

# Conversion of existing buildings illustrated by project Talwiesenstrasse 123, 8055 Zurich («Tiergarten»)

Capital Markets Day | 18 April 2024 | Marco Tondel

# Agenda

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1. Initial Situation
  - Location
  - Reasons for conversion
  
2. Project
  - Structural concept of the conversion
  - Plans
  - Impressions of construction / marketing
  
3. Conversion from a sustainability perspective
  - Sustainability rating
  - Circular economy
  - Gray energy / gray emissions

# 1. Initial Situation

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1. Initial Situation

# Good location in Wiedikon, district 3, Zurich



«Tiergarten»

0.5 km

1 km

2 km

1. Initial Situation

Embedded in a quiet residential area

Office building «Friesenberg»

«Tiergarten»



1. Initial Situation

The zone allows residential use



Residential  
zone

School  
building

«Tiergarten»

School  
building

# Reasons for conversion

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**Building structure is getting on in years (refurbishment cycle)**



**Building no longer meets ESG-Criteria**



**Expiring rental agreement of a major tenant**



**Realization of the utilization potential**



**Very high demand for housing**



**Building is located in a residential zone**

## **Decision 2019**

- **For a conversion from office to residential use**
- **Against demolition and thus for the greatest possible preservation of the structure**

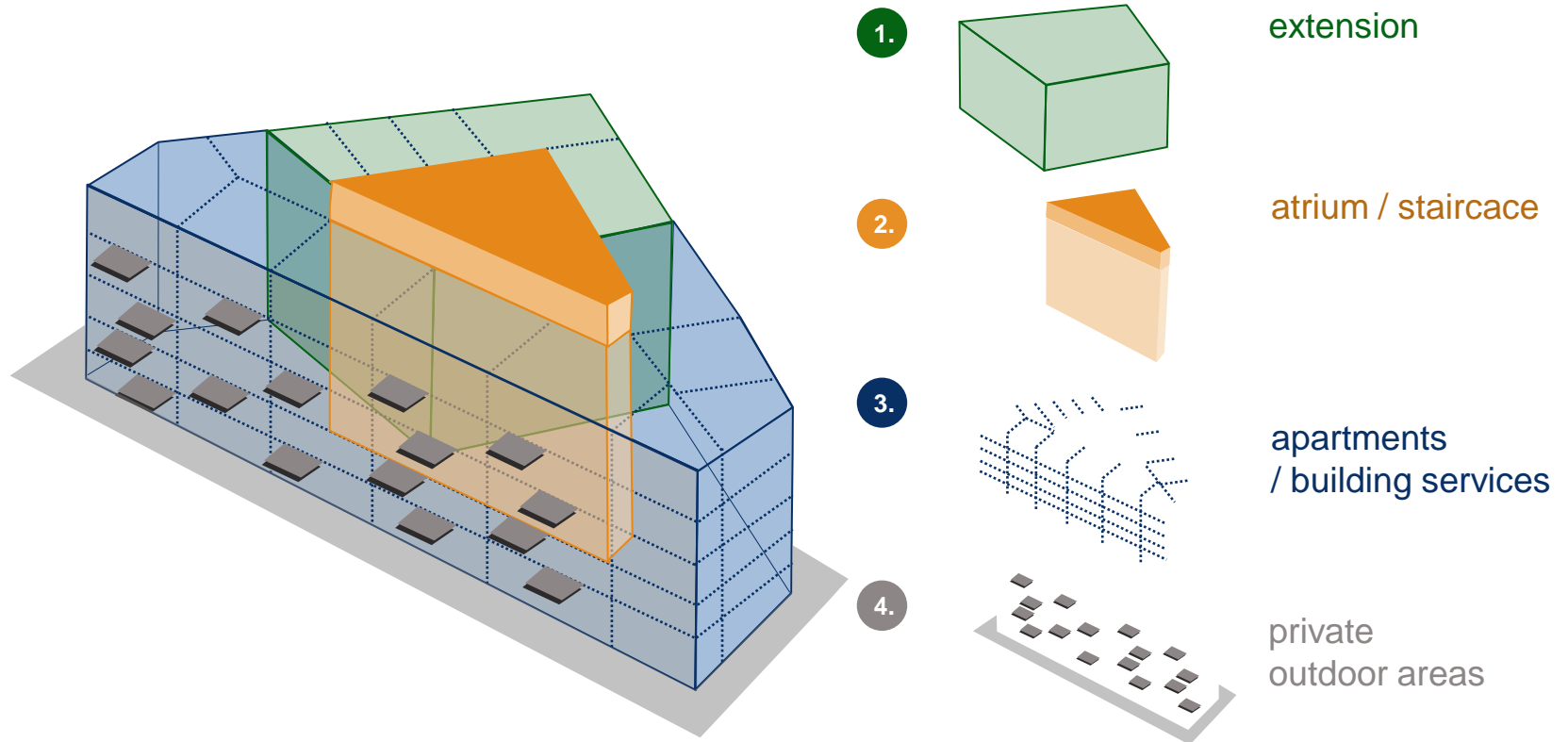
# 2. Project

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# Structural concept of the conversion



# Floor plan



**LEA certificate «Living Every Age»**

- age-appropriate living
- freedom from obstacles

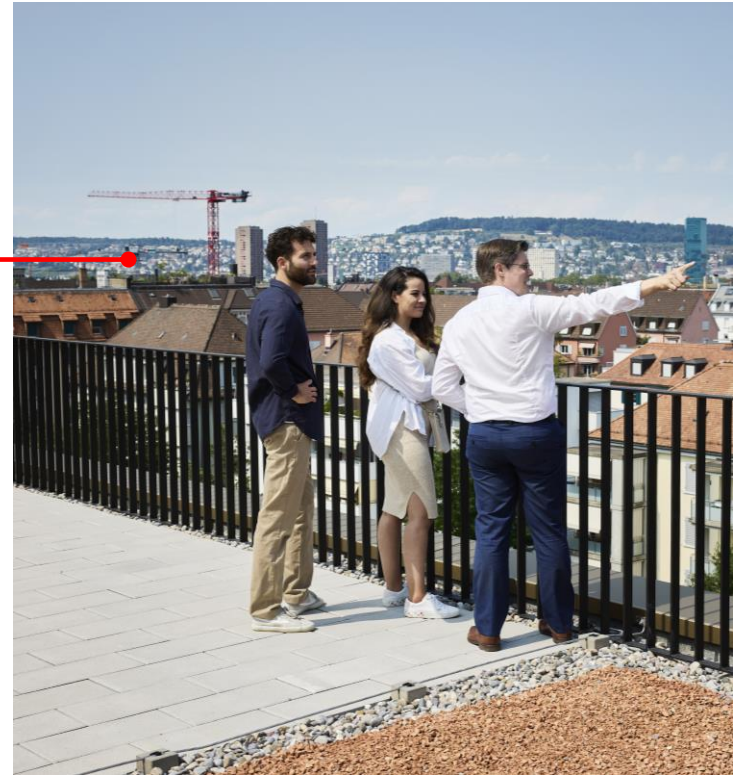
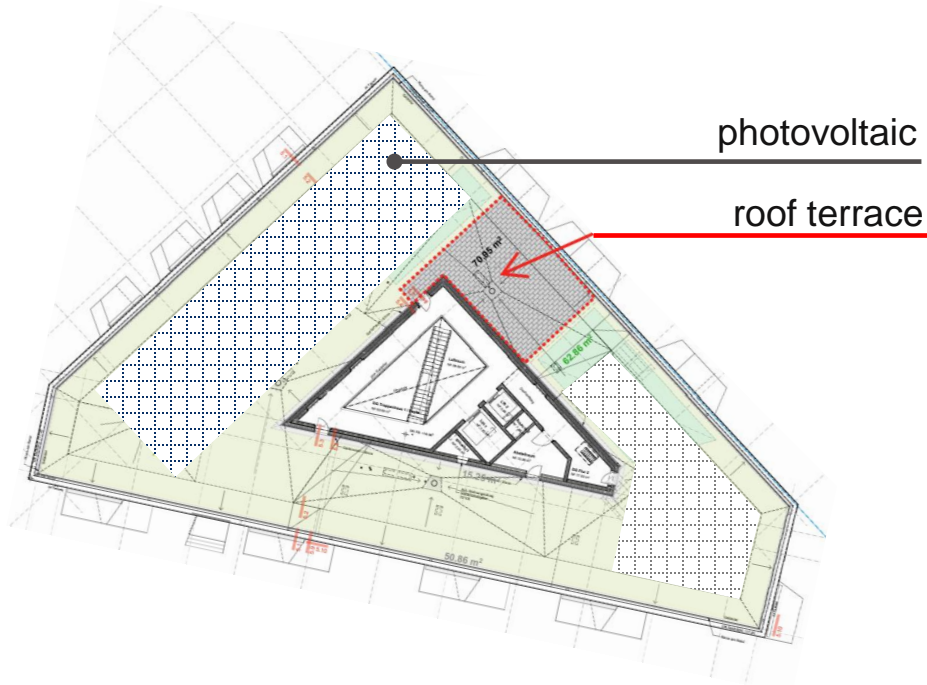
Groundfloor

# Floor plan

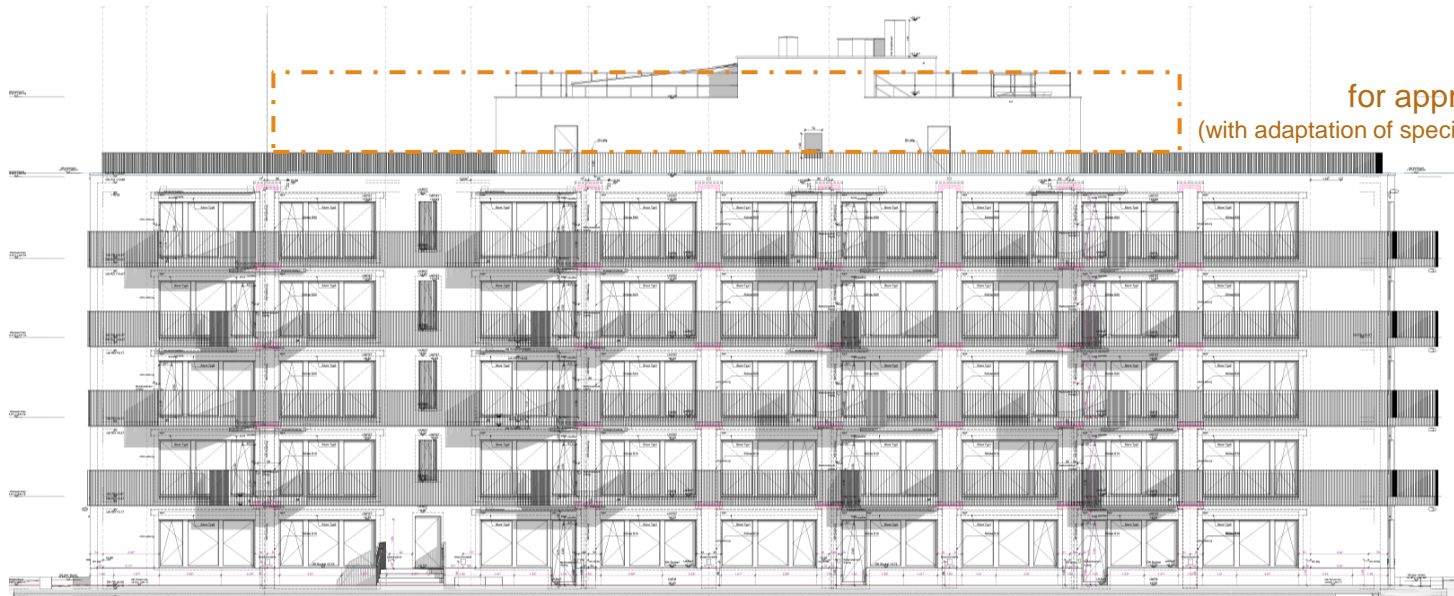


1. - 4. Floor

# Floor plan



Attica



Future potential  
for approx. 7 apartments  
(with adaptation of special building regulations)

## Facts and Figures

- Number of apartments: 59 units
- Storage space: approx. 2,000 m<sup>2</sup>
- Number of parking spaces: 44 units
- Target rental income: CHF 2.0 million
- Book value as of 31.12.2023: CHF 63.6 million
- Gross yield: 3.2%
- Yiel-on-Cost: ~3.7%
- Investment costs: CHF 27 million



# Impressions during the conversion



# Visualisations



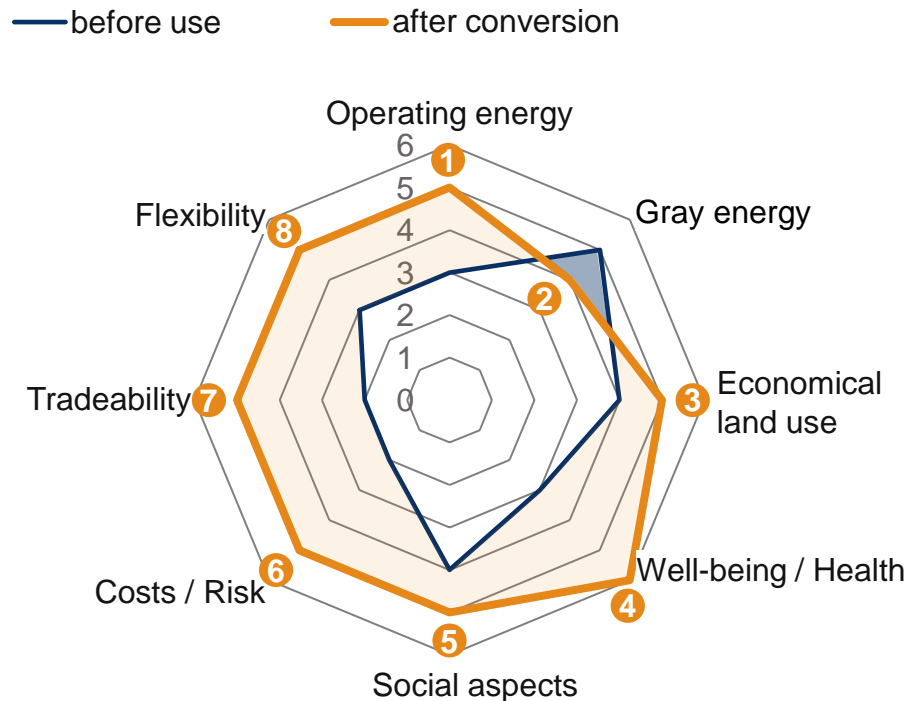


### 3. Conversion from a sustainability perspective

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# Sustainability rating (Mobimo internal)



- 1 Energy-efficient refurbishment
- 2 Conversion measures (but better than new construction)
- 3 Compaction
- 4 Good indoor climate / private outdoor areas
- 5 LEA-Certification / creating living space
- 6 Zurich / new building / fully rented
- 7 Very well tradable depending on location
- 8 Flexible use / no refurbishment required

## Circular Economy

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Mobimo has signed the «Circular Construction Charter 2023» in which we commit ourselves, among other things:



- Before demolition, check whether refurbishment also makes sense
- Reduce the use of materials
- Record CO<sub>2</sub> emissions during construction
- Separate components during construction
- Measure recyclability in pilot projects

**CONCLUSION** regarding the conversion of Talwiesenstrasse 123:



- Conversion vs. new construction saves a lot of CO<sub>2</sub> emissions



- Important elements of the former office building have been preserved

# Gray emissions - more than «half the battle»

## What are «gray emissions / gray CO<sub>2</sub>»?



- Emissions during the production of building materials



- Emissions during transportation and storage of materials



- Emissions during the construction of the building



- Emissions from the dismantling and disposal of the building

Total CO<sub>2</sub> emissions over the entire life cycle of a new building



**approx.  
70 %**

## Differentiation from operational emissions (CO<sub>2</sub> emissions)



- Emissions generated during operation
- E.g. CO<sub>2</sub> emissions from heating, hot water, electricity, etc.



**approx.  
30 %**

## Gray emissions Talwiesenstrasse 123

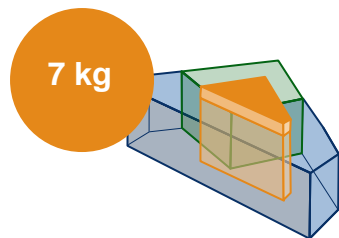
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- Due to the conversion, a large part of the existing structure (mainly concrete in the basement and upper floors) could be greatly reduced
- Due to the reduced use of building materials, the gray CO<sub>2</sub> emissions are also well below the limit values
- Minergie Eco provides limit values regarding gray energy / gray emissions, which should (limit value 1) / must (limit value 2) be adhered to



# Gray emissions conversion vs. new construction

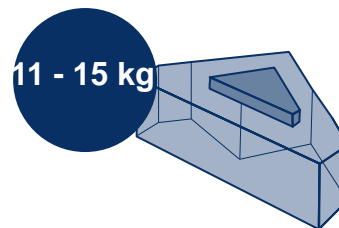
## Realized conversion project



**Limit value 1. 11.18** (kg CO<sub>2</sub>-eq/m<sup>2</sup> p.a.)  
**Limit value 2: 14.91** (kg CO<sub>2</sub>-eq/m<sup>2</sup> p.a.)

- **7 kg** (CO<sub>2</sub>-eq / m<sup>2</sup> p.a.): the total gray CO<sub>2</sub> emissions during construction, incl. production of the materials / during dismantling over the service life of the components per year
- approx. 40 % to 60 % CO<sub>2</sub> reduction compared to new construction

## Hypothetical new construction project



**Limit value 1. 11.18** (kg CO<sub>2</sub>-eq/m<sup>2</sup> p.a.)  
**Limit value 2: 14.91** (kg CO<sub>2</sub>-eq/m<sup>2</sup> p.a.)

- **11 - 15 kg** (CO<sub>2</sub>-eq / m<sup>2</sup> p.a.): Emissions of a comparable new building project that complies with the limit values
- From a CO<sub>2</sub> perspective, a new building is not worthwhile