

ESCO as Innovative Facilities Management in Danish Municipalities

Jesper Ole Jensen, Danish Building Research Institute

Pimmie Oesten, Centre for Facilities Management, Technical University
of Denmark

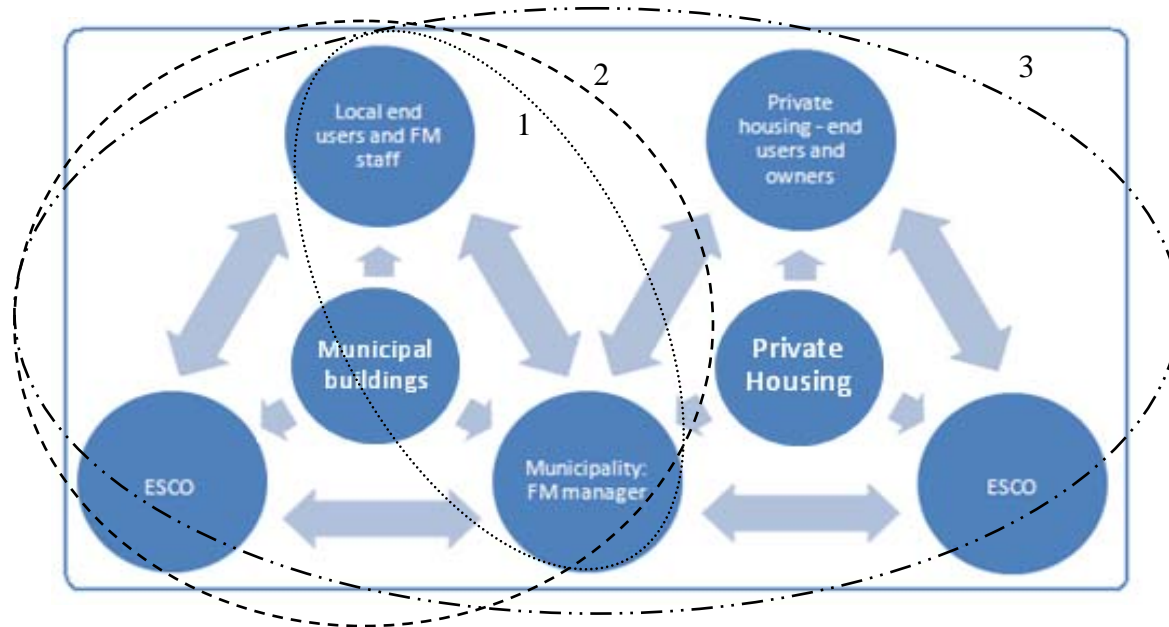
Susanne Balslev Nielsen, Centre for Facilities Management, Technical
University of Denmark

Background

- ESCO (Energy Service Company): Company that delivers energy services (not energy)
- ESCO-contracting: Contract (or partnership) on energy savings between client and ESCO-company
- Increasing political expectations to ESCO-contracting in Denmark
- Many barriers for ESCO to enter private housing market
- Status: Experiences with ESCO mainly in municipalities
- Potentials:
 - Guaranteed energy savings (often > 20%)
 - ESCO finances retrofitting of public buildings and energy labelling
 - Municipal learning and innovation in FM => Dissemination into private housing market?

Research question: “How does the experience with ESCO-contracting influence the municipal FM-function in relation to create innovation and new roles for FM, for instance in order to disseminate their ESCO-experience to private house owners in the municipality?”

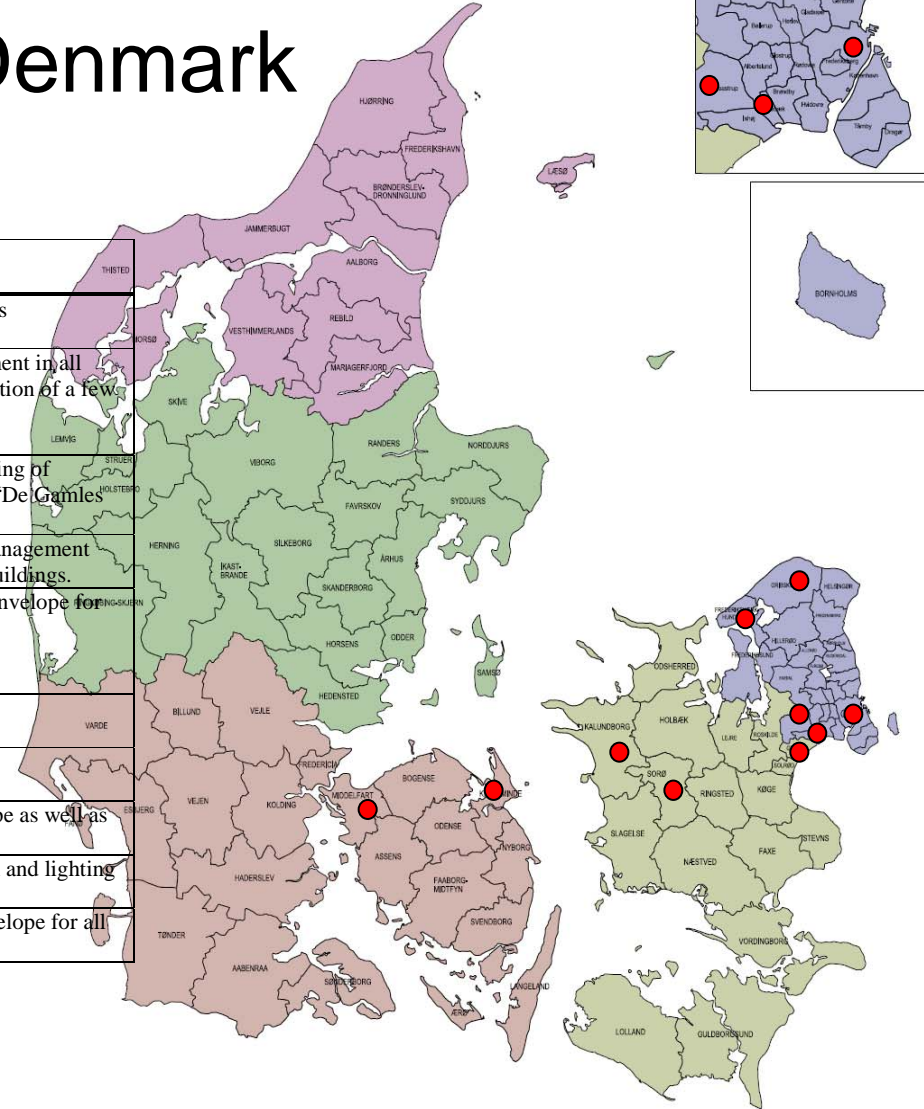
Model:



Methodology: Literature studies / Interview / Case studies

Status and overview ESCO-municipalities in Denmark

Municipality	Magnitude	ESCO-Contractor	Contract period	Improvements of:
Kalundborg	10 buildings, 20,000 m ²	TAC	2009-2021	Technical system and installations
Middelfart	100 buildings, 190,000 m ²	TAC	2008-2015	Installations and indoor environment in all municipal buildings and re-insulation of a few buildings. Energy labelling of all buildings.
København	27 buildings, 68,000 m ²	DONG	2009-2018	Energy savings and energy labelling of properties in the nursing facility “De Gamles By”.
Gribskov	100 buildings, 190,000 m ²	TAC	2009-2016	Energy savings through better management and technical improvements of buildings.
Vallensbæk	40 buildings, 114,000 m ²	Dansk Energi Management A/S	2009-2019	Technical systems and building envelope for the municipal buildings. Energy labelling
Kerteminde	60 buildings, 117000 m ²		2009-2019	-
Høje Taastrup	270 buildings (all), 270,000 m ²			-
Halsnæs	120 buildings, 130,000 m ²	YIT	2009-2021	Installations and building envelope as well as incentives for users to savings.
Greve	12 schools, 110,000 m ²	Siemens a/s	2009-2016	Better heat regulation, ventilation and lighting in schools and kinder gardens.
Sorø	all buildings	-	-	Energy systems and building envelope for all municipal buildings.



Preliminary results

- ***Learning:*** Much to learn from initial ESCO-stages (establishing baseline on existing buildings)
- ***Innovation:*** Internal and external (dissemination of knowledge to local housing market)
- ***Users:*** Important to include users
- ***Context:*** ESCO as alternative to other energy saving initiatives, competences in municipality, political attitude etc.

Conclusions and contribution to the Future Research Agenda

- ESCO-contracting has a large potential for energy savings in buildings AND learning process for municipal FM-function
- Understanding conditions for benefits of ESCO
- Future research: Organisation of FM and new roles for FM-managers

Thank you for your attention!

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