

Gate 21

Danish experience with EPC

Martin Dam Wied
Project Manager
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Agenda

- Brief presentation of Gate 21
- Background on EPC
- The Danish market for EPC
- Two cases on EPC
- The future for EPC in Denmark

What is Gate 21?

- Gate 21 is a non-profit partnership organisation between local authorities, private companies and research institutions working together for a sustainable society and green business development.
- established in 2009
- 48 partners – primarily in the capital region of Denmark and Zealand
- 27 employees
- Projects for approx. €15 mill.

**Public-private innovation
& green growth**

Project development

Funding

Project Management

Handle funding

Capacity building

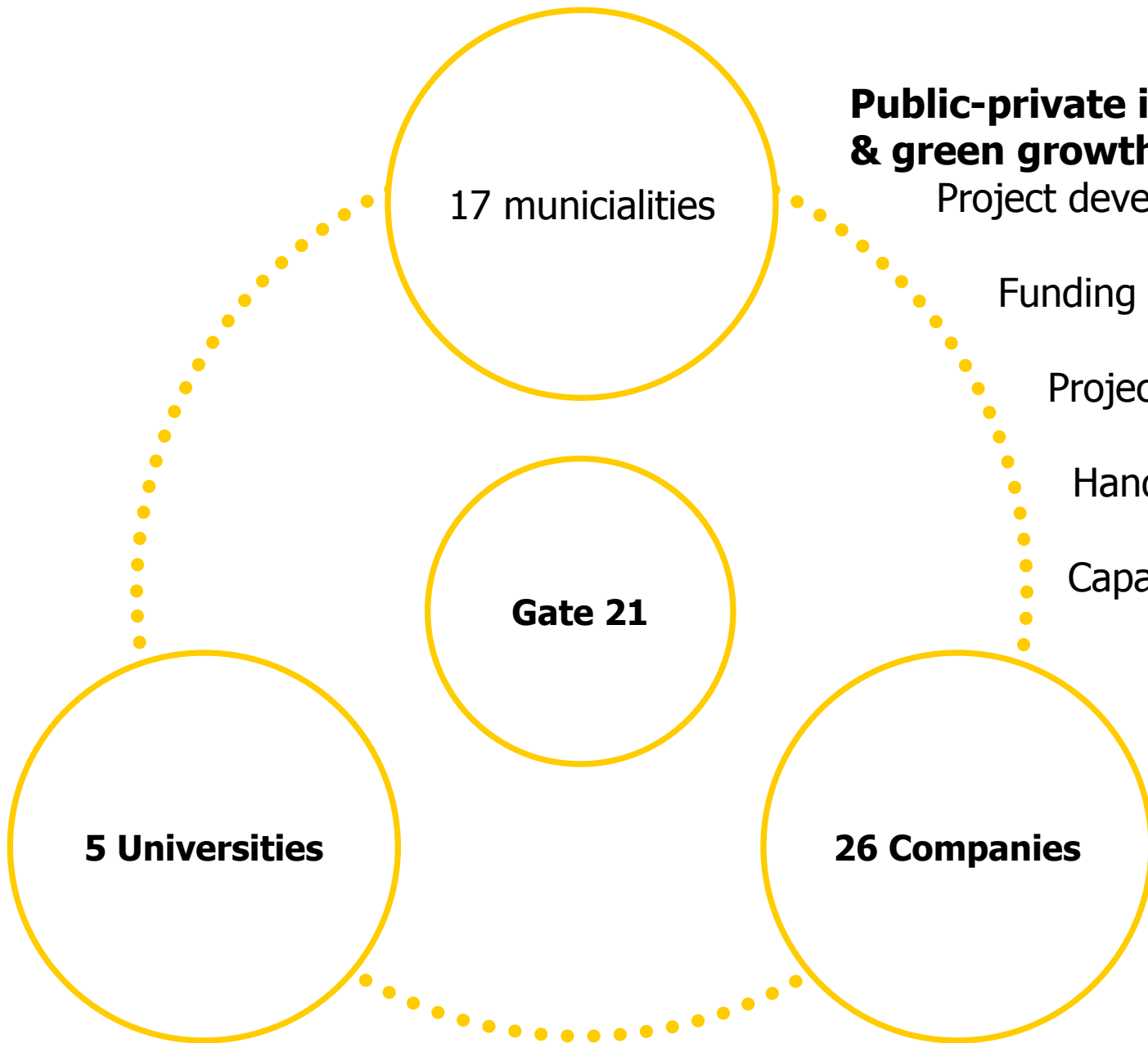
Network activity

17 municipalities

Gate 21

5 Universities

26 Companies



What is an EPC?

A Partnership between

ESCO

End-user

"owner" of cost-effective energy savings



A Company with a commercial focus on **identifying, realisation** og **securing** energy efficiency

The Partnership

The end-user

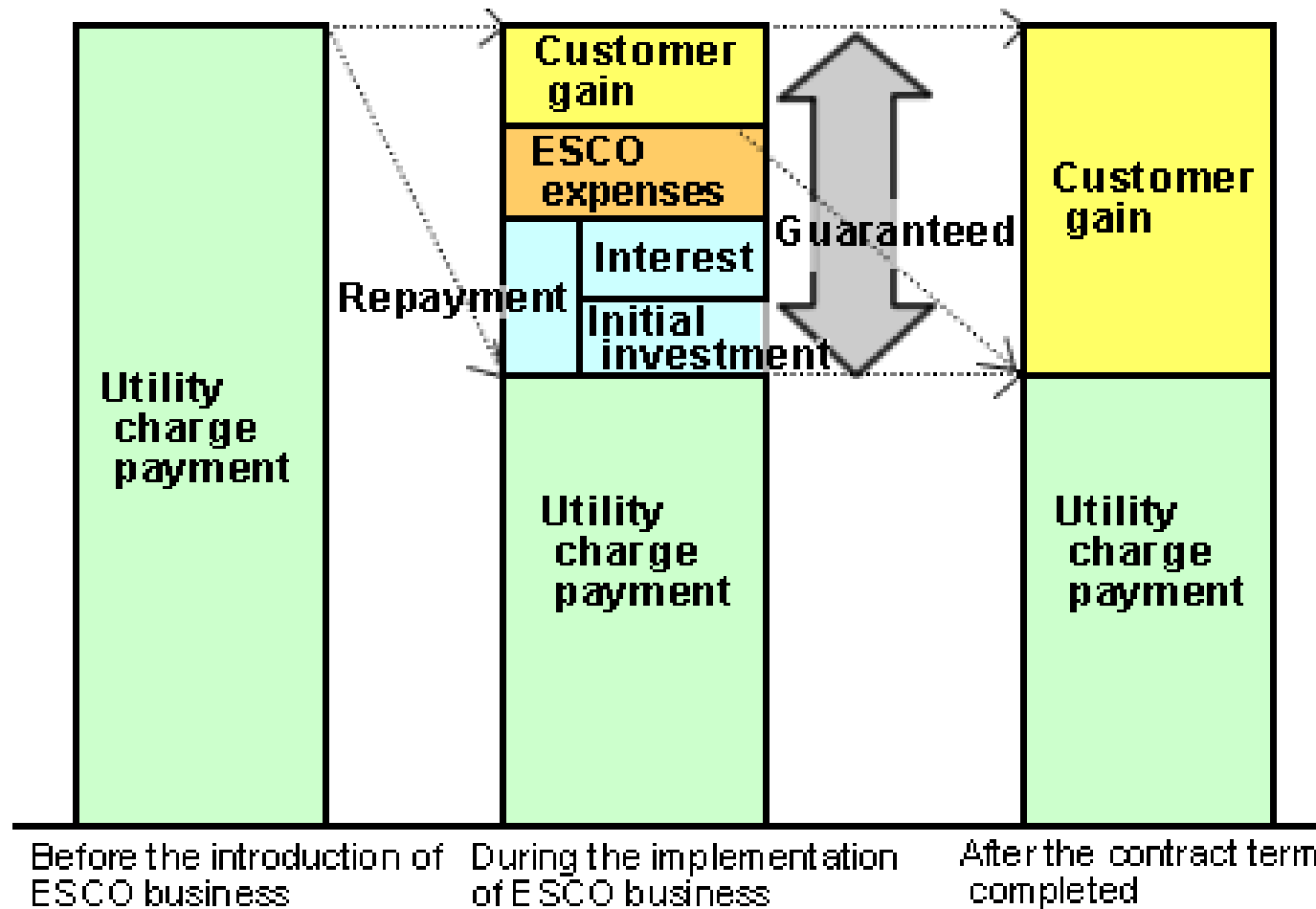
- Limited time and resources
- Economy/investments
- Little knowledge on energy savings
- Lack of focus on energy savings
- Goals for energy savings and GHG-reduction



The ESCO

- Time and resources
- Financing of energy savings
- Competence within energy savings
- Focus on saving energy
- Energy savings as a business area
- Guarantee for energy savings – minimize the risk

The model



The ESCO-market in DK

- The market started up 2007
- The main focus on ESCO market in the public sector
 - Municipalities
 - Federal buildings
- Around 20-25 EPC-projects in municipalities and 3 universities so far
- Increase in marked on 50-100 % within the last 3 years
- Average investments around €7 million per project
- The public sector is self-financing the projects
- Driven by political goals for better buildings and better environment
- EPC as a tool for achieving targets for GHG-reduction
- Focus on guaranteed saving
- Demand for EPC-models which accommodate deep renovation



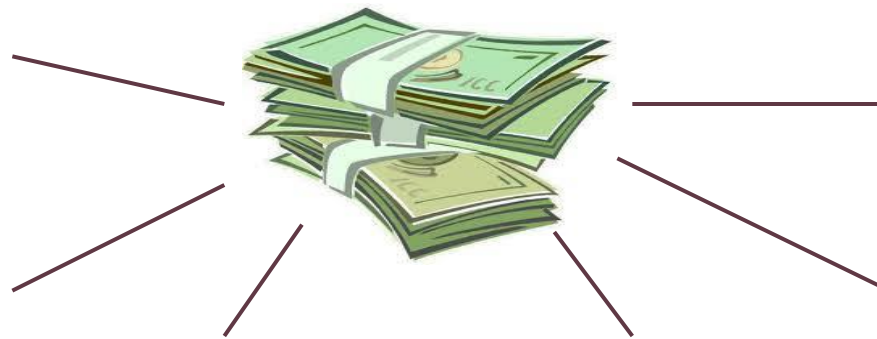
The ESCO's

- About 10-15 companies that offer ESCO services in Denmark
 - About 5 of these are the core of the market
- Diverse palette of companies
 - International corporations (Siemens and Schneider Elec.)
 - Danish construction companies (NCC, Brøndum, Glenco etc.)
 - Utility and energy companies (EnergiMidt, scanenergi, etc.)
 - Other local construction, engineering and manufacturing companies
- Lot of ESCOs use subcontractors e.g. consulting engineers



Important decisions in a municipality?

Budget reality!



Case 1: Brønderslev Municipality

Goal:

- Raising building standards, including reducing the maintenance backlog
- Reduce energy consumption and cost
- improve the indoor climate

Facts:

- Deep renovation of 32 buildings - 90.000 m²
- Guarantee period is 5 years
- 20 years of pay-back period
- About €10.5 mill. in investment
- Average annual savings €0,5 mill.
- measures with focus on building envelope was rated higher in the tender
- Guarantee on Indoor climate (option)



EPC in dwellings

- Issue between tenants and owner
- The right basis for decision
- Total economic assessment = total budget (investment, maintenance & operation)
- Simplify EPC/ESCO-projects
- Tenants has to bee aware of risk assessment

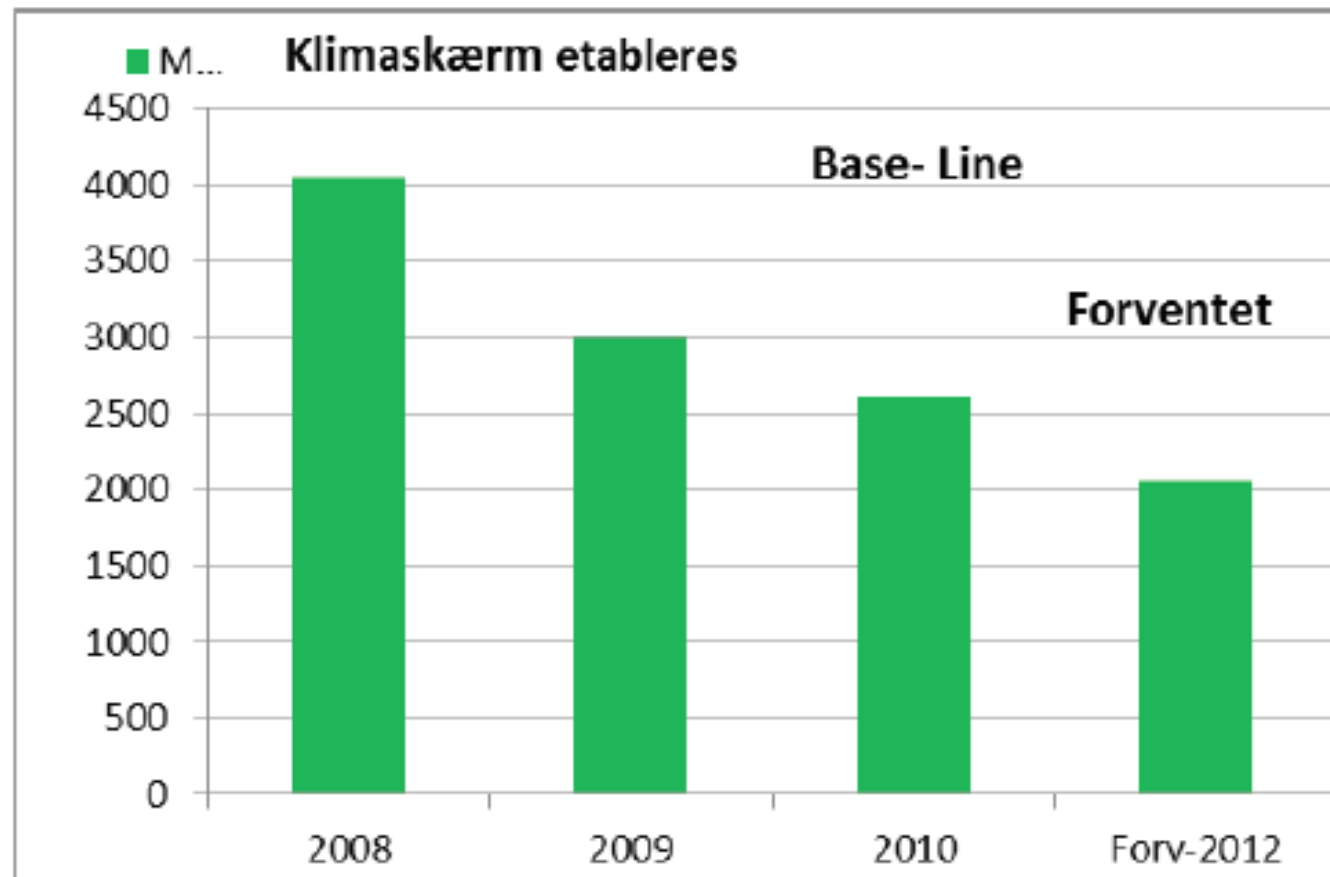


Case 2: EPC in social housing

- Renovation of building envelope in 2009
- ESCO-project: Renovation and optimizing of heating system
- Pay-back period 3-4 years
- Investment from the heat bill
- Indoor climate must not be compromised
- High reliability in operation
- Annual saving per tenant are €150



Case 2: EPC in social housing



Recommendations

- Secure the right strategy for the project
- Secure overview on data and the building stock
- Focus on measurement & verification
- Procurement process must be transparent
- The building owner must be prepared for the project – The organisation must be ready
- Internal resources for the project
- All levels in the organisation must be involved in the project (brown, blue & white collars)
- Involve others experiences or external expertise
- Take space management into account



The ESCO-future in DK

- Different incentive based business model in other sectors/branches
- One stop shop & ESCO in private households
- Integration of ESCO and PPS, and other partnership models
- Facilities Management integrated with EPC
- Services and EPC combined (service providers)
- ESCO must focus on architecture in deep renovation
- ESCO and indoor climate
- EPC and space management





For more information

- Project Manager Martin Dam Wied
- Email: martin.dam.wied@gate21.dk
- Phone: +45 2750 3671