Energy Performance Contracting Plus

Analysis of the Training Needs of SME's in the Energy Services Sector in Energy Performance Contracting

English

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www.epcplus.org

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Content

1. Introduction

This report outlines the findings of the Training Needs Survey carried out as part of the EPC+ project. This project includes training SPIN (SME Partnerships for Innovative Energy Services) members and other SME's in the energy services sector in EPC concepts, including:

- Basic EPC concepts
- Project identification
- Process and contracting
- Financing
- Strategy

The aim of the survey was to establish the training needs of the energy services sector in each partner country in Energy Performance Contacting. The results from this survey will be used to determine the key learning outcomes of the training sessions relating to EPC that will take place between March and September 2016. This will ensure that the training requirements are adapted to suit each the partner country's specifics needs.

All the data collected has been treated in line with good ethical practice; that is the surveys will not be seen by anyone other than the research team and are treated in strict confidentiality. The data collected will be kept strictly confidential and stored in-line with the data protection policy associated with the project, as submitted to the EU commission. No personal data has been requested.

2. Survey Design

The survey was designed by Tipperary Energy Agency, with input and discussion from Factor 4 and CRES.

The suggested topics for the training session are as follows:

1. EPC basic concepts
2. Current EPC market
    a. Policy
    b. Guidelines
    c. Size/maturity of the market – e.g. number of EPC contracts & ESCO's
3. Contractual issues
    a. Public sector contracts
    b. Financial models
    c. Legal obligations
4. M&V
5. Code of Conduct
6. Commissioning/Quality Assurance
7. How to create a SPIN
8. How to work as a SPIN
9. How to use the model forms from EPC+
10. How to answer a tender/win an EPC contract
11. How to participate/use the EPC+ on-line forum

These topics shows that the training subjects are split into 2 sections; EPC concepts and EPC+ project outputs, including how to establish a SPIN, model contracts and an online forum. Therefore, the aim of the survey was to ascertain the training needs for each partner country in terms of sections 1-6: EPC concepts. Sections 7-11 will be automatically be part of the training as no SME will have knowledge of these project specific topics, therefore these topics were not needed to be included in the survey.

It was important to highlight that the survey was not a tool to be used as a selection process to choose SME's to be part of a SPIN. The survey's sole purpose was to establish the gaps in understanding and knowledge of SME's in the energy service sector in each partner country.

The survey questions were split into the following headings, in-line with the EPC concepts outlined above:

- Basic EPC Concepts
- EPC Code of Conduct
- Contracting & Public Sector Contracts
- M&V
- Risk
- Commissioning/Quality Assurance
- Working as a consortium
- Perception of Current EPC Market in each partner country

Questions were created under each heading to establish the strength of knowledge of each topic. A 5-point Likert Scale was used to allow for easy and comparable analysis of results, therefore the questions were phrased to allow for responses to be scaled. The respondents were asked to specify their level of understanding and knowledge by agreeing or disagreeing to the set of statements. The results then depict the range of responses and therefore highlight where there are gaps or lack of understanding lies. These areas can then be dealt with in detail during the training sessions.

Due to the range of EPC market maturity in each partner country, the questions were kept general, however there was an option for each partner to elaborate with further questions if they required. These additional questions do not form part of this report as they were for each individual partner's information only. The list of final questions used by all partners is shown in Table 1. Two of the mandatory 15 questions were not based on the Likert Scale.

Question 4 required a qualitative response, as it was felt that the baseline energy required for an EPC is very complicated and it was difficult to ascertain knowledge and understanding using the Likert scale. The quality of response was marked by each partner based on what they expected the result to be. The marks given were based on the Likert Scale results, that is on a 1-5 basis, with 1 being the most knowledge and 5 being the least.

Question 7 was a multiple answer question, to establish whether respondents knew where Energy Performance Contracts can be used. The more responses chosen shows a deeper appreciation and understanding of EPC.

The survey was tested with one pilot respondent prior to final adjustments and final surveys being sent out to SME stakeholder lists, as identified in Work Package 2. Between 20-30 SME's were targeted in each country, with a minimum of 8 responses per partner country required in order to have a minimum response rate of 25%.

Topic of Questions	No.	15 mandatory questions for all partners	1	2	3	4	5
Perception of Current EPC Market	1	Energy Performance Contracting is successful in increasing energy savings associated with energy projects	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Basic Concepts	2	It is necessary to provide a performance guarantee to maximise savings on energy savings projects under an Energy Performance Contract	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
	3	It is critical to complete an energy audit before providing energy services to a Client?	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
	4	List the significant factors that impact the baseline energy consumption of an organisation	Qualitative response				
EPC Code of Conduct	5	An ESCO is an energy service provider who delivers energy services in the form of EPC	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
	6	I am fully aware of the European EPC Code Of Conduct	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Contracting & Public Sector Contracts	7	What type of projects do you think can be included in an Energy Performance Contract? (can choose multiple answers)	Single technology projects	Multiple technology projects	low pay back projects, less than 2-years	pay back between 3-5years	payback over 5-years
	8	Financing an Energy Performance Contract is straight forward and easy to achieve	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
M&V	9	Measurement and Verification needs to be carried out for a period of 12-months only after completion of the Energy Performance Contract	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
	10	I have expert knowledge and understanding of the M&V process relating to Energy Performance Contracting	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Risk	11	The Client retains a portion of the performance risks of the project and shares them with the ESCO	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree

Commissioning/Quality Assurance	12	Commissioning and technical supervision during the project is a vital part of a successful Energy Performance Contract	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Working as a consortium	13	Groups of SME's offering different energy services could work well together to provide EPC	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
	14	Standardised contracts and tools would help ESCO's provide Energy Performance Contracts	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Perception of Current EPC Market	15	The current EPC market in this country is well established	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree

Table 1: Survey Questions

3. Survey Results

The surveys have been analysed separately for each country in order to highlight areas that need concentrated on during the training sessions. Marks of between 1-5 were given to each response, based on their knowledge and understanding of the topic in question. 1 showed expert knowledge and understanding and 5 showed no knowledge or understanding of EPC concepts. The final results were averaged out for the number of respondents, therefore giving each question an average rating of between 1-5.

The questions were scored individually and then summed together with other questions within each of the 8 categories outlined in Section 2 of this report. The results are presented in spider graph format, with scores above 2 showing that some training is required. Results closer to 5 highlight a stronger need for training in these topics.

The questions on the perception of the current EPC market in each country are used to determine whether SME's in the energy services sector are aware of the potential EPC climate. This will help ascertain whether SME's in the energy services sector are aware of EPC projects in their countries, and whether the training session needs to highlight where and how to recognise potential EPC projects in order to help the EPC market in each country grow.

3.1. Greece

<u>Survey Dissemination and Response Rate</u>

The survey sent to the recipients was a Microsoft Excel worksheet that they were sent by personal e-mail and kindly asked to complete. This worksheet was a translated version of the English survey sent to all the partners by WP3 Leader, TEA. The pilot survey was sent out on 12th June, with final surveys sent out on the 15th June 2015. The survey was sent to 28 stakeholders. After 1 week follow-up e-mails were sent to those who had not yet responded. These e-mails were sent on the 1st July 2015.

The total survey returned was 16, giving a response rate of 57.1%.

<u>Survey Results</u>

The survey results for Greece are shown in Figure 1.

No topics scored higher than 2, meaning that SME's in Greece have good understanding of EPC, and therefore do not need specific training on any topic surveyed.

It can be seen, however, that 'Risk' scores the highest mark, highlighting that this topic has the least knowledge and understanding by Greek SME's.

'Perception of the Current EPC Market' shows that SME's are aware that there is work required to improve the EPC market in Greece. SME's stated that the current market in Greece is not well established, but recognised that EPC's help increase energy savings associated with energy projects.

Respondents also showed very high interest and saw the advantages of working in a consortium and use of standardised tools to successfully implement EPC's. This shows good potential for the EPC+ project deliverables which will form the second part of the training session.

It is very striking that Greece, which is a country with very little hands-on experience with EPC, seem to be so knowledgeable on the subject. It is suggested that the reason for this is that Greece is currently in a severe financial crisis and commercial and business activities are currently at a very low point. Business opportunities are few and far between. Therefore, this has probably stimulated companies and individuals to seek new business models and opportunities and this may be the reason why the Greeks know so much about the theory, although they have virtually no practical experience.

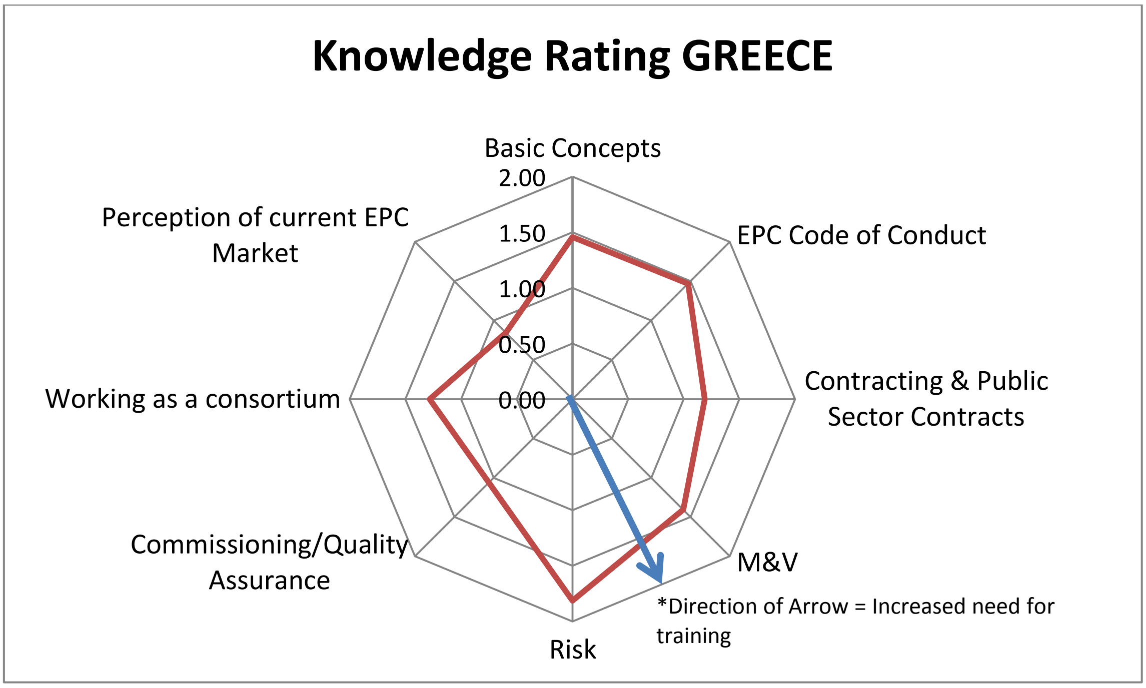

Figure 1: Knowledge Rating GREECE

3.2. Germany

<u>Survey Dissemination and Response Rate</u>

The German partner did the survey via questionnaire. The translation of the questionnaire into the German language took place in May. The pilot survey has been performed during the first two weeks of June. The final survey was sent to 65 stakeholders on the 24th of June with a deadline for feedback until the 3rd of July. Afterwards many stakeholders have been contacted again via phone in order to increase the amount of feedbacks.

The total survey returned was 13, giving a response rate of 20%.

Survey Results
The survey results for Germany are shown in Figure 2.

It can be seen that ’M&V’ scores the highest mark, highlighting that this topic has the least knowledge and understanding by German SME’s, with a score greater than 3.

’EPC Code of Conduct’, and ’Risk’ also score highly, with score greater than 2.5 in both cases, showing that some training in these areas is also required.

The topics with highest knowledge and understanding, and therefore little need for training is ’Commissioning & Quality Assurance’.

’Perception of the Current EPC Market’ shows that SME’s are aware that there is work required to improve the EPC market in Germany. SME’s stated that the current market in Germany is not well established, but recognised that EPC’s help increase energy savings associated with energy projects.

Respondents also showed an openness and understanding of the advantages and benefits to working as a consortium and use of standardised tools to successfully implement EPC’s. This shows good potential for the EPC+ project deliverables which will form the second part of the training session.

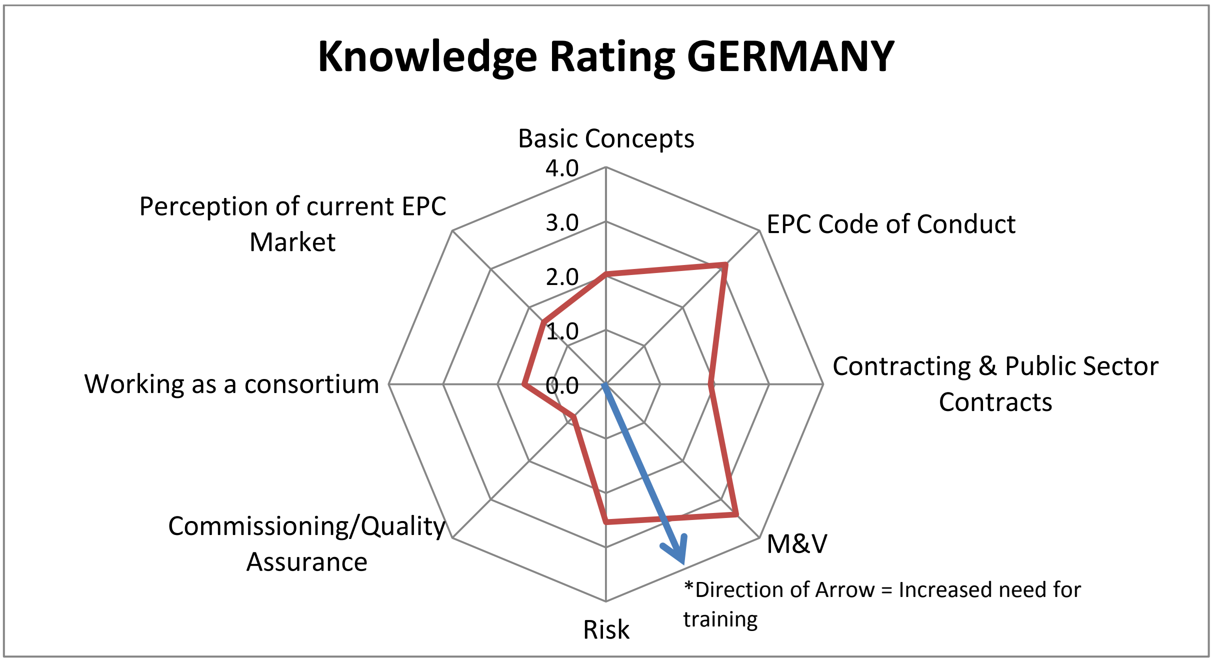

Figure 2: Knowledge Rating GERMANY

3.3. Belgium

Survey Dissemination and Response Rate

The survey was designed using Google Forms which is an on-line tool which allows easy dissemination of the survey and collection of the results. The pilot survey was tested on the 2nd of July, with final surveys between the 8th of July and the 14th of July 2015.

The survey was sent to 30 stakeholders. The total survey returned was 8, giving a response rate of 26.6%.

Survey Results

The survey results for Belgium are shown in Figure 3.

It can be clearly seen that the highest score, and therefore the topic which requires the largest training in Belgium is knowledge of the 'EPC Code of Conduct', with only 2 of the respondents having heard of the Code of Conduct.

Similar to most other partner countries, 'Risk' and 'M&V' also scored greater than 2, showing that some training is also required in these areas.

'Basic Concepts', 'Contracting' and 'Commissioning/Quality Assurance' all scored below 2, indicating that there is sufficient knowledge and understanding in these areas.

Belgian respondents also showed an openness and understanding of the advantages and benefits to working as a consortium and use of standardised tools to successfully implement EPC's. This shows good potential for the EPC+ project deliverables which will form the second part of the training session.

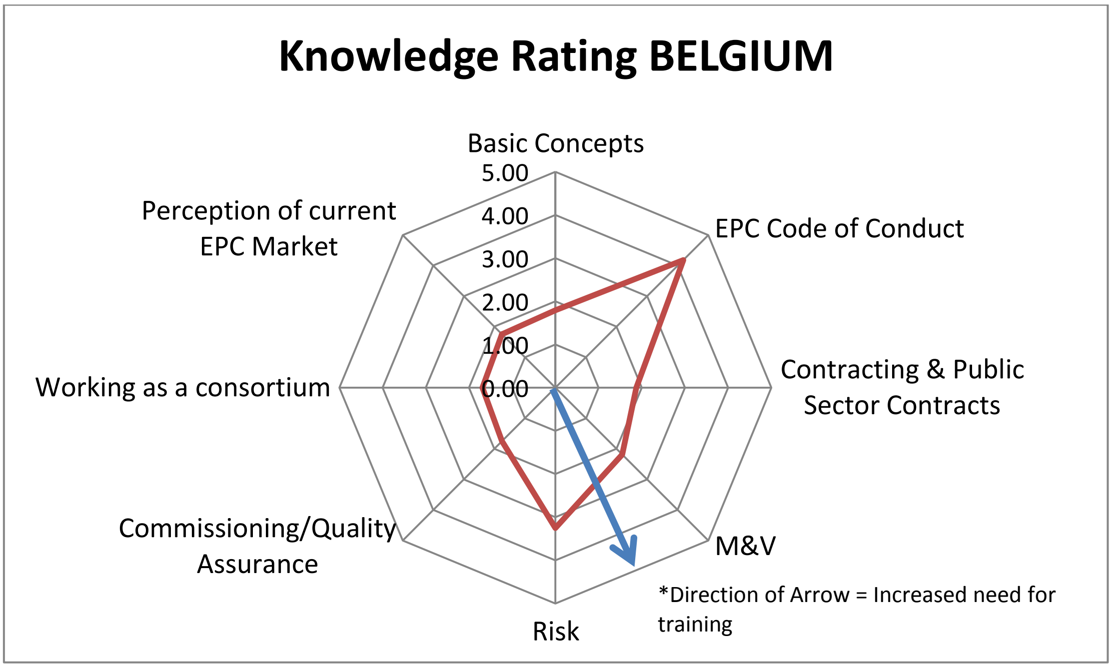

Figure 3: Knowledge Rating BELGIUM

3.4. Austria

Survey Dissemination and Response Rate
The survey was designed using a pdf tool, which allows easy dissemination of the survey. The results were collected in an Excel spreadsheet which allows a simple analysis. In Austria, two market actors distributed the survey (e7 and GEA).

e7 sent out the pilot survey on 16th and 24th July 2015. The survey was sent to 20 stakeholders.

GEA sent out the pilot survey on 23th July 2015. The survey was sent to 20 stakeholders.

The total survey returned was 5 for e7, giving a response rate of 25%, and 4 for GEA, giving a response rate of 20%. Overall response rate for Austria was 22.5%.

Survey Results
The survey results for Austria are shown in Figure 4.

There are a number of topics that score between 3 and 4, meaning considerable training is required in these topics; ’M&V’, ’EPC Code of Conduct’ and ‘Contracting and Public Sector Contracts’.

However, contrary to the findings, with respect to training in the Code of Conduct, the Austrian Partner, who has much experience with the EPC market and ESP in Austria, would not suggest to train Austrians in this as the stakeholders are more interested in sophisticated quality assurance schemes, such as certification of energy services (not limited to energy efficiency services).

e7 have also participated in the Transparense project and disseminated the Code of Conduct to 30 Energy Service Providers on a number of occasions. Austrian stakeholders were not overly interested as the Code stipulates only very basic principles. Sometimes stakeholders felt a bit “offended” as they were being told to stick to the Code, but for them the application of the principles are logic / business as usual.

The responses from the Transparense project on the Code were as follows:

1. Instead a comprehensive set of quality criteria would be necessary in order to differ between “good” and “bad” quality of the services.
2. quality criteria should be operationalised in order to be quantifiable.
3. However, the Code is good to have as discussion guideline and establishment of a common understanding on the term “quality” with respect to the offered EPC.

This feedback (point 1 and 2) was positively absorbed by e7 and they have developed operational quality criteria together with the *Austrian association for energy efficiency services and* contracting (DECA). A paper has been published on ECEEE 2015.

All remaining topics, with the exception of ’Commissioning & Quality Assurance’, score above 2, indicating that some training is required.

’Perception of the Current EPC Market’ shows that SME’s are aware that there is work required to improve the EPC market in Austria. Similar to previous countries, SME’s stated that the current market in Austria is not well established, but recognised that EPC’s help increase energy savings associated with energy projects.

Respondents in this case did show interest in working in a consortium. Similar responses are given to the use of standardised tools to successfully implement EPC’s. This indicates good potential for the EPC+ project deliverables which will form the second part of the training session.

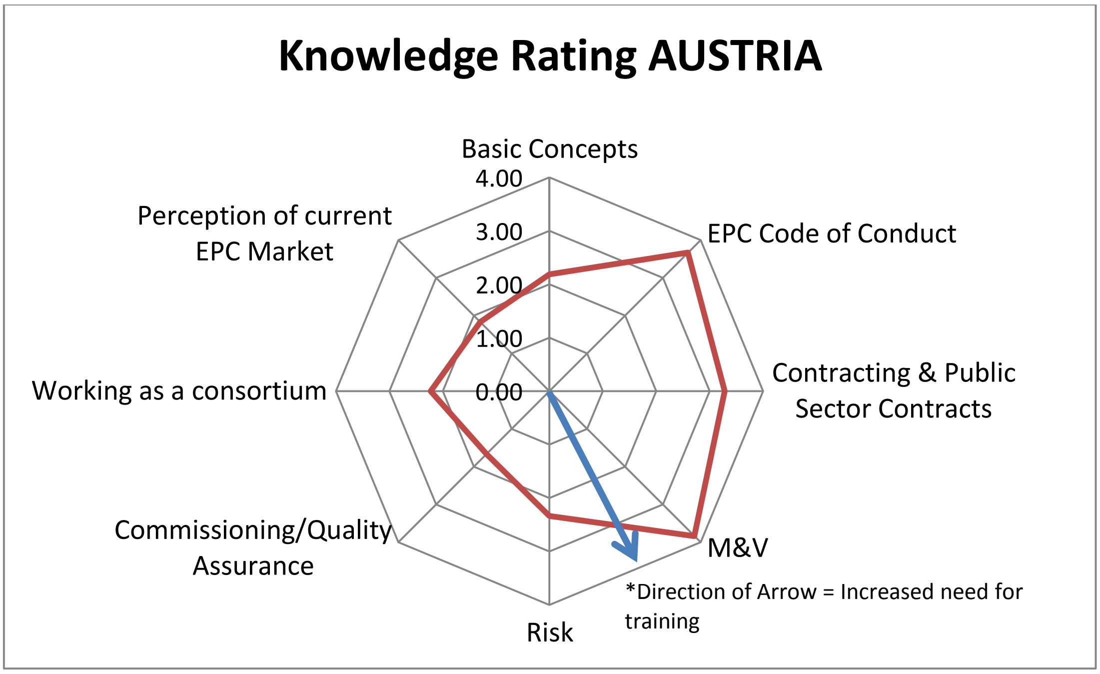

Figure 4: Knowledge Rating AUSTRIA

3.5. Ireland

Survey Dissemination and Response Rate

The survey was designed using Survey Monkey, which is an on-line tool which allows easy dissemination of the survey and collection of the results. The pilot survey was sent out on 6th June, with final surveys sent out on 25th June 2015. The survey was sent to 23 stakeholders. After 1 week follow-up phones calls were made to those who had not yet responded, these phone calls were made on 30th June 2015.

The total surveys completed and returned was 10, giving a response rate of 43.5%.

Survey Results

The survey results for Ireland are shown in Figure 5.

It can be seen that ’Risk’ scores the highest mark, highlighting that this topic has the least knowledge and understanding by Irish SME’s. ’Basic Concepts’, ’EPC Code of Conduct’, ’Contracting and Public Sector Contracts’ and ’M&V’ all score similar values, of between 2.3 and 2.8, meaning that some training is required in these topics.

The topic with highest knowledge and understanding, and therefore little need for training is ’Commissioning and Quality Assurance’. However, based on the experience of Tipperary Energy Agency in this field, commissioning of equipment is the key factor for a significant number of projects failing in the past. Therefore this highlights in fact that specific training is required in this area.

’Perception of the Current EPC Market’ shows that SME’s are aware that there is work required to improve the EPC market in Ireland. SME’s stated that the current market in Ireland is not well established, but recognised that EPC’s help increase energy savings associated with energy projects. This perception would match those in the TEA who have experience and knowledge of the current EPC market in Ireland, therefore it is encouraging to see that ESP are willing to participate to make this sector stronger.

Respondents also showed high interest and advantages of working in a consortium and use of standardised tools to successfully implement EPC’s. This shows good potential for the EPC+ project deliverables which will form the second part of the training session.

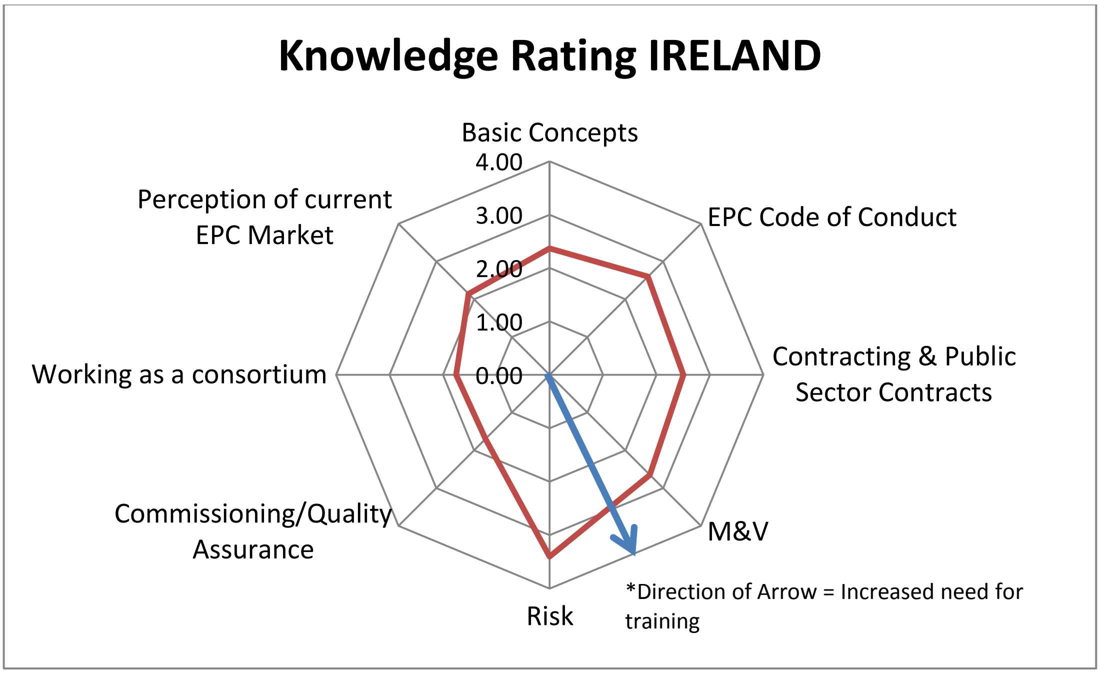

Figure 5: Knowledge Rating IRELAND

3.6. Spain

Survey Dissemination and Response Rate

The survey was designed by TEA and Escan chose the relevant questions and translated them into Spanish language.

The Survey was sent to 21 stakeholders by email and 8 of them replied by email; telephone calls were used to follow up on those who did not reply, and a further two responded giving answers over the telephone. These activities were carried out in June 2015.

Therefore, the total numbers of surveys returned was 10, giving a response rate of 48%.

Survey Results

The survey results for Spain are shown in Figure 6.

These results show a need for training in all topics except ‘Commissioning and Quality Assurance’, as all other topics score higher than 2. The highest scores, indicating the largest need for training are in topics ‘Risk’, ‘Contracting & Public Sector Contracts’ and ‘M&V’, all with a score great than 3.2.

Spanish SME’s ’Perception of the Current EPC Market’ is similar to other countries, in that results show that they are aware that there is work required to improve the EPC market in Spain. SME’s stated that the current market in Spain is not well established, but recognised that EPC’s help increase energy savings associated with energy projects.

Again, similar to other countries, respondents showed high interest and advantages of working in a consortium and use of standardised tools to successfully implement EPC’s.

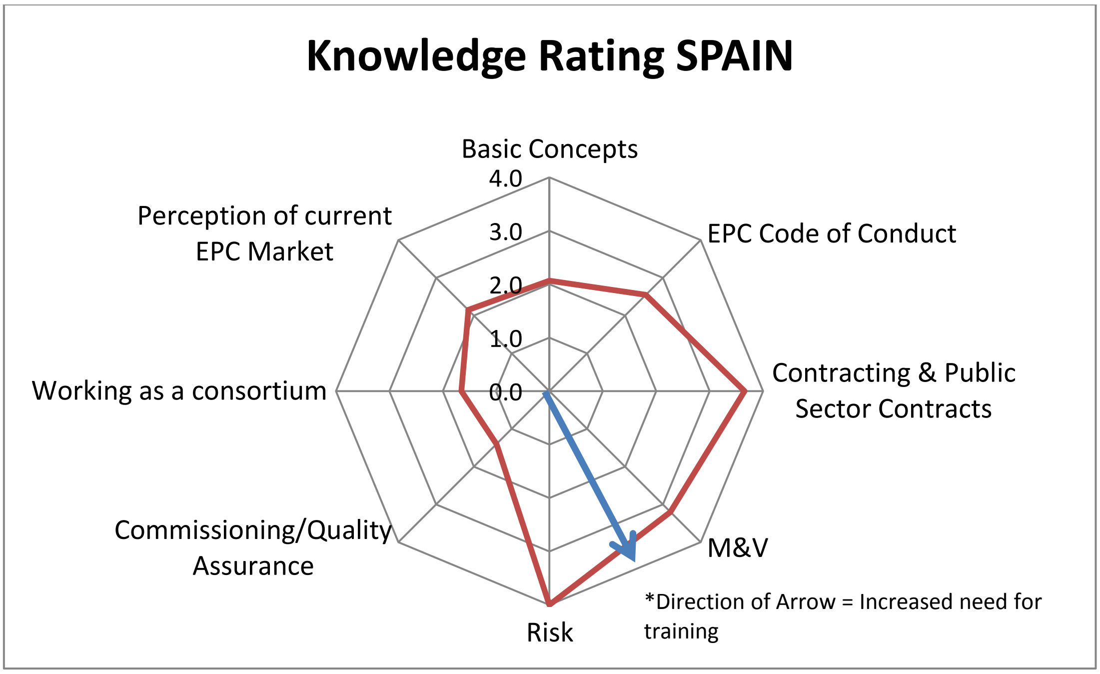

Figure 6: Knowledge Rating SPAIN

3.7. Portugal

Survey Dissemination and Response Rate

The survey was designed using the Google Forms, which is an on-line tool that allows easy dissemination of the survey and collection of the results on a spread-sheet. The pilot survey was sent out, using MailChimp platform, on 6th June, with final surveys sent out on 26th June 2015. The survey was sent to a list of 263 emails (ESCOS, stakeholders, etc). After the first 2 weeks follow-up phones calls were made to those who had not yet responded, and also some gentle email reminders were sent.

From the email sent, a total of 92 subscribers opened the email (35.4%) and 35 have clicked on the survey link (13,5%). The total survey returned was 20, giving a response rate of 7.6% of all the email subscribers and 57.14% from the ones who actually opened and clicked the survey link.

Although this is a low response rate, the target number of responses per partner for this project was 8-10, therefore it is felt that 20 responses gives a good indication of the Portuguese situation.

Survey Results

The survey results for Portugal are shown in Figure 7.

Similar to Greece, the Portuguese results show that no topics scored higher than 2, meaning that SME's in Portugal have good understanding of EPC because, in recent years, there was a significant advance in what concerns the legal framework and regulatory factors to promote and foster the diffusion of energy services, especially in the public sector. In 2011, when the law to promote energy efficiency in the public sector and the diploma to legislate ESCO activity was ratified (DL nº 2/2011 and nº 29/2011) and the ECO-AP programme, aiming at promoting energy efficiency in the public buildings, was launched. Since then, the number of ESCOs has increased significantly and more than 100 companies, including utilities, suppliers, consulting companies (including several SMEs). These are registered as ESCO companies, in the national registry database, with the expectation of participating in the public procurement of energy services, in the scope of the ECO.AP.

The ECO.AP provided a strong regulatory framework for ESCO development in other sectors other than the public sector, and some companies are using this framework to start their EE projects. However, there is still lack of awareness about EPC business, especially among the potential customers and the potential financiers. There is an information gap between the Portuguese ESCOs, which have good technical knowledge and work very well, and the potential customers and decision makers (especially in the public sector). The lack of definitions standardisation leads to misunderstandings and creates disinterest about energy savings.

It is crucial for the success establishment of EPCs, and energy services that the decision makers, the clients, the financiers and the assurance companies clearly understand what the EPC is, what are the costs involved and the costs associated to the risks involved. Moreover, regarding the public sector, an interlocutor, who understands the same language as the ESCO, is generally missing. Therefore, although the score is as high as 2, training and education is needed especially regarding the topics: Risk, Contracting & Public Sector Contracts and Assurance.

Based on the Transparense, it is possible to list the following lessons learnt for Portugal:

According to the feedback that was possible to collect during the last 6 months (with trainings and seminars organised within the scope of Transparense), the main constraint ESCOs are facing in Portugal is still the financing structure. Moreover, Portuguese financing institutions still need to have a better knowledge about the financing typologies and contracts, the problems mentioned in the 2012 survey, are still the same. In our perspective, these are the main problems at the moment:

- Still lack of knowledge/clarification -> there is no demand for EPCs (missing clients interested in this business model);
    - Lack of trust (mistrust of this new type of business that is too complex for the common knowledge)
- No insurance schemes available for this business – while there is no demand there are no insurance companies neither banks interested in the business.
- The ECO.AP framework is not very attractive for ESCOs
    - There is no balance regarding the share of responsibilities among the ESCO and the State, being very demanding for ESCO (has to invest, to take all risks, ...)
    - No guarantee that the ESCO receive the savings; nor the bank.
- Lack of interesting financing mechanisms
- Lack of ready-prepared procurement frameworks for the private sector
- More appropriate / more adequate procurement frameworks for the public sector
- Lack of experience to launch the tenders.

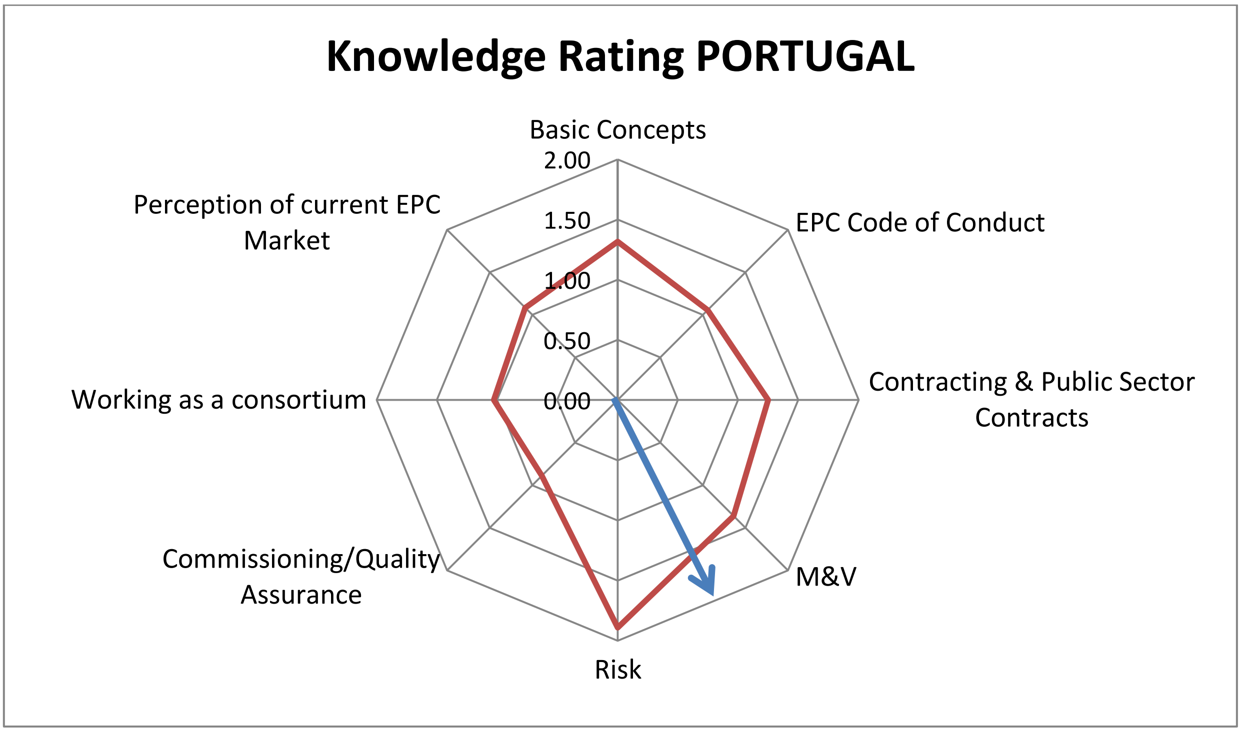

Figure 7: Knowledge Rating PORTUGAL

3.8. The Czech Republic

Survey Dissemination and Response Rate

The survey was organised partly through email questionnaires and partly through phone interviews. First the questionnaire was translated into the Czech language, and this was sent to 18 selected stakeholders with whom SEVEn had a previous contact. As only 4 questionnaires returned by email, SEVEn organised 4 follow-up phone interviews.

The total survey returned was 8, giving a total response rate of 36%.

Survey Results

The survey results for The Czech Republic are shown in Figure 8.

The results from The Czech Republic show a need for training in all topics, which differs to all other countries. The lowest score in this case is 'Risk', which differs to the majority of other results, which show 'Risk' as one of the highest scoring topics.

'Perception of the Current EPC Market' in The Czech Republic shows that SME's are aware that there is work required to improve the EPC market, although this was not as high a response as in other countries. In contrast to most other countries, SME's stated that the current market in The Czech Republic is already fairly well established, and also recognised that EPC's help increase energy savings associated with energy projects. This corresponds well to the fact that the Czech market is one of the most advanced EPC markets in Europe.

Respondents did show some interest and advantages of working in a consortium and use of standardised tools to successfully implement EPC's, however this was not as high as in other partner countries.

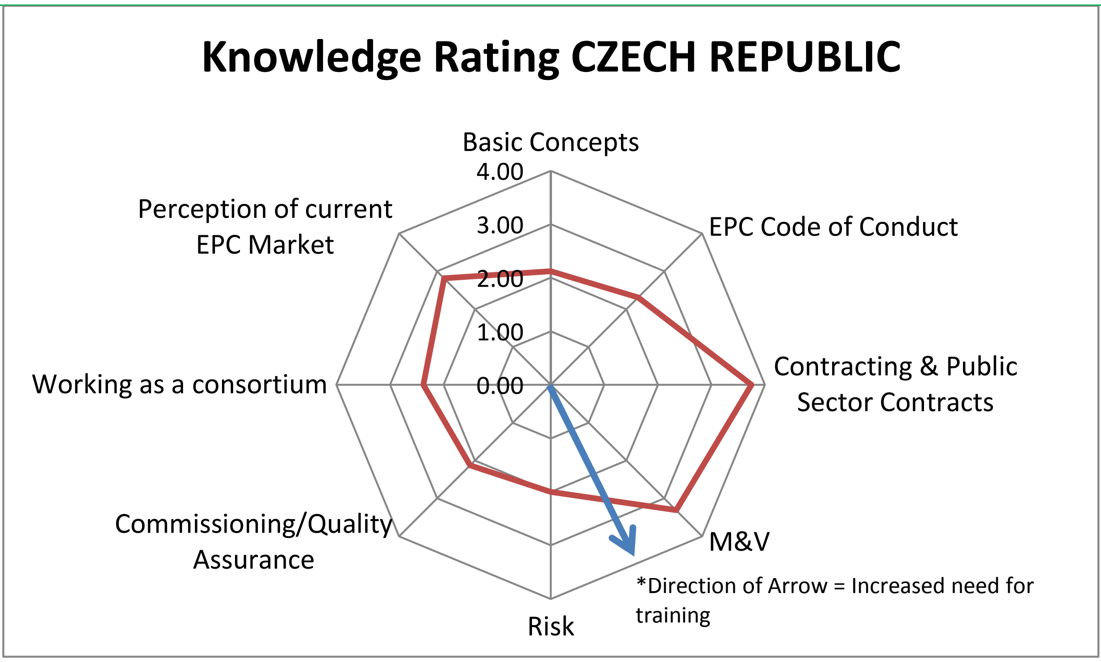

Figure 8: Knowledge Rating The CZECH REPUBLIC

3.9. Slovenia

Survey Dissemination and Response Rate

The survey was designed using the Google Forms. The e-mail invitation to fill out the on-line survey in the Slovene language was sent to 68 stakeholders. The first invitation letter was sent on June 15th 2015, the second one on June 29th 2015.

The total surveys completed and returned was 8, giving a response rate of 11.7%.

Survey Results

The survey results for Slovenia are shown in Figure 9.

Results for Slovenia are similar in nature to The Czech Republic, in the fact that all topics score higher than 2 and therefore require some form of training. 'M&V', 'Risk' and 'Contracting and Public Sector Contracts' all score higher than 3, meaning significant training is required.

The topic with highest knowledge and understanding, and therefore little need for training is 'Commissioning and Quality Assurance', which is line with the majority of other countries.

'Perception of the Current EPC Market' in Slovenia is comparable with The Czech Republic. In contrast to most other countries, SME's stated that the current market in Slovenia is already fairly well established, and also recognised that EPC's help increase energy savings associated with energy projects.

Again, very similar to The Czech Republic are the results for 'Working as a Consortium'. Respondents did show some interest and advantages of working in a consortium and use of standardised tools to successfully implement EPC's, however this was not as high as in other partner countries.

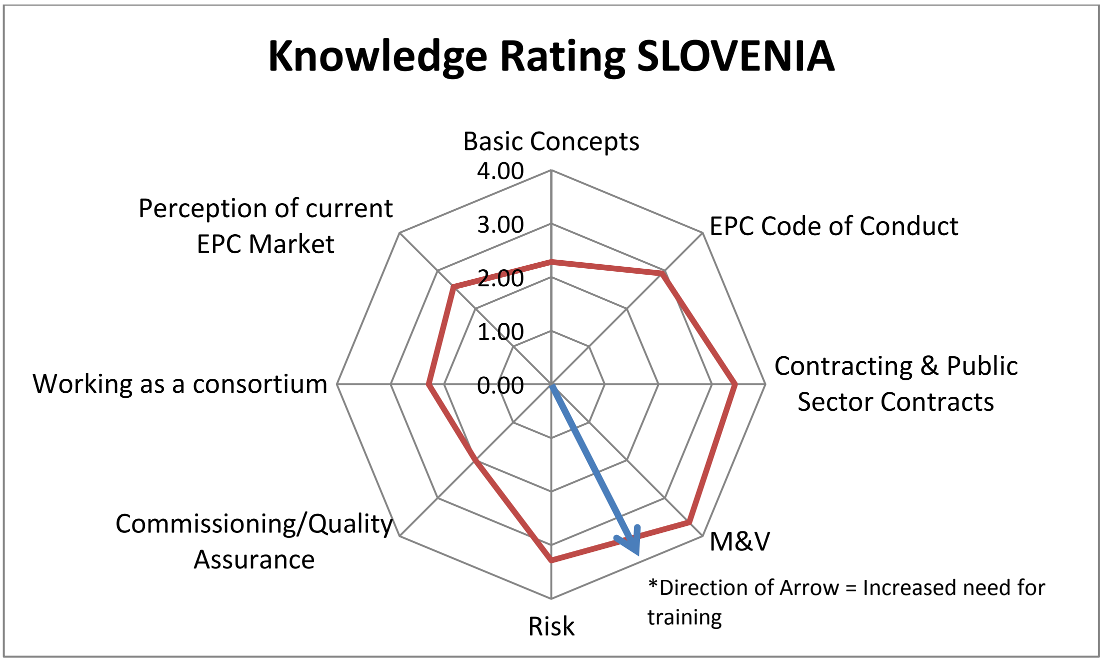

Figure 9: Knowledge Rating SLOVENIA

3.10. Bulgaria

Survey Dissemination and Response Rate

The survey was designed using SurveyPlanet, which is an on-line tool which allows easy dissemination of the survey and collection and analysis of the results. The pilot survey was sent out (e-mailed) on 15th June, with final surveys sent out (e-mailed) on 22nd June 2015 to 63 relevant SMEs. No reminders were sent.

The total survey returned was 8, giving a response rate of 12.7%. Although this is a low response rate, the target number of responses per partner for this project was 8-10, therefore it is felt that 8 responses is adequate for the needs of this analysis.

Survey Results

The survey results for Bulgaria are shown in Figure 10.

Bulgarian results show that there are 3 topics requiring training, and similar to the majority of other countries, 'Risk' scores highest. 'M&V' and 'Contracting and Public Sector Contracts' also score highly, indicating the need for some training in these topics. These results can be explained by the lack of or limited practical experience of respondents with EPC. It is interesting that although all respondents claim to have at least average knowledge about M&V (the majority claim to have very good knowledge), half of the respondents do not know when M&V takes place.

The remaining topics show good knowledge and understanding and therefore do not require specific training. The knowledge in “Basic Concepts” scored highest, probably due to the multiple EPC-related events in the country during the last few years. Similar to other results as described above, ‘Perception of Current EPC Market’ and ‘Working as a Consortium’ have scored positively.

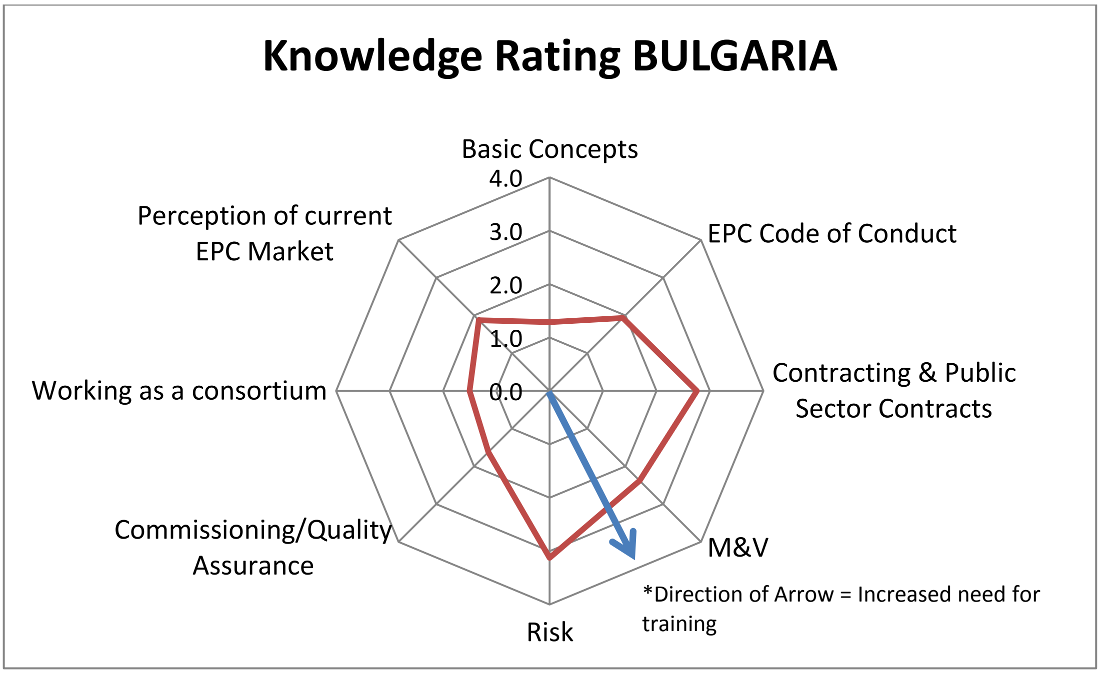

Figure 10: Knowledge Rating BULGARIA

3.11. Italy

Survey Dissemination and Response Rate

The survey was translated into Italian by Esco Italia, was tested by the technical department, and thereafter it was sent via Federesco, the Italian Esco Association, which has about 60 Members.

Federesco chose the relevant and most participating Esco subjects and sent the questionnaire in the form of an Excel worksheet via email to about 30 stakeholders on 1st October 2015. The email was addressed to specific and competent contact people, did not indicate any deadline but kindly requested the responses "as soon as possible". The internal deadline (between Esco Italia and Federesco) was scheduled to be on 7th October 2015. After this date, in the event of an insufficient number of responses, Esco Italia's Project contact person would have been contacting and interviewing the stakeholders by phone.

As the total surveys returned by 7th October via email were 10, there has been no need of follow-up calls. The response rate was of 33%.

Survey Results

The survey results for Italy are shown in Figure 11.

Results for Italy are similar in nature to Spain. There are a number of topics that score over 2, and therefore need some aspect of training; 'EPC Code of Conduct', 'M&V', 'Contracting and Public Sector Contracts' and 'Risk'. Risk has the highest score, which is higher than 3, meaning significant training is required in this area.

The topic with highest knowledge and understanding, and therefore little need for training is 'Commissioning and Quality Assurance', which is line with the majority of other countries.

'Perception of the Current EPC Market' in Italy is comparable with Spain and Bulgaria. Respondents showed high interest and advantages of working in a consortium and use of standardised tools to successfully implement EPC's.

Again, very similar to the majority of the partner countries, the results for 'Working as a Consortium' show that there is some interest and advantages of working in a consortium and use of standardised tools to successfully implement EPC's.

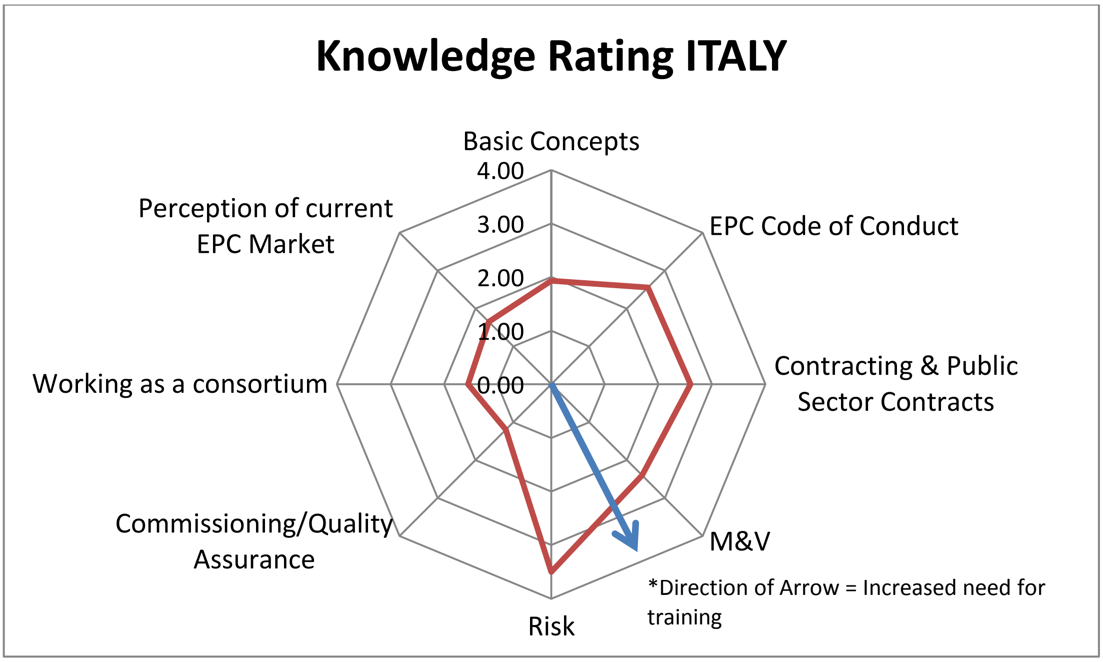

Figure 11: Knowledge Rating ITALY

4. Summary of Results

Table 2 shows the summary of results for all partner countries, ranked in order of training needs. Topics with scores less than 2.0 require no training. Topics with scores between 2 and 3 show a need for some training, whilst topics with a score greater than 3 require significant training.

As discussed above, the topic which shows the least need for training amongst all partner countries is 'Commissioing and Quality Assurance', with scores above 2 only in one country; The

Czech Republic. The topics that most require training are ’Risk’ and ’EPC Code of Conduct’. This table also highlights that Greece and Portugal do not score greater than 2 in any of the topics, and therefore do not need specific training in any of the topics surveyed. In contrast, The Czech Republic and Slovenia require training to some extent in all topics.

Table 3 shows the summary of all partners, with scores ranked per country, to highlight the highest and lowest scores of each country for comparison.

Topic	Country											Average
	Greece	Germany	Belgium	Austria	Ireland	Spain	Portugal	Italy	The Czech Republic	Slovenia	Bulgaria	
Basic Concepts	1.46	2.03	1.79	2.19	2.37	2.07	1.31	1.93	2.13	2.29	1.29	1.89
EPC Code of Conduct	1.47	3.12	4.19	3.67	2.60	2.55	1.06	2.55	2.31	2.93	1.94	2.58
Contracting & Public Sector Contracts	1.19	1.92	1.88	3.28	2.50	3.65	1.25	2.60	3.75	3.43	2.75	2.56
M&V	1.41	3.38	2.19	3.83	2.65	3.20	1.36	2.40	3.31	3.64	2.38	2.70
Risk	1.81	2.54	3.25	2.33	3.40	4.00	1.89	3.50	2.00	3.29	3.13	2.83
Commissioning/Quality Assurance	1.06	0.85	1.75	1.67	1.70	1.40	0.89	1.20	2.13	2.00	1.63	1.48
Working as a consortium	1.28	1.50	1.69	2.22	1.75	1.65	1.03	1.55	2.38	2.29	1.50	1.71
Perception of current EPC Market	0.84	1.62	1.75	1.83	2.15	2.15	1.08	1.65	2.81	2.57	1.88	1.85

Table 2: Summary of Results –Results highlighted by Training Requirement

Topic	Country										
	Greece	Germany	Belgium	Austria	Ireland	Spain	Portugal	Italy	The Czech Republic	Slovenia	Bulgaria
Basic Concepts	1.46	2.03	1.79	2.19	2.37	2.07	1.31	1.93	2.13	2.29	1.29
EPC Code of Conduct	1.47	3.12	4.19	3.67	2.60	2.55	1.06	2.55	2.31	2.93	1.94
Contracting & Public Sector Contracts	1.19	1.92	1.88	3.28	2.50	3.65	1.25	2.60	3.75	3.43	2.75
M&V	1.41	3.38	2.19	3.83	2.65	3.20	1.36	2.40	3.31	3.64	2.38
Risk	1.81	2.54	3.25	2.33	3.40	4.00	1.89	3.50	2.00	3.29	3.13
Commissioning/Quality Assurance	1.06	0.85	1.75	1.67	1.70	1.40	0.89	1.20	2.13	2.00	1.63
Working as a consortium	1.28	1.50	1.69	2.22	1.75	1.65	1.03	1.55	2.38	2.29	1.50
Perception of current EPC Market	0.84	1.62	1.75	1.83	2.15	2.15	1.08	1.65	2.81	2.57	1.88

Table 3: Summary of Results – Results Ranked per individual country

5. Conclusion

The results above highlight the training topics required for each partner country to ensure the learning outcomes of the training events are suited to each countries needs.

Greece and Portugal appear to have no training requirements, however both partners suggest that knowledge may be theory based, and no actual practice has taken place as the EPC market in both countries is very young. In Portyugal there hs been significant regulatory frameworks developed and implemented, which has also icnreased the knowledge of EPC.

All other countries require training in some areas, the topic most requireing training are:

- Risk
- M&V
- Contracting & Public Sector Contracts