



**CITIES &
AffaldVarme Aarhus &
Aarhus University Dept. of Engineering
joint Workshop on
*Value creation by use of smart city data***

4 January 2017
CAR

Date/time: Thursday, 12 January 2017. 10:00-16:00

Venue: NAVITAS, Inge Lehmanns Vej 10, Aarhus,
Room 03.070.
Take main stairs/lift to the 3rd floor and watch the floor plan on the opposite wall to the right of the lift.
Public parking available on Floor -1.

Registration: Sign up for participation on this Doodle-link: <http://doodle.com/poll/fmeukbyvk439cacf>,
by January 8, 2017 at the latest.

Abstract/purpose

There is an immense interest in the information contained within data from operation of district energy systems. Such data comprise consumption data from individual users as well as other network data. The data have big interest for operators because of the huge value associated with the optimal management of a secure delivery to all consumers in response to the very dynamic situation for supply and demand. The data are also of great interest to researchers who will study and develop models for intelligent operation of the integrated energy system. Thus, data and its proper management has become an important asset in communities, but its handling also needs to be done in a proper way that respects issues of privacy and business confidentiality. Data management, and its form of representation is of great interest to a wide range of stakeholders involved in smart city development. We will discuss these issues at the workshop and see specific examples of data use in smart city operation and research.



Program

10:00 - 10:10 Welcome (Steffen Petersen, Adam Brun, Henrik Madsen, Carsten Rode)

Session 1: An overview of data. What is there, its use (value creation) and availability

10:10 - 10:30 Perspectives for use of data in district heating systems (Henrik Madsen, DTU, CITIES)

10:30 - 10:50 City-scale building energy modelling using metered district heating data (Martin Heine Kristensen, Aarhus Univ. Department of Eng.)

10:50 - 11:20 The role of the data responsible person in a public enterprise (Thomas Vinther Andersen, AffaldVarme Aarhus, AVA)
AVA's value propositions on smart use of data (Adam Brun, AVA)

11:20 - 11:50 The Case of Middelfart: "Smart Energy @ Home", almost 200 households using Smart Energy and results. Some municipality considerations regarding data and technology (Morten Westergaard, Middelfart Kommune)

11:50 - 12:00 "Nature break"

12:00 - 12:30 Visit to the NAVITAS Building

12:30 - 13:15 Lunch

Session 2: Examples of specific use of data

13:15 - 13:35 Experiences from use of national database of energy consumption in buildings (Kasper Jessen, Grøn Energi / Dansk Fjernvarme)

13:35 - 13:55 The need for market data and market solutions in the heating sector to obtain an efficient integration with the electricity market (Anders Bavnhøj Hansen, Energinet.DK)

13:55 - 14:15 Heat prediction and control based on Smart City data (Per Dahlgaard Pedersen, Neogrid Technologies)

14:15 - 14:30 Energy Flexibility in Domestic Hot Water Preparation (Michael Dahl Knudsen, Aarhus Univ. Department of Engineering)

14:30 - 15:00 Demonstration of clustering applied to AVA data (Panagiota Gianniou, DTU Byg)
Data analytics on Jupyterhub (Xiufeng Liu, DTU Management Eng.)
An example of specific collaboration on data use for CITIES (Alfred Heller, DTU Byg)

15:00 - 15:15 Break (w. refreshments)

15:15 - 15:55 Use of personal data – legal conditions (Charlotte Bagger Tranberg, Bech-Bruun Advokatvirksomhed)

15:55 - 16:00 Closure