the Supportive City

the mass-customisation of urban housing
the mass customisation of urban housing

| User

|| MacuBS 1.0

||| Support City
user
problem statement
The Supportive City

| Nick Krouwel | 4108302 | 8 |

cities

| towns & suburbs | rural |

The mass customisation of urban housing
72% of the EU population lives in urban areas... on 17% of the land area...
...and the urban population will continue to grow.
the mass customisation of urban housing
miss-match in supply & demand
variety in demand
user-involvement in housing development
'How can users get efficiently involved in the development of customised housing for the Western Metropolis?'}
categorisation
the mass customisation of urban housing
Speculative | Self-built

The mass customization of urban housing

- Nick Krouwel  |  4108302  |  18

<table>
<thead>
<tr>
<th>Years</th>
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<th>07</th>
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*1000

Years

Number of homes to build
the mass customisation of urban housing
The mass customisation of urban housing

**The DIY House**

**Microhouse**
Wiel Arets
UK - 2017

**Droneport**
BIG & Lord Foster
Brande - 2016

**Post-Disaster Shelter**
Peter Soutjesdjik
Delft - 2013

**Geodesic Dome**
A. Buckminster Fuller
US - 1954
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Customer
Estate Agency*
Construction
Firm
Co-Design
Co-Development
Co-Initiative
Co-Production
Co-Initiative
Architect
Planner
Municipality
The Self-Built City
Drop-City
Christiania
Earthship-Ecovillage
Casa Luis Barragan
D.I.Y. Urbanism
The Self-Built Home
Java-eiland
Nieuw Leyden
Buikslootertam
The Supported Home
Supports
New-Babylon
Plug-In City
Fenix I
SOLID
Ököhaus
Superloft
Next21
Molenvliet
Kleiburg
The Catalogue House
WeBuiltHomes
Miji-house
Sekisui-homes
Wikihouse
The DIY-home
Wikihouse
Geodesic Dome
(Droneport)
(Post-Disaster Shelter)
The Market Home
Bijlmermeer
Vines Leidsche Rijn
Peels
Real-Estate
Developer*
Top-down
Initiative
Design
Production
Sales
bottom-up
speculative*
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HABRAKEN SUPPORTS
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contractor

real-estate

architect

municipality
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Building Sector

- Time
- Money
- In control
- Conservative mind-set
- Lack of initiative
- Lack of initiative
- Building Sector

Lack of initiative, Conservative mind-set, Money, In control, Time.
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User

Financially Limited
Lack of resources
Unskilled
Lack of initiative
conclusions
The mass customization of urban housing system design
the mass customisation of urban housing
system design

Architect

Developer

User
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economy | involvement
Distribution of studies

- Low cost & lead-time: economy
- High cost & lead-time: custom
- Involvement: standard
Distribution of studies

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User
personification | involvement
Distribution of studies

standard vs. involvement

little involved vs. highly involved

personification custom

Little involved

Involved

Highly involved

Distribution of studies
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standard personification custom

little involved involvement highly involved

Distribution of studies

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user
mass-customisation

‘The ability to provide your customers with anything they want profitably, any time they want it, anywhere they want it, any way they want it.’

mass-customisation

‘The use of flexible processes and organizational structures to produce varied and often individually customized products and services at the low cost of a standardized mass-production system.’

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mass-housing
the mass customisation of urban housing

mass-housing

customisable
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the mass customisation of urban housing

customisable

durable
the mass customisation of urban housing

mass-housing

customisable

durable

adaptable
mass-housing
Support

the mass customisation of urban housing

system design
Skeleton
Division
the mass customisation of urban housing

system design

Infill
the mass customisation of urban housing
system design
customisable
the mass customisation of urban housing
system design
the mass customisation of urban housing system design
the mass customisation of urban housing
system design
Bathroom: 4.0 m²
Kitchen: 3.6 m²
Living: 9.9 m²
Single Bedroom: 6.9 m²
Household: 1 person
<table>
<thead>
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<th>Room</th>
<th>Area (m²)</th>
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<tr>
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<tr>
<td>Kitchen</td>
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**Total: 24.4 m²**

**Household: 1 person**

The mass customisation of urban housing system design

The Randstad | Scale 1:200.000 | Designer Nick Krouwel | Project a Supportive City - the test-case of a customisable building system for the urban dwelling

Tutors: M.A. Asselbergs, Y. Cuperus, P. Stoutjesdijk

Date: 17/12/15

The mass customisation of urban housing

1200 3900 1200 5400 1200

20400

23400

20400
The Randstad | Scale 1:200.000 | Designer Nick Krouwel | Project a Supportive City - the test-case of a customisable building system for the urban dwelling | Tutors M.A. Asselbergs, Y. Cuperus, P. Stoutjesdijk | Date 17/12/15

the mass customisation of urban housing system design
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system design
the mass customisation of urban housing
system design

durable
the mass customisation of urban housing
system design
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system design

adaptable
the mass customisation of urban housing
system design
the mass customisation of urban housing
system design
The mass customisation of urban housing system design

- Customisable
- Durable
- Mass-housing
- Adaptable
100

the mass customisation of urban housing system design
the mass customization of urban housing

system design
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system design
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the mass customisation of urban housing
implementation

show-case

implementation
the mass customisation of urban housing
implementation
the metropolis
the mass customisation of urban housing
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implementation
the mass customisation of urban housing
implementation

the district
the neighbourhood
the mass customisation of urban housing implementation
<table>
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The mass customisation of urban housing implementation
the block
the mass customisation of urban housing
implementation
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implementation
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the mass customisation of urban housing

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implementation
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Plan E
Plan D
Plan D
Plan F

public

housing

culture

facilities

implementation

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implementation
the support city

implementation
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implementation

show-case
The mass customisation of urban housing

Implementation
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implementation

A
the mass customisation of urban housing
implementation
thank you