

SPECTRA

SPECTRA VILLAGES

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Legal Disclaimer *This paper was originally published in 2023 with the knowledge that Spectra would continue to evolve as a community-driven, open-source project. The aim for this paper is to lay out Spectra's primary motivations, proposals, and mechanisms at inception, and provide the foundation for further public discourse, feedback, and development. Nothing in this paper is an offer to sell, or the solicitation of an offer to buy, any tokens and/or physical or digital real estate. If and when Spectra offers for sale any assets, it will do so through definitive offering documents, including a disclosure document and risk factors. Those definitive documents may include an updated version of this paper, which may differ significantly from the current version. Nothing in this paper should be treated or read as a guarantee or promise of how Spectra's business or assets will develop or of the utility or value of the assets. This paper outlines Spectra's plans at initial inception, which could change at its discretion, and the success of which will depend on factors outside Spectra's control, not limited to market-based factors and factors within the data and cryptocurrency industries.*

Introduction

Spectra is a multidisciplinary project to solve existing problems in cities and define a new model of sustainable, human-centered, and technologically progressive urbanization. The [Spectra Whitepaper](#) identifies the primary mission of the project as building a sustainable, livable, and affordable city for at least one million people.

However, the dense mixed-use urbanism proposed in the Whitepaper is not the only solution to the wide-ranging problems confronting cities. Likewise, dense mixed-use urbanism might not be the right solution for everyone because not everyone wants to live in cities. For the vast majority of human history, people lived in rural settings. Most cities developed over centuries from what started as small villages or agrarian settlements. Less than 10% of people lived in urban areas in all regions of the world by 1800.¹ It wasn't until 2007 that the global number of people living in urban areas overtook the number in rural settings.²

This historical precedent is resurfacing amidst today's rapidly changing context of digitalization, economic regionalization, environmental degradation, pandemic recovery, and societal decay. For example, some groups like CabinDAO and Kift are seeking to establish peri-urban and rural co-owned, co-living communities supported by global digital networks.³

We believe that people who live in these smaller communities should also be included in co-creating our collective future and supported by tools such as VR experimentation. We introduce Spectra Villages to address this need.

Spectra Villages

A Spectra village is a peri-urban or rural community of a few dozen to a few hundred people. It is a sustainable place that advances local agriculture, renewable energy, circular waste systems, and is integrated into the natural landscape. It is a livable place that practices mixed-use development and prioritizes alternatives to car dependency when possible. It is an affordable place that values housing abundance and cooperativism. These villages are also likely to host recurring cultural events which build and align their communities.

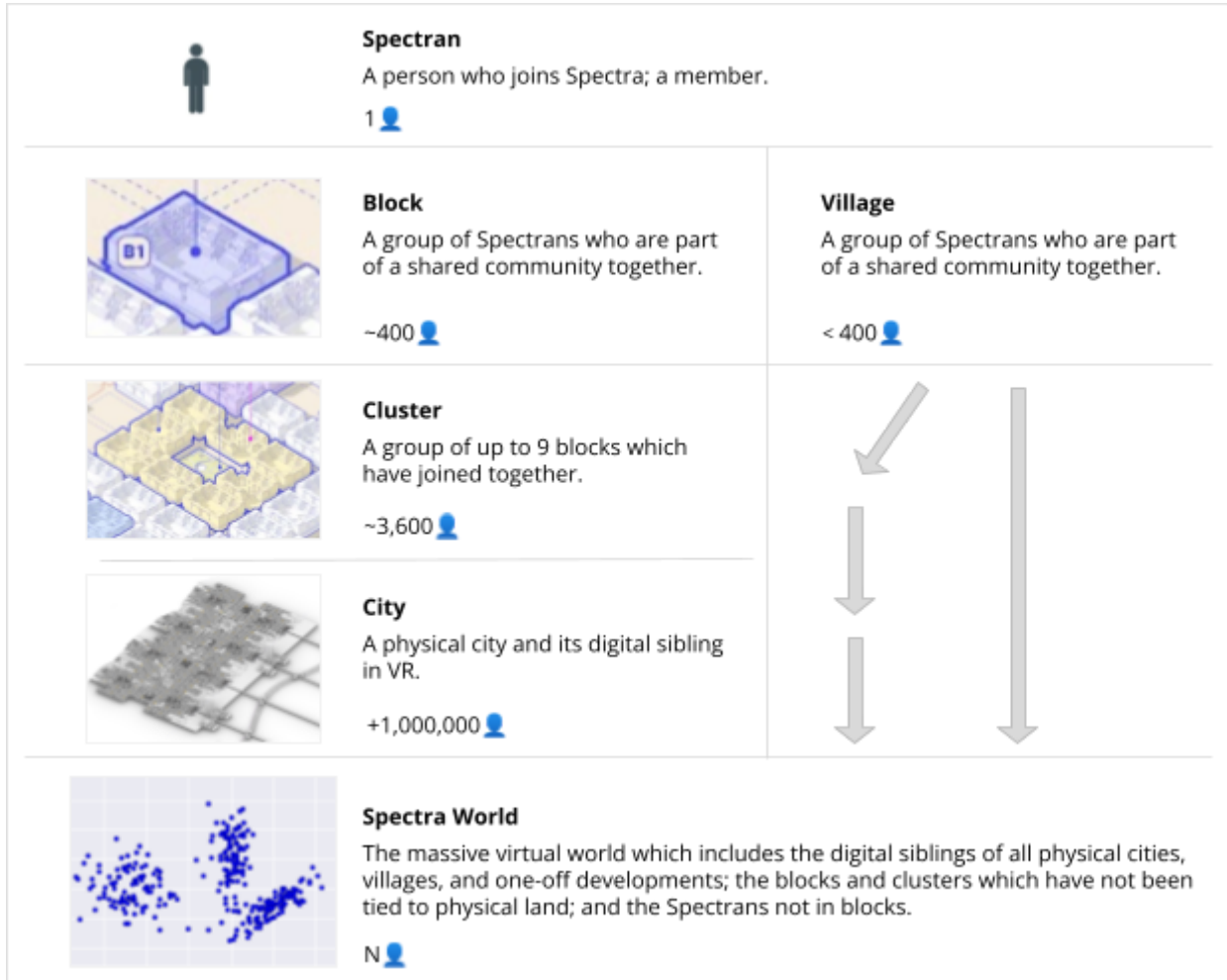
Villages are a natural fit into Spectra's multilayer cooperative structure. They are operationally similar to the block layer and also make up part of the broader Spectra community at the global

¹ Hannah Ritchie and Max Roser, "Urbanization," Our World in Data, Oxford Martin School, November 2019, accessed March 17, 2023, <https://ourworldindata.org/urbanization#number-of-people-living-in-urban-areas>.

² Ritchie and Roser, "Urbanization."

³ Cabin, "Coliving in nature for creators and remote workers," accessed March 18, 2023, <https://www.cabin.city/>; Kift, "Live and work anywhere," accessed March 18, 2023, <https://www.kift.com/>.

layer. Villages could eventually grow to a cluster or even city scale—at which point, they would functionally be blocks—or they can stay true to their smaller village scale and peri-urban/rural identity. Their innovation is in spatially decentralizing the city while still centering around community. As such, they extend Spectra into a **‘decentralized city’**.



Villages create the opportunity to incrementally build up Spectra’s practices, processes, and global community. They also offer an alternative to the clustering and landing process that are necessary for blocks to finance a much larger city-scale project. Depending on the geographic spread of Spectra villages, they could also improve the regional connectivity around the future site of a Spectra city.

Technological advancements

A suite of new technologies reestablish villages as viable in the modern economy. The widespread adoption of remote work and the availability of Starlink internet connectivity mean that people do not need to relocate to big cities for job opportunities. Solar panels and battery storage allow people to generate clean energy locally and cheaply. Drones and LiDAR improve our ability to survey remote land for development. VR worldbuilding provides an interactive, experimental co-creation space to rapidly test new ideas and build collaboratively. Prefabricated building materials speed up construction timelines. Within the next twenty years, shared autonomous electric vehicles and aerial passenger drones will provide new options for convenient connectivity between rural villages and urban centers. Finally, DAOs and blockchain technology enable a decentralized system for cooperative decision-making and financing common needs.

Spectra Puerto Rico site

The first Spectra village will be located on an 80-acre plot of land in Puerto Rico which has already been purchased by Spectra founder, Ryan Rzepecki. This site will be used to prototype some of Spectra's design concepts on a smaller scale. It will also serve as a hub for occasional in-person community gatherings. The land provides the opportunity to practice surveying, LiDAR scanning, site development, virtual worldbuilding, physical construction, and community building which can be applied to other village projects and inform later city-scale development.



Our role

Spectra will offer support to its partners and sub-communities as they stand up their own villages. This might start with advocating to rural areas about zoning reform, why it needs to happen, and how it can improve their livelihoods. Many rural communities have extremely large minimum lot sizes that are intended to preserve the rural character of the community, but that end up becoming low-density luxury sprawl. Instead, rural counties can adopt regulations that would allow for concentrated village development on a portion of large lots, while preserving the majority of the property for agricultural or conservation use.

In addition to advocating for land use and zoning reform, Spectra can help projects find and acquire land which is suitable to their needs, build a digital copy of the land using LiDAR and VR, run workshops to design and place buildings, and provide a library of building designs that can be quickly implemented or modified.

Socially, Spectra can also offer conferencing, social content, and capacity building. By being integrated into Spectra's broader global cooperative network, villages will be more resilient with the ability to coordinate resources and decision-making when relevant. For those who are interested, a program could also exist to facilitate migration—temporary or permanent—between Spectra villages, cities, and other developments.

Conclusion

To recap, Spectra aims to build a sustainable, livable, and affordable city for 1M+ people. Spectra villages extend this mission to peri-urban and rural areas. As with the [Whitepaper](#), this paper presents Spectra's aspirations and plans with the expectation that they will be refined by community-led input as the project grows.

What do you want the future to look like? Come join us in building it.

Website: www.spectracities.com

Discord: <https://discord.gg/cGpPpcxhqR>

Twitter, Instagram, TikTok: [@spectracities](#)