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# **Feasibility Methods and Financial Evaluation of Cultural Heritage Projects**

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# Overview on financial instruments and funding sources

what we learned from Interreg Central Europe project **ForHeritage**  
<https://www.interreg-central.eu/Content.Node/ForHeritage.html>

## FINANTIAL INSTRUMENTS

<b>GRANTS</b>	non-repayable funding	
<b>FINANCIAL INSTRUMENTS</b>	repayable funding with a return for investors	debt
		guarantee
		equity
<b>MARKET REVENUES</b>	sale of goods and services	
<b>HYBRID INSTRUMENTS</b>	combination of grant, debt and equity capital	

## FUNDING SOURCES

<b>PUBLIC</b>
<b>PUBLIC + PRIVATE</b>
<b>PRIVATE</b>  banks alternative channels philanthropic investors crowdfunding

# How to approach financial instruments for cultural heritage

All financial instruments are not suitable for all types of intervention

- identify the target you want to address; analyse the institutional context, different sources of financing; take into consideration the management cost and the risk of losses;

It is good to use financial instruments in combination with other support services

- e.g. training, consultancy, energy audits

Conservation + management costs are important

- the regular operating and maintenance costs unfortunately tend to be forgotten

It is recommended to adopt a holistic view

- take into consideration social, cultural, economic and environmental aspects

Sustainability and durability

- un-sustained projects can result in a loss of investment

Develop a strategic approach

- strategic and management plan that sets clear goals for heritage site management

# Project appraisal methods

## Ex-ante evaluation (mainstream)

- Relevance, effectiveness and efficiency

## Feasibility analysis

- Impacts on financial costs and revenues for investor

## Cost–benefit analysis

- Systematic overview of all advantages and disadvantages of a project / intervention for society

## Cost-effectiveness study

- Cheapest measure for achieving a defined objective (or cost per result obtained)

## Environmental impact assessment

- Impacts on noise, waste, emissions, nature etc.

## Economic impact studies

- Impacts on GDP and employment

## Multi-criteria analysis

- Impacts on relevant aspects weighted but not monetarized

# Feasibility analysis - Financial return on investment

**Tab.2.5. Calculation of the Financial Internal Rate of Return of the Investment**

**Discount rate** 6,0%

<b>Years</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Revenues	-	-	-	3,0	3,0	3,0	3,0	3,0	3,0	3,0
Residual value	-	-	-	-	-	-	-	-	-	20
<b>Total Revenues</b>		-	-	<b>3,0</b>	<b>3,0</b>	<b>3,0</b>	<b>3,0</b>	<b>3,0</b>	<b>3,0</b>	<b>23,0</b>
Operating Costs	-	-	-	2,0	2,0	2,0	4,0	2,0	2,0	2,0
Investment Costs	10,0	25,0	20,0	-	-	-	-	-	-	-
<b>Total Expenditures</b>	<b>10,0</b>	<b>25,0</b>	<b>20,0</b>	<b>2,0</b>	<b>2,0</b>	<b>2,0</b>	<b>4,0</b>	<b>2,0</b>	<b>2,0</b>	<b>2,0</b>
<b>Net Cash Flow</b>	- 10,0	- 25,0	- 20,0	1,0	1,0	1,0	- 1,0	1,0	1,0	21,0
<b>Discounted net C-F</b>	- 9,4	- 22,2	- 16,8	0,8	0,7	0,7	- 0,7	0,6	0,6	11,7

**FRR/C** -10,2%

**FNPV/C** -33,95

Source: Ecorys Academy, 2009

# Financial Sustainability

**Tab.2.4. Financial Sustainability Table**

Years	1	2	3	4	5	6	7	8	9	10
National Contribution	3	8	9							
EU Contribution	7	17	11							
Private Equity	0	0	0							
Revenues	-	-	-	4,0	4,0	4,0	4,0	4,0	4,0	4,0
Residual value										
<b>Total Inflow</b>	<b>10</b>	<b>25</b>	<b>20</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
Operating Costs	-	-	-	3,0	3,0	5,0	3,0	3,0	3,0	3,0
Investment Costs	10,0	25,0	20,0	-	-	-	-	-	-	-
<b>Total Outflow</b>	<b>10</b>	<b>25</b>	<b>20</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Net Cash Flow	0	0	0	1	1	-1	1	1	1	1
Source: Ecorys Academy, 2009										
<b>Cumulates Net C-F</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

# Discounting and rate of returns

- Future money has less value than present money
- Discounting cash flows
- Discount rate (r) in EU 5-10%
- Net present value: Actual value of all future costs and benefits

$$NPV = \sum_{t=1}^n \frac{CF_t}{(1+r)^t} = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

- Rate of return (IRR): discount factor where the NPV of costs and benefits is zero

$$NPV = \sum_{t=1}^n \frac{CF_t}{(1+IRR)^t} = 0$$

# Cost-benefit analysis can play a useful role in heritage conservation

- systematically seek out and assess the costs and benefits of cultural heritage projects because they are likely to **provide a net benefit to the community**;
- recognize that there are substantial costs to providing cultural heritage projects for community benefit;
- Analyse **the way in which costs and benefits are distributed** within society (i.e. who receives the benefits, who pays the costs).



# Costs and benefits in the cultural heritage context

- **Cost** is a measure of the value of what must be forgone to conserve the heritage environment
- The costs of cultural heritage interventions are the foregone benefits due to **employing scarce resources** for heritage conservation purposes, instead of putting those resources to their next best use
- **Benefits** represent opportunities
- The value of **opportunities** foregone as a result of heritage listing such as:
  - development opportunities lost
  - decrease in capital value of the land
  - consequences of foregone options to improve 'liveability' or 'usability' as a result of restrictions on modification or adaptation to current owner use and enjoyment
  - the additional maintenance and repair costs imposed to maintain the heritage specific characteristic

# How to measure C&B?

Indicators of the benefits of a heritage interventions are the collection of:

- individuals' **willingness to pay (WTP)** for the reduction or prevention of damages to cultural heritage or
- individuals' **willingness to accept (WTA)** compensation to tolerate such damages.

## How to measure non-usable values

### hedonic pricing method

- individuals reveal their preferences for cultural heritage in the housing market
- people value CH goods in terms of bundles of attributes, which may include non-market factors, like clean air or noise absence

### travel cost method

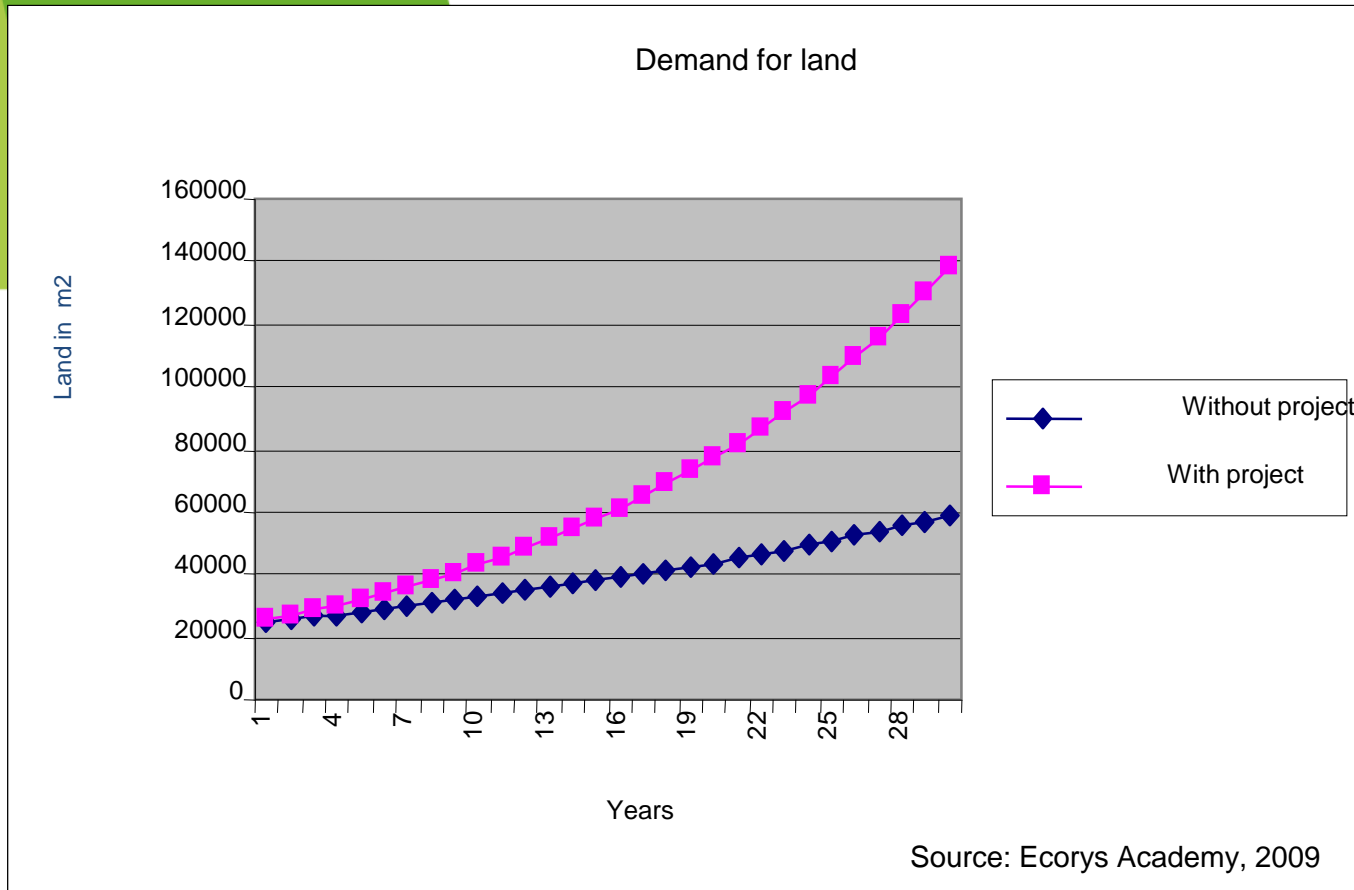
- individuals may reveal their demand for heritage goods through their decisions to travel to specific locations
- technique is useful for assessing the benefits of cultural heritage places that are frequently visited by tourists.

# Steps in CBA

1. Context analysis & project objectives (socio-economic and political context)
2. Project identification (need analysis: what is **the main problem or need** as a justification for the project, who are beneficiaries?)
3. Feasibility and option analysis
  - Technically feasible? Right technology, design;
  - Institutionally feasible?

**Alternatives:** option identification - Do Nothing // Do Minimum // Do Something

# Step 3 example: demand for land near cultural heritage object



# Steps in CBA

## 4. Financial analysis

What is the project's **commercial profitability**?

What amount of finance is needed and how will the project be financed?

What will be the source of financing (e.g. EU grant)?

Will the project be financially sustainable?

## 5. Economic analysis

Contribution of the project to welfare (well being) of the country or region: so all impacts are included

**Perspective: society**

Market impacts (e.g. attraction of business on the site)

Non market impacts (e.g., air pollution, noise)

Indirect economic impacts (employment: permanent net extra employees)

## 6. Risk assessment and sensitivity analysis

(impacts of different factors on results - No payment of bills, Higher investment costs, Higher operating costs, delays in construction due to technical risks, change in political environment)

PROJECT SELECTION

DETERMINATION OF EU CO-FUNDING

**Economic Analysis**

**ENPV > 0**  
Go ahead: the project leads to a more efficient allocation of resources.

**ENPV < 0**  
Reject: the region is better off without the project.

**Financial Analysis**

**FNPV < 0**  
Provide financing: the project needs the contribution from the Funds in order to be feasible.

**FNPV > 0**  
Reject financing: the project can be implemented without the assistance from the Funds.

**CBA and Funding-gap method**

EU grant

**ENPV > 0, FNPV ≈ 0**  
The project is economically desirable and financially viable

# Conclusions

- **CBA promotes transparency:** the results of a well executed cost-benefit analysis can be clearly linked to the assumptions, theory, methods and procedures used in it – this improves accountability;
- **CBA takes a community-wide perspective:** by encouraging decision makers to take account of all the positive and negative effects of a proposal, and discouraging them from making decisions based only on the impacts of a single group within the community;
- **CBA promotes comparability:** by quantifying the impacts of proposals in a standard manner, assists in the assessment of relative priorities and encourages consistent decision making;

CBA is useful for decisions by government (project selection, timing, size)

CBA can help to select the best project alternative

CBA can help to improve projects (timing, capacity, cost optimization)

CBA shows risk factors for risk management

# IMPORTANT!!!!

**Assumptions** are important for the outcomes of CBA!!

Cost-benefit analysis **can help inform decisions** by quantifying the impacts of proposed CH projects on different groups within society

- **it cannot make the decision!**





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# Thank you!



*Project smedia*