

Vertical Loop City

EUROPAN 2011 VIENNA

Location Hietzing/Vienna // Building Site 20.600 m² // Inhabitants 515 // Density 25.000 p/km²

urban design strategies / social- and environmental coexistence

The key-question for the future urban design thinking will cope with the term of coexistence in multiple ways. A social mix of different generations with different walks of life must be self-evident as well as re-joining production and consume in our daily routine. If we keep in mind the total land area needed for 1 person in central Europe, thinking of living, working, leisure, as well as food and energy production, we must implement a radical change in our city development by closing the circles of urban metabolism.

The project relocates the highest population density from Vienna (5th district Magareten, 25.000 p/km²) to Viennas 13th district with lowest population density (13. district Hietzing, 1.350 p/km²). Furthermore the 'space program' covers the daily needs of energy and major parts of food supply. Social-, programmatic- and temporal- densities will provide urgently needed synergies. How will a city look like, if we all live no longer at expenses of the 'hinterland'.

Problems + Challenges

The building site is situated in Viennas 13th district, Hietzing. It is dramatically surrounded and interpenetrated by all possible kinds of traffic (bus-tram-train, tempo-50-zone). Therefore the site is problematically cut off of most of its surrounding area and appears as an overdimensioned interurban traffic refuge.

Furthermore, the building site is, also due to its topography, divided into three not directly coherent parts. The western, the north-eastern and the south-eastern part.

Full + Direct Accessibility

To make the whole building site easily accessible, its (independent) parts have to be connected. By making a large-scaled underpass beneath the railways, the southern and northern part are fully connectet. The whole building site now has the same level.

Inter-/ Intraurban Connectivity

The building site gets connected to the surrounding area. The western area is used for a parking garage to compensate the difference in height to the bordering area. On its top is a park that connects to the existing park in the west.

The north-western part is modified into a shared-space area - so the connection to the surrounding area is no more cut off by a heavily frequented street and therefore turns into an urban ice-skating rink (s. description Shared Space). As there is now some compensating in height difference to accomplish, the whole building site gets harmoniously connected to its context by barrier-free ramps and is now fully integrated in the whole surrounding area.

At the same time, the area is used as a traffic nodal point. The building site is strongly connected to an inter- and intraurban traffic-network. A strong relation between the different possibilities of public transport is established to concentrate the public transport to a specific area.

Harmonious Integration

The building site is now easily accessible from every part of the (sub)urban context and vice versa. Access to public traffic is concentrated and therefore directly connected and private transport limited to an decelerated shared-space area. The whole main floor area now apperas as an area of public movement.

Shared Space

Shared space is an urban design concept aimed at integrated use of public spaces. It is used to make traffic-dominated public space more liveable and to improve the traffic flow.

Shared space removes the traditional segregation of motor vehicles, pedestrians and other road users. Conventional road priority management systems and devices such as kerbs, lines, signs and signals are replaced with an integrated, people-oriented understanding of public space, such that walking, cycling, shopping and driving cars become integrated activities. These actions generate an intended amount of precariousness to make the participants of traffic watch out for others as well as themselves.

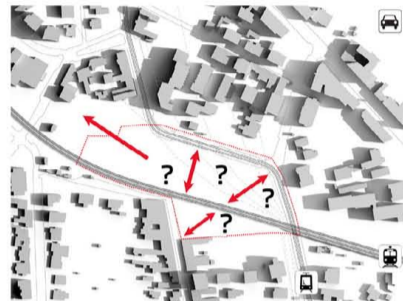
Building Structure

The building structure is based on Vienna's historic city structures. These generally dense structures becomes more densified to finally reach a density of 25.000p/km². Just like the main area got connected at the beginning, these perimeter block developments are also combined - they merge at their edges.

To offer a maximum of light and view for the future inhabitants (and vertical farming), the merged structure gets planarly cut off in southern direction. Not only on the inside but also on the outside the buildings get connected and perceptible.



Problems + Challenges



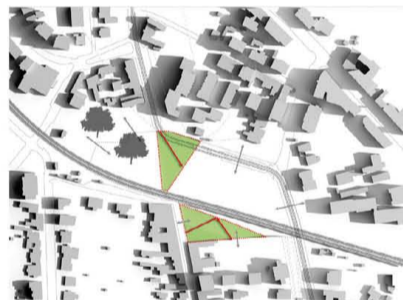
Problems + Challenges



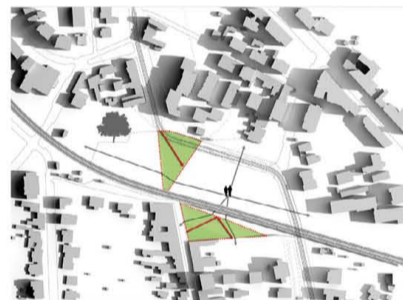
Full + Direct Accessibility



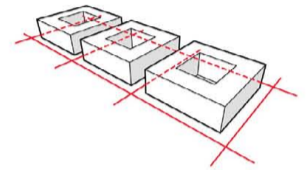
Inter-/ Intraurban Connectivity



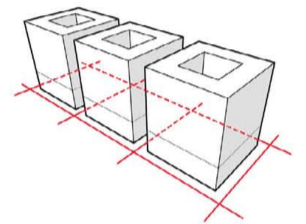
Inter-/ Intraurban Connectivity



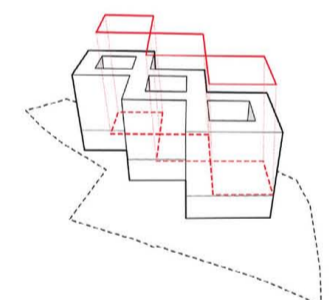
Harmonious Integration



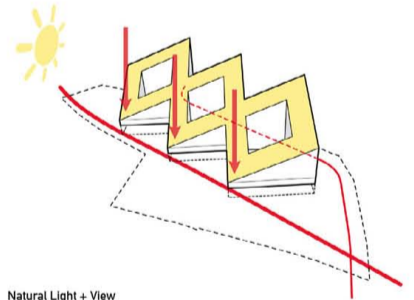
Historical City Pattern Vienna
Public Access



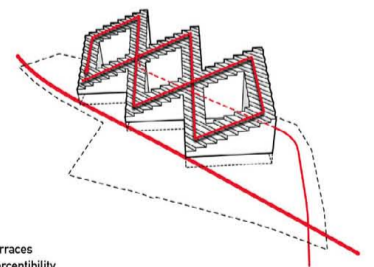
Density 50.000p/km²



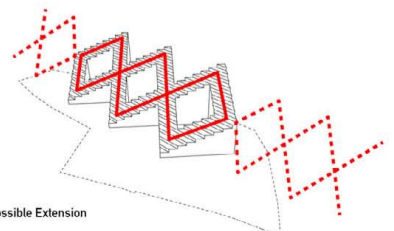
Connection



Natural Light + View
Public Foundation Floor
(Density 25.000p/km²)



Terraces
Perceptibility



Possible Extension



Abb. - View Backside

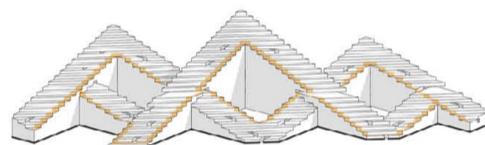


Abb. Front View

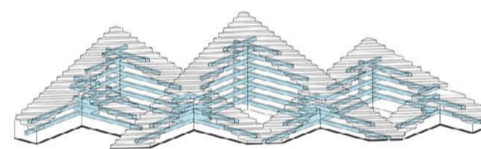
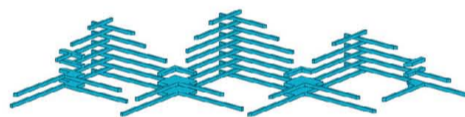
Vertical Access
Connection Main Floor - Building Structure

The whole building structure is publicly and barrier-free accessible. A mixture of uses like office, retail, public space, industry and living can be experienced from bottom to top. So the building appears as a vertical city that can be accessed by pedestrians, cyclists, wheelchair-users, segway-riders or other visionary alternativ transport systems. The point of intersection between the „area of movement“ in the mainfloor and the vertical city-structure is designed as a further public floor (=inner city main floor). An area with shops and stores of different kind, that make the building attractive for consumers that sets up a buffer zone between public and private vertical city structure.

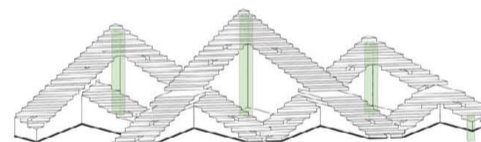
public access
perceptible building structure



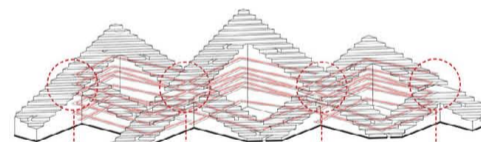
private access



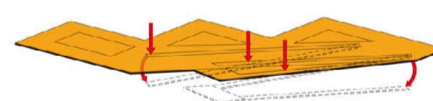
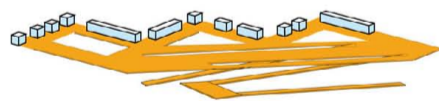
public direct access



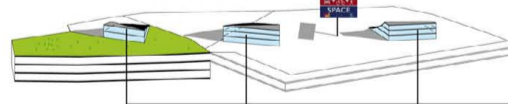
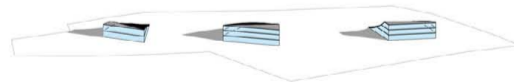
public barrier free access
perceptible building structure
public space



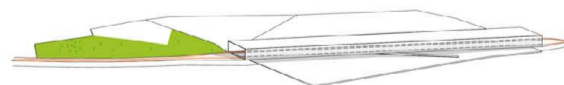
public floor
public functions



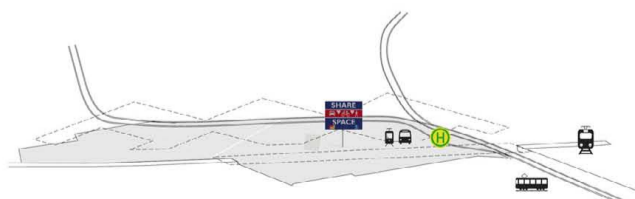
public access to public floor for pedestrians
contemporary market place



train station
noise-isolation

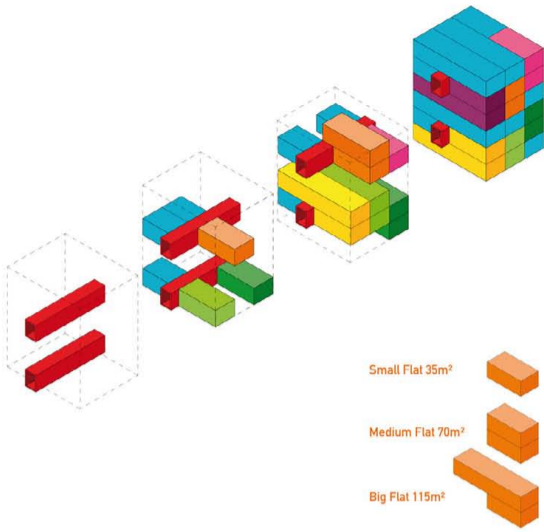


main level
area of movement



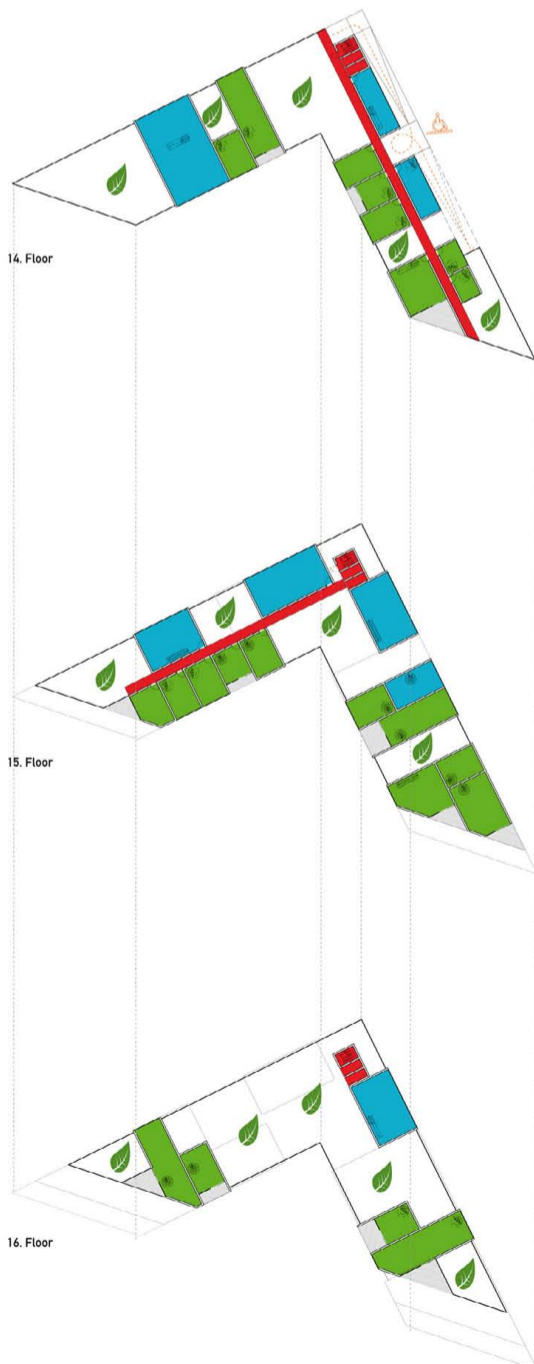
Function Boxes Variation

- Office
- Corridor
- Various Flat Types

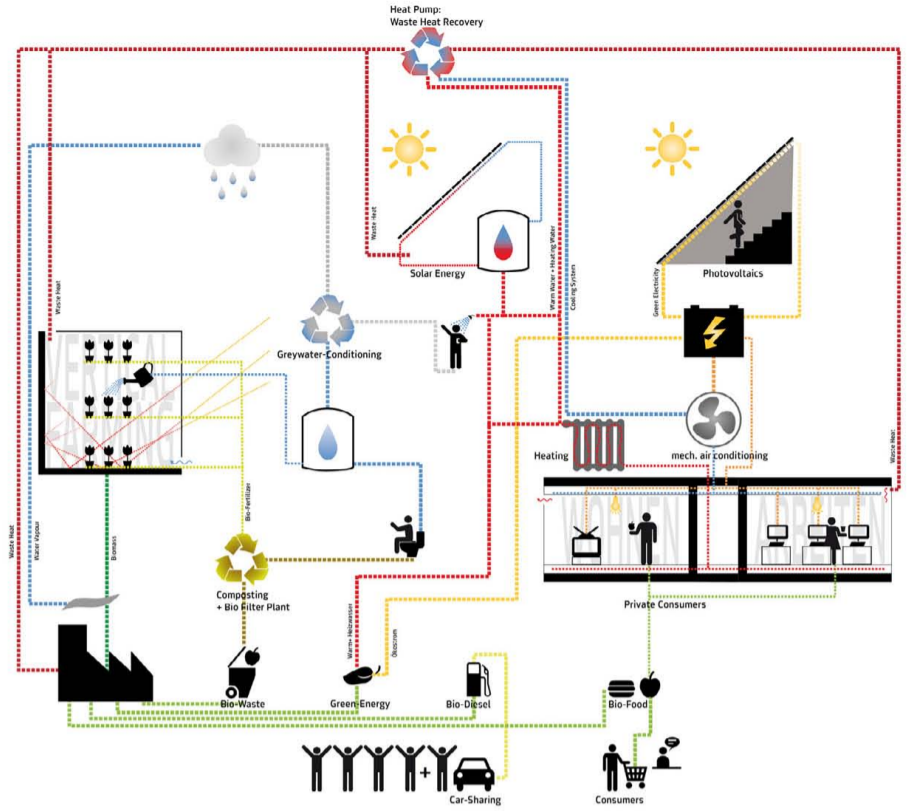


Floorplan 1:500

- Office
- Corridor
- Living
- Vertical Farming
- Public Access

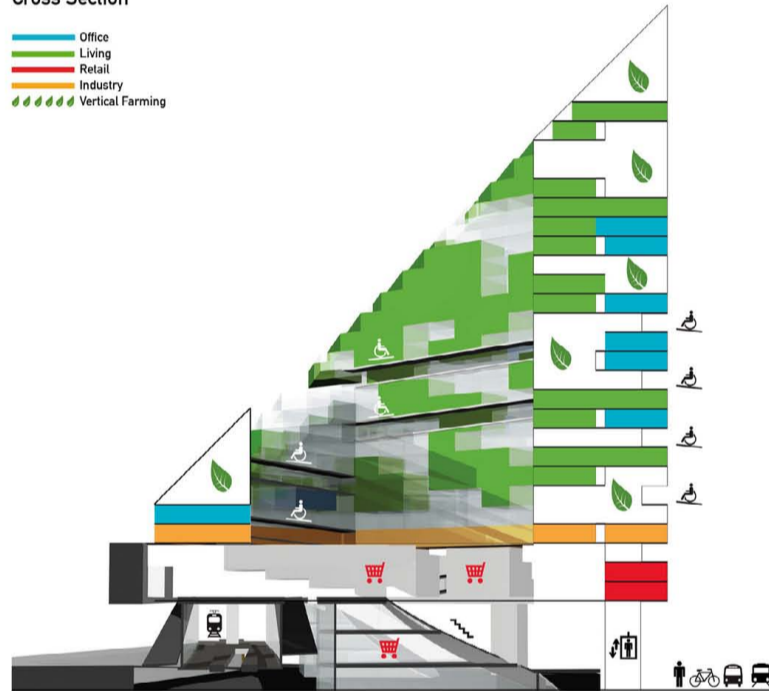


Energy Circulation



Cross Section

- Office
- Living
- Retail
- Industry
- Vertical Farming



Vertical Farming Sequence

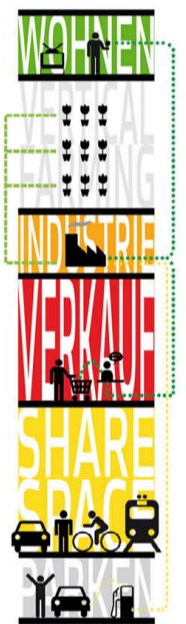


Abb.: Shared Space