ITU Kaleidoscope 2016

ICTs for a Sustainable World

Task-based process modeling for policy making in smart cities

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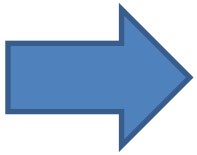
Grounding the problem

- RQ1: do existing smart city standards provide guidelines for city's energy efficiency policy making?
- RQ2: how can smart city energy efficiency policy making be modeled and standardized?

- Approach:
  - Standardize the policy making process for city's energy efficiency
  - Map the policy making process: Task-Based Modeling (TBM) method
  - Experimenting in cities under the project InSmart (Integrative Smart City Planning)

The Standardized Process

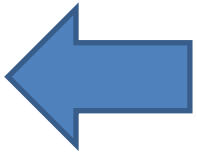
- Reference framework
- Energy demand sources
- Energy supply sources
- Scenarios definition (alternative policies)
- Scenarios execution (calculation with model)



- Scenarios' outcomes: policies' estimated performance

- Criteria:

1. Implementation Cost
2. Implementation Cost Efficiency
3. Energy savings
4. Operation and Maintenance Cost
5. Revenue Production
6. Ease of Implementation
7. City's Quality of Life Improvement
8. City's Economic Development Improvement
9. Social Acceptance



- Multi-criteria Decision Making Process

The Standardized Process (TBM)