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The Production of Cloud
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The Big Tech

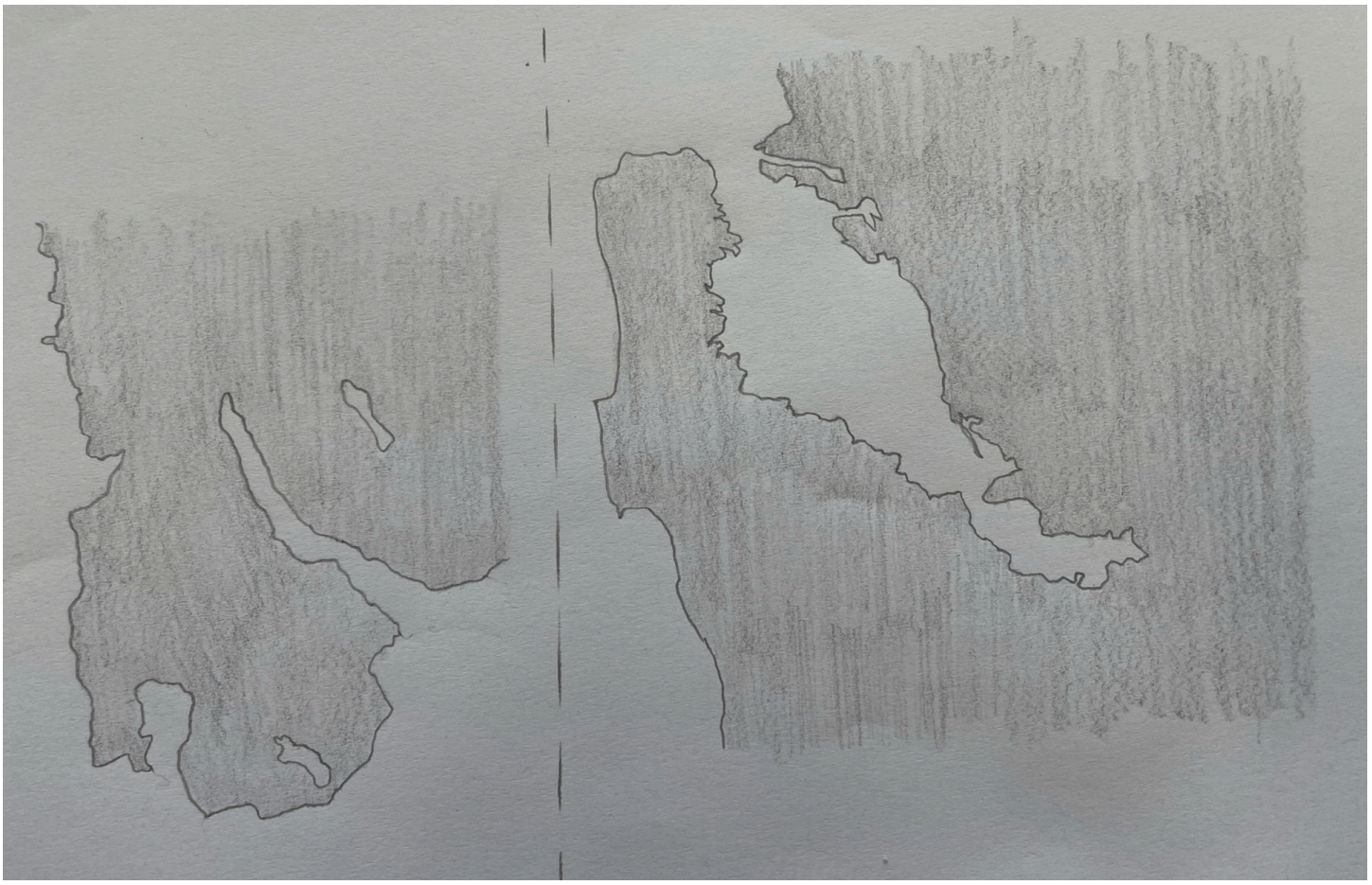
Decentring Urban Big Tech Clusters: From Exclusive Tech Valleys To Open Regional Networks

Leonardo Mühlestein, Vithursan Manoharan, and Alberto Früh

Zurich has imported the Silicon Valley economic model without adapting it to the fragility of a dense European fabric. This results in the friction between the global ambition of Big Tech and the physical reality of a city that cannot afford enclosed campuses. The Silicon Valley myth is producing a sterile spatial quality in Zurich, where corporate identity outweighs human scale, turning historic districts into mere logistics corridors for tech commuters.

The project proposes a shift in direction for Zurich's urban planning. We are moving away from the exclusion created by large corporates, where Big Tech clusters operate as autonomous, walled-off islands, toward urban symbiosis. By mapping the involved stakeholders, we identify new multifunctional hubs in the region where public infrastructure is no longer an extension of corporate offices, but the city's social engine open twenty-four seven.

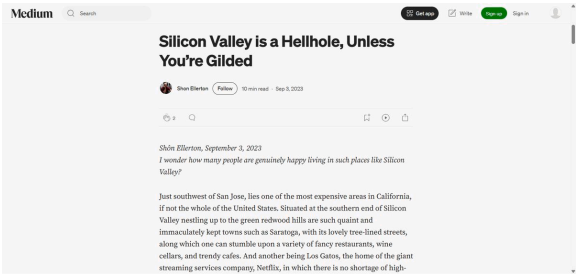
The Scale of the Global Tech



Zurich has imported the Silicon Valley economic model without adapting it to the fragility of a dense European fabric. This chapter analyses the friction between the global ambition of Big Tech and the physical reality of a city that cannot afford enclosed campuses. Through eye-level photography and comparative maps, we demonstrate how the Silicon Valley myth is producing a sterile spatial quality in Zurich, where corporate identity outweighs human scale, turning historic districts into mere logistics corridors for tech commuters.

Silicon Maps: promotional industry maps for high tech and biotech regions. Source: Silicon Maps, Inc.

The Silicon Valley with its hyper-concentrated scale of global tech serve as the prime example of a centralised tech monopoly. The dense, exclusive clustering of corporate giants generate immense economic power but inevitably lead to severe urban issues like extreme wealth disparity and housing crises. By analyzing this Californian archetype, we can better understand the similar monopolistic patterns currently emerging in the Greater Zurich Area.



Medium

Silicon Valley is a Hellhole, Unless You're Gilded

Shôn Ellerton, September 3, 2023

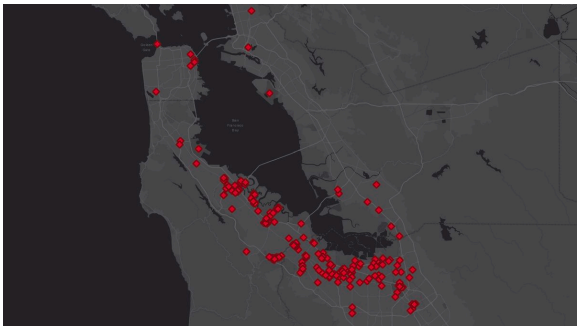
I wonder how many people are genuinely happy living in such places like Silicon Valley?

Just southwest of San Jose, lies one of the most expensive areas in California, if not the whole of the United States. Situated at the southern end of Silicon Valley nestling up to the green redwood hills are such quaint and immaculately kept towns such as Saratoga, with its lovely tree-lined streets, along which one can stumble upon a variety of fancy restaurants, wine cellars, and trendy cafes. And another being Los Gatos, the home of the giant streaming services company, Netflix, in which there is no shortage of high-

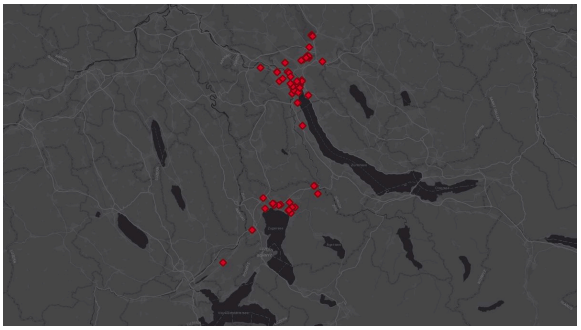
"Silicon Valley is a Hellhole, Unless You're Gilded." Article written by Shôn Ellerton and published on *Medium*.

"The photo project, Seeing Silicon Valley: Life Inside a Fraying America, features people like Cristobal, an army veteran and contract security guard, lives in a backyard shed in Mountain View, California. He earns $21 per hour, a wage that can't afford him a home in one of the most expensive housing markets in the country." Text: Melissa De Witte. Photograph: Mary Beth Meehan.

The unbridled corporate monopolies have severe socio-spatial consequences, such as a profound housing crisis and extreme wealth disparities. Without intervention and a shift toward open, polycentric regional networks, the accelerating tech cluster in the Greater Zurich Area risks replicating these exact patterns of displacement and urban inequality.

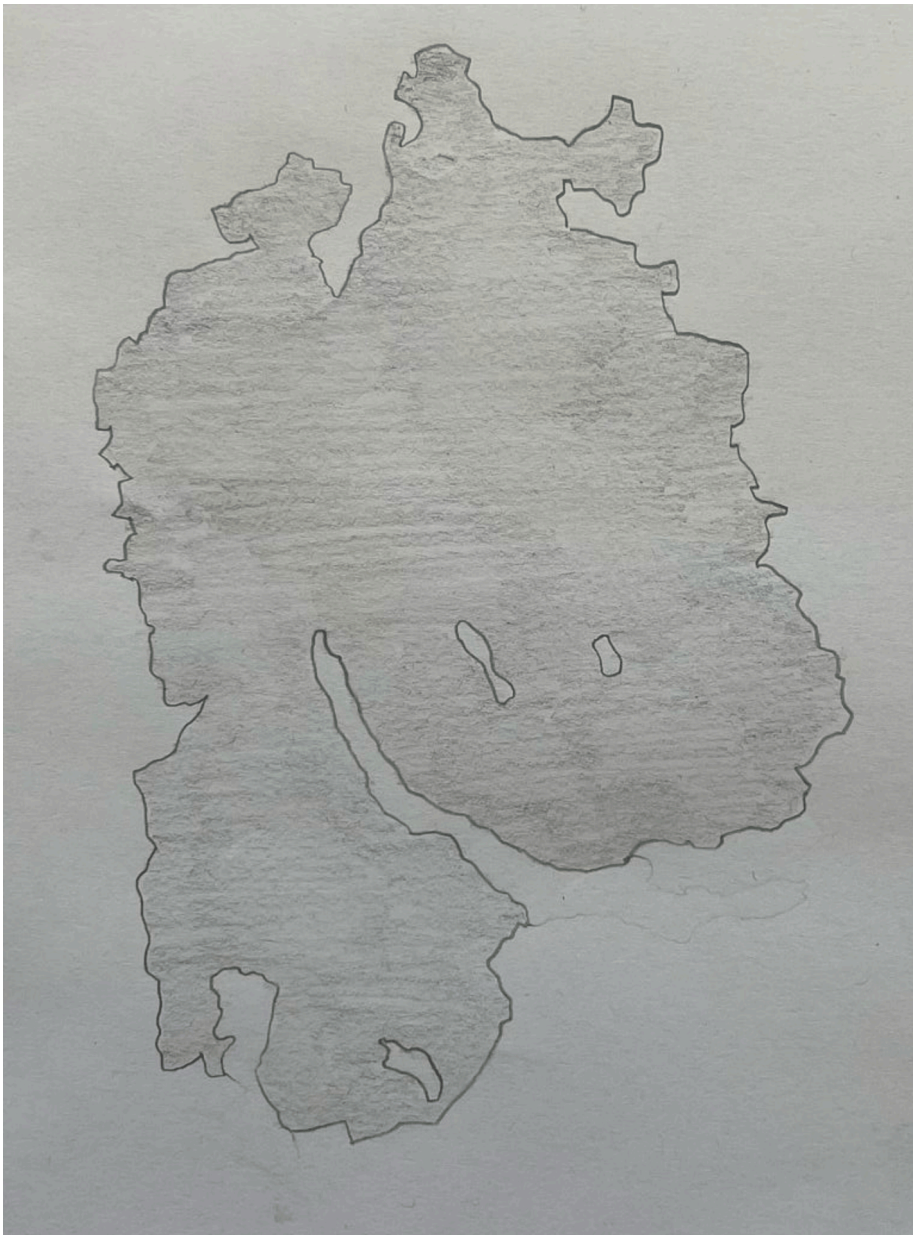


Map of Tech Companies in Silicon Valley.
A dense, uninterrupted constellation of corporate nodes is tightly bound to the geography of the San Francisco Bay, illustrating the ultimate scale of corporate hyper-concentration.

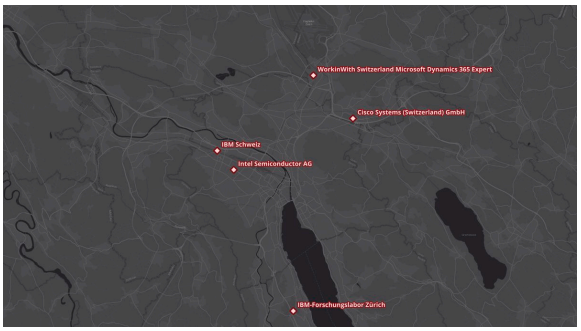


Map of Tech Companies in the Zurich Area
The Swiss landscape mimicks the American archetype, with corporate tech footprints aggressively clustering around highly specific, exclusive nodes at the tight urban corridor of central Zurich and the low-tax hub of Zug.

The Centralised Tech Monopoly of the Zurich Area



In this chapter, we define the identities of the key players: The Big Tech represents control, infrastructure stability, and data protection, attracting economies avoiding spontaneity. Small Tech represents agility, seeking proximity and low costs as true social activators. We finbalise the chapter by reconstructung a settlement timeline to show how the saturation of the Zurich city centre has created a rigid spatial hierarchy.



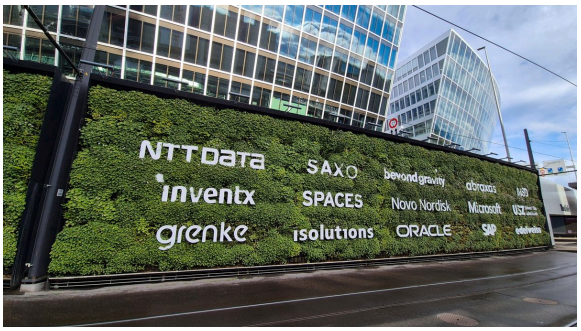
Before 2000
The ecosystem possessed a highly contained footprint, anchored by isolated foundational institutions like the IBM Research Laboratory in Rüschlikon and early commercial outposts like Intel and Cisco.

Between 2000 and 2010
The region experienced its first major wave of expansion. The arrival of global giants; most notably Google establishing its presence near central Zurich, marked a distinct spatial shift toward urban clustering, accompanied by emerging specialized labs like Disney Research and Oracle Labs.

After 2010
The landscape exploded into a massive corporate monopoly. Big Tech expanded aggressively across the city center, while massive cloud and infrastructure players like Microsoft and SAP consolidated suburban nodes near the airport. Simultaneously, a dense corridor of AI and R&D enterprises tightly clustered around the ETH axis.

1963: Inauguration of IBM Research in Rueschlikon. Source: YouTube.

2008: First Google location in Zurich at the Hürlimann-Areal. Source: Tages-Anzeiger.

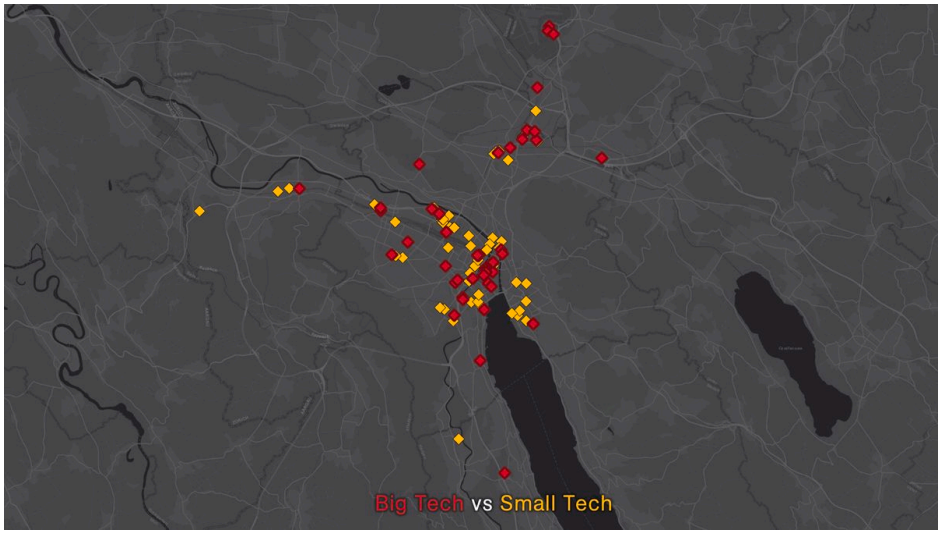


2026: Tram station at The Circle, Zurich Airport.

Before 2000, the industry favoured isolated suburban campuses, like the IBM Research Laboratory in Rüschlikon, which prioritised a quiet academic focus nestled in nature and away from the urban core.

Between 2000 and 2010, a major shift toward urban integration occurred as companies like Google adaptively reused historic industrial sites, such as the Hürlimann-Areal, seeking to absorb the cultural vibrancy of the inner city to attract top research talent.

Finally, the period after 2010 is defined by the corporate mega-complex, perfectly exemplified by “The Circle” at Zurich Airport. These hyper-modern, high-density commercial enclaves are physically detached from the historic centre and symbolise the complete consolidation of a global tech monopoly that now dictates vast territories for enterprise logistics and cloud infrastructure.



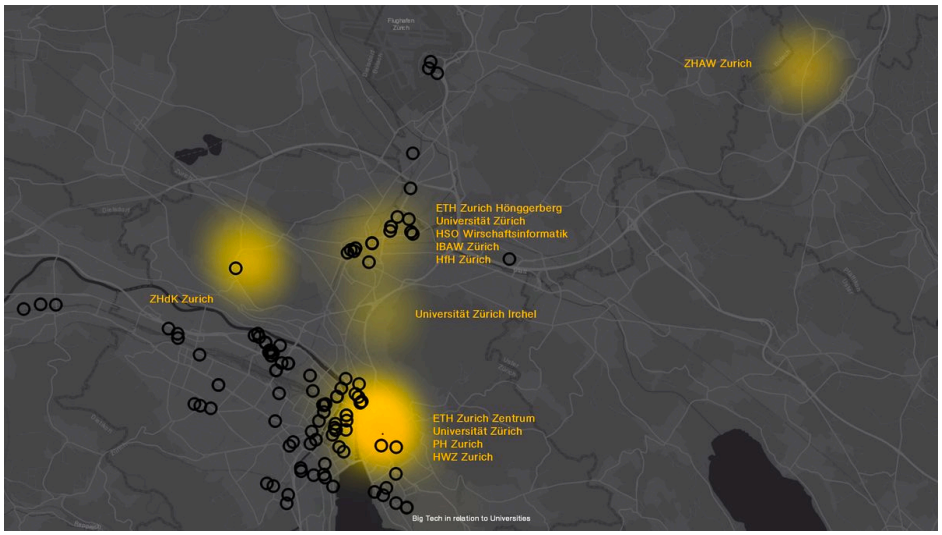
Proximity of Big Tech to Small Tech companies in the Zurich area.

Between established corporate giants and emerging startups across the Zurich landscape exist stark spatial and organisational differences.

Big Tech corporations operate globally with massive resources, calculated risk profiles, and process-heavy bureaucracies. Spatially, they form exclusive, monolithic clusters that dominate prime urban corridors or secure massive suburban footprints, dictating spatial control over the surrounding territory.

Small Tech firms survive on hyper focus, extreme agility, and lean teams, operating flexibly within a dynamic, localised urban network rather than isolating themselves in walled-off mega campuses.

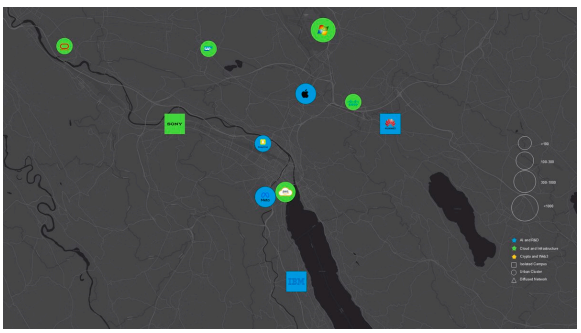
Currently, this creates a fragmented and imbalanced landscape where heavy corporate clusters cast a shadow over local innovation. Transforming this dynamic requires dismantling these exclusive corporate borders and relocating monolithic tech campuses to operate in direct synergy with agile Small Tech.



The spatial relationship between tech companies and Zurich's premier higher education institutions illuminates the extractive logic of the location of the Big Tech.

The spatial relationship between tech companies and Zurich’s premier higher education institutions illuminate the extractive logic of corporate placement. Major academic clusters are the ZHdK, ZHAW, the University of Zurich, and the core centres of ETH Zurich, Zentrum and Hönggerberg. Superimposing the tech companies reveals a profound geographical dependency: corporate offices are tightly packed directly up against or along the corridors connecting these academic institutions. This hyper-proximity allows global monopolies to act as a physical attractor for elite talent, absorbing top researchers and graduates the moment they leave the university ecosystem.

Map of AI and R&D cluster.



Map of cloud and infrastructure cluster.

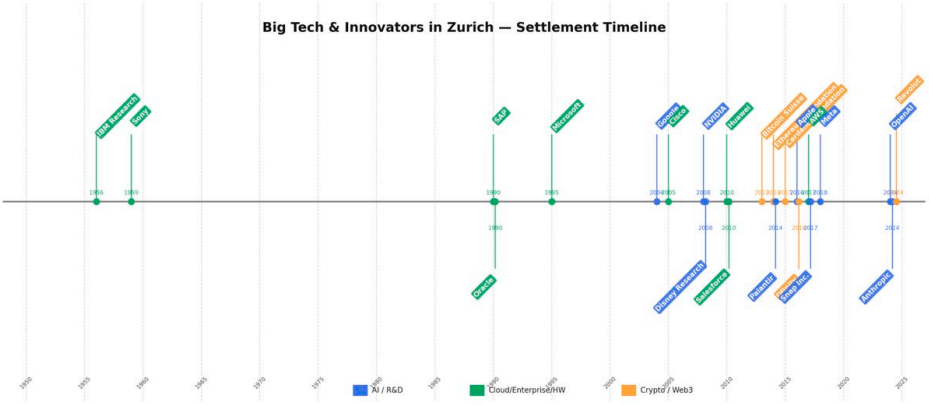
Map of crypto and Web3 cluster.

The regional tech ecosystem is organised in three distinct spatial typologies, each driven by different operational and regulatory logics.

AI and R&D giants, such as Google, Meta, and Apple, form a dense urban cluster in central Zurich, strategically positioning themselves near university corridors to extract top talent from institutions like ETH Zurich.

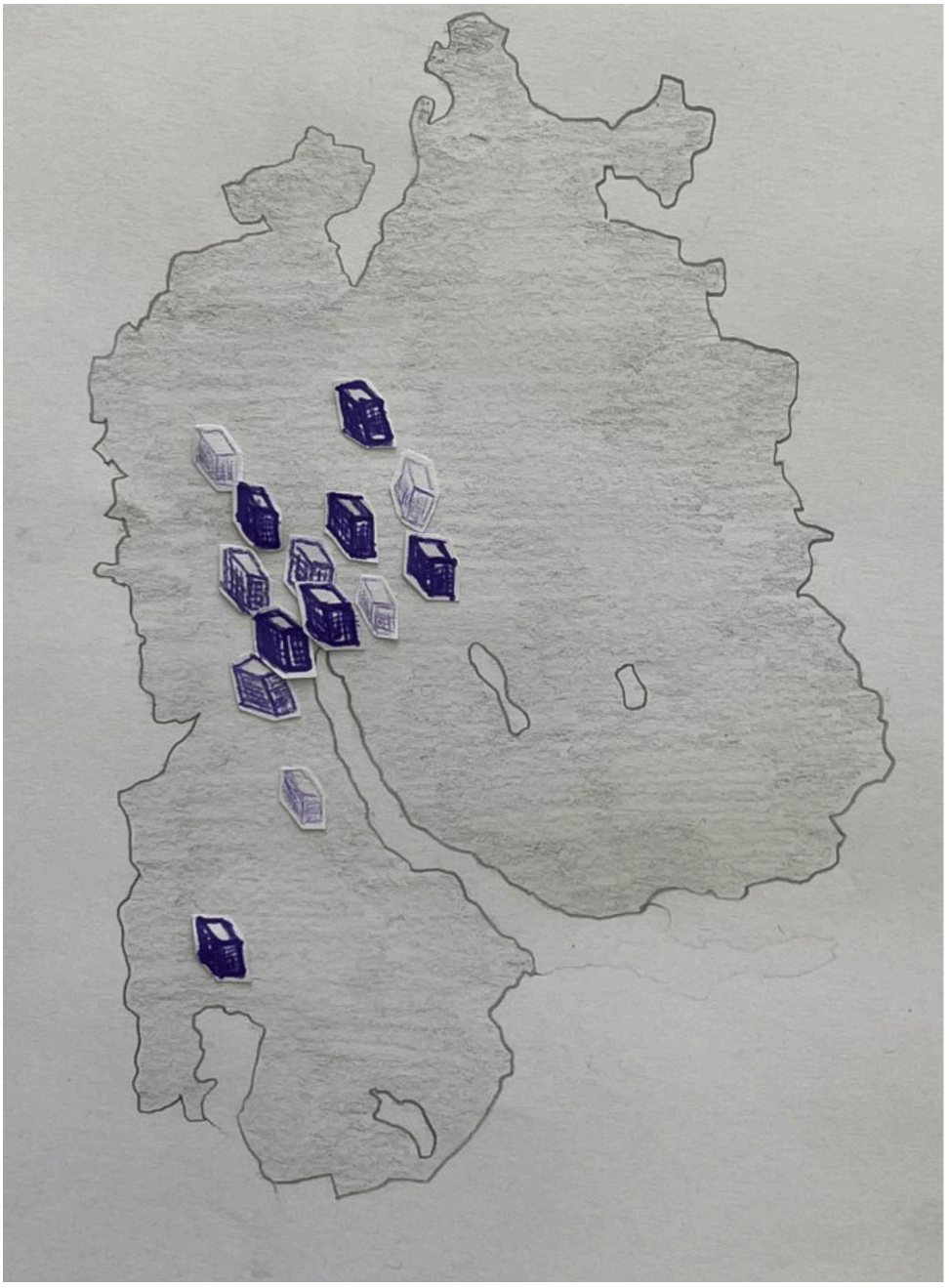
In contrast, cloud and infrastructure providers like Microsoft and SAP favor a diffused suburban network, moving toward peripheral nodes like the Zurich Airport to maximise logistical efficiency and minimise real estate costs.

Finally, the Crypto and Web3 sector is entirely isolated in Zug, driven not by physical infrastructure but by favorable tax conditions and permissive legal frameworks that define “Crypto Valley”. Together, these distinct clusters illustrate a heavily segmented regional monopoly that our project aims to decentralise into an open, polycentric network.



Settlement timeline of the Big Tech in Zurich.

The Urban Problems of the Current Model



The current tech clustering is in fact a fracture in the city. We consider the current segregation in terms of impact on labour market, gentrification, and impact on public life. We prove that Big Tech's "control" has generated an invisible wall that empties the streets of interaction, neutrality, and urbanity making a beneficial decentralisation strategy urgent wich will positively reflect in the housing market.

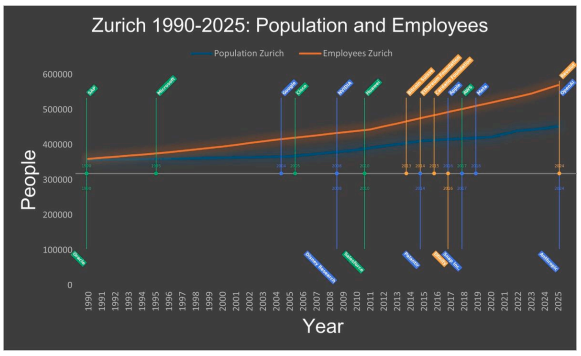
NZZ

Starting salary of 180,000 Swiss francs: American tech giants are poaching the best talent from the Swiss IT industry.

Tech companies in Zurich are scrambling for skilled workers and paying top salaries even to entry-level employees. Swiss companies complain that they can't compete.

Vogt Straight June 25, 2025, 5:30 a.m. 5 minutes of reading

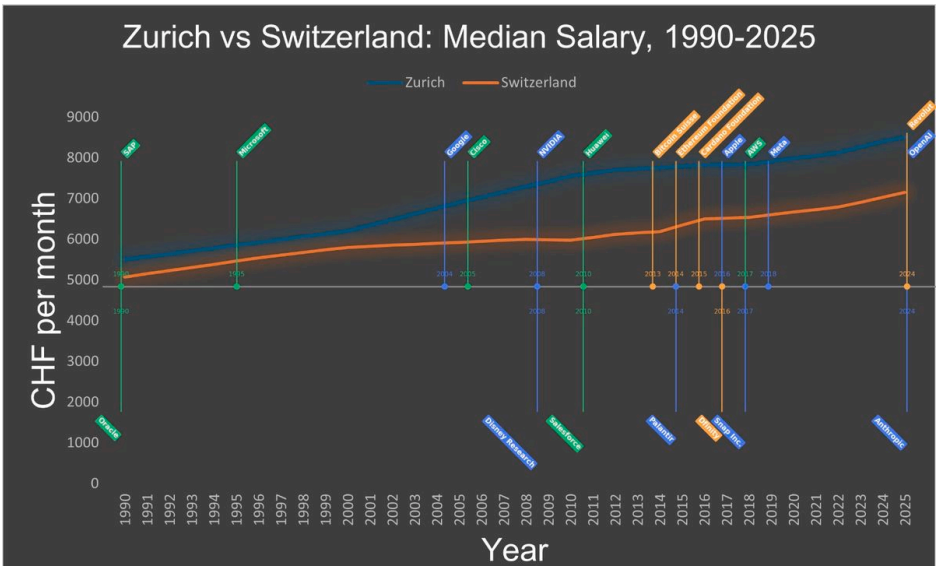
"American tech giants are poaching the best talent form the Swiss IT Industry." Article by Vogt Straight, published June 25, 2025 at Neue Zürcher Zeitung.



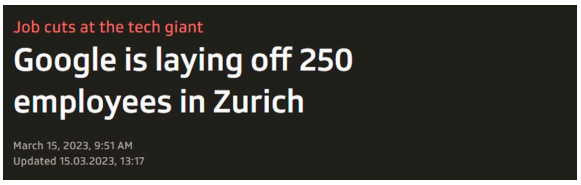
Population and employment in relation to the establishing of Big Tech in Zurich between 1990 and 2025.

The intense macroeconomic and labour market pressures is shaping the Greater Zurich Area. There has been a widening structural gap between 1990 and 2025: the number of employees in Zurich has grown significantly faster than its residential population, cementing the city's role as an intensive commercial capital dependent on external talent.

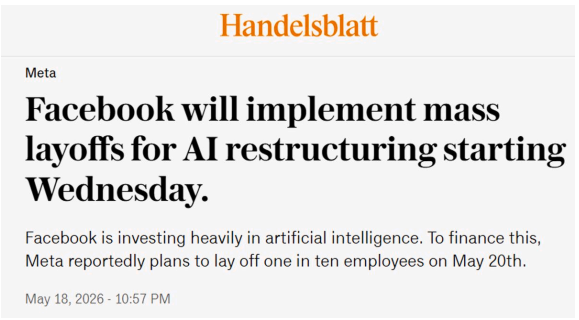
As a consequence of this hyper-concentration, American tech monopolies use their massive resources to offer astronomical starting salaries of 180,000 CHF, effectively siphoning top talent away from the local Swiss IT sector. Together, they expose a market out of balance, where global corporate monopolies distort the regional economy, drive competition beyond the reach of local small tech firms, and reinforce the urgent need for a decentralised, polycentric regional network.



Comparison between the median salary of Zurich and Switzerland between 1990 and 2025.



SRF, Massenentlassung, 15.03.203



Handelsblatt, 18.05.2026

iTReseller, 11.04.2025

Blick.ch, Massenentlassung Google, 2024

CNBC, Millennial Money Mike Winters, 30.09.2025

TagesAnzeiger, Denise Jeitziner, 29.01.2026

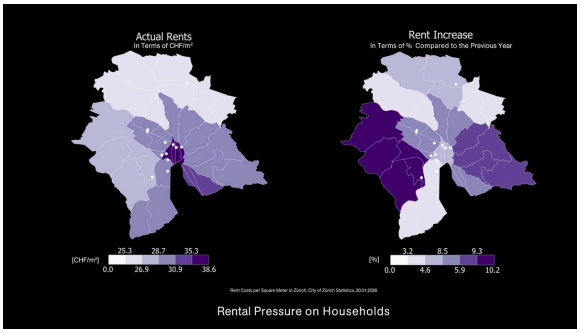
Zurich's median wage has drastically decoupled from the rest of Switzerland between 1990 and 2025, driven by the hyper-concentration of high-paying tech giants.

However, high wages are often tied to an intense, process-heavy corporate ecosystem that breeds extreme job stress and burnout. This strain has fueled a culture of early "exit strategies" and mini-retirements, with workers saving aggressively simply to escape the corporate grind. Compounding this personal strain is severe corporate volatility; as the news headlines demonstrate, total reliance on foreign monopolies leaves the local workforce highly vulnerable to sudden, overseas restructuring and massive waves of layoffs.

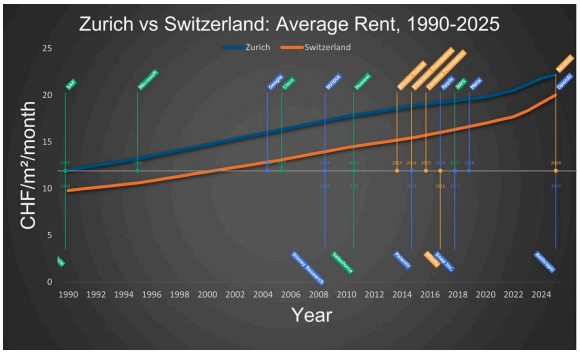
Together, these factors reveal a deeply unsustainable cycle of income polarisation, psychological strain, and employment insecurity.

Gentrification in Zurich. Source: Swiss Info, September 26, 2019.

Zurich's centralised tech boom has severe physical and economic impacts on the local housing market. This physical transformation is propelled by intense spatial-economic pressure, which details a city under extreme rental strain. Current rents peak above 38 CHF per square metre in the central urban core, alongside aggressive annual rent increases reaching up to 10.2 % in surrounding districts. This is not a temporary spike but a relentless, long-term trend; between 1990 and 2025, Zurich's average rent completely decoupled from the Swiss national average, climbing steadily past 20 CHF per square meter per month. Together, this reveals how the unchecked clustering of hyper-salaried corporate monopolies forces an unsustainable wave of real estate inflation and displacement upon ordinary households.



Rent per cost per square metre in Zurich, 2026.



Comparison of average rent in Zurich and Switzerland between 1990 and 2025.

Europaallee during lunch time.

Europaallee at night.

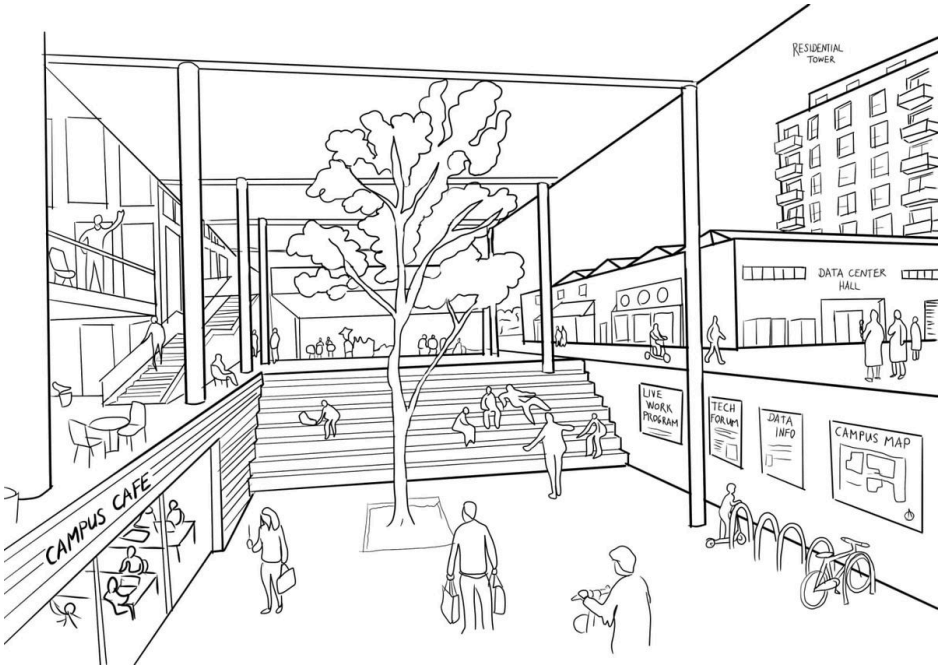
The physical manifestation of centralised Big Tech monopolies severely diminishes the quality, vibrancy, and accessibility of our public urban spaces. The corporate-dominated districts suffer from a profound temporal and user shift. These areas are designed almost exclusively to serve the rhythms of corporate life. During the day, they function as manicured, transient corridors for tech employees, but at night, they become entirely sterile and desolate. This monoculture strips the city of its natural, twenty-four seven mixed-use vitality, replacing true public life with a rigid nine-to-five corporate schedule.

Technopark in Zurich, located near Hardbrücke train station.

Demonstrated by their imposing architecture, these tech hubs exert aggressive spatial control over the urban environment. By replacing porous, diverse streetscapes with monolithic, fortress-like mega-structures and vast, uninviting concrete plazas, Big Tech effectively privatises the urban realm. This architecture is not designed for public gathering or civic life; it is designed to project power, control movement, and ultimately exclude the general public, eroding the democratic character of the city.

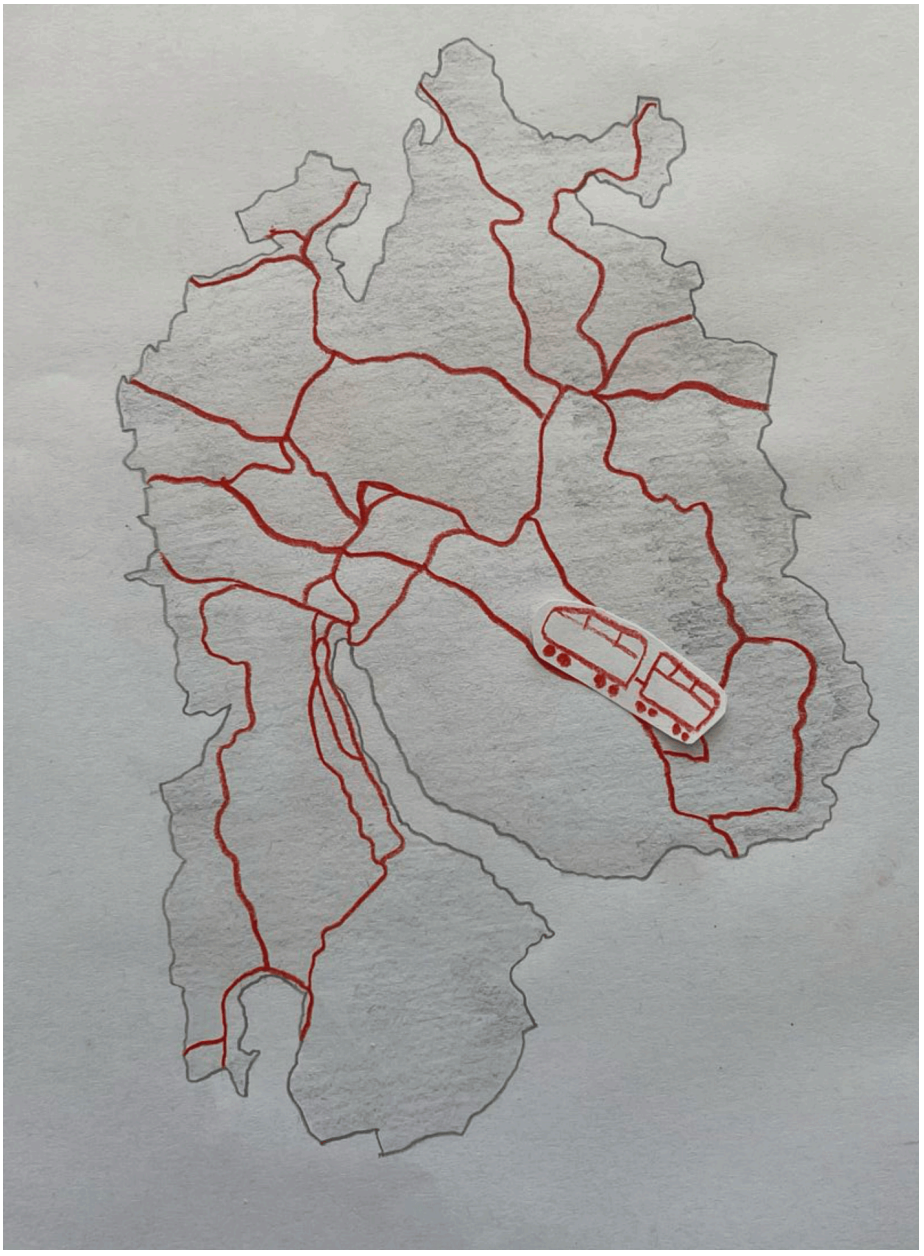
Toward a a Decentralised, Polycentric Regional Network of Tech Firms

The current model of the isolated, centralised corporate tech campus has proven to be socially, economically, and spatially unsustainable for our territories. To resolve the profound urban imbalances caused by this model, we must dismantle these exclusive corporate borders and transition away from the concept of a monolithic “tech valley.” In its place, our project proposes a decentralised network where global corporate giants are strategically relocated to operate in direct, non-exploitative synergy with agile, local Small Tech firms. Crucially, these new polycentric tech hubs must be seamlessly anchored into existing municipal train systems to ensure equitable regional access and prevent the geographic isolation of wealth. Ultimately, this requires a fundamental reclaiming of architectural space for civic life. By replacing rigid corporate fortresses with open, democratic, and truly mixed-use architectural frameworks, integrating residential spaces, public tech forums, data centre halls, and community campus cafes.



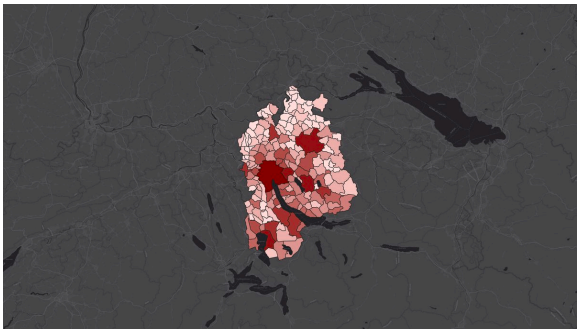
Proposal sketch: global corporate giants are strategically relocated to operate in direct, non-exploitative synergy with agile, local Small Tech firms.

The New Multifunctional Hubs

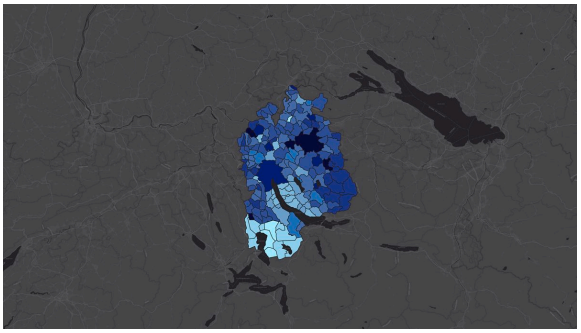


We propose new strategic nodes for the relocation of tech clusters, based on the required conditions of a site such as tax attractiveness for corporations, accessibility ensured by public transport, population density as well as proximity to academia. In addition, low-cost space has to be available for Small Tech and the cluster has to have the potential to improve the neighbourhood. As a result, we shift from monofunctional centrality of the city centre to a polycentric urban network.

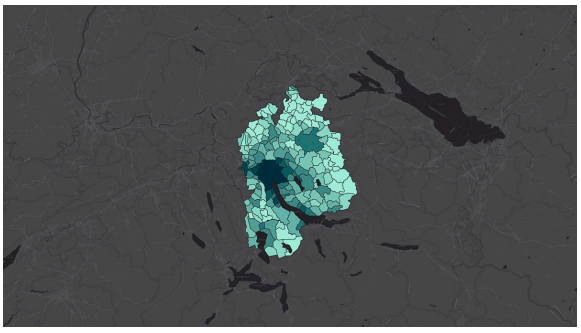
The New Multifunctional Hubs



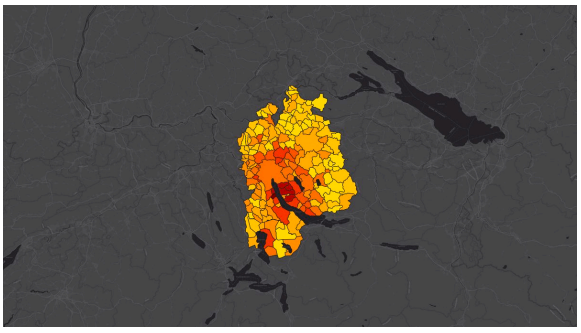
POPOULATION DENSITY
A large part of the regional workforce lives outside the primary tech clusters in urban centres. By relocating tech campuses out to these populated secondary nodes and linking them directly to local train systems, we can drastically reduce daily commuter traffic into the city. It allows us to bring the workspaces directly to where the people actually reside, restoring vitality to local communities.



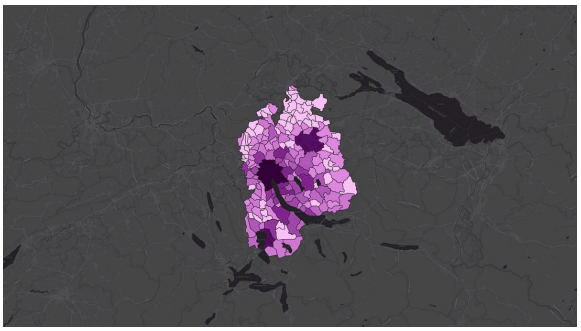
TAX RATES
In the Canton of Zurich, tax rates vary across the territory. This uneven topography provides strategic leverage. By identifying municipalities with balanced or favorable tax rates, we can create targeted financial incentives to encourage agile Small Tech startups and decentralised Big Tech outposts to settle together outside the monopolised core, fostering new zones of innovation.



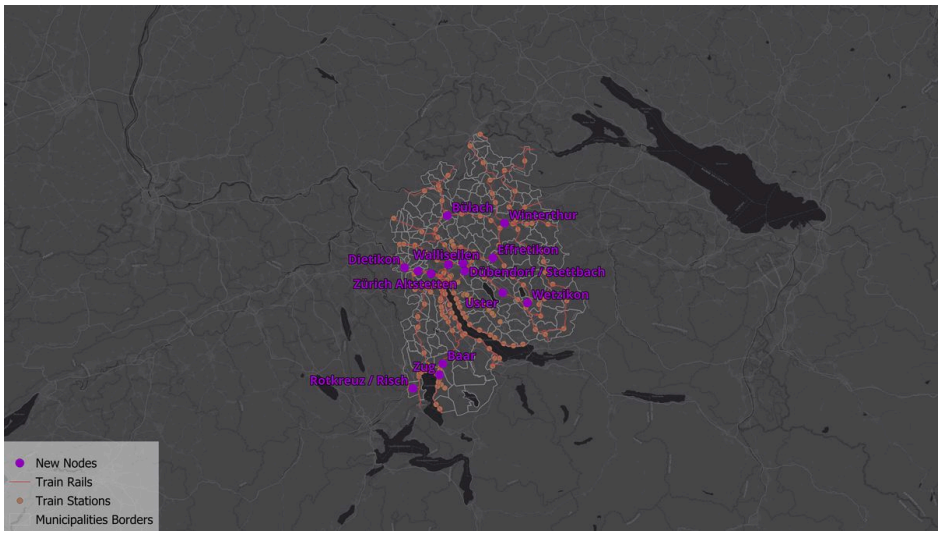
SPATIAL DENSITY
This map reveals a heavily congested urban core surrounded by less dense peripheral municipalities. These lower-density zones outside the city centre offer the vital physical capacity needed to build new, open tech hubs. They provide the necessary breathing room to integrate living, working, and public spaces without exacerbating the severe crowding of central Zurich.



TAX REVENUE
Tax revenue is heavily skewed toward the city centre and the affluent lake districts, leaving peripheral areas behind. Dispersing tech networks into municipalities with currently lower tax revenues presents a massive opportunity for regional equity. Relocating these hubs will distribute economic wealth more evenly, boosting local economies and preventing the extreme, localised gentrification we see today.



TOTAL TAX VOLUME
The total tax volume reflects the profound economic imbalances of the current centralized system. A polycentric relocation strategy will inherently distribute the massive corporate tax base across the wider region. This empowers peripheral municipalities with the increased funding they need to invest in high-quality public spaces, civic architecture, and better transit infrastructure for everyone.



THE NEW MULTIFUNCTIONAL HUBS

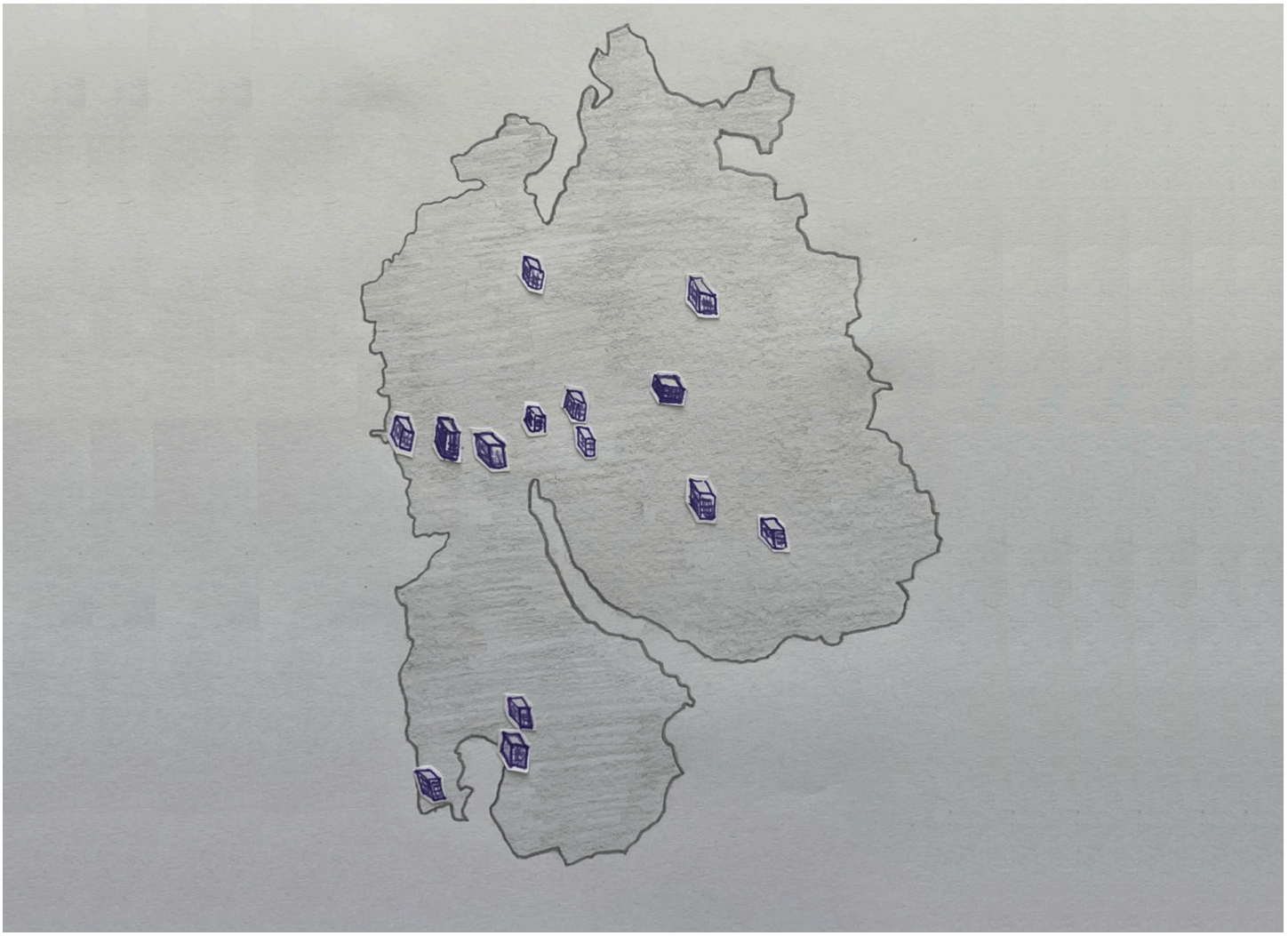
Rather than allowing Big Tech to dominate central Zurich, the final proposed nodes are strategically dispersed across the municipalities of Zurich and Zug. Every hub is anchored to the existing train rail network. This ensures region-wide public transit accessibility, utilising existing infrastructure to link the territory rather than isolating it.

A defining structural mechanism of this polycentric model is the strict “2% cap” relative to each municipality’s existing population. For example, Winterthur, with a population of 120,000, features a hub capacity capped at 2,400 users, while a smaller node like Schlieren (population 20,000) is proportionately capped at 400 users. This ceiling guarantees that the scale of the tech hub never overwhelms the host municipality, fundamentally preventing the extreme real estate inflation, displacement, and gentrification that define the current model.

Node	Population	2% cap	Role
Winterthur	120k	2400	AI / R&D / Small Tech
Uster	37k	740	AI / R&D / Small Tech
Zürich Altstetten	36k	720	AI / R&D / Small Tech
Zug	31k	620	Crypto / Web3 / Fintech
Dübendorf / Stettbach	29k	580	AI / R&D / Small Tech
Dietikon	29k	580	Enterprise / Cloud
Wetzikon	26k	520	Enterprise / Cloud
Baar	26k	512	Crypto / Web3 / Fintech
Bülach	24k	488	Enterprise / Cloud
Zürich Oerlikon	24k	480	AI / R&D / Small Tech
Schlieren	20k	400	AI / R&D / Small Tech
Illnau-Effretikon	18k	360	Enterprise / Cloud
Wallisellen	17k	340	Enterprise / Cloud
Rotkreuz / Risch	12k	230	Crypto / Web3 / Fintech

The 2% population growth cap for a sustainable growth of the new hub.

The Anatomy of a Permeable Building



From the territorial strategy, we move to the architecture and propose a new typology, the multifunctional building, as the core architecture of the new hubs. The ground and first floors are porous to public functions. Above that, there are semipublic co-working offices, followed by private corporate offices.

As a case study for the new multifunctional building, we selected a parcel at Wallisellen's Bahnhofplatz. Designated as a new enterprise and cloud node, this site leverages Wallisellen's robust train connectivity to intercept regional commuters before they are forced into the congested centre of Zurich.

We propose a linear footprint, running parallel to the rail tracks. By anchoring the development directly onto the station, we transform a transient infrastructural corridor into a vibrant, mixed-use destination.

Adhering to our 2 % population cap, the Wallisellen hub is scaled to accommodate a maximum of 340 users. This ensures that the new enterprise architecture does not overwhelm the local municipality of 17,000 residents, but rather acts as a sustainable, proportionate economic catalyst that brings jobs directly to where the workforce lives.

Wallisellen multifunctional hub, current state.

Wallisellen multifunctional hub, site plan.

Wallisellen multifunctional hub, uses and vertical organisation.

We organise the programme vertically, combining corporate and public zones on different floors, as an alternative to the monolithic structures of the existing tech campuses. The ground floor expands into the surrounding landscape as an extended public realm, establishing an accessible foundation for the civic library above it, while a second public layer caps the structure at the roof level. Elevated green sky bridges and linear walkways connect between he different zones. Designed as floating public parks, these pathways ensure that the building's infrastructure is fundamentally shared between the tech workforce and local residents.

THE PUBLIC GROUND FLOOR

The street level is entirely returned to the people, operating as a porous, active transit plaza filled with local market stalls, bicycle parking, and greenery.

THE LIBRARY

From this public foundation, a prominent central staircase and transparent elevator core function as a vertical street, inviting the community upward towards the library, located on the first floor.

SHARED WORKSPACES

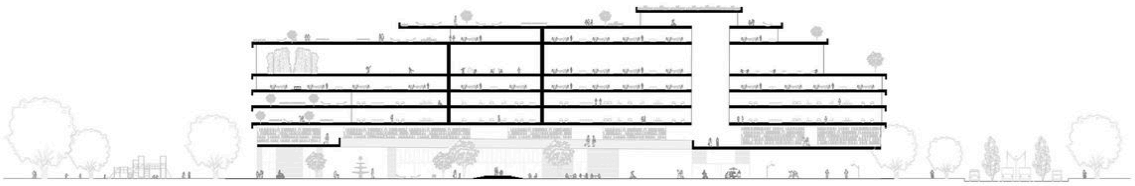
The shared workspaces act as a hybrid transition zone where local Small Tech startups, freelancers, and community makers gain direct access to professional infrastructure.

PRIVATE WORKSPACES

Private workspaces are dedicated to specialised enterprises, AI, or cloud engineering tasks. Rather than occupying an exclusive, detached campus that limits public entry, this corporate zone is fully embedded within the civic structure of the building. It is physically bound by public zones both below and above, forcing corporate entities to operate within a shared, transparent, and democratic urban framework.

THE PUBLIC ROOF

The roof is returned to the public sphere as an open garden and terrace. Elevating civic space to the top of the structure provides the community with a high-quality recreational environment.



Wallisellen multifunctional hub, section.

The concept of a multifunctional tech hub for Wallisellen serves as an architectural example for how to concretise our proposal for a decentralised, polycentric regional network. It serves as a vivid architectural manifestation of our thesis: stripping Big Tech of its exclusive, walled fortresses and reintegrating corporate power into the civic fabric of the territory.

Proposal for the new multifunctional hub at Wallisellen train station.

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Gemini AI was used for spelling and grammatical corrections. Photographs, drawing, and diagrammes by authors unless otherwise indicated.

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