

Equapolis: My Ideal City

Mission Statement

Cities are places where people from different backgrounds have come to seek a better life, innovate, exchange their unique ideas and outlooks, advance the social consciousness, and thrive. This facilitation of human flourishing, exchange, and progress has always been the most magical aspect of Cities to me. My Ideal City is one that continues this tradition of diversity, and progress, while tackling the issues of our time, notably creating sustainability, and equity.

Background

Today, we are at a critical intersection of demographic trends, and environmental changes. This reality will create large problems that people all around the world will have to grapple with; these challenges will also be an opportunity to lay the groundwork for a better future. In the coming decades, the population of certain regions, mostly in the global south, will skyrocket, with Nigeria for example expected to almost quadruple in size. These regions, such as Sub-Saharan Africa, and South Asia also tend to be developing economically, a trend that is linked to increased urbanization. For this reason, experts predict large-scale urbanization in these regions, as more people are born, and more of those people move to urban areas. This demographic trend will be compounded by climate change, as many of the fastest growing areas of the world are also the most susceptible to climate disaster. This will create an increasing number of climate refugees, as areas that are already growing will see less available resources. Most of these refugees, who tend to be disproportionately rural, will add to the existing rapid urbanization in their home regions, but many will also be moving to richer parts of the world, such as Europe, North America, and East Asia, where in many cases the population is aging, and in need for young workers. Other rich nations will actually lose population, with China expected to shrink by half according to some estimates, and will have to consolidate communities to prevent infrastructural redundancy which will burden a shrinking tax base, and to prevent increased loneliness in shrinking towns.

-The important takeaway is that some cities will grow, some will shrink, and large numbers of people will be moving to unfamiliar environments for economic or climate security.- The future city will be more diverse, and subject to more climate related risks. To ensure that Cities continue to function as the space for human flourishing I believe should be, we must design them with Equity in mind, being conscious of the mixing pot of different peoples they will be, while focusing heavily on sustainability, so that we can provide citizens with secure lives while preventing the further degradation of the environment.-

Goals

My ideal city would tackle these challenges head on, providing a sustainable and equitable environment to people from across the globe that provides the economic opportunities, and rich culture that makes cities great. To achieve this, Equapolis, my ideal city has a list of goals based on the 4 pillars of Opportunity, Humanity (culture), Equity, and Sustainability:

- Site specific climate resilience
- Ecologically sustainable growth
- Net zero emitter
- Positive impact on the ecosystem
- Economic opportunity regardless of wealth or skill
- Cultural integration and recognition within the larger city
- Equitable distribution of political power among communities
- Climate security for every resident
- Equal access to resources
- Cutting edge technological innovation

These goals will be achieved via two main techniques, effective urban design, effective local government.

Urban Design

Equiblocks

If my city is to accommodate the large number of people moving to urban areas in the future, it will need to be easily scaled, and descaled when necessary. To accomplish this, the city will be composed of semi-self-sufficient modular neighborhoods called Equiblocks¹. The

¹ Slide 1

Equiblocks will be designed with several key ideas from existing urban design practice, while also incorporating original elements to help achieve the lofty goals of the city. Each Equiblock will follow the '15 minute city principle' which states that every citizen should be no more than a 15-minute walk/bike away from all of their everyday needs, which include housing, employment, retail, recreation, and transportation. Walking and cycling will also be incentivized by smaller-scale design features, notably raised intersections, Auto-luw streets, road width, and dedicated walk/cycle path networks². By implementing these design techniques alongside '15 minute city' model, which allows most trips to be made by walking or biking, and by de-prioritizing automobiles with carbon taxes the Equiblock will insentise pedestrianism, which will reduce the city's greenhouse gas emissions. Increasing walking and cycling will also have a social benefit, as neighbors will be more likely to run into each other on the sidewalk, therefore interacting more, and building the community. Having economic opportunities and daily necessities will also help Equapolis achieve its goal of equity. In many car-centric American cities lower-income individuals who cannot afford cars miss out on opportunities such as job interviews, or bank appointments as they are simply not able to get there. By making such resources within walking distance of each citizen Equapolis will ensure that owning a car is not a barrier to success.

Zoning

Another major part of Equapolis' urban design strategy is its progressive zoning code, which will prioritize economic and environmental sustainability, and community building. One of the pillars of the city's zoning code will be an emphasis on mixed use zoning. This kind of zoning, which allows for several uses, most often residential and commercial, in one building promotes density by allowing more in a smaller space. Such density will have several positive impacts, such as lower housing costs by increasing supply and resource efficiency³, less of an ecological impact by reducing the amount of space taken away from natural habitats, and increased walk ability by putting daily needs near people's homes. While the most common type of mixed use buildings tend to be larger apartments with storefronts on the bottom floor, Equapolis will also encourage to special types of mixed use arrangements which will provide more economic opportunities to individual citizens, Front yard businesses, and live-work arrangements⁴.

Ecological Sustainability

As previously mentioned many people will move to cities fleeing climate disasters such as flooding, drought, fire, etc. Equapolis will be able to quickly expand to accommodate climate refugees from across the world, while growing in a way that does not increase the city's risk of itself experiencing climate related problems, and while minimizing the effects on ecology of its surroundings. The primary tool that will be used is materiality, or what materials are used to build the city. The city will aim to minimize the use of steel and concrete. Both of these materials create large CO2 emissions in their making, and are therefore not inline with equapolises sustainability principles. Concrete, and closely related asphalt, tend to produce large amounts of impermeable surface⁵, which leads to increased flood risk, and a worsening of the urban heat island effect. In the

² Slides 2-3

³ Slide 4

⁴ Slides 5-7

⁵ Slide 8

city, 90% of a building will have to be made out of a low carbon, renewable material. The two most preferential materials will be adobe and hay, as they do not add to deforestation as improper wood harvesting often can, are cheap, and therefore will lower the cost of construction, and are good insulators, reducing the electricity demands for heating and cooling⁶. To reduce the use of concrete and steel in streets and sidewalks, Equapolis will encourage the use of gravel, wood, blocks, or grassy paths over traditional concrete and asphalt streets. All of these renewable materials also have another benefit, they all are biodegradable, allowing for managed retreat⁷ as demographic trends lead to population shrinkage. To reduce the risk of flooding, which is the most common climate hazard in the world, Equapolis will utilize bioswales and flood easement areas instead of traditional channelization⁷. Equapolis will also strive to minimize its negative impact on the ecosystem. As the city expands and new Equblocks are built, the city will require that a piece of land at least half the side of the construction site be set aside for habitat preservation. For animals with larger ranges, and for the biodiversity of plants, small pockets of ecosystem separated from each other are not very useful, so individual pockets of their ecosystem will be linked throughout the urban environment using wildlife crossings to connect habitats into a continuous system. Connecting the human part of the city will also be done in a green way. Each Equblock will be connected to the wider city through light rail, which is more affordable and maneuverable than heavy rail, and more energy efficient than buses. The last mile problem, where people struggle to find connection for the nearest transit stop to their final destination, will be solved by placing the light rail stop at the center of each Equblock, ensuring that it is no more than a 15 minute walk away from anywhere in the city. For long haul journeys, citizens will be able to take the light rail to a multimodal central station, where they will be able to access affordable intercity trains, or electric car rentals.

Rights of Citizens

For Equapolis to provide all citizens with an opportunity to thrive it will aim to ensure that each person has access to education, economic opportunity, healthcare, political voice, and green space. Access to many of these resources will be found in the central plaza of each Equblock. This plaza will act as a centralized area for citizens to find said resources, containing different institutions and facilities. First of which will be the integrated high school and community college, which will help give students more educational opportunities earlier. For adults, the public library will contain a collection made largely of online classes that citizens can access, so that anyone can get ahead at any age. Each Equblock will also contain a startup incubator, containing networking resources, technology, and space for citizens of all economic backgrounds to start their own enterprise and improve their outlooks, and their community. In addition to the aforementioned network of ecological preserves, there will also be a network of human centered green belts which will provide recreation and an alternative form of connecting the city⁸. On the political side, each Equblock will have its own community center. Each block, which is designed to contain the same population, will have an elected representative who will represent the neighborhood on the city council. The representatives office will be located in the community center, so that every citizen has easy access to a person in political power to voice their concerns. This community center will also collect a special tax on expensive developments to raise money for a community projects

⁶ Slide 9

⁷ Slide 8

⁸ Slide 10

fund, with which people from the community can organize to propose an idea to use the money to execute a project such as creating a community garden, or improving a specific sidewalk. Each Equiblock will also contain a unique cultural center, such as a theater, sports venue, or museum, which will give citizens of that block a sense of community pride, and distinguish the block from others in the city, attracting tourism.