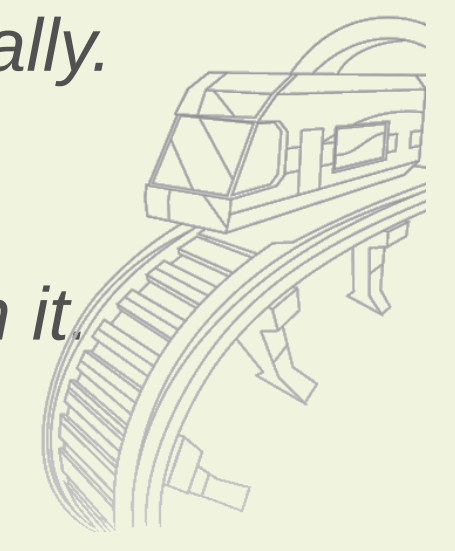


AIDEN–Cluster of Barges amongst the Oceans

Key Characteristics

- ❖ Introduction to idea of an economical Floating Modern infrastructure Project based on an approach with social impact economically.
- ❖ Flow path to selection and estimating a model project.
- ❖ Design outline for a renewable energy system, working beneath the ocean.
- ❖ Reasons for ideating an off the grid futuristic mobility and transprt corridor and the importance of brining in green technologies in it.
- ❖ Criticism and Analysis of the scope of work.



Motivation & Objectives

The potential of the oceans is yet to be recognized by man.

Oceans play a major role in weather, marine life, maritime activities, balance in Ecosphere, it is also a major source of transport, food , livelihood and energy. Today, the world is fighting the crisis of rising global warming , sea waters, loss of habitat for sea animals. Under the present days, soon humans would coexist on the oceans, inhabiting floating structures that would replace land masses. Giving almost 71% of the unexplored earth to utilize.

The project invokes the idea of a cluster system of new and recycled barges, that will connect each other and form packaging and stocking unit, to speed up the process and facilitate small vessels and boats. The cluster of barges will form a self sufficient system, stationed outside the EEZ of each country, giving it the opportunity to utilize the resources in the SEZs and also increasing planned mobility of humans into the oceans and creating a habitable Maritime infrastructure.

We are not only looking for housing and profit motives, but mainly targeting the resources that the ocean has to offer, like, Fishing. Supporting the fishing community is part of the project idea. The second phase of the project, is another thought invoking concept that may change the way, we have been generating power. The fact, wave energy has been on immense utility for power generation is known to all, but have we ever imagined how much force exists at the ocean depths. In the form of static head- for every 10.06 m. increase in depth in seas, the rise in pressure is around 14.5 psi.(on an avg.) The ability to utilise the potential energy of the oceans can be a whole new venture(yet to be proven).

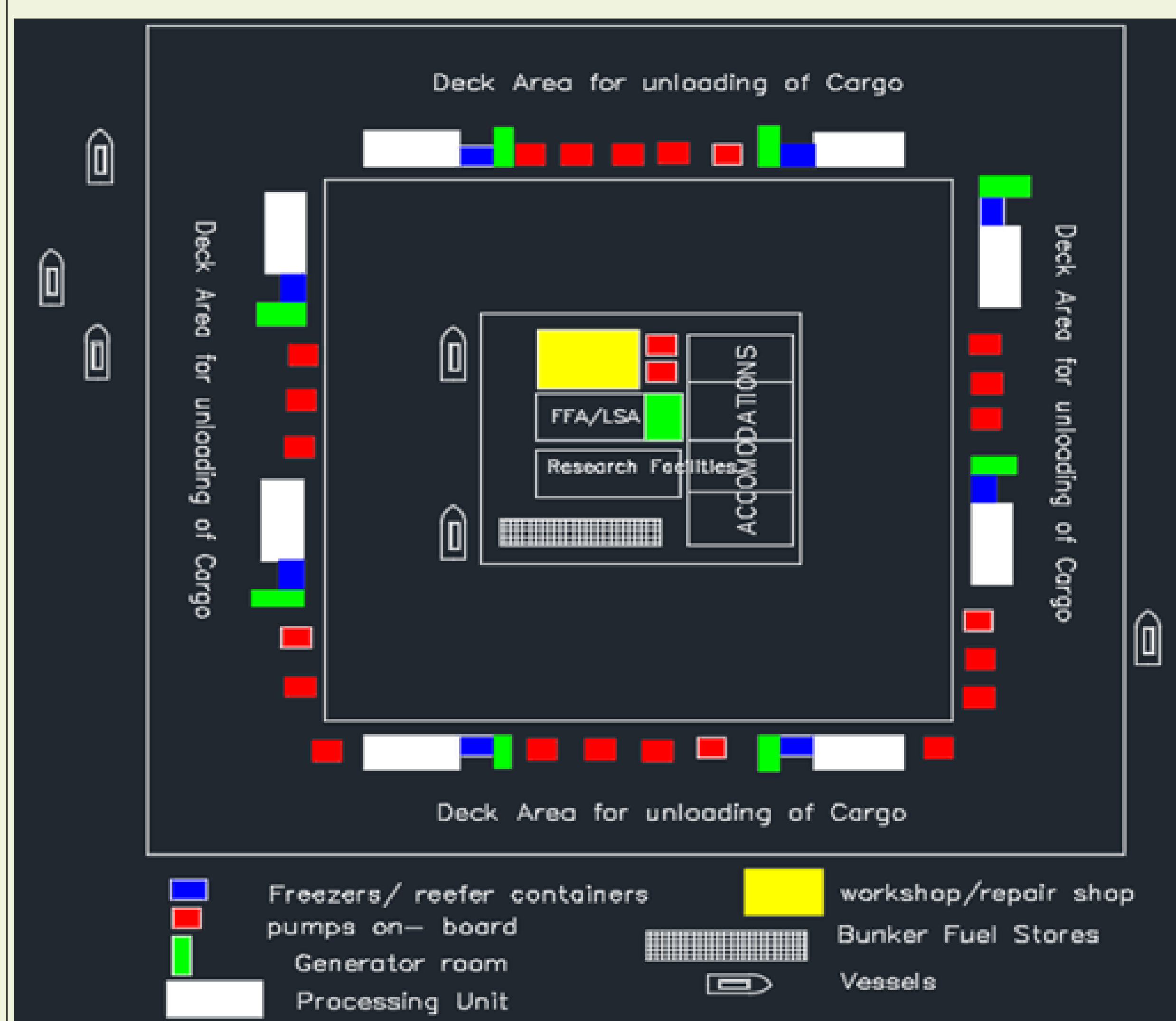
The Aiden Project, **Targets 3 phases-**

Ph.1 : Creating mobility outside territorial waters, creating a BLUE CORRIDOR in the SEZs for better economic targets.

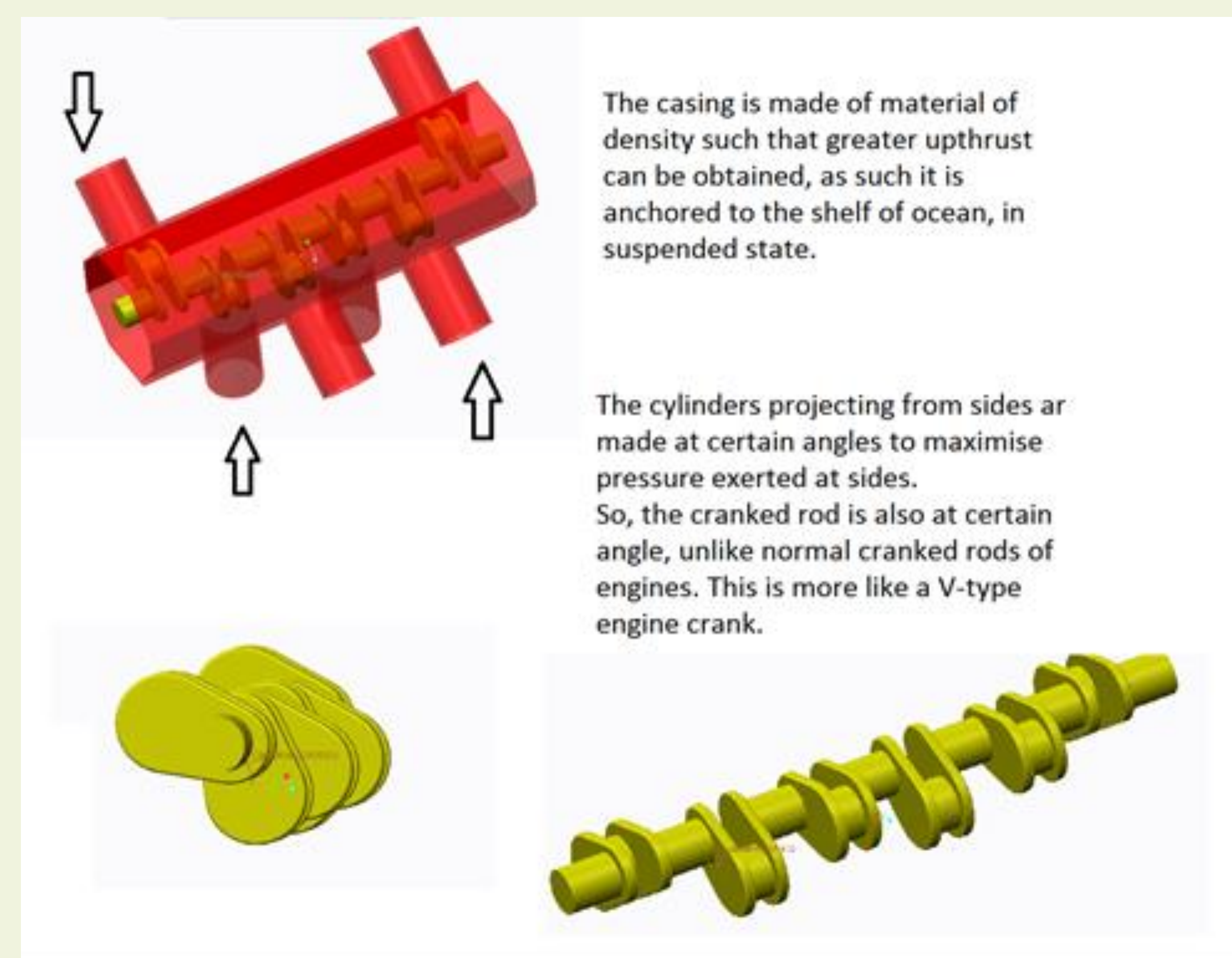
Ph.2 : Introduction of a new ocean energy system, apart from solar, wind, wave. We want to introduce- “UpThra”- It is a system which can utilize the potential (static pressure head) energy of the oceans, to generate power for systems onboard in the cluster.

Ph.3 : A systematic tracking and recording of vessels entering and leaving the territorial waters, by installing apps on incoming vessels and directly relaying pre-registered infos of the vessel

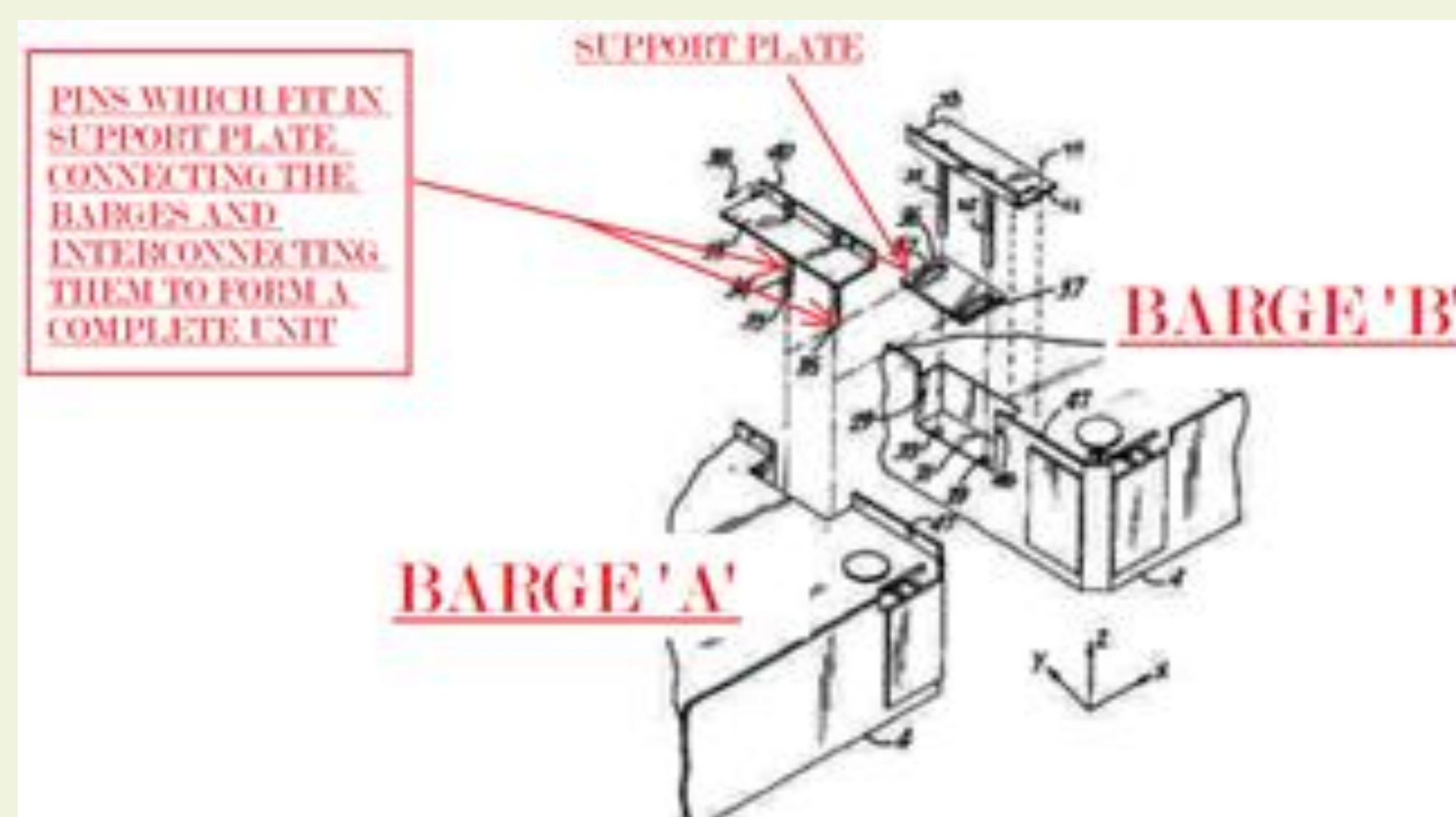
DESIGN IDEA OUTPUTS



LAYOUT OF THE CLUSTER OF BARGES, CONSISTING OF A CENTRAL CORE AND AN OUTER LAYER, FOR OPERATIONS



MODEL OF THE ANGULARLY CRANKED SHAFT ROD, CUSTOMIZED TO TAKE THE THRUST FROM THE PISTONS



STRUCTURAL CONNECTION BETWEEN BARGES

The project targets to cater the need for a self sustaining connection or grid system between land and water, so that the SEZs can be utilized more, giving a stable impetus to defense, industry, sailing, fishing, trade, living, etc. We have large part of the under utilized oceans at our reach, this project is a beginning to taking up this idea of work.

Another factor that limits the expansion into the oceans is its lack of connectivity all round the year, due to lack of power for huge operations or industrial feats. Till now, we are relying on the fossil fuels heavily for such activities and works are being conducted everyday to find better cost effective solutions. The concept of UpThra attempts to address this issue. Reducing reliance of complicated technology that is required to generate power from waves, further, location

Is a big factor for wave energy convertors, which is not

The case for UpThra.

Research Outlook

The economic viability studies and locations to sea fasten the barges,has to be conducted in the future. A studies on the Impact of the project on the lives of daily sailors has to be monitored and registered.

The UpThra concept is a new technological idea, that has its limitations and benefits and needs intense calculations, to arrive at a point where it can be simulated or tested.

TRA VISIONS 2016 project
is funded by
the European Union

