

ATEMIS

TOWARDS A TERRITORY-BASED ECONOMIC MODEL FOR REGIONAL ENERGY EFFICIENCY PROGRAMMES: LEARNING FROM PAST INITIATIVES

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ECEEE Summer Study - June 2017





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BUILDING ENERGY RETROFIT: THEORETICALLY CRUCIAL AND EASY...

- Buildings likely to account for 30 Gt CO₂ in 2030
 - Numerous political scheme to handle the problem (thermal regulations, subsidies, tax credits) based on a "cost efficiency analysis"
 - Given a specified target, which set of actions could deliver the aimed reduction in energy consumption at a lower social price?



Source: Grubb, Hourcade, and Neuhoff. (2014): Planetary Economics: er

- Progress in EE in buildings << technical & economic potential
- EE is not only a matter of CO₂ abatement/ Energy savings (IEA 2014)



NON ENERGY BENEFITS: A DEFINITIVE ARGUMENT?

- Several assessment methods stemming form **cost-benefits analysis** and relying on a broader stakeholder and impacts scope underline a comprehensive economic advantage of EE programme
- However, these assessment methods relies on the Hicks-Kaldor assumption:
 - "the winners (WTP) are able to compensate for the losses of the losers (WTR)" (Σ WTP > Σ WTR)... but will they do that?
 - OK in the case of "all powerful states" able to make initial investments and deal with transfers... But public funds are becoming scarce
 - At a territorial scale, how to **organize cooperation & partnerships** between public and private organisations to :
 - make the investments of an EE programme
 - Harness the whole generated value
 - Convert this value in financial terms
 - Split (transfer) this value among all the stakes?
- A proposal for a change in point of view:
 - Utilities are seen as actors who have to support the constraint of helping to subsidize the EE program
 - What if the **orchestration of an territorial EE program** would be an economically viable activity?



• Under what conditions?

WTP /WTR = Willingness to Pay / to Receive

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A TRY TO DRAW LESSONS FROM EDF-SUPPORTED TERRITORIAL EE PROGRAMMES...



A TRY TO DRAW LESSONS FROM EDF-SUPPORTED TERRITORIAL EE PROGRAMMES...

• Additional EE programmes to national-wide support system

Programmes	MDE 52-55	MDE 52-55 local programmes	Alsace	Brittany
Territorial scale	(Rural) Districts	Municipality	Region	Region
Main Objectives	Energy Savings	Energy Savings	Enhancing building trade competencies	Securing electricity supply
Secondary objectives	Creating/ maintaining qualified job on local building ref. market	Feasibility test of an EE scenario	Testing control and accompaniment procedures	Reducing CO ₂ emissions Developing Biomass
EE actions	Individual or multi- actions: Insulation, windows, Efficient systems	Deep renovations (Energy performance vs. Investment costs compromise)	Deep & ambitious renovation (objective: low emission levels)	Individual or multi actions: Insulation, windows, Efficient systems
Building sectors	Residential Public Service sector	Residential	Residential limited to 500 houses	Residential



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THE FUNCTIONAL ECONOMY IN CHART FORM

• Economic model:

- basis for value creation and distribution (capturing) between the actors
- basis and formal structure of relationships between actors
- Sources of mutual investment or financing operations
- The nature of work performed by these players

	Lack of territorial involvement	Presence of territorial involvement	
Industrial logic	Clean industrial model	Model of "ecological industry"	Circular economy
Service logic	Service model with strong involvement of the beneficiary	Functional Economy (& cooperation) model	

• Functional economy model:

- Incorporation of positive externalities in meeting functional needs
- Creation of value distinct from object production (& energy/resource consumption)
- High level of interaction with the economic development of local area



FROM A "PRODUCT LIKE" DESIGNED EE PROGRAM TOWARDS A "SERVICE BASED/ INTERMEDIATION LOGIC"

Small territorial scale: Utility & its HR

Wider scale: dedicated structure





Local authorities



Institutional bodies in building sector

Financial intermediation

Assessing financial needs Financial engineering, negotiation

Technical intermediation

R&D and software expertise, contextualized training

Communicational intermediation

Understanding residents way of life, much more than delivering facts & figures



Installer/craftmen



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FROM A "PRODUCT LIKE" DESIGNED EE PROGRAM TOWARDS A "SERVICE BASED LOGIC"

- Traditionally, an EE programme designed as a product relying on a self-representation of territorial challenge...
 - Challenge : to have the project accepted by
 - Inhabitants
 - Local building tradesmen (unavoidable partners to carry out the project)
- Moving towards a full co-design considering the concern of local partners
 - "local authorities legitimating the project
 - Local scale : mayors (very close to the populations) vs wider scale
 - Institutional players in the building industry sector, likely to
 - foster synergies and cooperation between artisans
 - Have a clear view of the current trade competence and the needed occupational training to meet the expectations of deep renovations
 - Facilitate the emergence of a player acting as a "interface" between trades
 - Craftsmen likely to take part in JV while taking steps to maintain "freedom spirit"
 - Residents
 - Communication, not just information
 - Taking account of ways of thinking/seeing/life
- The programme leader as in intermediation actor relying on his internal competences
 - Technical expertise
 - Financing
 - Communication
 - Assessment and feedback organisation



VALUE CREATION OF THE PROG. LEADER: FROM INTERMEDIATION ACTIVITIES TO FULL INTEGRATION

- Financial intermediation
 - Assess financial need for a renovation project
 - Identify financing sources (loans/subsidies)
 - Negotiate and articulate awarded financial support

→ In the described programmes, this activity was supported by either an EDF specific subsidiary /artisans themselves/local structure

- Technical intermediation
 - R&D expertise for highly innovative products & systems
 - Energy audit and design support tools development
 - Accompanying local tradesmen in their competence development
 - Not just training but also taking account of local context (jurisdiction competition between tradesmen, local relationships and knowledge specificities)
 - Ex : local small building firms without the qualification label / level required by the utility at a nation-wide scale to replace windows...
- Communicational intermediation
 - Not just information (= "delivering facts and figures to residents")
 - Relational expertise
 - Need for expertise in social sciences
- Intermediation is just one stage
 - OK at a small scale with the mobilization of the utility human resource
 - At a larger scale : need for a specific structure as an "integration factor"
 - Managing the cooperation between partners



REGIONAL ENERGY EFFICIENCY PROGRAMME OR REGIONAL DEVELOPMENT PROGRAMME THROUGH EE?

• Consolidation of territorialized intangible assets





REGIONAL ENERGY EFFICIENCY PROGRAMME OR REGIONAL DEVELOPMENT PROGRAMME THROUGH EE?

• A necessary overlap of territorial energy efficiency projects in functional spheres



REGIONAL ENERGY EFFICIENCY PROGRAMME OR REGIONAL DEVELOPMENT PROGRAMME THROUGH EE?

• Development of ad hoc assessment systems that move beyond quantitative aspects → an example of a process establishing an assessment system



CONCLUSION #1 - A NEED FOR NEW WORKING METHODS

• Culture of cooperation

- Cooperation = coordination + taking the constraints/competencies of the others into account regarding the ultimate goal of a project
- Drawing up a **shared doctrine**
 - Sharing same values & references (ways of thinking)
- Making the most **feedback from experience**
 - Ensure the shared doctrine is consistent with players 'experience
 - Translate competencies stemming from energy questions into those helping to make a link with non-energy issues
- Development of **professional attitudes** beyond technical skills
 - Listening attitudes regarding the other players' and stakes' expectations
- Communication
 - Not a secondary activity of an "industrial process" (one-way info delivery)
 - Relying on relational aspects



CONCLUSION #2 - A NEED FOR INNOVATIVE ECONOMIC **MODEL CANVAS**

- A change in canvas to find more suited to
 - multi-beneficiaries context & externalities consideration
 - Predominance of intangible assets



CONCLUSION #2 - A NEED FOR INNOVATIVE ECONOMIC MODEL CANVAS

- Example of an EDF-supported local cooperative firm of Energy Performance Contracting in homes
 - Shareholders: EDF, municipality, involved artisans, customers...



Thanks



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