

Is technology the only way for a new future? Social capital is vital for new value creation.

Exploring engineering and social coherence, vitalizing coastal societies by the establishment of an information sharing platform and incentive system and utilizing cutting edge technologies such as the latest space technology.



Social implementation in coastal management

We believe that technology should work together with society to solve any individual issue, even when it seems more specified to the engineering field. Coastal areas are technically facing geomorphological and hydrological variations at different time scales. Simultaneously, coastal communities face various social challenges, such as population and assets concentration, community degradation due to coastal erosion, and so on. Therefore to manage this complex system, the inclusion and integration of technology into society is essential.

Applying the latest technology with consideration of social inclusion offers the potential to utilize social capital more effectively. Not only blockchain and satellite technology are introduced, but we are also seeking for more innovative solutions for a better integrated coastal management.

Bringing out “leapfrogging” in coastal development

Our approach aims to establish a resilient and sustainable society by empowering humanware, hardware, and software. Many developing countries, where policy, regulatory, and institutional frameworks are not sufficiently developed to manage coastal areas and conserve environmental assets, have the potential for leapfrogging development using today’s technology.

Platforming and its process

It is important to set and share common goals that satisfy both engineering and social aspects to create sustainable and lively coastal areas. Besides, coastal values and generated benefits should be adequately evaluated, recognized, and shared among the whole stakeholders. To realize leapfrogging development and formulate a well-designed ecosystem in a coastal community, a platform for sharing and collaboration among various stakeholders is essential.

The platform is prepared for collecting and accumulating the information and data related to coastal management. **It also can incentivize a participant’s actions and contributions based on blockchain technology.** Community profiling such as baseline survey, gap analysis, etc., is one of the core activities for coastal management. Furthermore, **satellite imagery has become a powerful tool for enhancing macro-scale understanding.**

Our Technology

Blockchain technology enables information sharing, while the ownership of the information remains with the original provider. Blockchain also provides a database where the record of contribution to reach a solution can be secured against any attempts of tampering. Furthermore, blockchain can mint some “token”, similar to Bitcoin, to measure and visualize the contribution for the solution. The token can be traded among the participants across the globe. Thus, it works on formulating a so-called “Token Economy”, creating economic values and responsibilities, and promoting sustainable coastal management. In the future, it may also be possible to cover some of the project and survey costs using tokens, together with other budgets and funds.

AxelGlobe is the new era for earth observation infrastructure consisting of a satellite monitoring system that is at a low cost, can capture imagery daily, and has a wide coverage. AxelGlobe can radically improve coastal monitoring. It has the ability to capture the whole civilized world with 2.5 m resolution every day. Such resolution is enough to distinguish container size objects. The satellite provides daily-fresh information and a collection of past data. Comparing older images and studying their evolution can lead to invaluable insights and predictions for the future. We can build a scheme of satellite image provision that monitors coastlines, lagoon conditions, community activities, and conducts construction monitoring and disaster monitoring.

Figure The platform can integrate information/data and work as an incentive system

