

## THE PROGRAM

Based on the sensitive relationship between the site and other main factors, our proposal is to simulate the fateful ship described in the literary work "The Little Mermaid." Our target in this project will address a few following issues

### \* The main task of the project:

We aim at harnessing and utilizing energy from nature, converting it into electricity and improving our ability of storage. It consists of sun, wind and piezoelectric energy.

- Pinwheel screen: This thing is combined from steel module grid with a framework made based on a traditional ship form. Furthermore, the amount of energy produced by wind 400-450 [W/m<sup>2</sup>] in the site makes the system of pinwheels run continuously. As a result, it creates a 3D form in which its planes could switch in the direction of wind flow. The propeller of pinwheel with diameter of 38cm is made of ETFE material and consists of 8 thin wings. Assembled into the module grid, this system can revolve around a pivot in order to have the pinwheel get the best wind flow direction.

- Seafoam: A system of spheres has different sizes (diameter of 3m, 6m, 7m, 10m). It is made of ETFE material and organic photovoltaics panels, the third generation. This innovative ecological system can replace conventional silicon panels. The new technology has a few great advantages compared with traditional products. It has a thin flexible laminated surface and a special attractive color and can absorb light across 140 degree relative to their surface. This extraordinary wide-angle design enables the whole system to work well when installed in spheres having large diameter. Each sphere in the seafoam system is connected with each other by an elastic-joint tube attached to Piezo rings. One third of the system will stand afloat on the surface of water. Under the influence of water waves, this part establishes the effect of rhythmic oscillation on the entire seafoam system while transforming mechanical forces of bending and motion into electrical current. Furthermore, the movement of visitors to system has a tremendous contribution to this process.

- LED lights put in the sphere create visual effect for the visitors at night.

