No-Stop History
An Investigation on Performance of the Historic City

The Why Factory
Graduation Project

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Tutors: Alexander Sverdlov, Huib Plomp

External Examiner: Ivan Nevzgodin
Content

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   -What?
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3. Introducing the Historic City
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6. Introducing Preservation
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   -Building Stock per Year
   -DNA
   -Section
2. Concept
3. Footprint Development
4. Possibilities / Limitations
5. Projects
6. Transformation on the Urban Scale: No-Stop History Section
7. Offset / Numbers
**Why?**

The rediscovering of the city centres in the 1990’s is a combination of the search for alternative living environments, started from young and cultural interested low budget groups.

Further pushed through the discussion about sustainability, doubting the efficiency of the sprawl.

The attractivity of the centre requires a transformation from a ‘museum city’ into a living city, meeting contemporary needs of living and working.

Finding a stimulating fusion of the old and the new will be the task for the future.

**What?**

The Ambition of ‘No-Stop History’ is to show possibilities of increasing the performance of the Historic City, without changing the old structures.

This project does not claim to be the only or the perfect solution, but to be a Vision of a different future of our Historic Cities.

It should provide a basis for further explorations and discussion.

Can we increase the performance of the Historic City?
Interview Series
The Capacity of the Preserved City

Paul Meurs
Professor of Restoration RMIT / TU Delft

Jaqueline von Santen
Senior Consultant Preservation /
Rijksdienst voor het Cultureel Erfgoed

Anastasia Smirnova
Preservation Theme Supervisor /
Strelka Institute for Media, Architecture & Design Moscow
Introducing the Historic City
Introducing the Historic City
Facts, Trivia and Controversies

Paris, has an annual 30 million foreign visitors, and so is the most visited city in the world.

Every third Travel has a Cultural Goal.

I think the danger is, that world heritage aims to show the differences, the unique leftovers of top art. But the way it’s been exploited as tourist destinations has a very uniforming effect. As soon as something gets listed, it gets globalised, unified, ‘tourified’.

A mass consumption thing, which looks more and more the same, because the functional program is getting identical.

Paul Meurs
Professor of Restoration RMIT / TU Delft
Historic cities are mostly existing of restricted individual traffic areas:

- Carfree Cores
- OneWay Roads
- Pedestrian Zones

Public Transport:
  - Destinations planned per interest points
  - no equal distribution

European Union ‘White Paper 2011’:
  - till 2030, a fifty per cent reduction in automobiles powered by conventional fuels
  - 2050 the total elimination of such vehicles from cities

65% of Viennas traffic is done by public transport, bike or walking.

http://www.bmvit.gv.at
History is Economy

German government spends 546,000,000 € for urban renewal in 2010, 90,000,000 € for the historic city cores.

36% of German citizens would pay a higher rent for a historic building, 43% in cities with over 500,000 inhabitants.

Vivacon AG / Allensbach-Institutes; 2006

‘Berlin style of architecture’ is the post modern concept of a ‘decorated shed’ for a globalised real estate market which reduces architecture to the role of styling the consumer article building with the help of stereotyped images.’

Eckard Wolf: Berlin Shaped by History - Planning and Economic Forces
History is Generic

A lot of people look at history, because maybe they are confused about the future and about today or the scale of the globalisation. It's a kind of reaction to all this tendencies and then you see a kind of commercial movement filling this gap, to still the hunger for identity and history.

Paul Meurs
Professor of Restoration RMIT / TU Delft
Public Interest
in Restored & Preserved Buildings

61%
like the preservation of culture & history.

Vivacon AG / Allensbach-Institutes, Germany 2006
60% like the atmosphere of historic cities.
54%

like the beauty of the historic cities.
53% like the uniqueness.

48% like alcoves.

45% like large rooms.

53% like timber framing.

88% like a historic cityscape & restored buildings.
7% are unsure
5% like new buildings instead.

43% like high ceilings.

41% like high windows.

40% like beautiful roofs.

31% like transom windows.

51% like stucco.

45% like parquet floor.

20% like the representing effect.
Real Estate Prices per Area

Amsterdam
-Real Estate Prices per Districts
-Prices risen up to 5% between 2009 and 2010

http://www.globalpropertyguide.com/Europe/Netherlands

Paris
-Real Estate Prices per Districts
-Prices risen up to 7.2% between 2009 and 2010

http://www.paris.notaires.fr/
Vienna
- Real Estate Prices per Districts
- Prices rised up to >5% between 2008 and 2009

www.immobilien.net
London
- Real Estate Prices per Districts
- Prices rised up to 9% between 2008 and 2009

http://www.hamptons.co.uk/en-gb/
Berlin

- Real Estate Prices per Districts
- Population Change per Area in % till 2030:

  - Average Change  +1,7%
  - Core Area Change +20%

administration of urban development;
Berlin 01/2009
<table>
<thead>
<tr>
<th>Adresse</th>
<th>Jahr</th>
<th>Entfernung</th>
<th>Fläche</th>
<th>Preis</th>
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<td>Gormannstrasse 5</td>
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<td>Price</td>
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<td>2011</td>
<td>Regensburger Strasse 30</td>
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</table>
Berlin Pankow

- **Adresse:** Froebelstrasse 11
- **Jahr:** 2010
- **Abstand:** 2,48 km
- **Fläche:** 135 m²
- **Preis:** 429.000 €
- **Preis pro m²:** 3.178 €

- **Adresse:** Berliner Strasse 123-125
- **Jahr:** 2010
- **Abstand:** 5,33 km
- **Fläche:** 125 m²
- **Preis:** 394.068 €
- **Preis pro m²:** 3.153 €
Berlin Spandau

- **Year:** 1890
- **Adresse:** Feldstrasse
- **Distance:** 14.30 km
- **M²:** 92
- **Price:** €219,000
- **E/M²:** €2,380

- **Year:** 1900
- **Adresse:** Wilhelmstrasse
- **Distance:** 15.36 km
- **M²:** 140
- **Price:** €185,000
- **E/M²:** €1,321
The Future of the Past
The Future of the Past
Workshop The Why Factory & AEDES
Berlin 2010

2010    Today
2060    City Gets Densified
2110    New Housing Structure Over Nikolai Viertel
2160    Old Buildings Disappear And Water Moves In
2210    1000 Years Berlin / Temporary Tribune Structure
2260    Preserved/Plastified Church Area
2310    Nikolai Viertel Becomes An Island
2360    Leisure Moves In
2410    Beach Island
2460    New Structure, Leisure On Top
2510    Support Structure Gets Demolished / Hovering Buildings
2560    Snowball Church Area / New Preservation Dome
2610    Snowball Church Area / Controlled Weather Dome
Transformations
Architectural Transformations
From Abandonment to New Heart
Urban Transformations
From Erasing to Reusing
Introducing Preservation
Introducing Preservation
Facts, Trivia and Controversies

About 12% of the World’s Surface is preserved

911 existing UNESCO World Heritage Sites and 1511 pending Sites

Over 500,000 listed buildings in England

About 748,105 preserved Buildings in Germany till 2010

‘Visionary Cities’ t?f, Amsterdam Netherlands, 2009
MONU Issue 14, Rotterdam Netherlands, 04.2011
Administration of urban development, Berlin Germany 05/2010
During the French Revolution, huge numbers of objects were labeled 'insults' and 'offence' to Republicanism; entire towns could be denied the right to existence. Within this tumult, selections were made between objects that would be melted, pulverized, or burnt and those that might continue to endure. The term 'heritage' was introduced as a juridical instrument in 1790 to ward off the degradations and destruction of revolutionary 'vandals'.

Objects and structures came to be appraised for their 'historical and artistic value', a value which 'resides in the fact that it represents a particular stage, in some sense unique, of the development of a domain of the creation of man.'

Rem Koolhaas: Content

This 220 years old 'invention' is unchanged till today. When society, architecture and urbanism changed dramatically in this time, preservation doesn't underlie a constant change. **Contemporary forms of preservation are outdated!**

We need to update the ways of preservation to make it compatible with the needs of our environment and future progress.

Marie Alexander Lenoir (1761-1839), was devoted to saving France’s historic monuments, sculptures and tombs from the ravages of the French Revolution.

http://en.wikipedia.org/
Eugene-Emmanuel Viollet-Le-Duc (1814-1879)
Restoration is a “means to reestablish [a building] to a finished state, which may in fact never have actually existed at any given time.”

John Ruskin (1819-1900),
It [restauration] means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture.

Eugene-Emmanuel Viollet-Le-Duc (1814-1879)
Restoration is a “means to reestablish [a building] to a finished state, which may in fact never have actually existed at any given time.”
Preservation is Economy

46% of German citizens would pay a higher buying price for a historic building.

88% of German citizens are pro restoration, just 5% pro new constructed buildings.

Vivacon AG / Allensbach-Institutes: 2006

Germany provides 2,400,000 €/year governmental subsidy for preservation. There are about 748,105 preserved buildings in Germany till now.

Administration of Urban Development
Berlin 05/2010
Preservation is Stagnation

To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of ten selection criteria. Six of these criteria are connected to architecture or urbanism.

All properties inscribed on the World Heritage List must have adequate long-term legislative, regulatory, institutional and traditional protection and management to ensure their safeguarding. Legislative and regulatory measures at national and local levels should assure the survival of the property and its protection against development and change that might negatively impact the outstanding universal value, or the integrity and authenticity of the property.

http://whc.unesco.org/

Statutorily regulation of:
- building typology
- building mass
- roof form
- facade structure
- open / close ratio facade
- advertising structure

Excerpt from the German planning regulations; 2010.

45% of world heritages sites in Europe are located in 20% of Europes area, the city.

http://whc.unesco.org/en/
http://www.iiasa.ac.at/Research/ERD/
Preservation is Political

That's not an expert decision, this is political.

It’s really interesting, that apparently there is a big need for a large group of people to pretend, that some layers in history haven’t happend.

Paul Meurs
Professor of Restoration RMIT / TU Delft

Jaqueline von Santen
Senior Consultant Preservation / Rijksdienst voor het Cultureel Erfgoed
## Structure of Preservation

<table>
<thead>
<tr>
<th>Laws</th>
<th>State</th>
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<td>'Venice Charter'; Italy 1964</td>
<td>'CONVENTION FOR THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE' UN; France 1972</td>
<td>'NARA'; Japan 1994</td>
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Preservation Guidelines
Overview

1931 – Athens Charter
1948 - The Universal Declaration of Human Rights
1954 – Convention for the Protection of Cultural Property in the Event of Armed Conflict
1954 – European Cultural Convention
1964 – Venice Charter
1972 - World Heritage Convention
1981 - Florence Charter
1985 – Granada Convention
1987 – Washington Charter
1994 - Nara Document on Authenticity
1996 - International Committee of the Blue Shield
1999 - Burra Charter
2000 – Nota Belvedere
2001 – UNESCO Universal Declaration on Cultural Diversity
2003 – New Athens Charter
2005 – Vienna Memorandum
2005 – Faro Convention
2007 - Cultural Rights Fribourg Declaration
2007 - European Manifesto for Multiple Cultural Affiliation
2008 – Ename Charter

in use / international
lesser importance / national
specialised guideline
related in a wider field / no direct statements
Preservation Guidelines

Analysis

- **Action:**
  - Restoration
  - Maintaining
  - In-action

- **Environmental Protection**

- **Occupation:**
  - New Program
  - Original Program
  - Unoccupied

- **Area**

- **Material:**
  - New Material
  - Original Material
  - Visibility of Restoration

- **Style:**
  - Actual State
  - Re-design
  - Addition

- **Region:**
  - National
  - International

- **Importance:**
  - Object
  - Character

- **Location:**
  - Fixed
  - Moveable

- **Theory / Documentation**

- **Laws:**
  - Mandatory Laws
  - Penalties

- **Education / Information**

- **Planning:**
  - Public Participation
  - Traffic
  - Urbanism

In the past there was one set of guidelines - the charters - .. what you see now, .. , the guidelines are tailor-made.

Maybe it's even more important, that you can explain why you made a decision, then the decision itself.

Paul Meurs
Professor of Restoration RMIT / TU Delft

Jaqueline von Santen
Senior Consultant Preservation / Rijksdienst voor het Cultureel Erfgoed
1931 – Athens Charter

Synopsis

The Athens Charter formulated the first principles of the conservation and restoration of monuments. Providing several resolutions and announcing the need for international cooperation. The resolutions deal with the creation of relevant international organizations, relevant evaluation-procedures and with the building of a legal framework in each country. It claims how to deal with archeological sites, modern materials, the supervision of conservation projects and the including of the surrounding areas of preservation sites.
**1964 – Venice Charter**

**Synopsis**
The Venice Charter for the Conservation and Restoration of Monuments and Sites is a treaty that gives an international framework for the preservation and restoration of ancient buildings and sites, on the base of the Athen’s Charter. Itself does not contain any new definitions.

<table>
<thead>
<tr>
<th>Action</th>
<th>restoration / preservation / inaction / destruction</th>
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</thead>
<tbody>
<tr>
<td>Area</td>
<td>surrounding / object</td>
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<tr>
<td>Stage</td>
<td>earlier state / actual state / redesign / addition</td>
</tr>
<tr>
<td>Material</td>
<td>new material / visibility of restoration / invisibility of restoration</td>
</tr>
<tr>
<td>Importance</td>
<td>representative quality / material authenticity</td>
</tr>
<tr>
<td>Location</td>
<td>original position / moveable</td>
</tr>
<tr>
<td>Occupation</td>
<td>new program / original program / unoccupied</td>
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<tr>
<td>Environment</td>
<td>environmental protection / sustainability</td>
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<tr>
<td>Laws</td>
<td>manadatory laws / penalties</td>
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<td>Planning</td>
<td>urbanism / traffic planning / public participation</td>
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<tr>
<td>Theory</td>
<td>documentation / education / information</td>
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Legend:
- **recommended**
- **permitted**
- **not permitted**
- **no statement**
### 1972 – World Heritage Convention

**Synopsis**

The World Heritage Convention provides the organisational and executive framework for the UNESCO World Heritage Sites. It defines the selection criteria for built heritage and nature heritage. It provides the procedure for the listings, representation of heritage, financial assistance, organisational structure and the management committee.

<table>
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<tr>
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<th>Definition</th>
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</table>

Recommended: permitted
Not permitted: no statement
1985 – Granada Convention

Synopsis

The Convention for the Protection of the Architectural Heritage of Europe (Granada Convention) rephrases the definitions of monuments, groups of buildings and sites, adding "technical interest" to the qualitative criteria, thus enlarging the concept of the heritage. This was the first time that an international treaty had included the principles of integrated conservation.
1987 – Washington Charter

Synopsis
This charter concerns historic urban areas, large and small, including cities, towns and historic centres or quarters, together with their natural and man-made environments. Beyond their role as historical documents, these areas embody the values of traditional urban cultures. Today many such areas are being threatened, physically degraded, damaged or even destroyed, by the impact of the urban development that follows industrialisation in societies everywhere.

Action
restoration / preservation / inaction / destruction

Area
surrounding / object

Stage
earlier state / actual state / redesign / addition

Material
new material / visibility of restoration / invisibility of restoration

Importance
representative quality / material authenticity

Location
original position / moveable

Occupation
new program / original program / unoccupied

Environment
environmental protection / sustainability

Laws
manadatory laws / penalties

Planning
urbanism / traffic planning / public participation

Theory
documentation / education / information
2005 – Vienna Memorandum

Synopsis
The present Memorandum refers to historic cities already inscribed or proposed for inscription on the UNESCO World Heritage List, as well as to larger cities that have World Heritage monuments and sites within their urban territories.

The Vienna Memorandum focuses on the impact of contemporary development on the overall urban landscape of heritage significance, whereby the notion of historic urban landscape goes beyond traditional terms of “historic centres”, “ensembles” or “surroundings”, often used in charters and protection laws, to include the broader territorial and landscape context.

Economic aspects of urban development should be bound to the goals of longterm heritage preservation.

Action
restoration / preservation / inaction / destruction

Area
surrounding / object

Stage
erlier state / actual state / redesign / addition

Material
new material / visibility of restoration / invisibility of restoration

Importance
representative quality / material authenticity

Location
original position / moveable

Occupation
new program / original program / unoccupied

Environment
environmental protection / sustainability

Laws
mandatory laws / penalties

Planning
urbanism / traffic planning / public participation

Theory
documentation / education / information
Preservation Guidelines
Importance & Change over Time

Pre-guideline: national planning and preservation laws, if existing

First guideline: catalogue of material to preserve / technical guidelines

Post-war: restrained and academical approach / education and public participation

Authenticity guidelines: knowledge, authenticity and marketing, combined development / presentation of cultural history and with this identity / object to spirit

Future guideline: representative quality over material authenticity / preservation sprawl

1920

1931 Athens Charter

1954 Convention for the Protection of Cultural Property in the Event of Armed Conflict

1964 Venice Charter

1972 World Heritage Convention

1985 Granada Convention

1987 Washington Charter

1994 NARA Document on Authenticity

2005 Vienna Memorandum

2008 Ename Charter

2000
‘Depending on the nature of the cultural heritage, and its cultural context, authenticity judgments may be linked to spirit and feeling, and other internal and external factors.’

NARA, 1994
Vienna Memorandum
on World Heritage and Contemporary Architecture Vienna, Austria 2005

Object: City of Graz, Austria
Constructed: Middle Ages - 18th century
New Construction: Kunsthaus Graz 2003
Info: UNESCO World Heritage Site
Ref: 931bis

'This memorandum is not against new construction as such, but emphasises on that the universal qualities of the world heritage should not be jeopardized by new developments.'
Paul Meurers

‘The random cherishing of everything that is old in the cities changes them into museums full of rubbish.’
Lina Bo Bardi
Preservation Tools

-Preservation
-Restoration
-Reconstruction
-Relocation
-Addition
-Copy
-Demolition

‘..removing the core of building stock worthy of protection (“façadism”) does not constitute an appropriate mean of structural intervention.’

Vienna Memorandum, 2005
Preservation

‘Parthenon’

Athens, Greece

Object: Religious
Constructed: 5th century BC.
Preserved: 1830th / 1930th / 1980th

1931 Athens Charter
1964 Venice Charter
1972 World Heritage Convention
1985 Granada Convention
1987 Washington Charter
1994 NARA Document on Authenticity
1999 Burra Charter
2005 Vienna Memorandum
2008 Ename Charter
Restoration
‘Unité d’Habitation’
Marseille, France

Object: Residential
Constructed: 1947
Restored: 1983/84 and 2003

1931 Athens Charter
1964 Venice Charter
1972 World Heritage Convention
1985 Granada Convention
1987 Washington Charter
1994 NARA Document on Authenticity
1999 Burra Charter
2005 Vienna Memorandum
2008 Ename Charter
Reconstruction
‘Stari Most’
Mostar, Bosnia and Herzegovina

Object: Bridge
Constructed: 1557-1566
Destroyed: 1993
Reconstruction: 2004
Info: UNESCO World Heritage Site Ref.: 946

1931 Athens Charter
1964 Venice Charter
1972 World Heritage Convention
1985 Granada Convention
1987 Washington Charter
1994 NARA Document on Authenticity
1999 Burra Charter
2005 Vienna Memorandum
2008 Ename Charter

‘This representative quality is then given priority over the material authenticity which is usually the focus of the restoration charters.’
Paul Meurers
Relocation
‘Georgs Chapel’
Bonn, Germany

Object: Religious
Constructed: 1230
Destroyed: 1842 (partly)
Relocated: 1846 / 1847

1931 Athens Charter
1964 Venice Charter
1972 World Heritage Convention
1985 Granada Convention
1987 Washington Charter
1994 NARA Document on Authenticity
1999 Burra Charter
2005 Vienna Memorandum
2008 Ename Charter
Adding
‘Kaiser-Wilhelm-Gedächtnis-Church’
Berlin, Germany

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1931</td>
<td>Athens Charter (✗)</td>
</tr>
<tr>
<td>1964</td>
<td>Venice Charter (✗)</td>
</tr>
<tr>
<td>1972</td>
<td>World Heritage Convention</td>
</tr>
<tr>
<td>1985</td>
<td>Granada Convention</td>
</tr>
<tr>
<td>1987</td>
<td>Washington Charter (✗)</td>
</tr>
<tr>
<td>1994</td>
<td>NARA Document on Authenticity</td>
</tr>
<tr>
<td>1999</td>
<td>Burra Charter (✓)</td>
</tr>
<tr>
<td>2005</td>
<td>Vienna Memorandum (✗)</td>
</tr>
<tr>
<td>2008</td>
<td>Ename Charter</td>
</tr>
</tbody>
</table>
Copy
‘Leaning Tower of Pisa’
Niles, USA

Object: Commercial / Public Space
Constructed: original 1161-1372
Destroyed: -
Copy: 1934
Info: Differences in Size, Material, Function, etc.

1931 Athens Charter
1964 Venice Charter ✗
1972 World Heritage Convention ✓
1985 Granada Convention
1987 Washington Charter
1994 NARA Document on Authenticity ✓
1999 Burra Charter ✓
2005 Vienna Memorandum
2008 Ename Charter
Demolition
‘Centrum Mall’
Dresden, Germany

Object: Commercial
Constructed: 1973-78
Destroyed: 2007

1931 Athens Charter
1964 Venice Charter
1972 World Heritage Convention
1985 Granada Convention
1987 Washington Charter
1994 NARA Document on Authenticity
1999 Burra Charter
2005 Vienna Memorandum
2008 Ename Charter
Preservation Laws

Monumentenwet 1988; Netherlands

MW Netherlands
§ 2
Permits modification, demolition or removal
Article 11
1. It is forbidden to damage or destroy a protected monument
2. It is prohibited without a permit or contrary to:
   a. to break down, to disturb, move or change in any way;
   b. to repair a protected monument, use or have used it in a manner thus it is flawed or compromised

Denkmalschutzgesetz Berlin 1995; Germany

DSchG. Bln.
§ 11
Measures Requiring Authorization

(1) Only with authorization of the proper historic property authority may a historic property be
   1. altered in its appearance,
   2. completely or partially removed,
   3. moved from its location or place of safekeeping or
   4. renovated, restored or modified in its use.

This also applies to building elements and equipment of a historic property. Authorization in accordance with paragraph 1 shall be granted, if no opposing grounds exist with regard to historic property preservation or when predominant public interest so demands.

(2) Furthermore, authorization is required for the construction, modification or removal of elements in the immediate environment of the historic property, when this affects the condition or appearance of the historic property. Authorization shall be granted, when the character and appearance of the historic property is not significantly affected by this measure.
DSchG. Bln.
§ 11
Measures Requiring Authorization

(1) Only with authorization of the proper historic property
authority

may a historic property be
1. altered in its appearance, ✓
4. renovated, restored or modified in its use. ✓

BauO. Bln.
§ 65 Building Permit Process ✓
§ 69 Planning Application, Building Plans ✓
§ 71 Building Permits, Construction ✓
The Exception

DSchG. Bln.
§11
(3) For advertisements conflicting reasons for the historic preservation, referred to in paragraph 1 sentence 3 or a substantial impairment under paragraph 2 sentence 2, doesn’t apply, when the advertisement isn’t installed for more than six months and the content is primarily in the public interest.
Problem!

History vs. Performance
Research Conclusion

- Images are the Historic Essence
- Authenticity is Selfmade
- Do as you like - Do as It sells

Idea

-Urban Vision: Tabula Rasa under the Historic Skyline
Generic City
Generic City Analysis

-Age / Repetitive Pattern
-Building Stock per Year
-DNA
-Section
Age / Repetitive Pattern

City

Time

M.A.

18th / 19th Century

Luebeck; Germany
Prague; Czech Rep.
Strasbourg; France
Venice; Italy
Barcelona; Spain

Berlin; Germany
Vienna; Austria
Barcelona; Spain
Rome; Italy
Paris; France
### Age / Repetitive Pattern

<table>
<thead>
<tr>
<th>Time</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900-1945</td>
<td>Stockholm; Sweden</td>
</tr>
<tr>
<td></td>
<td>Stuttgart; Germany</td>
</tr>
<tr>
<td></td>
<td>Amsterdam; Netherlands</td>
</tr>
<tr>
<td></td>
<td>Berlin; Germany</td>
</tr>
<tr>
<td></td>
<td>Milan; Italy</td>
</tr>
<tr>
<td>1945-now</td>
<td>Hamburg; Germany</td>
</tr>
<tr>
<td></td>
<td>Rotterdam; Netherlands</td>
</tr>
<tr>
<td></td>
<td>Munich; Germany</td>
</tr>
<tr>
<td></td>
<td>Madrid; Spain</td>
</tr>
<tr>
<td></td>
<td>London; England</td>
</tr>
</tbody>
</table>
DNA
Church

Type: Public Space / Religious
Time: M.A. / 18th-19th Century
Height: 60-155m
Streetprofile: 10-50m
DNA
Medieval Block

Type: Residential / Commercial
Time: M.A.
Height: 9-16m
Streetprofile: 6-10m
DNA
Palace

Type: Public Space / Residential
Time: 18th Century
Height: 16-40m
Streetprofile: 15-50m
DNA Block

Type: Residential / Commercial
Time: 18th-19th Century
Height: 16-25m
Streetprofile: 15-30m
DNA
Slab

Type: Residential
Time: 1900-1950
Height: 16-25m
Streetprofile: 10-25m
DNA
Villa

Type: Residential
Time: 18th-20th Century
Height: 8-16m
Streetprofile: 10-25m
DNA
Mass Housing

Type: Residential
Time: 1960-1980
Height: 36-51m
Streetprofile: 79m
If you look at the inner cities and the conservation of the real historic cities, what makes the difference to the outskirts, where the history is imitated, but that in a way that it fits into the parking norms, the sizes of today's kitchen and everything. So, .. it's interesting to find a justification, why we should make very problematic conservation approaches in the historic cities and then create buildings, which have all kind of shortcomings for today's requirements.

Paul Meurs
Professor of Restoration RMIT / TU Delft
St. Petri Church
Location: Lübeck; Germany
Build: 1170-1492
Style: Romanesque / Gothic
History: -Addition 1227 / 1290 / 15th cent.
-Partial Destruction 1942
-Reconstruction 1987

Kastanienallee
Location: Berlin; Germany
Build: 1826
Style: Historicism / Gründerzeit / Contemporary
History: -Partial Vacancy 1970th-1980th
-Redevelopment / Addition 1990th

Roemerberg
Location: Frankfurt a. M.; Germany
Build: 1288
Style: -
History: -Several Additions
-Destruction 1944
-New Build 1950th
-Destruction 1969
-New Build 1970th
-Reconstruction 1981-1984
Concept
Metro Station Depths
brush vs. tunnel boring machine

average station depth 5m
-open construction
-Berlin
station depth 20-30m
-tube construction
-clearance needed, because of archeological findings or natural obstacles (river; etc.)
-Paris / Vienna / Rome / Athens
station depth 90-100m
-tube construction
-clearance needed, because of military usage
-St.Petersburg / Pyongyang
No-Stop History City

- Existing Situation Historic City
- Excavating Basement Level
- Adding new Walls, Support Structure & Facades: Filter Level
- Adding Structural Level underneath Filter Level
- Adding Column System & new Entrances underneath Structural Level: Lobby Level
Footprint Development
'New Nolli Plan'
Lobbi Level +0 / -17.05 m
Possibilities / Limitations
Possibilities / Limitations

Program Factors

- Daylight
- Groundwater
- Structure
- Transport
Technical Solutions

Sun Study

- Sun Study for different Blocksizes and Streetprofiles
- Minimum 2 Hours of Sunlight per Day for Residential Areas
Daylight Courtyards

- Minimal 2 Hours Daylight for Residential Use

- Average Exposure to Light (West Orientation)

- Optimal Exposure to Light (South Orientation)
Daylight
Streetprofile 30m

- Minimal 2 Hours Daylight for Residential Use
- Average Exposure to Light (West Orientation)
- Optimal Exposure to Light (South Orientation)
Groundwater Amount

-Average Depth Worldwide about 55 m
-Average Depth Germany about 30 m
-Average Depth Netherlands about 4 m

-Calculation Method: Glugla & Fürtig, 1997

-Groundwater Data:
  Berlin 4.7 l/s*km²

-Area Data:
  No-Stop History City ~ 6.7 km²

-31.5 l/s -> 2.721.6 m³/Day

-Evaporation standing Water with an average Depth of 2 m:
  74 cm/Year

-Needed Watersupply per Person/Day:
  without Industry ~ 130 l/Day
  with Industry ~ 350 l/Day

-Watersupply for 20.935 People (without Industry)

http://www.stadtentwicklung.berlin.de/umwelt/umweltatlas/edinh_02.htm
http://www.dwd.de/
Groundwater
Flow Diagram
Spoil Amount

-Area Data:
  No-Stop History City ~ 6.7 km²

-Depth Data:
  No-Stop History City ~ -17.05 m

-> 114.235.000 m³

-Artificial Landscape
  ~ 495.636.57 m³

-Recycled
  ~ 113.739.363.40 m³
Climate
Temperature

-Area Data:
No-Stop History City -17.05 m
+ 3°C/100m ~ + 0.6°C

-Urban Heat Island:
Temperature difference to rural Areas can be +1-3°C
during the Day & up to +12°C in the Evening

-Climate Scenarios:

-BAMBU (+ 3.3°C):
Analogue Areas are France, Italy, eastern Balkans,
South-East Bulgaria and North-West Turkey

-GRAS (+ 4.5°C):
Analogue Areas are France, Italy, Area around the Aegean
and Black Sea, Greece, South-East Bulgaria and North-West
Turkey

'Modellierung der Auswirkungen des Klimawandels
auf die Flora und Vegetation in Deutschland'
Bundesamt für Naturschutz (BfN); Bonn 2011
Structural System
Disconnecting the Old from the New

‘Structural System’
Level -0 to +3 / -17,05 m to +0

Structure:

- Old Foundations/Walls & new Walls 3,30 m
- Bubbledeck Floor 0,35 m
- Space Frame 2,05 m
- Bubbledeck Floor 0,35 m
- Columns 11,00 m
Technical Instalations

Technical installations will be stored on the ‘Filter Level’ and then transported vertically through the ‘Structural Level’ and special columns.
New Transport Concept
Flying on the Ceiling

‘Unesco: Buga-Ropeway doesn't harms World Cultural Heritage.’
www.rhein-zeitung.de
**New Transport Concept**  
**Flying on the Ceiling**

Preferences:
- High transportation efficiency (up to 5,000 persons/hour one direction)
- Waiting periods ~30 seconds
- Low noise level
- Low costs in operation (no drivers necessary)
- Ecologically beneficial (low noise level, no waste, saving CO2)
- Saving energy (slight transported masses of the cabins)
- High automation grade (low costs for personal)
- New railway constructions are relative simple (insignificance space required)
- Highest attractivity (view, design, exclusivity)

Passengers:
- Subway 60,000 passengers each direction and hour
- Light Rail 20,000 passengers each direction and hour
- Tramway 10,000 passengers each direction and hour
- **Ropeway 5,000 passengers each direction and hour**
- Bus 3,500 passengers each direction and hour

10,000 Persons/Hour = 100 Bus Transfers = 2,000 Car Transfers
New Transport Concept
Flying on the Ceiling

Level +0 to +3 / -17.05 m to +0

Function:
- Transit to lower City Level
- Park & Ride
- Public Transport
New Transport Concept
Flying on the Ceiling

Level +-0 / -17,05 m
Function:
- Public Transport
- Stationgrid every 300m
- under 5 Minutes walking distance
- even Transport Distribution
New Transport Concept
Flying on the Ceiling

Level +0 to +3 / -17.05 m to +-0
Function:
  - Transit to lower City Level
  - Park & Ride
  - Public Transport
Projects
‘Medieval Block’
Medieval Block
Section

Historic Level / +3
(former +0)

Filter Level / +2

Structure Level / +1

Lobby Level / +0
‘Medieval Block’
Level +0 / -17,05 m
Function:
- Entrance/Exit
- Public Space
- Park
- Public Transport
‘Medieval Block’
Level +2 (former -1) / -3.30 m
Function:
- Entrance/Exit
- Technical installations
- Storage
- Semi Public Space
‘Gruenderzeit Block’
Historic Level / +3
(former +0)
Filter Level / +2
Structure Level / +1
Lobby Level / +0
‘Gruenderzeit Block’
Level +0 / -17,05 m
Function:
- Entrance/Exit
- Public Space
- Park
- Public Transport
'Gruenderzeit Block'
Level +2 (former -1) / -3,30 m
Function:
- Entrance/Exit
- Technical installations
- Storage
- Semi Public Space
‘1950’s Slab’
Section

Historic Level / +3
(former +0)
Structure Level / +1
Lobby Level / +0
‘1950’s Slab’
Level +-0 / -17,05 m
Function:
- Entrance/Exit
- Public Space
- Park
- Public Transport
- Groundwater Reservoir
‘1950’s Slab’
Level +2 (former -1) / -3,30 m
Function:
- Entrance/Exit
- Technical installations
- Storage
- Semi Public Space
'Villa Block'
Section

Historic Level / +3
(former +0)

Filter Level / +2

Structure Level / +1

Lobby Level / +0
‘Villa’
Level +0 / -17.05 m
Function:
- Entrance/Exit
- Storage
- Public Space
- Park
- Public Transport
‘Villa’
Level +2 (former -1) / -3,30 m
Function:
- Entrance/Exit
- Technical installations
- Storage
- Private Space
‘Church Cemetery’
'Church Cemetery'
Level -2 (former -5) / -23.65 m
Function:
  - Cemetery
  - Public Space
‘Church Cemetery’
Level +3 (former +0)/ +17.05 m
Function:
- Church
‘Palace’
Level +0 / -17.05 m
Function:
- Entrance/Exit
- Public Space
- Theater/Event Space
- Public Transport
‘Palace’
Level +2 (former -1) / -3.30 m
Function:
- Entrance/Exit
- Technical installations
- Storage
- Office
'Square'
Level +0 / -17.05 m
Function:
- Entrance/Exit
- Square Access
- Public Garden
- Hot Springs
- Public Space

'Church'
Level +2 (former -1) / -3.30 m
Function:
- Spa
‘Square’
Level -2 (former -5) / -20,35 m/-23,65 m
Function:
-Residential
-Public Space
-Public Garden
-Exhibition
‘Square’
Level -4 (former -7) / -30.25 m
Function:
- Retail
- Residential
- Public Garden
- Public Space
‘Square’
Level -7 (former -10) / -40,15 m
Function:
- Square
- Retail
- Residantial
- Public Space
- Public Garden
- Exhibition
...I think, it’s very important that we want to show that the vector of preservation is not always towards the past, but it can be towards the future, in certain cases. A kind of pre-emptive preservation.

Anastasia Smirnova
Preservation Theme Supervisor /
Strelka Institute for Media, Architecture & Design Moscow
**Historic City vs. No-Stop History City**

Site Data Comparison

- **Area Data:**
  - Historic City ~ 6.7 km²
  - No-Stop History City ~ 6.7 km²

- **Built Area:**
  - 87% ~ 5.83 km²
  - 107% ~ 7.17 km²

- **Green/Public Area:**
  - 8% ~ 0.54 km²
  - 70% ~ 4.69 km²

- **Water Area:**
  - 1% ~ 0.07 km²
  - 17% ~ 1.14 km²

- **Infrastructure Area:**
  - 4% ~ 0.27 km²
  - 2% ~ 0.13 km²

**Pie Charts:**

- **Public:** 30% (Historic City) vs. 50% (No-Stop History City)
- **Housing:** 60% (Historic City) vs. 50% (No-Stop History City)
- **Industrial:** 10% (Historic City)
- **Green:** 80% (Historic City) vs. 60% (No-Stop History City)
- **Public:** 40% (No-Stop History City)
- **Green:** 60% (No-Stop History City)

These diagrams illustrate the percentage distribution of different land uses in both cities.
No-Stop History City
Site Data Improvement

-Area Data:
 No-Stop History City ~ 6.7 km²

-Built Area:
 +20% ~ 1.34 km² 'Increasing'

-Green/Public Area:
 +62% ~ 4.15 km² 'Increasing'

-Water Area:
 +16% ~ 1.07 km²

-Infrastructure Area:
 -2% ~ 0.13 km²
Thank you for your attention.