

**LUCID SIDEWALKS**

**Bar Gregoryan & Bee Haven in conversation with Mitchell Joachim, founder of Terreform One**

**BAR GREGORYAN & BEE HAVEN:** Mitch, it's great to see you here in New York's Brooklyn Navy Yard. You've been thinking about the near future of our cities for decades, considering waste, food, water, energy, air quality and mobility. It's great to see so many of your ideas being realized.

**MITCHELL JOACHIM:** In architecture there are no more distinctions between landscape and housing. Thanks to advances in synthetic biology over the last twenty years, they have turned into one. For example, we are able to shape trees into specific geometries in order to form structures that actually work for human environments. We are also looking at different material grown in labs.

**You are in fact currently sitting on a Bonsai chair, which was grown in a lab.**

It's pretty fantastic. It took us years to develop a design that allows for trees to grow in the right shape to create a living chair, but it turned out to be really practical. Since living designs last longer than a human lifespan, they will be able to feed thousands of other forms of life even after being discarded. Architecture and science have fused into one environmentally friendly discipline.

**For a very long time, sidewalks in cities were just pieces of concrete and stone. This has changed in unexpected ways. At Terreform ONE, you have been thinking about such new forms of urban mobility.**

We developed lucid sidewalks that are fully connected to their users and to nearby vehicles. We can charge our vehicles directly on the street and our phones are incorporated into our bodies, getting charged automatically when we walk on the sidewalk. Everything that moves through the city is recorded in a privacy-friendly way and is cautious of the Earth's metabolism. Different mobile tools and instruments measure and calibrate the amount of carbon in the air, making our cities not only carbon-neutral but also free of any pollution whatsoever.

**These systems formed through many different arguments on how to make cities adaptable, regenerative and resilient. But without observing the effects of the crisis we wouldn't have made such progress.**

It took a massively unsettling moment to develop the needed energy as well as political engagement to push for change that is now becoming visible in our civilization. For a long time we have been focusing on designs aimed at preventing extinction. In the United States the Endangered Species Act was passed, but it was not enough. We had to provide for ways to keep creatures alive and to increase biodiversity in our cities, on facades of our buildings, in our vehicles and within the energy and waste systems.

**Years ago, biodiversity was declining steadily. 50% to 60% of all species on Planet Earth are now extinct.**

'Design against Extinction' was planning buildings that would act as sanctuaries for creatures that were endangered, had no voice and were affected by over-development and land scarcity. Eventually, we managed to increase biodiversity, but we still have a long way to go. It is terrible to lose any kind of life, especially permanently.

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