

# Swarm Tactics

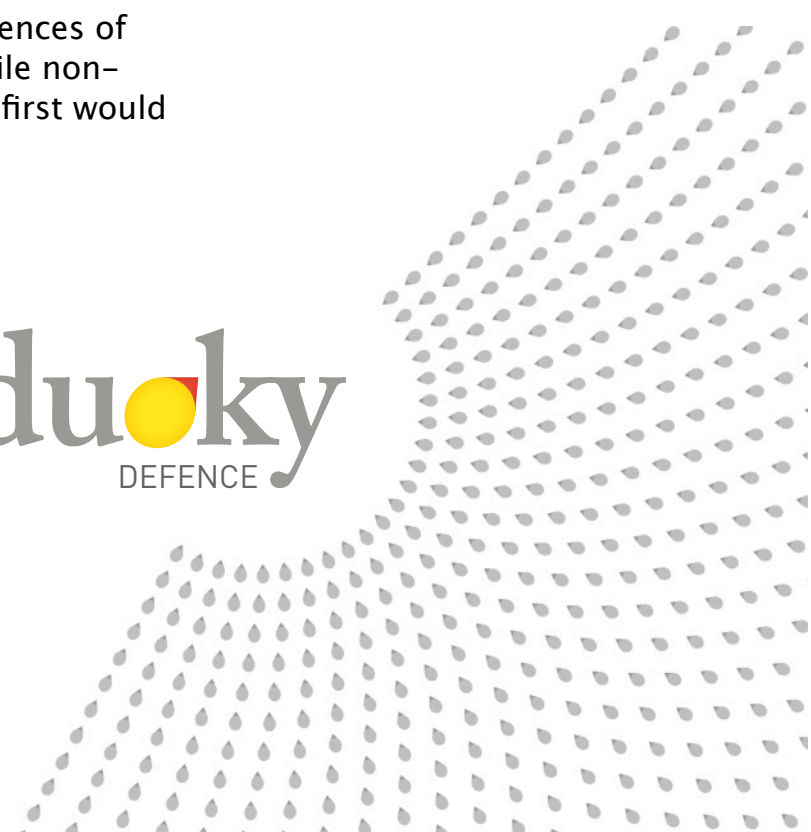
In 2002, a \$250 million war-game called the Millennium Challenge demonstrated how an unsophisticated but aggressive swarm could defeat a major US fleet, including its carrier. The reason swarms succeed in combat is simple: lots of small targets are far harder to engage than a few very large ones. Air-forces and armies have used swarms for centuries.

Optimising a swarm – and all of the weaponry, sensory, supply and communication systems it depends upon – is less simple. Our company's primary focus is on how to embrace the natural advantages inherent in a swarm – and offer an optimised swarm combat system to sophisticated navies.

That a well-designed, properly equipped naval swarm would be deadly today is beyond dispute. The bang-for-buck advantages of swarm tactics are staggering: the consequences of them being realised by hostile non-state, or rogue-state actors first would be terrifying.

speed  
stealth  
agility  
numbers

rubberduky  
DEFENCE



# RDD Swarm Combat Vessel (SCV)

At its core, the SCV is a manned, high-speed, high-stealth planing hull weapons and sensor platform.

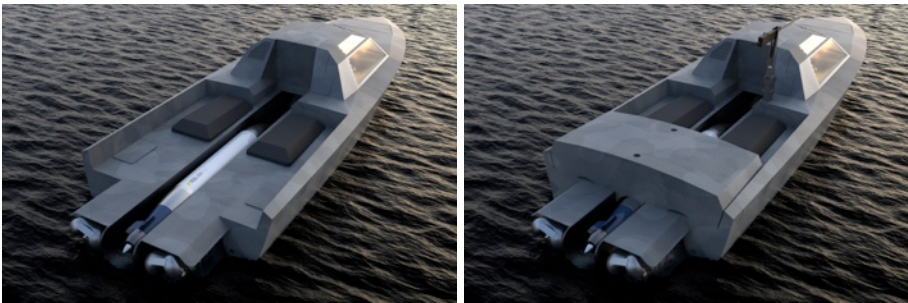
It incorporates Rubber Ducky's unique, patent-pending self-righting and semi-submersing capability, and offers robust, short-notice all-weather deployment options, and unrivalled concealment capabilities.

Shown here with Rubber Ducky's proprietary swarm-optimised wounding-weight torpedo, the SCV is designed to pack in a formidable maritime-strike weapon system in a package the size of a rigid-hull inflatable, a.k.a. 'rubber ducky'.



*Concept Image: RDD Swarm Combat Vessel (SCV)*

Also compatible with a range of commercially available weapons and sensors, the SCV is designed to integrate seamlessly into Rubber Ducky's proprietary oceanic supply systems, to enabling a reach well beyond the traditional role of brown-water combat assets.



*The SCV's rear wet-deck is designed for flexible mission modules, shown here with a 1000 litre fuel 'backpack'*



*The SCV is semi-submersible, allowing unprecedented low-profile deployment capabilities*

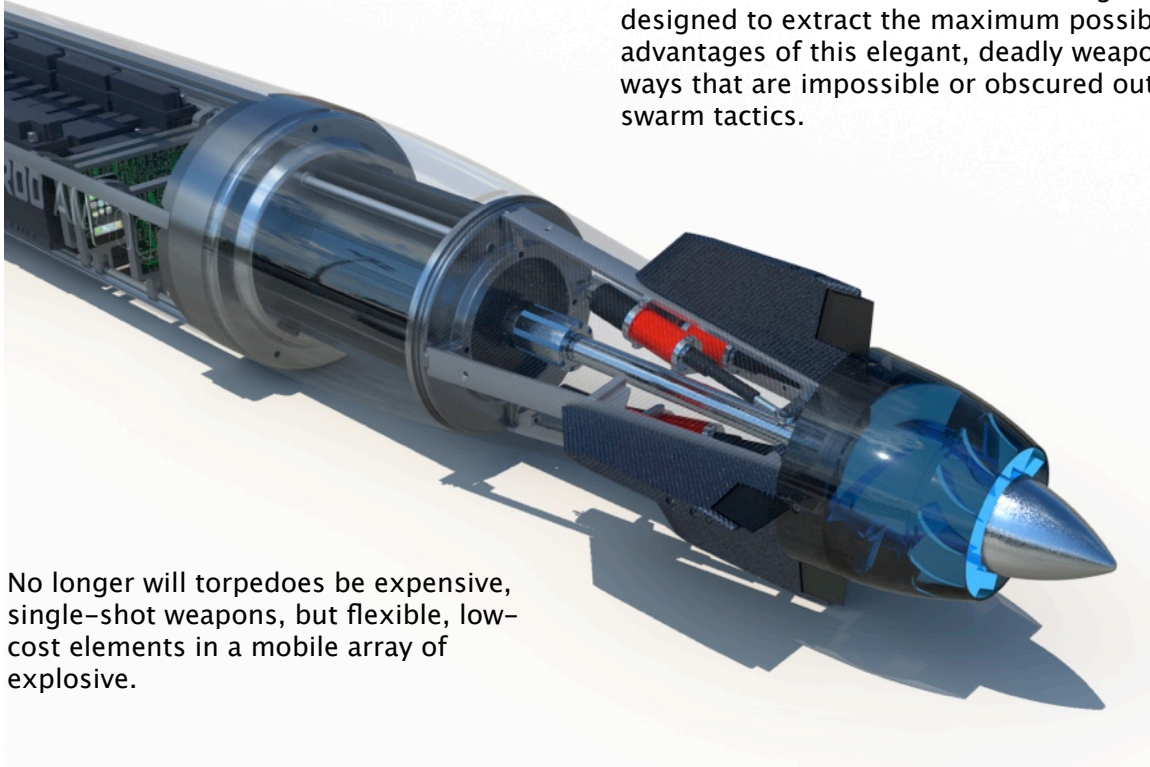
## **Specifications:**

- Dry weight: 4.5 tonne
- Loaded weight: 6.5 tonne
- Max weight: 8 tonne
- Range: 600–1400km
- Max Speed: >40kt
- Crew: 2–3

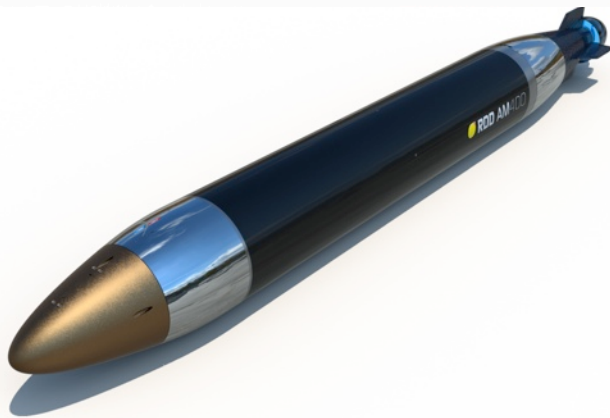
# RDD Wounding-Weight Torpedo (WTT)

Torpedoes have been effective naval weapons for well over a century. Striking below the waterline has enormous advantages in every sense: physically, psychologically, and financially.

Our innovative modular-electric design is designed to extract the maximum possible advantages of this elegant, deadly weapon, in ways that are impossible or obscured outside of swarm tactics.



No longer will torpedoes be expensive, single-shot weapons, but flexible, low-cost elements in a mobile array of explosive.



## Modules, Weapons and Options

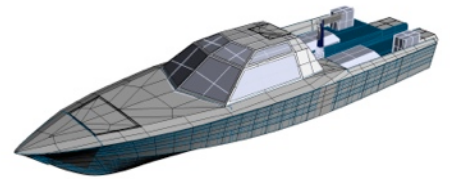
- 1-2 WWT's, recoverable, rechargeable electric modular torpedoes
- 10-30 limpet acting contact mines
- Stabilised robot gun mount - 12.7mm machine-gun through to 30mm auto cannon capacity
- >50 sonobuoys
- Towed sonar array
- Mine Countermeasures: magnetic and acoustic decoys
- 6-8 special forces/divers/boarding party
- Radio/Radar/IR/optical chaff and decoys
- 1000 litres supplementary fuel

**A swarm combat system by Rubber Ducky Defence will provide game-changing effects in:**

- Maritime-strike / Anti-Surface Warfare
- Anti-Submarine Warfare
- Mobile Mine Warfare
- Mine Countermeasures
- Surveillance and patrol
- Anti-Piracy
- Special Forces Insertion

# About Rubber Ducky

Rubber Ducky is a defence company that thinks deeply about military problems, before designing the best possible solutions to them. Our products are precisely and elegantly engineered pieces of technology. But more importantly, they represent a precisely – yet creatively – optimised solution to real problems. To us, simplicity isn't the casualty of sophistication, it's the offspring. Increasing effectiveness whilst reducing complexity is our speciality. We devise ways of assembling the most decisive and robust combat power, with costs of acquisition and operation that are trivial in comparison with our competitors. Our weapons work best when they're needed most. They're cost-effective enough to operate at full readiness day-in, day-out for routine constabulary and peacetime training exercises. And in the worst contingencies, they're robust, and resilient and lethal enough to defeat high-end threats against overwhelming odds, at times when traditional assets may be degraded through first strike, electronic warfare, and Anti-Access/Area-Denial technique.

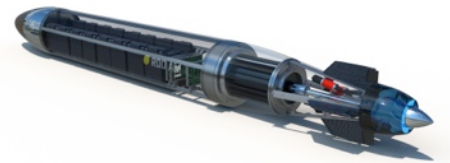


## Who we are

The founder and Managing Director of Rubber Ducky Defence, Aidan Morrison comes with a background in theoretical and experimental particle physics, and in 2009 was involved in the ATLAS experiment at CERN. The board of Rubber Ducky Defence includes a retired Captain from the US Navy, a retired Fleet Gunnery Officer from the Royal Australian Navy, a former CEO of British Aerospace Australia, and a leading Australian industrial designer.

## Who we work with

Much of our analysis and development is secret, some is classified. We're grateful to have many informal supporters at the highest level spanning the public, private and academic sectors who continually provoke, review, and inspire our analysis. We're also proud to be associated with the following major partners in the design, development, manufacturing and marketing our products:



- AADI Defence Pty Ltd
- Peter Lowe Design Pty Ltd
- Design + Industry
- Incat
- Doen Waterjets
- Penguin Composites

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*Rubber Ducky Research and Development Pty Ltd*  
ACN 153 614 101

Contact: M: +61 4 0009 1770 E: [sales@rubberdukydefence.com.au](mailto:sales@rubberdukydefence.com.au)