

SIDE BY SIDE

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VEGETAL CITIES



THIERRY ROCHE



BRUNO VITASSE

From vegetal walls to urban agriculture, nature is growing its way back into cities. Moreover, it becomes a major issue in the future vision of smart cities, counterbalancing the digital and automated features they usually project.

To explore this issue, we have asked two creative individuals to share their visions, side by side. They both design new spaces for nature in our cities with a different, but somehow complementary approach.

BRUNO VITASSE is an agricultural engineer specialized in plant and environmental protection. In 2014, he co-founded Zone-AH!, a French association for the development of hybrid and collaborative urban agriculture. He recently initiated a new project called ZÉBU, which is an ecosystem of urban breweries.

THIERRY ROCHE is a leading architect from Lyon, France. He defends a committed architecture, connected to the people who live in the city. He designs buildings that meet high environmental as well as human standards.

What has vegetation to do with smart cities?

Without being directly involved in designing smart cities, both Bruno Vitasse and Thierry Roche have developed a singular relationship to urban spaces, where the vegetal plays a key role. Through their work, they take part in shaping our daily environment and their projects always include nature as part of a greater picture. Bruno Vitasse's work is mostly of experimental: he is seeking ingenious devices for a more autonomous city, where plants are productive. That's why, for him, a smart city is a resilient city, with urban farming at its core, aiming towards food autonomy.

Thierry Roche also believes vegetation should play a key role in a truly smart city. He grows plants in all the interstitial spaces between the buildings he designs. Spread around, they act as transitional, green areas between housings and public space, they also create links between people who live there. Roche views his role as an architect is to "open enough" places both for plants and people and let them grow together, out of his control.

What does nature bring to cities?

The first reaction of both our experts was to remind us that we shouldn't just think of plants as a decorative element in the city. The qualities nature brings to cities are numerous, if we accept to take a long-term perspective: plants can help regulate "heat islands", they bring a soothing atmosphere, and you can even grow fruit and vegetable to feed people.

Thierry Roche insists on the social qualities of vegetation as it creates opportunities for people to meet, to spend some quality time together, and work as a team to grow collaborative projects. This opinion is shared by Bruno Vitasse, who believes in vegetations ability to improve citizens well-being. Yet, for him this will come from plants' productive capacity, which empowers people to create a food-resilient city: "In a truly resilient city we should take into account every aspect of the production cycle, from transformation and distribution to waste recycling".

In fact, urban nature goes beyond a set of functionalities: it is about putting people back into the living world. "City should be all colors and smell" says Thierry Roche, as he claims that plants are essential to reconnect us to a larger diversity of sensations.

"We should be taking into account every aspect of the production cycle, from transformation and distribution to waste recycling". Bruno Vitasse

Nature has become a cultural matter in the search of better, healthy cities. Bruno Vitasse also claims that with a productive city, human beings could get back in touch with the natural cycle of organic life.



Production and recycling cycle of the productive urban nature. Here, the waste from beer production, spent grains, is reused as a material for many other products (home insulation, fertilizer, food, furniture, etc.)



"Living Roof", an open source garden on the roof top of the Cité du design et de la mode in Paris in 2016, developed by many associations, including Bruno Vitasse's (Zone-AH!).

Inventing new roles for vegetation in the city

How do we apply those ideas to design tangible projects in cities? For Thierry Roche, nature should be introduced through open spaces, "capable" spaces in which vegetation is not enclosed, but still shaped. These spaces are designed to be easily used and adopted, allowing each person to live and tell his own story there. People should be looking for places that welcome their singularity he says, and that is the role of green, interstitial spaces to allow this kind of serendipity. Practically, it means that every architecture or landscape project should integrate from the start environmental dimensions: from paying special attention to biodiversity, to managing shared gardens on rooftops.

Roche's creations are productive in terms of imagination and social life, while Vitasse's are literally producing food and announcing, "here comes the

edible city!". To reach this goal, he is building a dense network of associations to experiment vegetal walls, to design aquaponics workshops or to spread the word through conferences on the role of citizens in sustainable cities. And of course, urban farming is a key part of his program, working around the four pillars of a circular economy: production, transformation, recycling and distribution.



The most original illustration of his approach is the "third-garden" project: such a third place combines living spaces, leisure, work and above all urban farming to boost users' well-being and creativity and to transform our urban societies as a whole.

Thierry Roche's project of a vegetal rooftop

What is the role of citizens in those projects?

Giving more space to nature in cities is a key aspiration of citizens all around the world. But one could wonder how people can actually become involved in different kinds of greening projects. If most urban planners consider vegetation as a major issue in urban projects, they have not the question remains on whether it will allow citizens' appropriation or only be a mere pretty picture.

In this regard, Thierry Roche argues that any project should start from the way people live and interact: user experience being a core inspiration, which enable later adoption and symbolic ownership. He also believes cities should be designed to give space to people, and this is particularly true for gardens: they need to be open so that people can occupy or modify them; they can even be forgotten for a while and maybe reinvested later. In fact, when an architect designs "capable spaces", which are

open to change, they become "possibility spaces" for inhabitants. Inspiration for this approach comes from Alexander Stahle's "sociotopes" methodology.

"Investors, building companies, landlords, they all understand how much these new approaches are important to people, so they do take interest too," he says, and this could lead to a larger place given to vegetation in our cities.

However, it is not always easy to bring together all these different actors and, in Vitasse's opinion, if some land owners are very receptive to this vegetal city, most inhabitants and elected officials only see the surface of it. They often categorize those projects as "alternative" and don't feel concern.

"This is why a large part of our activities has been linked to public information and training" he says, even if that is very time consuming. Now, he tries to foster collective projects, empowering citizens to build new skills, share tools and work together.

A collective project to build the "Living Roof" in Paris with citizens and associations.



Thierry Roche's project of a housing block with plenty of "possibility spaces" opened up by vegetation.



How can we build a durable relationship between inhabitants and their vegetal environment?

Both Roche and Vitasse clearly identify the difficulties to create a durable relationship between people and their vegetal environment. If it doesn't actually belong to them, they don't always feel responsible for it. That leads to questions about how to manage such spaces collectively, as commons. Roche feels you can't be intrusive and impose this responsibility upon people, even if it can lead to disappointing results. Once, his team designed a lovely rooftop garden, meant to be shared and managed by all the inhabitants. Yet, one of the co-owners offered to purchase the shares of all his neighbours and unburden them from the co-maintenance duties... "They all accepted and the garden that was meant

to be shared became an ordinary private garden belonging to only one family" he regrets. "Since then, we try to include trustees from the beginning to create a participative governance".

Bruno Vitasse shares the same opinion: "it is easy to create a garden or even an urban farm in the city, what is difficult is to make it live by getting people involved over time." In all his projects, he spends a lot of energy to build a resilient ecosystem of participants, sharing skills and responsibilities so that if one leaves, another can take his or her place.



Thierry Roche's project, like a vegetal plug in the city

"we try to include trustees from the beginning to create a participative governance". Thierry Roche



Farmbot, an open source agriculture CNC farming project.

Is there a contradiction between urban nature and automation?

Both our interviewees agree that automation can be useful to develop vegetal smart cities, as long as technology doesn't create a barrier between people and nature. "You have to be careful not to build a project around a technology that will block other potential uses" says Thierry Roche. For him, it is possible to include sensors and even bots to man-

age urban farms or gardens, if they help getting more people on board by making the project more accessible and participatory. Bruno Vitasse goes even further and promotes the use of open-source technologies: "for us, resilience is not only in nature, it also means to remain independent from closed technologies". That is why the Zone AH! team supports

the Farmbot or LettuceThink for micro-gardening, or La Cool Co, which is a group of designers making open source sensors for environmental monitoring. All those projects empower individuals in their use of technology for urban gardening.

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