

TOPIA.
Regaining Urban Control.
Hagar Abiri

TOPIA. REGAINING URBAN CONTROL

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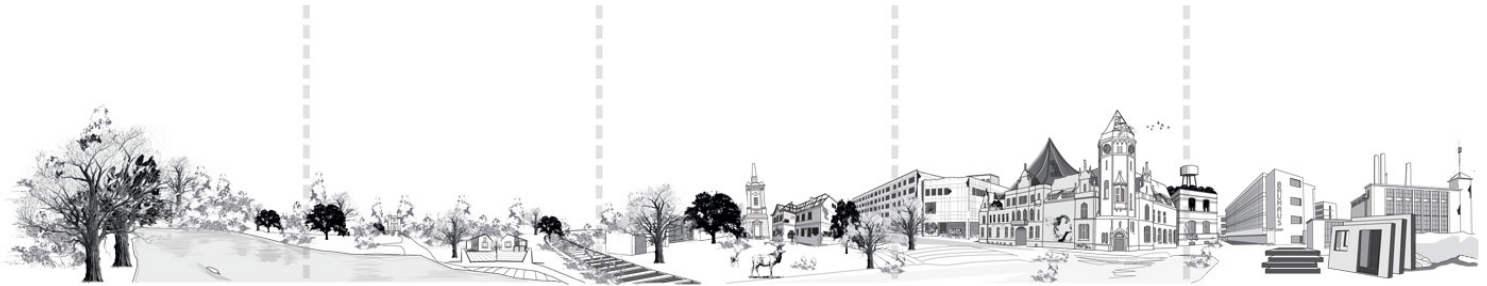
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Authorship: Research by Hagar Abiri.

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Bauhaus Urban Village. Due to its shrinking population and proximity to nature, Dessau has the potential to serve as a valuable source for materials which can be recycled to create a new settlement, called the Bauhaus Urban Village. Based on a new social hybrid system as the main Prosumer concept, the Bauhaus U.V. will answer new needs arising from a changed reality in local as well as global terms.



Dessau 2025

Transition

The year is 2025. The community of space pioneers has expanded, more people have arrived over time and the young pioneers who have grown older now have children, a factor which affects their lifestyle. The space pioneers are now facing a new situation and problems. The crumbling city, the non-maintained built environment, is a hazard; it takes more energy to maintain the roads and keep wildlife from invading the living areas.

It will take longer for balance to restore itself. In the first few years, stray cats have become the rulers of the abandoned buildings, which are now small-scale wildlife colonies. With time, vegetation will spread and the river and floodplains will expand. Small animals will slowly infiltrate the city and reproduce: snakes, spiders and different species of insects, hamsters, hares, rabbits, martens, muskrats, raccoons and foxes, followed by buzzards and bigger animals such as deer and wild boar. The natural balance will be restored only when animals and trees find their place. Until then, the radical imbalance will be present. At first, rats, which eat everything from field crops to cardboard and plastic, will be present everywhere looking for food. Then, without the big supermarkets, human garbage and field crops, their population will naturally dwindle. Squirrels will spread and eat all the nuts before they germinate, which will allow imported species of trees to reproduce over the local oaks, until bigger animals arrive and restore the balance of the squirrels, which will give the oaks the chance to reproduce and take over the

landscape again.

Meanwhile, parallel to the disintegration process and nature taking over the city, the Bauhaus prospers. The industrial mass production which characterised the Bauhaus design approach for so long is replaced with the new perception, asserting that we must improve the way we live while taking responsibility for the damage caused to nature by humans. The new concept suggests that we must find a way to use materials that already exist and instead of taking more from nature and hurting it by contaminating the water, soil and air in the process of producing new products. In 2013 industries which abuse ecosystem services are imposing costs on the rest of society, since everyone depends on those services (such as water, air and soil) and is harmed by their decrease. Having understood the value of good design and the fundamental mistake of separating it from technology and science, the Bauhaus created a new platform which imitates natural optimisation: ‘nature does not compromise, nature optimises’. The new platform of interdisciplinary research advocates for transformation through entrepreneurs, industrialists and trade – without relying on politics and government. The main idea is to suggest an alternative in order to encourage entrepreneurs to operate differently, basically using garbage as resource.

A very important aspect of this transformation is how we build our habitat. Fundamental questions are raised in this context: Is the fact that we have been using the same systems for decades a good reason to keep using them? Is it moral to flush clean water down the toilet when there is a shortage of clean water in the world? Or, basically, how can we improve the way we live, using what we have or what nature kindly offers, while repairing the damage caused by our present (2013) habitats, which means accelerating the process of healing the exhausted landscape and returning it to nature.

Naturally, the state of the city in 2025 along with the new situation of the space pioneers had turned the whole city into a laboratory for testing future living, while at the same time studying the old – after the test of time – in order to learn from past mistakes.

Location

The forest garden located outside the city, founded by the pioneers several years earlier, now (2025) blooms and functions as a source of quality food in a functioning ecosystem. The Bauhaus research group did not want to use the same traditional methods but only the materials. Thus, they chose the restored site of the forest garden, located outside the city, for constructing the new settlement in order to encourage a different way of thinking: one that would not be dependent on traditional infrastructure and

methods, while keeping the city as it is presently (2025) as an experimental space, tested under stress conditions, and maintaining its educational and heritage aspect.

The site is located far from the river, allowing it the flexibility to expand, but close to existing access roads such as the main road leading to Berlin and another leading to Dessau. At first, the roads are needed for construction purposes as well as for a gradual shift of the population. Later, they will be maintained for maintenance purposes, as an access road for tourists and for access to the Bauhaus' interdisciplinary research centre.

Materials

The new settlement will be formed out of recycled materials, originating from the abandoned buildings of Dessau. Old factories will be converted into recycling centres for concrete, glass, metal and porcelain in order to structure the new settlement while selling surplus for reuse outside of the region.

Community & Lifestyle

“Individual behaviour will adapt itself more to local and seasonal conditions, and mobility and domestic lifestyles will change... Social innovation will also be necessary, as will a review of current consumption patterns in the industrial countries. Do we always have to have a holiday on the Maldives? Do we really need a new DVD player every two years? Do we have to eat meat every day? Does everybody need a car? Do there have to be thirty different types of cheese in the supermarket? Is a new outfit really necessary at the start of each season? This only seems like preaching Sacrifice at first glance – what it is really about is a change in values. The things that people are not prepared to give up already represent sacrifice: peace and quiet, children, a future. Studies show that people who experience increasing prosperity are not necessarily happier. Consumption is not the key to happiness... A positive attitude towards a culture of shrinking can also mean reassessing happiness and one's appreciation of everyday life, not based on participation in the usual 'rat race' of consumption, but on the mindfulness of coexistence, civic involvement, and the benefits of informal structures so that restructuring society is driven from the bottom up.”

From: 'After the End of the Fossil Energy Era: The Climate and the Energy Landscape in Saxony-Anhalt 2050'

Doing good for nature doesn't necessarily mean lifestyle damage. On the contrary, natural improvement means improving our lives as an integral part of nature. It is only a matter of values and how we perceive them: in the cholera outbreak in Soho, London in 1854, John Snow found himself fighting people's perceptions in order to save their lives. He found out that the cholera was spreading through the water coming from what was considered to be the best pump in the neighbourhood, but due to the perception that diseases were transmitted through air, along with the common assumption that the water from that specific pump was 'the best', people did not believe him and paid with their lives.⁸ This story demonstrates how hard we are willing to hold on to misconceptions and what price we are willing to pay for something that is only considered to be better. Moreover, the story of the cholera outbreak demonstrates how hard it is to change someone's mind, not to mention an entire community's. In the end, simply by not drinking the water from the most desirable pump, the people of Soho recovered their health, received life.

And so, the community of Bauhaus city holds a new local perception. At the same time they are a part of a new much more global perception and, with that, they live a life of luxury and prosperity.

Food & Water

Local. Food takes the place of money as the most important element in the inhabitants' lives and affects all other aspects. Food in the Bauhaus Urban Village is the key for changing agriculture from being part of the climate problem into being part of the solution. With no meat or milk products, the consumption of energy will be tremendously reduced. Less energy will be needed, because today (2013) it is used mainly to cool livestock products in supermarkets, private houses and in distribution trucks. Moreover, the refrigeration industry will not be necessary at the same scale on which it operates today. With no livestock products, the distribution of food will not occur as frequently, which will save money as well as fossil fuel, since most fruits and vegetables will be provided on a local basis using natural forest gardens as the main source of local, optimally adapted food, together with aquaponics and vertical gardening to satisfy the increased demand. In order to receive food supply, one must register in one or more of the different sources for food. Food supply is free, well organized and tightly supervised so people can live in abundance but not in wastefulness.

People regain control over what they eat and where it's coming from, since they understand that the most important property they possess is, in fact, their body. Inhabitants take an active part in growing their own food. Parents teach their children the value of food, not only for their health but also for

nature's sake. New species of nuts and plants that grow naturally in the area become part of the daily diet. An intelligent water system is installed, which collects rainwater and separates clean water from grey water, recycles the grey water and produces energy using the water pressure in the pipes, while cleaning the water before returning it back to nature. Black water does not exist, since there are no chemicals washed from the food and toilets are not flushed with water.

Global. With no livestock-based industry, forests, which were cut down to make room for grazing and farms, will return to normal along with the ecosystems they contain. Greenhouse gas emissions will drop by more than 50 percent giving nature more of a chance to deal with the pollution generated so far, while significantly reducing the amount of acid rain.

More vertical gardening, forest gardening and aquaponics will reduce the need for traditional farming, thus letting the soil heal and regain life. Less processed food products means less packaging, which leads to less polluting industries and less trash. With a reduction in the amount of water-polluting industries, without a huge number of farm animals (who consume the clean water on the one hand and pollute it on the other), along with the fact that people do not eat fish anymore (therefore fishing boats are also grounded), the world water will rehabilitate itself and water will gradually be cleaner.

With only half of the wheat given to farm animals, we could feed a billion people. Additionally, the production of one kilo of beef requires 17 times more land and 50 times more water than one kilo of soybeans, which means that it takes 15 times more water to produce 1 Kilo of protein that originated in beef, than in wheat. With a significant reduction in meat consumption, by 2050 there will be no hunger in the world.

John Kasarda and Greg Lindsay's book *Aerotropolis* quotes Adrian Williams: *"If you care about the environment, there's certainly a case to be made for growing things where they grow best, or at least better than they do now."*

People will be able to enjoy good quality food coming from somewhere else in the world. Every place / country, in addition to its local food supply, will grow food for the purpose of bartering. Whatever grows best in one location's climate will be exchanged for what best grows under different climate conditions, in a different location – all around the world. Growing food in its most natural climate conditions saves energy. This food will grow in vertical gardens using technology that helps to heal the soil, or at least not damage it.

Transport

In the Bauhaus Urban Village, there is no need for vehicles, therefore there are no private vehicles but only shared transportation. On the first floor, there is a parking lot with different types of vehicles one can book in advance according to the amount of people sharing the ride (single, couple, family or bigger group). The vehicles run on energy generated from renewable energy sources such as wind and solar energy. Charging stations can be found all over Germany and abroad.

There are no trains in 2050. A new system, based on the existing rail system, is in use. The mechanism used is a bus bar: vehicles anchored on a surface leading them, in high-speed, to another place, according to fixed schedules, which are based on demand.

A new airline system will be in use for the distribution of food, clothing and other goods using hovercrafts. Since food is based mainly on local production, and there are no food or hygiene products packed in packages, but only by weight, distribution is much more efficient. People who wish to travel abroad may use the hovercraft and the airline system as well. The hovercraft use renewable sources of energy, mainly biomass.

Prosumer concepts

Human waste management:

First, toilets will not be flushed with water; toilets will have liquid-repellent coatings, subtle contours to facilitate complete draining, and a special lighter-than-urine biodegradable trap liquid to prevent odours.

Due to the fact that people will eat mainly fruits, vegetables and nuts, the urine and faeces will make for a valuable fertilizer due to the nutrients in them. This type of toilet not only saves about 40–60,000 gallons per unit, per year, but it will also save on sewage collection and sewage treatment and will improve topsoil.

Energy

* **Virtual information storage:**

More virtual activity requires larger (physical) storage space, which is located on a server farm. In addition to the obvious energy consumption of computers, additional expenses (much greater ones) are designated for cooling those servers, which produce a great amount of heat and require temperatures between 10 and 28 degrees Celsius. Therefore, there will be complete separation between the cold air, required for cooling the servers, and the hot air emitted from the servers. The cold air will be provided by the wind tower (see 'Renewable sources' – 'Wind') to maintain the required temperature, while the emitted hot air will be routed for heating shower water, heating greenhouses or to be transformed into energy for the server farm and more.

* **Renewable sources:**

Solar – the windows of the new structure will be photovoltaic windows, which produce energy not only from the sunlight, but also from indoor lighting, meaning electricity will be produced even in low light conditions.

Wind – the wind will be used for both generating energy and for the cooling system through the wind tower. The wind tower will be integrated with other systems in the building and will be located at its centre. Usually, the wind tower will capture the wind and, by sprinkling water, the air will become cooler, therefore heavier, and swirl down. In the new settlement, it will work the same way, but the air will be routed into a limited space, increasing the pressure so, while cooling the building, energy will also be produced.

Water – rain water will be collected on the top floor's surface (which is deep enough to contain water) and in the building's foundations, in sealed containers. The water will be cleaned by vegetation and be routed for drinking water and for the showers. After being used once, the water will be routed to a pool in the ground floor, where it will be cleaned once more and will be reused for cleaning purposes, such as laundry and housing/public maintenance. After the second use, the water will be routed to a secondary pool on the ground floor, where it will be cleaned in a natural process and returned to nature.

Climate control – apart from the water reservoir on the ground floor and the cold-air stream flowing through the centre of the building, cables will stretch across the building's southern façade and will allow creepers to climb up. In the winter time, when sun is needed for heating and light, the creepers, naturally, are in a state of hibernation, thus there are no leaves to block the sunlight. When summer arrives, the sun is stronger and one needs to protect oneself from it, the creepers are blooming, thus the

leaves shade the building. Also, external blinds will be installed outside the windows of the building for additional protection or rather to moderate the sunlight.

Work, Education, Leisure & Economy

To live in the Bauhaus Urban Village, one does not need a lot of money. Basic elements such as housing, food, transportation and education are free. In fact, inside the settlement money is not worth much. The economic system in New Bauhaus is virtual, based on credits that one can collect only by social actions such as cultivation, collection and distribution of food or by taking part in public information system management, and also by taking part in academic activities or other various private occupations.

Crime appears when there is a shortage, because when there are shortages people are busy fighting for their survival. Society, as well as innovation, are then pushed aside. So, it is better to invest energy and resources in supplying what people need, so they will have the time and the will to take an active part in society and in innovation.

As for today (2013), we pay great amounts of money to remedy crime and illiteracy. We pay to repair our soil, water and air after food industries and other product factories (we don't need) have destroyed them. We cut forests to produce paper products. As of the year 2000, paper accounted for about 2 percent of world's trade and 2.5 percent of world industrial production. Its U.S. shipment amounted to over \$132 billion. Yet, only about one-tenth of global paper goes into long-term storage in such forms as books, records and files.

When there are no natural sources to clean, or natural wildlife habitats to restore, no paper to produce or to dispose of, no printers or ink to produce, buy and dispose of, fewer health problems requiring less medical treatment and less medication, and no need for fossil fuels, a lot of money and energy are saved, which makes it possible to live a carefree, comfortable life for free, or even to equip each person with a personal tablet which will replace paper.

The world of 2050 is virtual; you get anything you need online. One can buy anything for oneself or for one's house and replace it with a new product whenever one desires.

There will be no need for physical stores but only small exhibition spaces; everyone will have their own virtual avatar to try on clothes before purchasing. Also jobs, for those who choose to keep having one, can be operated from anywhere, so one does not need to change locations in order to be in close

proximity to the work place.

With time, our priorities have been confused. Work received a priority over everything, even though the reason we work is to take care of ourselves and our families in a capitalist reality. In the new settlement, you don't have to work. Therefore only people who are passionate about something will do it, resulting in a small and high-quality professional sector.

Working spaces can be anywhere – in a private or a public space. Whereas, if someone would like to work alone but in proximity to others, or in an interdisciplinary collaboration, he or she can use the Bauhaus offered spaces.

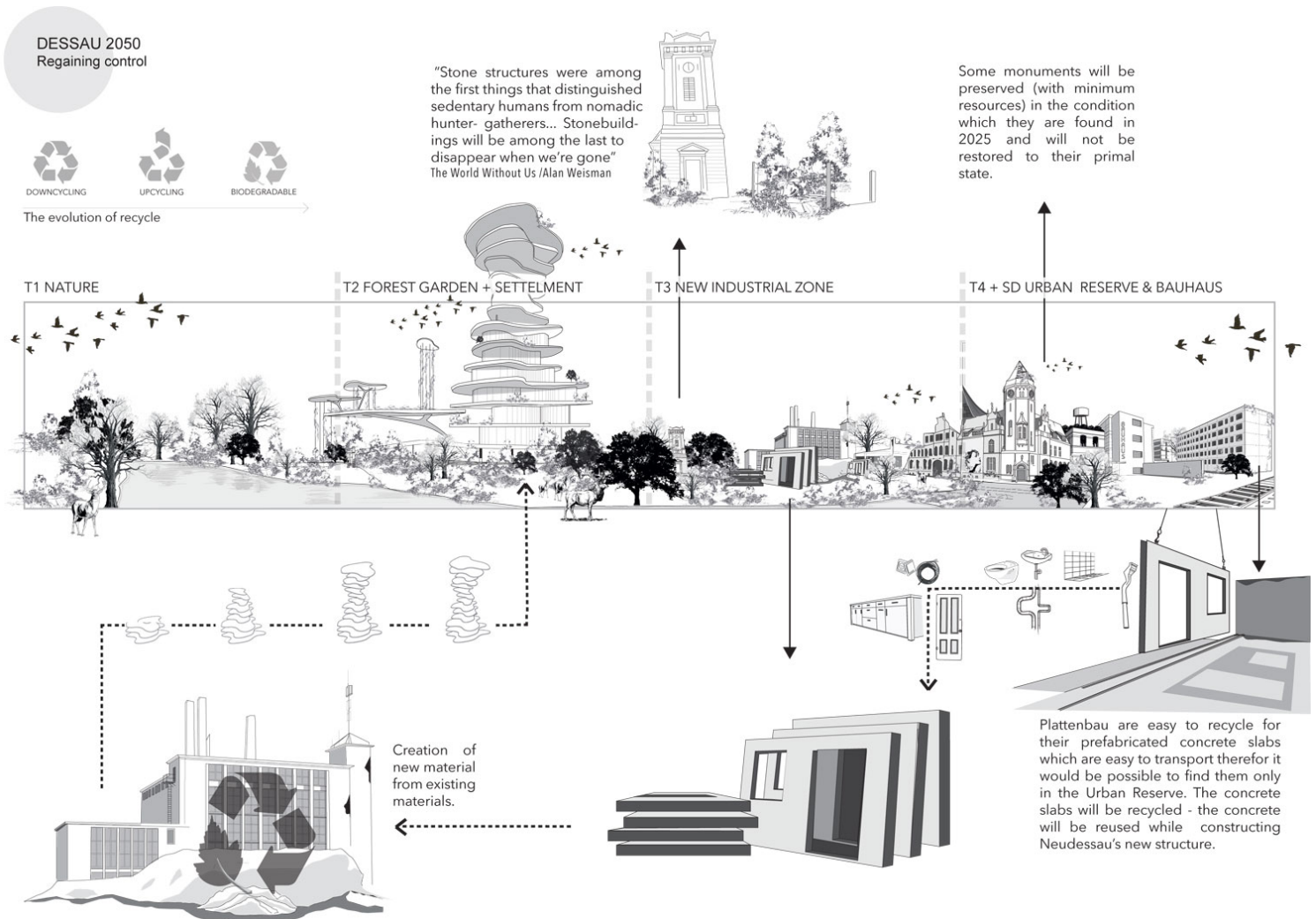
There are public shared spaces that can be used for different purposes, such as a common dining room that can be divided into several different zones, where people who would like to cook can share their passion with others. There will be spaces for public gatherings and social activities for kids and adults. The pools (reservoirs) and some of the terraces serve as public gardens, and when a surface (floor) is not in use it can be opened and turned into a garden.

Education is everywhere. While there is a place where young kids can learn the basics (language, math, history), educational activities take place in different locations. Learning groups are determined by interest and level of knowledge (and not by age), where those who have greater knowledge teach those who know less or nothing about a subject. Having a lot of information online, one can learn by watching tutorials and explore what one finds interesting, using a teacher's guidance. Youngsters will learn about nature's values, not only in theory but also in practice. Later they will help out, one day a week, at a location of their choice (with the food, in the research labs of the Bauhaus, maintaining the settlement and Dessau's urban reserve or teaching other kids). There are many ways to explore knowledge; therefore flexibility within a (given) timeframe is important.

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