

**EcoShopping - Energy efficient & Cost competitive retrofitting solutions
for Shopping buildings**



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Appendix 7.

Owner questionnaire



Approach and regulations

- 1) Before EcoShopping project, did you consider to retrofit your shopping centre? Why?
- 2) Before EcoShopping project, did you consider to install renewable energy solutions (RES)? Why?
- 3) If you considered retrofitting your shopping center, did you do a cost-benefit analysis of the retrofitting solutions? Would you do it now?
- 4) Does national regulations encourage installing RES? Are there financing schemes for the retrofitting projects for shopping centres?
- 5) In your opinion, what are the problems that discourage owners for upgrading shopping centres? Are they more related to technical or financial issues?
- 6) In shopping centres that have common areas with private shops, what type of problems do they have to deal with? Will it be more or less difficult to arrange and perform a retrofitting project? Why?

Indoor requirements

- 1) Do you think a good indoor environment encourage people to stay (and buy) more in your shopping center?
- 2) Which are the comfort expectations of the shopping centre?
- 3) Do you know the requirements for the comfort parameters of the building?
 - a. temperature: winter/summer
 - b. air quality, air exchange rates
 - c. relative humidity
 - d. noise level (emission and immission)
 - e. ventilation movement (draft)
 - f. quality of lighting
 - g. accessibility
- 4) Is the shopping centre achieving the required levels?
- 5) If not, why? Which are the main problems for not achieving these minimum values?
- 6) Do you have any requirements for these parameters in addition to the requirements? What are these?
- 7) Do you intend to improve these parameters? If not, why?
- 8) Do you consider different zones within the shopping centre for air conditioning or lighting?

Technical orientation and policies

- 1) Do you have any demand for the use of RES?
- 2) Do you have any demands from the:
 - a. heating system
 - b. Domestic Hot Water (DHW) system
 - c. cooling system

- d. ventilation system
- 3) Do you have any expectations that require the use of:
 - a. central or local systems
 - b. water or air systems
 - c. system control: local, central or both local and central?
- 4) What amount of energy cost saving (%) do you expect?
- 5) How do you rate the energy cost and maintenance cost of the building? Which is more significant?
- 6) Do you have any quality requirements for materials to be built in the building?

Operation and maintenance

- 1) About the current situation of your building, could you tell us the energy consumption costs per year of the shopping centre?
- 2) Among the overall costs of your building maintenance per year, which is the percentage of this energy consumption?
- 3) How many employees do you need for the operation and maintenance of the building?
- 4) How many employees are working in the Heating, Ventilation and Air Conditioning (HVAC) and Lighting maintenance?
- 5) How much is the maintenance cost (approximately) of the HVAC and Lighting equipment per year?
- 6) How many times do building structures and the building service systems require regular maintenance and reparation works per year in average? Could you estimate an average cost? How many hours they work on the building monthly? What equipment is necessary?
- 7) What permits and surveillance reports do you need for being able to operate the building? What is the cost for them in average?
- 8) Please describe an average day of operation (opening hours, staff, who does what).
- 9) Does the building have identified permanent problems with the building services systems and building energy management?

Lease

- 1) What kind of comfort requirements do current and potential tenants have?
- 2) What services are included in tenant's contracts?
- 3) What requirements do you have from a potential tenant?
- 4) What's the commercial profile of the shopping centre?
- 5) In your opinion, how the status of the shopping centre affects the market position? What parameter do you consider the most important (noise, architecture and appearance, pollution, status of the structure)?
- 6) In your opinion, how environmental parameters affect the market position of the shopping centre? What parameter do you consider the most important (noise, architecture and appearance, pollution, status of the structure)?
- 7) In your opinion, how a high-quality, state-of-the-art shopping centre could affect the value of its environment?

Future

- 1) Do you consider EcoShopping project is a good approach for the retrofitting of shopping centres? Why?
- 2) In your opinion, do you think the new standards for Energy Efficiency are well balanced? Why?
- 3) Do these new regulations and a greener conscious change your mind?
- 4) How do you consider economical aspects in a retrofitting project? What type of project do you think is interesting (regarding energy savings and payback period)?
- 5) Do you consider National Administration should improve the regulations?
- 6) Do you consider National or European Governments should help economically (eg. subsidies, low interest rate financing and favourable tax policies) for these projects? Do you any idea to improve the current situation?
- 7) Do you have a plan for the future market positioning of the building? If yes, who are expected to possibly be the potential end users in the future?
- 8) According to the previous point, do you foresee any significant changes in the building's operation time in the future?

Thank you much for your cooperation!