Green City Solutions fights air pollution with Internet of Things, biotech and moss

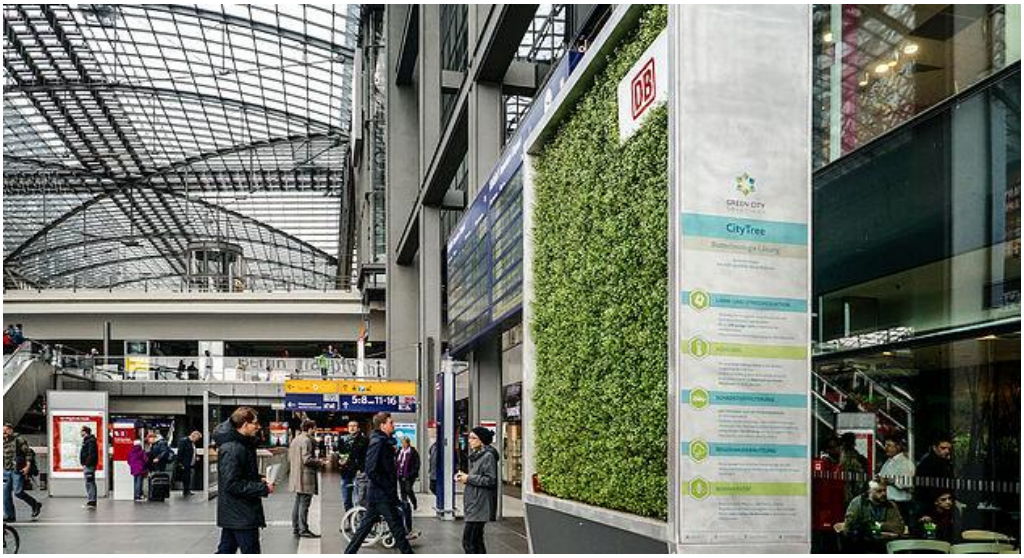
Air pollution is becoming a global threat as 90% of urban population's breaths polluted air. We have all seen the images of a smog-filled China city, people wearing masks and authorities banning people to go outside. In December 2016, the Chinese government reported the highest air pollution and the red alert were implemented in 23 cities in northern China. In 2016, World Energy Outlook made a study on air pollution as the fourth-largest threat to human health – but also to our environment. According to the report, this problem causes up to 6,5 million deaths annually, not to mention the 1,6 trillion-dollar annual economic damage in EU, where governments are trying to treat air pollution.With the increasing growth in mass production, industries expanding to low cost production sites in Asia, fuelling on coal and the pollution from transport, the problem continues to grow.

The team behind the CityTree, from left: Peter Sänger, Victor Splittgerber, Liang Wu and CEO Dénes Honus. Source: Green City Solutions, red.

Creating a solution to clean air

Green City Solutions tries to fight the problem of air pollution worldwide. They seek to solve it with a combination of Internet of Things (IoT) and plants, providing clean and cool air to hot urban cities. Their solution is a four-meter-high CityTree installation, which is equivalent to 275 urban trees and has the ability to clean city air from harmful pollution. Examples of those harmful pollutants are nitrous oxides, ozone and particulate matter. Every CityTree reduces local air pollution in proximity of up to 50 meters, up to 30%. In comparison to 275 normal urban trees, a CityTree is 95% more cost effective, and requires 99% less space on ground, according

to Green City Solutions. This is especially handy in urban cities, where free uninhabited space is a rare commodity.



The CityTree in action at the main station in Berlin. Source: Green City Solutions, red.

City Solutions' approach is based on biotechnology, a moss culture, which has the ability to attract air pollutants from its surroundings and convert them into its own biomass. The moss, therefore, literally eats air pollution. Because of IoT technology, the reduction of air pollution is traceable, and the City Tree requires only a few hours of maintenance per year. Previously, air pollution has been tackled indirectly, by shutting down factories or traffic, but treating air pollution this way causes a lot of economic damage. The City Tree is a simpler solution to this issue and a better economic alternative to the previous methods.

Another CityTree in Jena, Germany. Source: Green City Solutions, red.

Source: http://www.greentechchallenge.eu/single-post/2017/01/06/Green-City-Solutions-fights-air-pollution-with-IoT-biotech-and-moss