

Energy Services in Europe



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- Background
- Types of energy services
- Market overview ■
- Examples
- Insulation and energy services

Energy services (= Contracting)

Core elements:

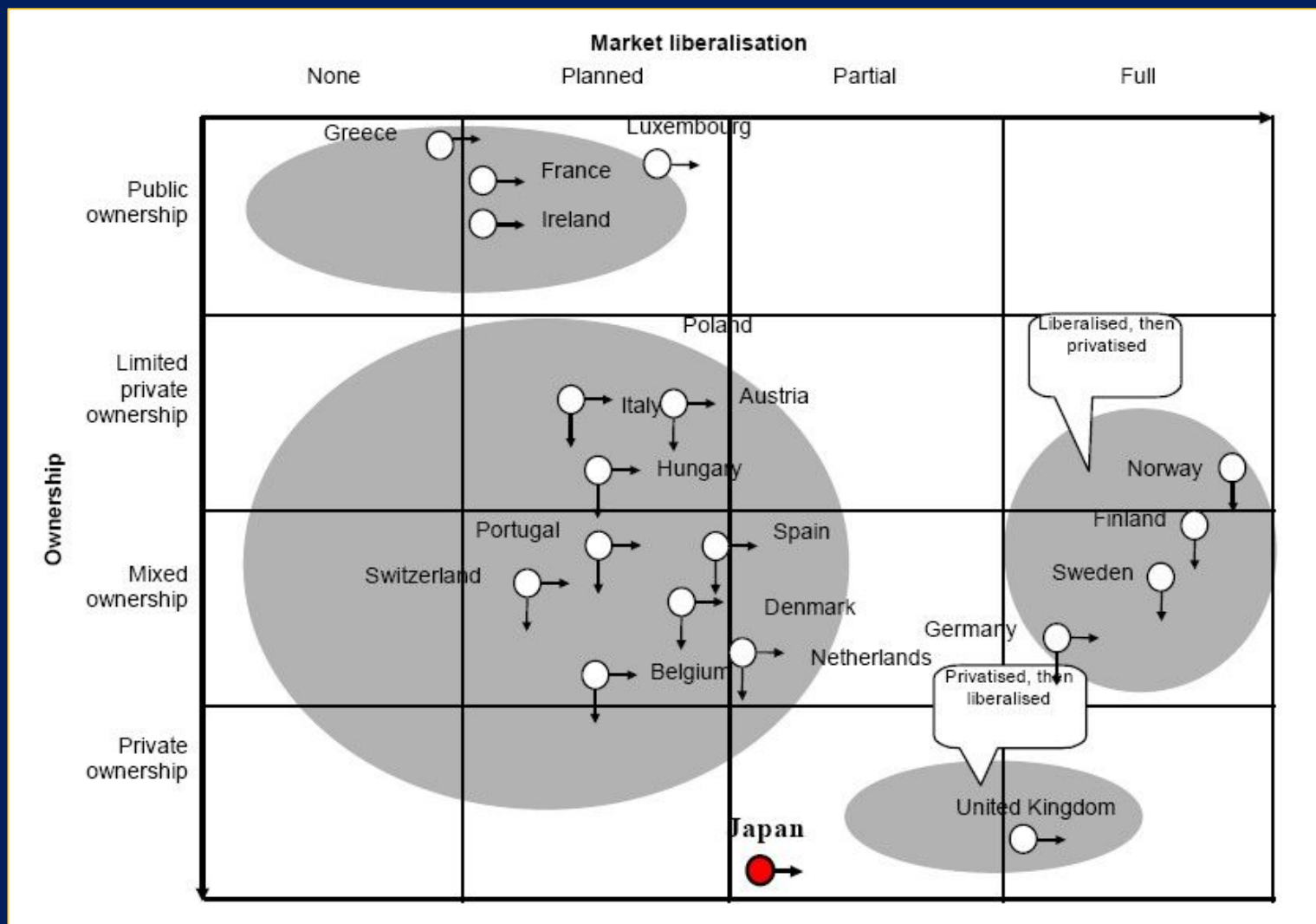
- Supply of services for heating, cooling, lighting etc. instead of delivery of commodities such as gas, oil and electricity

Directive:

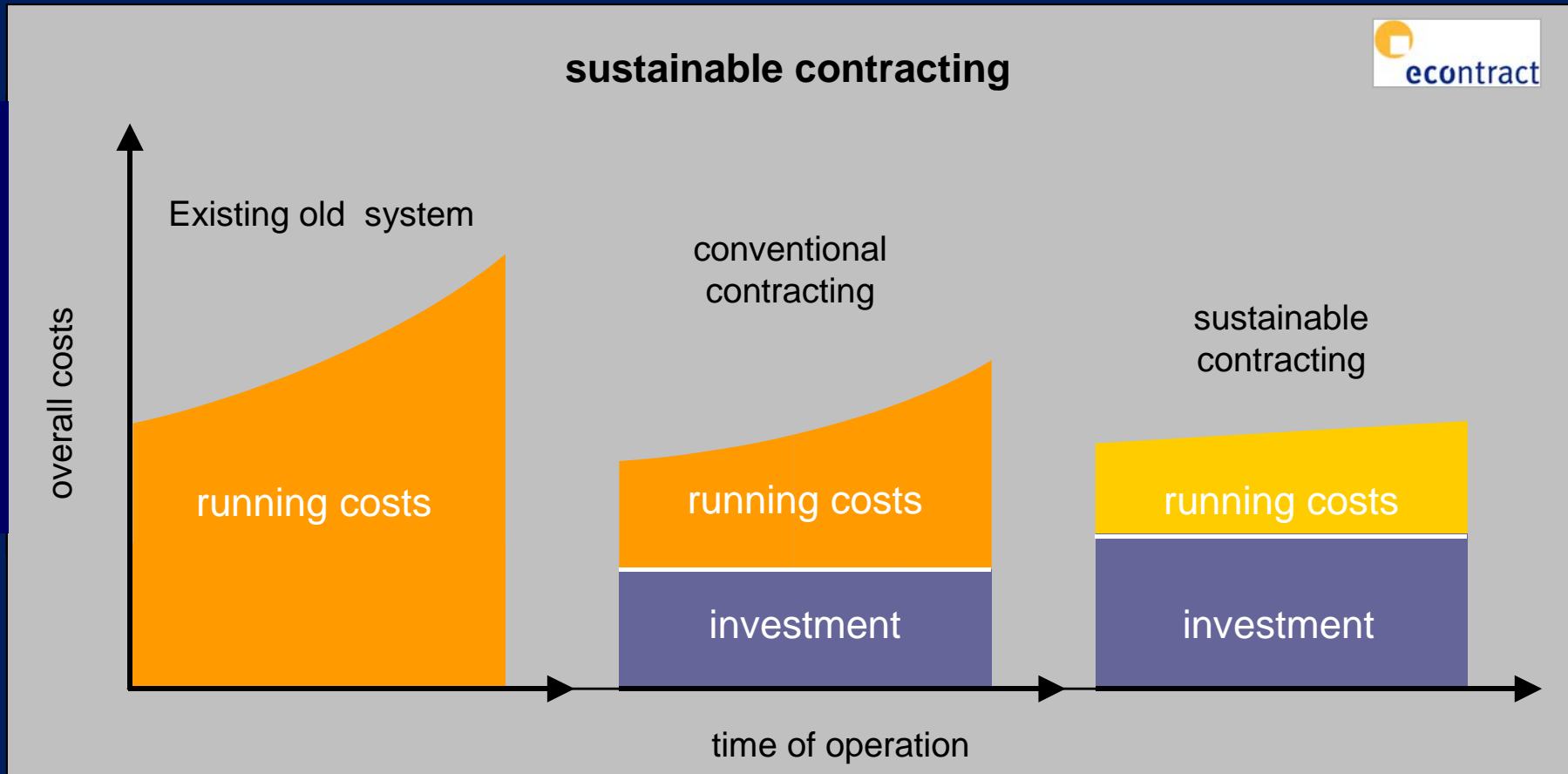
- - integral package, including the technology needed to produce these services
 - strong element of energy-efficient end-use technology and the necessary energy to run it when they are delivered or supplied

Energy services in Europe – External Factors

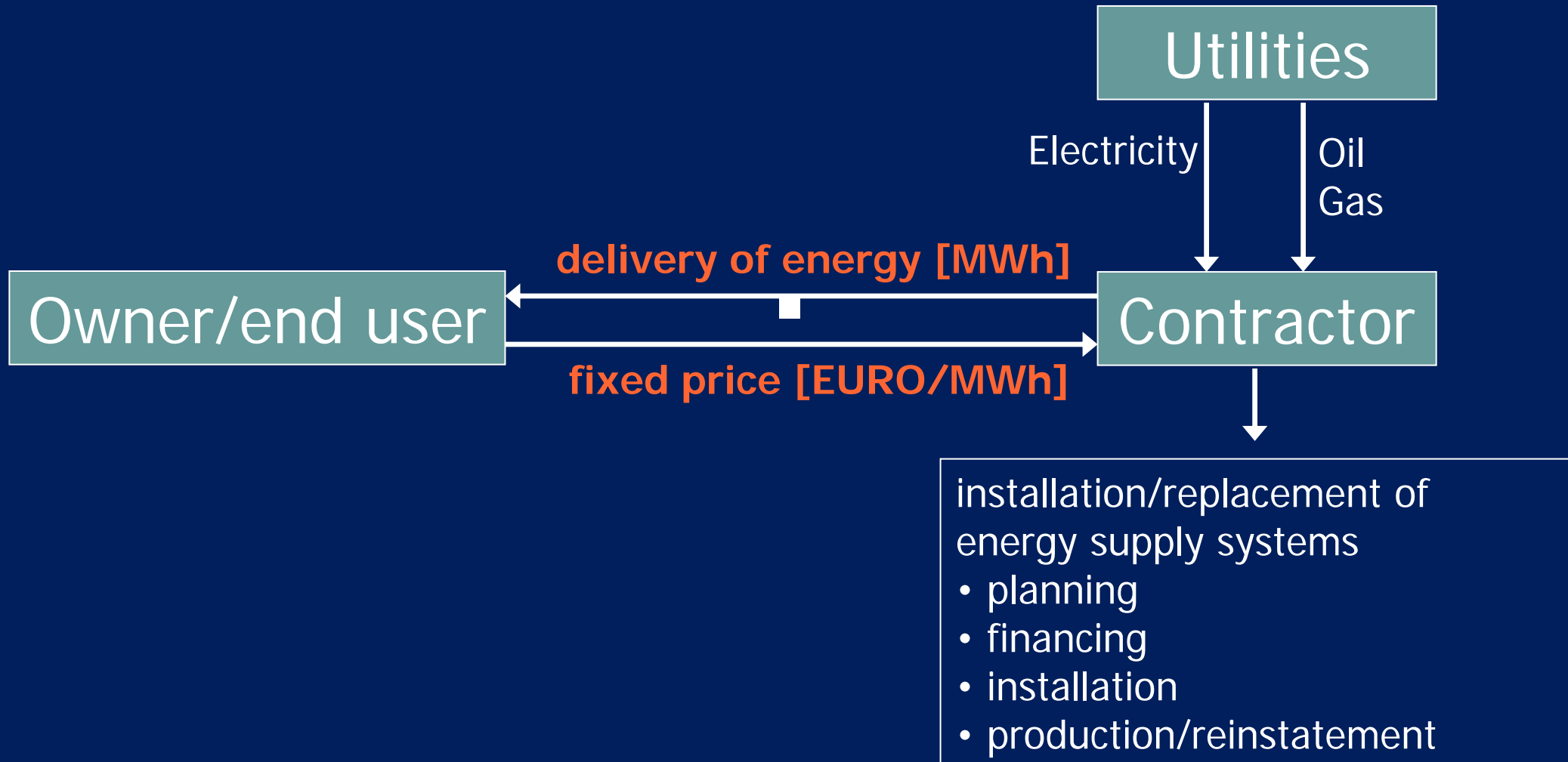
- Liberalisation
- Privatisation
- Outsourcing
- Environmental commitments



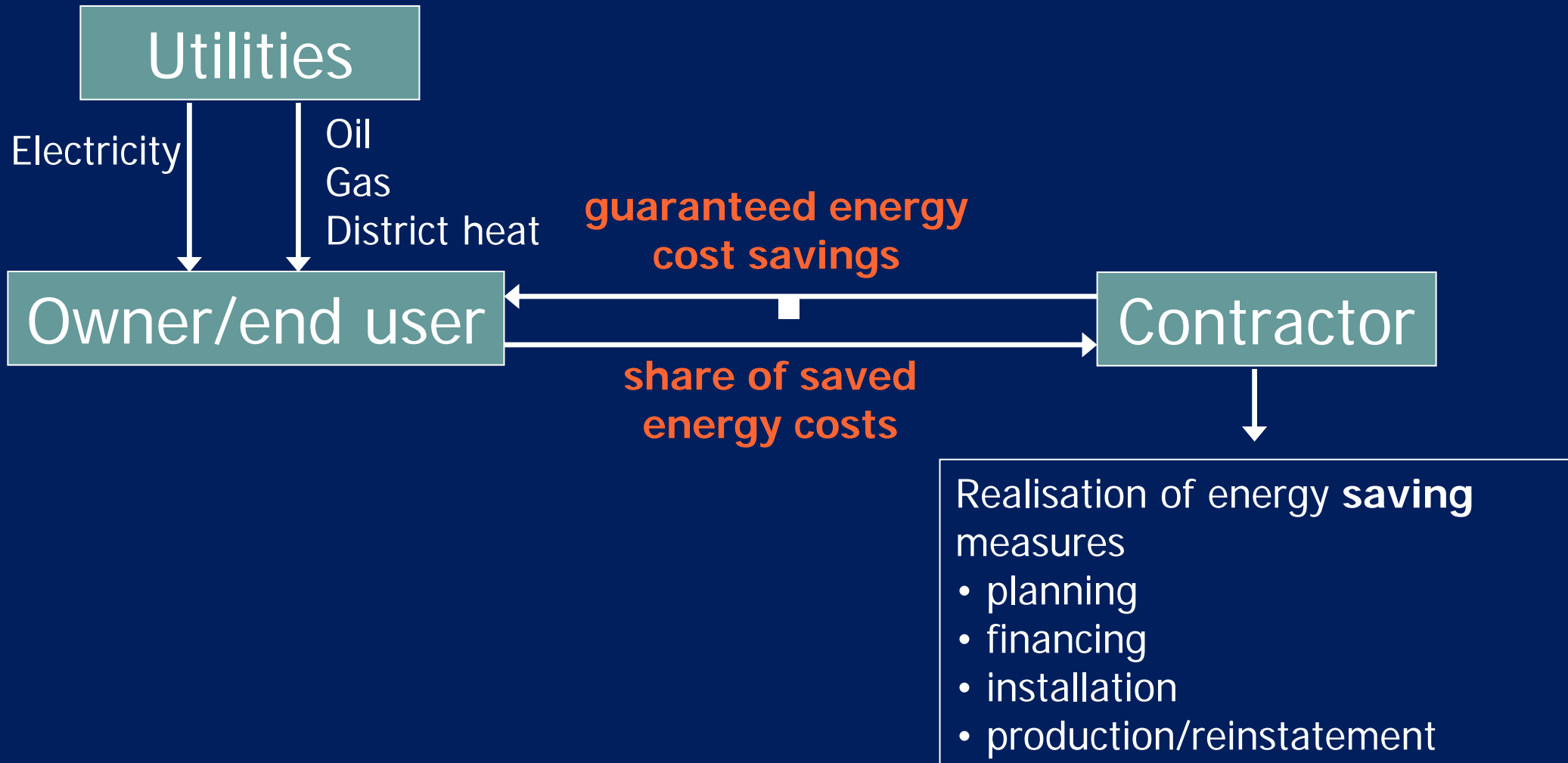
The Basic Principle



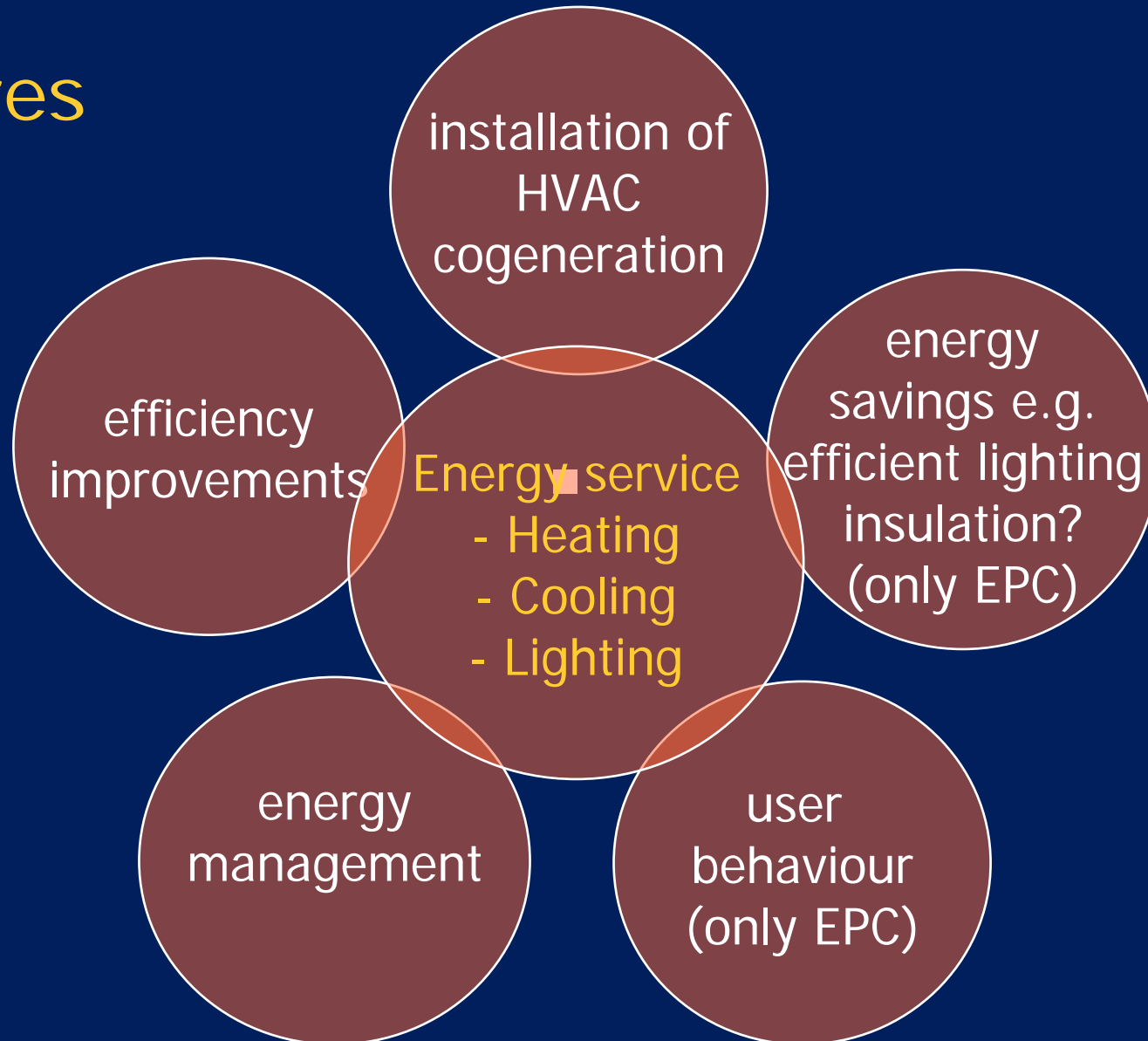
Installation-Contracting (IC)



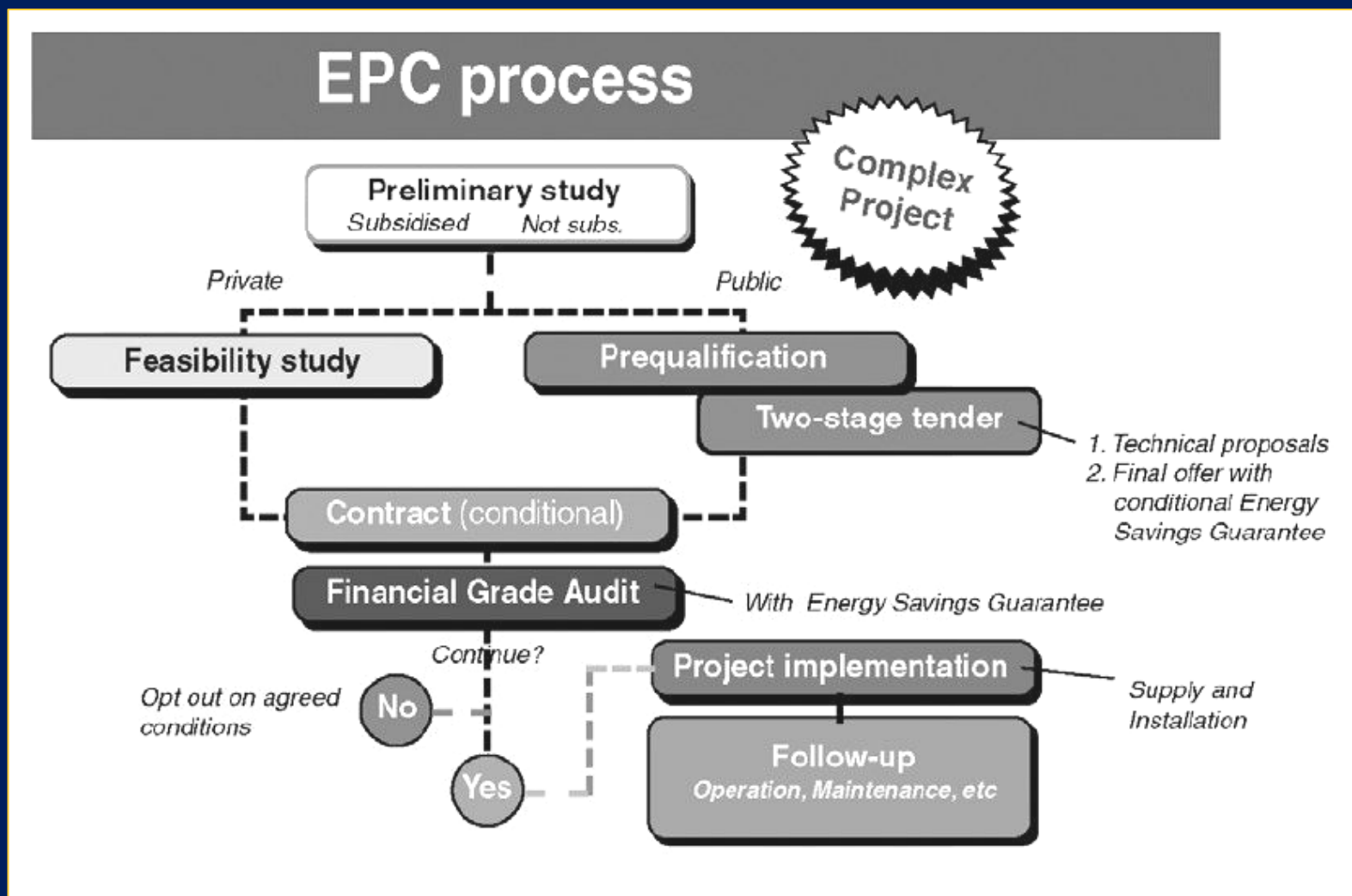
Energy-Performance-Contracting (EPC)



Measures



Process



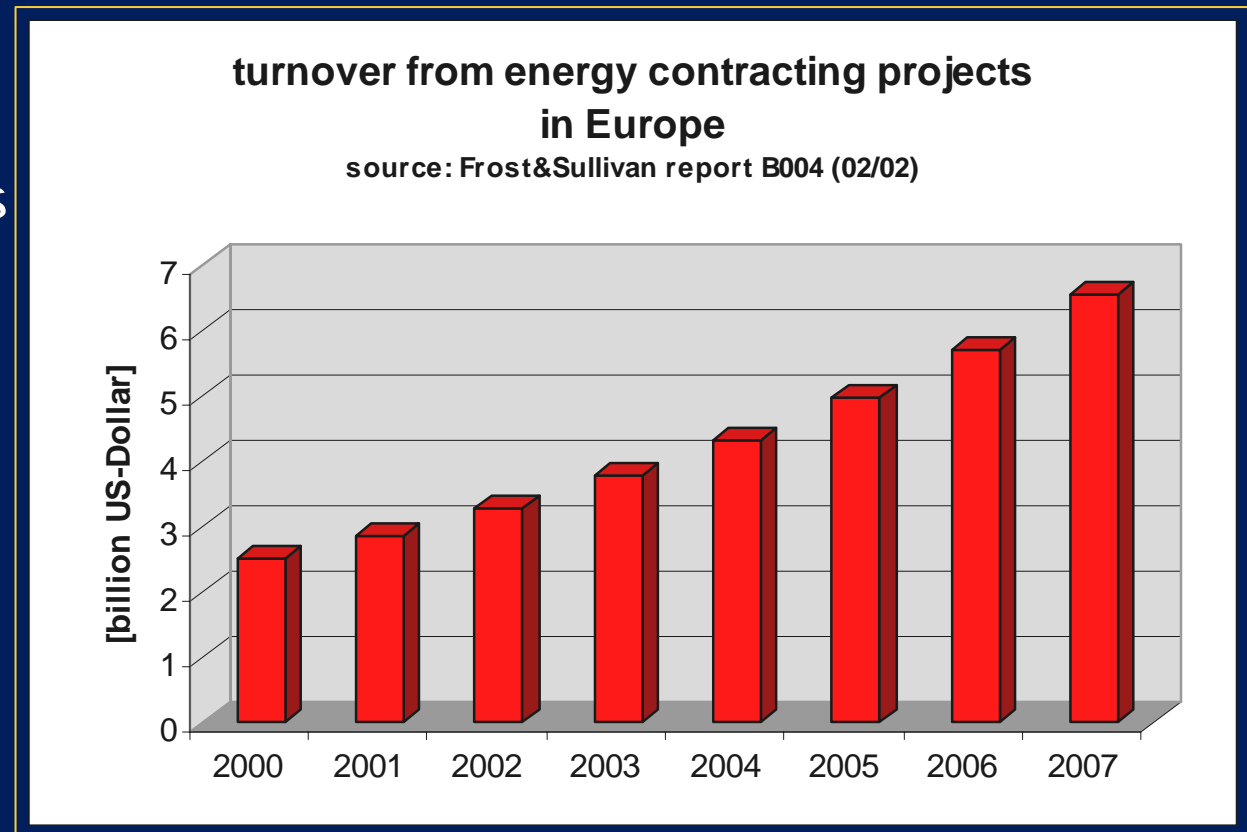
Contracting in Europe

market players (ESCOs)

- utilities
- manufacturers
- installation companies
- energy agencies
- consultants
- building industry

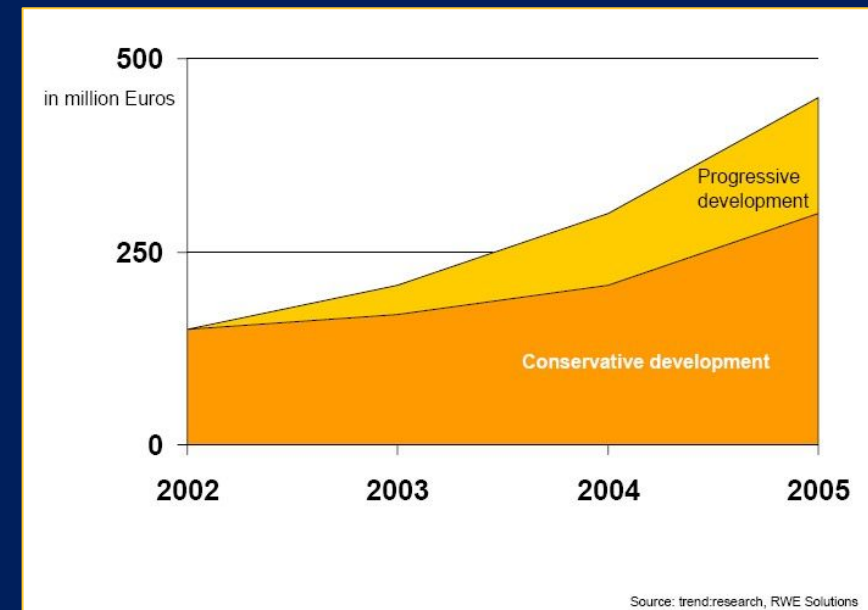
customers

- industry
- public sector
- housing associations



Contracting in Germany

- 90% of contracts as installation contracting
- continuous growth, but on a small basis
- built environment:
 - Technical potential for contracting: approx. 1.3 Mio. buildings
 - only approx. 7% of potential realised
- some of the **barriers**:
 - lacking awareness
 - long term contracts necessary
 - contractual and legal issues



Examples Installation Contracting

MVV Energie AG
Biomass district heat Bad Endorf

- 4 MW_{th}
- heat supply for new settlement, public buildings and hospital
- contract duration: 20 years



Examples installation contracting

Hessen Energie:
standardized CHPs

- ca. 55 modules
@ 50 or 110 kW_{el}
(=ca. 3 MW in 2001)

Econtract:
PV-System in solar settlement

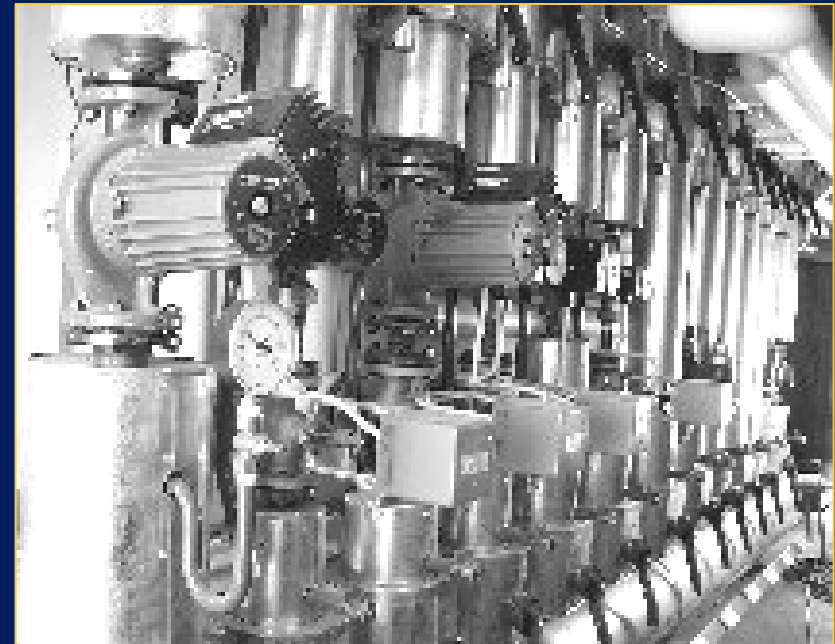
- 9 houses
- 22 kW solar energy



Example performance contracting

HEW/Vattenfall: Berlin / Energiesparpartnerschaft (ESP), Pool 5

- 36 real estates in Berlin
- Contract duration: 14 years (starting 2000)
- Baseline: 1.5 Mio Euro/a
- guaranteed savings: 23 %
- investment: 2,3 Mio. Euro
- measures:
 - improvement energy system
 - optimisation system control and setpoints
 - energy information system
 - promotion of energy conscious behaviour



Insulation and Contracting

benefits

- interaction insulation/
energy supply optimized
- insulation actions triggered

obstacles

- ownership/responsibilities/bank guarantees
- façade: long payback times > 10 years
- contracting-companies focus on their background
(energy utility, manufacturer of energy supply systems)
neglecting insulation

examples

- not often implemented, some projects in e.g. USA, Austria



Insulation and Contracting

Solutions: Realisation in framework of EPC

- planning, realisation and quality control by contractor
- financing by owner or contractor
- clear legal arrangements necessary
- especially insulation of roof or cellar ceiling
 - payback times < 10 years
 - no interference with regular retrofit measures



Outlook

- Positive market conditions and framework
- Growing market with increasing number of players
- Background of most ESCOs: ■ utilities, manufacturers of HVAC
- Installation Contracting: difficult
- Energy Performance Contracting: not core element, but market potential visible