GENERAL INFORMATION		
Name of the public building renovation		Musée d'Aquitaine (museum)
Building Good Practice number (example BGP n°1 – Bordeaux)		BGP n°2 – Bordeaux
Historical building sub-group		
Description	   	
	Address	20 cours Pasteur – 33 000 Bordeaux - France
	Public sector contractor	Bordeaux municipality
	Architect Engineering consulting	No (internal monitoring)
	Date of construction	1880
	Legal aspects (e.g.: level of protection of	Unesco World heritage classified + situated in the national area of restoration and enhancement of

	building)	heritage.
	Date of renovation	2010
	Nature of the work (short description)	roof insulation thermostatic taps (impregnable locking mecanism) incandescent bulbs replaced with LEDs (for scenic lighting) change of heating contract (profit-sharing on energy price) heating clock setting
	Budget and source of financement	75 000 €

AVAILABLE RESULTS	
What were the big problems (in terms of energy efficiency) to tackle?	The important high of the building for roof insulation (by blowing)
Has this building been already analysed and certified?	No
What are the key innovative energy efficiency measures undertaken through the renovation?	The relevant involvement of scenic lighting specialists in the substitution of incandescent bulbs with LED technology.
What are the measurable improvements in terms of energy efficiency in electricity and heating (kWh saved)? • **kWh saved, kWh before/after, kWh given in the studies/real kWh)** • **carbonated energy kWh substituted by REN** • **kg CO2 saved**	On gas consumptions (heating) : ➢ before : 25.6 Wh/m².DJU ➢ after : 13.7 Wh/m².DJU i.e., 46% energy saving. On electricity consumptions : ➢ before : 826 MWh/year ➢ after : 621 MWh/year i.e., 25% energy saving.

ENERGY EFFICIENT MEASURES	
Energy efficient measures of the building envelope	Insulation roof with cellulose wadding (260 mm)
Energy efficient measures of the heating system	
Energy efficient measures of monitoring energy	
Energy efficient measures regarding behaviour	
Stakeholders' involvement in the energy efficient measures	Staff has been involved in the choice of the bulbs (tests) : The city asked manufacturers lighting for samples of different light bulbs. After a first selection, a "testing pack" (a box with around 50-60 bulbs) has been made up, that the technician of museum could use to make his own tests. He chose the one which suited him and the city offered the first set to change all the bulbs gradually, as soon as failures happened.
Others?	

SUSTAINABILITY OF THE RENOVATION	
Design and choice of sustainable materials?	Insulation roof with cellulose wadding
Sustainable building site management? (sorting waste, water…)	
Application of a valuation method (BREAM? HQE? Others?) **Carrying out consultation process with dwellers? Concerted choice on the work program? Which external partners?**	

BUILDING MAINTENANCE: life of the building after the renovation	
Is the building following an energy monitoring? Is there a responsible manager?	Energy consumptions monitoring by the energy service of the municipality, once per month.
Who is in charge of the maintenance of	

the heating system of the building?	
Who is in charge of the day to day energy management?	
Are there some specific measures to raise energy awareness and to implicate users in energy efficiency?	

FUNDING	
What is the financing plan?	
Innovative or specific aspects in the method of financing (European funds or loan, energy performance contract,...)	Energy Saving Certificates (CEE in French) on thermostatic taps : 273 000 kWh cumac, i.e. around 1 150 € recovered.
What is the balanced budget for each stakeholder • **Energy costs for tenant before /after** • **Increase in the rent**	
Is there any specific economical indicators (payback time on investment, global cost, ...)	Concerning LED bulbs : The first set that has been given by the municipality to the museum had only a two year payback period (also considering savings due to a lesser consumption of air conditioning, because LED bulbs do not release heat, contrary to incandescent ones).

TRANFERABILITY	
Transferable aspects according to the partner in charge of this example of good practice	Transferability of planning (forming a partnership, choosing priorities, setting up a renovation building teams, etc.)?
	Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.) The relevant involvement of scenic lighting specialists in the substitution of incandescent bulbs with LED technology.
	Transferability of results (good solutions, adaptability, change of behaviour, etc.)? LED bulbs : Electricity consumption was reduced by 25%, which means 15 000 € saved per year. In terms of acceptability, the feedback

	of museum's lighting technician is excellent because he was involved in the process. Moreover, he will spend less time in future to change bulbs, considering the longer lifespan of LED technology than incandescent one.
Transferable aspects according to all the partners of Serpente project	The other partners will analyse and validate these good practices. During the process of validation, the partners will take on the role of auditors because they will assess and improve the effectiveness and portability of good practices in their context.
	The validation process will promote a systemic approach in local competent public administrations. Moreover, this process of selection and validation is a peer review and entails the mutual role of experts and auditors depending on typology of buildings and partner's expertise.

SOURCES	
Publications	
Website	
Interviews	Remy SPIEWAK (Bordeaux town council) (26/10/12 and 24/01/13)