This project has received funding from the European Union's Horizon 2020 research and innovation programme

The role of the EPC facilitator and EPC 2.0

Factor4, Johan Coolen

Brussel, March 27th 2019

This project has received funding from the European Union's Horizon 2020 research and innovation programme

Agenda

- Factor4
- QualitEE project
- EPC facilitator
  - Role
  - The human factor
  - Good practice
- EPC 2.0
  - Contract overview
  - Residual value
  - Circular materials

This project has received funding from the European Union's Horizon 2020 research and innovation programme

- **Building Performance Consultants**
  - Since 2006
  - 10 senior experts, Belgium
- **Scope**: improve building performance of existing buildings*:*
  - Energy
  - Maintenance
  - Comfort
  - Circular materials
- **Approach**: performance based implementation (e.g. EPC contracts)
  - Facilitator of EPC contracts : public sector
  - ESCO in private sector (SMEs)

This project has received funding from the European Union's Horizon 2020 research and innovation programme

QualitEE project

Main objectives:

- Development of quality assurance standards of EE services
  - Technical Quality
  - Financial Quality
- Increased trust in EE services by clients and financers
- Easier financing and more EE-projects

☞ *Focus on performance based EE services (EPC, ESC,…)*

More info: www.qualitee.eu/be

This project has received funding from the European Union's Horizon 2020 research and innovation programme

QualitEE project

9 Technical quality assurance criteria

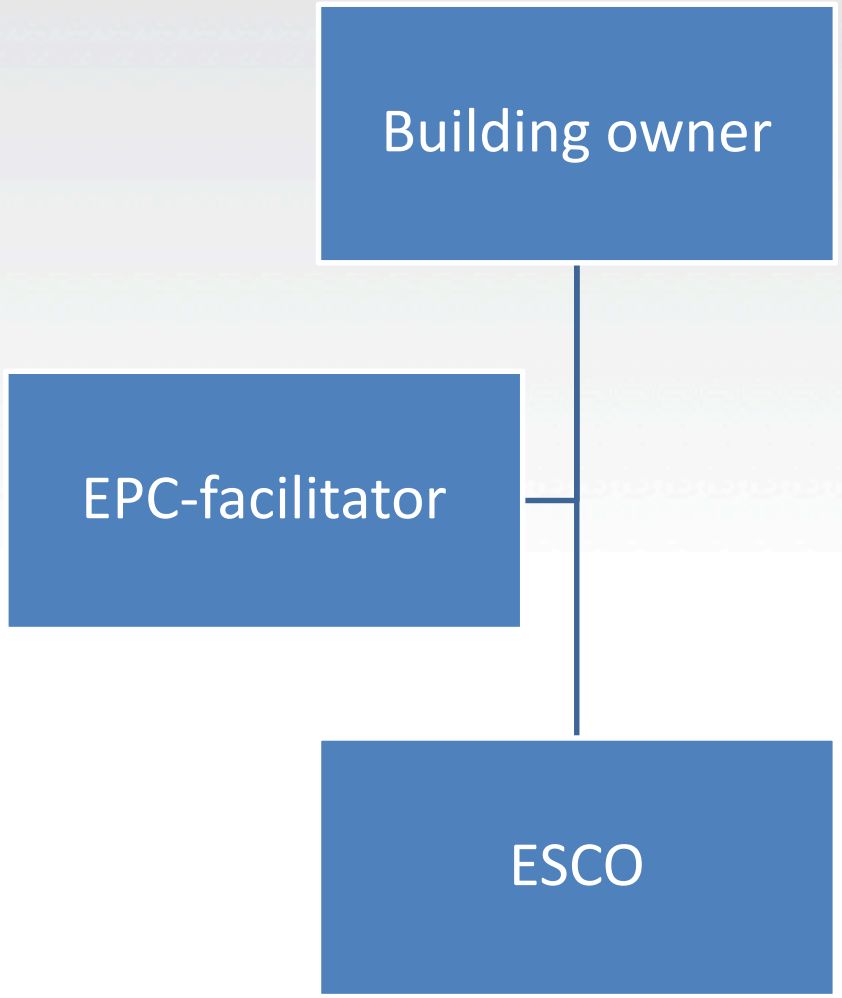
QC-1	Adequate **analysis**
QC-2	Quality of **implementation** of technical EE improvement measures
QC-3	Savings **guarantee**
QC-4	Verification of energy savings (**M&V**)
QC-5	**Value retention** and maintenance
QC-6	**Communication** between the EES provider and the client
QC-7	Compliance with us**ers' comfort** requirements
QC-8	Information and **motivation of users**
QC-9	**Comprehensible contractual** stipulations

-> verified via 38 assessment criteria

More info: www.qualitee.eu/be/publications/draft-guidelines-of-european-quality-criteria

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC facilitation: role



This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC facilitation: the human factor

- **EPC-facilitation =**
  - Technics (M&V, audit,…)
  - Contracting
  - **Change management**

- **EPC-facilitator = team**, individual experts should recognize their limitations
- **Watch out for 'hard-core experts'** (juridical, technical, financial,….), they tend to…
  - focus too much on risks in their domain
  - send too complex/technical messages towards client

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC facilitation: the human factor

- ✓ **Explain and re-explain** > 5x the basic principles of EPC
  - … bit by bit
  - … on all levels of the organization
- ✓ Listen to the **needs of your client**, the ideal is that he concludes himself that EPC fulfills his/her needs
- ✓ Deliver contract only **when client is ready** for it
  - Avoid having to answer long lists of questions about the contract that are basically generated by the fact that the client doesn't understand the basic principles
- ✓ **Soft + step by step + personalized approach** that answers the upcoming questions of the client and prepares them for EPC. Slower is faster, less is more…
- ✓ EPC = abstract concept. **Make it concrete and recognizable** by showing pictures of their buildings, energy consumption graphs, etc.

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC facilitation: good practice

Good practice example: **EPC initiation & coaching trajectory** at Province Flemish-Brabant, with support of EY and Factor4)

Four step approach:

- Step 1: **EPC training** of all stakeholders (politicians, technical staff,…)
- Step 2: **EPC feasibility study** including walk through audit
- Step 3: **interactive jam sessions** with all stakeholders about legal, technical and operational aspects of EPC
- Step 4: **municipality procures EPC-facilitator**

'JAM-sessions' with municipal officials and *EPC-experts*

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC facilitation: good practice

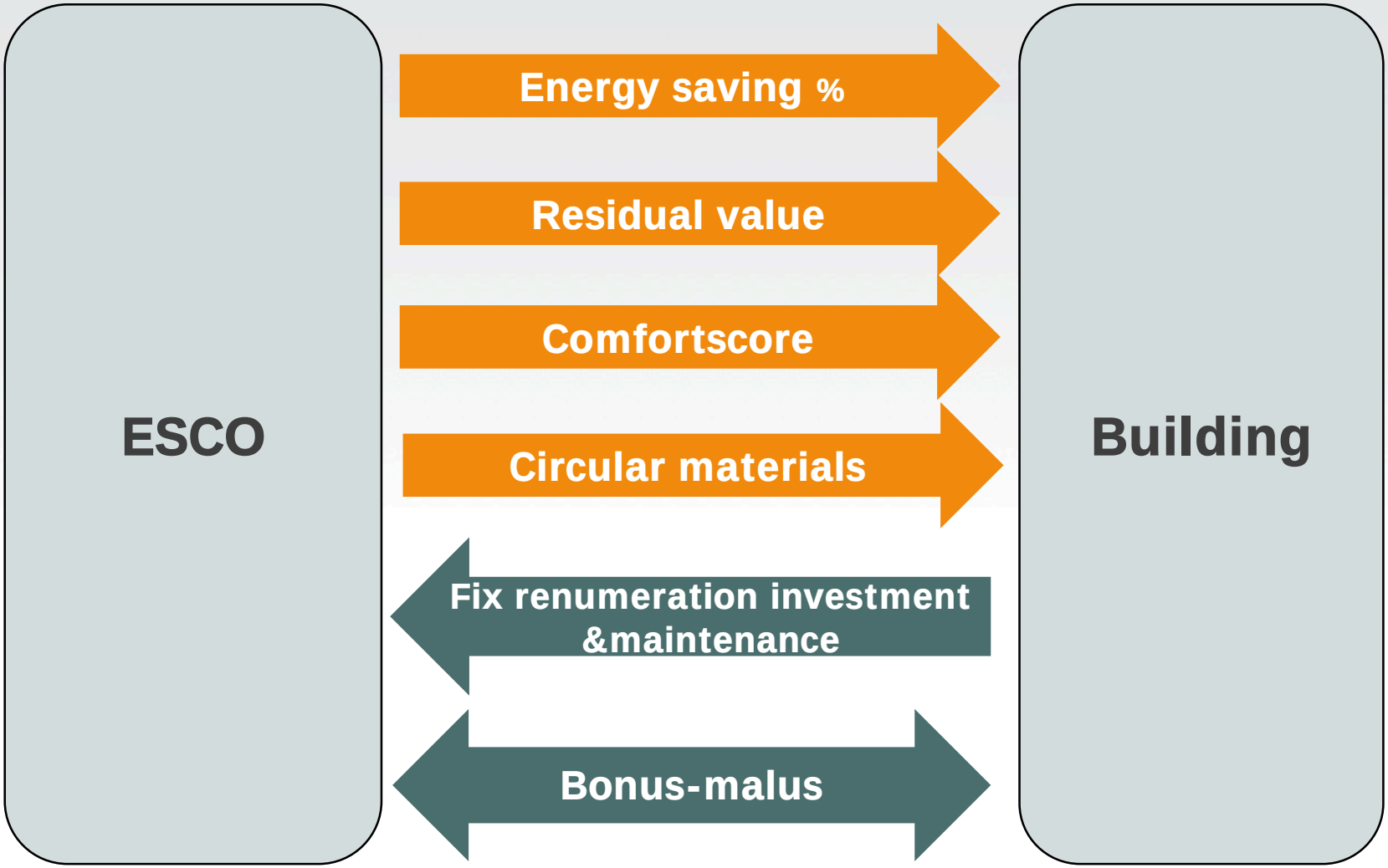
16 municipalities started trajectory (2014-2016)

- ✓ **70%** (11) went for **EPC-project** >> 10% EPC success rate before!!
- ✓ **20%** (3) went for **conventional EE approach**, eg because of too few buildings/small baseline

Major success → strong focus on professional process management pays off!

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC 2.0: contract overview



Source: Factor4, 2019

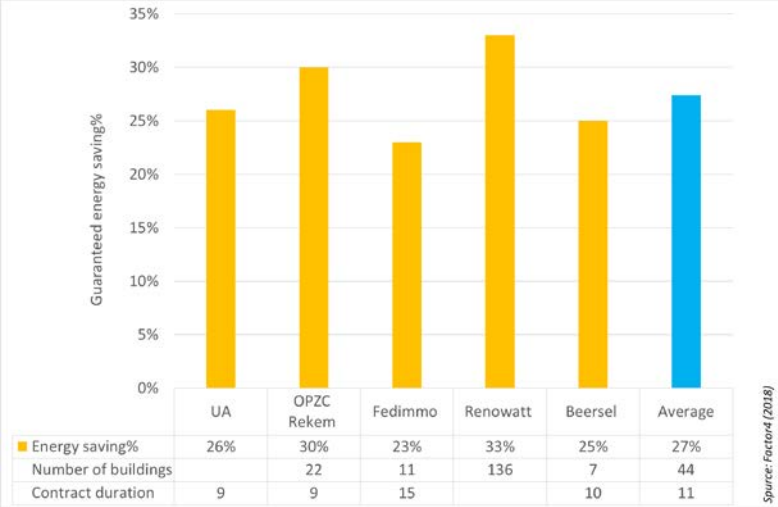
This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC 2.0: residual value

The problem:

- EPC-projects until now: only ±27% energy saving…
- Mainly technical measures (HVAC, lighting,…), almost no insulation measures

☹ *insulation measures are crucial for realising climate neutral buildings…*



	UA	OPZC Rekem	Fedimmo	Renowatt	Beersel	Average
Energy saving%	26%	30%	23%	33%	25%	27%
Number of buildings		22	11	136	7	44
Contract duration	9	9	15		10	11

The solution:

- Create incentive for ESCO for proposing measures with lifespan of 30 years

? *but how to do it within a reasonable contract duration, ie ± 10 years?*

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC 2.0: residual value

Conditie 3

56105 CV-leidingen onderstation

onderstation

K2GV01 Verval tussen 50%-75% van de levensduur

Ernst	Intensiteit	Omvang	Conditie	Risico/prioriteit
Gering	2	5	3	Gebruik en bedrijfsproces - matig effect Technische vervolgschade - matig effect

Activiteit:	2020	Hvh	Totaal
Herstellen		80,00 m1	€ 1.000

enige tekenen van corrosie geconstateerd. niet ernstig, incidenteel.

Conditie 2

56101 CV-expansievat voorschakelvat

onderstation

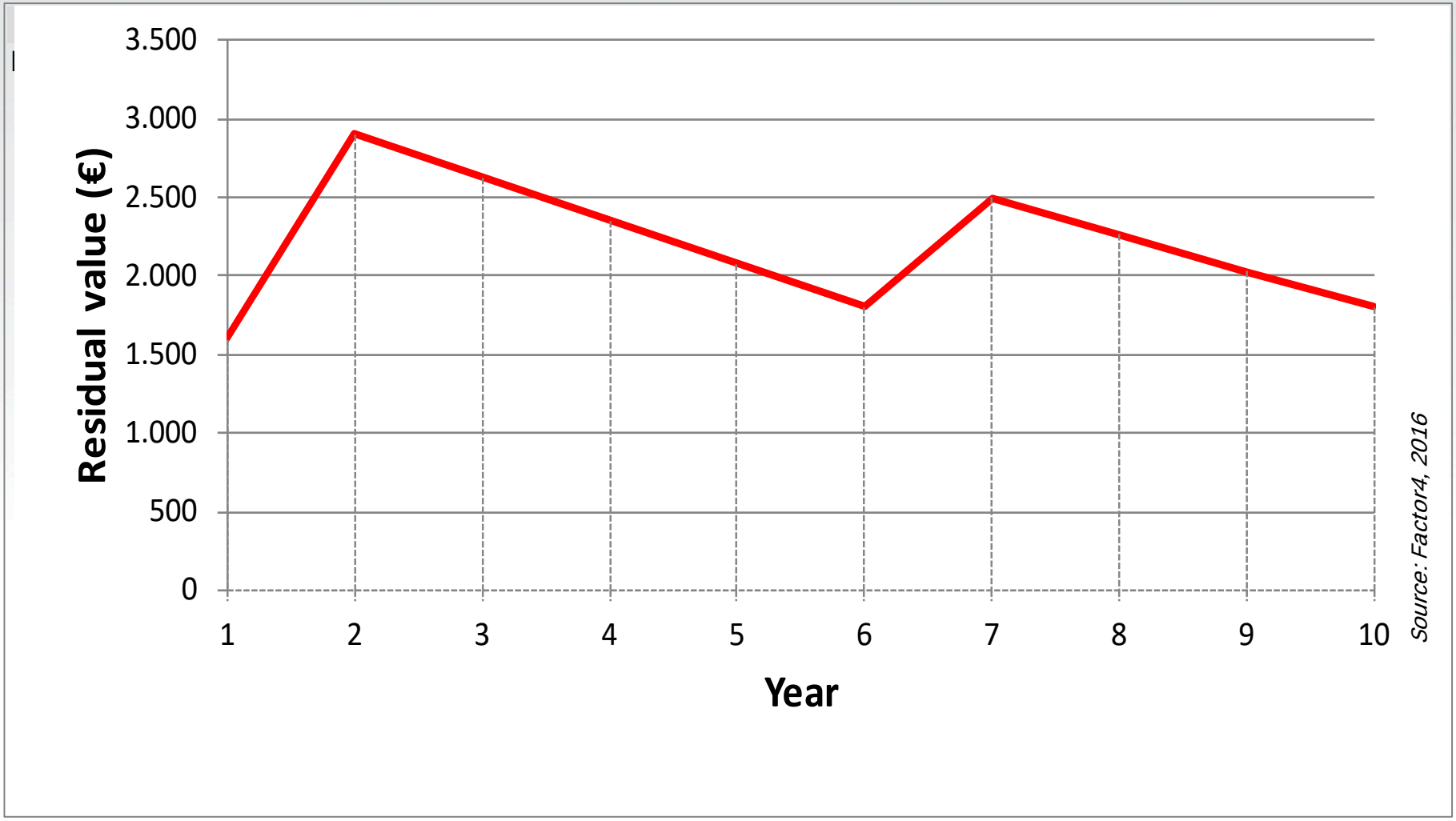
K2GV02 Verval tussen 75%-87,5% van de levensduur

Ernst	Intensiteit	Omvang	Conditie	Risico/prioriteit
Gering	2	4	2	Gebruik en bedrijfsproces - matig effect Technische vervolgschade - matig effect

Activiteit:	2026	Hvh	Totaal
vervangen expansievat		1,00 st	€ 2.050

This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC 2.0: residual value



This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC 2.0: residual value

Advantages

✓ **Simple contract**

- 5-20 pages maintenance clauses (>50 pages in conventional maintenance contract)

✓ **Short contract duration**

… while long term strategy of ESCO is honoured via additional residual value

✓ **Less follow-up costs client, less 'discussion's'**

- No rigid input control of maintenance -> flexibility↗ and follow-up costs ↘
- No long discussions about necessity replacement investments
- No/less juridical disputes (NEN 2767 = official standard)

This project has received funding from the European Union's Horizon 2020 research and innovation programme

Advantages (continued)

✓ **ESCO will minimise maintenance cost, e.g.**

- More focus on preventive maintenance and measures with long technical lifetime (high quality equipment,…), as…
- Cost future replacement investments in project ↘
- Increased building value at end ↗

✓ **Higher flexibility e.g.**

- Simple exit option
  - Simple exit clauses: ESCO rewarded for realised works via additional residual value
- Solution for Owner-tenant issue e.g.
  - Tenant (long term, e.g. large company, public authority,…) contracts the ESCO
  - Tenant guarantees residual value to the owner at end of contract
  - Tenant contracts and follows up autonomously the ESCO

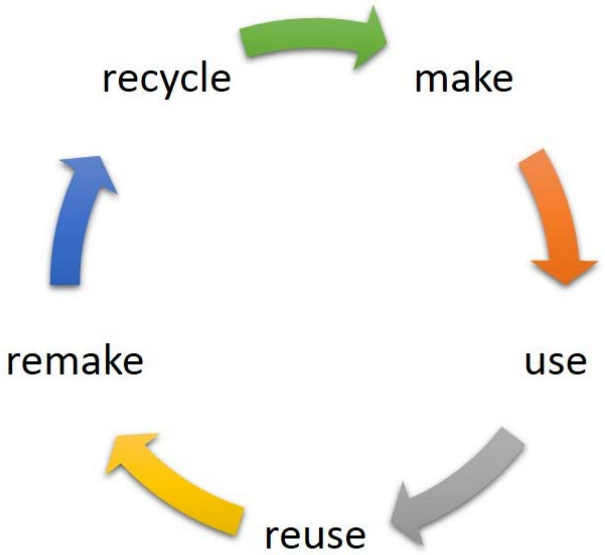
This project has received funding from the European Union's Horizon 2020 research and innovation programme

EPC 2.0: circular materials

Performance criterium: **environmental impact** of elements installed (e.g. pump, boiler, insulation material,…) =

~ Environmental cost of materials during production

~ Demontability, reusability and recyclability of elements



This project has received funding from the European Union's Horizon 2020 research and innovation programme

Questions?

This project has received funding from the European Union's Horizon 2020 research and innovation programme

Contact

Factor4, Johan Coolen

Website: www.factor4.eu

Office: Antwerp, Belgium