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WG3 : ICT as catalyst of change in user behaviours

Fields of activity - general observations :

Buildings :

HEQ (High Environmental Quality) is a global approach designed to improve the environmental quality of buildings; to control their impact on the outdoors environment and create a healthy and comfortable indoors environment. HEQ is applicable to all types of new and existing buildings in the residential, tertiary and industrial sectors. Certification relates to the operation management system and the environmental quality of the building. Behaviour must be based on a hierarchical definition of the 14 targets including target performance levels, to create a profile of the environmental quality of the building.

Transport :

Sustainable transport is a concept developed in reaction to what went visibly wrong with transportation policy, practice and performance over the last half of the 20th century. Urban transport systems based around the car have proved unsustainable, consuming excessive energy, affecting the health of populations and delivering a declining level of service despite increasing investments...



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WG3 : ICT as catalyst of change in user behaviours

Fields of activity - general observations :

Transport :

As sustainable transportation mainly refers to human behaviour and not to technology, a behavioural approach considers not only a set of non-polluting and human scaled green transport choices - regardless of the means and technology used - but also a set of reinforces both individual and social to promote these choices.

Citizens :

Energy efficiency can become a every day reality for all actors - professionals and citizens - based upon a learning process showing 3 phases :

- awareness
- knowledge
- skills

An (international) platform proving tools for this process needs to be an integral part of the consortium's approach.



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The 14 targets in the HEQ® approach

Control impacts on the outdoors environment:

Eco-construction:

1. harmonious relation between buildings and their immediate environment
2. integrated choice of products and construction materials
3. low site nuisance

Eco-management:

4. management of energy
5. management of water
6. management of waste caused by activities
7. management of servicing and maintenance

Create a healthy and comfortable indoors environment:

Comfort:

8. Hygrometric comfort
9. Acoustic comfort
10. Visual comfort
11. No unpleasant smells

Health:

12. Sanitary quality of areas
13. sanitary air quality
14. sanitary water quality





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Examples



GOOD PRACTICES :

Individual meters for apartment buildings heating allowing each occupant to pay only that part personally consumed.

INDICATORS : Energy-savings by appealing to the individual responsibility of residents of apartment buildings.

BO01 City of Tomorrow/WTC-building Malmö (domotic systems for public buildings).

INDICATORS : The criteria of the Quality programme and ... many others

Mobile offices.

INDICATORS : Lack of indicators because of lack of definitions and tools (in particular statistics) to measure the different realities and actors hiding behind the terms « teleworking », « working at distance », « mobile work » or « e-work ». Moreover, the organisational changes and ICT-usage in companies evaluate fast.



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Examples

GOOD PRACTICES :

GrDF(Gaz réseau Distribution France)-system called « eco-generator » : heating system with natural gaz generating electricity.

INDICATORS : as the eco-generator produces for a big part the electricity it is consuming, and resells to EDF the part which has not been consumed, the energy and monetary savings are important. Intensive cooperation between research-industry was essential.

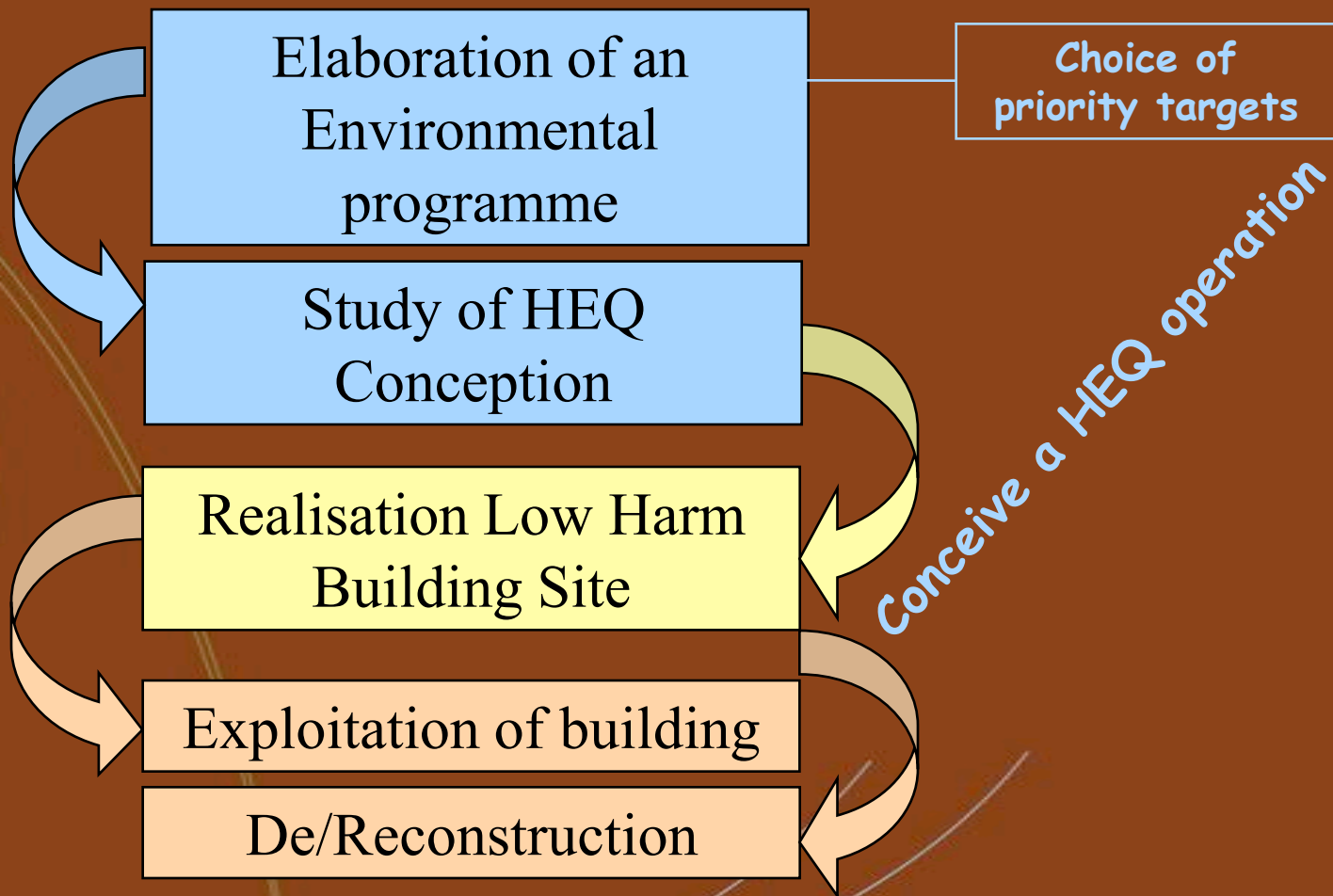


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Methodology



Source :
NpdeC Region



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The targets in transportation

World Business Council for Sustainable Development :

Sustainable mobility = the ability to meet the needs of society to move freely, gain access, communicate, trade and establish relationships without sacrificing other essential human or ecological values today or in the future.

This definition encompasses the following measures :

- | | |
|------------------------------------|--|
| accessibility | greenhouse gas emissions |
| financial outlay required of users | impact on the environment and human well-being |
| travel time | resource use |
| reliability | equity implications |
| safety | impact on public revenues and expenditures |
| security | prospective rate of return to private business |



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The targets in transportation

EU Directorate-General for Transport and Energy (DG-TREN) with a focus on Urban Transport

Measures :

- clean fuels and vehicles
- sustainable (green) infrastructure
- collective passenger transport
- soft measures (child mobility, cycling, ...)
- access restrictions
- integrated pricing strategies
- less car intensive lifestyle
- urban goods transport
- transport management



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Examples



GOOD PRACTICES :

GPRS-systems in freight transport, allowing to follow in detail the trajectory of goods, any place, any time.

INDICATORS : availability of techniques (knowledge and know-how), their tests and degree of being mastered, adapted to other (industrial) sectors and public.

security improving and energy saving technology-systems in cars (speed-limiting tools inside cars for instance)

ITS for intelligent traffic management & control

BEHAVIOUR AND INDICATORS based on a wish for security, confort, the planet's health, traffic jam stress, ... and linked to pollution, urban infrastructure, car-accidents & physical/mental consequences etc.

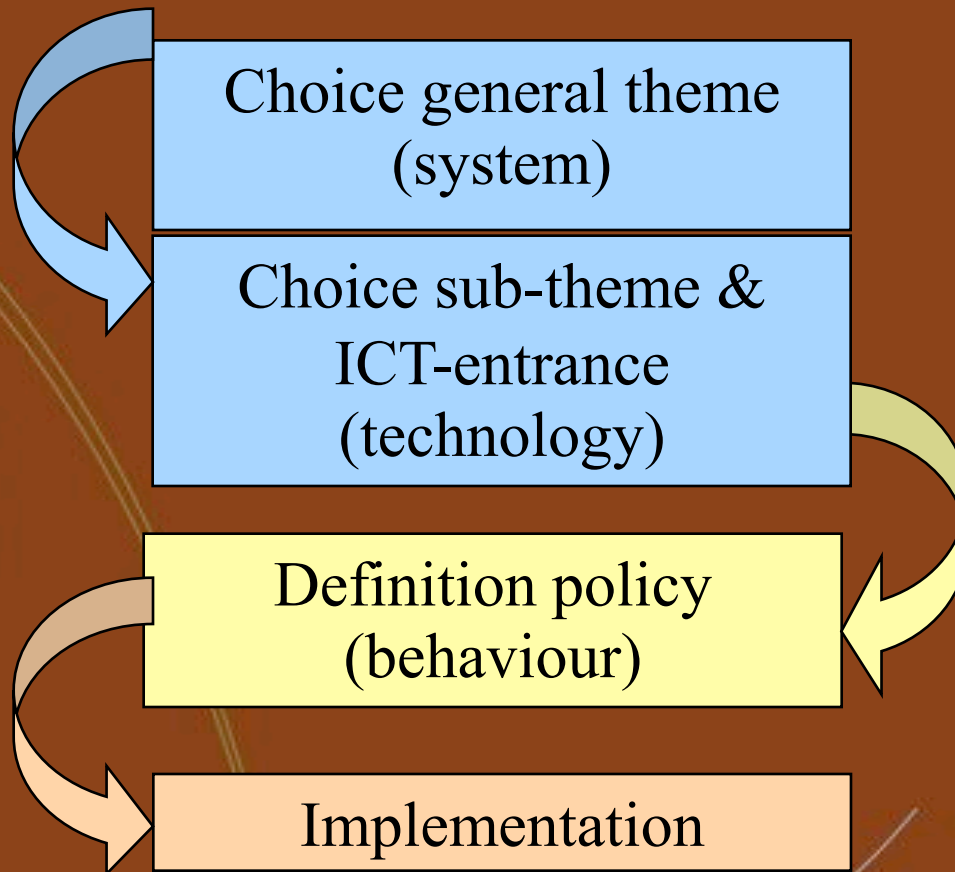


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Behaviour - Tertiary sector



Characteristics & Adjustment parameters :

Fundamental characteristics of an (educational) system

structure
interactions
finality

The parameters for observing a system :

limits?
period of observation?
emergence

Source :
Esther DUBOIS



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Examples



GOOD PRACTICES :

Training session based upon the desire to make large public and in particular decision makers aware of the interest, complexity and necessity of sustainable and integrated development.

INDICATORS : pedagogical programme, quality of exchange, ...

SAP in France (Services à la Personne) : improve mobility elder people, logistics meal services, ...

e-commerce : after having served the clients, it's supplier and producer sides are evaluating.

BEHAVIOUR AND INDICATORS based on a wish for social, economic and logistic gain.



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Balanced choice of thematics, experts and auditors. Shared workflow for multilateral communication and orientation.

Thinking-process without preset tools and attention for applications : create a common culture.

Development of capacities allowing to conceive and put in place tailor-made strategies.

Source :





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CONCLUSION

Good practices are generally based on a transversal, comprehensive approach : a collaborative platform.

Actors are and feel actively involved

Objectives are in general ambitious, results communicated with modesty (being humble for making sustainable!)

Cross-cultural awareness and competencies are necessary for a productive and efficient cooperation

High-level project management needed for achieving the defined objectives.

Relations with time and space are delicate.

Theory and practice are both needed in an integrated approach.