

## **CAPSTONE PROJECT SUMMARY**

### **Market analysis of Nature Based Solutions applied in the planning phase of urban infrastructure and real estate projects: alternative product ideas and competitor analysis**

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#### **General introduction, project rationale**

Physi, an off-shoot of the Horizon 2020 initiative's Naturvation project funded by the EU, aims to bring in sustainable Nature Based Solution (NBS) impact assessment from the very early planning stage. It is aimed at urban planners, real estate developers, councils and all stakeholders involved in modern city planning. The goal is to create (a) product(s) and (a) solution(s) which fosters the currently „trendy” green thinking, green planning and thus create a win-win scenario for real estate developers, urban planners, councils and most importantly, citizens. As 75% of the EU population lives in urban areas, it is critical to come up with fast and efficient ways to tackle the ever-increasing problems posed by climate change and urbanisation.

Physi was founded by László Pintér, Professor and Head of Department at the Department of Environmental Sciences and Policy. As his research area is sustainable development goals (SDGs) with a focus on implementation, review and monitoring, founding this project under CEU iLab's start-up incubator umbrella seems like a natural choice. As for now, they are considering rolling out a software that is either licensed or sold to various stakeholders i.e. urban planners, architects, councils, real estate developers, etc. which can measure and track precisely the benefits of Nature Based Solutions applied in a given infrastructure/real estate development project.

Currently Physi is in the phase where the required know-how, data is available, and they need to select how exactly they intend to enter the Nature Based Solutions assessment and implementation monitoring market. The aim of the Capstone Project was to briefly assess the market and bring to the table alternative ideas that could be helpful for them to decide which way to go to.

## **Nature Based Solutions**

As defined in the „Horizon 2020 –Work Programme 2018-2020” paper, NBSs are sustainable, efficient, nature centric tools to combat the tackles posed by climate change and pollution. These tools are bringing with themselves tremendous environmental, social, and economic benefits, improving health prospects, well-being, sustainable resource management inspired and supported by nature. Often these solutions are complementary to one another. NBSs can be grouped into some subgroups such as 1) green, sustainable urban planning and infrastructure; 2) Comprehensive ecological system management; 3) Ecosystem restoration, protection; 4) Ecological engineering, green infrastructure; 5) Ecosystem based adaptation. Physi focuses green, sustainable urban planning and infrastructure.

## **Alternative idea 1 - Green bonds Second Party Opinion Issuer**

Green bonds have become very popular in the past years, their market share is dynamically growing. The instrument is similar to a plain vanilla bond with the difference being that the money raised have to be used to fund green, sustainable projects and this is strictly monitored throughout the lifetime of the bond. The volume of the global green bonds market has surpassed €200 billion last year.

The usual issuers are banks, government agencies, development banks, local government entities, asset backed security issuers. Unlike plain vanilla bonds where credit rating agencies are assessing the issuer companies, in the case of green bonds so-called “Second Party Opinion Issuers” are the “creditworthiness” assigners. There is a significant niche in the market which Physi could penetrate, there are only a handful of players available to issue second party opinions. The academic background, data focus, scientific approach and key values predestine Physi (after a suggested name change) to enter this market and carve out a decent share of this increasingly popular market.

## **Alternative idea 2 – Physi to complement the already existing building certifications BREEAM/LEED/WELL**

BREEAM and LEED and international sustainability certifications that are used worldwide mostly to assess the impact of office buildings and have to be obtained by the commercial real estate developers. WELL is a similar scheme, which is usually requested by the end-users (i.e. the tenants), and is focused

on employee well-being. While these qualifications already sufficiently complement one another, they all lack proper assessment of the micro location, turning brownfield projects into green, existing environmental pollution/biological footprint in the area, carbon emission/future employee, negative carbon emissions, etc. Either via entering into a partnership with one of the three major players (probably the easiest and most lucrative option) or establishing a completely new framework, Physi could become a much sought after bench marker, assessor of the micro location impact analysis.

### **Alternative idea 3 – Become a green „rating agency” for EU and national projects**

As for now, when granting EU funding to national governments which are to be used for infrastructure projects, sustainability and long-term impact are not an important, critical factor. The author proposes that Physi along with other potentially suitable players shall lobby the EU decision makers to introduce a „Green Coefficient” which are to be used in approved projects to monitor and assess NBS impacts. Ideally, some national governments would follow the lead voluntarily and implement this assessment criterion in their own projects.

Physi should utilize its existing network within the EU to reach the decision makers and lobby for this worthy cause. This experience and reference shall facilitate and ease entry into various other potentially lucrative market segments such as Alternative idea 1 and 2.

### **Conclusion**

The alternative ideas presented are recommended to be slowly and parallelly built up as different subsidiaries within Physi, therefore creating an entire ecosystem of companies. Remarkable synergies could be formed by utilizing the vast amount of data that could be gathered through the various projects.

Barriers of entry, opportunity costs, opposition, timeframe, bureaucracy, in-house expertise should all be considered before deciding which project to launch first. Also, connections and networks and the ease of building up references should be a significant factor to consider. As for green bonds second party opinion issuance and “green coefficient” assessment, targeting a “whale, a significant player could work as an anchor for other potentially interested parties.

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