Protei

Open Source Sailing Drone

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@ Lucid NYC, 2012

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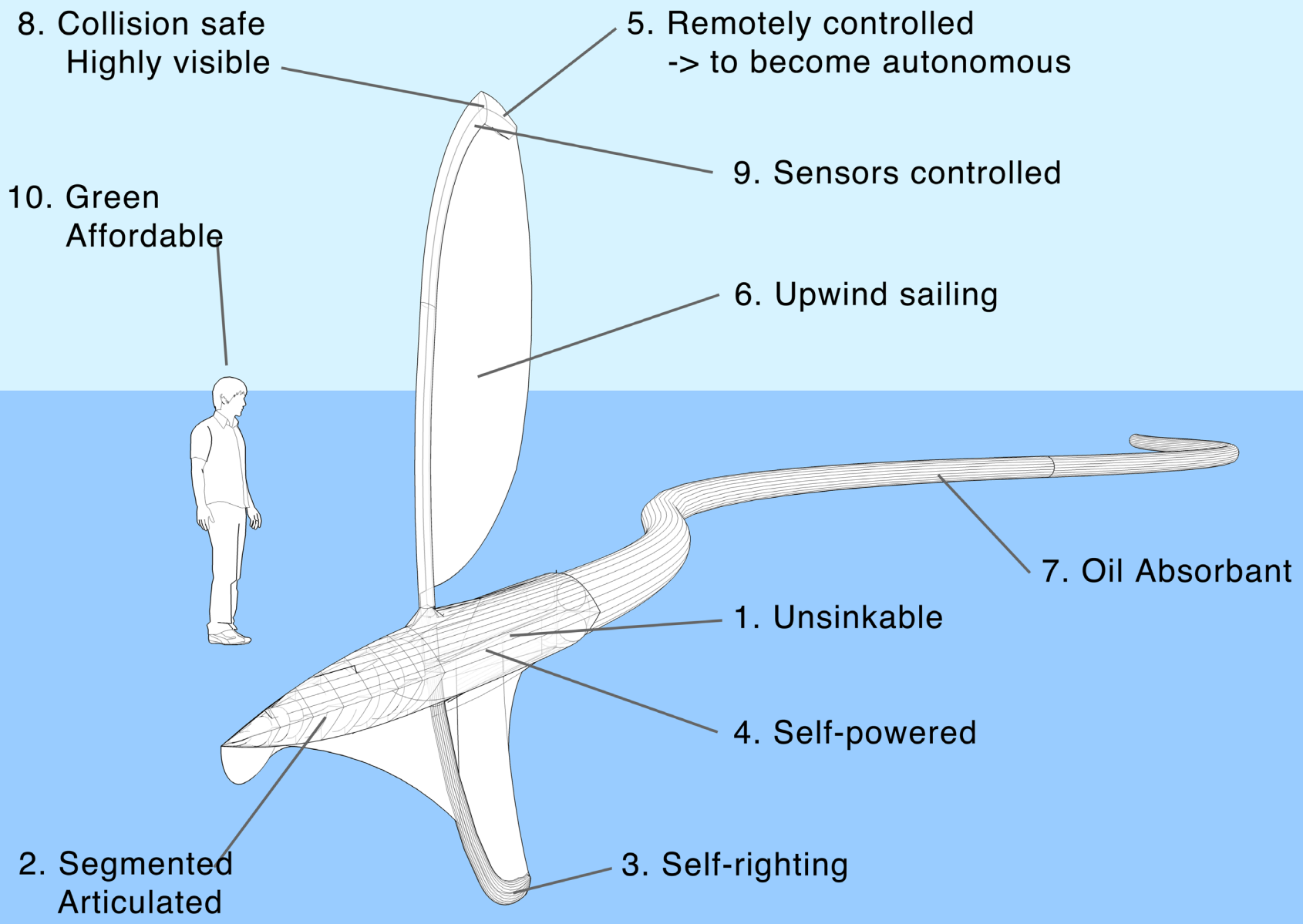
005
Protei

Protei



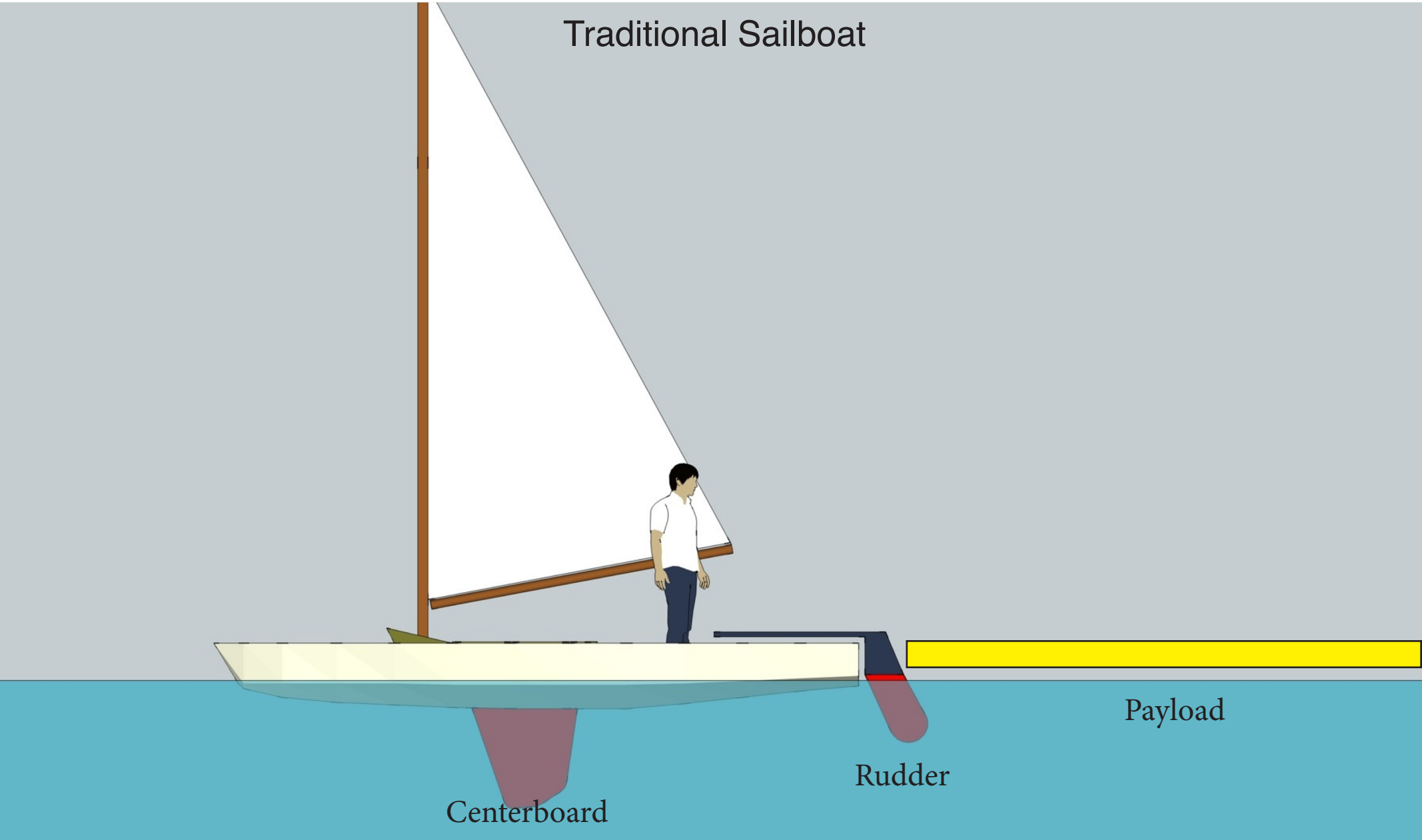
Gulf of Mexico:

- 20 April 2010
- BP Deepwater Horizon Oil Spill
- Only 3% of oil spill was cleaned*

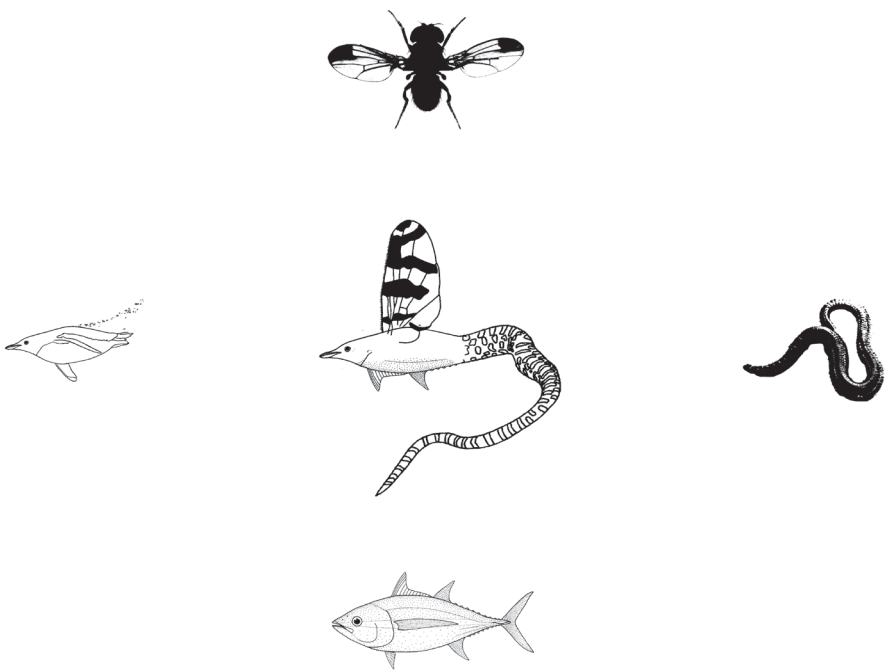
*ScienceMag.org, 13th Augush 2010

REPURPOSED MANNED FISHING VESSELS	PROTEI GOALS
Exposes crew to health risks and toxins	**Unmanned and autonomous**
Cannot operate during a storm	**Able to operate during extreme weather conditions**
Oil sensing limited to human eye sight	**Sensing technologies**
Not sustainable, environmentally destructive	**Sustainable**
Expensive	**Affordable**
Proprietary design	**Open-source hardware**

Can we achieve better steering with an articulated hull:



Can we achieve better steering with an articulated hull:



Protei mimics animal's articulation for locomotive efficiency

Protei prototype 2

Members of Open_H2O:

open_source Hardware:

-Shared design

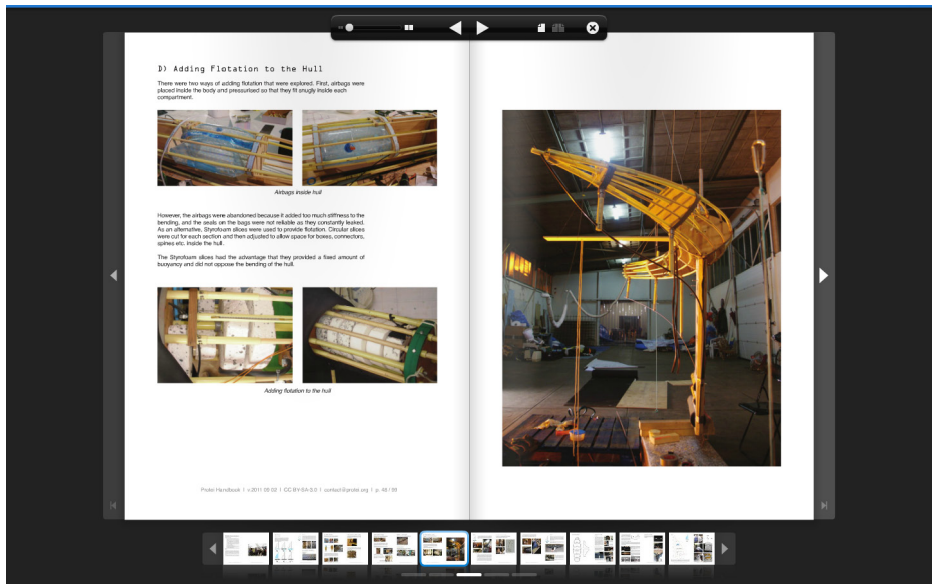
-Document and distribute information

-Anyone can build one

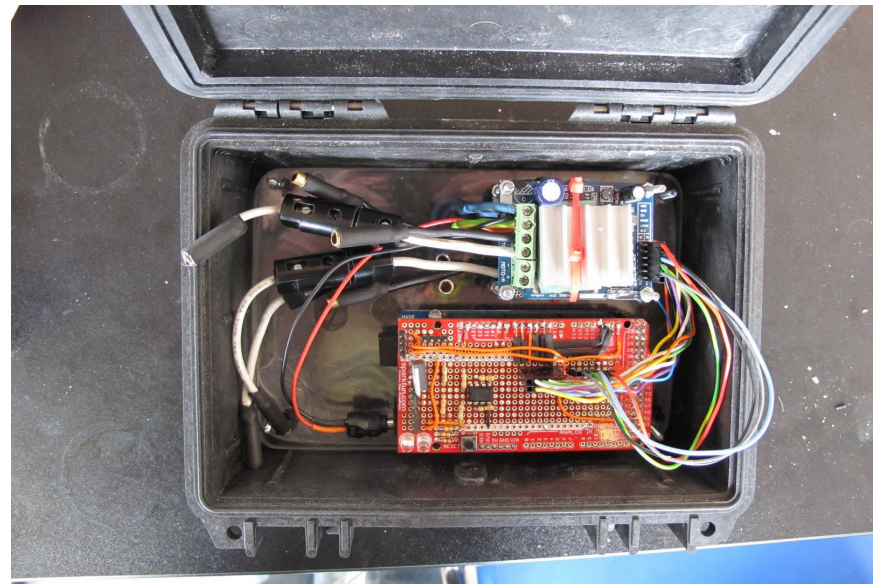
-low cost design

-shortens time frame for development

-credit Protei.org



The Protei Handbook, available in print and online



Main Electronics Box (Arduino Mega)

Collaborative

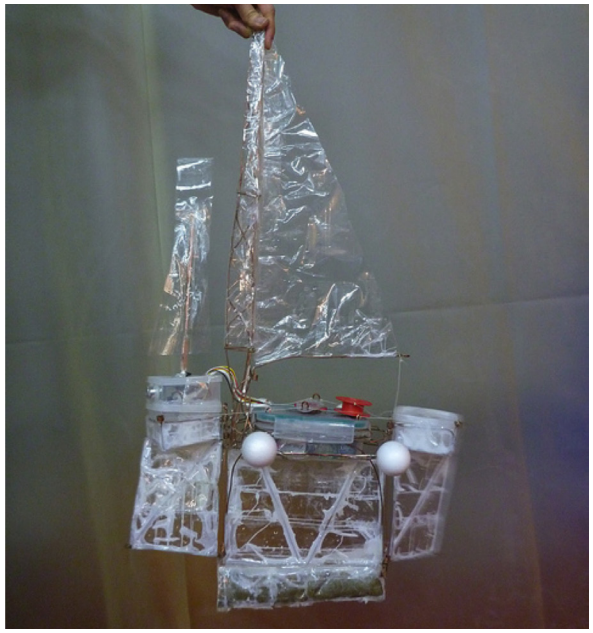
- Multinational
- open workflow
- fleets of DIY sailing drones

Prototypes:

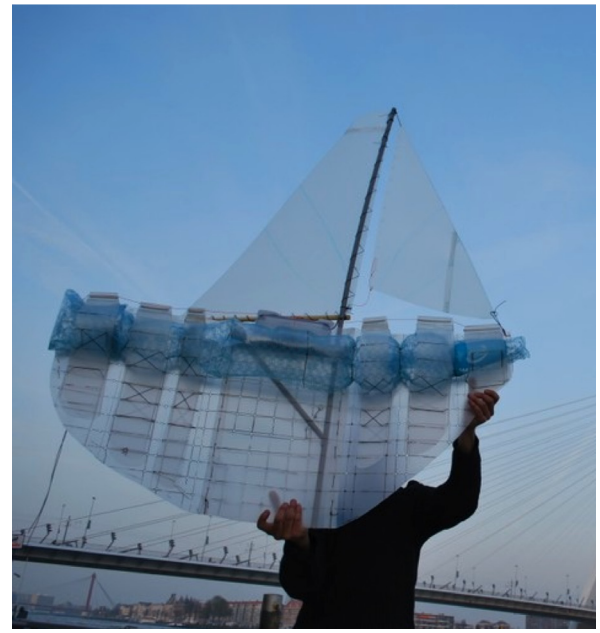
Protei_001

Protei_002

Protei_003



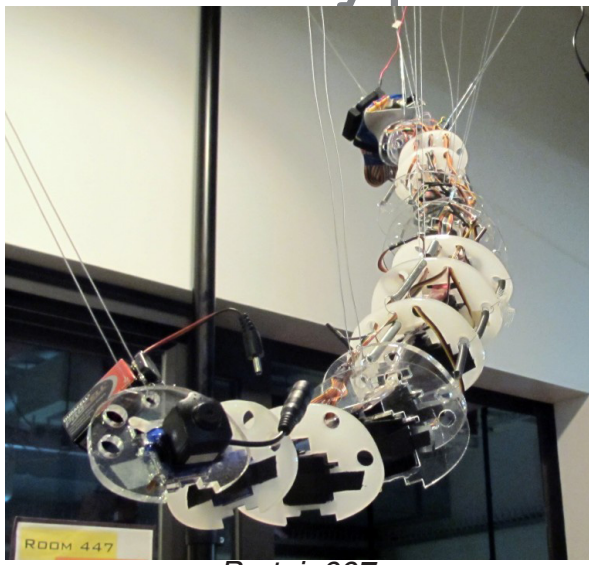
Protei_004



Protei_005

Protei_006

Prototypes:



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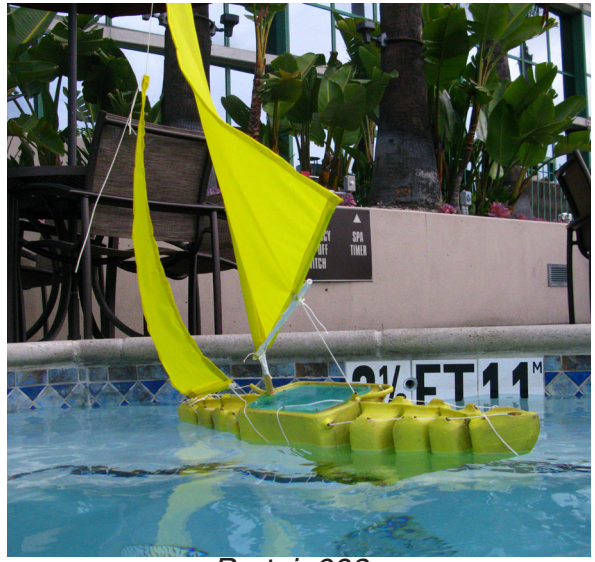
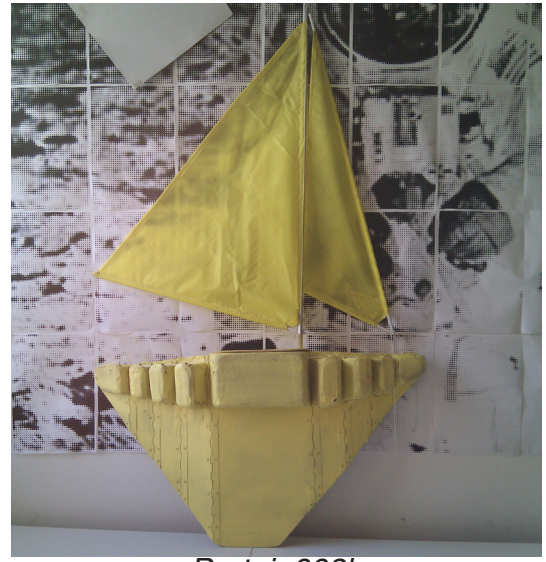


Protei_008a

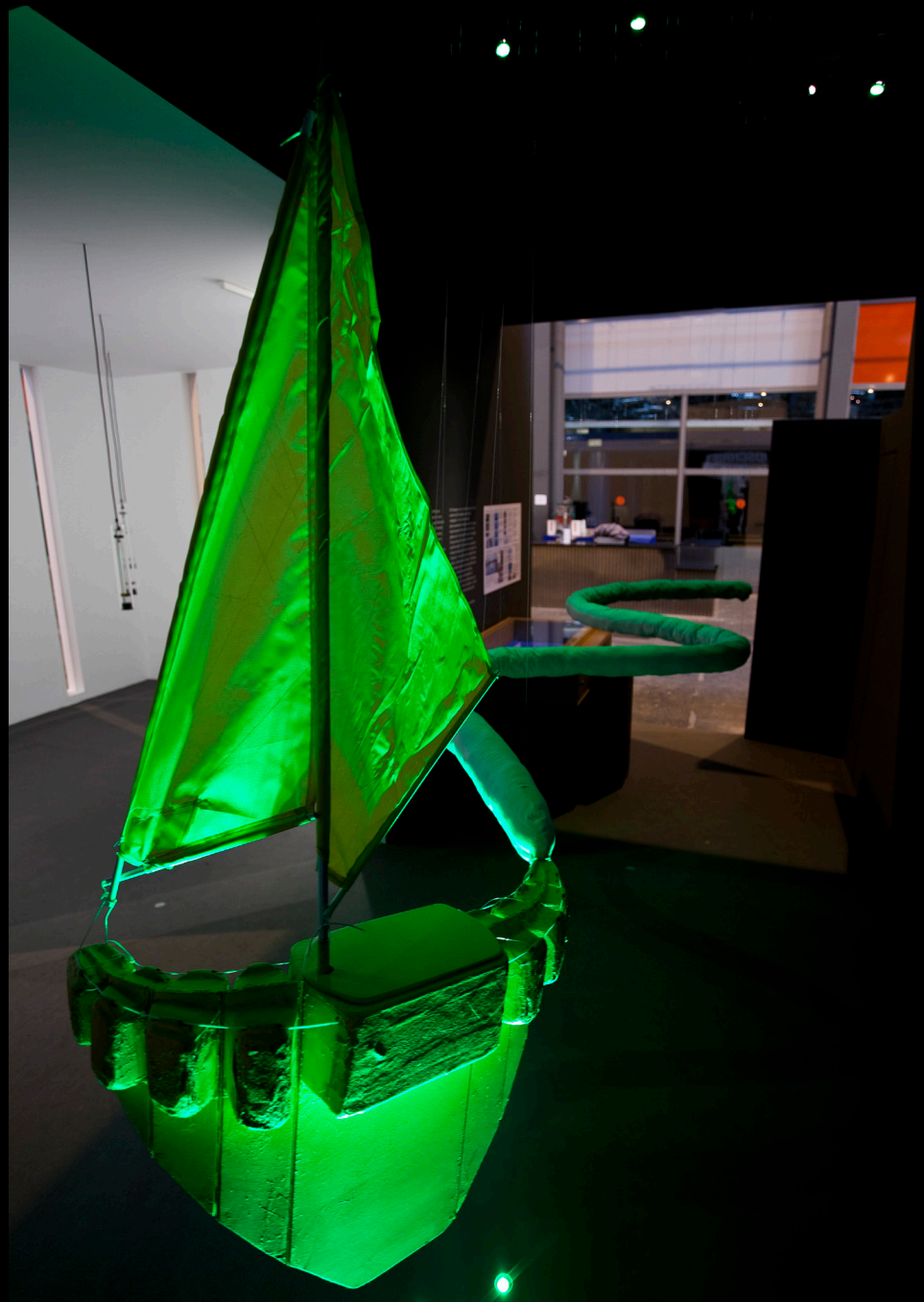


Protei_008b

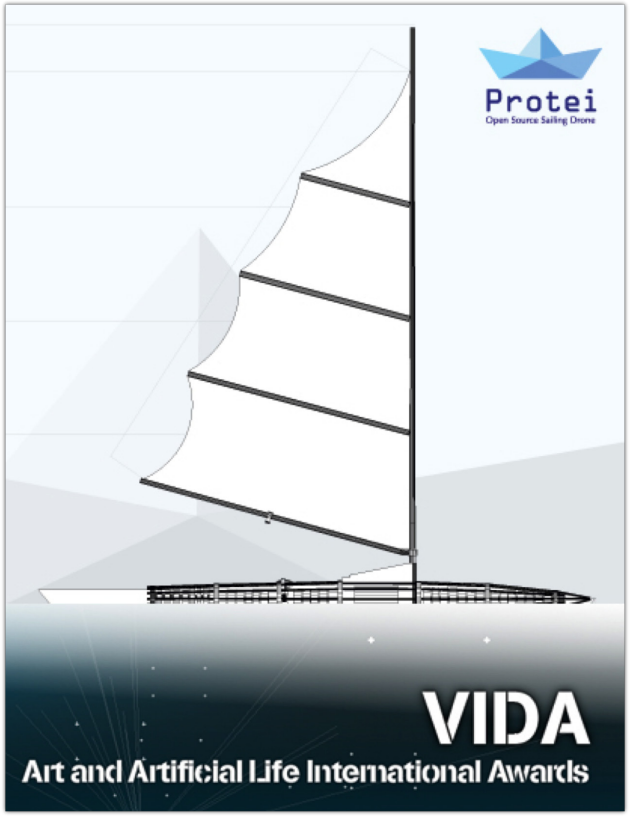
Protei_009

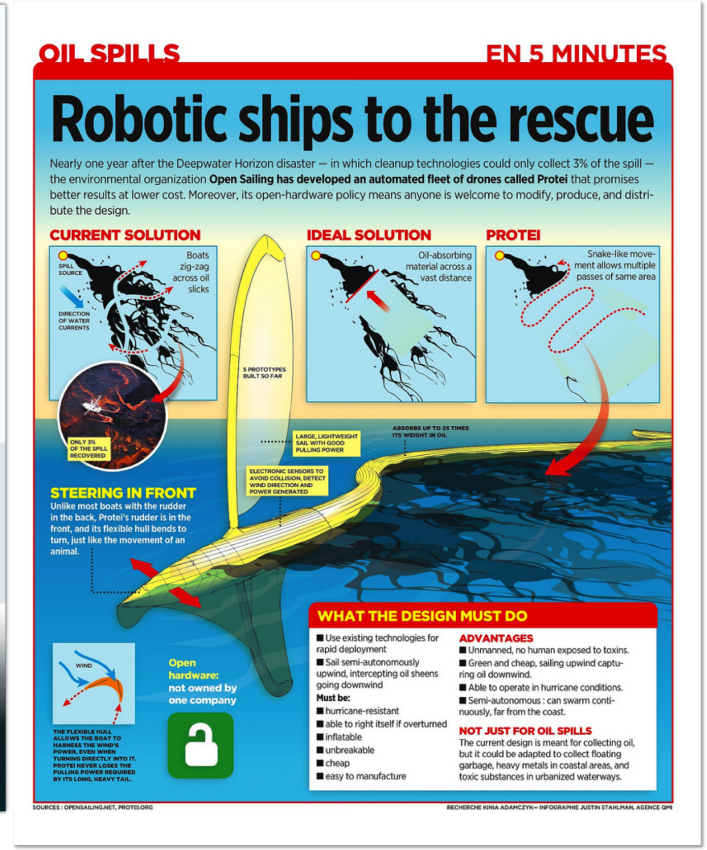
More coming...!

Protei_008 for manufacture:



Results 2011





What is Next?

Protei

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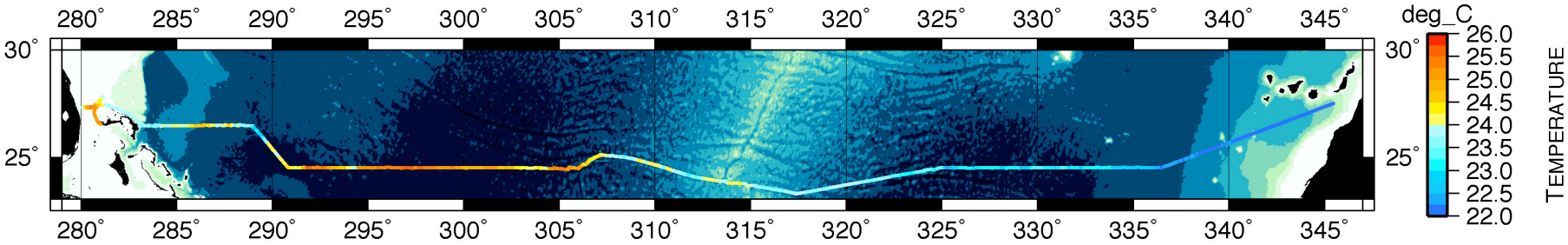
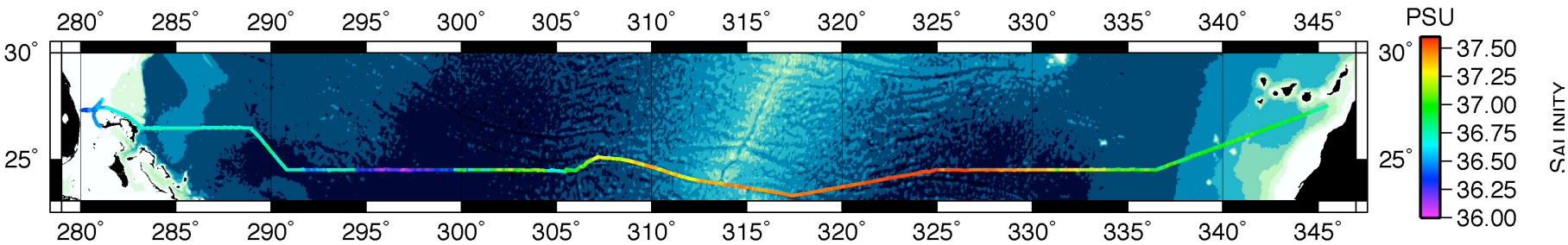
Other uses:

Underway Temperature to 15/02/10



Underway Salinity to 15/02/10



Ocean temperature and salinity data

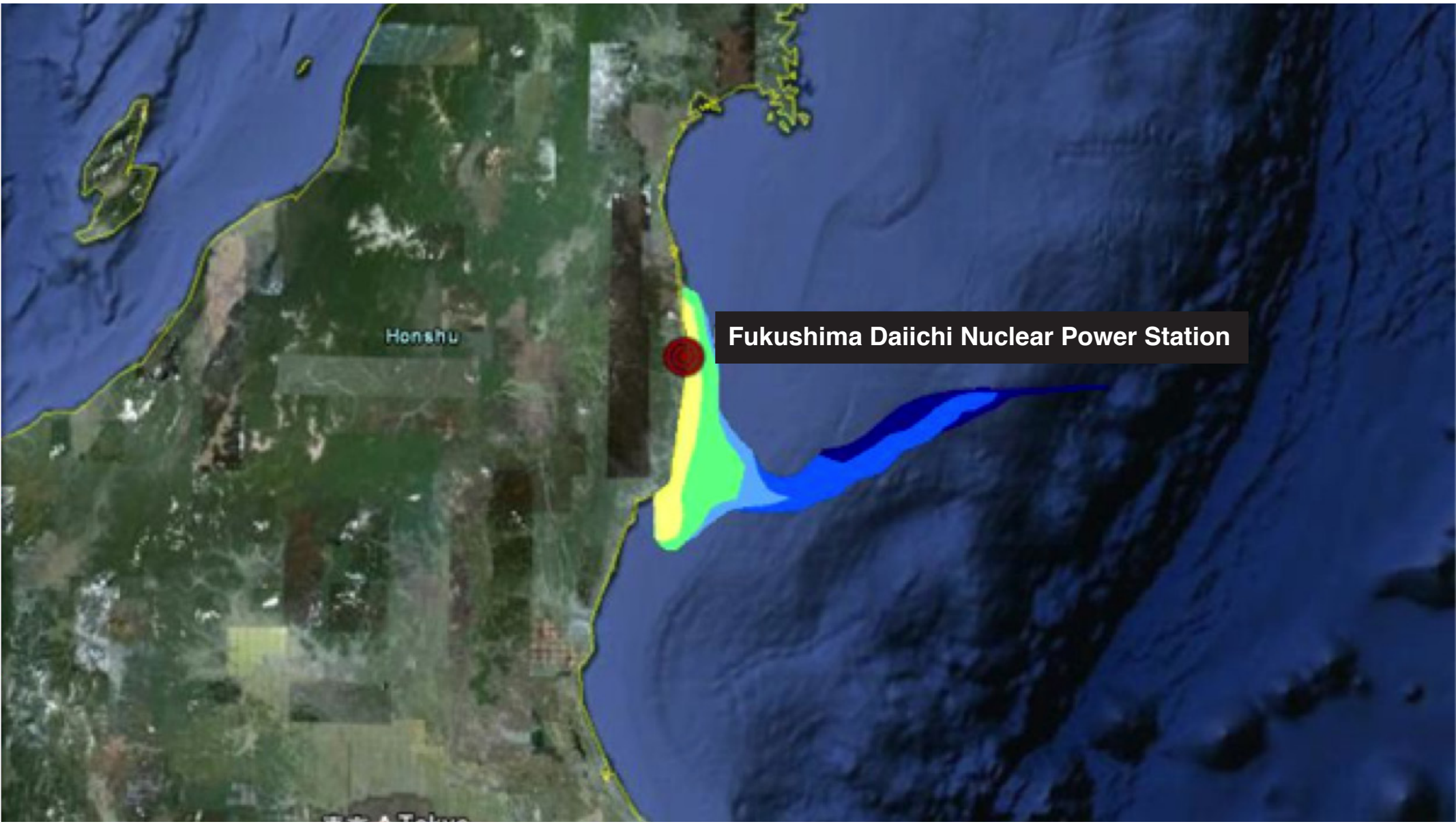
Other uses:

Plastic trash from the Great Pacific Garbage Patch

Other uses:

Fishery monitoring in marine protected areas

Other uses:



Radioactive plume over Japan

2012 Objectives:

RC kits

2012 Objectives:

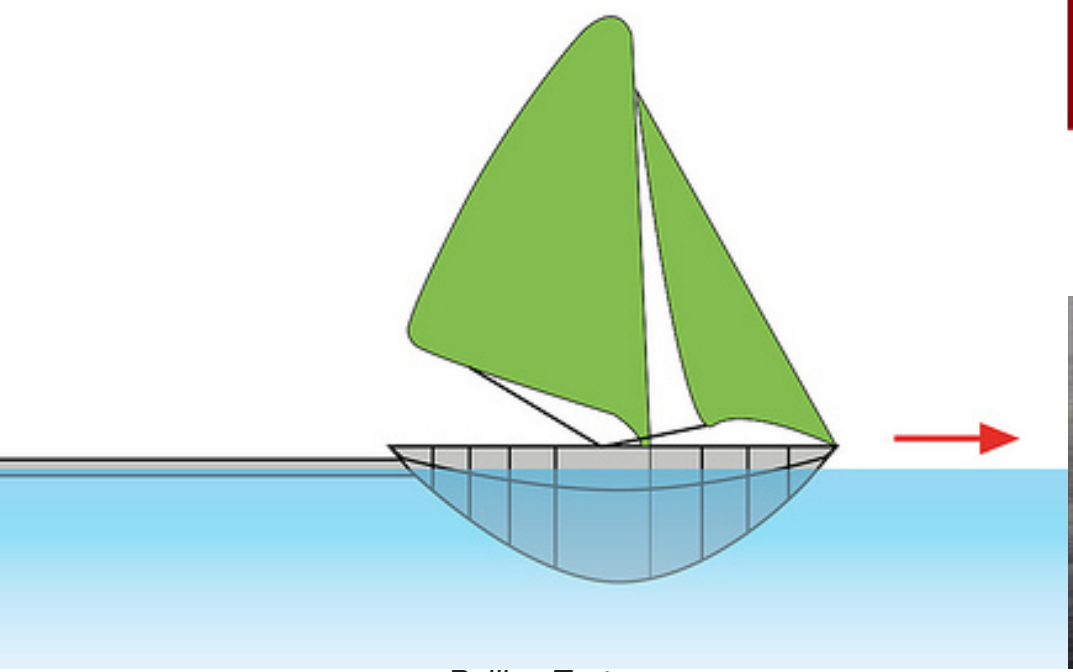
workshops with kids

2012 Objectives:

6 meter manned version

2012 Objectives:

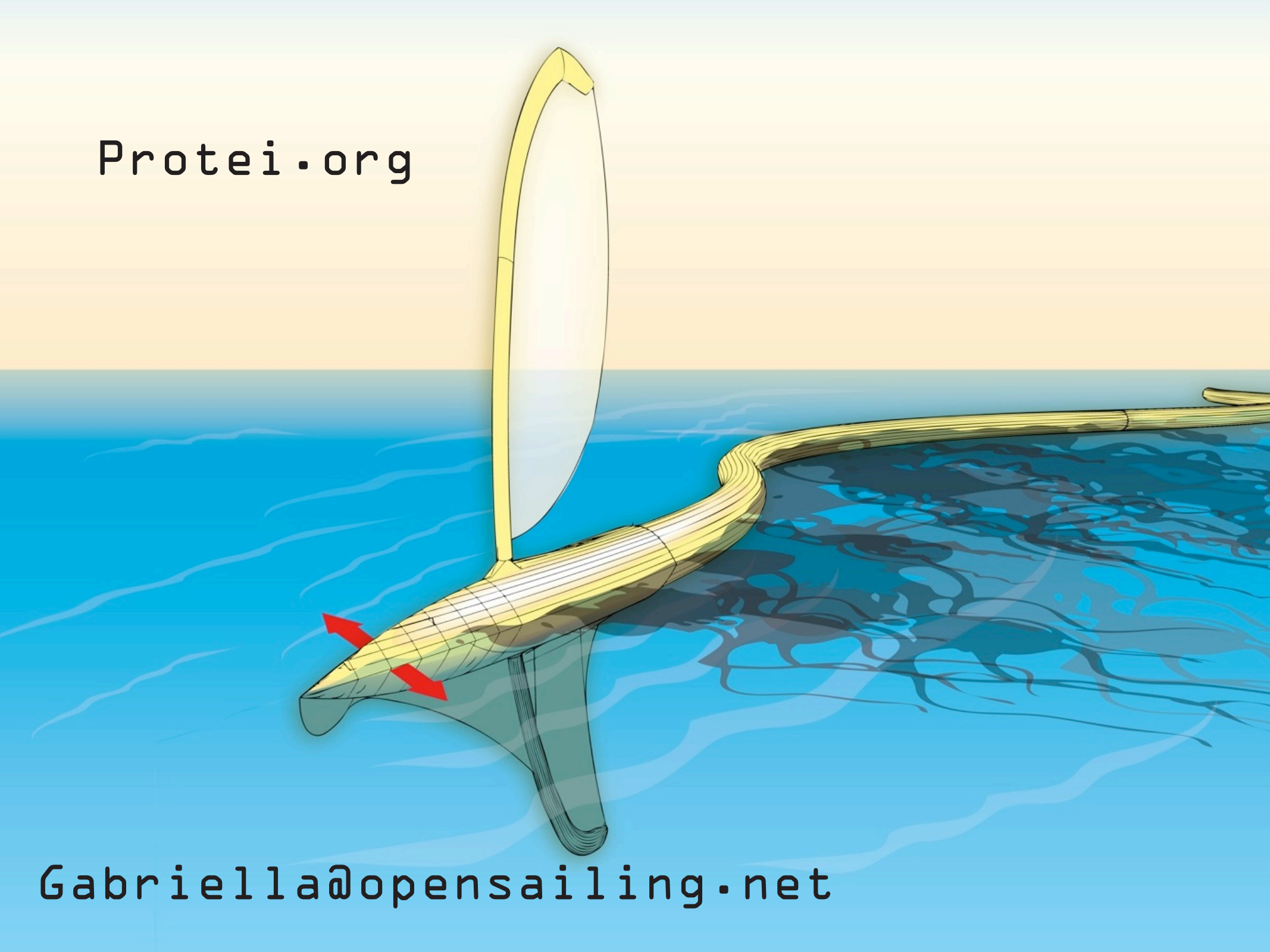
- Implementation:
  - -Brazil, Japan, San Francisco, Brooklyn
- Economic sustainability:
  - -R&D, manufacturing, distribution
- Research topics:
  - -Pull tests, Upwind Capabilities



Pulling Tests

Inadequate disaster response

Protei.org



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