



FINESTBAY AREA
DEVELOPMENT

27.8.2020

MEDIA RELEASE

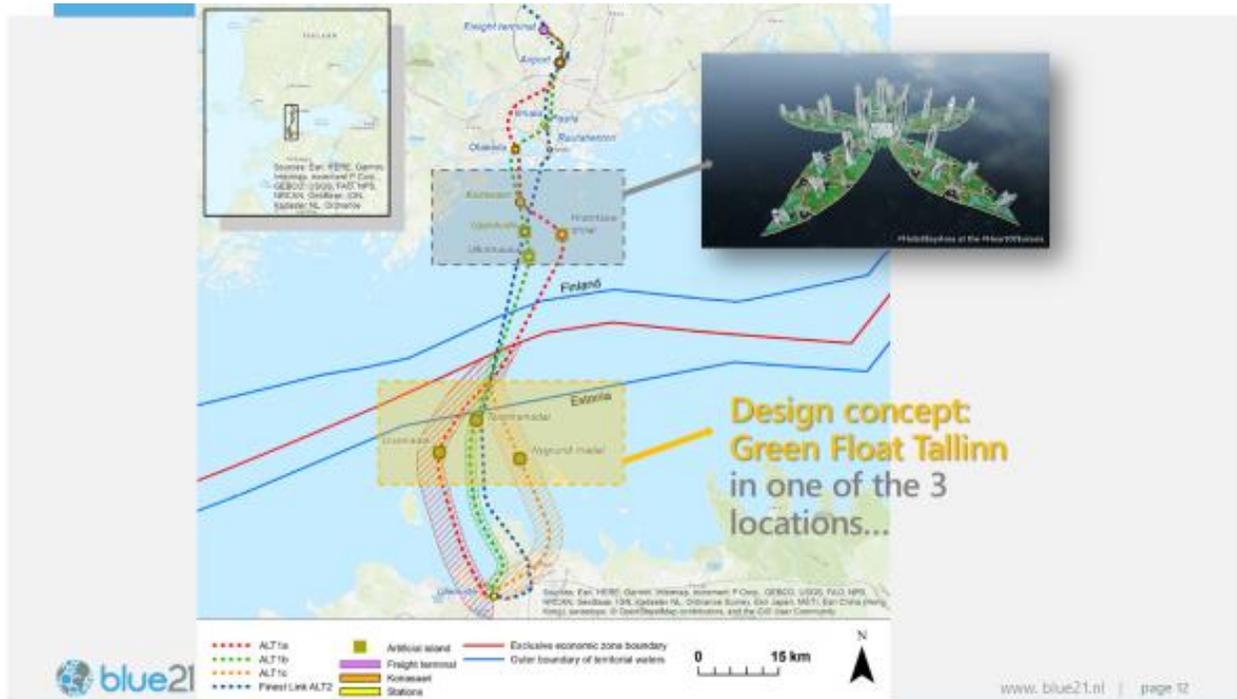
“GREEN FLOAT TALLINN” – NEW MARITIME LIVING, BUSINESS AND RECREATIONAL AREA PLANNED

Finnish/Estonian company Finest Bay Area Development (www.finestbayarea.online), Japanese company Shimizu Corporation (<https://www.shimz.co.jp/en/>) and Dutch company Blue21 (<https://www.blue21.nl/>) have agreed to collaborate on the concept and design of floating islands on the Baltic Sea outside of Tallinn city in Estonia. The floating island collaboration will support the construction of the Helsinki-Tallinn tunnel project. Two newly-created islands connected by a tunnel will be a symbol of the close link between Finland and Estonia. Green Float Tallinn will have a personality that represents the values and characteristics of Estonia, the Finest Bay Area -region and the Baltic Sea maritime environment. This creates the heart of the Finest Bay Area.

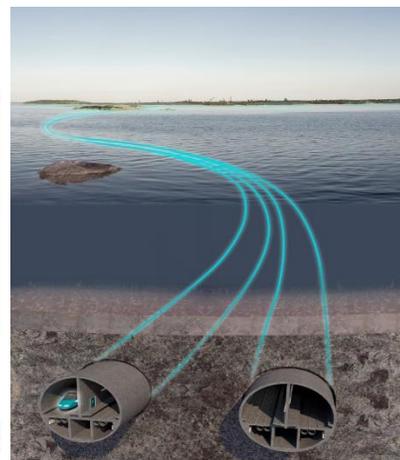


Floating development offers many benefits. It is scalable with fast deployment, environmentally friendly and it adapts to sea level changes. It is ecological habitat creation that considers the global cycles of CO₂, food, energy, water and other resources. For Tallinn metropolitan area Green Float Tallinn will bolster the attractiveness of the area. “It is a great way to stand out from the crowd and be stronger in the international competition to attract businesses, investments and highly qualified skilled **people** internationally. The Green Float Tallinn will offer a place to live, learn and visit in the unique Baltic Sea

marine nature. The island will be a satellite for nature recreation and leisure times but also a place for living, education and work.”, says Peter Vesterbacka of Finest Bay Area Development.



Green Float Tallinn will be built along the Helsinki – Tallinn tunnel alignment, at one of the sea areas under environmental studies. Island size will be built in sea depths of 2,5m - 50m. The shape is circular with three layers (breakwaters) to even out wave and ice impact. The on-surface size of the island will be about 1,2km by 2,5km. There will be different purposed spaces on the island from normal housing to educational and entertainment. All construction is subject to concluding environmental studies and more detailed planning.



The Finest Bay Area tunnel project has already set the target to follow and meet the United Nations 17 Sustainable Development Goals. Finest Bay Area are using an AI based application to track its SDG status and progress in real time. Green Float Tallinn project will set the same objectives and use same processes to be highly compatible.

Green Float Tallinn contributing to the city vision



The tunnel project alone is estimated to create 30 000 -man years of labor. The Green Float Tallinn will boost that estimate even higher. Environmentally sound design and technology to enable sustainable living on the Green Float Tallinn. The idea is that the floating island will not generate waste. Resources will either be reused, recycled, or upcycled. The global cycles are considered. The objective is to reach food self-sufficiency, energy autarky, circular water systems, carbon positivity, closed loop system with the use of resources.

“The overall objectives of Green Float will contribute to the vision of Tallinn. The current design of Green Float is still work in progress. Discussions with stakeholders and particularly the people from Estonia need to continue to take place to gain more insights for the functions and final design.”, says Karina Czapiewska co-founder of Blue21.

Blue21 is a scale-up and global leader in developing floating urban projects based in Delft, The Netherlands. Blue21 has the mission to realize floating cities with a positive impact on the planet. Floating city technology addresses many urgent global challenges such as climate change, urbanization, and land scarcity. In the company, a unique collaboration has been established between architects, urban designers, water managers, civil engineers, and maritime engineers. A strong link to governance, legal and social expertise is made through the Thinktank Governance of Floating Cities. Blue21 has an international client base including the USA, China, Japan, Singapore, Malaysia and various countries from Europe. The founder’s team of Blue21 has been involved in the design, engineering, and realization of iconic floating projects such as the Floating Pavilion in Rotterdam, the Floating Ecohomes in Harnaspolder, Delft and more recently, the INNOZOWA floating solar project.

Solutions (utilize the power of the ocean)

SOLUTION
 1. Earth regeneration by potentials of the deep sea 1

Renewing Global Cycles in Five Areas
 Harnessing the potential of the deep sea to renew the earth's cycles and processes and to create a more sustainable human society in five critical areas

FOOD	ENERGY	WATER	CO ₂	RESOURCES
<p>Food shortages due to explosive population growth worldwide</p> <p>Environmental pollution due to the expansion of farmland worldwide</p> <p>The deep sea offers unlimited potential for fisheries, both in terms of quality and quantity</p> <p>↑ Raising the temperature and nutrients of the deep sea Example: Aquaculture of farmed salmon</p> <p>↓ Expansion of artificial reefs and aquaculture</p>	<p>Tight supply of electric power due to globalization of economic development</p> <p>Need for basic-level power supplies capable of instant and distributed power generation</p> <p>The deep sea is an endless source of advanced energy</p> <p>↑ Create thermal energy conversion, offering advantages in temperature balance, the deep sea and the sea surface</p> <p>↓ Energy production</p>	<p>Digital water shortages caused by abnormal weather and increased consumption</p> <p>Problem solved if sea water can be desalinated easily</p> <p>↑ Utilize natural volume of sea water could be generated from the deep sea</p> <p>↓ Water desalination</p>	<p>A pressing need to reduce CO₂ emissions in response to global warming</p> <p>Difficulty in reaching a global consensus on CO₂ reductions</p> <p>↑ The deep sea offers unlimited potential for sequestering CO₂ emissions</p> <p>↓ Harnessing the earth's natural CO₂ cycle Example: sequestering energy from CO₂</p> <p>↓ Deep-sea energy technology Example: CO₂ sequestration</p>	<p>Tight supplies of resources due to globalization of economic development</p> <p>Extraction can deplete resources on land and cause environmental problems</p> <p>↑ The resources available on the sea floor and the sea itself are limitless</p> <p>↓ Harnessing the natural resources in sea water and on the sea floor Example: artificial hydrothermal vents</p> <p>↓ Marine energy technology Example: hydrothermal vents</p>

blue21 | SHMZ

(Source ; Deep Sea City Concept "OCEAN SPIRAL" by SHIMIZU)

Cutting-edge environmental technology

Advanced technologies of the future, born amid nature

If a city could absorb CO₂ like a single leaf, using sunlight for photosynthesis.
 If we could purify our own environment with our own natural power.
 If we could grow by changing garbage into energy.
 The clues to leading technologies for flexible and pleasant living are found in nature.

CO₂ Reduction and Energy Conservation

- Carbon capture
- Carbon sink (Carbon cycle)
- CO₂ recovery and reuse (recycling)
- Power generation from solar energy (solar cells)
- Power generation from ocean thermal energy conversion
- City in the sky (floating system)
- Wave power generation

Ecosystem and Planting

- Formation of diverse ecosystems
- Creation of a stable indoor "leaf" (system)
- Planting on water tanks
- Shading of thermopiles to create biomass
- Management of natural forests and creation of habitats

Self-Sufficiency and Recycling

- Plant factory for food self-sufficiency
- Waste recycling system
- Water, freshwater and other things in the plant factory
- On-site up and conversion of garbage (garbage incinerator) into energy resources

Safety and Security

- City disaster and natural disaster prevention (SDG)
- Structural strengthening and disaster response (strong earthquake-resistant structure and system)
- Disaster-resistant lighting (disaster-resistant)

Maritime Construction

- Management ability structural materials and related field knowledge
- Construction of an artificial offshore ground structure (flexible foundation structure)
- Utilization of marine construction "float" system (flexible float structure)

Environmental Island The Technology behind Green Float

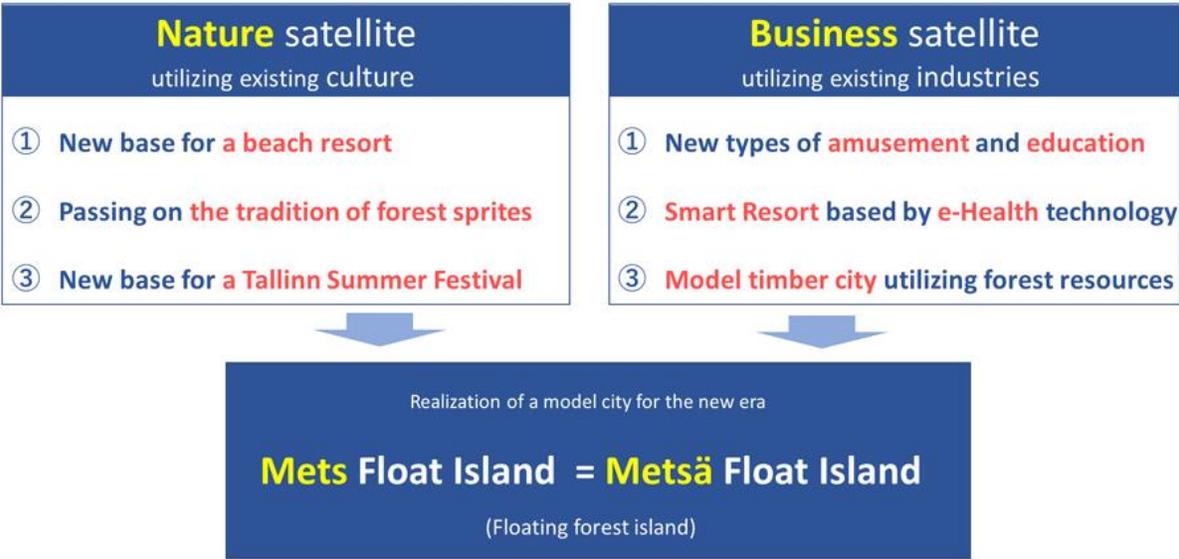
Reducing CO₂, conserving energy resources, reducing waste products, solving food problems, preserving ecosystems, preventing pollution...
 The question is how to deal with these issues comprehensively.
 We are gathering leading global technologies to do so based on a technical approach.

blue21 | SHMZ

(Source ; Mega Floating Concept "GREEN FLOAT" by SHIMIZU)

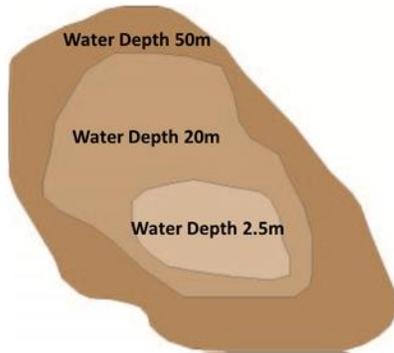
Shimizu Corporation has vast expertise in the design, development, and construction of floating structures. The technology has already been developed, tested, and practiced in modern buildings on land. In addition to the technological systems, the functional distribution has also been well studied. Functionality of the island will lay the foundation for all technology needs. "Since Shimizu Corporation proposed the floating future city concept GREEN FLOAT in 2008, we have engaged in the realization. As a member of this forward-looking environmental project, we will devote ourselves to develop the bay area of Baltic Sea in Tallinn", states Shinichi Takiguchi, Managing Officer and Director of the Emerging Frontiers Division of Shimizu Corporation.

Concept



Application & Site Plan

Properties of the seabed topography
(as currently envisaged)



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We propose such a site plan.

Double Circle System that corresponds to the waves and depth of the sea.



Inner Circle Images

Mets Float Island = Metsä Float Island

Inner Circle Zone
 Group of floating facilities.
 Tranquil sea area surrounded by double breakwater.

- Beach resort
- Yacht harbor
- Smart Resort Health and comfort spa
- Outdoor event stage

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Beach resort & SPA



Summer festival of sea and light



Artificial beach image



Summer festival hill (floating body)

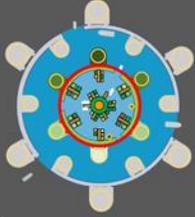


Outer Circle Images

Mets Float Island = Metsä Float Island

Outer Circle Zone

Artificial floating ground surrounded by outer breakwaters

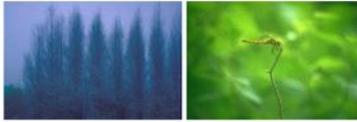


- Angry Birds amusement
- Nature amusement
- Nature education
- Forest and sprite walking path

Forest Fairy Walkway



Hiis
Sacred sites
Creating a new spot for people to interact and have fun, on the new base on the sea.



Nature education & amusement



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More info about us:

More info about us

We are Blue21, in collaboration with and representing Shimizu, a large contracting firm from Japan.

Our shared mission is to create sustainable future cities by building on water, starting with coastal urban expansion.

We are collaborating with FINEST BAY AREA to realize the first and most innovative floating island in Baltic Sea.



Blue21:



- Design and engineering consultancy firm specializing in floating development
- Founded in 2008
- Base in Delft, the Netherlands



Floating pavilion in Rotterdam (2010)



Mid-left: Floating houses in Delft (2009)

Bottom left: Floating island project in French Polynesia (2017)

Bottom right: Floating Schiphol airport concept (2017)



Shimizu Corporation:



Kisuke Shimizu, Founder

Established in 1804
(more than 200 years)

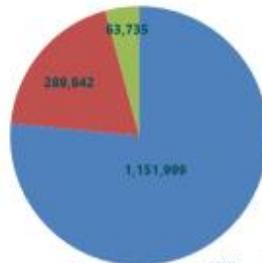


Overseas: regular offices in 27 cities

Construction business (orders)

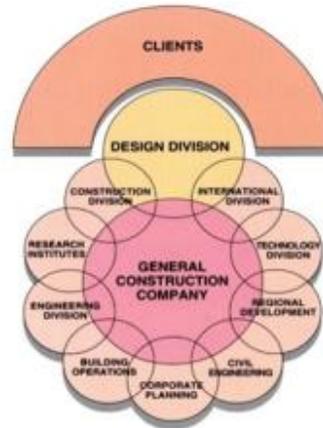
For the year ended March 31, 2018

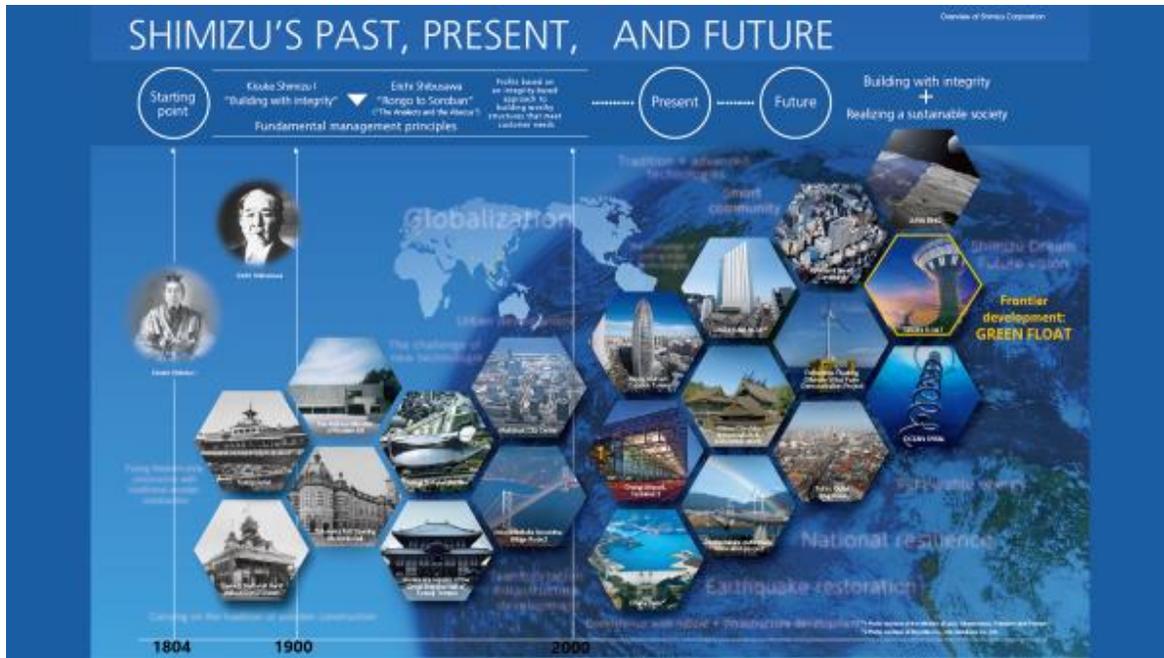
- Architectural Construction
- Civil Engineering
- Real estate development and other (contracts)



Millions of Yen

In-company Design Division since establishment

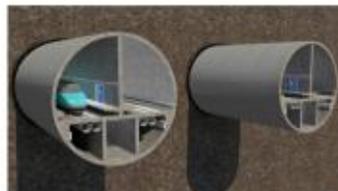




Finest Bay Area Development:



- A development project to construct the significant Helsinki-Tallinn tunnels and the 4 station areas
- Started in the summer of 2016
- Aim to create economic growth for the region
- Tunnel operation begins on 24.12.2024



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To know more... please contact



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#HEARTOFEURASIA

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