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Background

- IHSMAG: Integrating the Household in the SMARt Grid
- ERA-Net 2nd Smart Grid Joint Call (2014-2016)
- Three country collaboration
 - Denmark – Danish Building Research Institute
 - Norway – Norwegian University of Sci & Tech
 - The Basque Country – Tecnalia/ZIV
- Results: recommendations for policy/design

Background

- The smart grid is developing
- Mainly identified as smart meter roll-out
- Some challenges?
 - Solutions focus mainly on economic incentives
 - Based on idea of user as rational
 - Homo economicus
 - But does this kind of user even exist?



Design recommendation #1

- Don't just focus on economic incentives
- ...even though it *does* play a role
- Good for recruitment, needs mentioning
- But it gets backgrounded after a while
- Other issues must be explored
- Risk of licensing effects
- Economic rationality resonates with men

Design recommendation #2

- Ensure wholehearted involvement of users
- Active engagement of users over time
- Make use of community leaders (champions)
- Facilitate for social learning over time:
 - Create events to facilitate learning
 - Create and maintain a platform for interest management

Design recommendation #3

- Keep on the look-out for unforeseen actors
- Specific, local issues can be made useful
- This can open up unexpected partnerships
 - This can provide added value and drive

Design recommendation #4

- Look for synergies between solutions
- Make use of several inroads. How?
- By introducing concepts and gadgets together
 - Concept is the cognitive aspect (i.e. peak load)
 - Gadgets binds the cognitive aspect to a practical concern (i.e. EV charging and ToU pricing)

Design recommendation #5

- Be aware of negative, unintended effects
- Classic example: rebound effects
- Licensing effect

Design recommendation #6

- Data must be collected and made accessible without compromising privacy

Design recommendation #7

- Make solutions easy to understand and use
- Skills and competences vary
- Make user learning a priority
- Break down real-time appliance electricity use
- Some prefer large, tactile, rigidly programmed buttons and switches
- Static pricing is good for planning
- Dynamic pricing requires automation

...and a policy recommendation

- Make use of mediators
- Be a mediator?

Thank you!

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