



Intelligent Buoy System for Fishers

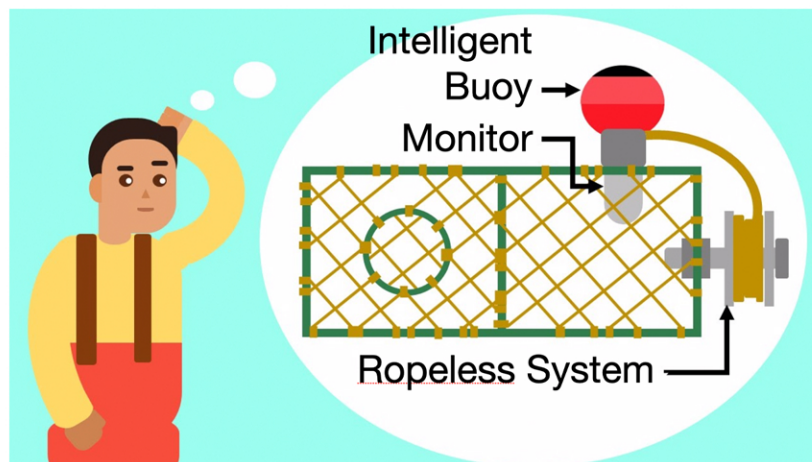
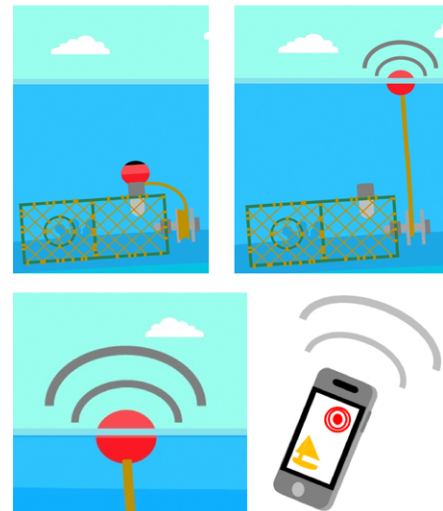
Hackaday Prize 2020 - Conservation X Labs Dream Team

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How might we **decrease** marine species entanglements and **ghost gear** creation — while making the commercial fishing process more **data driven**?

Solution Concept

- Ropeless system to avoid vertical lines
- Intelligent buoy with position marking and communication
- Monitor of gear capacity
- Modular design for more adaptability
- Compliance with regulations



Solution in Need

- **10%** of identified Ghost Gear were ropes from traps and pots *(Stelfox et al. 2016)*
- Traps and Pots have greater **ghost fishing efficiency**
 - Trap placement location is **lacking data** *(based on interviews with fishers)*

Monitor Device

Presently, fishers evaluate trap location from intuition: bait levels, catch, competition
(based on fisher interviews)

Monitor addresses a gap that fishers do not know:

1. Fish traffic around the trap
2. When fish enter the trap

Lobster and prawn traps re-baited every 1-3 days
— transfer data from monitor to fisher

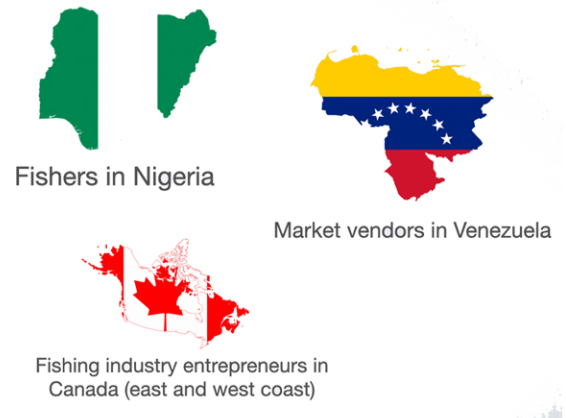
Fisher decides if trap needs to be relocated

Making the most of short duration fishing seasons
— while protecting animal migration

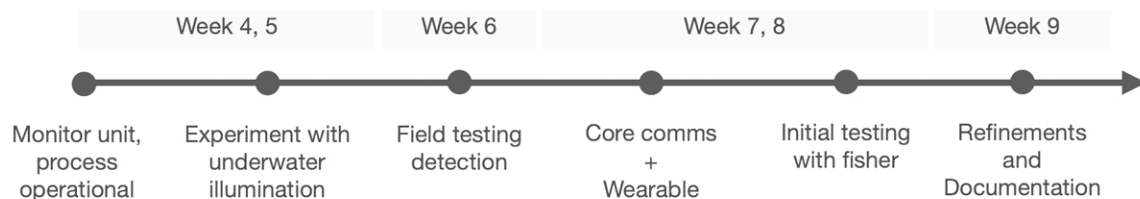
Constraints

- Battery powered (72 hours)
- AC supply on boat
- Mobile phone for data
- Operate in harsh environment

Interviews conducted include...



Proposed Monitor Development Timeline



Call to Action: Tech for Fishers Survey

Do YOU know a fisher? Know a friend who knows a fisher? We'd be appreciative if they could share their experience, and possibly become a beta tester

bit.ly/fishers-survey