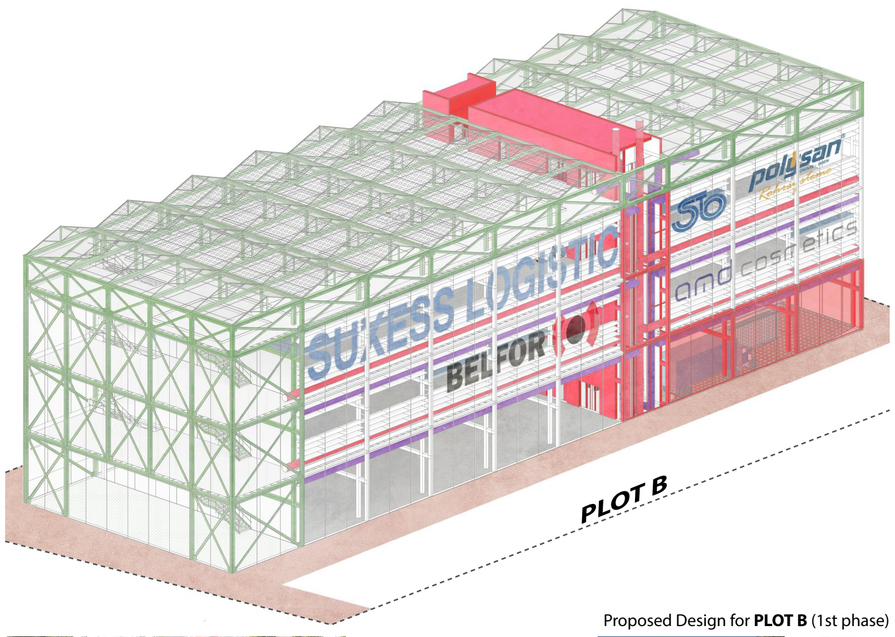
BZ385 VIENNA

/Plot B/
A New Vertical Factory: The Typology

3L's for LIESING 1



Proposed Design for **PLOT B** (1st phase)

Vienna Green

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Liesing Red

0_INTRO

We conceive Liesing as the LAB to test a new **identity capable of catalyzing a process of urban renewal that realizes the new paradigms of industry 4.0 in which ideation, design, production and leisure occur in the same urban space**. This agonistic urban vision seeks to activate idle life in parallel to productive life.
And this identity should not only symbolize but also build new values associated with a cleaner, more efficient and intelligent industry… in short, more sustainable. But it must also be able to build new values associated with a more educated and aware society. Just as Nina Rappaport wonders whether vertical factories can again represent sustainable solutions for future self-sufficient cities, we share the idea that "reinventing the factory has the potential to engage the public in the cycles of making, consuming, and recycling needed to create a self-sufficient city. "
In response to Rappaport's approach to the future of the vertical factory, we propose a new typology based on **the triple L strategy**: the spectacular **L** + the sustainable **L** + the flexible **L**ofts. Playing with the "L" of Liesing as a characteristic image, we combine a red L, highly industrial and containing logistics, with a green L, highly "natural" and social, and a potentially capable and diaphanous container space between them, the Lofts.

4_THE IMAGE OF ENERGY

Industry is energy. What is the role that energy has to play in the new industry? Although the answer seems to be non-negotiable, it does not seem so much the way in which it must be formalized.

We propose that the answer be, once again, the transparentization of a kind of closed cycle between several energy processes that occur in the building: water, electricity, heat, wind and waste management. For this reason, it seeks to implement a series of complementary installations to recirculate all the supply processes: from the typical solar collection on the roof to energy harvestors that transform latent residual energy into electricity through the piezoelectric that takes advantage of the movement of trucks as well as the recirculation of hot or cold air from the greenhouse to the interior spaces.

However, we insist that more important than the minimization of energy costs or profitability of resources is the visualization of these processes. **THE NEW LIESING HAS TO BE CONVERTED IN A EDUCATIONAL MACHINE CAPABLE OF RAISING AWARENESS ON NEW VALUES FOR A NEW SOCIETY.**

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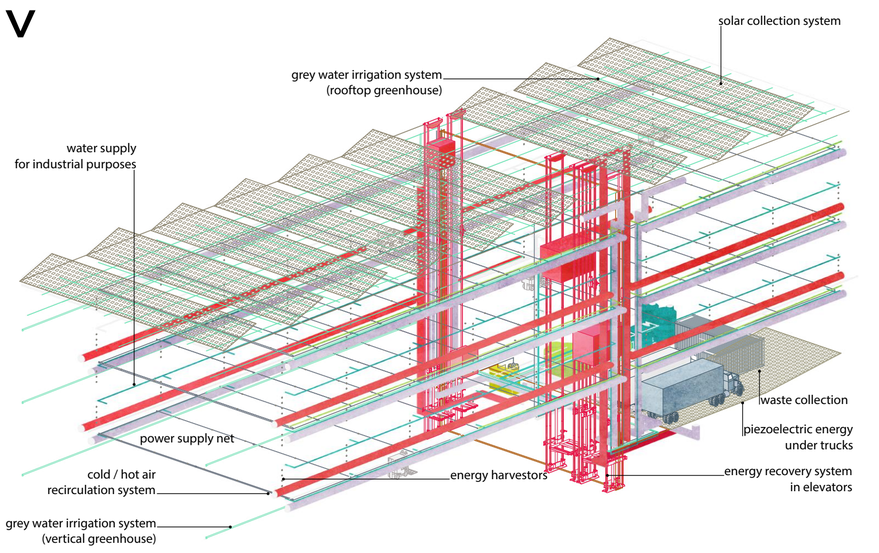

Energy Cycles: Water, Heat, Electricity, Air, Waste Management

1_THE GREEN "L": the socio-environmental machine

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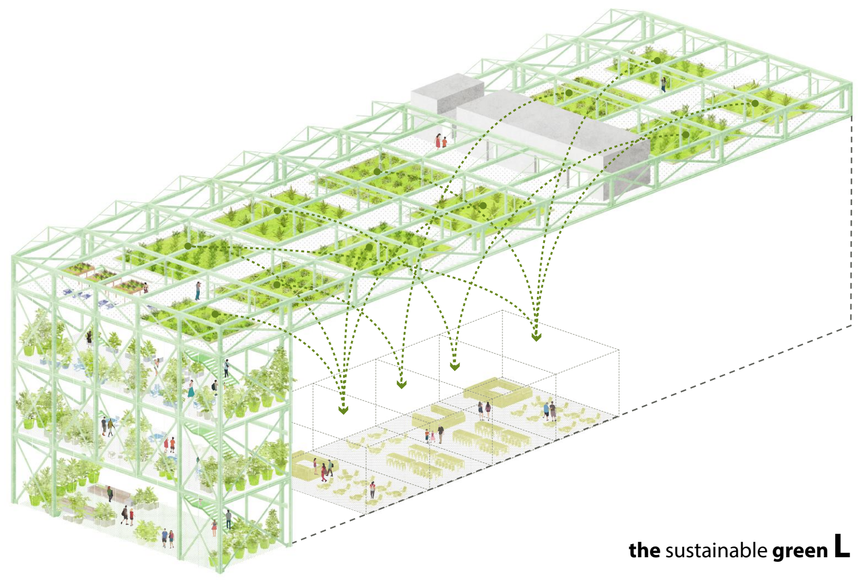
The green L is not only green because it contains a wide range of vegetation and native crops but because **it builds its structure in clear reference to the so characteristic green of Vienna's civil structures.**

The horizontal part, which forms the roof of the building, is considered as a vegetation cover capable of hosting local crops that can supply the restaurants in lower floors.

Meanwhile, its vertical part builds a "more pleasant" interior for the installed companies as well as an accessible exterior where to meet, share, exchange, escape, isolate, relax, laugh, breathe ... However, both parts function as a greenhouse that can become a thermal buffer or a natural climate control both in winter and summer by driving air to interior parts of the building.



the sustainable **green L**

2_THE RED "L": spectacular logistics

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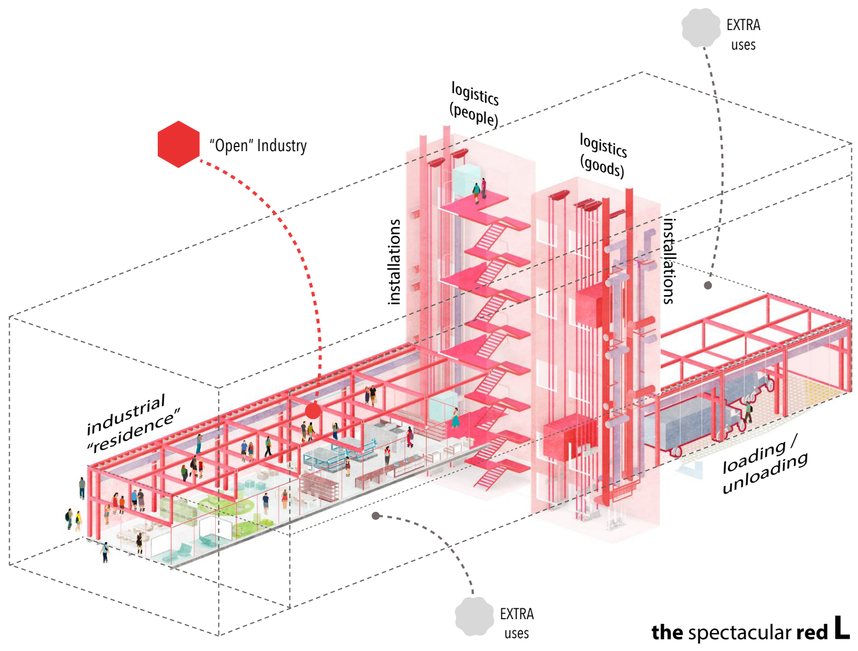
The red L not only directly symbolizes Liesing but is responsible for **transparentizing the spectacular of industrial processes** and knowledge generation.

Its horizontal part, stuck to the street, contains not only the facilities and "capable" space but the administrative conditions to accommodate a sort of industrial "residence", following the popular artist-in-residence programs. It will be open and in continuous contact with the street, and will experiment new industrial solutions exposed to the public. In parallel, it will cohabit with other complementary uses: sports, research, education, trade, etc. whose purpose is to activate and to make urban life more complex. From an administrative point of view, we propose that the assignment of industrial use on these lower floors may be temporary and under leasing conditions sufficiently attractive to attract newly formed companies. In time they will have to decide whether to move in any of the upper floors or to go to another place.

Its vertical part is the one that contains mainly the companies' logistics: freight elevators, people lifts, stairs, vertical shafts .... Its facade is designed to give visibility not only to all the energy processes of the building but also to the intrinsic movements of goods and people. In short, it is considered as a collective celebration of industrial day-to-day and its multiple social implications.



the spectacular **red L**

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3_LOFTS: slabs for programmatic flexibility

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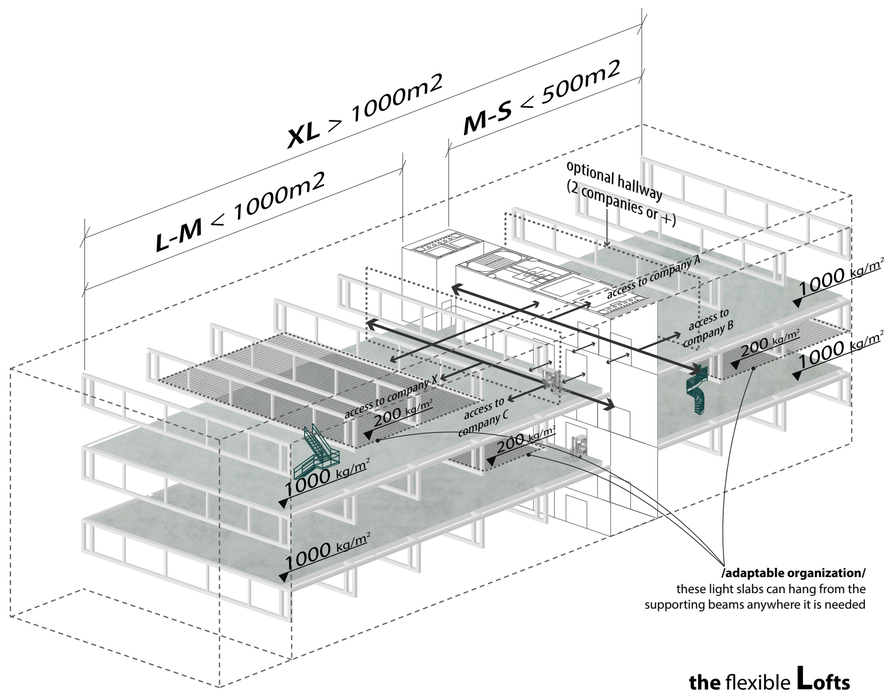
We offer 2 types of "capable" slabs: a dominant slab capable of supporting 1000 kg/m2 and a minor slab, limited to an overload of 200 kg/m2 but whose location is completely flexible depending on the needs of each company. Both use the same structure of large beams to be placed up or down.

The strategic location of the building's vertical core (the red "L") at 1/3 or 2/3 of both ends, allows to create and serve 3 surface ranges that comprise the requested spectrum of companies: from 50m2 to 1000m2.

These load bearing slabs have as lateral façade their corresponding installation trays that allow the maximum "super" connection of the installed industries. Likewise, their facades allow to have a maximum exposure of the city and the light towards them but also of the industries towards the outside, reason why they become the most representative part of each company. We imagine 2 L that in their lag "catch" a great quantity and diversity of company brands stacked in height.



the flexible **Lofts**

"Reinventing the factory has the potential to engage in the cycles of making, consuming and recycling needed to create a self-sufficient city."

"A future scenario would combine vertical urban factories across urban neighborhoods in symbiotic relationships, where the ecology of making things could redistribute the material and energy supply into urban biological systems that react, interact, and create new products and thus new economies."

Nina Rappaport