URBAN DWELLING AND HOUSING ADAPTABILITY: CONSIDERATION FOR POLICY INNOVATION

Wiwik Dwi PRATIWI, www.ar.itb.ac.id/wdp
Architecture Program, Institut Teknologi Bandung

Erika Yuni ASTUTI
Graduate School URBANgrad & Faculty of Architecture (FB 15)
Technische Universität Darmstadt (TU Darmstadt)

SAMSIRINA
Architecture Program, Institut Teknologi Bandung

Ida HAMIDA
Architecture Program, Institut Teknologi Bandung

Discussion

Introduction

Analysis: What makes urban dwelling adaptability works?

Analysis: Barriers to urban dwelling adaptability
- Maintenance
- Building code compliance
- Changing the classification
- Production and development criteria
- Commercial risk and uncertainty
- Financial and technical perceptions

Conclusion: What can be learnt for policy innovation?

Acknowledgement

Bibliography
Introduction

An introduction to the issues influencing the decision to adopt an urban dwelling adaptability strategy. Urban dwelling adaptability is a key strategy to improve financial, environmental, and social performance of buildings including housing and dwelling (Langston et al., 2007). The shift to dwelling and housing adaptability is an increasing trend within the built environment (Ball, 1999; Bon and Hutchinson, 2000; de Valence, 2004; Gallant and Blickle, 2005; Kohler, 2006; Bradley and Kohler, 2007; van Beuren and de Jong, 2007).

Considering the technological aspects of houses and buildings, it has been suggested that the strength of most building can be negative because any inherent negative environmental impact will be spread over long periods (Itard and Klunder, 2007).

INTRODUCTION

Analysis:
What makes urban dwelling adaptability works?

Lifecycle issues

1. The life expectancy of buildings has been identified as an important issue that determines whether they are reused or demolished (Bradley and Kohler, 2007).
2. Extending the lifecycle of a building and dwelling the ageing asset, existing failures and resourcing requirements can be dealt effectively (Kendal, 1999).

Changing perception of building

3. Buildings that are able to provide multiple uses by adaptability are in great demand (Hassler et al., 2000).
4. The growth of appreciation for built heritage (Welthuis and Spennemann, 2007).
5. Adapting older buildings is less prestigious than constructing new ones (Gregory, 2004).
Buildings distribution in Gegerkalong Girang street based on function

Analysis by: Esti Istiqomah; Nitih Indra Komala Dewi; Meinisa Fajria (2012)

Case 3 -

Ownership | Land Certificate
---|---
Site area | 55 m²
Transformation of the dwelling

Geger Kalong Girang (Daarud Tauhid)
Esti Istiqomah, Nitih Indra Komala Dewi, Meinisa Fajria

First Floor

Second Floor

Third Floor

The Book Shop

The Garment Shop

WC

Livingroom

Kitchen

Thread Shop

Book shop

Rent room

Dining room

Corridor

Bedroom

Tempat Jemur
**Dwelling 3**

<table>
<thead>
<tr>
<th>Existing Layout</th>
<th>Transformation 1</th>
<th>Transformation 2</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>The garage (Gr), Living room (RT), Kitchen (D), Bedroom (K), dan Toilet (T) in the first floor; Balkon (B), Bedroom (K), dan Toilet (T) in the second floor; and Sun-drying clothes (J) in the third floor.</td>
<td>Garage (Gr) change into Shop (Tk) and Toilet (T) move into the corner near to the kitchen in the first floor; others changing function: Balkon (B) and Bedroom (K) change into rent room (KS) in the second floor.</td>
<td>The shop (Tk) has been divided into two. The bedroom (K) has been change into rent room (KS) in the first floor; flat roof changing change into dining room (RM), Toilet (T) divided into two, and the stairs into sun-drying area dari toilet into corridor; additional bedroom (K) into third floor.</td>
<td></td>
</tr>
</tbody>
</table>

---

**Barriers to urban dwelling adaptability**

<table>
<thead>
<tr>
<th>Maintenance</th>
<th>Building code compliance</th>
<th>Changing the classification</th>
<th>Production and development criteria</th>
<th>Commercial risk and uncertainty</th>
<th>Financial and technical perceptions</th>
</tr>
</thead>
</table>
| • Remoy and van der Voordt (2007)  
• O’Donnell | • Cooper (2001)  
• St Lawrence (2003) | • Fothergill et al (1987)  
• Sabot (1998) | • Reyers and Mansfield (2001)  
• Itard and Klunder (2007)  
Maintenance

- A time consuming process
- A detailed survey of structure and other elements
- The current layout may also be inappropriate for any change of use
- The building that not flexible enough to be reused and have poor spatial quality (Remoy and van der Voordt, 2007)
- Older buildings may also not reach the standard of new buildings in term of operating performance (O’Donnell, 2004)

Building code compliance

- The need to bring older facilities up to current performance levels as required by new building codes and regulations (Cooper, 2001)
- The inflexibility of building codes and other regulations in the requirements for reusing buildings (Shipley et al, 2006)

Data collected by Hera Mestika Parameshwari and Afina Raditya, 2012
Changing the classification

Data collected by Hera Mestika Parameshwari and Afina Raditya, 2012

The changing of zoning area and need for **compliance with new building codes** (Langston et al, 2007)

The lack of resources needed to enforce the requirements being asked by developers (St Lawrence, 2003)

Analysis: **Barriers to urban dwelling adaptability**

Production and development criteria

Analysis: **Barriers to urban dwelling adaptability**

Many areas of cities were constructed under a **set of production and development criteria** that were very different from those currently in use (Forthergill et al, 1987 and Sabot, 1998)

To tackling this issue, **regeneration programs can be and have been widely used.**
Commercial risk and uncertainty

- The perceived risk that lengthy or difficult renovations may decrease profit margins (Reyers and Mansfield, 2001; Cox, 2004)
- The difficulty of raising finance for urban dwelling adaptability ventures (Shipley et al., 2006)
- Unknown work, scope of changes, compatibility of materials, quality of information and the operating environment, health and safety, design constraints and decanting of occupants (Reyers and Mansfield, 2001; Cox, 2004)

Analysis: Barriers to urban dwelling adaptability

- Financial and technical perceptions
  - A mixture of perceived and factual negative design, technical and operational issues attached to urban dwelling adaptability projects. Where perceptions are strong, they have convinced developers that urban dwelling adaptability is too expensive and demolition is the only way to acquire a reasonable profit. This has lead to hundred of older buildings being prematurely demolished (Shipley et al., 2006)

- Investor and developers typically base their urban dwelling adaptability decision on perceptions rather than an objective assessment risk, complexity, cost and value (Kurul, 2007)

- The rising costs of new construction this trend appears to be reversing as most urban dwelling adaptability projects now compete economically with redevelopment (Bullen, 2007)
Map of Jakarta and Kemang location
A house in Kemang Jakarta which is adapted to boutique (fashion retail) in Kemang, Jakarta

A house in Kemang Jakarta which is adapted to a cafe. restaurant in Kemang, Jakarta
Urban dwelling adaptability in Kemang which is designed to appeal to the desires of tourists and visitors in Kemang, Jakarta

Conclusion: What can be learnt for policy innovation

Addressing a building’s urban dwelling adaptability is significantly reduce whole life cost, waste and lead to the improved building functionality.

Government and agencies can also encourage development, particularly in the case of heritage buildings, through the use of financial incentives. (Barber, 2003 and Shipley et al., 2006)
Conclusion:
What can be learnt for policy innovation

Introducing a degree of flexibility to planning requirements, so that proposal for buildings that enable a range of different uses in the future.

The building codes should incorporate a set of reusability criteria but the code should not be relaxed to simply accommodate reuse issues.

The illustration in Bandung shows that tourist, as the markets, drive the urban dwelling to transform into the tourism places and motivates the owners and operators to use adaptability concept.

Acknowledgement

This work derives from a research entitled “Transformasi Perumahan-Permukiman dan Pariwisata: Komparasi di Jakarta dan Bandung” http://www.ar.itb.ac.id/wdp/ conducted within Housing Settlement Research Group http://www.ar.itb.ac.id/pp/ funded by the Dirjen Dikti, Depdikbud and administered by School of Architecture, Planning and Policy Development, Institut Teknologi Bandung (ITB).

Other members of research team: Dwinik Winawangsari, Medria Shekar Rani, Afina Raditya, Indah Susanti, Esti Istiqomah, Asyifa Rismawati, Wanda Yovita, Hera Mestika Parameshwari, for their effort in data collections and the writing the fieldwork report.

Finally, I am grateful to Habitechno Committee, which gives us opportunity to write this thought.
References


Thank you
for your kind attention

Habitechno • 11 November 2013 • ITB, Bandung