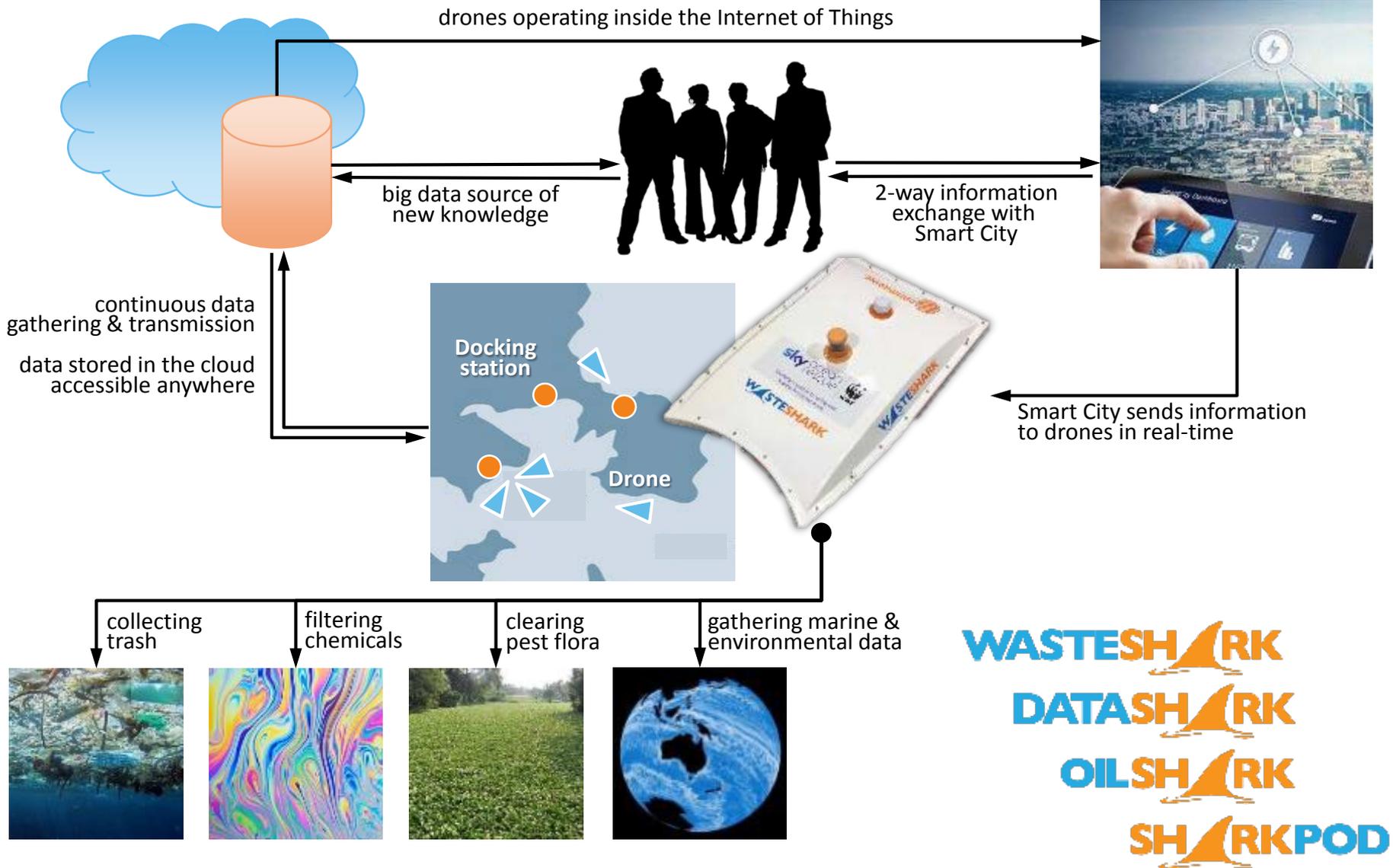
Clearing 500 kg per day

Low cost *and* zero carbon, quiet, agile,
powerful, durable, friendly to animals

Smart City enablement by



RanMarine



WASTESHARK

WasteShark[®] is a drone designed for 24/7 water health management – continuously removing unwanted material and monitoring the water for threats to viability.

low cost low capex, very low opex

productive 500 kg debris removal per day

durable 15-50 years useful life

autonomous navigation, collision avoidance, return-to-home

compact 156 x 108 x 45 cm

agile can turn on own axis

versatile ambient -5°C to +60°C; waves to 1.25 metres

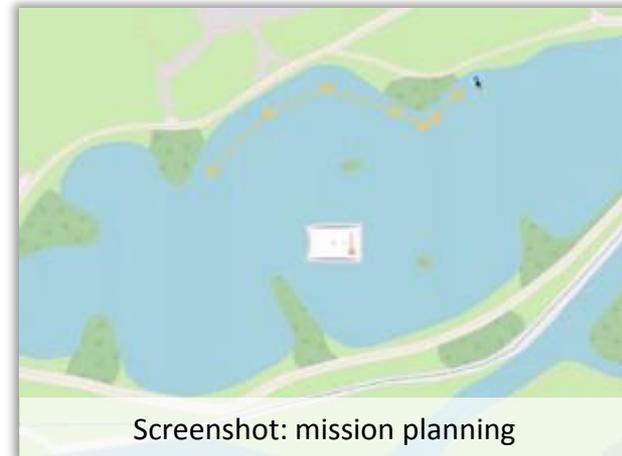
harmonious not harmful to animals, safe for humans

green zero carbon emissions, no noise or light pollution

data ready can collect and transmit any sort of data



Robotics assembly at the Shark Nursery



Screenshot: mission planning



WasteShark at work in Cape Town

WASTESHARK FAQ

What is it? WasteShark® is a drone (an unmanned autonomous vehicle) designed for urban, inland and near-coastal water

What does it do? 24/7 waste clearing and environmental data collection

What waste does it clear? Plastics and microplastics, general trash, oils and chemical pollutants, invasive plants (eg algae, sargassum, water hyacinth, etc) and invasive animals (eg jellyfish)

What data does it collect? Anything at all, such as water quality, toxins, heavy metals, audio-visual surveillance, even counting the marine life

What does it look like? Compact shape with excellent body lines – small enough to swim tight angles and confined spaces, and big enough to get a lot of work done

What is it made of? Maritime-grade polymer (as used for seagoing yachts)

How does it work? Autonomous (defined path or random walk inside a defined area) or manual (remote control by human operator with handheld device)

How do I get it in/out the water? Either manually or with a small crane or lifting device, or using the SharkPod™ docking station

Does it crash into things? No – there is a

built-in collision avoidance system

Does it hurt animals? No – there is zero reported animal injury anywhere in the world. Animals can easily outswim the drone, and there is nothing in the drone that can trap or disable an animal

Does it pollute the environment? No – WasteShark produces zero carbon or greenhouse emissions, and no light or noise pollution either

Is it recyclable? Yes

What if it gets lost or someone tries to steal it? You have constant sight of your WasteShark from your computer or mobile device, using the tracking system

What if it gets full or runs out of battery? WasteShark has a “return to home” feature that activates if its belly is full or its battery is running low

What does it do with the waste it collects? WasteShark brings it to land, where it can be recycled back into the circular economy

Do I need a licence to pilot it? No

How can I get it? Find us online at WWW.RANMARINE.IO or contact your local authorised distributor

FAST FACTS

Size 156 x 108 x 45 cm

Tare 50 kg approx

Buoyancy 400 kg

Payload capacity 350 kg approx

Swim time 16 hours per day

Territory Smart Cities and the built environment – waterfront property, canals, rivers, lakes, lagoons, bays, beaches, marinas, ports and harbours

Effective range Up to 5 km

Operating environment Ambient temperature from -5° C to +60° C with swells to 1.25 metres (Douglas scale 3)

Productivity Can clear half a ton (500 kg) of debris per day

Useful life 30-50 years expected

Developer RanMarine Technology BV, The Netherlands





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