setembro 2-3-4 2013
LISBOA
workshop/seminário internacional da INTA
INTA-international workshop/seminar
mobilidade vertical na cidade
welcome to the upper floor:vertical mobility in the city

parceiros

organizado

LISBOA - Associação dos Municípios de Lisboa

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SEMANA EUROPEIA DA MUDANÇA

OTIS
THE WAY TO GREEN

LIFTECH

NOVOTEL

SERM

ThyssenKrupp
Welcome to the upper floor: vertical mobility in Lisbon

International Design workshop by the Municipality of Lisbon and INTA
Mobility in Lisbon: from vision to projects

- Movement in town cannot be understood without taking into account:
  - the technical conditions of moving (urban transportation),
  - the organization of activities (urban structure),
  - the daily practice of inhabitants and visitors (urban society),
  - the quality of space (urban landscape),
  - the measures taken by decision-makers to shape the city (urban policy).

- More than a concept, mobility is a framework, a basis to build new relations between people and space, and to propose more services to the inhabitants.
Mobility in Lisbon: a political commitment

- Maximise the quality of life of all inhabitants through improved mobility
- Maximise the connectivity between neighbourhoods
- Maximise the efficiency and effectiveness of public investment in mobility
- Maximise the satisfaction of the visitors and their contribution to the local economy
Mobility in Lisbon: a political commitment the neighbourhoods

- "Para além das suas freguesias, Lisboa tem muito mais bairros com identidade própria e, mesmo dentro de cada bairro, várias unidades homogéneas - a rua, o beco, a vila - onde os laços de vizinhança ainda são mais fortes".

- "Cidade de bairros é uma grande mais-valia no reforço da coesão social e territorial de Lisboa. Por isso, queremos rejuvenescer os bairros e fomentar este espírito nas novas urbanizações da cidade".
Mobility in Lisbon: a political commitment the neighbourhoods

- "ma praça em cada bairro» como iniciativa emblemática da ideia Lisboa Cidade de Bairros. A partir de uma praça, de uma rua, zona comercial, do jardim do bairro ou de um equipamento coletivo existente ou projetado propõe-se organizar um ponto de encontro da comunidade local, uma microcentralidade que concentre atividade e emprego como um espaço público de excelência?"
Mobility in Lisbon: a political commitment mobility

"O sistema de mobilidade de Lisboa tem de ser dimensionado a partir desta premissa com o objetivo de aumentar o nível de acessibilidade dos seus habitantes e visitantes a serviços, escolas, emprego, zonas de lazer, ou à informação e cultura, fazendo com que o elemento central devam ser as pessoas e não os automóveis.

Ao repensar toda a estrutura de mobilidade urbana para englobar também os modos suaves estaremos a contribuir para que mais pessoas deixem de sentir necessidade de utilizar o automóvel nas suas viagens pendulares"
Mobility in Lisbon: a political commitment
vertical mobility & accessibility

- "Desenvolver um programa de instalação de elevadores em prédios antigos que facilitem o acesso de todos e contribuam para o reforço da estrutura aos sismos.

- Tratar os bairros como zonas de tráfego partilhado em que a rua volte a ser um local de convívio e lazer, dificultando o seu atravessamento por tráfego que não tenha origem e destino no bairro através de medidas que reduzam a velocidade de circulação e de efetiva partilha do espaço público pelos peões e veículos em condições de conforto e segurança"
Mobility in Lisbon: a political commitment

smooth walkability

- "Tornar progressivamente o espaço público acessível a todos com pavimentos mais seguros e cómodos eliminando os riscos das calçadas sem contudo descaracterizar a cidade, em particular, o casco histórico, dando particular atenção aos cruzamentos com alternamento de passadeiras pedonais, pavimentos tácteis, sonorização dos semáforos"
Outline of the presentation

1. **Moving without constraints**: the Mobile experience
   - Incremental innovation

2. **Connecting neighbourhoods**
   - Breakthrough innovation

3. **Tourism as leverage** for neighbourhood regeneration
   - Value creation

4. **Transport technology** as incubator of new social and economic practices
   - Rethinking the role of infrastructure in the transformation of the modes of living, of the urban environment, and in the production of smart living community
1. Moving without constraints
1. Moving without constraints
incremental innovation

- **Mixing modes**
  - Horizontal – Vertical – tram, bus, lifts, escalators, walking, alternative modes: tuk-tuk, go-car, electric bikes,

- **Integrating systems**
  - Sequencing: mechanical, natural, vertical, horizontal,...
  - Resting places, micro places, benches, balconies, "bubbles", pavilions

- **Foster soft mobility**
  - Walking, cycling, "sliding"
  - Avoid disturbing the calm, charming environment, no heavy interventions

- "A Streetcar Named Desire": **desirable walking experience** for the visitors
  - Aesthetic value of every project
  - Scenography of the promenades, discovery trail around the Castle
  - Improvement of pavements, side walks, cycling and walking paths,
Actual transport system
Walking = concentrate area of loading - boarding

Bubbles of mobility (small segments)

PT = enlarging area of loading/boarding
Over-simplification with existing tools-in-use

- **Time**
  - Average-time (peak hours)
  - Macro-times (day-night)
  - No time cycle

- **Space**
  - No physical space (network)
  - Homogenous territories

- **Social and economical activities**
  - Accessibility (isochronic maps)
  - Life territories not linked to activities
Mobility efficiency analysis

- Isochronic maps
  - Access-time to any locations from « one-single-point »
  - Transport efficiency ≈10-15%
  - Avoiding « blind points »

- Chronotopic maps
  - Intensity of use according to daily cycles
  - People-activities-moments
Mix-mobility experience for inhabitants & tourists

- Better path context
- Cognitive legibility
London Walking: 7 millions trips in 2025

- 22% modal share
- 25% more in 2020
- >50% of daily trips faster by foot in Central London
- 1.5m of PC trips < 1km
- Need to create an attractive context for walking
Legible London

- Pilot experiment in Oxford Street!

- Principles
  - Walking perceived through cognitive sciences
  - Ego/Allo-centered navigation

- Trip continuity above all
London
Lisbon
2. Connecting districts
2. Connecting neighbourhoods: breakthrough innovation

- Prevent neighbourhoods to fall behind in terms of development and insertion
  - Rethink the hierarchy of the accesses to the districts
  - Unifying the public space through high quality of urban furniture, signage,
- Other modes of connecting the neighbourhoods: improving the respective image of the districts; ICT as a connecting tool
- Making the building morphology to evolve through spatial reorganisation to attract additional functions
- Demand responsive transit

- Overcome artificial situations that divide the common appropriation of public space
Augmented mobility

Two continents linked: (reli@nce)
ZONAS 30 E MOBILIDADE SUAVE - Seminário sobre "Moderação de circulação"
CIUL – 20 de Setembro de 2010

Mobilidade Suave: Mouraria

- Acesso livre
- Acesso condicionado
- Inversão de sentido de circulação

"Porta" de entrada
"Porta" de saída
Parque de Estacionamento Público (existente/previsto)
Zona de Acesso Condicionado existente
Zonas de Acesso Condicionado Propostas
Improved mobility for Alfama/Castelo/Mouraria

- Many small solutions to assist pedestrian movements and provide resting places are better than one big project.
Improved mobility for Alfama/Castelo/Mouraria

- These solutions should serve both tourists and locals
Improved mobility for Alfama/Castelo/Mouraria.

3. There are 3 main tourist origins:
   - a) Cruise terminal.
   - b) Transit hub at the Santa Apolónia train station.
   - c) Hotels in the city center.
Improved mobility for Alfama/Castelo/Mouraria

- 4.- Clarify way-finding to the Castelo (markings, lights, maps, apps...)
Improved mobility for Alfama/Castelo/Mouraria

5.- Increase mini-bus services.
Improved mobility for Alfama/Castelo/Mouraria

6. Reinforce and improve a pedestrian ring around the Castelo.
Mobility strategies for Mouraria
Pedestrian accessibility plan
Accesses to the Castle
Integrating several issues

- DELIVERING SOCIAL INTEGRATION THROUGH A UNIFIED SYSTEM OF HIGH QUALITY ENVIRONMENTS
- IMPROVE THE OVERALL HIERARCHY AND NODALITY THROUGH SPATIAL DEFINITION
- ESTABLISHING AN INTERACTIVE ‘GROUND’ OF MOVEMENT AND ASSOCIATION
- DEFINING A STRATEGY OF INCREMENTAL IMPLEMENTATION
- IDENTIFYING A BROAD STAKEHOLDER MIX AND ALTERNATIVE FORMS OF INVESTMENT
Attractivity extension

Improve pedestrian accessibility to and from different parts of the city

Extend attractivity to the Castel

- Connect pedestrian itineraries to metro stations
- Open new gates to the Castle
Tourist lines of desire

Extending attraction from the Castel

- Understanding the different forms of visitor flows and intensity

- How can a spatial strategy support the balance between investment and intrusion
Differentiated character

‘Common Ground’

- Creating a diverse set of new concentric public spaces

- Connecting along established horizontal spaces at different levels

- Spatially integrating the Castel

- Support the intensification of social and civic amenities.
Strategy of intervention

Moving from singular strategy of technological solution to a diverse network

- Intensive
- Nodal Multi level
- Extensive
Incremental improvement of mobility experience

- Define scales of integration and separation
- Clarify hierarchy of streets
- Horizontal streets
- Vertical connections
- Differentiate forms of investment
Horizontal vs vertical layers

- Clarify the organisation of the neighbourhoods
- Elaborate a new mobility scheme / circulation pattern (schéma de circulation) / hierarchy for the local streets
- Specify a status for each street – commercial and residential
- Develop public space projects
Transformational change from day one

- Remove obstacles to mobility/less ability to move
- Separation of flows (vehicles/pedestrians)
- Shared space: 30km/h, priority to pedestrians
- Pedestrian streets
Vertical strategy

- Overlapping strategies for access
- Creating different speeds of movement
- Light and/or heavy mechanical help
- Light: rehabilitation of the stairs (total security) and help for disabled (platform)
- Heavy: rehabilitation of stairs, moving walkways/escalator + platform?
Expanding the Civic Realm

- From figure/ground to a concept of absorption
- Identifying municipal land
- Evolving typology
- Attracting new stakeholders
Testing and short feedback

Short term: light and unexpensive interventions, “easy” to implement

> opening a new gate to the Castel
> rehabilitation of stairs
> removing obstacles to pedestrians from the streets
> establishing continuous pavement
> implement a mechanical platform

Middle/long term: if relevant, develop a heavier project
Improving public transport connections

Completing the Network and intermodal transport

One existing bus line

➢ Improve its attractiveness (work on frequency, schedules...)

A part of Mouraria and Alfama population has no public transport connection

➢ Study the feasibility of a new minibus line connecting the neighborhoods and connected to the tram / and metro line
Open accessibility for cyclists

Demand for leisure

- evaluate opportunity to implement a mechanical system suitable for bicycles
- develop cycling tours
- develop the use of bicycle as sustainable mean of transport in coordination with the development of cycling itineraries in the city
Participative / Consensus democracy

Condition for the success of the project: the populations (inhabitants, shop owners, parents…) must appropriate the project.

- Implement a public participation process
- Mobilise local stakeholders
3. Tourism Oriented Development
3. Tourism as leverage for regeneration
value creation

- Modulating the intensity of the visitors flows
  - Reducing the pressure of tourists on most visited sites through alternative routes (Serendipitor apps)
  - Improving the last hundred metres access to the Castle – reduce confusion at the entrance (ticketing, parking, shops,
    - Interactive signage

- Balancing intrusiveness of visitors with creation of economic opportunities for local population
New entrance to the Castelo?

- Elevator inside North tower?
Augmented mobility (1)
Serendipitor: alternative random circuits

Mouraria Apps LAB?
(showing local talents)
Global strategy
« CONNECTING FOR REVITALIZING »
« FROM TRANSPORTATION SYSTEM TO MOBILITY EXPERIENCE »
ACTUAL SPATIAL SYSTEMS

MAN PHYSICAL BARRIER
MINIMUM PSYCHOLOGICAL BARRIER

TOWNS
POPULAR

CENTRIFUGATION PROCESS

GATING

NEIGHBOURHOOD

ALFADAN

TRAIN TERMINAL

CLASS TERMINAL
2 spatial systems
- **Touristical spatial system**: the castel and his entrance, the tram, the touristical spending places (museum, shops and restaurants), the gentrified neighbourhoods
- **Popular/immigrant/ethnic spatial system**: Mouraria and his communities (chinese, arabs, africans, indians, portuges (old) inhabitants.

A great barrier between the two systems:
- physical barrier (pent, hill, ramparts of the castel …) a
- psychological barrier (Historically, Mouraria was outside the wall of the city, now Mouraria is seen as a problem neighbourhood).
Some conflicts between the two systems
- Gentrification process
- Tram « full of tourist »: inhabitant can’t take the tram

Capitalise on opportunities
- Identity, authenticity and heritage of Mouraria: a resource for touristical attractiveness and for urban amenities for Lisboa inhabitants
- Low price of buildings and housing in Mouraria: a resource for cultural and creative-class based development
- Castel hill and park: a big amenity for residential attractiveness of Lisboa Centre (view, park, calm, …).
POSSIBLE / DESIRED SPATIAL SYSTEMS
POSSIBLE / DESIRED SPATIAL SYSTEMS

Put Mouraria into the tourist agenda and as a spending place
- Valorize the identity, authenticity and heritage as a touristical ressource for local community-managed development
- Connect Mouraria to the Castel in order to offer a new parcourse between the town centre and the Castel passing through Mouraria
- Use the tourist spends ad a ressource for revitalization
- Limit the gentrification process in order to preserve the authenticity of Mouraria (counter-example of Alfama).
Possible / Desired Spatial Systems

Use the tram (line 12) and the walking path as connectors between the hill and the town centre / between the neighbourhoods of the hill.

Connect the Castel to the cruise terminal (by foot and/or by public transport) in order to increase the global tourist attractiveness and tourist-spendig
POSSIBLE MOBILITY SYSTEMS EVOLUTION TO REACH THE DESIRED SPATIAL SYSTEMS
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A mixed-used mobility system

- A system for inhabitants and tourists (no separation between those two kinds of users).
- A system for all (« universal design » of public space)
- A system for Increasing and facilitating walking and for diffusing touristical flows and spends
- A system based mainly on walking but also on public transportation (using and improving the existing tram lines).
POSSIBLE MOBILITY SYSTEMS
EVOLUTION TO REACH THE
DESIRSED SPATIAL SYSTEMS

An « increased-walking » mobility system
- High visibility (signages, specific pavements, …)
- Accessibility for all (comfort of walking, take into account disable poeple)
- Mecanical assistance (elevators and vertical mobility systems) in some key / difficult points
- Mobility experience as a way to increase use of walking and to create touristical attractivity and value
POSSIBLE MOBILITY SYSTEMS
EVOLUTION TO REACH THE
DESIRED SPATIAL SYSTEMS

New entrances to the Castle site

-for diffusing tourist flows and spending
-for increasing the links between the Castel and the city for inhabitants and tourists
POSSIBLE MOBILITY SYSTEMS EVOLUTION TO REACH THE DESIRED SPATIAL SYSTEMS

Improved tram system
- Increasing the offer (more trams / less waiting / more seats for inhabitants)
- Building new trams with old-fashioned style but modern mechanical and motorisation system!
- Use stations and tram-rails as marks and signages for walkable and cyclable mobility
4. Transport technology
4. Transport technology as incubator of new social and economic practices

- Personal assisted transport
  - Lifts, escalators, ropeways, inclined lifts, stairs.

- A Vertical Urban Lab in Lisbon
  - Engaging more actors: University, research, designers, technologists, Municipal departments, operators, community
Elevador do Castelo de São Jorge

Baixa de Lisboa

Planta da Caixa

Alçado
Urban Installations

Inclined lift in Covilhã I
comfortable stairs

designer Mark A. Reigelman
Vertical Mobility Living Lab

- Concession
  - Building elevator inside North tower
  - Vs sharing (%) entrance fees

- R&D Lab?

- Other ?
THANK YOU

Deputy Mayor in charge of mobility and his team

The Lisbon Municipality technical departments

The sponsors