



EPC market survey: barriers, drivers and potential benefits from quality assurance

Energy efficiency policies toward 2030 - opportunities and challenges for Central Europe

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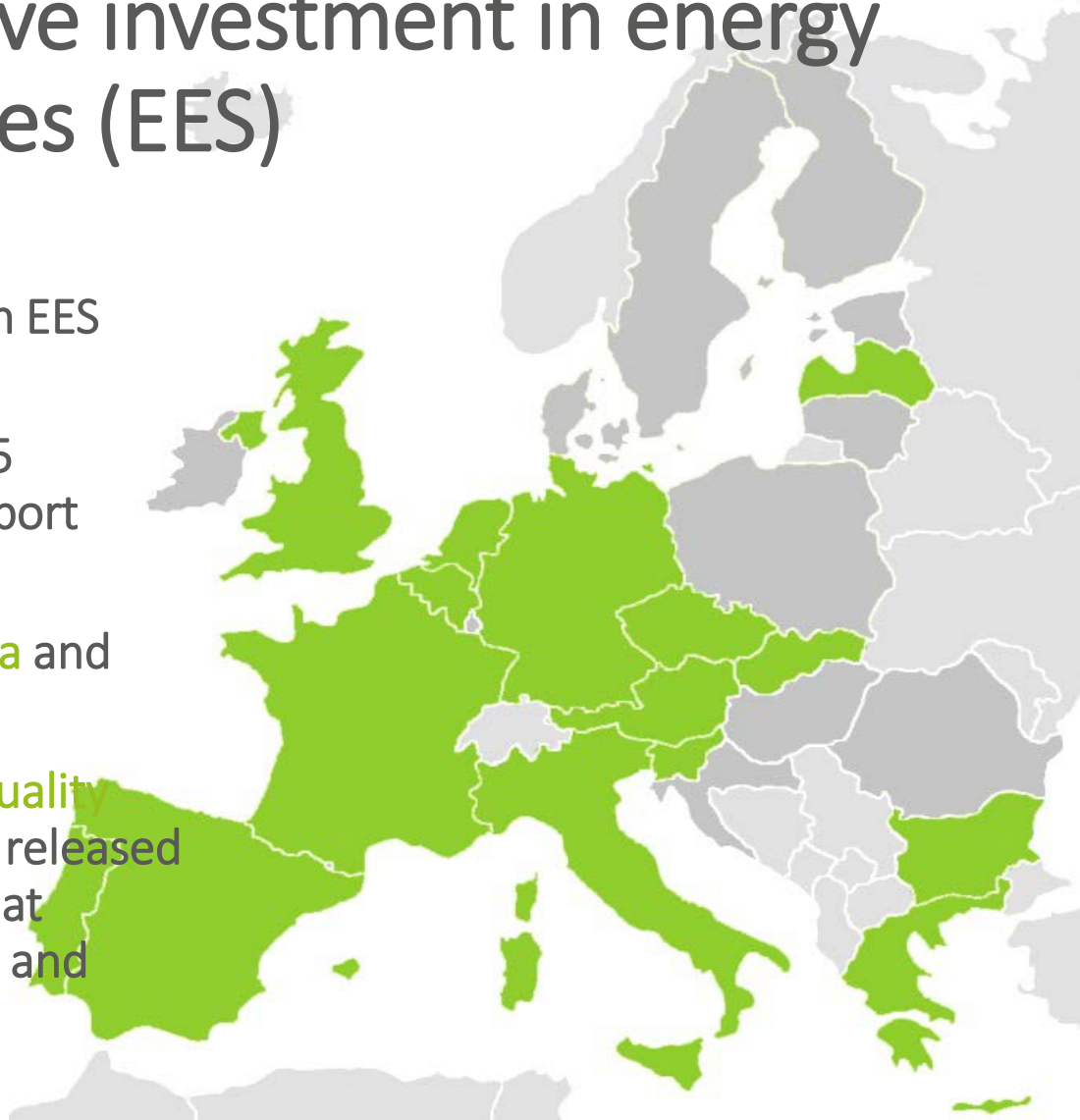
26 November 2018, Prague





QualitEE project – developing quality assurance to drive investment in energy efficiency services (EES)

- ✓ Extensive research has been conducted across 15 European EES markets
- ✓ Market research reports for 15 countries and summary EU report have been published
- ✓ Aims to develop quality criteria and assurance schemes for EES
- ✓ Draft technical and financial quality guidelines for EES have been released and reviewed by stakeholders at workshops in Brussels, Prague and Vienna





Scope of the QualitEE project: Energy Efficiency Services (EES)

ENERGY PERFORMANCE CONTRACTING (EPC)

- implementation of energy saving measures to provide guaranteed energy savings
- energy saving guarantee
- a complete reconstruction
- payment is based on the amount of energy savings
- ongoing measurement & verification services

ENERGY SUPPLY CONTRACTING (ESC)

- efficient supply of energy such as heat, steam or electricity contracted, measured and delivered in physical units (e.g. MWh).
- no saving guarantee
- usually focused on boiler house only
- payment based on the amount of energy delivered.



Key features of the Energy Performance Contracting (EPC)

- **Turnkey service:** The EPC provider provides all the services required to design and implement a comprehensive energy saving project at the customer's facility, from initial energy audit to measurement and verification (M&V) of savings
- **No need for up-front capital:** EE investments are repaid directly from energy savings and related financial savings, so there is no need for up-front capital from the customer
- **Savings guaranteed:** The EPC provider (ESCO) guarantees the achievement of the contractually agreed level of savings and is obliged to compensate any shortfalls in savings
- **Risks for customers minimised:** The EPC provider assumes the contractually agreed performance risks of the project
- **Support in securing financing:** The capital to finance the EPC project can either be supplied out of the client's own funds or by the EPC provider or by a third party.



QualitEE Online survey 2017

109

EES providers

79

EES facilitators

15

Countries

Austria, Belgium, Bulgaria, the Czech Republic, France, Germany, Greece, Italy, Latvia, the Netherlands, Portugal, Slovakia, Slovenia, Spain, the UK



<https://qualitee.eu/market-research/>



QualitEE personal interviews 2017

37

representatives of finance houses and governmental programs funding EES

42

EES clients

13

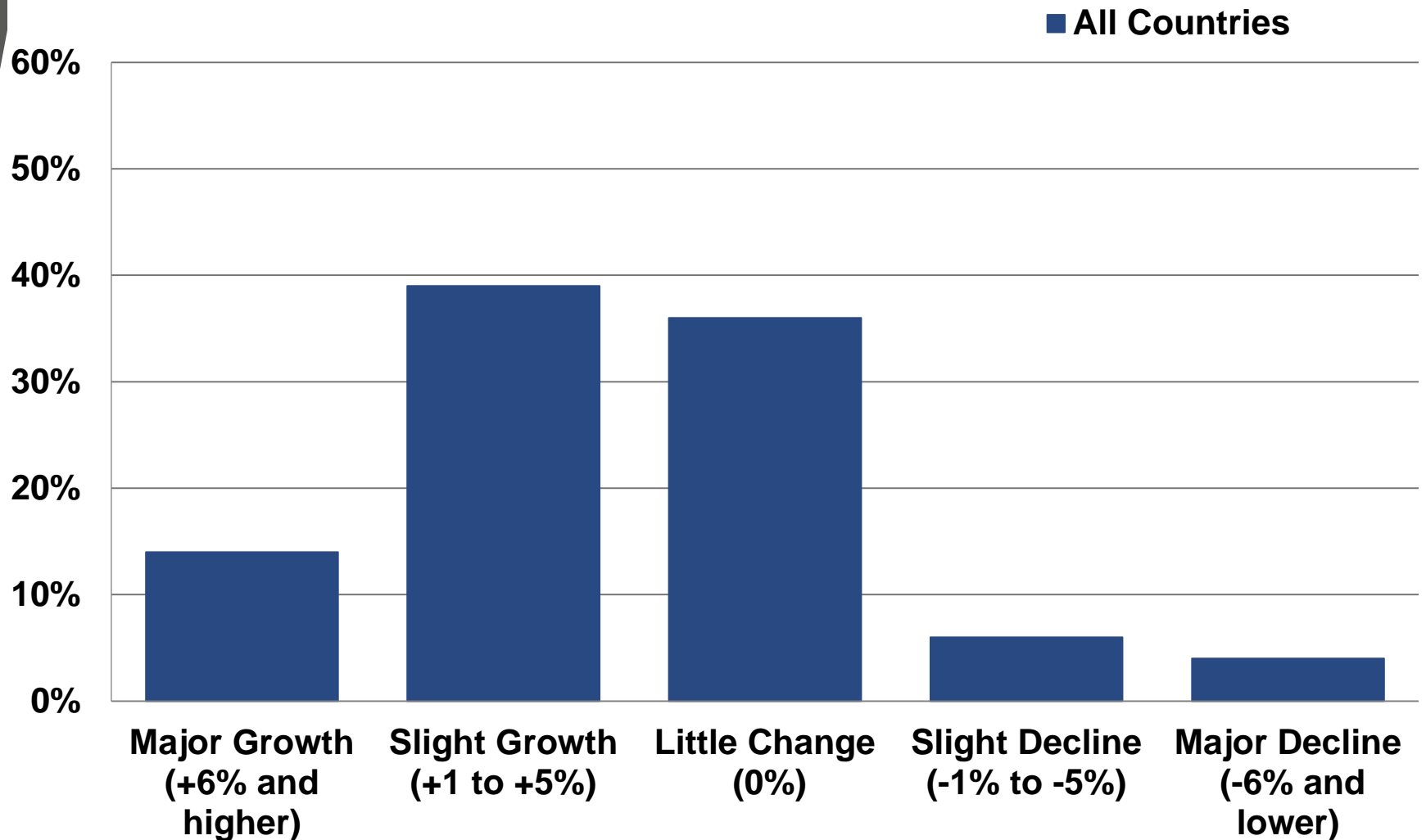
Countries

Austria, Belgium, Bulgaria, the Czech Republic, Germany, Greece, Italy, Latvia, Portugal, Slovakia, Slovenia, Spain and the UK



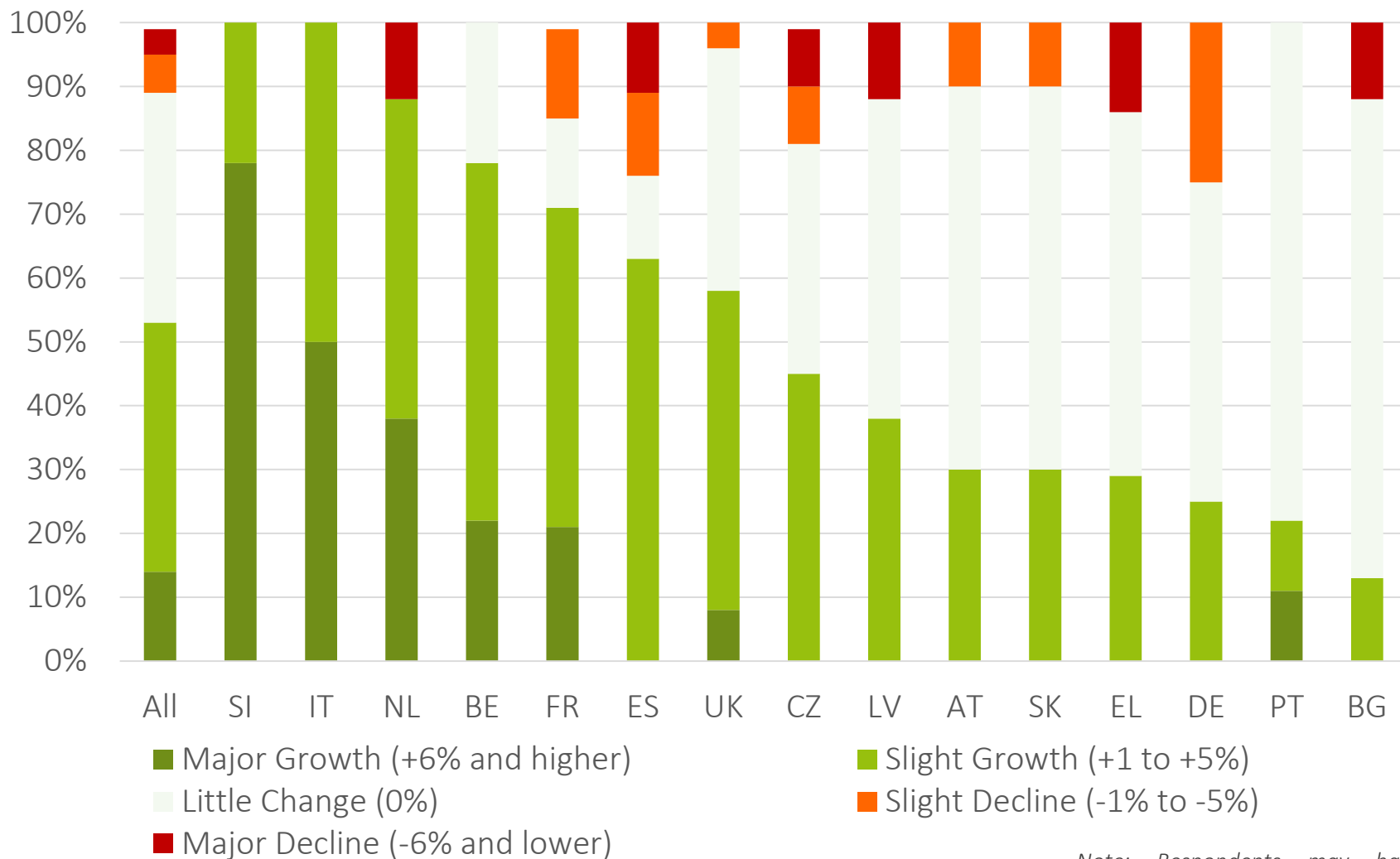


EPC markets grew slightly in 2017





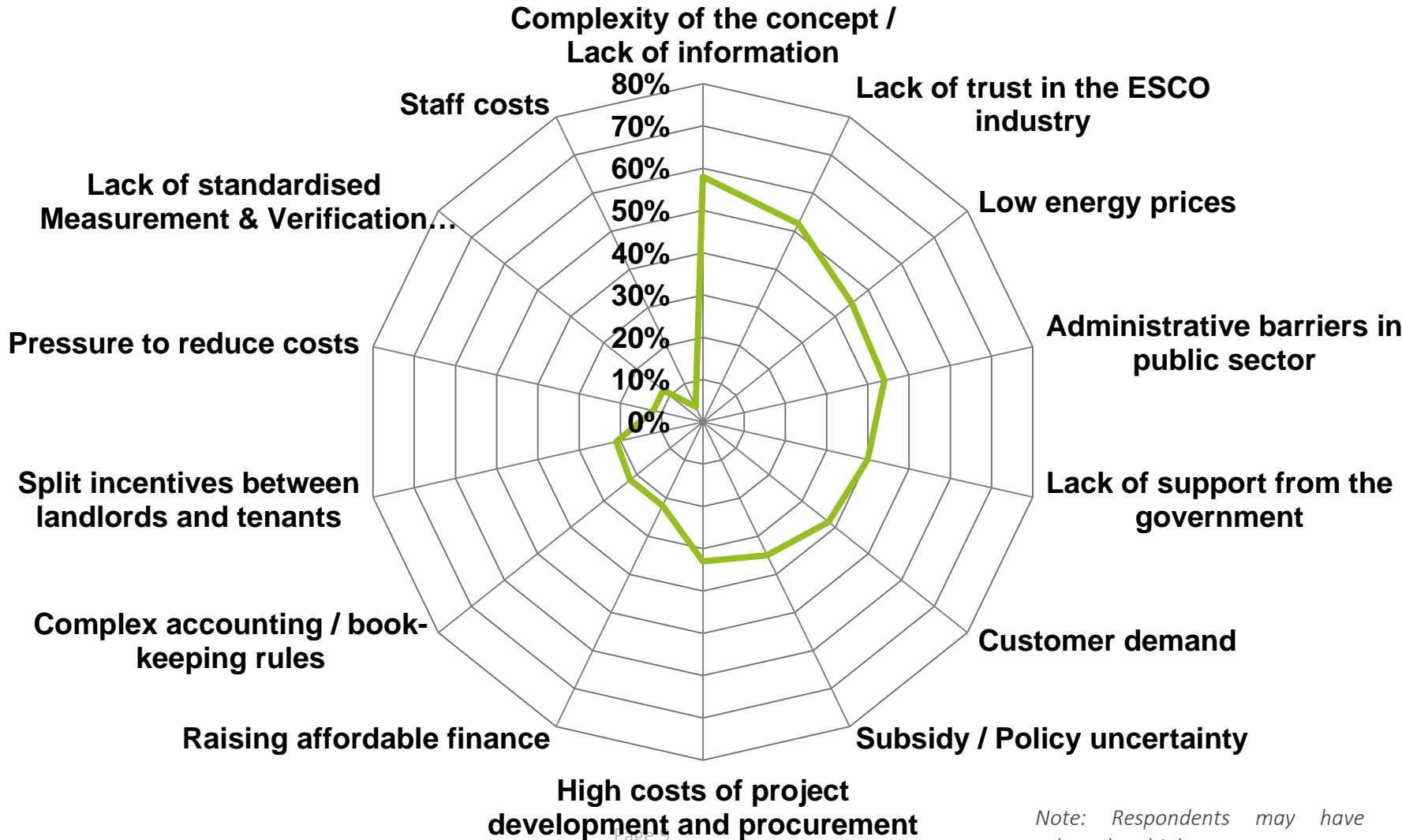
EPC market growth varied across All Countries





Key barriers EPC projects

— Providers & facilitators - All Countries

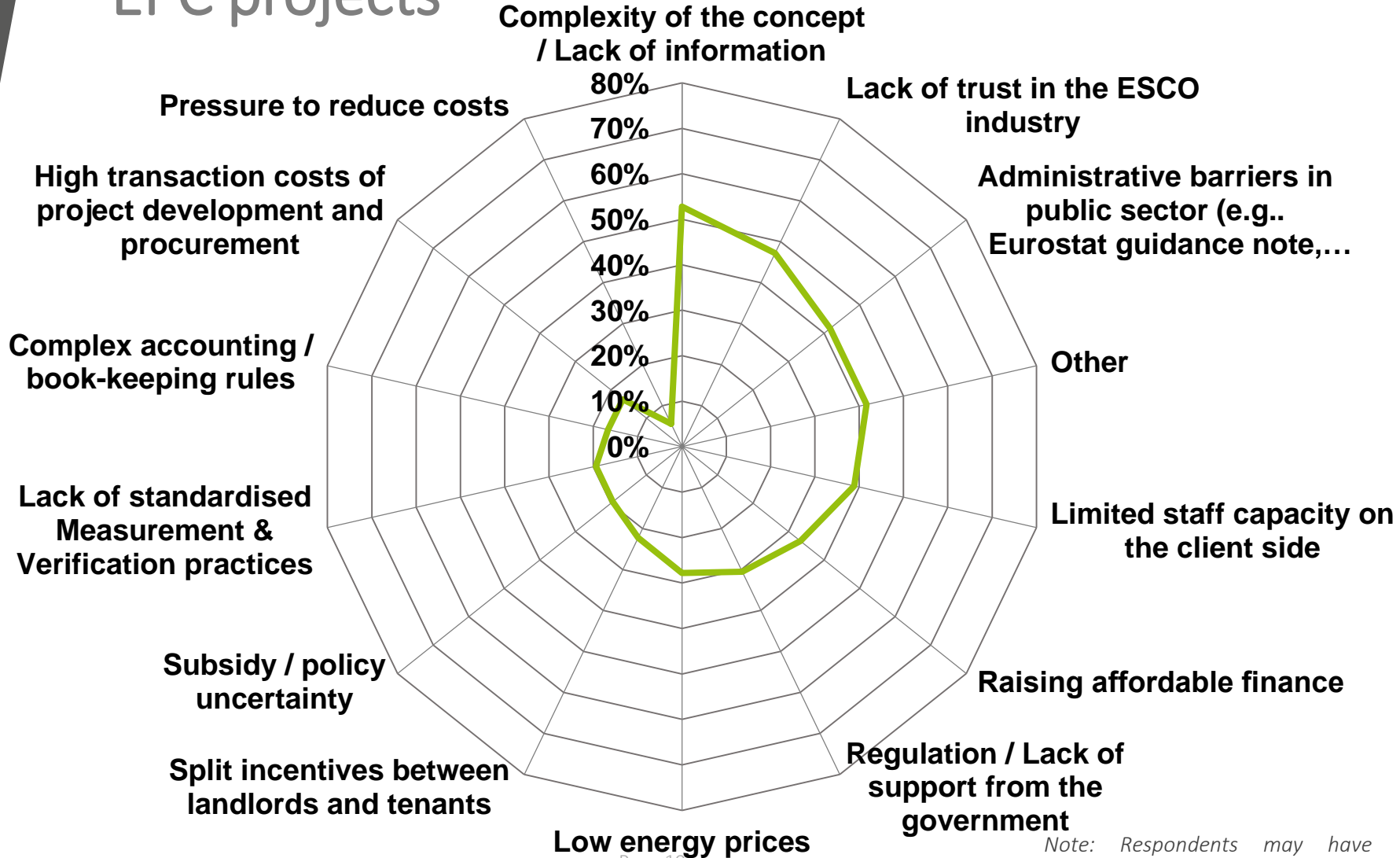


Note: Respondents may have selected multiple answers.



Key barriers EPC projects

— Clients - All Countries

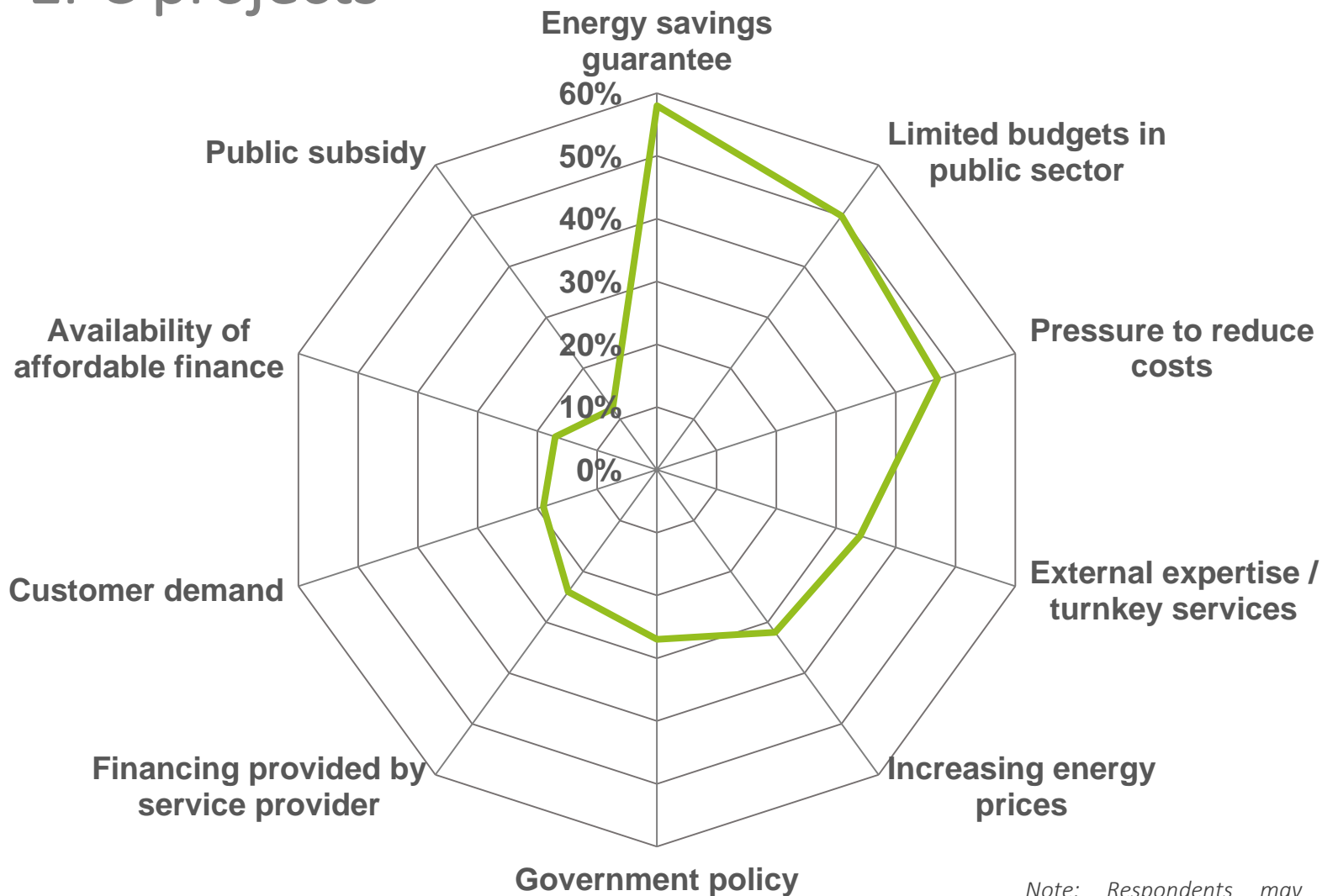


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Key drivers EPC projects

— Providers & facilitators - All Countries

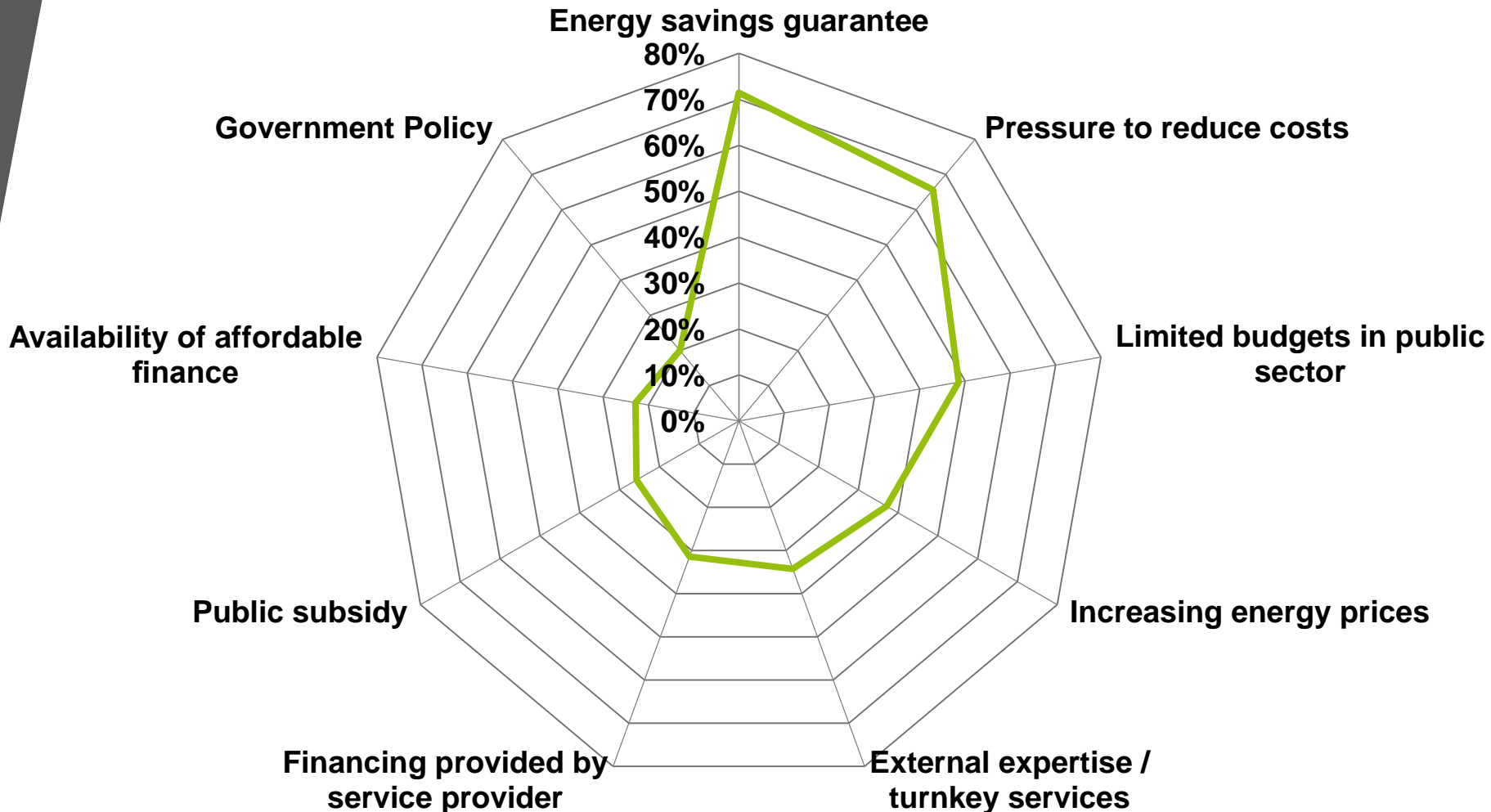


Note: Respondents may have selected multiple answers.



Key drivers EPC projects

— Clients - All Countries





Top barriers and drivers of the EPC markets

EPC providers and facilitators agreed with EPC clients:

✓ Top EPC market barriers:

- 'complexity of the concept / lack of information'
- 'lack of trust in the ESCO industry'
- EPC providers and facilitators indicated complexity of the concept / lack of information (58%) and lack of trust in the ESCO industry (52%) were the top two barriers to EPC business - almost identical results were obtained in the Transparence survey (2015)

✓ Top EPC market drivers

- the energy savings guarantee
- limited budgets in public sector
- pressure to reduce costs



Other barriers of the EPC markets

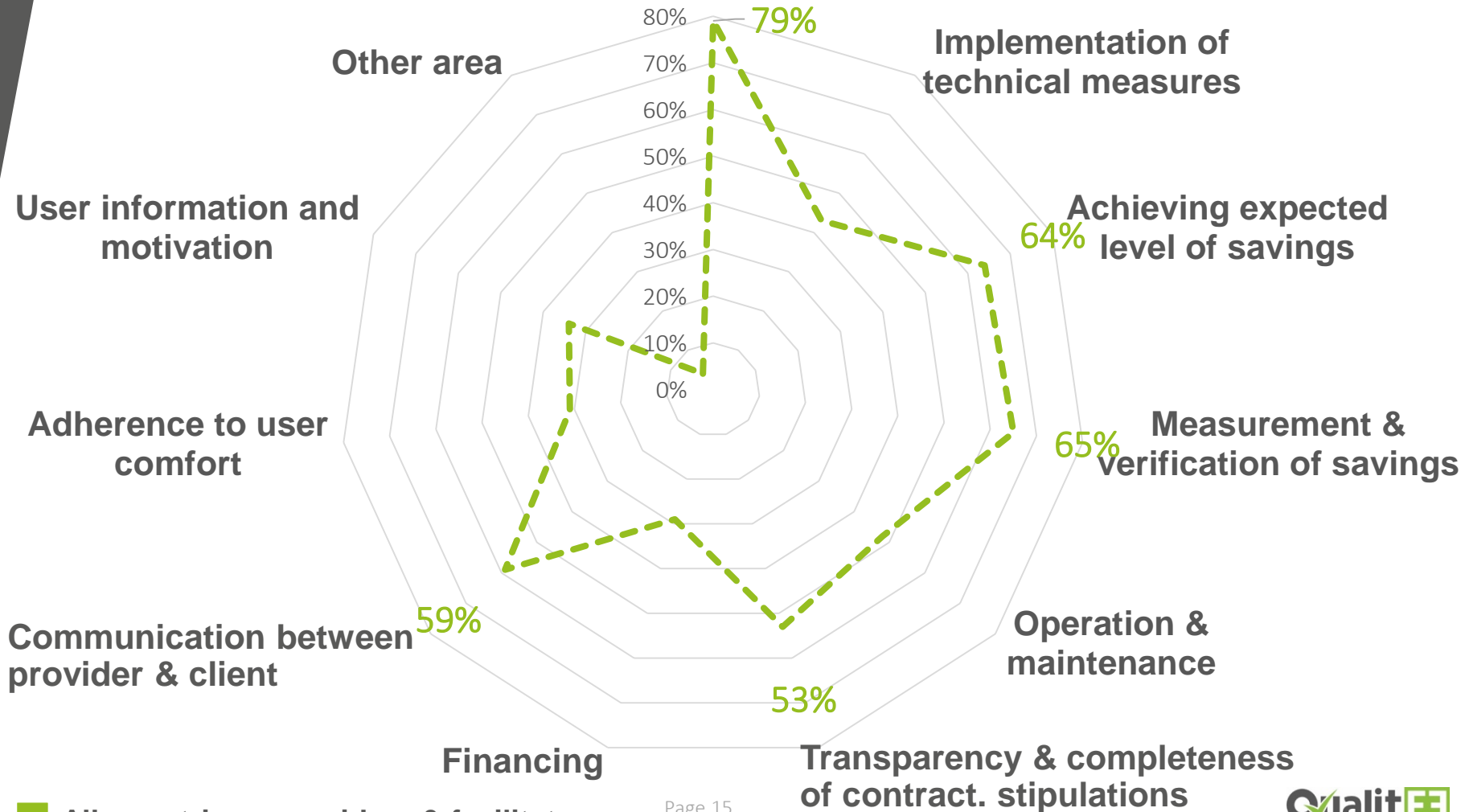
- **Low energy prices (45%)**
 - **France and Austria** they seem to play a major role as **90%** respondents agreed they belong among main barriers
 - not perceived as a relevant barrier in Southern European countries such as Italy (10%), Portugal (11%), Spain (13%) or Greece (14%)
- **High costs of project development and procurement**
 - is an important barrier in the **Netherlands (75%), Germany (58%) and in the UK (50%)**
 - In Germany and in the UK - despite the availability of standardised procurement routes in these countries
 - UK - EPC facilitation is subsidised in the public sector, but high transaction costs for EPC make the model less attractive than alternative approaches to implementing energy efficiency improvements
- **administrative barriers in the public sector**
 - there were countries where they play key role: **Belgium (89%), Czech Republic (73%) and in Bulgaria (63%)**
- **Support from the government**
 - is reported to be lacking in Latvia (75%), Slovakia (60%) and Austria (60%), which is expected to be related to subsidy and policy uncertainty reported in Latvia (88%) and Slovakia (70%)



Key quality determinants

EPC projects

Preliminary technical-economical analysis / energy audit



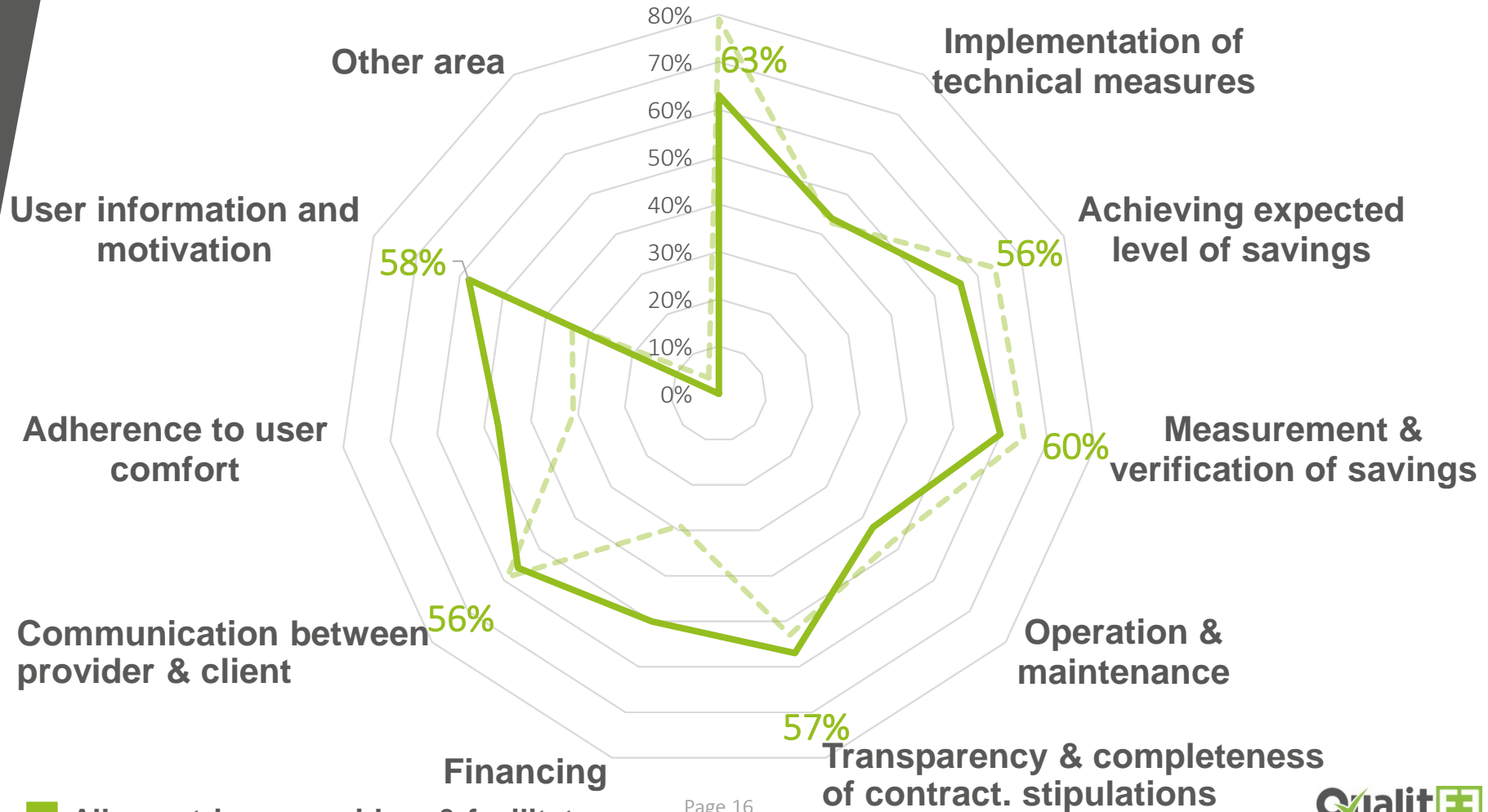
■ All countries – providers & facilitators



Quality improvement most needed

EPC projects

Preliminary technical-economical analysis / energy audit

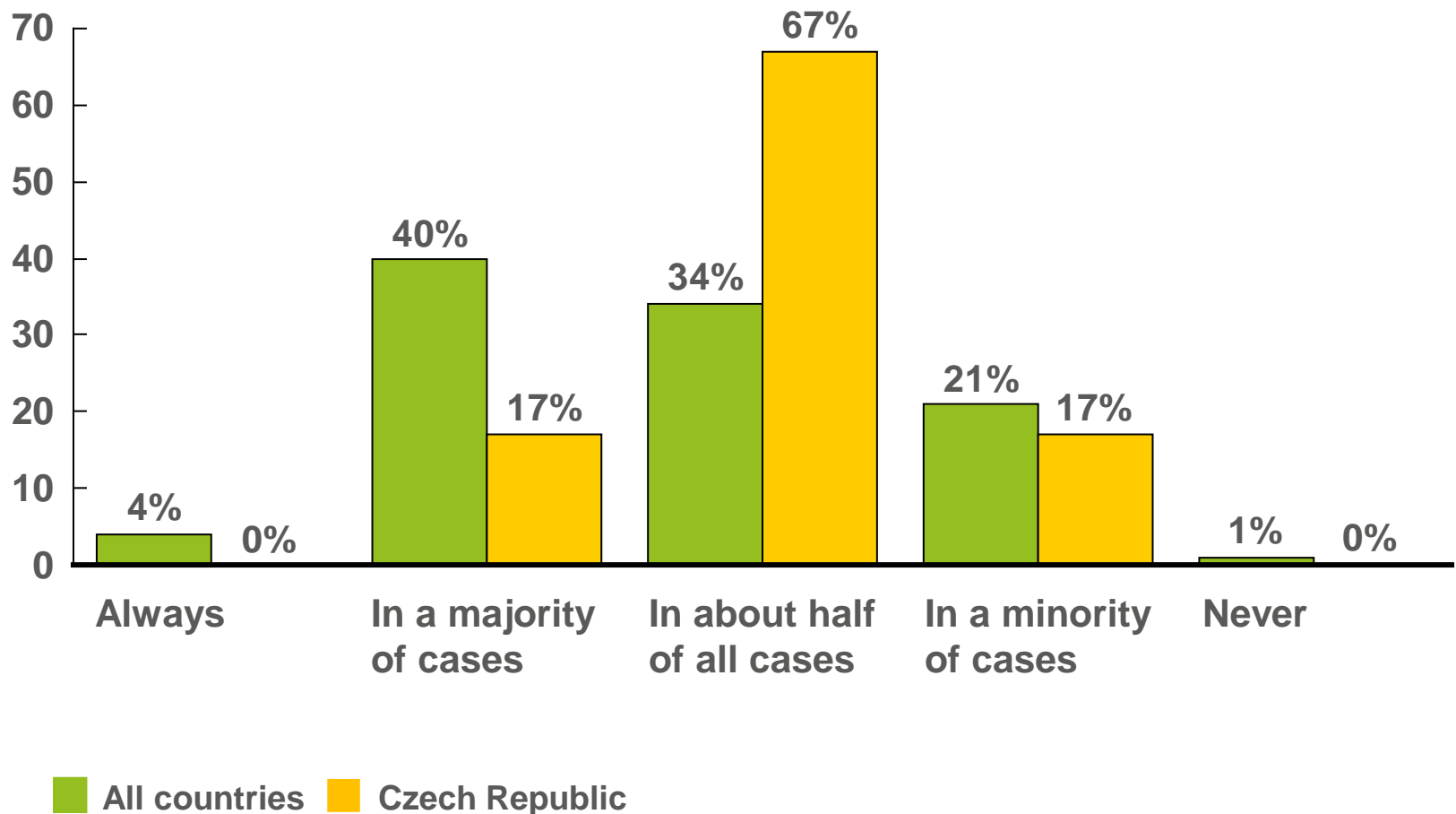


■ All countries – providers & facilitators



Lack of trust in providers

Energy Efficiency Services

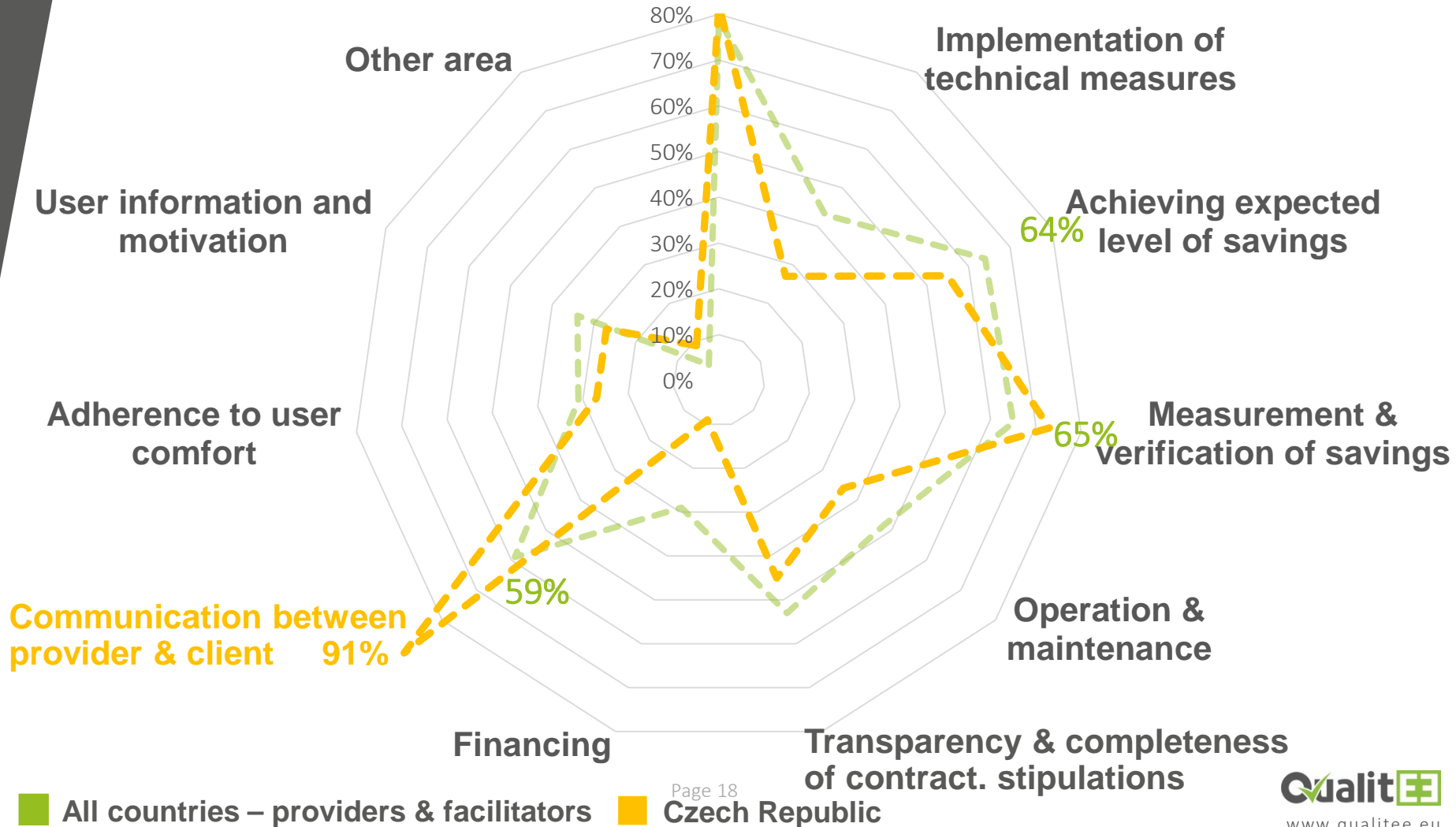




Key quality determinants

EPC projects

Preliminary technical-economical analysis / energy audit



All countries – providers & facilitators

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Czech Republic



The European Code of Conduct for EPC



- ✔ defines the **basic values and principles** that are considered fundamental for the successful preparation and implementation of EPC projects
- ✔ Finalised in 2014, after being discussed with stakeholders at EU and national level; administered by European associations of providers: EFIEES and eu.ESCO
- ✔ June 2018 - **236 signatories across Europe** (150 EPC providers, 13 national associations, 2 European associations and 70 facilitators and other signatories)

www.transparensense.eu



The European Code of Conduct for EPC

nine principles



1. The EPC provider delivers **economically efficient savings**
2. The EPC provider takes over the **performance risks**
3. **Savings are guaranteed** by the EPC provider and determined by M&V
4. The EPC provider supports long-term use of **energy management**
5. The relationship between the EPC provider and the Client is long-term, fair and transparent
6. All steps in the process of the EPC project are conducted lawfully and with **integrity**
7. The EPC provider supports the Client in **financing** of EPC project
8. The EPC provider ensures **qualified staff** for EPC project implementation
9. The EPC provider focuses on **high quality** and care in all phases of project implementation



The European Code of Conduct for EPC

conducted in a stakeholder process

✓ The Code has been used as:

- a discussion guideline between client and EPC provider
- guidance for the preparation of tender dossiers and contracts,
- as a marketing tool

✓ Enforcement:

- only if included in the contract
- **no other control mechanism**



QualitEE project to increase trust and quality

✓ Developing quality assurance schemes for EES

- to overcome top market barriers - the lack of trust in service providers and low customer demand
- provide a tool for the clients to distinguish good quality projects
- set quality benchmarks for a good quality project for both existing and new providers
- providers who obtain quality assurance gain a competitive advantage on the market

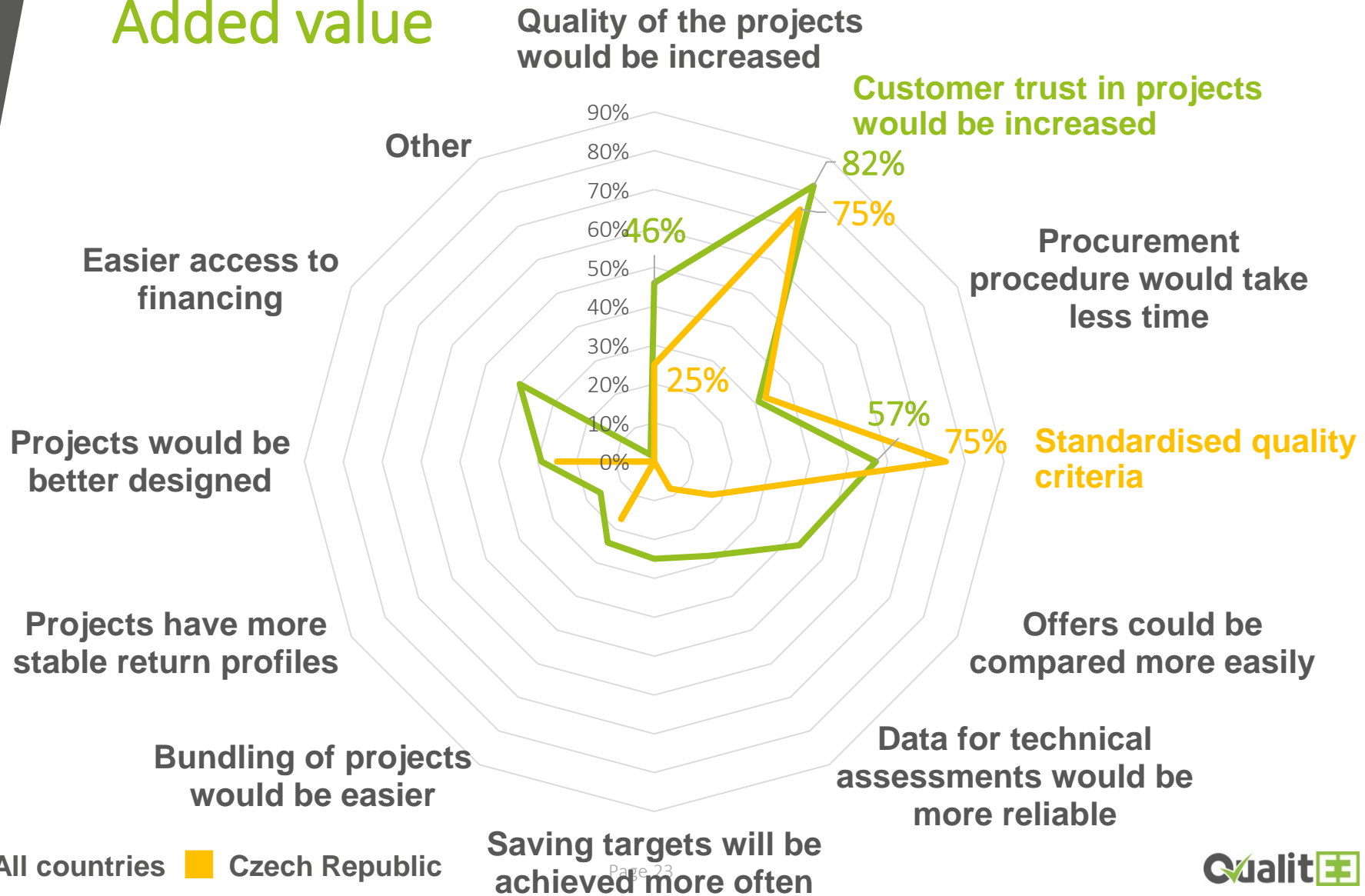
✓ Developing a standardised set of “Quality Criteria” for EES

- technical and financial guidelines
- tool to assess different EES offerings
- criteria can be incorporated in service contracts by clients
- each technical quality criterion contains a set of assessment criteria



Quality assurance scheme

Added value



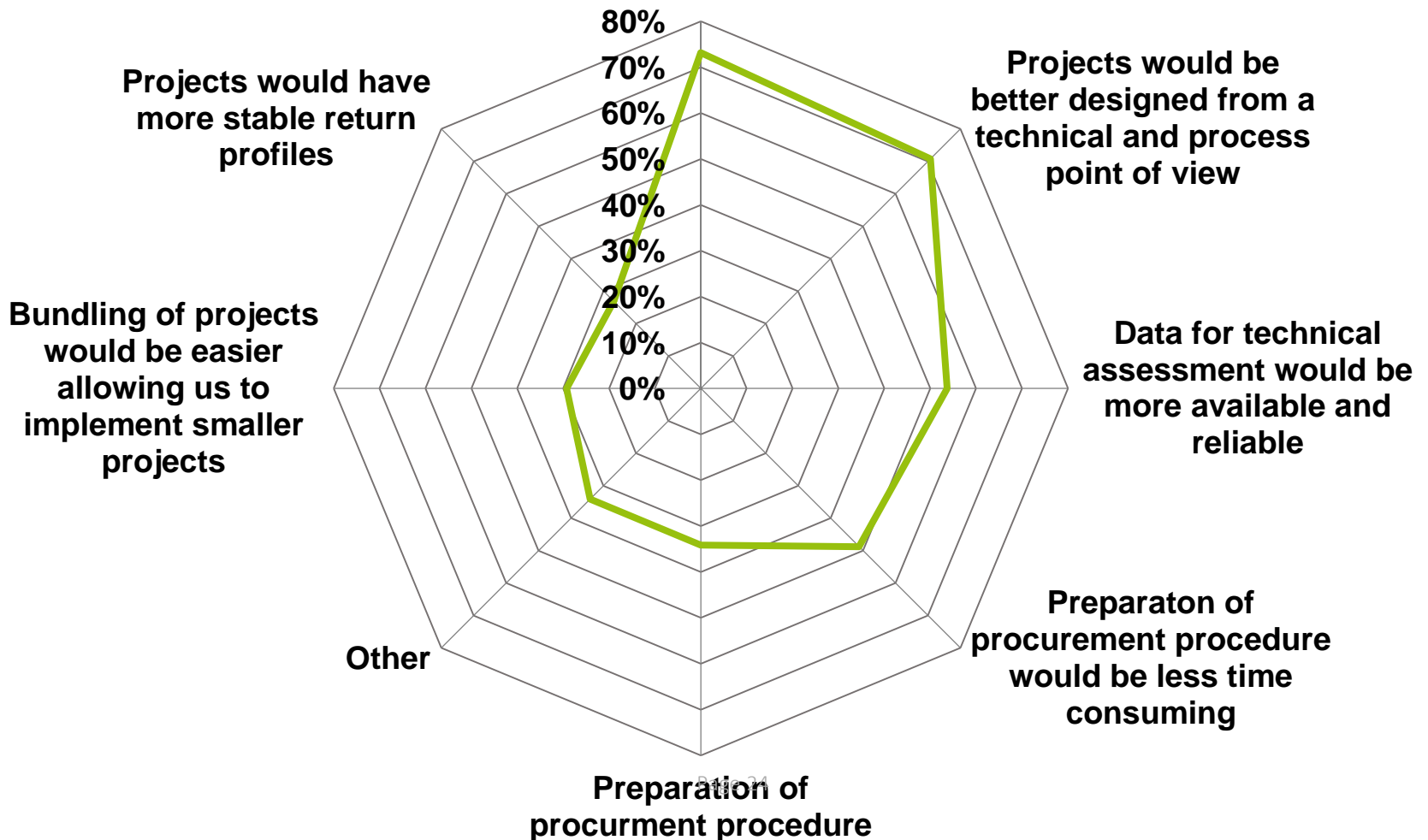


Quality assurance scheme

Added value – expected by clients

— Clients - All Countries

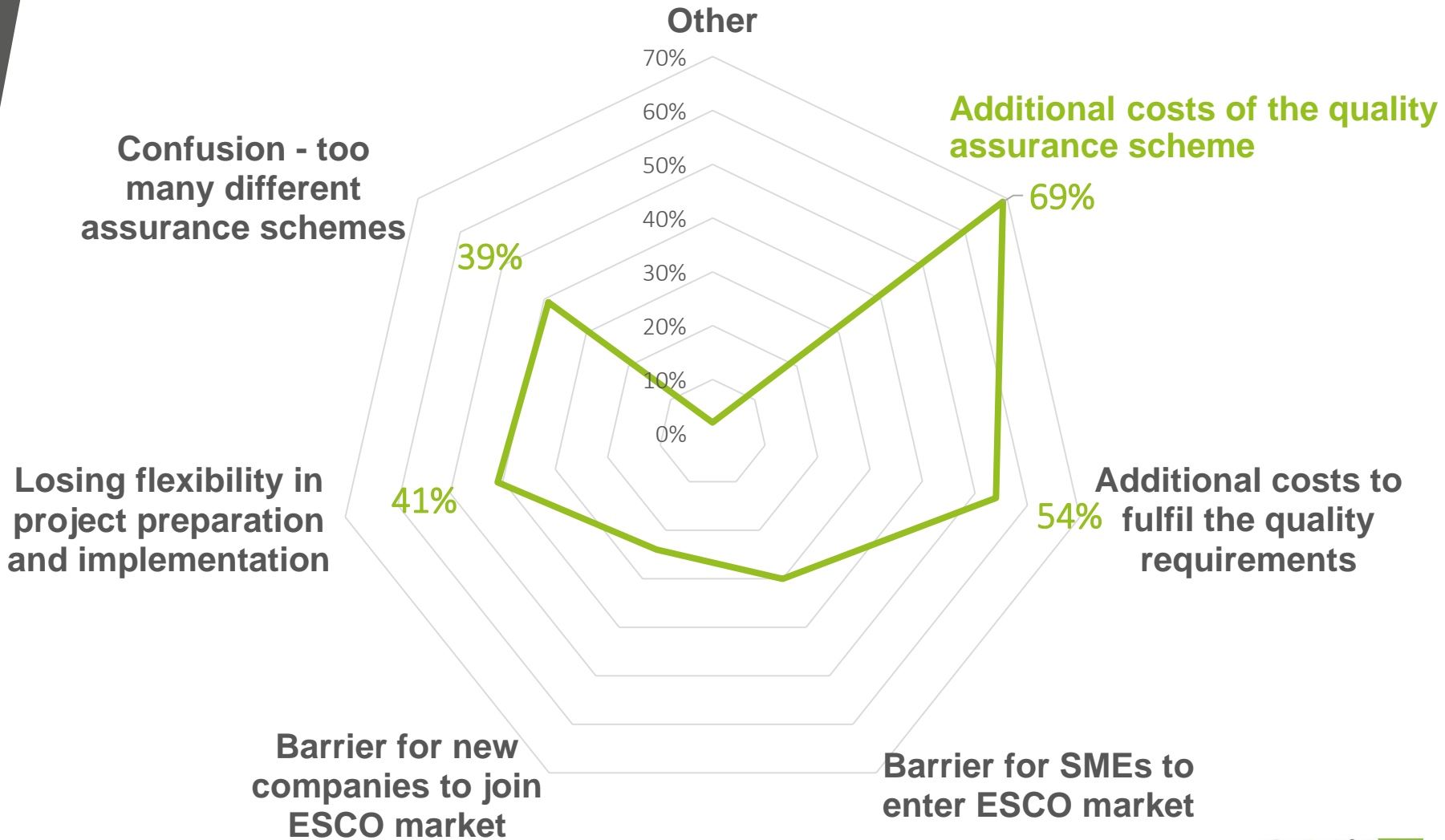
Quality of the projects
would be increased 73%





Quality assurance scheme

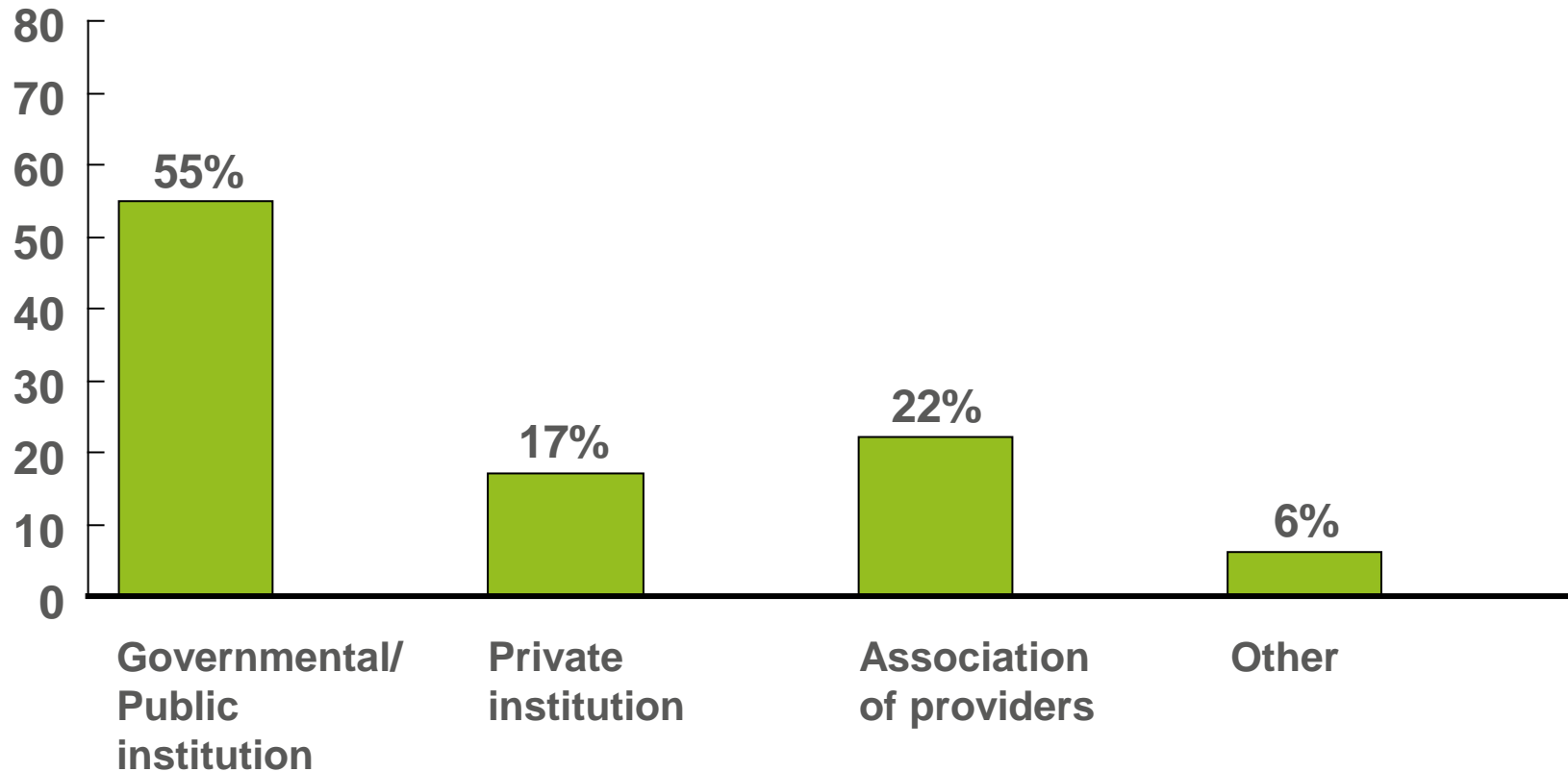
Drawbacks and barriers





Quality assurance scheme

Respected body to issue a label or certification

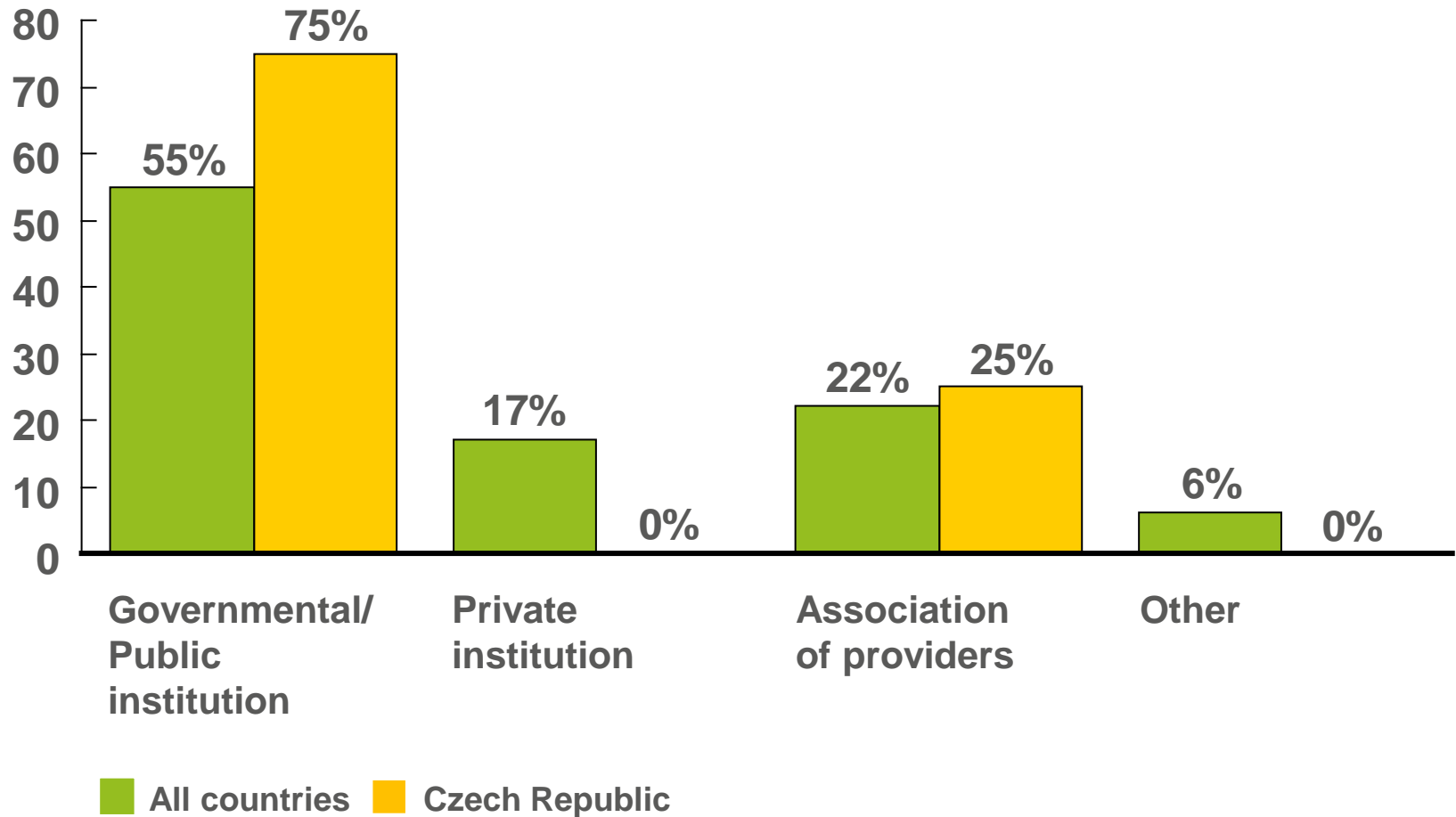


■ All countries – providers & facilitators



Quality assurance scheme

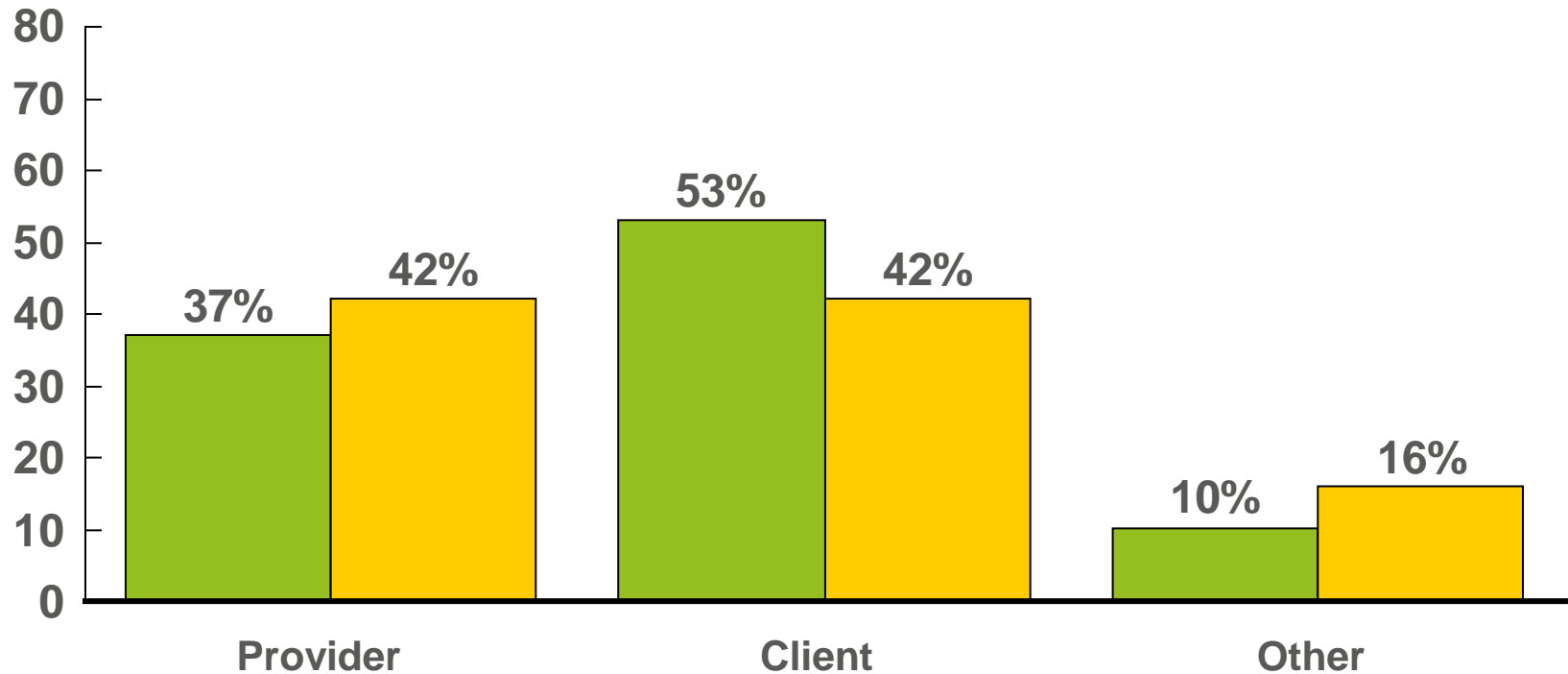
Respected body to issue a label or certification





Quality assurance scheme

Who should pay for quality assurance?

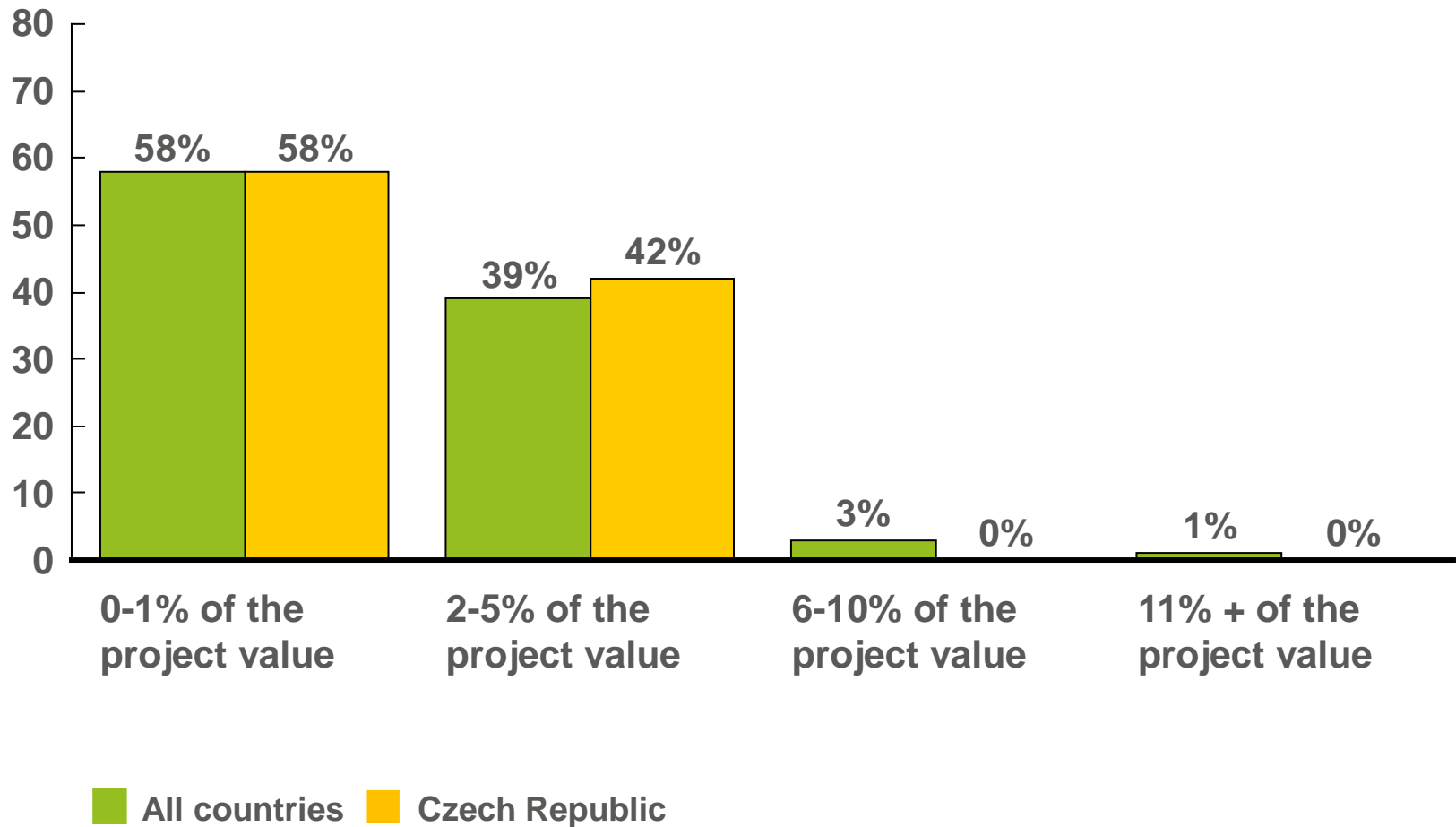


■ All countries ■ Czech Republic



Quality assurance scheme

Viable fee level





Conclusions

- ✔ What are the EES quality determinants to be addressed?
 - Most important: preliminary technical-economical analysis / energy audit
 - Followed by achieving savings, M&V, communication
 - Need for quality improvements reported in all areas
- ✔ What is QA system expected to bring ?
 - more increase in trust than in quality, while lack of trust highly reported
- ✔ How to deal with costs of QA system
 - reported as main drawback
 - clients to pay (EU results) or split between clients and providers (CZ) ?
- ✔ Who should issue the quality label or certificate?
 - governmental / public institutions reported as most respected



Recommendations for the Czech Republic

- ✓ Recommended a system based primarily on **EPC project certification**
 - the implementation of several projects which will gain EPC project certification – a **prerequisite for the subsequent certification of the EPC provider.**
 - to establish a certification system independent of international standards - simpler & lower costs of certification
- ✓ EPC certification systems need to set quality criteria for the preparation and implementation of EPC projects
 - 17 criteria have been selected from the draft version of the European technical criteria for the quality of energy efficiency services (EES) prepared by QualitEE project
 - provided that all evaluation criteria required for the EPC certificate have been met, the certification body shall issue the project certificate to the applicant.
- ✓ Need to stipulate requirements for EPC providers



Thank you

SEVEn – The Energy Efficiency Center

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www.qualitee.eu

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