

P4 Reflection

FUTURE NODE : AMSTERDAM SLOTERDIJK 2050

Proposing a radically new typology that epitomises integrated transit-oriented development (TOD) and seamless multimodality whilst keeping publicness at it's very core - as such forming a comprehensive answer to pressing urban challenges that Amsterdam, and cities worldwide, will face in the 21st century .

Complex Projects
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INTRODUCTION:

Project description.

Well into the 21st century, Amsterdam and many rapidly developing cities worldwide are facing key urban challenges. These challenges include the direction of rapid urban growth, [inward] densification, finding an answer to mobility systems that are reaching their limits, the response and adaption to new technologies, and perhaps most important: the creation of (or safeguarding of) a well-functioning social realm, which includes a dynamic urban milieu that is public in nature, inclusive and that provides a strong identity. New answers need to be sought for these new urban questions that relate to both urban, technological and societal matters.

The graduation project 'Future Node: Amsterdam Sloterdijk 2050' seeks to provide such answer through proposing a comprehensive & innovative approach that defies the status quo of urban development and delivers a strategic alternative. At first sight, it might come across as provocative and speculative in nature, but rather the project should be seen as an absolute necessity in the current urban developmental context, highly feasible and most of all: financially viable. Thus one can anticipate that hopefully very soon, what is currently still 'future' will form the new state of affairs - note: this is not a utopia!.

Located at and around the current station of Amsterdam Sloterdijk, one of the busiest mobility nodes of the Netherlands (yet functioning poorly and surrounded by a desolate and under-developed office park) the proposal goes well beyond merely replacing the old station. Rooted in the urban vision that Amsterdam's only way of successful densification is at the ring-road zone - a place with plenty of space and that is, at the same time, very well accessible - it seeks to kickstart a newly directed urban development in the station area of Sloterdijk as to convert it into one of multiple new 'poly-centers' of Amsterdam.

On of the measures to achieve this is by 'closing of the loop', by connecting the existing metro line at Sloterdijk to Central a new focus on Sloterdijk will be achieved where it is prognosed to form the #1 metro station of Amsterdam. This strategic connective asset is further enforces by directly connecting the A10 ring road to the railway and metro station. As such it can evolve into a true multimodal station that can serve as a valuable place for transferring from car-based traffic to public transport networks within the Ring-zone. This is made possible by the electric car charging parking garage, that is directly powered by its solar roof - thus de-stressing the electricity net with the advent of electric cars. Through intuitive way finding, and using a panopticon strategy where all locations of transfer are directly identifiably through sight-lines, the building ensures next-level seamless multimodality. Approaching the station one can directly see the trains entering the building, and from the entrance hall one has a straight look at the train platforms. From the plaza all surrounding train-platforms are visible, as well as the ways to the K+R zone for autonomous pods and even the walkways that lead into the surrounding district. Only by in such a way smoothly and intuitively integrating mobility networks, both digitally and physically, we can optimally make use of the existing mobility network, avoid congestion and keep growing cities accessible.

By providing an initial programmatic 'critical mass', breaching the current low-occupancy and prevailing mono-functionality, an essential step is taken toward developing also the area around this node to it's full potential. Transit-oriented design principles (matching node-value with place-value, creating a walkable and diverse neighbourhood, etc) are seen as the answer to successful integration of mobility and spatial development. However, as typically the case with such developments the interdependence between infrastructural investments and urban development can halt progress. By integration of the urban and infrastructural development within a single mixed-used complex a unique model is created which breaks this barrier; the increased real-estate value through increased accessibility now directly benefits the instigator of this improved accessibility, thus providing a viable and self-sustaining model for both urban as infrastructural development.

The design finds its configuration as a direct result of a critical analysis of both its urban context and infrastructural topology. Currently performing as a two-layer crossing station (even though both crossing tracks lead directly to the same location: Amsterdam Central) with a high complexity of infrastructure that divides and dominates surrounding area, an elegant solution is presented which both untangles this infrastructural 'knot' and at the same time completely resolves the barrier-effect of the tracks by removing the ground based tracks of the crossing and redirecting them across the two already existing fly-over tracks. As such this knot is turned into a true node, where different flows - relieved from its former obstructions - can freely converge and connect into all directions. These different flows (bicycle highways, roads, walk & run tracks, green-corridor) are resolved in the most pure and elegant way: a simple multi-lane roundabout that is exactly 1km in diameter; imagine the Amsterdam Marathon of 2050 consisting of 42 loops around the station! This roundabout at the same time demarcates a hyper-connected, special zone, that -unlike typical market driven capitalisation of key locations - serves the people of Amsterdam through creating an inclusive and diverse place. Most importantly, the very center is kept completely unbuilt, forming a new open and multifunctional space for the cities, that allows use as meeting place, for festivals and concert, for live-360 degree screenings, the 'Ajax-huldiging', or perhaps for democratic protests that are sure to get noticed. This large open central plaza becomes the social focal point of the area and a truly unique space in the city, forming both literally and figuratively the biggest gift imaginable to the people of Amsterdam!

Architecturally, the building is conceived as a large adaptable 'framework for urban life' - inspired by utopian visions such as Constant's New Babylon. This is all structured within a layout that has a distinctly 'urban' interface, consisting of streets, passages, colonnades and interior plazas that are formed in-between typical building blocks with all-sided accessibility (comparable in size to Amsterdam Zuid and the city-center), that is further subdivided into smaller sub-units that can be rented out to small businesses, individuals, or collectives. However, the typical rectilinear grids/pixels are morphed into the rounded geometry thus providing all-unique units and diverse and ever-surprising views and connections - similar to how the rounded shape of the canal belt is essential component of it's much-loved character. The average resulting trapezoid unit is around 12x12m and 9m in height, forming a climatized 'superstructure' of steel and glass which lends itself for individualised CLT-infill; 1, 2, 3 storey or open-loft style configurations all fall within the possibilities.

Also programmatically, the morphed shaped determines a gradient of different occupancies and uses resulting from the wide variation in units and street dimensions. Generally speaking, the ground floor is mainly rented out commercially to both serve the high flows of travellers (imagine doing all your shopping needs on the way home from work!) and at the same time capitalise on these flows to provide the essential income for maintaining the building and re-paying the initial (infrastructural) investments. The upper-level floors are equally well-connected yet out of the major connection routes and hosts a wide variety of functions serving the diverse needs of the people of Amsterdam; from judicial support, to a municipal office, from a library, to a capsule hotel, from a homeless soup-kitchen to a flex-work space, the chosen functions can be determined by public vote.

The success and longevity of this framework is determined by several innovative technical design solutions developed for this project. The typical modules consists of a structural steel skeleton, of which the members are over-dimensioned to keep harmony with the building's size and to create performative beams and columns; structural (lost) space becomes usable service-space. This way, the otherwise potentially disruptive restrictions to architectural freedom (such as a multitude of columns, fire stairs, shafts, load bearing walls etc) become elegantly integrated and omnipresent throughout the building; allowing for 100% flexibility and adaptability of the space, being freed from such restrictions. Flexibility is also key in the facade of the building, which is envisioned as a low-tech, highly adaptable 'membrane' consisting of 4 different roller-blinds strategically placed on both sides of an outdoor gallery. Drawing from the highly advanced dutch green-house building physical performance, these techniques are translated into a 'bio-climatic' building skin that can selectively adjusts its permeability to heat, light and air as to adjust to changing climate conditions and interior needs. The facade is wrapped in a subtle and open white metal mesh that functions as 360 degree horizontal shutters whilst concealing this building in a elegant veil - creating a fluid aesthetic that expresses itself outwards as a smooth gradient around the building that is coloured by the ever-changing Dutch skies. All in all, the applied system of 'skin & bones' ensures superior performance and sustainability whilst maintaining great simplicity.

Contrasting the suspected complexity of the 1/2 million square metre project, at all scales the project is rather characterised by such highly effective simplicity -from rearranging the infrastructural flows, towards dealing with interior flows of people and technical demands. Undeniably an icon (being even visible from outer space) for the area and the city, the real key to it's success lies not in what is built, but what is kept open. Similar to how Amsterdam's historical development was grounded on the interactions that were a result of halting traveller flows and radiated around Dam square, Sloterdijk will develop to it's full potential by repurposing it's node of infrastructural flows into a node of openness & interaction - as such truly forming a place for *all* people of Amsterdam.

ASPECT 1:

The Relationship between research and design.

Looking backward, the elaborate research phase in the graduation year proved essential to the resulting final outcome. Without doubt a wholly different project would have resulted would this phase not have been stretched to account for the majority of last year. Especially through re-examining the intermediate presentations, a gradual 'deepening' of the ambitions and intentions becomes clear. It started from simply a train station, towards a station+library/meeting place, towards a station as city entrance/gateway, towards a station as destination, towards a station as node of a multiplicity of flows, towards a station as complete urban nodal development, towards a station as key urban focal point and inclusive social space. The time and research was necessary to fully gain an understanding of the complex context of the assignment and develop the strategic ambitions and vision for the project. Never having this much time for formulating ones assignment, studying the relevant themes and topics, and working towards a final design I never would have thought this to actually be so beneficial. Formerly when, in a design process that contained little research phase, I would do some small studies and then become clear of direction, in the conviction that that is the way to go. This year has learned me that, when given more time, always way more is possible than initially thought. At first I had absolutely no clear sense of direction of how the project and programme should develop, but as the result of steady research, and time for the solutions to clarify, I steadily was able to draw conclusion with conviction and was able to build upon them conceptually. By this steady research it becomes less a matter of 'just doing' but actually more a matter of 'finding'. This reciprocal process, of research informing design and design informing research, proved an essential path for deciding on the multitude of small decisions that lead to the final design. Without research, and rational analysis and understanding of the situation, it would have been extremely difficult, if not impossible, to break down the complexity of such an architectural project with urban ambitions. So all throughout last year the key method in the design phase was research through studying, trying to understand, sketching, testing and drawing. Through openly examining encountered problems & studying backgrounds, options and alternatives it was possible to make steady progress and find appropriate solutions.

ASPECT 2:

The Relationship between theme and graduation lab complex projects.

The theme of the project 'Future Node: Amsterdam Sloterdijk 2050' is very much in line with the original ambitions and intentions of the graduation lab. It seeks to answer the key questions of the 'Amsterdam 2050' studio- as to how Amsterdam should densify inwards regarding key themes such as urban development, housing prices, congestion, mobility, sustainability, social inclusion and technology. Rather than responding to one of the key themes however, the project seeks to seek a comprehensive answer to the whole scope of relevant questions. Through the sheer size and different scales that the project involves, it becomes in a way as if designing a template for a city in itself - thus touching down upon all relevant themes. Hopefully the project will also serve the initial goal of the studio, which is to provide a inspiration for city-planners with thought provoking projects that perhaps currently seem a-typical but that might be extremely relevant for the day of tomorrow.

ASPECT 3:

The Relationship between methodology of the studio and method chosen.

The studio has a quite clear-cut methodology which served as guideline for production for the duration of the year. With many intermediary presentations, research themes, and products a large part of the year was determined. For a large part I thought it would have been nicer if there was more space for individual infill, but in general the assignments also provided a welcome source of inspiration next to the individual brain storming. The general method followed of research based design, group discussions and individual fascinations led to a diverse experience which was also a welcome alternation. Personally I could well identify with this research based, rational, and analytical design approach of a design problem, which ranges across all the scales. This usually would be most similar to my personal approach to design problems. However usually the scope of scales would be smaller. The focus of the studio's methodology of 'Complex Projects' therefor was very educative and inspiring. Not merely keeping to one scale (i.e. architectural), but also looking at urban development, economic tendencies, societal and technological changes and how all these inform and affect each other is a very relevant method for tackling the ever-increasing complexities of urban and architectural questions.

ASPECT 4:

The Relationship between the project and the wider social context.

The project becomes especially relevant regarding the wider social context and current era since it addresses many of the key questions cities worldwide are facing nowadays. How to steer urban development? How to safeguard identity in a globalising world? How could cities grow whilst staying accessible? How can we make the change towards sustainable energy sources? How to adapt to electric/autonomous car? How can we balance the forces of capitalist development in cities? How to create a open and inclusive city? How to create a dynamic city with plenty of interaction? How can cities adapt to future change? How can urban or architectural interventions be realised, also financially? How to build more sustainably? What is the future role of the infrastructure/mobility nodes within the urban fabric? How to realise quality mixed-use urbanity? How to safeguard public space? How could we maintain public street life and democratic meeting grounds? The list could go on, but these are some of the relevant questions that the project seeks to answer.

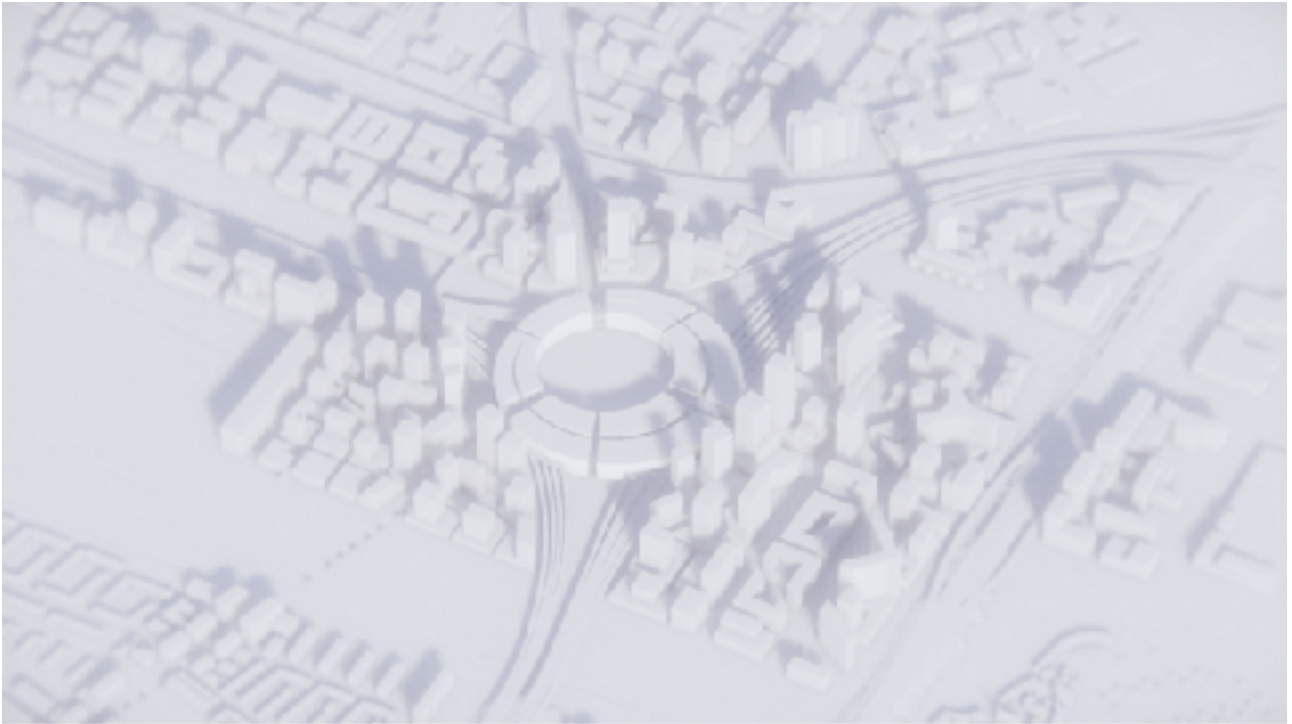
CONCLUSION:

Future Node Sloterdijk: Amsterdam 2050

Reflecting on the last year, I look back at a mostly inspiring final phase of my studies, which proved enormously educative for my development as a designer; without doubt I have seen my personal skill as a designer make huge steps during this year and this proved also very motivating for me to keep on learning and start to (finally) put this to practice as a future architect.

After some initial struggles with choosing my point of departure and thematic focus, I experienced my design process as an open, explorative, yet steadily converging process- sometimes making steps 'sideways' or 'forward', but with little irresolvable issues, or insurmountable 'dead-ends' so to speak. The project developed in a very gradual way, from a somewhat vague intention/vision towards a tangible and fully developed architectural (&urban?) project where the ambitions developed in the first semester got form - from a multi-million square meter urban plan, to a window frame that expresses the projects core intentions of simplicity & performance.

From urban design, to re-designing railway tracks and highly complex traffic flows, to more architectural design, structural and climate climate design, to a more technical elaboration, the project ranged across many scales and disciplines, which all were guided by the initial ambitions for the project. Each in their own way enforced the original vision and resulted in an integrative design outcome. This wide scope and comprehensive approach was very educative for me and it was a fun process of which I can say it feels almost completed. Time for some final fine-tuning and presentation, and then it is time for the next, non-academic design challenge that might only be slightly different in nature and scale, but who knows..



Initial Artist Impression: Public space at the heart of this new 'polycenter' of Amsterdam



Initial Artist Impression: Public, urban-like interior which centers itself around quality social space