

Protei & Oil Compass

On intersection of art, design, science, mobile tech
and marine engineering

TABLE OF CONTENT

1. About Protei

2. About Oil Compass

3. About Protei, Oil Compass and Mobile Apps

4. About Protei, Oil Compass, Mobile Apps and convergence of Art, Science and Tech

5. Contact

Meet the team!

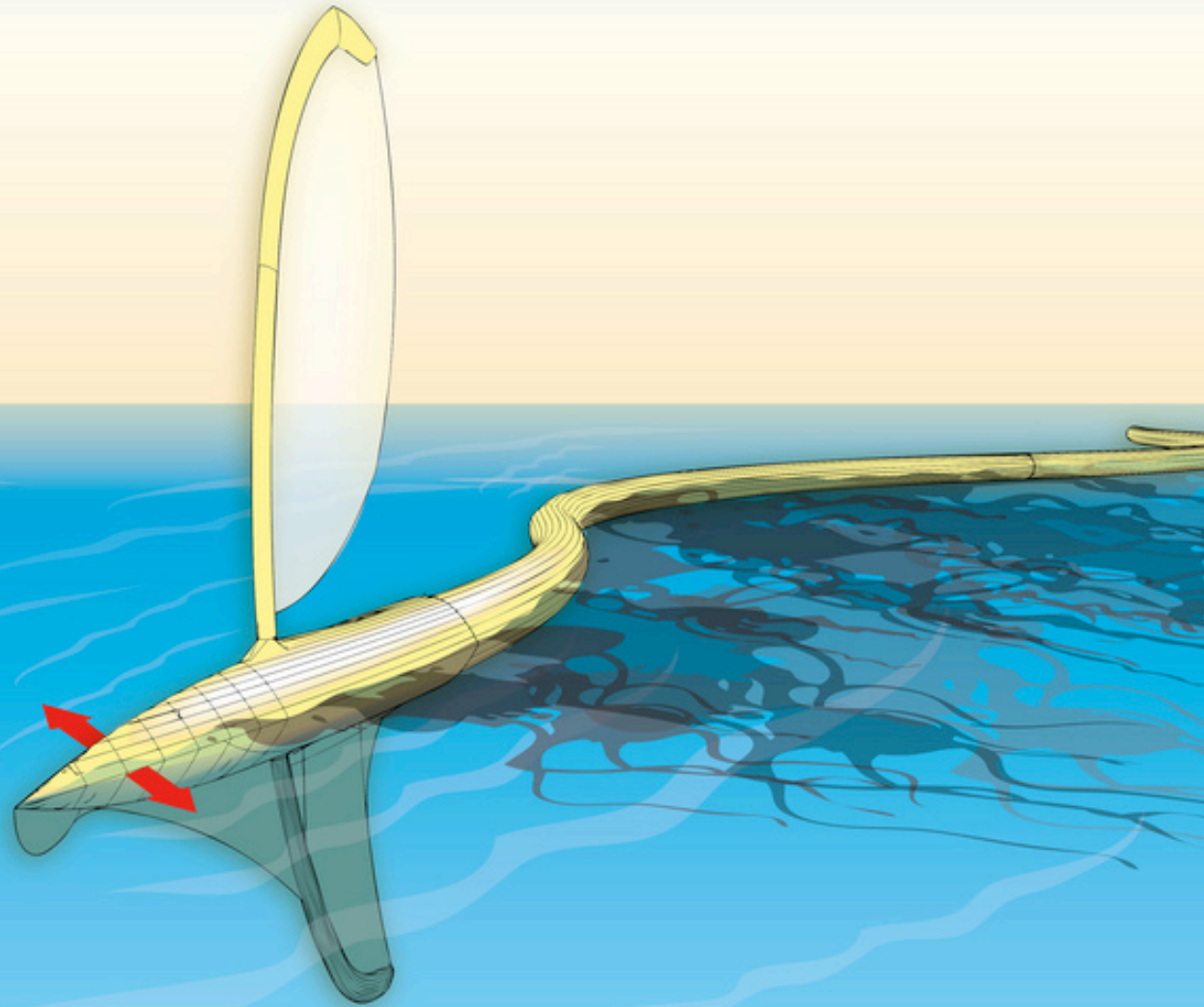


This presentation:
<http://goo.gl/c0A5t>
<http://protei.org>
contact@protei.org

1. Protei

collaborative project initiated by Cesar Harada

Sailing Robot to clean up oil spills.



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Protei - Issues



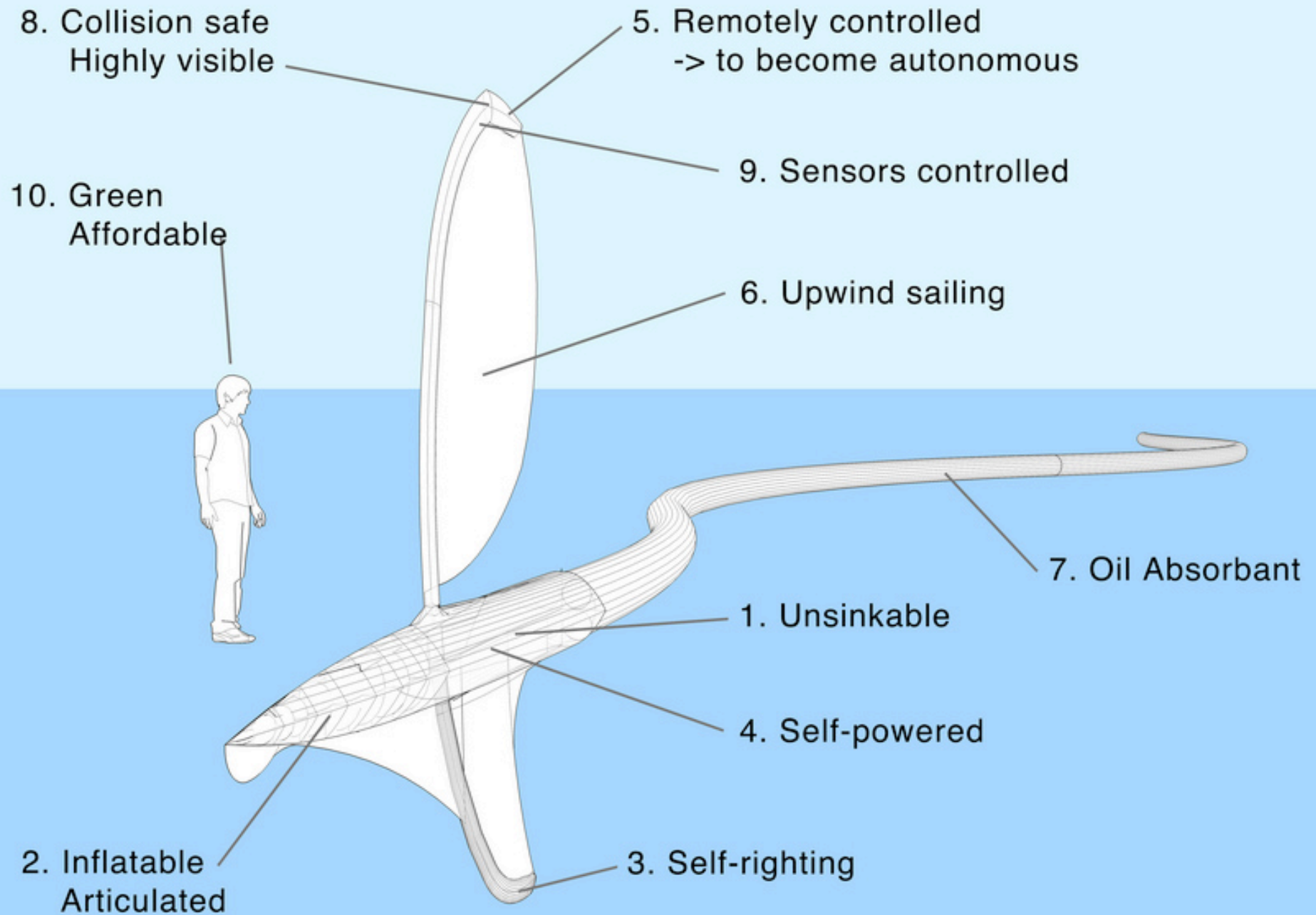
Conventional Oil Skimmers --> Protei

Cleans up only 3% of oil --> More efficient

Dangerous for cleaners , dirty tech --> Drones, clean tech

Expensive, Patented --> Affordable, Open Hardware

Protei - Overview



Protei - Concept



This is how we do it now. Oil skimmers trace a line of clean in an ocean of dirt.



With the same length of oil sorbent you can clean up a lot more oil.



If we use multiple lines, we can collect a lot more. It is very hard to pull up the wind such structure.



Protei uses wind power, to sail up the wind and capture the oil drifting down the wind.

Protei - Proteus

"Protei" is the plural of Proteus, the Greek god of the sea.



Proteus is the son of Poseidon.
He is the herdsman of the creatures of the oceans.
He can change shape to carry his duties.
Protei changed shape to carry its duties, adapts.



"Proteus anguinus" is the scientific name of the Olm.
The olm lives in dark caves in the north of Italy and Slovenia.
It is entirely blind and it has developed other super senses to thrive.

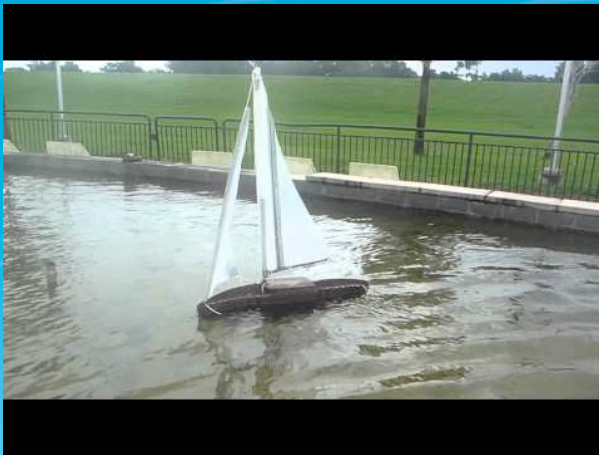
Protei - Versions



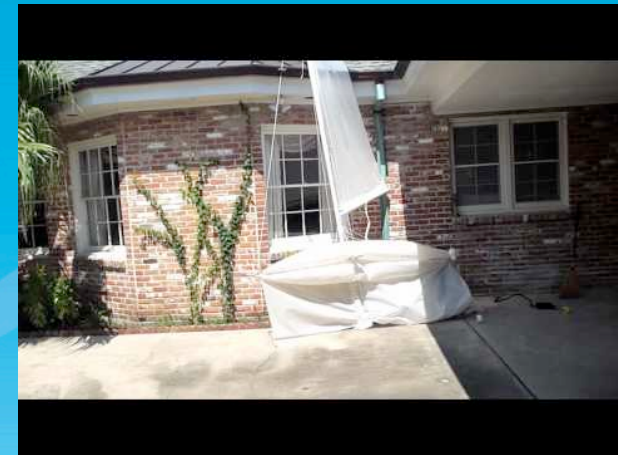
A conventional sailboat loses power and steering when pulling something long and heavy.



By putting the rudder at the front, Protei_001 shows it is possible to control something long and heavy with little force.



Protei_002 hull is entirely articulated and introduces many potential breakthrough in the science of sailing, for oil spill cleaning among other possible applications.

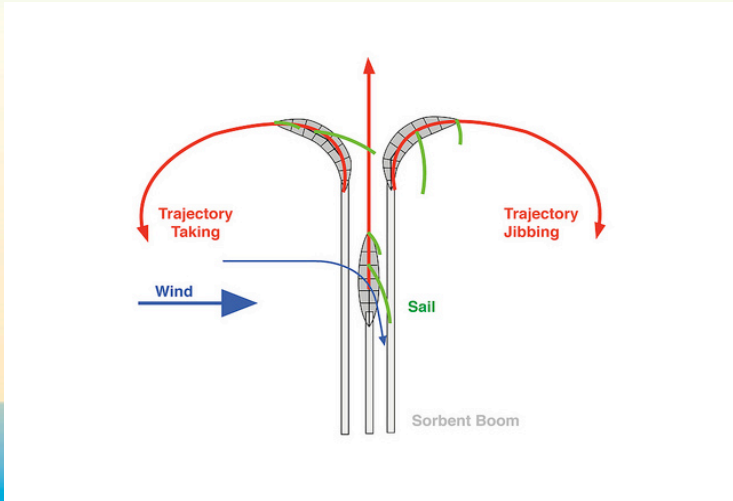


Protei_003 was built in less than a week and under 100\$. It demonstrates that this new technology can be affordable and fast to develop.

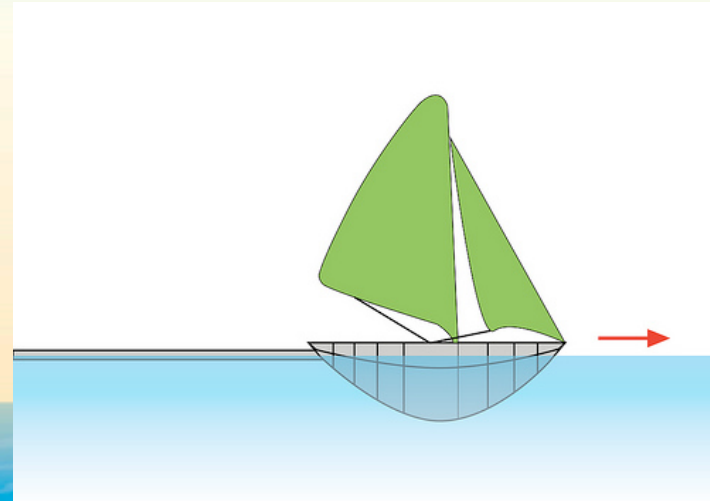
Protei - Innovations?

Protei research questions leading to potential innovations.

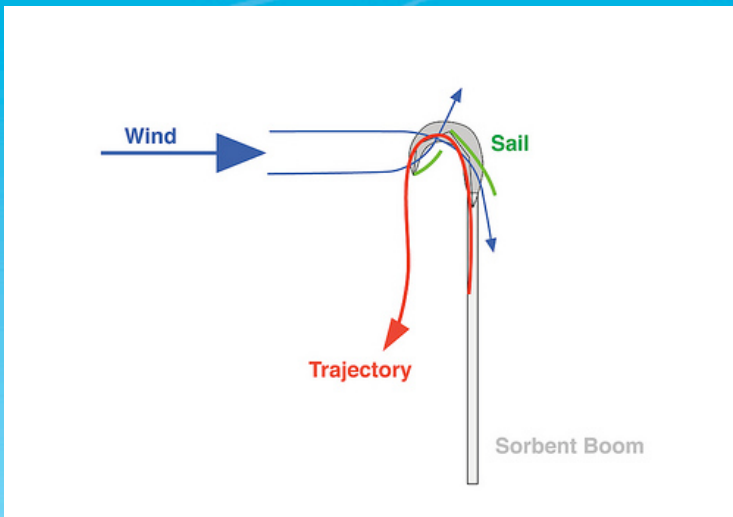
Better control?



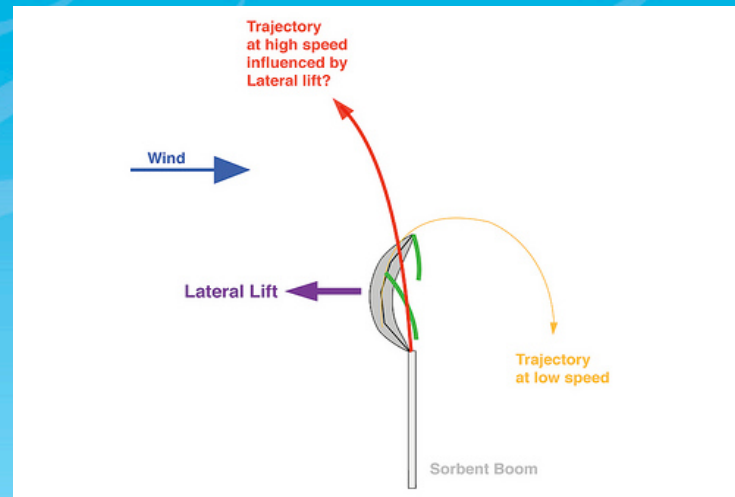
Rugged? Less turbulences? Faster?



Upwind Sailing? More pulling power?

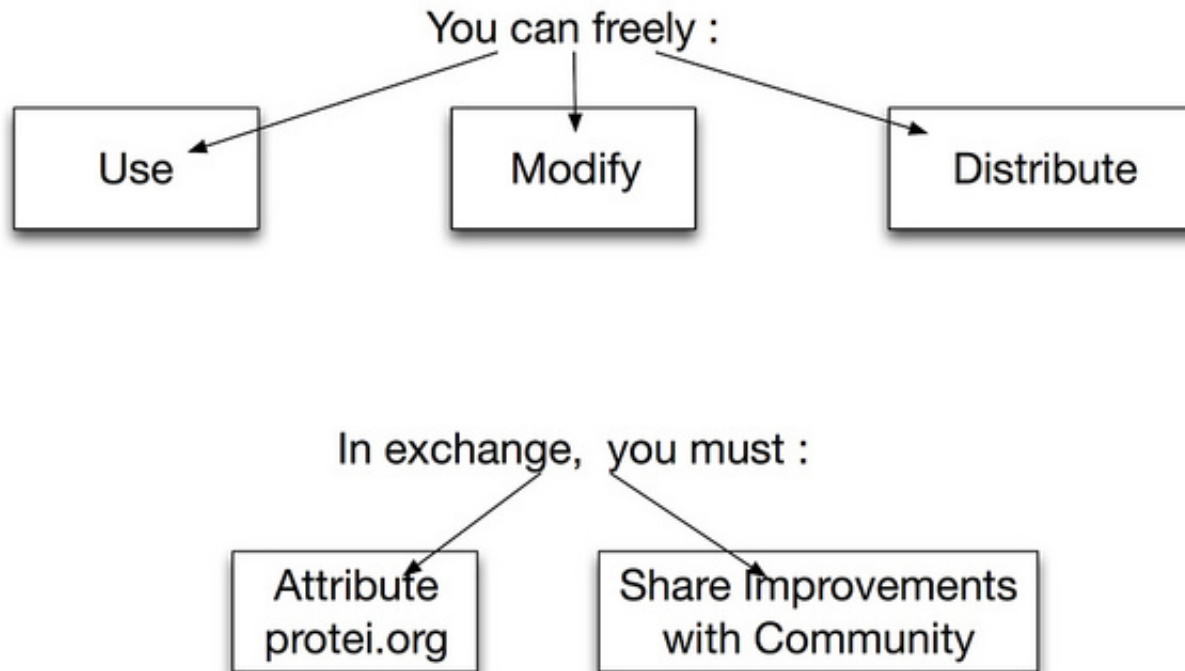


Hydrofoil profile : lateral lift?



Protei - Open Hardware

Protei Open Hardware Agreement

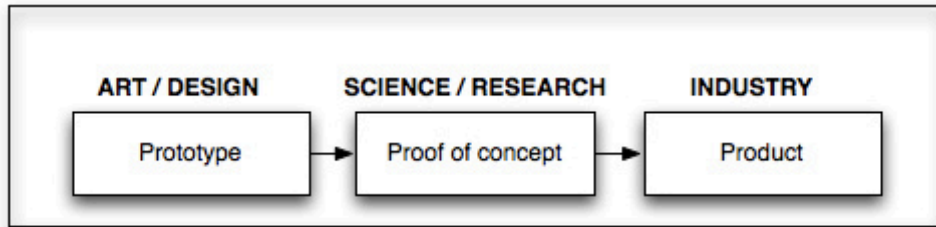


We work Open Hardware not only because it is the most ethical, the fastest, cheapest and most fun way, but because it is building a community around the technology, ensuring our leadership to serve environmental purposes.

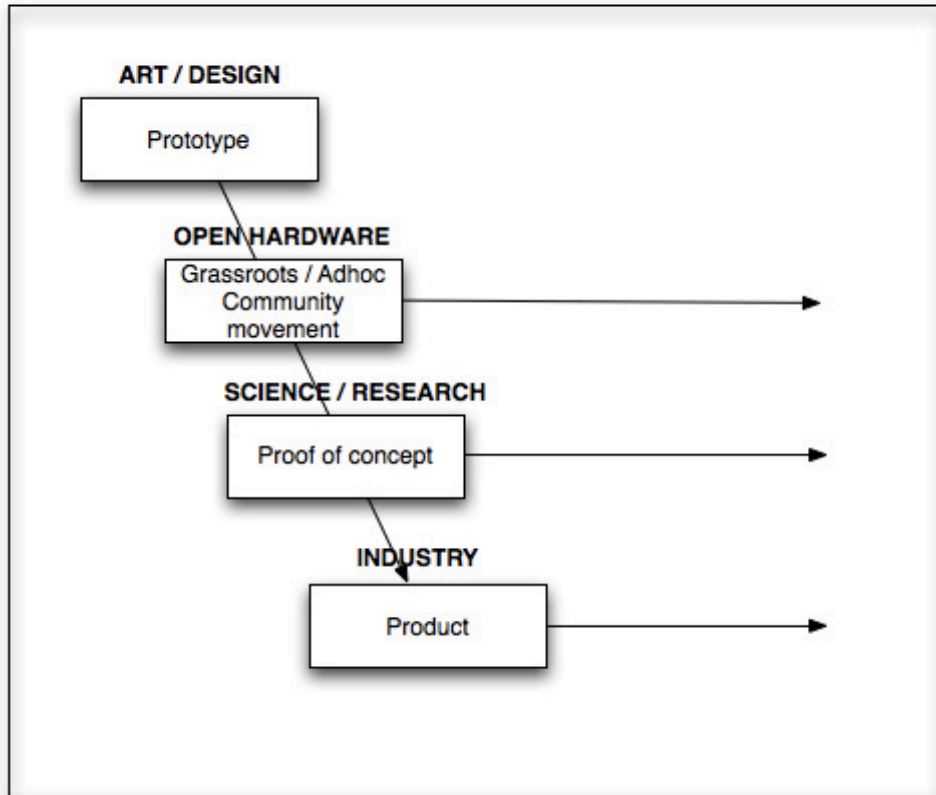
On the short term, the financial returns might be small, on the long term we become the technology nexus and demanded specialists.

Protei - Sequential vs Parallel Development

Sequential Development (classical)



Parallel Development (Proposed for Protei with an Open hardware structure)



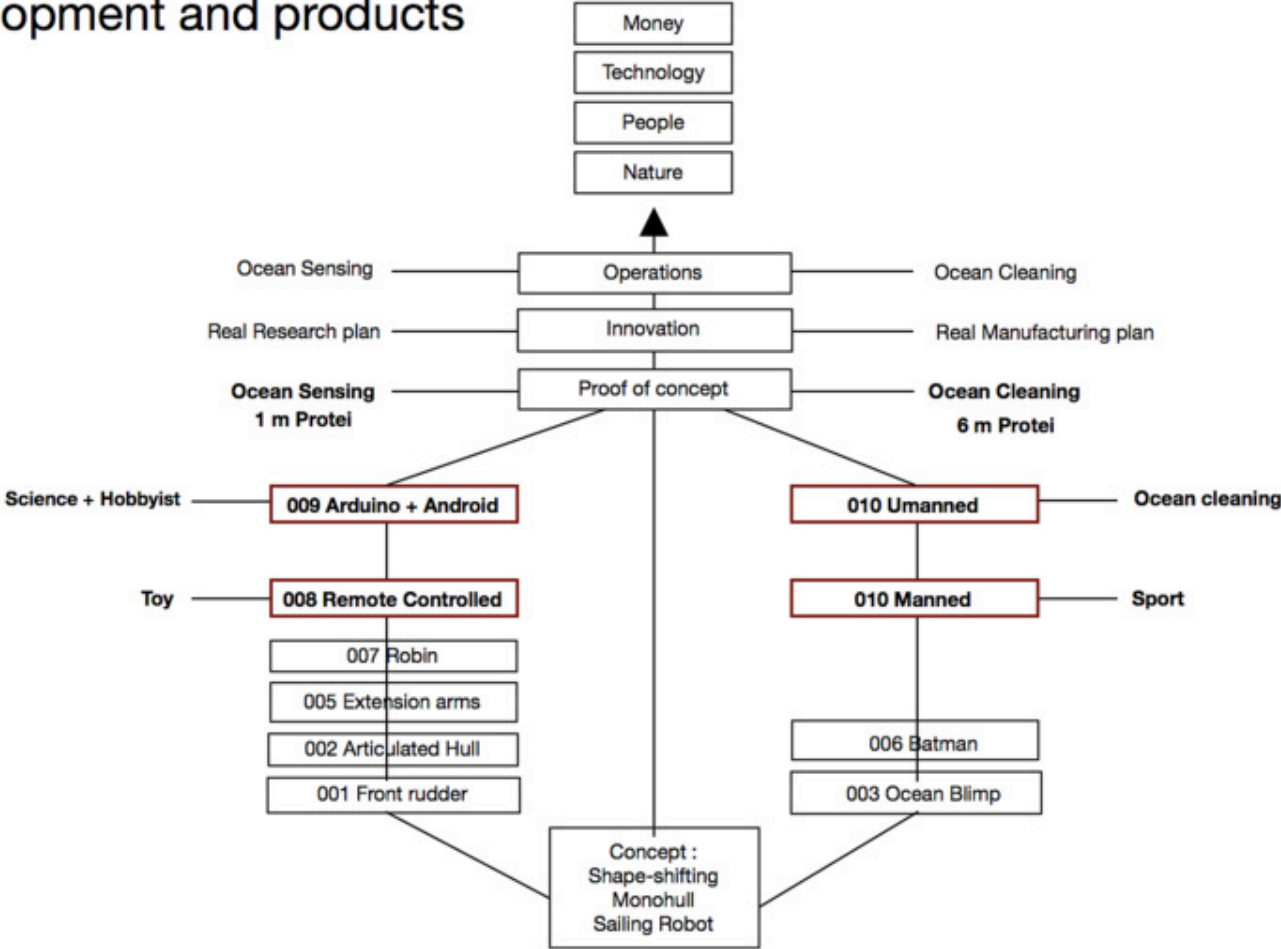
In conventional innovation development, a good idea is prototyped to the proof of concept stage, then studied scientifically, before it is mass-produced. These transactions slow down the innovation process and increase the price artificially.

Open Hardware serves the interest of everyone at the same time, so everyone can collaborate.

Protei - Strategy

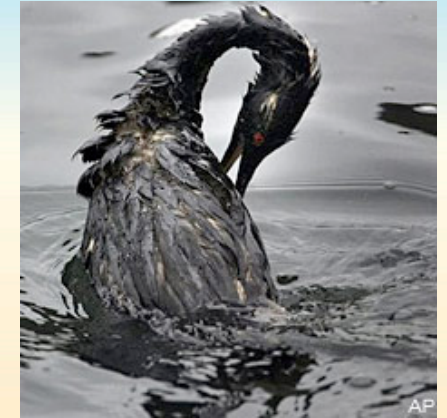
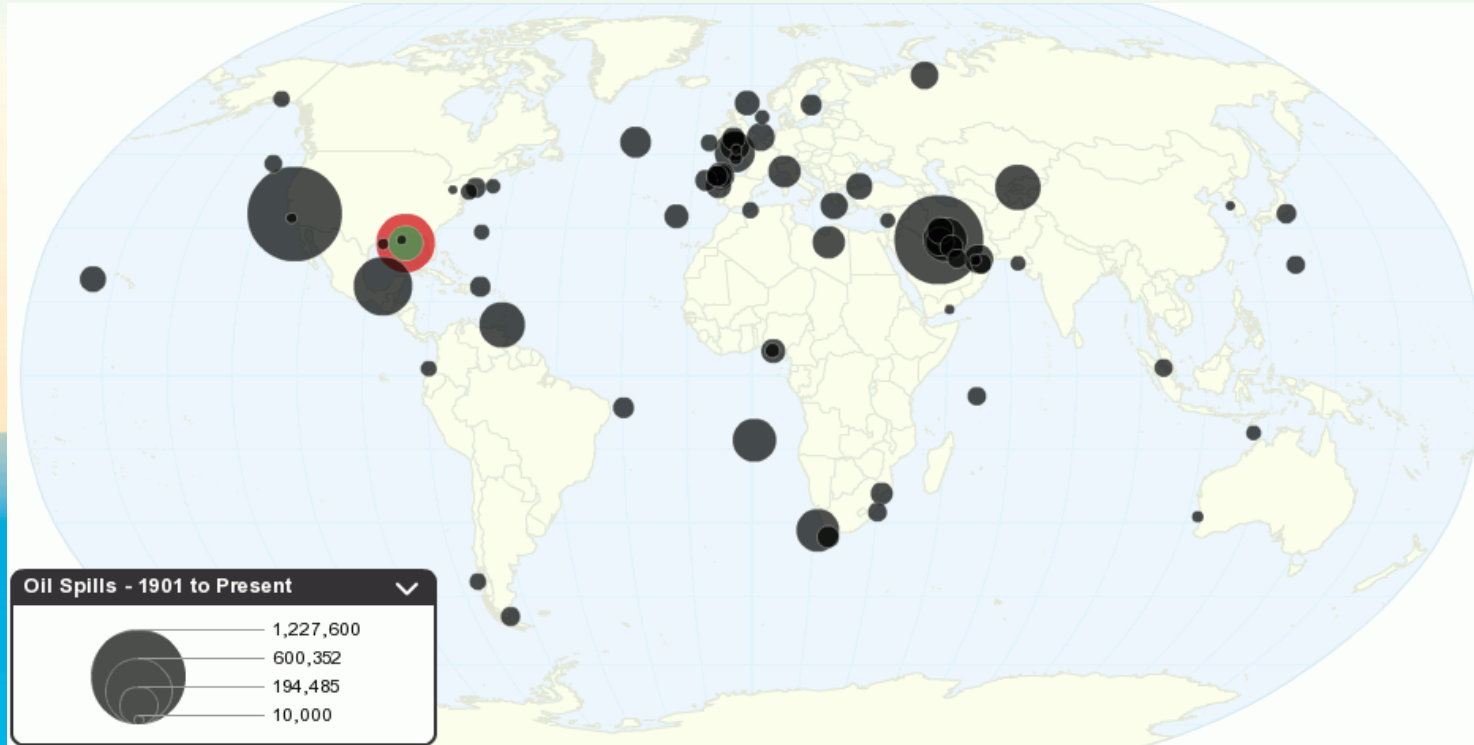
We have interesting prototypes, some promising research questions.
Now, how do we achieve significant positive environmental impact?

Protei Development and products



Protei - Applications/Oil Spill

Overview



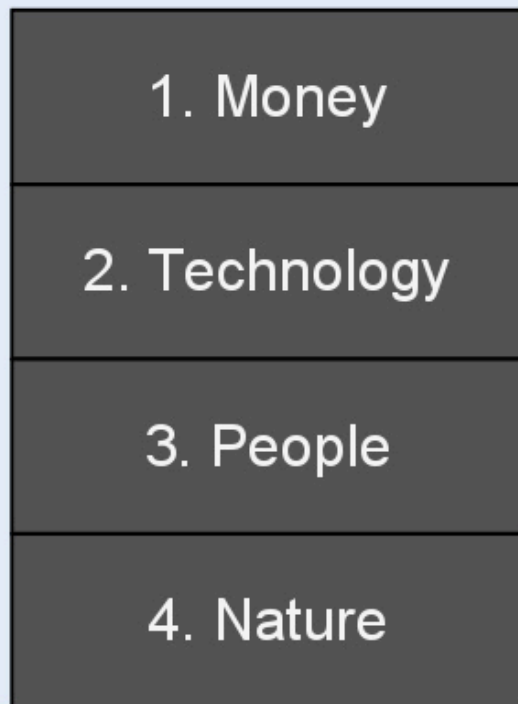
Oil spills are happening everywhere, all the time.

It is not about asking the question "IF" another oil spill is going to happen, but predicting when and where it is going to happen.

In the Gulf of Mexico, during the BP oil spill 700 skimmers have been deployed and collected only 3% of the spill, exposing the health of human beings at a very high cost.

Protei Ethical Order of Priority

Business as usual



Protei.org



Protei - 3 big ideas

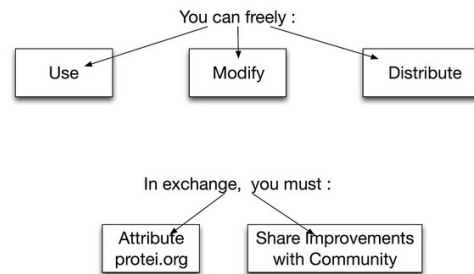
Technology is
power of Nature



Using power of nature to
remediate man-made
disaster.
Innovations in the science
of sailing.

Open Hardware

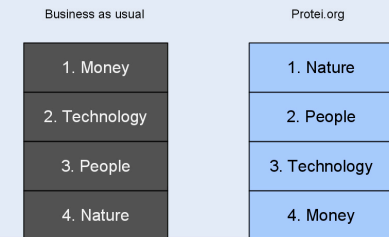
Protei Open Hardware Agreement



Open hardware and global
collaboration.
Community development.

How the world
really works

Protei Ethical Order of Priority



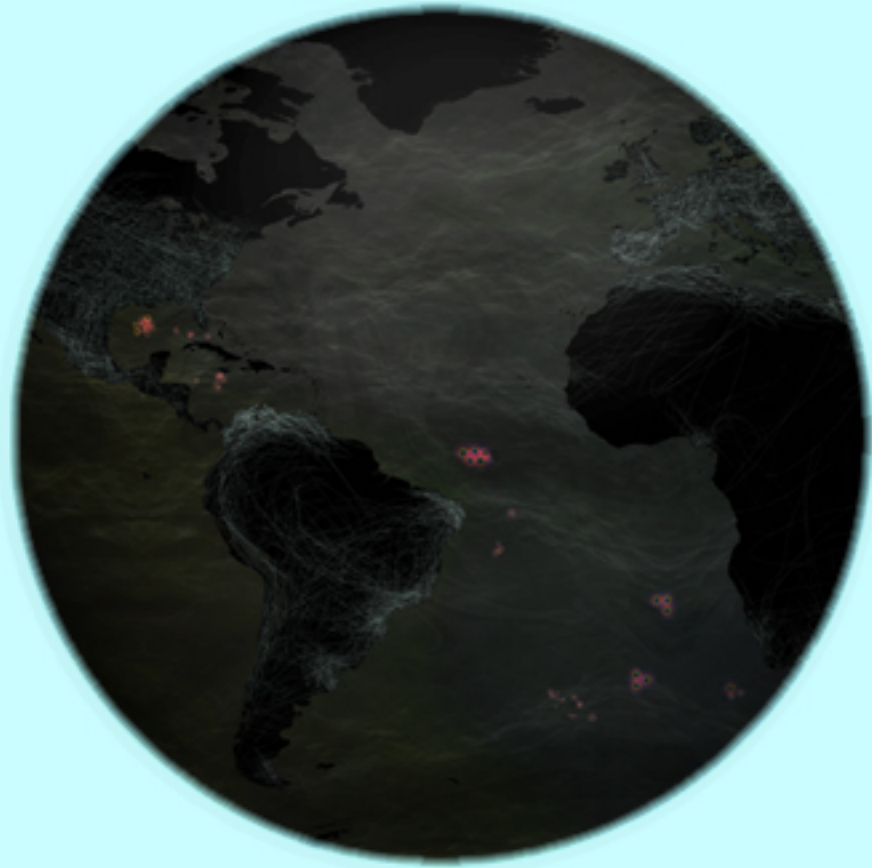
New Business model

1. Nature
2. People
3. Technology
4. Money

2. Oil Compass

collaborative project initiated by Kasia Molga

An open source central navigational hub and “living sculpture” to visualise issues of oil spills and other marine environmental problems.



This presentation:

<http://protei.org> & www.kasiamolga.net
contact@protei.org & info@kasiamolga.net

Oil Compass - WHAT IS IT?

- navigational hub of Protei and part of Protei project
- data visualisation interface
- interactive art installation
- connection between the marine environmental issues and public



Oil Compass v 1.0 - AN OBJECT / INTERACTIVE INSTALLATION / A LIVING SCULPTURE



Roles:

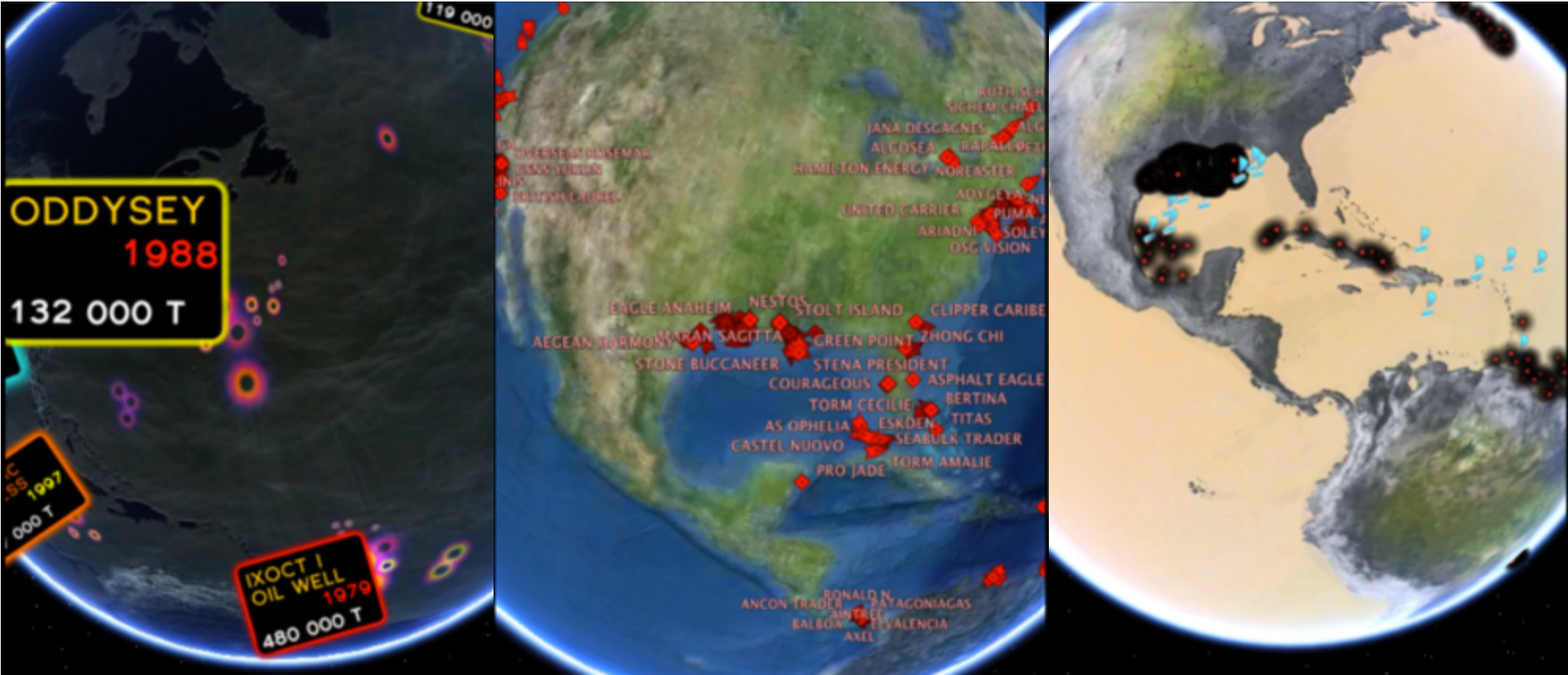
- 1) Educational/Didactic
- 2) Monitoring / Forecasting
- 3) Navigational for "Protei" Locations

Oil Compass v 1.0 - DEPICTING PAST / PRESENT / FUTURE

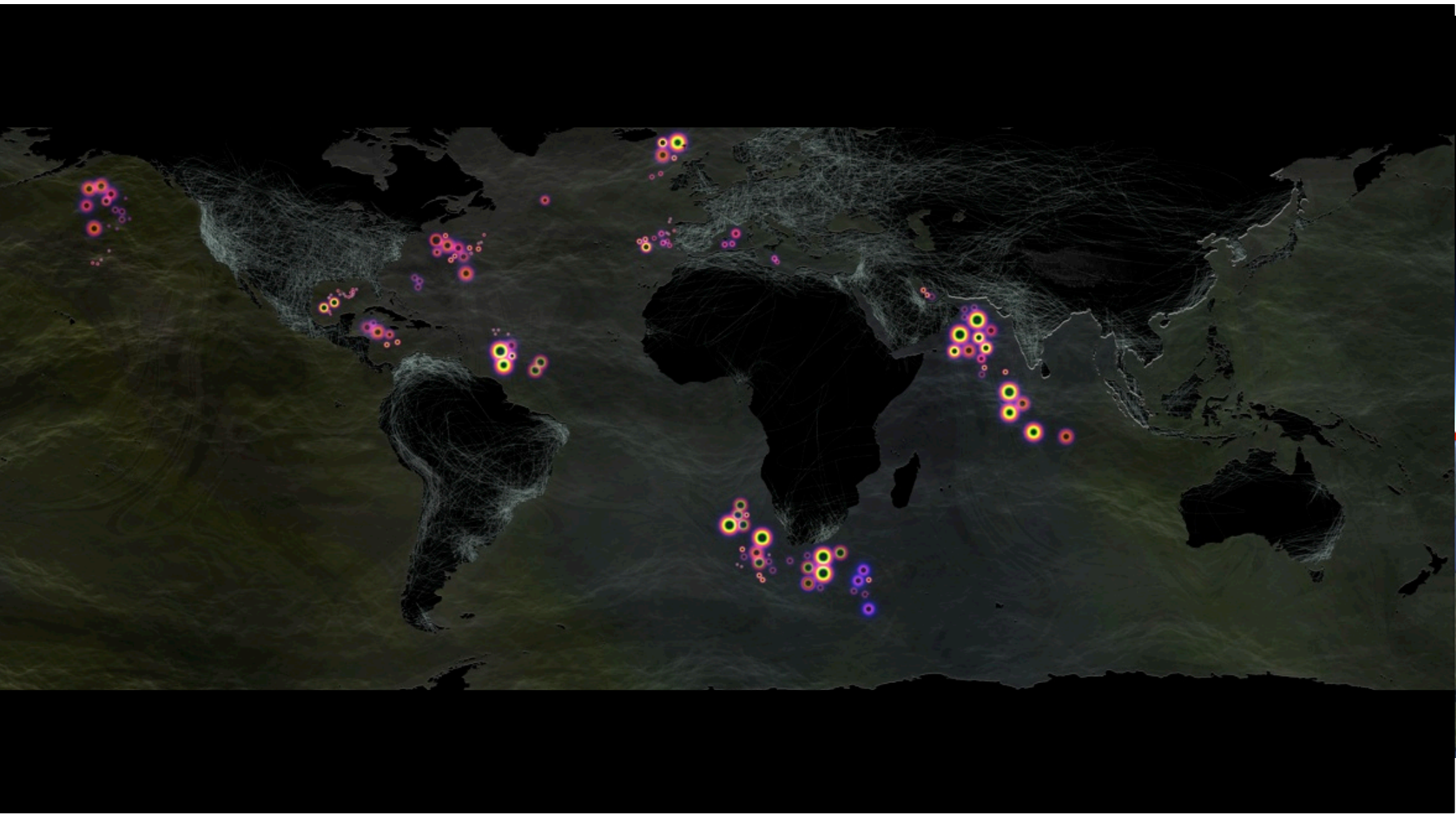
PAST

PRESENT

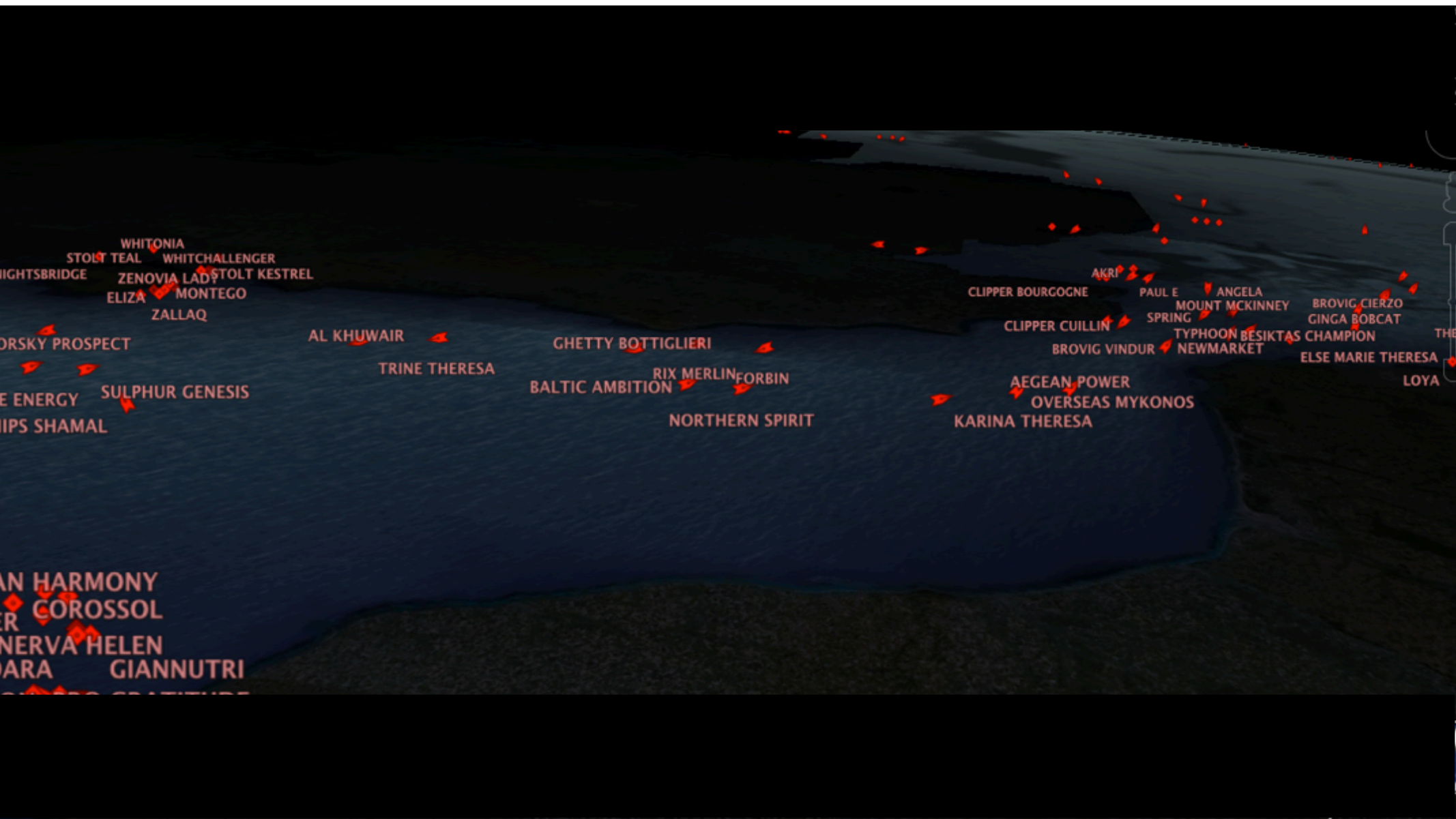
FUTURE



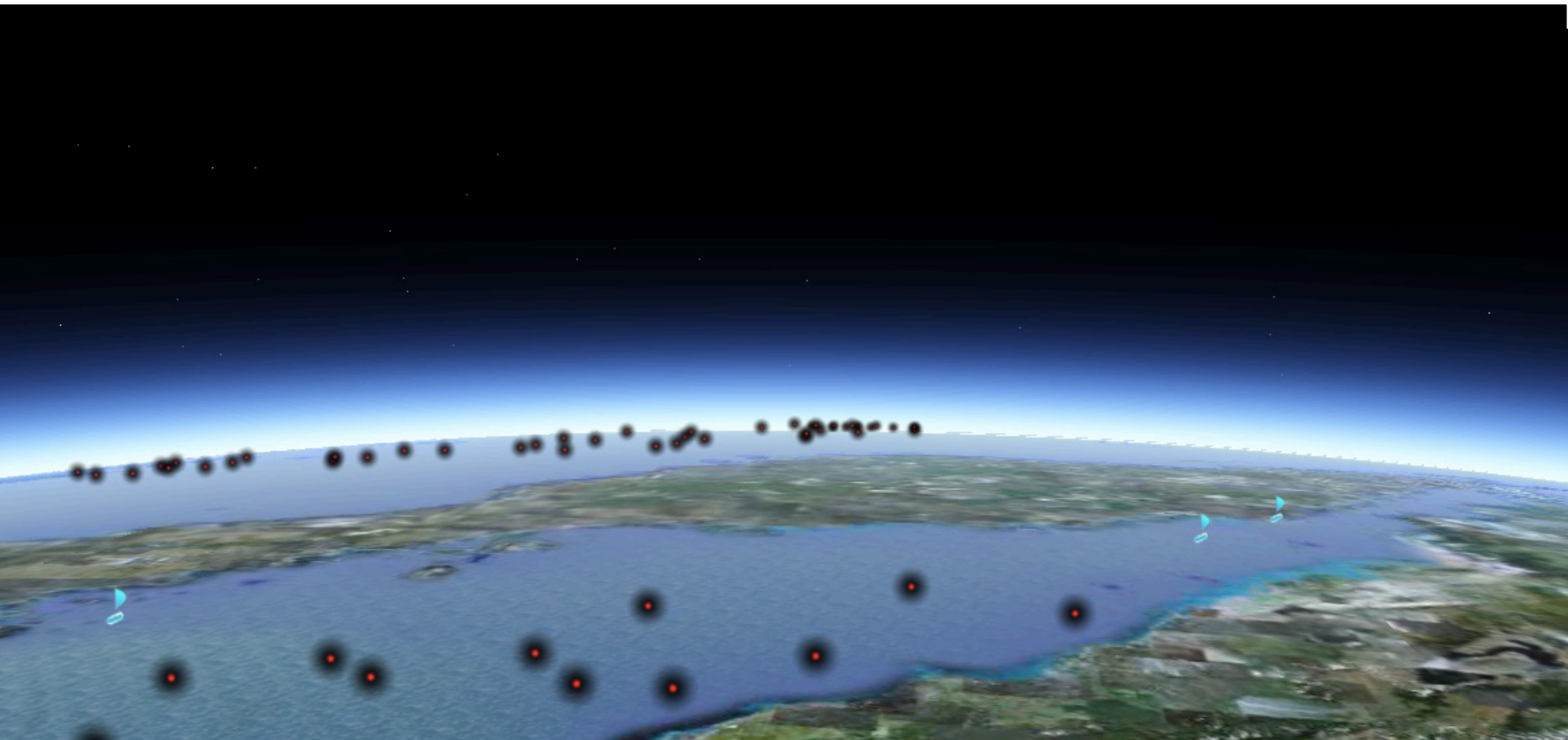
Oil Compass v 1.0 - PAST: OIL SPILLS AND CURRENT OIL SPILLS



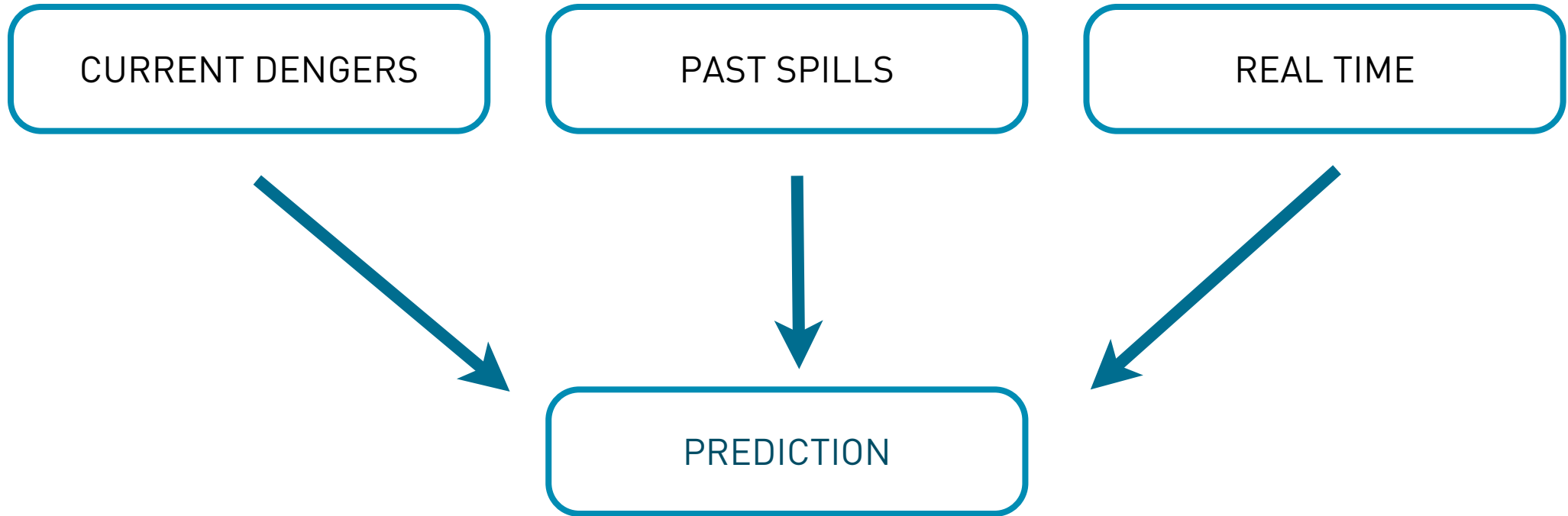
Oil Compass v 1.0 - PRESENT: LIVE DATA VISUALISATION OF MARINE TRAFFIC (OIL TANKERS)



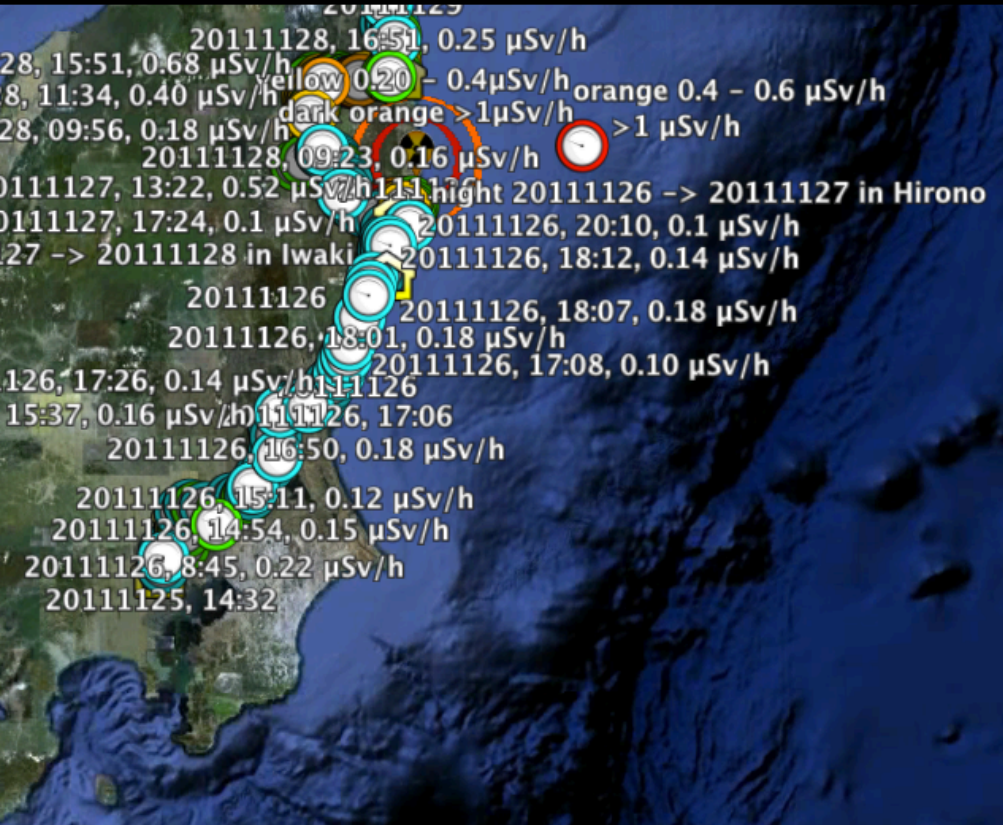
Oil Compass v 1.0 - FUTURE: LOCATIONS OF OIL RIGS



Oil Compass v 1.0 - WHY WE NEED IT WITHIN PROTEI?



Oil Compass v 1.0 - SHOWING OTHER FUNCTIONS OF PROTEI



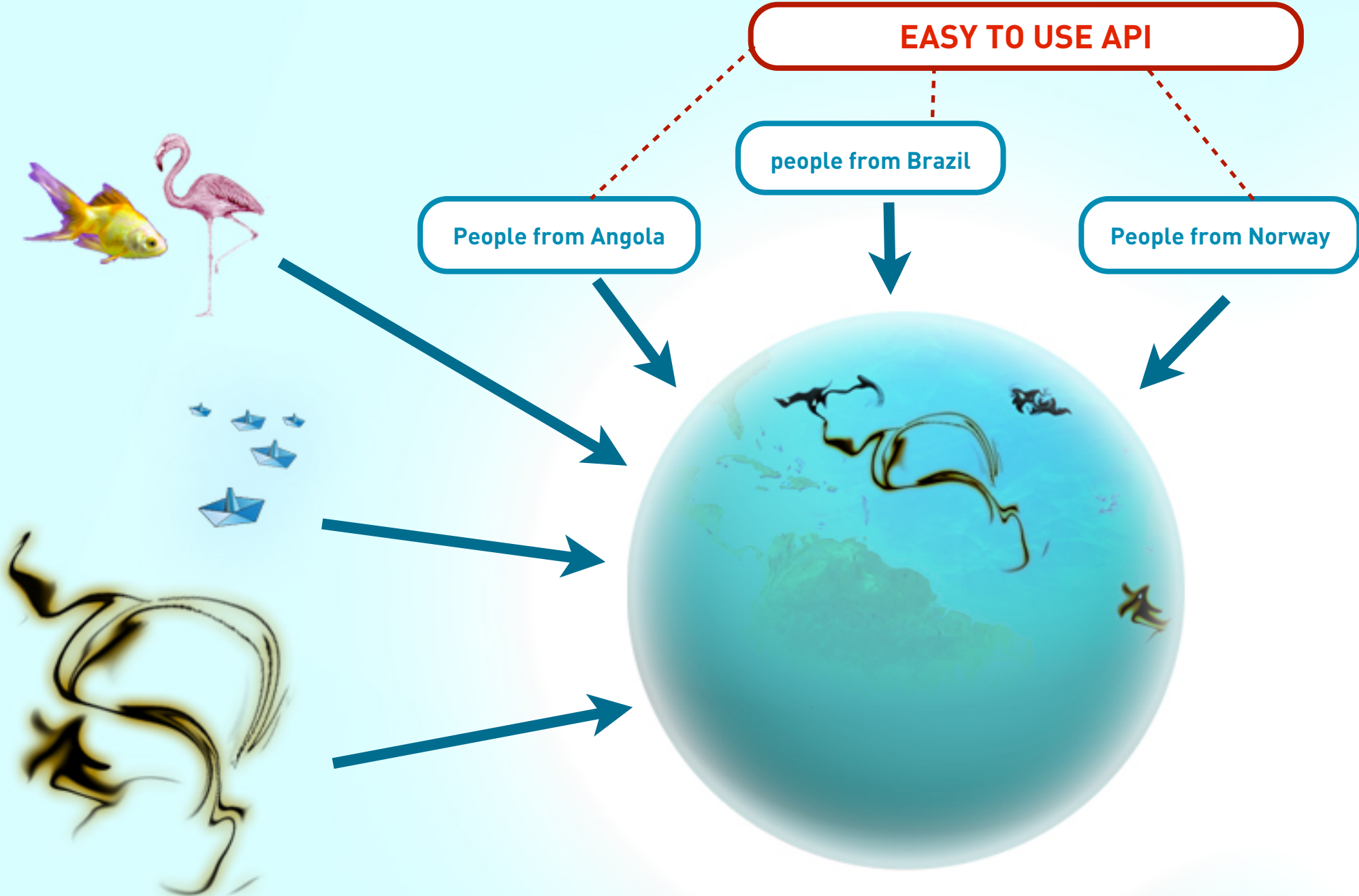
PROTEI.ORG/PROJECTS/OILCOMPASS

Oil Compass v 1.0 - EASY TO ACCESS: BASED ON GOOGLE EARTH API



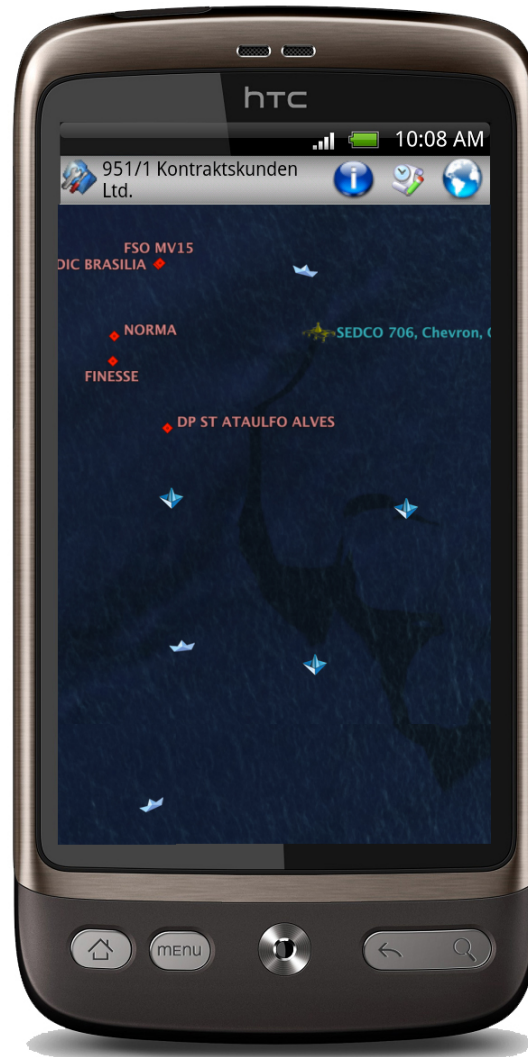
PROTEI.ORG/PROJECTS/OILCOMPASS

Oil Compass - FUTURE ADDITIONS & DEVELOPMENTS

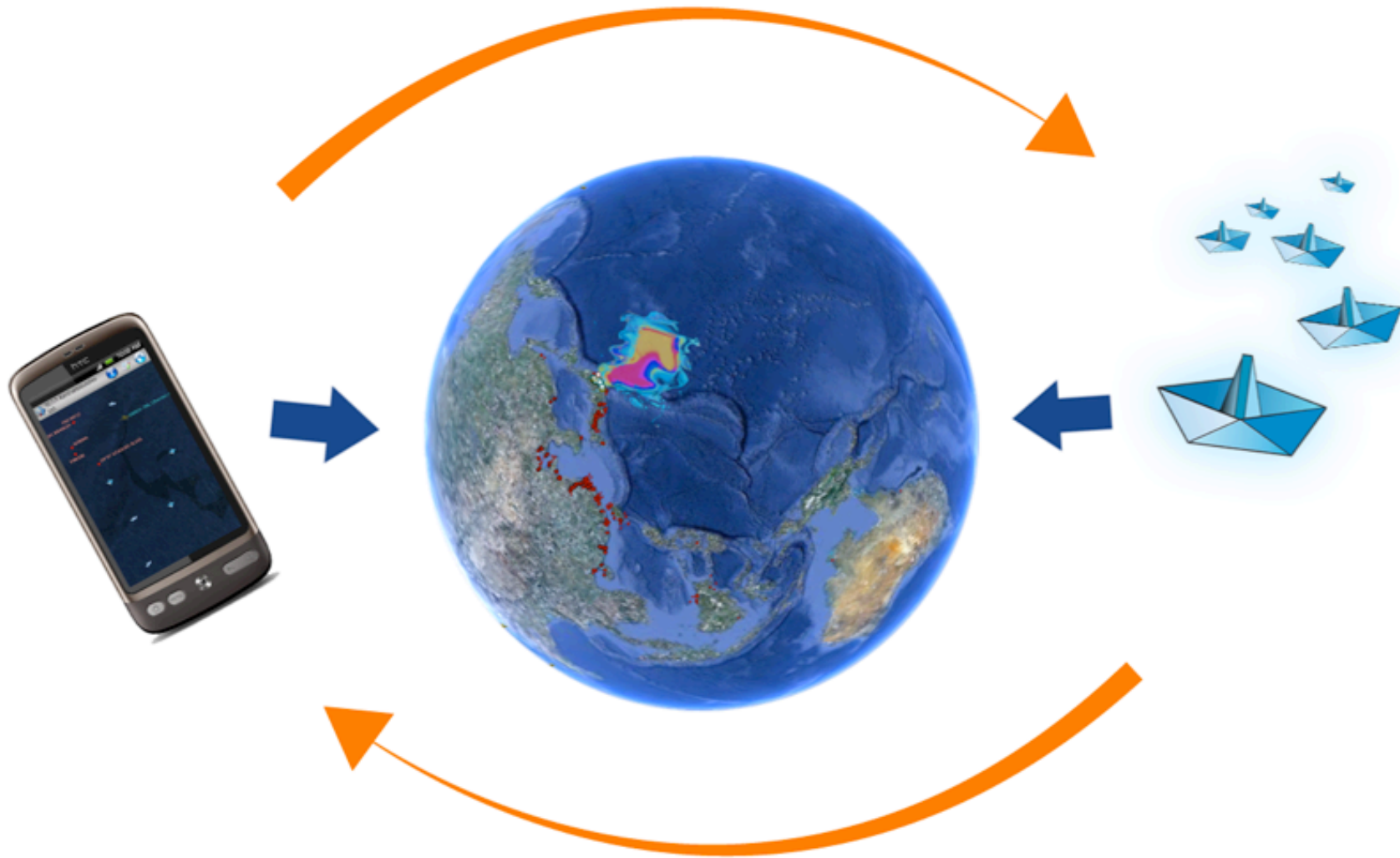


3. Protei | Oil Compass

& The Mobile App



Protei | Oil Compass | Mobile App - HOW WILL THAT WORK?



Protei | Oil Compass | Mobile App - HOW WE WANT TO USE IT?



4. Art | Science | Tech

A convergence of art, science, design - a result of collaboration between people and disciplines.



Oil Compass - AS A LIVING SCULPTURE TO RAISE AWARENESS

Oil Compass v 1.0



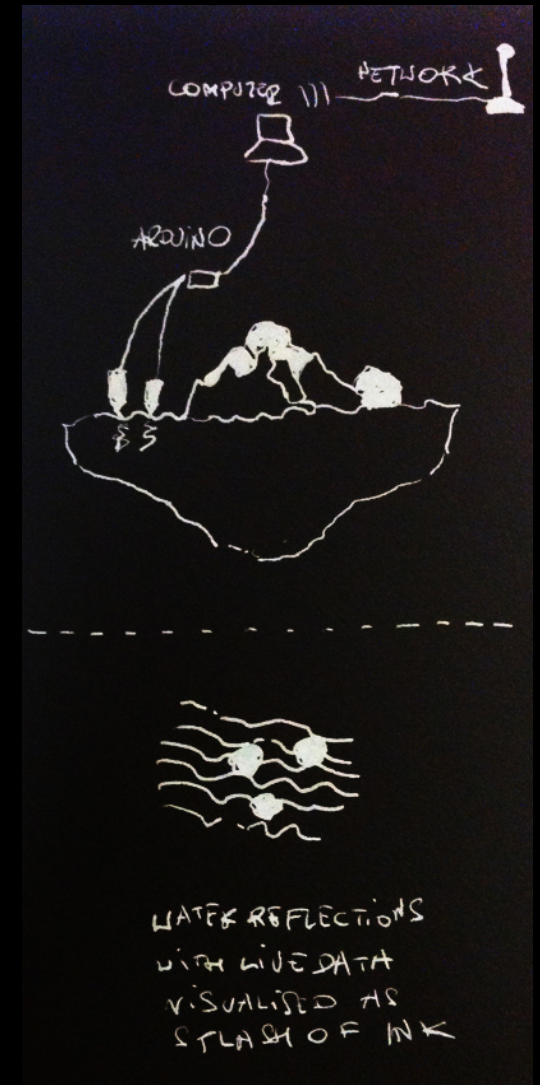
Oil Compass v 2.0

(projection 3D mapping - networked and interactive - work in progress)



Oil Compass v 3.0

(data visualisation outside screen-based media - to be built)



Oil Compass - an artwork | WHY IS IT IMPORTANT???

- Creation of a central place with all live/past data gathered
- Raising awareness, provoking public to question
- Promoting Protei and ethical attitudes and actions
- Appropriating new technologies as a tool of artistic expression
- Converging art, science and technology in one project and thus finding new definition of art
- Advocating public function of art



**PROTEI -
converging art, science, design
and technology.**



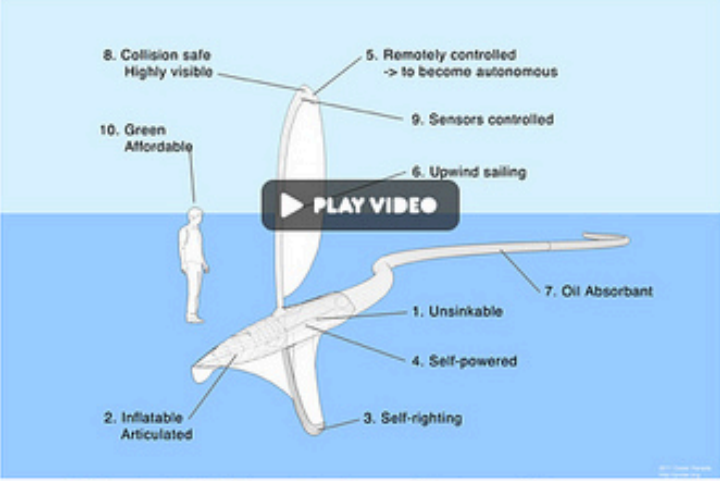
Backers/Funders

Protei, Open Hardware Oil Spill Cleaning Sailing Robot

An Open Hardware project in New Orleans, LA by Cesar Harada · [send message](#)

PROJECT HOME | UPDATES 20 | BACKERS 331 | COMMENTS 30 | DASHBOARD | POST UPDATE

Protei



331 BACKERS
\$33,795 PLEDGED OF \$27,500 GOAL
0 SECONDS TO GO

FUNDING SUCCESSFUL
This project successfully raised its funding goal on April 11, 2011.

PLEDGE \$1 OR MORE
15 BACKERS
Insider updates of Protei ahead of public releases on the Kickstarter blog.
[BACKER REPORT](#) ← You can now create a survey

PLEDGE \$5 OR MORE
57 BACKERS
Your name on protei.org as "backer".
[BACKER REPORT](#) ← You can now create a survey

PLEDGE \$10 OR MORE
98 BACKERS
Your name on protei.org as "backer" + a link to your website.
[BACKER REPORT](#) ← You can now create a survey

Like Cesar Harada, Earl Scioneaux III and 1,540 others like this. [Tweet](#) [EMBED](#) <http://kick.st/hUv88A>

ABOUT THIS PROJECT

We are developing Protei : a low-cost open-source oil collecting robot that autonomously sails upwind, intercepting oil sheens going downwind. Protei combines conventional technologies in an innovative design that we can implement in the short term to address timely environmental crisis such as the BP Oil Spill, cleaning the ocean gyre garbage patches or performing ocean research. We need your help to build our next prototype of Protei - the first articulated sailing boat that can tack upwind pulling a long heavy payload and initiating a revolutionary family in ocean robotics. <http://protei.org>

A situation we must change

Current Oil spill skimming technology was able to collect only 3% of the BP Deepwater Horizon Oil Spill. The health of remediation workers was



Protei/Media

Protei is generously covered by mainstream media as well as specialised press.

Public presentations

2011 Open Hardware Summit (NYC), TED2011 (LA), Wereldhavendagen (Rotterdam), TEDxMidAtlantic (Washington DC), TEDxSeeds (Yokohama), TEDxBasquesCountry (FR), TEDxSanDiego, TEDxOrlando, TEDxLoire (FR), Networked Fabrication, Universidad Iberoamericana Ensenada (Mexico)...

Prizes, competitions : VIDA Artificial Intelligence Prize, Fundacion Telefonica (Spain), Open_Sailing won the Golden Nica at the Ars Electronica (Austria). Maker faire Label (USA)...

Exhibitions : Maker faire, New York (USA); INDAF Incheon (Korea), ISEA, Istanbul (Turkey); Tokyo Midtown Design Touch (Japan), Weather Tunnel, Translife, Triennale of New Media Art, National Museum of art Beijing (China) World Port Day & World of Witte de With (NL); ARCO Madrid (SP); Haus Der Kultur der Welt (DE); Datapolis, Prag (Czech Republic)...

Workshops : Science gallery Dublin (Ireland), Nabi Art Center, Seoul (Korea), Department of Architecture Milwaukee (USA), Hongik University (Korea)...

General medias : CNN, VICE TV, Vogue Man Italy, Good.is, Treehugger, Guardian, FastCompany, Fashioning Technology

Specialized press New Scientist, Physorg, DIYdrones, MakerFaire Daily, Zeilen. We have our own publications : 100 Pages Protei handbooks, 4000 handouts printed and distributed in NL

TV, Radio : CNN, Motherboard TV, WWOZ New Orleans (USA), Piradio.de, RadioCorax (DE)

Social Media : Facebook, Twitter

CONTACT:

PROTEI & OIL COMPASS

protei.org

e: contact@protei.org

t: +44 7 853 286 216

www.kasiamolga.net

e: info@kasiamolga.net

t: +44 7810 327 707

CONTACT:

THANK YOU!



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contact@protei.org & info@kasiamolga.net