Possible future role of architects and developers in reuse

Graduation of
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Content

Research/design questions and goals
Results
Conclusions
Design
Questions
Research/design questions and goals
Fascination

Migration to the city

Vacancy

Small households

Economic crisis

Degraded houses and neighbourhoods
Considering the changing building industry, what is the sum of co-operation between real estate developers and reuse architects in the initial phase in the building process in a reuse project?

- How can the building industry network be described in terms of processes and actors? How does the hypothesis fit in this network?
- What is the current relationship between architects and developers? What is about to change?
- What are the design approaches of a developer and a reuse architect?
Research questions and goals

- Research goal: test hypothesis
- Design goal: redesign post war housing flat
Location and building

(1) Inner courtyard with playground

(2) Inner courtyard with grass and benches, garage boxes at the end of the access street

(3) Waterfront on the north side of the area
Results

Urban analysis
Building analysis
Financial analysis
Multi-criteria analysis
Urban analysis

Conclusions

- Presence/use of water
- Undefined space
- Contact with prof. Telderslaan
- Target group
Building analysis

Strong and weak points
Building analysis

Conclusions

• **Minimal interventions:**
  - heating
  - ventilation
  - insulation (also sound insulation)

• **Maximize**
  - Light entrance
  - (use of) Space
Building analysis

Inventory of possible solutions
Designing three scenarios

Scenario 1

Scenario 2

Scenario 3
Building analysis
Conclusions and valuation

- Zoning
Building analysis
Conclusions and valuation

• Clear, readable facades
Financial analysis

Answer the big question: worth the investment?

Winket method $\rightarrow$ direct building costs $\rightarrow$ feasibility

Is renovation worth the investment?
Financial analysis
# Financial analysis

**Gross Initial Yield (bruto aanvangstrendement)**

<table>
<thead>
<tr>
<th></th>
<th>GIY based on max. €681,-</th>
<th>GIY based on average €900,-</th>
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<tbody>
<tr>
<td><strong>Social sector</strong></td>
<td></td>
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<tr>
<td>Building new 2</td>
<td>3,9%</td>
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<tr>
<td>Building new 3</td>
<td>4,2%</td>
<td></td>
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<tr>
<td>Renovation 2</td>
<td>4,8%</td>
<td></td>
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<tr>
<td>Building new 1</td>
<td>5,0%</td>
<td></td>
</tr>
<tr>
<td>Renovation 3</td>
<td>5,2%</td>
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<tr>
<td>Renovation 1</td>
<td>6,8%</td>
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<tr>
<td><strong>Private sector</strong></td>
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<tr>
<td>Building new 1</td>
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<td></td>
</tr>
<tr>
<td>Renovation 1</td>
<td>11,2%</td>
<td></td>
</tr>
</tbody>
</table>
Financial analysis

Conclusion

- Scenario 1 most profitable
- All renovation scenarios are more profitable than building new
- The costs are in elevator and walkways, not level of reorganisation (sc1 vs. Sc2 and sc3)
- Scenario 2 and 3 cost the same, different appearance, different level of restructuring
Multi-criteria analysis

- Quality criteria
- Functional criteria
- Financial criteria
- Target group specific criteria
- Sustainability
Multi criteria analysis

Conclusion: scenario 2 fits best for all
Answering research questions

Sub questions

Design approaches: architecture and development

• Different focus; can be complementary indeed
• Tool for ‘normal’ buildings is missing

VS.
Answering research questions

Main question

Is there a sum?

- Architectural quality and costs
- Depreciated ≠ demolishing ➔ still profitable

- Scenarios that are cheaper than building anew, with GIY of over 6%
Design
Design
Design – general solutions

- Using existing ducts and vents as new shafts
- Combining floor heating with sound insulation
- Collective low temperature heating
Design
Taking into account conclusions: internal reconstruction
Design
example: ground floor house
Design

Taking into account conclusions: clarity of the facades
Materials and details
Taking into account costs and ease of building
Design

Sections
Details
Details

2A

90° pivot turn window
(Windhuk)

board insulation
reinforcement board
inside board

2B

existing floor (concrete)
high-quality insulation
cavity with styrofoam
wooden panels

stoned doors (2 in total)
(De Hoop-hout)

ventilation
(Andalo)

insulated glass