

# SNAP GROUP™

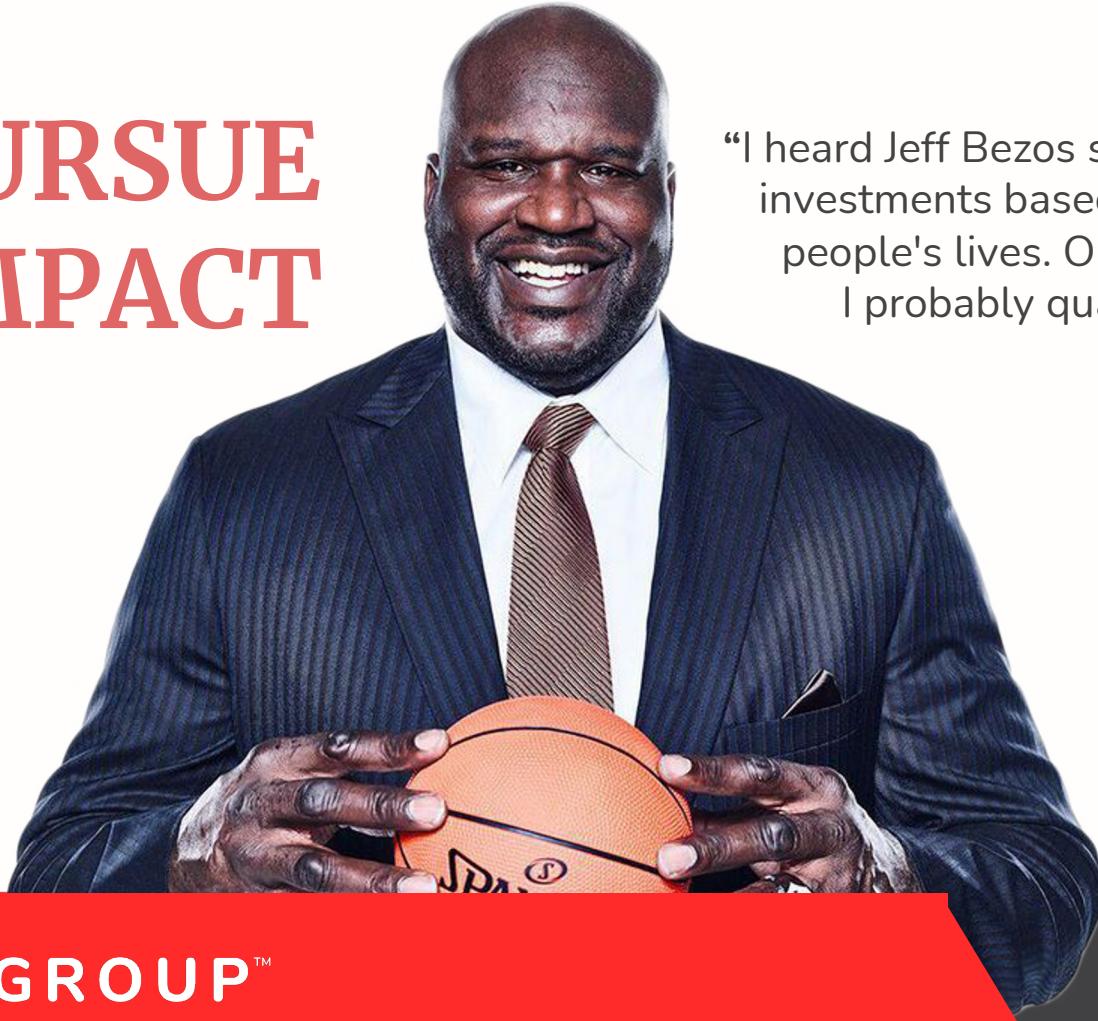
Capture Innovation, Inspire Transformation



"Running a commercially driven impact business is **challenging..**  
It requires **focussed conviction, propulsive partners** and most  
importantly **patient perseverance.**"  
**-Chris Rodley, Snap Group Founder**

Live capture technology and ai in fisheries

# PURSUE IMPACT



“I heard Jeff Bezos say one time, he makes his investments based on if it's going to change people's lives. Once I started that strategy, I probably quadrupled what I'm worth.”  
- Shaquille O'Neal

## **Small beginnings... focus...**

- building on good ancestors
- Nelson born and bred
- taught at Nelson College
- co-founders; the Rodley boys
- launched CES las vegas





**teem.fish**  
MONITORING  
Local focus. Global impact.

Recognized  
as **EM**  
**leader**

After 2  
years holds  
**~10%**  
of global  
market

**Trusted**  
by industry

Empowering local fisheries  
with world-class innovation

[www.teem.fish](http://www.teem.fish)

# The Problem We are addressing

- Fisheries management is extremely difficult! Currently this is predominantly through on board human observers monitoring catch, by-catch and on-board process sometimes only 12% of trips.
- Human observers can cost a lot making management cost prohibitive in the majority of fisheries. When an observer is on board in NZ there is a 60% increase in reported events.
- The World Bank estimates 57% of fish stocks are fully exploited and another 30% are over-exploited, depleted, or recovering.
- If stocks in these fisheries can be rebuilt, then fishery production could increase by 16.5 million tonnes or by USD\$32 billion annually.
- Unless we address this issue, we risk the future of the fishing industry - relied on by approximately 3 billion people as their primary source of protein.

# The Solution We are providing

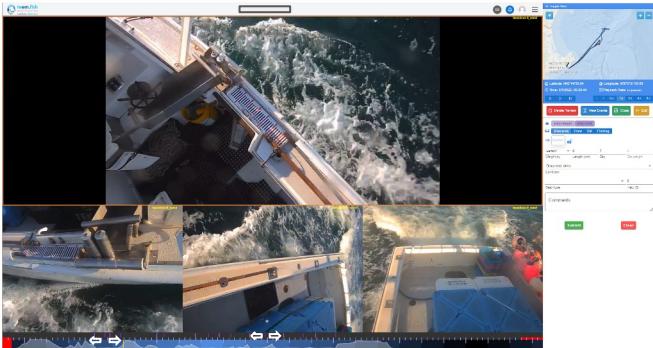
- Using cameras installed on vessels, ai, data collection and review tools we replace human observers and provide a world class fisheries management solution that ensures incontestable data on 100% of trips.
- We increase data access, integrity and can scale to hundreds of thousands of vessels in fisheries globally including opening new markets in fisheries that currently have no formal observation.
- **TRANSPARENCY:** Fishermen can now prove they operate with integrity.  
**TRACEABILITY:** Data can be used to trace fish from sea to plate.  
**COST EFFECTIVE:** Camera review costs much less per trip.  
**BUSINESS PLANNING:** Business intelligence improving vessel and company efficiency and marketing.  
**ENFORCEMENT:** Evidence of a vessel's compliance with their fishery's regulated 'Conditions of License', reduction of Illegal, Unregulated and Unreported fishing vessels globally - slavery, smuggling and theft.  
**FISHERIES MANAGEMENT:** Gather fishing effort and stock assessment data for better decision making.
- Our technology let's the fisher just fish by reducing compliance burden and cost.

# Technology: Hardware , Software and IP



## CAPTURE

Hardware:  
Cameras, ai hardware,  
remote tracking and  
Satellite communications



## ANALYZE

Software:  
Cloud based SaaS review  
tool, allows govt or industry  
the ability to review,  
annotate and train for ai  
machine learning

## CONNECT

AI:  
Analysed data and API  
submits data to wider  
ecosystems for full automation  
and BI reporting



## Problems with edge compute AI

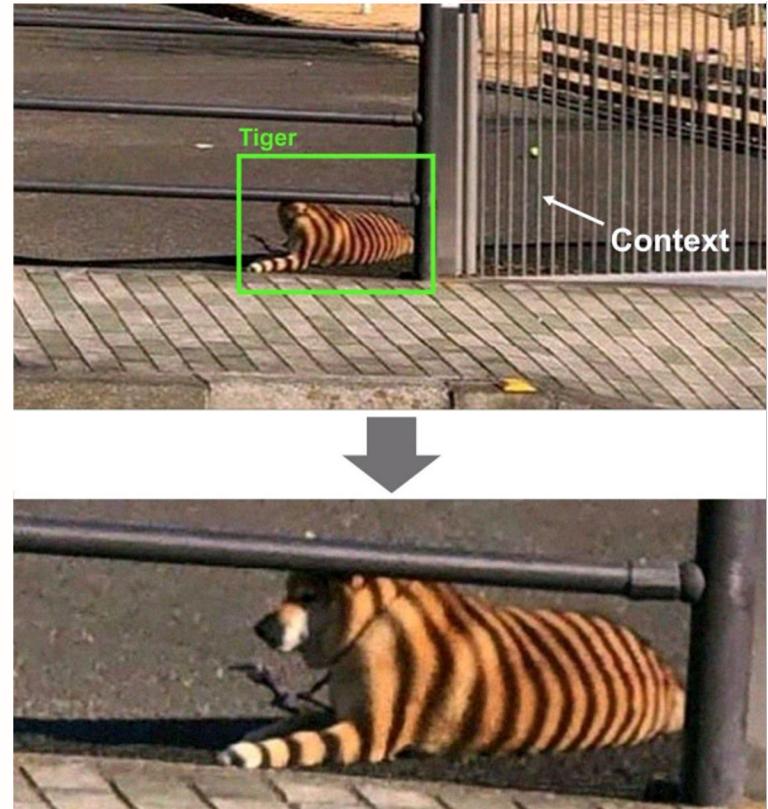
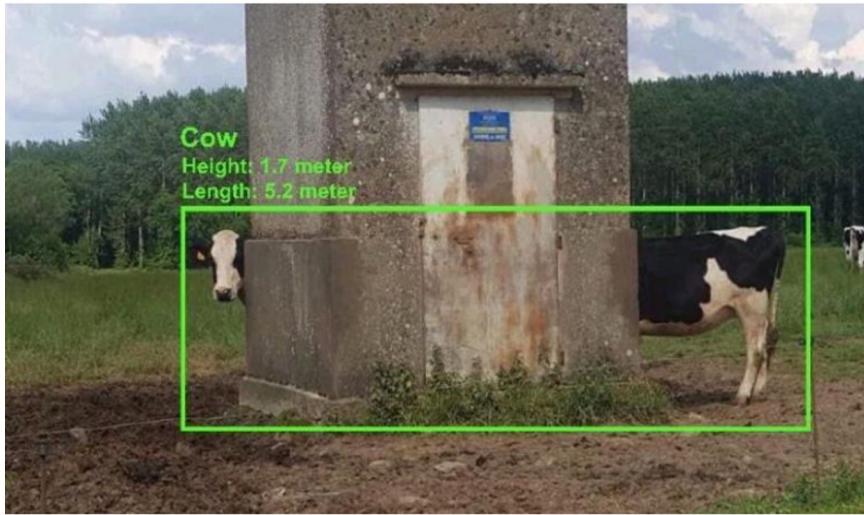
**Data requirements:** Requires large datasets, it is very time consuming to annotate the data. We cannot get large datasets of some things (e.g., black petrel).

**Computational complexity:** Training deep learning models requires computers with lots of GPU memory/processing.

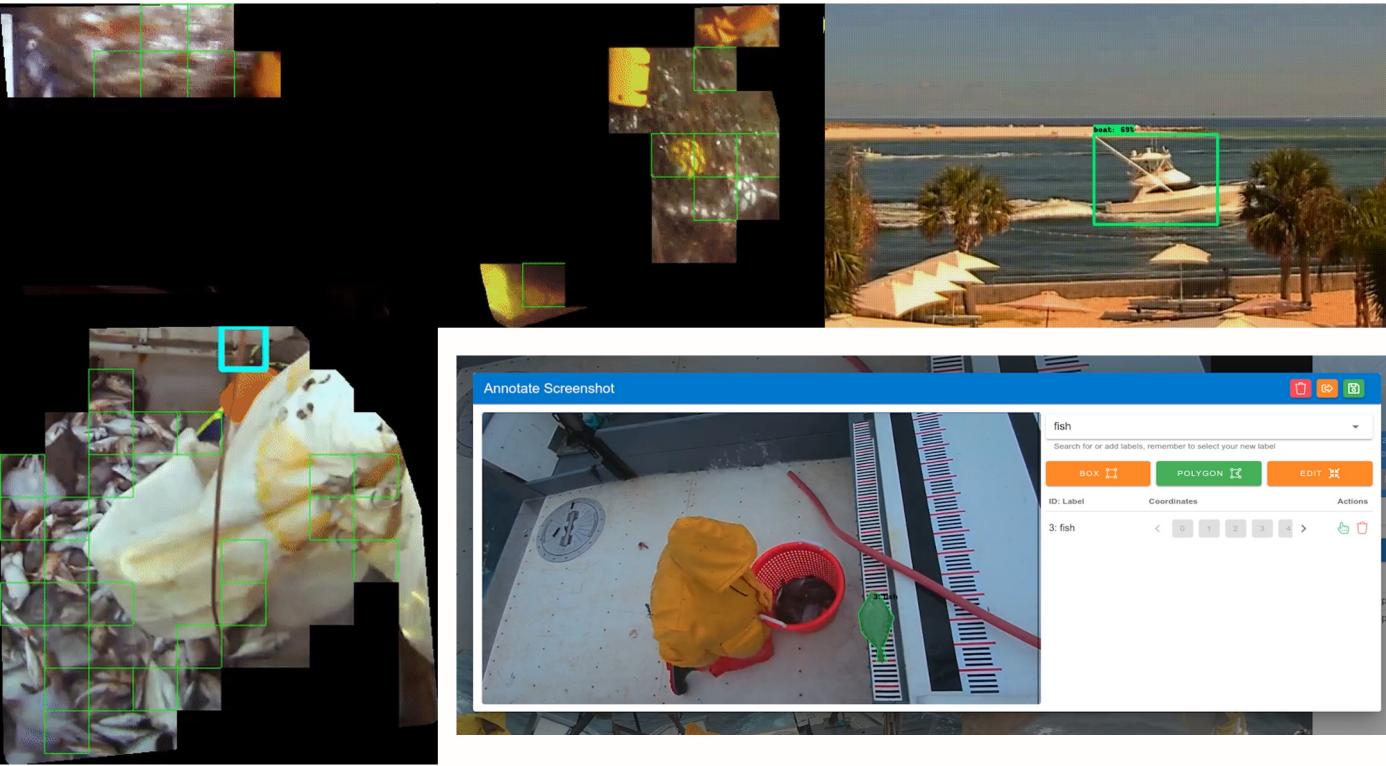
**Explainability:** It is difficult or impossible to understand what the models are doing. AI needs to be explainable in many cases (e.g., is discarding this fish a criminal act).

**Accuracy:** Deep learning isn't perfect. In some cases 50% accuracy is great, in other cases 99% accuracy is not good enough.

# Problems with edge AI: Teaching context



# Fisheries AI examples



Enter your prompts, comma separated...



A photo of green shell mussels a species of shellfish, A photo of scallops a species of shellfish, A photo of a snapper a species of fish, A photo of a tuna a species of fish, A photo with no fish



Prompt #2 - 2024-04-18 14:12:19 - 0% 98% 0% 0% 0%



Prompt #4 - 2024-04-18 10:44:08 - 0% 4% 2% 80% 11%



Prompt #4 - 2024-04-17 14:40:15 - 0% 0% 3% 84% 11%



Prompt #4 - 2024-04-16 16:52:00 - 0% 0% 4% 91% 4%



Prompt #1 - 2024-04-16 16:51:34 - 93% 0% 0% 2% 2%



Prompt #2 - 2024-04-16 16:51:10 - 14% 84% 0% 0% 0%



Prompt #2 - 2024-04-16 16:50:42 - 0% 98% 0% 0% 0%



Prompt #4 - 2024-04-16 14:40:45 - 0% 0% 2% 84% 12%



Prompt #4 - 2024-04-15 16:44:44 - 0% 0% 10% 82% 6%



Prompt #4 - 2024-04-12 16:00:57 - 0% 0% 3% 85% 11%



Prompt #4 - 2024-04-12 16:00:25 - 0% 0% 5% 83% 10%



Prompt #4 - 2024-04-12 15:58:12 - 1% 7% 2% 84% 4%



## Q&A / demo

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pinpoint earth

nodus.ai



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