



XV Conference of the Italian Association of Transport Economics and Logistics (SIET)
 "Transport, Spatial Organization and Sustainable Economic Development"
 Venice - September 18-20, 2013

Accessibilità, mobilità e valorizzazione del patrimonio culturale in un'ottica di sviluppo strategico

Accessibility, mobility and cultural heritage valorization from a strategic development perspective

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Outline


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- Aim of paper
- Introduction: background, literature review and concept of cultural heritage
- Relationship between Cultural Heritage Valorization (CHV) and transport system: a proposal of classification of the different dimensions
- Case study of Bilbao
- Conclusions: future research "ambitions" and policy implications

Aim of the research

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- ✓ To investigate the **mutual relationship** between **local development strategies** – based on **Cultural Heritage Valorization (CHV)** - and **transport system**

Main research questions:

- ✓ which is the contribution of transport to the success of CHV projects?
- ✓ Which are the returns of the investments in transport infrastructure/networks and quality services on the CHV and, consequently, on the local development?

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Background

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- ✓ Cultural heritage valorization and the development of transportation systems are two key chapters of **local development agendas**
- ✓ and the successful development of CHV projects seems to be more and more conditioned by the **quality of the local accessibility and transport networks and services**
- ✓ still, even in strategic planning (with very few exceptions – see Bilbao), these crucial elements generally continue to **remain separated in strategic planning**

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Literature review

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- ✓ The literature and the case studies are very lacking and mainly focused on the "tourism/tourist side" approach
- ✓ Very low attention is paid on transport dimension and contribution to CHV

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What cultural heritage means?

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According to cultural economists, in our approach CH is seen as a **system of resources producing territorial values in the medium/long period.**

Different types of resources:

- ✓ **CH sites** (new and old buildings, ancient and settlements, new and old monuments)
- ✓ **cultural landscapes**, composed by elements diffused in a vast area (how to access a landscape without altering its quality?)
- ✓ **museums** and other cultural collections and institutions
- ✓ typical local **products and productions**
- ✓ **cultural tangible and intangible resources**

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What cultural heritage valorization means?

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According to the literature on cultural districts or new urban cultural policies, an effective valorization of cultural heritage is based on:

- ✓ **territorial integration** of cultural resources
- ✓ **networking** among local and over-local actors
- ✓ **attraction** of investors and capabilities
- ✓ **attraction** of highly skilled human resources
- ✓ **attraction** of **temporary and stable** users of cultural resources
- ✓ the **best possible accessibility** to cultural heritage
- ✓ the **best possible diffusion** of cultural heritage driven productions

Cultural heritage, if adequately valorized, “becomes” a local development driver

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What cultural heritage valorization means?

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In order to produce local development, CHV needs strategic planning also in terms of:

- ✓ where to **locate** the object of the investments,
- ✓ how to make them **accessible** and
- ✓ how to ameliorate the **internal mobility**

In these decisions **transport** (both in terms of **present system of infrastructures and services and future development**) is **crucial**

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How to approach CHV and transportation system relationship?

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A system of **cross impacts / externalities** which can be both positive or negative:

- ✓ Effects of transport on CH: **accessibility** improvement (positive impact) but also **environmental externalities** (negative impact)
- ✓ Effects of CH on transport: the presence of CH resources attracts **capitals** which can finance the transport investments (positive impact) but also makes **excessive pressures** on transport, causing congestion and difficulty in mobility management (negative impact)

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How to approach CHV and transportation system relationship?

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- ✓ Our thesis: the existing models, experiences, assessment processes approaching the **relationship between transport and the natural environment** can be adapted on the relationship between transport and cultural heritage (according to Nijkamp, environment and culture can be considered very similar resources: public goods, fragile, non reproducible etc...)

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CHV and transportation system relationship

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Different dimensions. A proposal of classification:

1. **Accessibility** itself to CH and **internal mobility** management, also connected to geography, climate conditions and deseasoning policies
2. **Physical integration** of CH resources
3. **Trade-offs between fruition and protection/conservation of CH quality**
4. **Transport modes and infrastructures as cultural heritage themselves** (both ancient and new)
5. **Transport infrastructures as a window** on the culture and specificities of a region

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CHV and transportation system relationship

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1. Accessibility itself to CH and internal mobility

- ❖ Accessibility can enhance the **local tourism industry**
- ❖ In some places, **climate and geographic conditions may represent an obstacle to the accessibility** to a region but, at the same time, often represent a specificity linked to the local cultural framework (here technology in transport can do a lot to overcome such obstacles but still a problem of pressure on the quality and conservation of CH may arise. See trade offs issue)
- ❖ In the places in which tourism has been already developed, the valorization of cultural heritage often refers to **deseasoning goals** (in order to reduce tourism pressures and offer more stable income opportunities to local communities). Demand for a transport system functioning all year round

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CHV and transportation system relationship

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2. Physical integration of CH

- ❖ In the case of cultural resources integration at the territorial level (**multiple territorial offer of CH resources**), i.e. **cultural districts**, transport systems may represent a crucial resource for the success of the CHV and local development
- ❖ Nevertheless, in the present experiences of cultural districts very low attention is paid on transport
- ❖ Two examples: Val Camonica (Valley in Lombardy region; province of Brescia) and Province of Cremona (Lombardy region) – the accessibility and the internal connection is still difficult

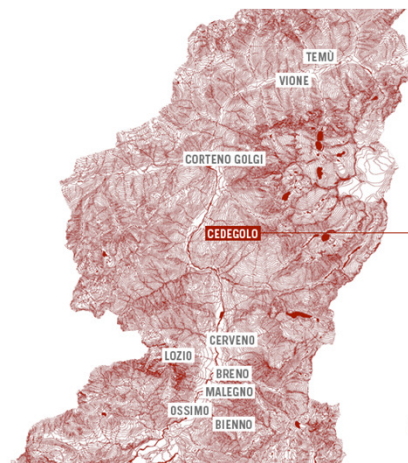
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2. Physical integration of CH



one of the largest valleys of the central Alps, in eastern Lombardy, about 90 km long.



MUSIL
MUSEO DELL'ENERGIA IDROELETTRICA

via Roma, 49 - Cedegolo 25051 (BS)
tel. +39 (0)30 3750663
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Orari di apertura: Da Marzo a Ottobre da Martedì a Venerdì:
mattino visite guidate (su prenotazione Tel. 0364 622179)
pomeriggio 15.00-18.00, Sabato 9.00-12.00 15.00-18.00,
Domenica 15.00-18.00, Lunedì chiuso

[Apri il sito >](#)

Sistema Musei di Valle Camonica

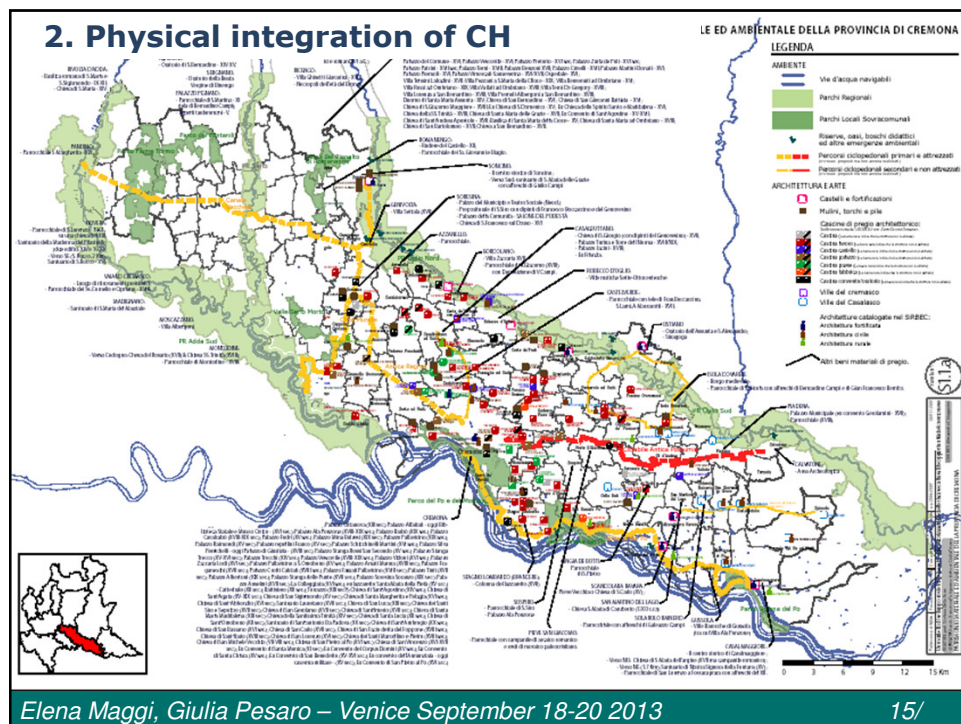


MUSEI di VALLE CAMONICA

Dieci musei. Centinaia di oggetti appartenenti ad un mondo passato. Molti progetti in corso con l'obiettivo di **valorizzare il patrimonio materiale e immateriale della Valle Camonica**. Gli oggetti in mostra attingono nuova linfa, aprendo le mura del museo e donando un nuovo valore al passato, alla tradizione,

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all'identità del territorio e della sua gente.



CHV and transportation system relationship

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3. Trade-offs between fruition and protection/conservation of CH quality

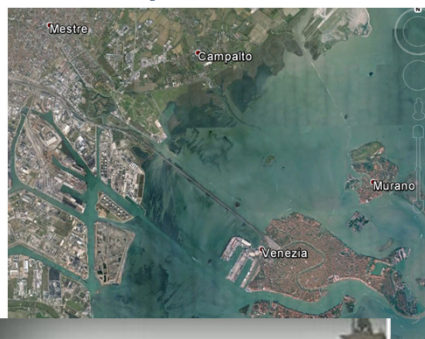
- ❖ **Need for sustainable transport**, especially in order to make accessible cultural landscapes, the so called “diffused cultural heritage”, historical centers and settlements (like in Italy)
- ❖ **Difficulty to reach remote** cultural heritage sites
- ❖ **Fear for incomplete transport systems** facing cultural heritage development projects (when transport goes slower than the territorial project itself and when transport infrastructure remain incomplete and represent a pure damage to the cultural landscape)
- ❖ Concept of “**Cultural Heritage Connectivity**” (Antonson, Gustafsson and Angelstam, 2010): in some transport projects there is high attention on environmental issues but low attention on cultural heritage accessibility

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3. Trade-offs between fruition and protection/conservation of CH quality

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High season and local specificities....



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CHV and transportation system relationship

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3. Trade-offs between fruition and protection/conservation of CH quality: sustainable transport

Sustainable transport:
Mincio river in
Mantua province
(Lombardy region)



1024 x 683 - fuoqire.net



LASCIATE A TERRA GLI OROLOGI, DIMENTICATEVI DEGLI IMPEGNI INCOMBENTI E LASCIATEVI CULLARE DAL DONDOLIO DELL'ACQUA: SIETE SUL MINCIO, IL FIUME DEI POETI.

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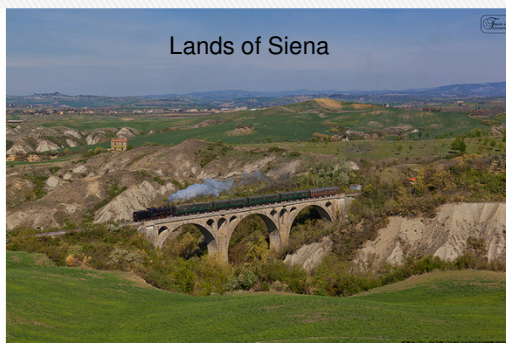
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3. Trade-offs between fruition and protection/conservation of CH quality: sustainable transport

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The nature train passes through Tuscany

From March to December, you can discover the Terre di Siena thanks to sixteen 'slow' itineraries on a vintage train. The vintage train is the perfect means of transport to slowly savor the uniqueness of Tuscany's landscape, traditions, art and culture.



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3. Trade-offs between fruition and protection/conservation of CH quality

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Millau
viaduct
France 2004

Is it
sustainable?



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3. Trade-offs between fruition and protection/conservation of CH quality: fear for incomplete infrastructure



Spain, south of Madrid:
Ciudad Real's Airport
was supposed to be a
symbol of modern Spain,
but is now being left to
rack and ruin...

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3. Trade-offs between fruition and protection/conservation of CH quality: CH connectivity

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Cultural Heritage Connectivity (Antonson, Gustafsson and Angelstam, 2010):

- ✓ analysis on Environmental Impact Assessment (EIA) documents on transport infrastructure planning
- ✓ case study from south-central Sweden
- ✓ functional, economic or social connection of human processes between two points in the landscape, which can be manifested in tangible or non-tangible features and has an historical dimension

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3. Trade-offs between fruition and protection/conservation of CH quality: CH connectivity

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Cultural Heritage Connectivity (Antonson, Gustafsson and Angelstam, 2010)

Table 1
EIA documents (EIS) in road or railroad projects.

Number	Road number or rail name	Town/section	Year of EIS	Specified date of EIS	Planning phase		Length of road or rail section in kilometres	Ecological connectivity	CHC
					Feasibility Study	Detailed Design Plan			
1	E6	Tanumshede	1999	March	X		13	X	X
2	E22	Linderöd (Hörby)	2001	March	X		32 or 33.5	X	X
3	Rv21	Önnestad	2002	February	X		6.2	X	
4	E20	Lundsbrunn	2002	May		X	12.2 + 3.3	X	
5	Tvärleden	Markaryd	2003	May		X	23	X	
6	E4	Enånger	2005	September		X	24	X	
7	E4	Stockholm	2006	June	X		20.7 + 16.0	X	X
8	Rv68	Norberg	2007	June		X	14.1	X	
9	E4	Gnarp	2008	June			22	X	
10	E22	Sölve	2008	October		X	15	X	

High ecological connectivity but low CH connectivity

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4. Transport modes and infrastructures as cultural heritage themselves

- ❖ Past transport infrastructures and places are part of the cultural heritage itself (Grazuleviciute-Vileniske and Matijosaitiene 2010: "Over time roads and their surroundings gained historic and cultural significance")
- ❖ Newly developed transport infrastructures become part of the cultural heritage itself (the quality of the design/architecture/technology of such new "transport places" and infrastructures become more and more important)
- ❖ The use of particular / traditional transport modes seems to represent a way to let visitors come closer to local habits and cultural heritage (the traditional ones but also the very new and high-tech ones... make people amuse and, at the same time, diffuse culture..)
- ❖ Any transport infrastructure with adequate architectural quality and a "more than adequate" quality considering the integration in the landscape (e.g.: Millau viaduct: a contemporary infrastructure dialogs with the existing landscape elements)

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4. Transport modes and infrastructures as cultural heritage themselves

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According to cultural economist (e.g. Throsby D.), cultural goods include the **cultural heritage of roads and road landscapes**, which "can provide additional exchange, use and non-use economic value" (Grazuleviciute-Vileniske and Matijosaitiene, 2010)



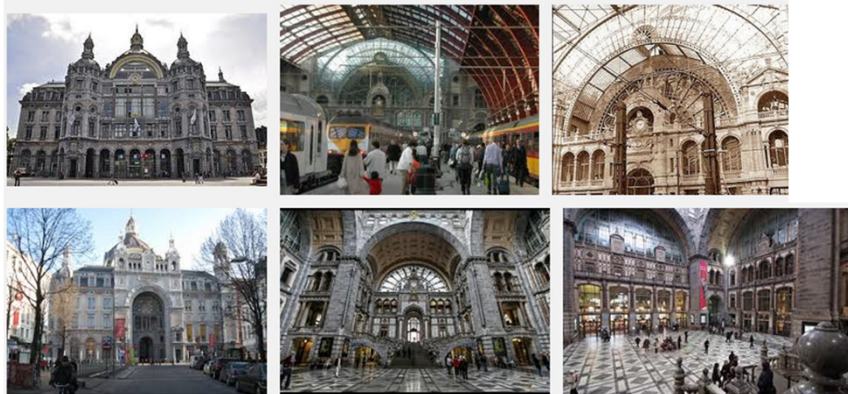
Figure 10. Ongoing extensive reconstruction of historic Kaunas – Ukmerge road (E262) (central Lithuania).

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4. Transport modes and infrastructures as cultural heritage themselves

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Antwerp central railway station

Luis Delacenserie, Clement van Bogaert, Jan van Asperen 1895-1905

One of the most important meeting place and tourist attractor

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4. Transport modes and infrastructures as cultural heritage themselves

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One of the UNESCO
world heritage resources



In early July 2008, UNESCO's World Heritage Committee added the Albula/Bernina line of the Rhaetian Railway to its list of World Heritage sites. The Rhaetian Railway is only the third railway in the world judged by UNESCO to be of "outstanding universal value".

► Ulteriori informazioni:

www.mybernina.ch

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4. Transport modes and infrastructures as cultural heritage themselves

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Bilbao
Underground
by Norman
Foster 1988-
1995



Investment in local public transport was dominated by the inauguration of the new metro system with stations designed by the architect Norman Foster (Fig. 19). This project was particularly important for Bilbao's regeneration process. It was the first major project to be completed and gave confidence to the residents that recovery was possible (P. Emparanza, interview). The first metro line, running from the city centre along the

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4. Transport modes and infrastructures as cultural heritage themselves

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Bilbao Airport
Santiago Calatrava 2000

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5. Transport infrastructures as a window on the culture and specificities of a region

- ❖ Should an airport continue to be a Marc Augé's *Non-place* or could an airport be the arrival/departure window of the cultural specificities of its territorial area? (see the "personalization process" of the Amsterdam Airport Schiphol).
- ❖ Transportation places as local culture drivers beyond food and crafts (case study Amsterdam Airport Schiphol. Towards a win-win game: the airport investments become also an engine to diffuse local cultural heritage)
- ❖ transport infrastructures realized by very famous architectures (the Bilbao transport infrastructures are an anticipation of the new city cultural atmosphere: dynamic, contemporary, "mega", visible....)

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5. Transport infrastructures as a window on the culture and specificities of a region

Amsterdam Airport Schiphol

- ✓ ranking as Europe's 4th busiest total passenger traffic in 2012
- ✓ the world's 16th busiest by total passenger traffic in 2012 (14th in 2011).
- ✓ the world's 5th busiest by international passenger traffic
- ✓ the world's 17th largest for cargo tonnage.

49.8 million passengers passed through the airport in 2011, a 10% increase compared with 2010

Data source: Airports Council International (ACI)

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The airport recently unveiled an indoor/outdoor nature park where travelers can go to relax. Projections of scenes from real parks adorn the walls while projected butterflies flutter around on the floor. Sounds of the outdoors like birds, bicycle bells and playing children create an immersive environment where travelers can almost forget where they really are



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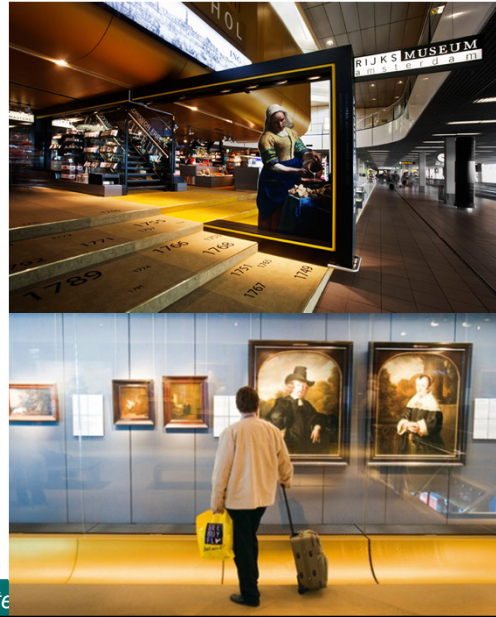
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National Museum The Rijksmuseum

Amsterdam Schiphol contains a permanent exhibition of ten works of old masters from the Golden Age. Location: Airside, on Holland Boulevard, between the E and F Pier. Hours: daily from 07:00am-20.00pm. Rate: free



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Amsterdam Schiphol house of tulips

Tulip field at Amsterdam Airport

Heading to or through Amsterdam Schiphol Airport during the first two weeks of April?

These two weeks in April offer a unique sight on a sea of tulips.... the Airport will also have a sea of flowers!



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An **example of non-production of new cultural heritage** when **transport infrastructures** are **not adequate**

- ✓ the city of Taichung (Taiwan) envisioned a new Guggenheim designed by Zaha Hadid in order to attract cultural tourism
- ✓ Local conditions, among which the **absence of an international airport**, pushed the local government to cancel the project (Martinez, 2006)

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The Bilbao case study

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- ✓ An example of **integration of CHV policies and transport policies**
- ✓ Juan Alayo (2012) presenting the Bilbao strategic plan:
 - Four key lines of action
 - Urban and environmental regeneration
 - External accessibility - internal mobility
 - Technology and human resources
 - Cultural centrality

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The Bilbao case study

Box 5: Major transport investments, Bilbao Metropolitana



Project	Financing	Investment (in million Euros)	Inaugurated (year)
Metro	Line 1: jointly by national (AENA) and regional government., some EU funding (FEDER)	500 (Line 1) 434 (Line 2)	1995 Under construction
Cercania (suburban trains)	Land valorisation	83	1999
Tram	65% regional gov. (EuskoTren); 24% Bilbao Ría 2000; 12% city government.	20 (Line 1)	2003
Port (expansion and Modernisation)	Mostly port authority (national government), some EU funding (FEDER); further expenses re-financed through port fees	240 (1 st phase, 1993-1999) 390 (2 nd phase, 1999-2005)	Ongoing (until 2020)
Airport	50/50 central and regional government (> infrastructure agreement); partly re-financed through airport tax	60 (new terminal) 204 (modernisation)	2000 Ongoing
High-speed train	61% national gov.; 39% regional government	4,178	In planning

Source: Bilbao Ayuntamiento, 2007; Bilbao Ría 2000, 2006; Siemiatycki, 2005; Rodríguez, 2002; Gómez, 1998.

Guggenheim Museum: 144 Million Euros

Eskalduna Conference Centre: 72 Million Euros

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The Bilbao case study



Juan Alayo (2012) presenting the Bilbao strategic plan:

Tourism as a new economic sector

- From not existent, to > 5% of the local economy
- High level visitors

Year	1996	2007
Total Visitors to Bilbao	169,000	623,000
Congress Events	109	1,007
Congress Participants	20,000	185,000

"At the end of 2011 the number of the visitors of the Guggenheim Museum has been 962,358, with a little increase compared to 2010. The visitors from abroad remain the 62% of the total"
Il Sole 24 Ore 2012

- In 2011, 726,000 visitors, 6% annual growth

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The Bilbao case study

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Ibon Areso (2010) presenting Bilbao's strategic evolution

Tourist evolution of Bilbao

	1994	1996	1998	2000	2002	2004	2006	%Δ 94-06
VISITORS	24.302	169.166	216.409	397.513	394.627	489.978	605.512	2.392
CONGRESSES	88	109	268	280	457	735	978	1.011
ELEGATES OF	18.817	20.000	36.412	52.470	92.085	136.144	184.581	881
HOTEL ESTABLISHMENTS	29	29	36	40	41	44	50	72
HOTEL USERS	442.012	518.820	804.994	782.594	795.192	964.673	1.124.649	154
AERIAL PASSENGERS	1.425.822	1.794.586	2.123.305	2.554.309	2.463.512	3.395.773	3.876.062	172
ENTRANCE OF CRUISES	0	0	2	14	19	21	22	
PASSENGERS OF CRUISES	0	0	1.331	5.524	8.089	12.180	16.645	

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Conclusions and policy implications

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- ✓ Cultural heritage is a complex system of resources which can produce values if adequately valorized
- ✓ Transport can be one of these resources (even it can be also a component of the system)
- ✓ Transportation policies represent one of the key/crucial factors for the success of the cultural heritage sustainable exploitation and policy implementation
- ✓ Our work try to give a contribution to policy decision making
- ✓ Only an integration of transport planning and CHV planning can maximize potential positive externalities and minimize negative impacts and costs

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Future research steps


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- Continue the **review** of literature and case studies
- Propose a **taxonomy** of the relationship between cultural heritage and transport and deepen the role of transportation in cultural driven development strategies
- Identify **adequate indicators and measures** to assist decision makers with a better evidence of the positive and negative externalities in the interactions between transport and cultural heritage development projects

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Future research steps


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- Identify **indicators and measures to better understand the importance of transport** with respect to cultural heritage valorization
- Identify the conditions for the **enhancement of a cooperative / joint strategic planning** of cultural heritage sustainable development and transport systems

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*Thank you for
your attention!*



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