

T.2.3.3 Intelligent energy metering, registration and reporting

- The concept shall comprise both power and heat consumption and will be developed with a primary focus on reducing energy consumption. Cost efficient indirect methods like comfort registration will be evaluated. Close cooperation with selected housing associations within HOUSE-NO's portfolio will be established during the concept development phase. These housing associations will be the candidates for demonstration. The work will be done in close co-operation with the RTD and innovation activities in Helsingborg/Helsingør and Tudela (ref. T.2.1.4 and T.2.23 in this WP 2)
- The results from the research activity will form the basis for demonstration of the metering, registration and reporting concept in 670 dwellings, which again should lead to establishing a base concept for implementation in the community at large.

WP 2.3 - COMMUNITY ENERGY EFFICIENCY AT TRONDHEIM (R&D-NO)

- **T.2.3.3 Intelligent energy metering, registration and reporting (IC-NO)**
- D.2.3.3.1: Working paper on improved metering, registering and reporting methodologies for district heating and power in private households. (R&D-NO) (M 6)
- D.2.3.3.2: Specification of concept for implementing metering, registration and reporting of power and district heating (HOUSE-NO) (M 10)
- D.2.3.3.3: Specification of technical concept for metering, registration and reporting of power and heating (UTIL-NO) (M 24)

T.2.3.3 Intelligent energy metering, registration and reporting

- IC-NO: Task Leader. Analyse and develop strategies for a cost efficient concept for metering, registration and reporting of energy consumption in private households.
- UTIL-NO: Cost efficient concepts for metering of power consumption based on 2-way communication
- HOUSE-NO: Cost efficient concepts for metering of district heating.
- R&D-NO: Implementation and technical aspects

Trondheim Community Members

- COWI AS (IC-NO)
- Trondheim Municipality (MUN-NO)
- TEV (Utility) (UTIL-NO)
- Heimdalgruppen (Building Developer) (BUILD-NO)
- TOBB (House Owner) (HOUSE-NO)
- Svartlamoen (ECO-settlement) (TRUST-NO)
- SINTEF (research) (RTD-NO)
- Observer (Municipality of ZILINA Slovakia) (ASCOM)

Hva skal måles?

- **Elektrisitetsforbr.**
- **Fjernvarme**
- **Temperatur?**



5

11.10.06

COWI

System for måling av energiforbruket?

- **Elektrisitetsmåler**
- **Vannmåler**
- **Temperaturmåler**



6

11.10.06

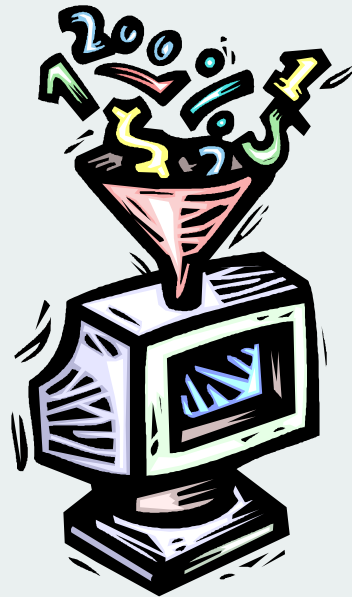
COWI

System for innsamling av forbruksdata:

- Manuell avlesning
- Automatisk avlesning

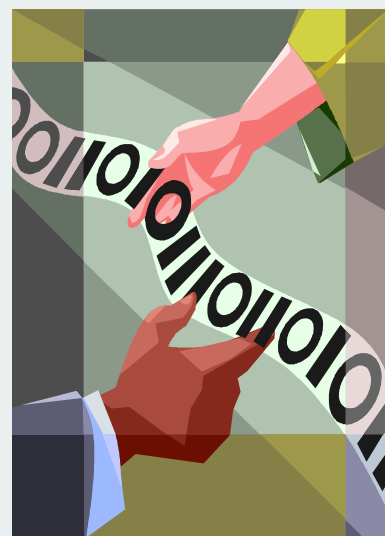
Kommunikasjon:

- Flere alternativer kommersielt tilgjengelig i dag.



Database

- Data lagres i database:
 - Felles database for el og fjernvarme?
 - Er data tilgjengelig for andre?



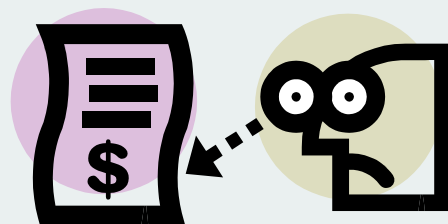
Hvordan motivere til redusert forbruk?

- Hvordan skal prosjektet bidra til redusert forbruk?
 - Løsningen skal kunne generaliseres til flere sluttbrukere.
- Tilbakemelding til sluttbruker:
 - Hva?
 - Når?
 - Hvordan?



Presentasjonsform

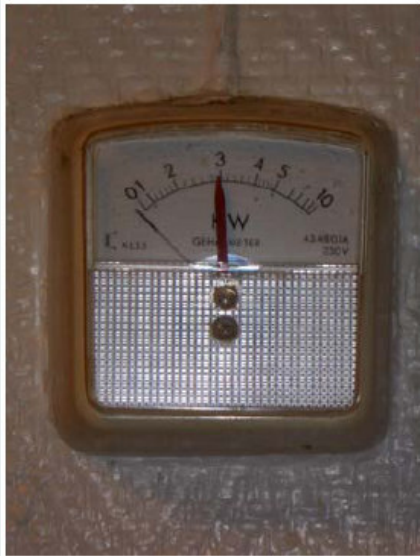
- Hvordan løse evt. tekniske problemer vedrørende motiveringstiltakene?
 - Internett/e-post?
 - Gjennom tilsendte regninger?
 - Eget display i leiligheten?
 - Annet



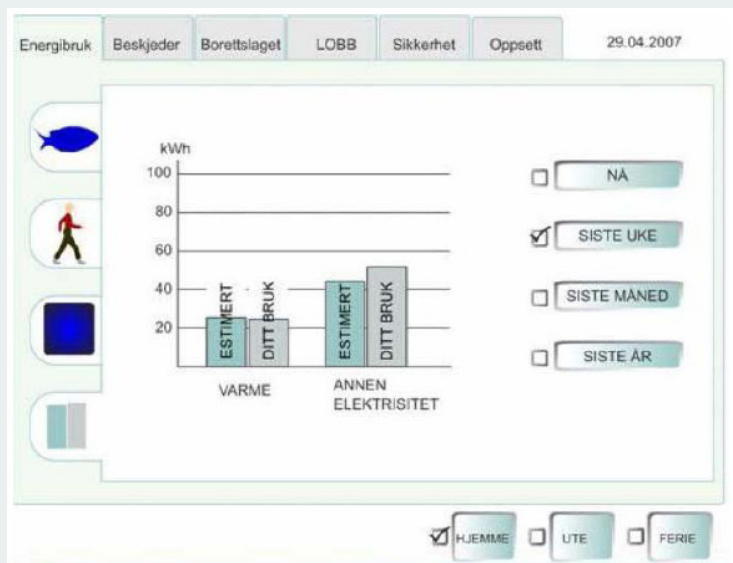
Løsninger som er i bruk i dag

- Energileverandører
 - Internett (Stolpediagram, tabeller kvartalsvis)
 - Faktura
- SD-leverandører/automasjonsfirma/smarthusløsninger
 - Finnes mange leverandører og løsninger. (Prototyper?)
 - Internett, sms, kWh/m² sammenlignet med snitt for borettslaget, display
 - Har ikke funnet noen som har kommunikasjon mellom database og display

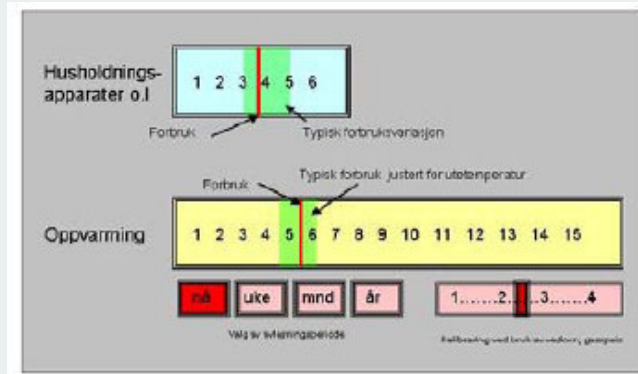




Bilde: Inger Andersen



Figur: Guro Nereng



Figur: Are Rødsjø, Husbanken

