



Lambesc

## Social impacts of new technologies: Analysis of customers' acceptance

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Social impacts of new technologies: Analysis of Customers' Acceptance



### An impact is a shock

Is a shock the best way to ensure that society will accept a new technology?



## From acceptance to acceptability

- ◆ Acceptance refers to situations in which you MUST say 'yes' – or you reject the proposition
- ◆ Acceptance is a question asked at the end of process -- there is no choice over the thing to be accepted or rejected
  
- ◆ How to avoid a 'yes or no' situation?
  
- ◆ Make your project acceptable! Think in terms of acceptability instead of acceptance

==> Negotiate with users the thing that you want them to accept. Make compromises!

➔ Acceptance means that there are very few choices - it's a yes or a no  
Acceptability means negotiating over what is acceptable and what isn't and modifying the project accordingly

## Building a socio-technical agreement around Premio (1/3)

- ◆ Premio wants to be a project that integrates technology, economy, and society
  - From the very beginning, Premio involved multiple partners in order to address the electricity issue in the area. The project intends to incorporate 3 key principles:
    - Technology: support innovative research in the field of energy
    - Economy and markets: involve local companies, create markets
    - Society: address the energy challenge of the 21st century in terms of energy provision and energy use
  - The notion of an "energy cluster" or "pocket" lies at the core of the project.
    - This notion underlies Premio's technical architecture
    - This notion also refers to that of a territory, thus constructing a specific modality of addressing society: Premio works at the community level
  - Premio wants to mobilize the community on a collective basis. Everyone is in the same boat and has to play the game in order to reach the common goal of peak shaving.
    - There are practically no individual benefits to gain from one's participation in the project
    - In the Premio project, the user is a participant. He is informed, he could choose to let the platform work or to push the override button, and he could even also do more for his community like not baking a cake during the critical period

➔ Premio does not want to be a "purely technical" project. Premio integrates, negotiates, compromises.

*"You can't ask a regional council: 'Please, lend us your citizens and your buildings so we can conduct our technical tests'." (PREMIO partner)*

## Building a socio-technical agreement around Premio (2/3)

- ◆ What Premio consists of is negotiated with all partners. From the beginning of the project, compromises on technical and non-technical issues have been established
    - The choice of a host city
      - The hosting competition (summer of 2008) was a huge success: Twelve cities applied, six had a good profile => A nice surprise
      - Lambesc was chosen in September 2008
        - A small town (population 7,500) without the ability to host all of the planned resources
        - But a very motivated one, from mayor to citizens
      - The consortium agreed to choose motivation over purely technical criteria in the final choice of the test site
      - As a result, some of the distributed resources that were to be included in the town were relocated to 2 satellite locations
    - The definition of the critical period
      - There have been several discussions over which criteria to use in order to define the critical period: CO2 emissions, grid overload, spot market price
      - 50% of the critical periods are defined according to a peak load criteria, the other 50% are defined with a CO2 criteria
      - As a result, Premio has been defined as a VPP serving the grid needs and also serving environmental objectives
    - Local or central optimization?
      - Choices had to be made on what to optimize: the local, distributed resource or the platform?
      - Technicians making technical decisions are in fact also making social decisions
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- All these compromises have redefined the project. And they have technical consequences on the algorithm and on the functionalities of the distributed resources
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## Building a socio-technical agreement around Premio (3/3)

- ◆ So far, the project is working successfully
  - Several partners are associated with the project and new ones become involved. The project is attractive and inclusive.
  - Making compromises hasn't hindered the project in any way



Discussion and negotiation between partners ensure an integration of technology, markets, and society in the project

Premio is working on its technical, social, and economic acceptability

However, real users are not part of the negotiation

## The Premio end-user: enthusiastic, elusive, absent, interested, and protesting (1/2)

- ◆ The enthusiastic and elusive user: the recruiting process
  - The actual recruitment of hosting sites was not a smooth process
  - The context seemed ideal: many potential users had shown up at the competition stage. Their participation seemed secured
    - But it wasn't clear who was actually in charge of the recruitment: the town council, the technology owners, or someone else from the project team
    - Field conditions revealed the need for distributed resources to add additional sites requirements
- ◆ The absent user: what to do with energy savings and how to provide user feed-back
  - There has been much discussion on whether or not energy savings were a legitimate component of the project
    - It was decided to offer participants an energy check-up
  - There has also been much discussion on participant feed-back
  - The website construction proved rather difficult.
  - The kind of data to give back to the user was difficult to decide
    - It entailed the typical measurement problem of peak shaving and valley filling – that is, measuring a non-existent thing: non consumed kW, or extra kW.
    - How to differentiate between an avoided load and a shifted load?
    - The same goes for avoided CO2 emissions

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## The Premio end-user: enthusiastic, elusive, absent, interested, and protesting (2/2)

- ◆ The interested user: the Premio party
  - In March 2010, the project team held a meeting with the hosting-sites end-users (from the residential sector)
  - The meeting was successful with 30+ participants
  - All showed a keen interest in the project and asked many questions
  - It was difficult to stop them in order to get to dinner
- ◆ The protesting user: neglected parties strike back
  - Some residents and workers felt affected by the project and felt unaccounted for
  - They protested
  - As a result, the project withdrew from these areas and the distributed resources were removed



Many decisions were taken in the name of the user but without the user. Is there something left to negotiate?



With regards to end-users, the project finds itself in a traditional acceptance model

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## What to do next?

- ◆ Many choices are made in the user's name. But more often than not, these choices are based on mere assumptions on who the user is, what he wants, what he would find more convenient, etc. The town council and the sociologist are often mistaken as representatives of users
- ◆ We suggest forming a group of users and making this group a project partner. By users, we mean those who are hosting a resource but also those who are affected by the project
  - End-users are competent members of society. They are practitioners of everyday life.
  - They have not all the knowledge or a superior knowledge but a different knowledge
  - They have questions to ask to the project
- ◆ This would be relatively easy to do since there are few users and they are motivated
  - The formed group of users doesn't have to include all users but a few of them
- ◆ These propositions have to be discussed and negotiated with the project partners

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## Summary of key messages

- ◆ Acceptance is a result, acceptability is a process
- ◆ Avoid the “take it or leave it” situation
- ◆ Work on making the project acceptable: negotiate, make compromises
- ◆ Get as many allies on board as possible : do not forget users and affected parties
- ◆ Users matter: involve them in the project

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