1.3 Functional Decomposition

1. Positioned in stationary configuration on/in flowing water.
2. Induce rotational motion and mechanical energy from flowing water.
3. Transform mechanical to electrical energy.
4. Transfer electrical energy from device to power consumer.

The functional decomposition of a device that utilizes flowing water to generate energy starts with positioning the device in/on a flowing water source. This could include rivers, streams, and even ocean currents as potential sources. The flowing water source will then induce rotational motion and mechanical energy. The generated mechanical energy must then be transformed to utilizable electrical energy. The electrical energy must then be transferred from the device to a power consumer which could be an electrical device or power grid.

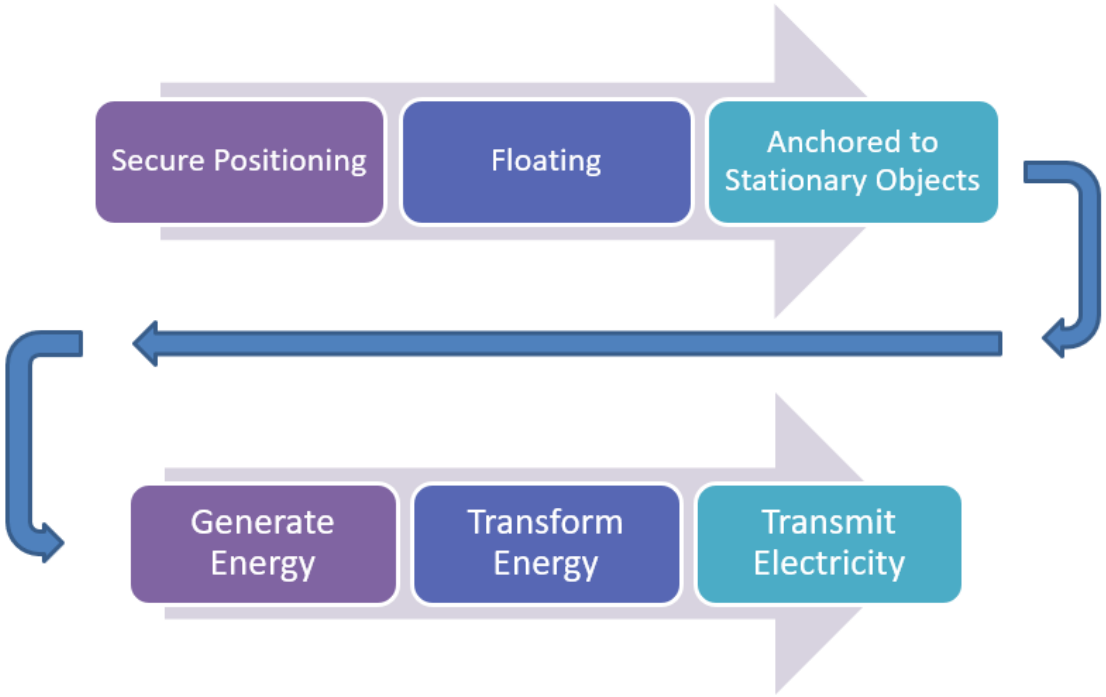

Fig. 2. Functional Decomposition for (Top) Positioning and (Bottom) Energy Generation and Transmission