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TALOTEKNIIKAN
TEKNOLOGIAOHJELMA 2002–2006

- **DEVELOPMENT OF A BUSINESS MODEL FOR FUTURE LIFE-CYCLE SERVICES FOR BUILDING SERVICES AND AUTOMATION (CUBENet)**
- **DEVELOPMENT OF A BUSINESS MODEL FOR BUILDING ENERGY PERFORMANCE SERVICES IN THE ASEAN REGION (EU ASEAN)**

- **Olosuhdetakuu**
- **Talotekniikan kokonaisvastuutoimitus**
- **Ominaisuusperustainen järjestelmätoimitus**
- **Kiinteistökannan energiahallintapalvelut**
- **Julkisen sektorin energiapalvelut**



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Key elements

Procurement

- Tender protocols
- Competing proposals on service not on technology
- Tools for invitation for tenders and comparison of service tender issues

Business

New concepts and operators business opportunities
Networks
Moneymaking tools

Service concepts

- Development of new service products
- Business cooperation (e.g. manufacturing, logistics, management and decision-making)
- International concepts

BUILDING SERVICES & AUTOMATION

ASSET & FACILITIES MANAGEMENT

Contract documents

- Elements for long term partnerships
- Credibility; sphere of responsibilities Duration, starting point
- Fuctionality and requirements Economic sanctions of the changes in service
- Control of the provision

Risk management
Identification of technological and economical risk
Tools for risk management

Verification
Measurements of technological functionality to be used for to settle the terms of contracts

Demand



Supply



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Concept
model 1

Concept
model 2

Concept
model ...

Concept
model 6

Procurement

Verification

Risk management

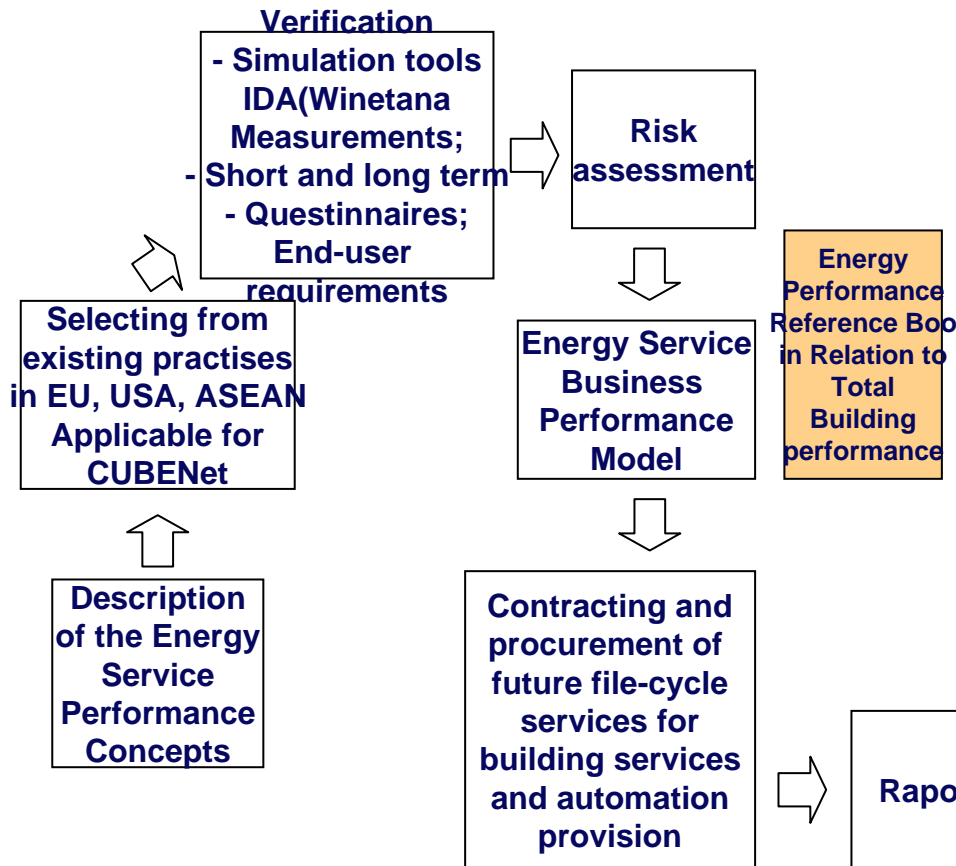
Contract documents

Business models

International research



- CUBENet tasks are on various disciplines:
- reference books is a mean to help in understanding unfamiliar concepts

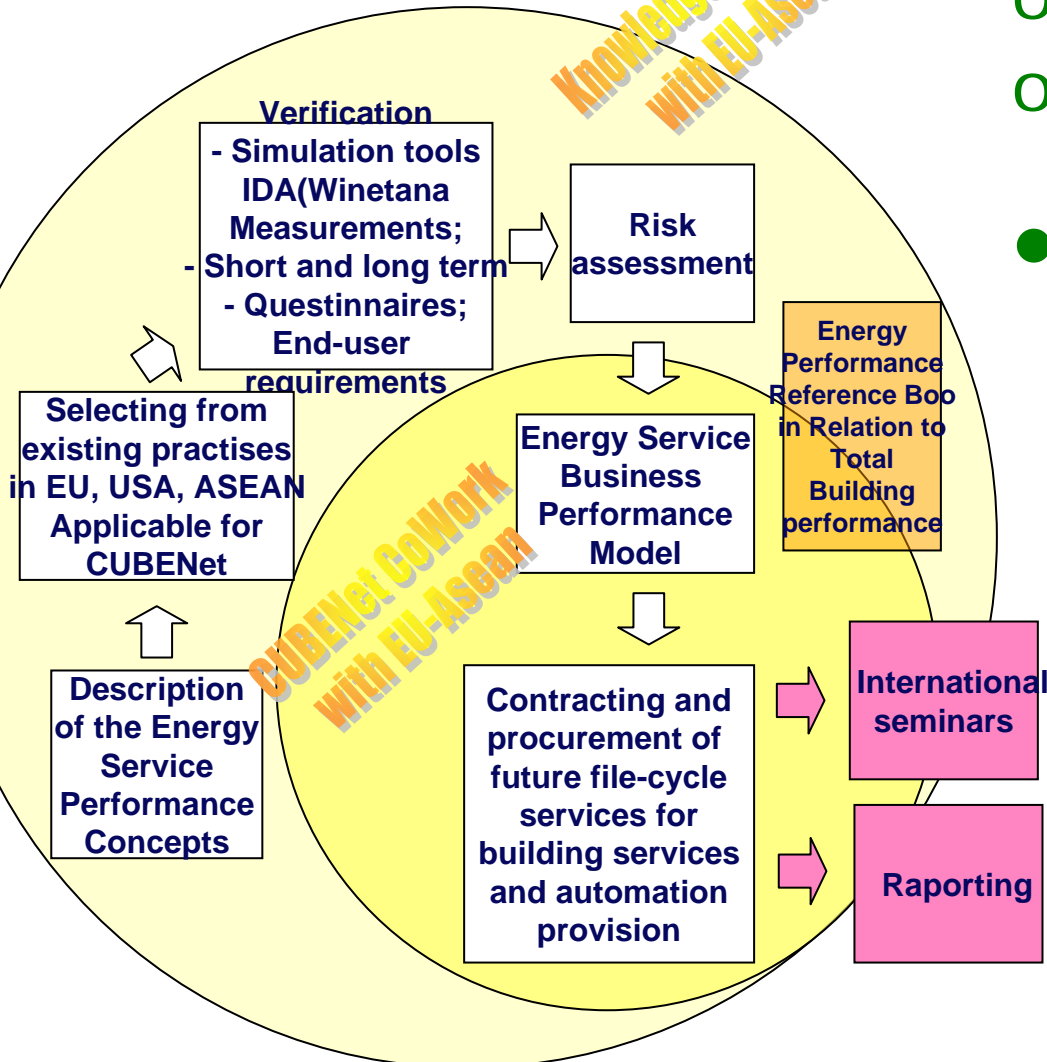




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CUBENet
Knowledge exchange
With EU-Asean



- Co-work between CUBENet and EU-ASEAN is divided into two:
 - knowledge exchange
 - knowledge creation together
- Reference Book might include variations of concepts in different regions



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Concept
model 1

Concept
model 2

Concept
model ...

Concept
model 6

Procurement

Best practises,
lessons learned
(SWOT, Reference Book)

Verification

Data and knowledge exchange
(Seminars, Reference Book)

Risk management

Knowledge exchange
(Seminars, Reference
Book)

Contract documents

Data and knowledge
exchange
(Seminars, example
templates)

Business models

Best practises, lessons learned (SWOT)
Case studies (Story telling method)
Description of Model

International research



Knowledge exchange

Knowledge creation together



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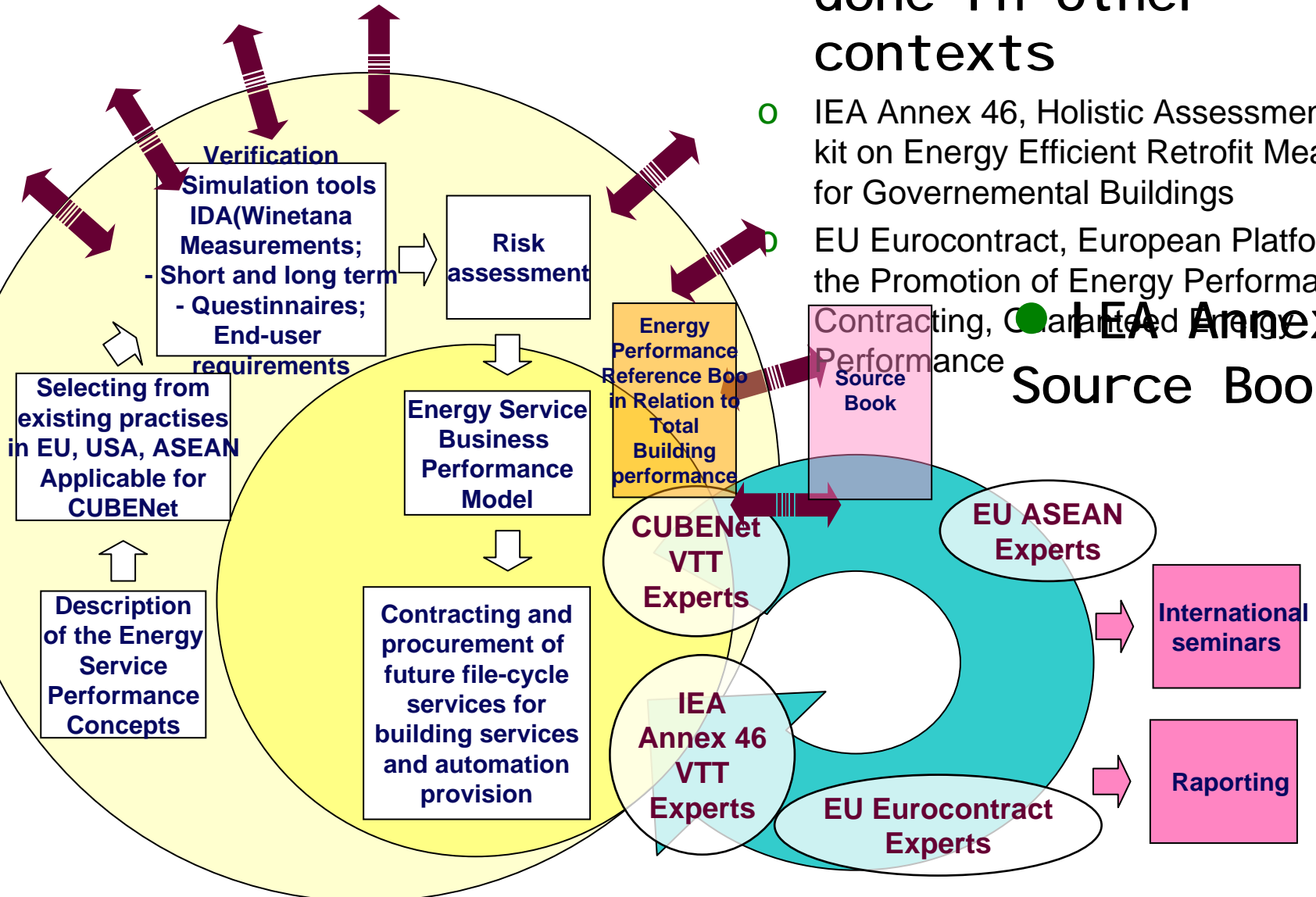
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- Co-work is drawing from the research done in other contexts

- IEA Annex 46, Holistic Assessment Toolkit on Energy Efficient Retrofit Measures for Governmental Buildings

EU Eurocontract, European Platform for the Promotion of Energy Performance Contracting, Guaranteed Energy Performance

● IEA Annex 46 Source Book

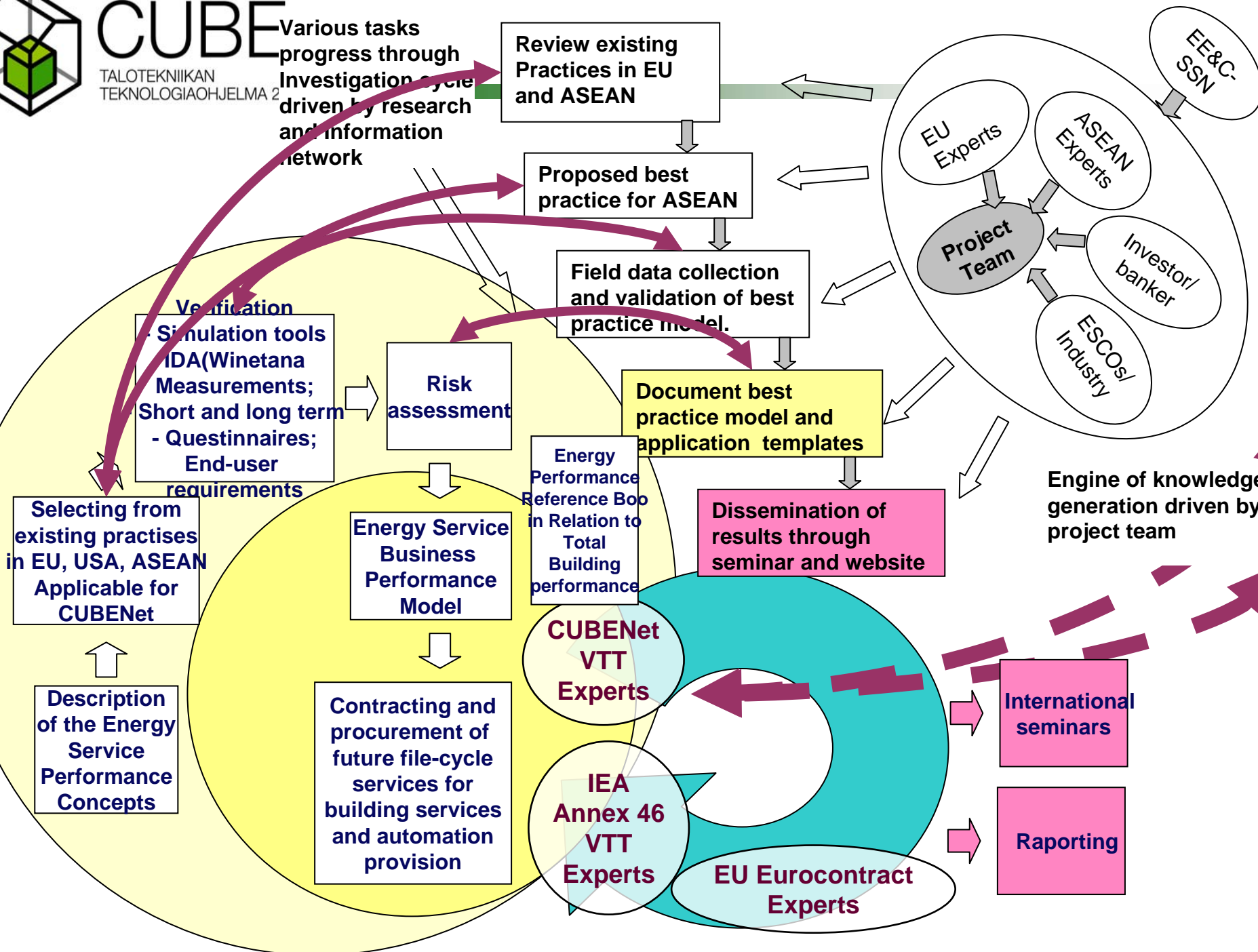




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Various tasks progress through investigation cycle driven by research and information network





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Motiva

Energiankäytön uusi suunta

Eurocontract

European Platform for the Promotion
of Energy Performance Contracting

Pertti Koski

8.3.2004



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- **ESCO Energy Service Company**
- **TPF Third Party Financing**
- **EPC Energy Performance Contracting**

 **EUROCONTRACT**
GUARANTEED ENERGY PERFORMANCE



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Eurocontract Targets 1/2

- To provide aggregated current know-how on EPC
- To provide key factors for success (experiences of projects implemented, case examples...)
- To build a European Platform on Energy Contracting (build a network for actors and a feedback loop between actors..)
- To build and increase capacity of market actors (transparency, risk minimising, trust..)



Targets 2/2

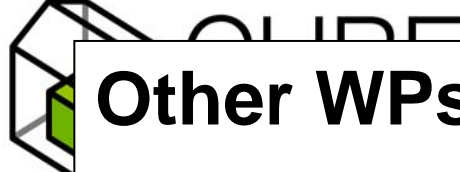
- To provide model documents and adapted procedures on EPC (...for different local conditions and legal frameworks..)
- To provide quality guidelines.
- **Further developing new approaches in innovative energy services and financing schemes (e.g. linking measures to facility management or leasing applications)**
- **Prepare for more local implementation of EPC. Only more projects that are implemented under different framework conditions will help to trigger the potential that is possible**



WP 1 (BE, Berlin Energy Agency)

Overall project Coordination

- **Consortium agreement**
- **Communication**
 - **Meetings (1+3 int meetings)**
 - **Internal Commun.**
 - **Reporting**
 - **Interim report (after 15 months)**
 - **Short reports (every 6 months)**
 - **Final report**



Other WPs

- **WP 2 European Energy Contracting Platform (BE)**
- **WP 3 Innovative Energy Services and Financing (Graz EA)**
- **Wp 4 Quality Standads and Certification Issues of EPC (Graz EA)**
- **WP 5 National Work Programmes**
- **WP 6 International Dissemination (BE)**



WP 5.5 ESCO Services for Municipalities (Finland)

Targets


- **New procedures and agreement guidelines for ESCO's and municipalities for different situations (new buildings, retrofitting projects)**
- **Increasing the volume of ESCO-projects and developing the ESCO services for the municipalities**

Tasks

- **Task 1 Analyses of main barriers**
- **Task 2: Development of municipal ESCO guidelines**
- **Task 3: Information dissemination of the Finnish experience in marketing and implementing ESCO services in the municipal sector.**
- **Task 4: Seminar to representatives of the municipal building sector to introduce EPC practices and use of ESCO services in other European countries.**
- **Developing pilot contracts**

Milestones

- **M N2 1. The barriers and success factors identified**
- **M N2 2. Recommendations (draft 1)**
- **M N2 3 Seminar programme and material ready**
- **M N2 4 Interim country report**
- **M N 2 5 Final country report**



GUIDE

Time table, WP 6 Finland (months from the beginning)

D 6.5.1 (Finland)	Recommendations for municipalities	26
D 6.5.2	Information dissemination material	8
D 6.5.3	Municipal ESCO -agreement guidelines	18
D 6.5.4	National seminar for municipal building sector	10
D 6.5.5	Interim country report	14
D 6.5.6	Final country reports	26



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Work packages/ Motiva

WP		Hours	Costs
● WP 1 Coordination and reporting	120	14 608	
● WP2 European energy contracting platform	120	9 800	
● WP3 Innovative energy serv. and financing	104	8 200	
● WP 4 Quality standads & certification	120	10 208	
● WP5 National work package		300	44 520
● WP 6 International dissemination	16	1 000	
Total		780	88 352

Eurocontract

European Platform for the Promotion of Energy Performance Contracting

Promote and develop ESCO/ EPC services for municipalities

- services for building projects and retrofits
- Model contracts, pilot projects
- information dissemination
- other.

Work costs	29,6 k€
Subcontracts	14 k€
Travel costs	10
Others	11
Subtotal	64,6
Indirect eligible costs	23,7 k€
Total	88 k€

Work packages

WP1	120 h	14,6k€
WP2	120 h	9,8
WP3	104 h	8,2
WP4	120 h	10,2
WP5	300	44,5
WP 6	16 h	1
Total	780 h	88 k€

FINANCING

TOTAL 109 k€

EU/EIE
41,9 k€

Ministry of
Trade and Industry
23,4 k€

National Technology
Agency of Finland &
Partners
43,7

- **Enterprises**
- **Municipalities**
- **etc.**

CUBENet

Life cycle services for building technology in the future
(Talotekniikan tulevaisuuden elinkaari palvelut)

The target is to develop grounds for LC services:

- Procurements
- Initiatives for LC services
- Model contracts
- Methods for verifying
- Risk control

Detailed targets will be defined together with partners when starting the project

Total costs about 1 M€, time schedule 2005-2008

Motiva

- focus: services for municipalities
- costs: 109 k€

CUBENet - Life cycle services for building technology in the future

Funding: National Technology Agency of Finland, private companies and municipalities (about 1 million €)

Participants: 15 private companies and municipalities so far

Time schedule: 2005...2007



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Tasks	Services				
	A	B	C	...	Services for Municipalities etc. ESCO & EPC & LCC
1. Service concepts					<div style="border: 2px solid red; padding: 5px; display: inline-block;"> <div style="border: 1px solid green; padding: 2px; display: inline-block;">Eurocontract</div> <div style="border: 1px solid green; padding: 2px; display: inline-block; margin-left: 10px;">Cubenet</div> </div>
2. Procurement, model contracts					
3. Risk management, verification					
4. Business concepts, networks					
International cooperation					
Information dissemination					