



SECTORAL STRATEGIC APPROACH TO COOPERATE ON SKILLS IN THE CONSTRUCTION INDUSTRY

**WP4. WATCHTOWER OF SKILLS NEEDS IN THE
CONSTRUCTION INDUSTRY**

**Results of the questionnaire on skills
needs of construction companies,
2nd part: transversal skills applied to
the construction sector**



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Key Action 2 | Call 2018

COOPERATION FOR INNOVATION AND THE EXCHANGE OF GOOD PRACTICES
SECTOR SKILLS ALLIANCES FOR IMPLEMENTING A NEW STRATEGIC APPROACH
("BLUEPRINT") TO SECTORAL COOPERATION ON SKILLS

Project number:

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| PARTNERSHIP | | |
|-----------------------------|----------------------------|-----------|
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Methodology

While the first edition of the skills questionnaire addressed to construction companies, launched in 2021, was focused on their needs of technical skills linked to digitalisation, energy efficiency and circular economy (click [here](#) to see the results), this second edition aimed to identify their skills needs in transversal skills applied to the construction sector.

UNESCO defines “transversal skills” as “skills typically considered as not specifically related to a particular job, task, academic discipline or area of knowledge but as skills that can be used in a wide variety of situations and work settings (IBE 2013)” and divides them into [six categories](#).

As for the first edition of the questionnaire, this second edition was designed after consultation of Belgian and French VET experts and validated by European Commission representatives, the project pilot FLC and other project partners between January and March 2022. WP4 co-pilots decided to use the same online tool called *Déclic*, used by CCCA-BTP, to disseminate the questionnaire and collect the data.

Once finalised in English and French, it was translated by project partners in March and April 2022 in all partnership languages: Spanish, Portuguese, Italian, Dutch, German, Polish, Greek, Slovenian, Lithuanian and Finnish.

As specified in the application, the aim was to collect a minimum of 2000 answers among the 12 European countries of the consortium. Each country was addressed with a minimal number of answers to reach, depending on their respective number of construction companies (*please see the table below*).

| | Number of construction companies (1) | Minimal number of answers required (2) | Minimal number of construction companies to reach (Answer rate = 10%) |
|--|--------------------------------------|--|--|
| Italy | 1 044 531 | 300 | 3 000 |
| France | 804 420 | 300 | 3 000 |
| Spain | 698 086 | 300 | 3 000 |
| Germany | 655 109 | 180 | 1 800 |
| Poland | 522 283 | 180 | 1 800 |
| Belgium | 204 476 | 120 | 1 200 |
| Greece | 168 233 | 120 | 1 200 |
| Portugal | 167 584 | 120 | 1 200 |
| Ireland | 95 781 | 120 | 1 200 |
| Finland | 84 392 | 120 | 1 200 |
| Lithuania | 68 074 | 90 | 900 |
| Slovenia | 36 257 | 90 | 900 |
| Total | 4 549 226 | 2 040 | 20 400 |
| (1) Source: ECSO (EU) | | | |
| (2) National partners can decide to raise this minimum in their country. | | | |

The obstacles to data collection of the 1st questionnaire were taken into account and a dissemination strategy was designed between WP4 co-pilots and the project pilot FLC. Common communication materials for emailing and social media were offered to project partners, and all of them committed in reacting / commenting / sharing any post related to the 2nd skills questionnaire they might see, with a dedicated hashtag (#constructiontransversalskills), in order to match social media expectations.

The questionnaire was launched on **May 5th**, 2022 and was closed on **September 30th**, 2022. The consortium collected **a total of 1354 answers**.

The **answers collected by the Construction Blueprint consortium** are distributed according to *the table below*.

| | Minimal number of answers required (2) | Total of answers collected (2nd edition - 2022) | Distribution of results | Adjustment coefficient (2nd edition - 2022) |
|--------------|--|---|-------------------------|---|
| Italy | 300 | 460 | 34% | 0,676 |
| France | 300 | 51 | 3,80% | 4,695 |
| Spain | 300 | 167 | 12,30% | 1,244 |
| Germany | 180 | 34 | 2,50% | 5,735 |
| Poland | 180 | 38 | 2,80% | 4,091 |
| Belgium | 120 | 150 | 11,10% | 0,406 |
| Greece | 120 | 89 | 6,60% | 0,563 |
| Portugal | 120 | 25 | 1,80% | 1,995 |
| Ireland | 120 | 104 | 7,70% | 0,274 |
| Finland | 120 | 121 | 8,90% | 0,208 |
| Lithuania | 90 | 29 | 2,10% | 0,699 |
| Slovenia | 90 | 86 | 6,40% | 0,125 |
| Total | 2 040 | 1354 | 100% | |

Before any analysis, a statistical expert of CCCA-BTP weighted the collected results based on the ratio between the number collected by each country and their respective number of construction companies, in relation with the total number of answers collected by the consortium, in order to determine the **adjustment coefficients** for each country (*please see the table above*).

As reader may have noticed, gaps between adjustment coefficients are very significative: eight Slovenian answers will weight for one while one German answer will count for nearly six. In addition to that, two countries (Portugal and Lithuania) did not reach the minimum of 30 answers needed to conduct a minimal national analysis.

Given that the disparity of answers is distributed among all the consortium, none of the partner country will be excluded from this transnational analysis, unlike the consolidation of the first questionnaire's results in which Polish answers were not taken into account, as one Polish answer would have count for more than sixteen.

The total number of responses collected is lower than the first edition of the questionnaire, which managed to collect 1715 responses, even though the second questionnaire is much shorter. One plausible explication is the short period of time between the closure of the first questionnaire (September 2021) and the launching of the second one (May 2022). Construction companies are very solicited to answer questionnaires and surveys, and only 8 months to separate two large-scale campaigns are not enough to maintain their interest into responding such long questionnaires. Another possible factor is that construction companies may have a higher interest in technical skills rather than transversal skills as it resonates more with their daily practice and concerns.

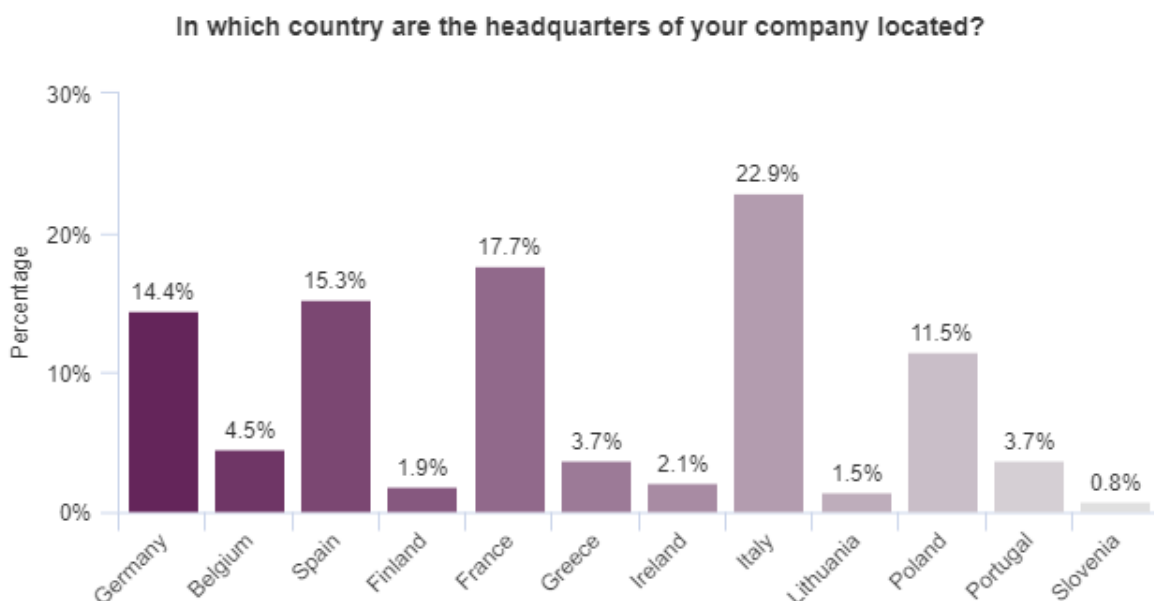


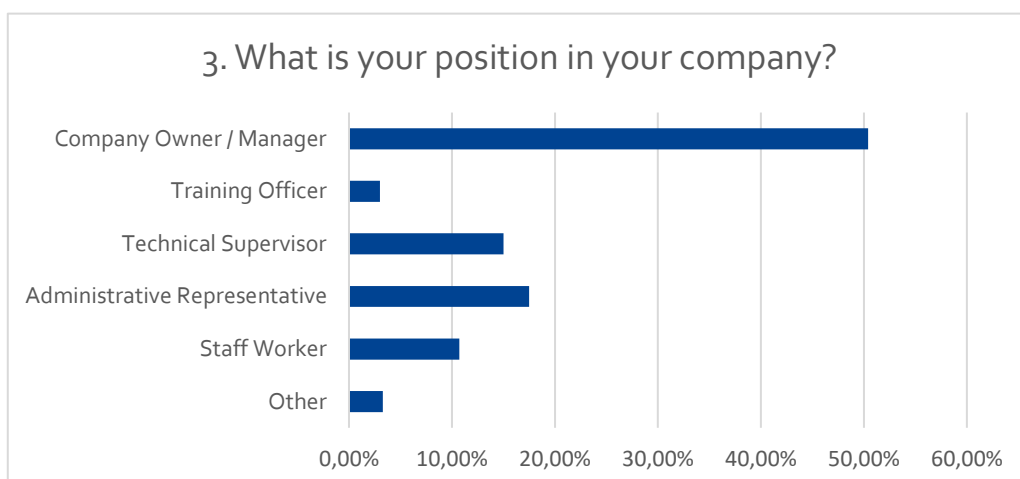
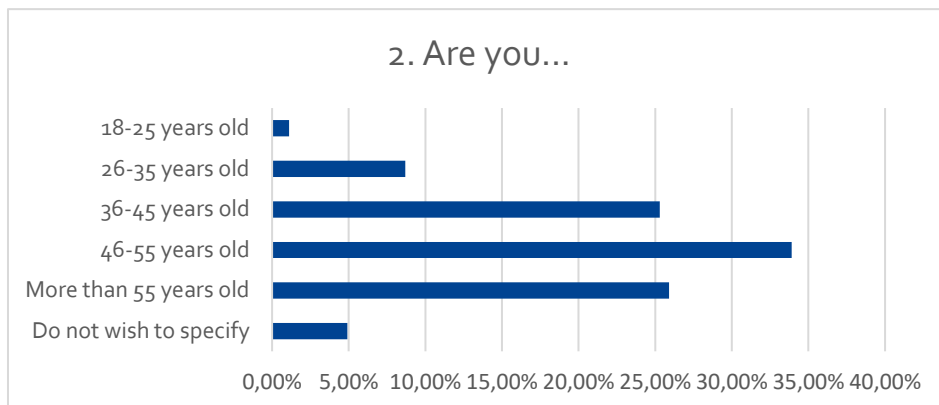
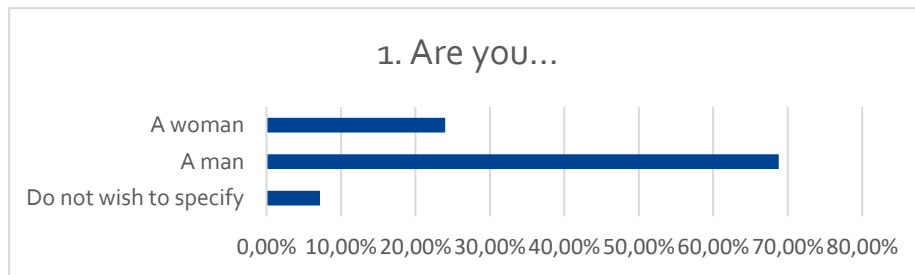
Figure 1 - Distribution of collected answers, including adjustment coefficients - second skills questionnaire - 2022

Profile of the respondents

Most of or all the questionnaire was completed by **1354 respondents from the construction sector** in the 12 European countries of the consortium.

68,8% of them are men and 24% are women (7,2% do not wish to specify). Most of them are between 46 and 55 years old (33,9%), more than 55 years old (25,9%) and between 36 and 45 years old (25,3%).

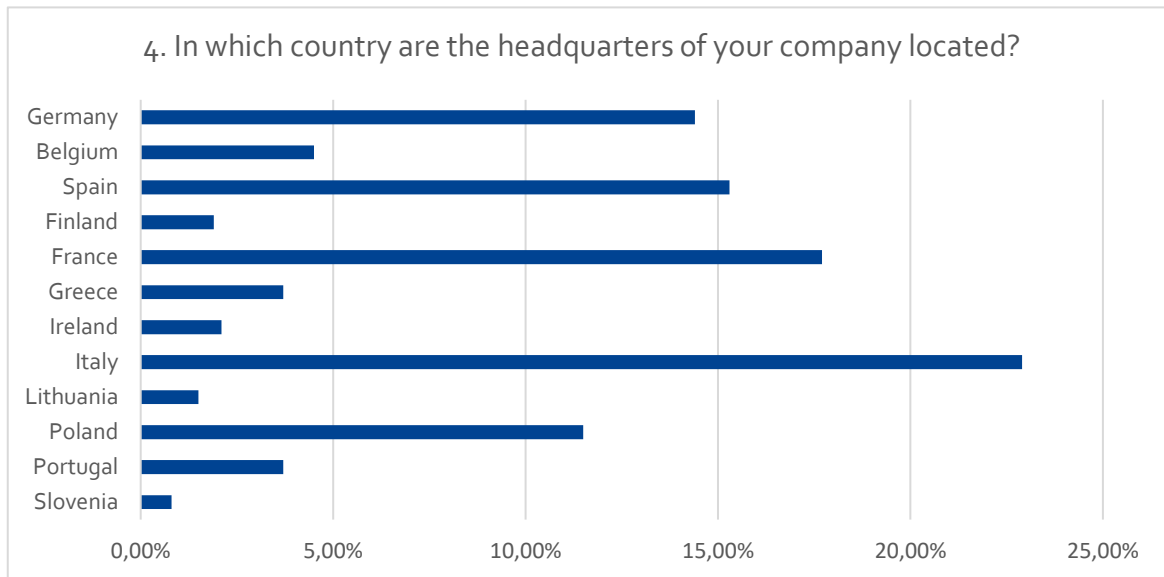
Half of the respondents is company owner / manager (50,4%) and administrative representative (17,5%).

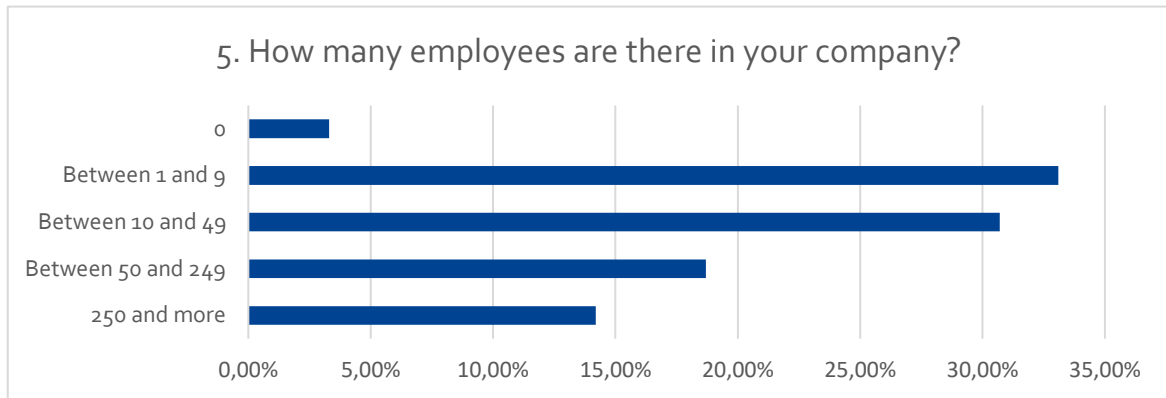


Profile of the companies

22,9% of the companies where the respondents work are located in Italy, 17,7% in France, 15,3% in Spain and 14,4% in Germany.

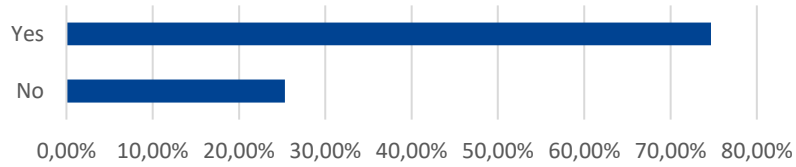
One third of these companies (33,1%) have between 1 and 9 employees, 30,7% of them have between 10 and 49 employees and 18,7% have between 50 and 249 employees.



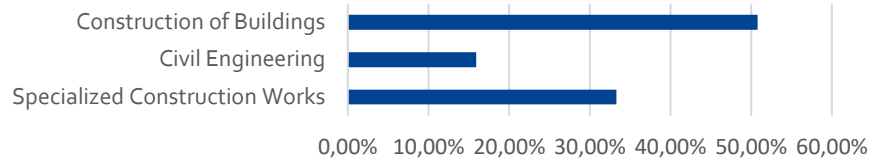


74,7% of the respondents indicated that their companies have several activities related to the construction sector, and this figure varies between 64% for France and 92,1% for Greece. Half of these companies' general sector of activity is the construction of buildings (50,8%), and this figure varies between 29,2% for Portugal, and 71,4% for Lithuania. 8 of 10 of them are into the construction of residential and non-residential buildings.

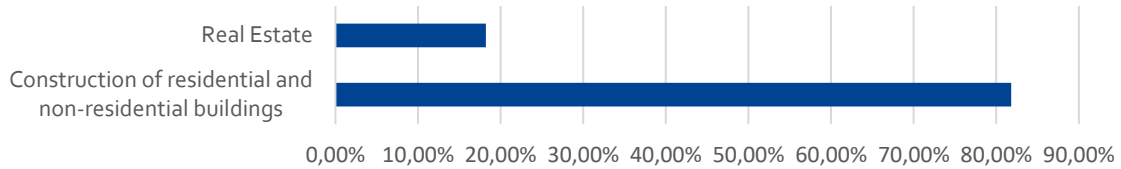
6. Does your company have several activities related to the construction sector?



7. What is your company's general sector of activity?

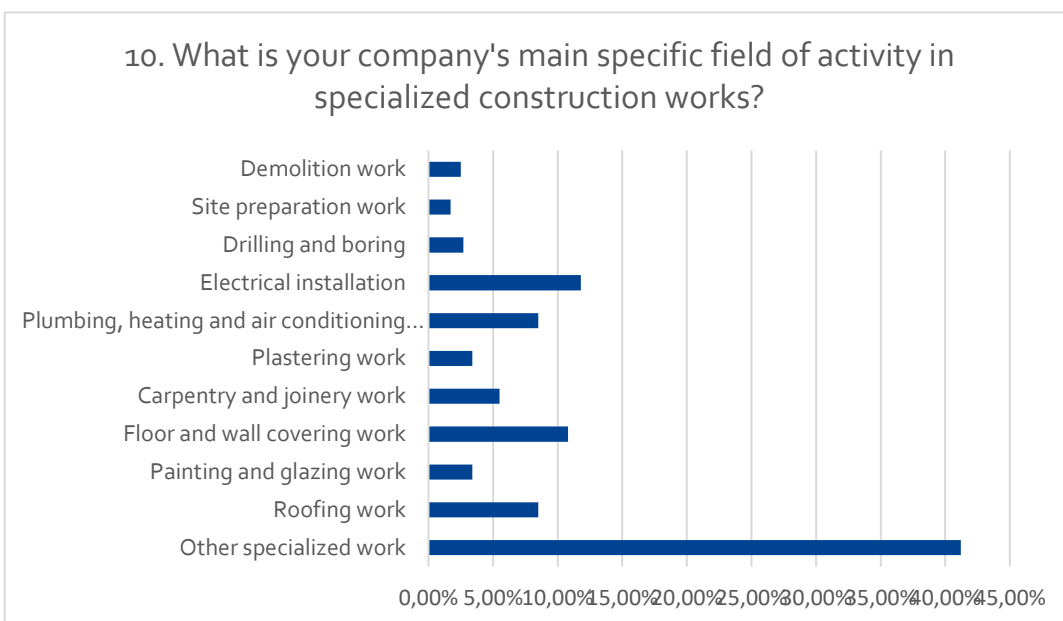
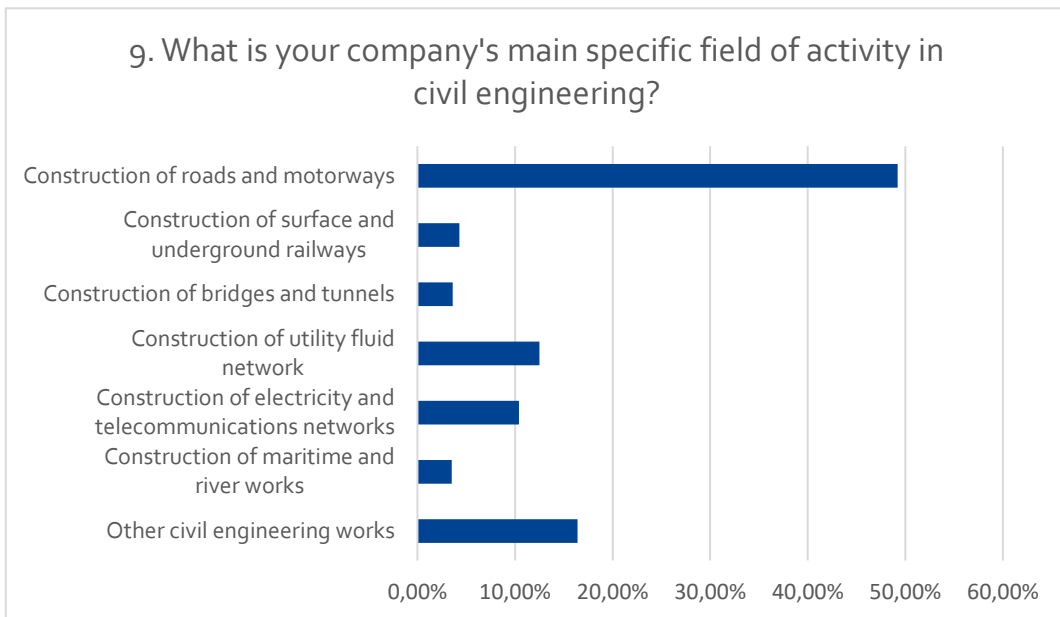


8. What is your company's specific field of activity in building construction?



49,2% of the respondent construction companies in civil engineering operate in the construction of roads and motorways (a common characteristic to almost all the countries of the partnership) and 12,5% of them in the construction of utility fluid network.

11,8% of the respondent construction companies in specialized construction works operate in electrical installation, 10,8% in floor and wall covering work, 8,5% in roofing work and plumbing / heating / air conditioning installation work, and 5,5% in carpentry and joinery work. It must be taken into account that most of the respondent construction companies have several activities related to the construction sector, and most of them operate in specialized construction works. Given the proportion of other civil engineering works (16,4%) and other specialized construction works (41,1%), the categories would have to be changed for future questionnaires in order to match European construction activities.



Opening remarks

This analysis gathers the results of the second questionnaire on European company skills needs, designed and launched in the framework of the Construction Blueprint project. While the first questionnaire focused on technical skills related to digitalisation, energy efficiency and circular economy, the second one addressed transversal skills applied to the construction sector. As such, it was divided as follows:

- Implement regulatory requirements
- Preparation, organisation, and supervision of construction sites
- Develop constructive relationships and behaviour
- Use of digital applications in company management

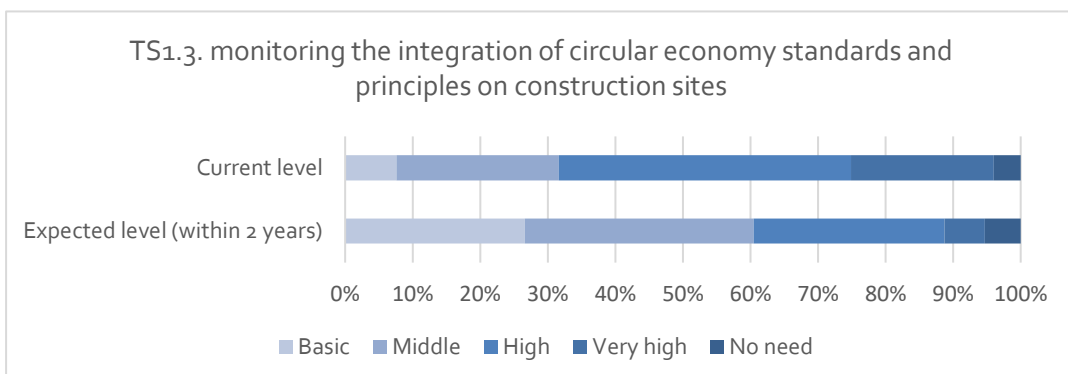
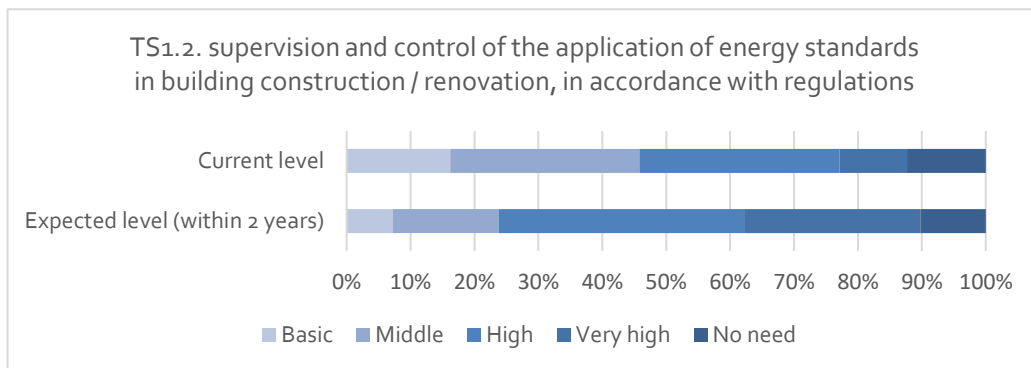
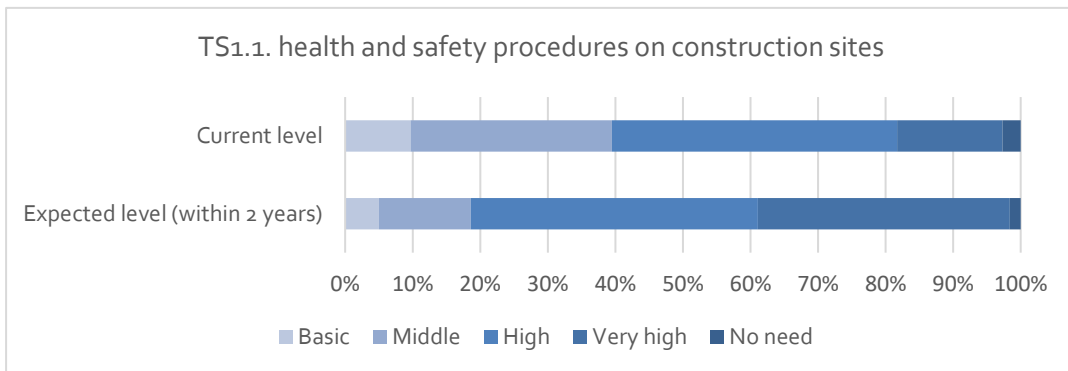
This transnational consolidation has been organised according to these four categories of transversal skills applied to the construction sector. Each of the four sections of the questionnaire begins with “**What is the level of competence within your company regarding...**”, a formulation that was not transcribed in each question to avoid repetition. This analysis follows the same logic.

Transversal skills – implement regulatory requirements

Focus on skills

For TS1.1, 42,2% of respondent construction companies indicated to currently master the knowledge and application of health and safety procedures on construction sites at a high level; they are 15,6% at a very high level. 37,3% expect to keep / reach the higher level within 2 years, which represent an upskilling opportunity for 274 companies.

For TS1.2, it represents an upskilling opportunity for 297 companies to reach high and very high levels, and it rises to 361 companies for TS1.3.

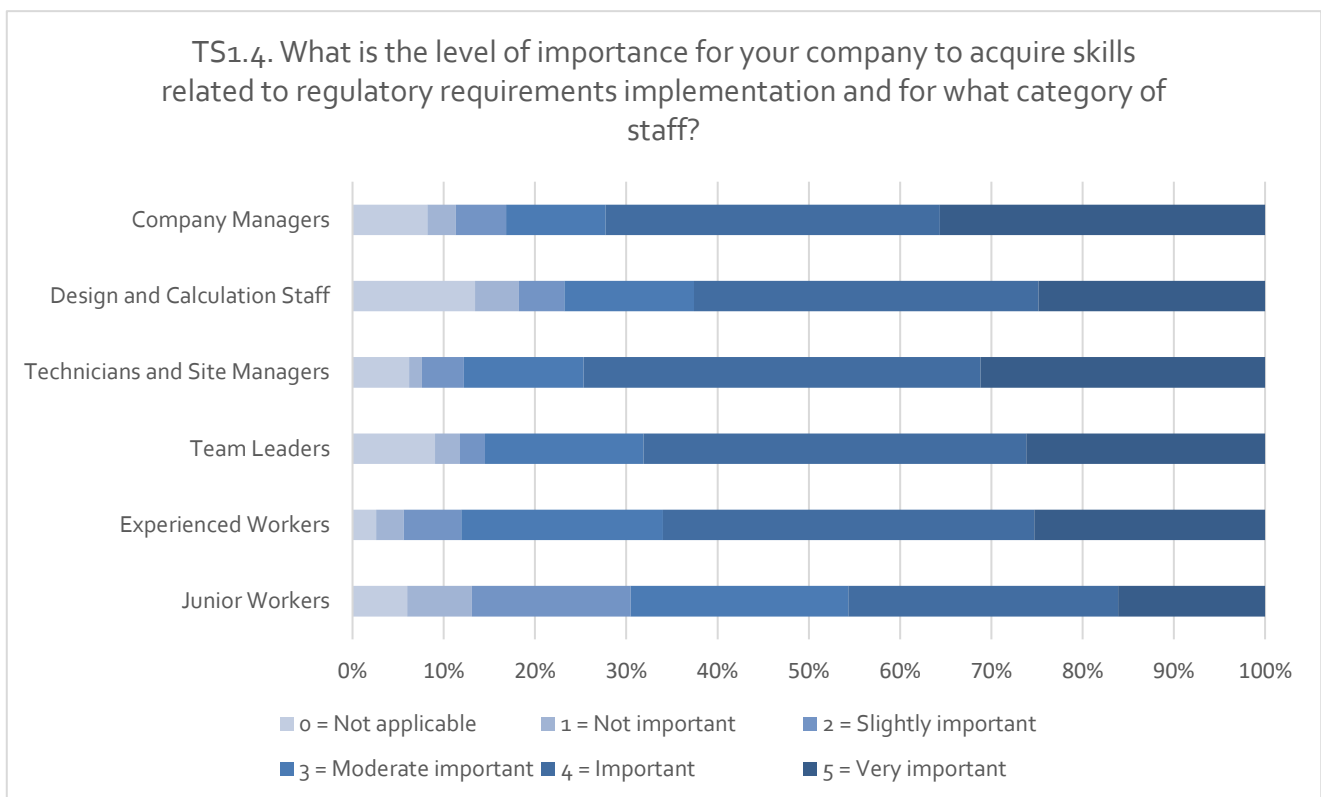


Training needs

For 890 respondent construction companies (74,7%), regulatory requirements implementation skills are between important and very important to master for technicians and site managers. 834 of them (72,2%) these skills to be between important and very important for company managers.

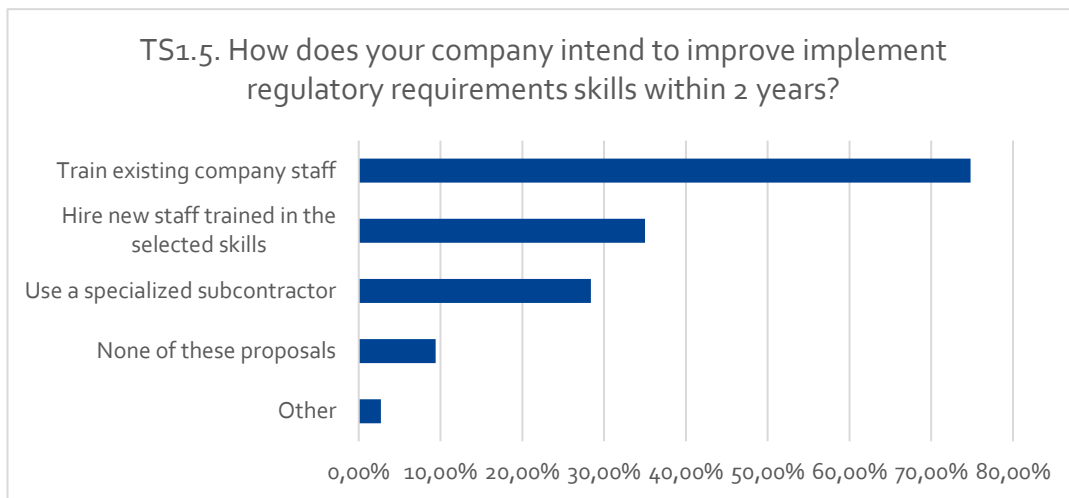
At the same time, 179 respondent construction companies (13,4%) consider these not being applicable for design and calculation staff (the higher rate for the not applicable category); it represents 162 companies (8,6%) for team leaders and 120 companies (8,2%) for company managers.

Regulatory requirements implementation skills are considered to be important or very important for junior workers according to 578 respondent construction companies (45,7%).



858 respondent construction companies (74,8%) plan to train their existing staff to reach the expected regulatory requirements implementation skills level within the next 2 years. 448 (35%) plan to hire new staff trained in the selected skills and 396 (28,4%) plan to use a specialised subcontractor.

The 836 construction companies which answered TS1.5 intend to upskill or reskill an average of 30 employees within 2 years regarding regulatory requirements implementation skills.



How many employees your company intend to upskill / reskill in regulatory requirements implementation within 2 years?

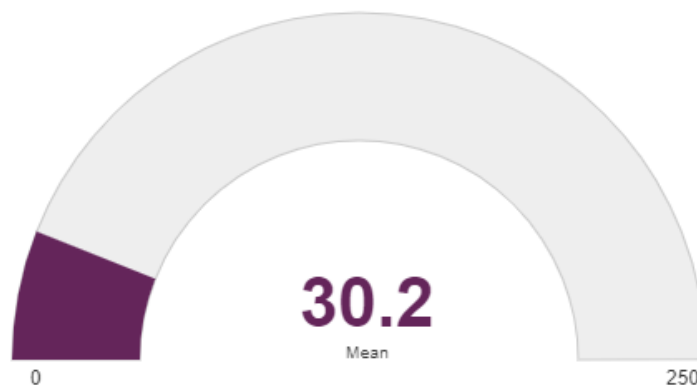
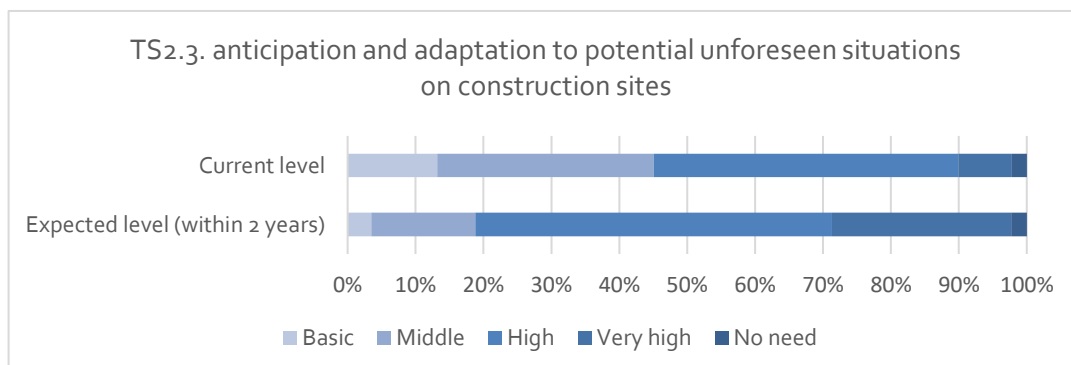
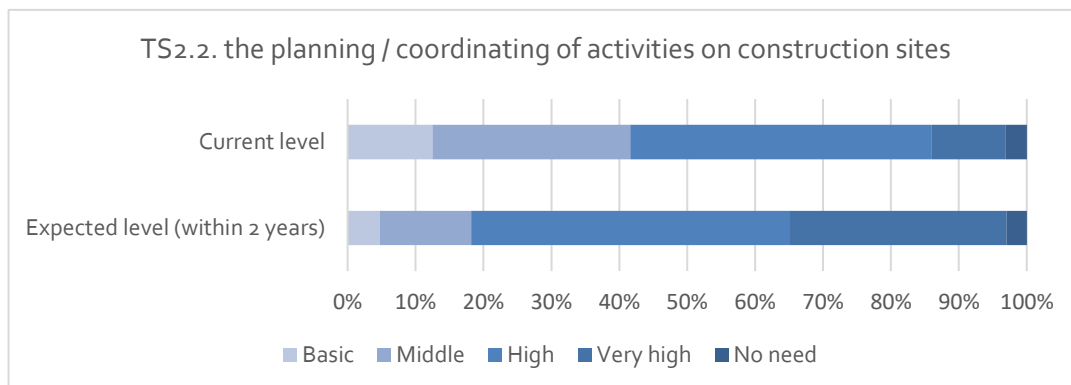
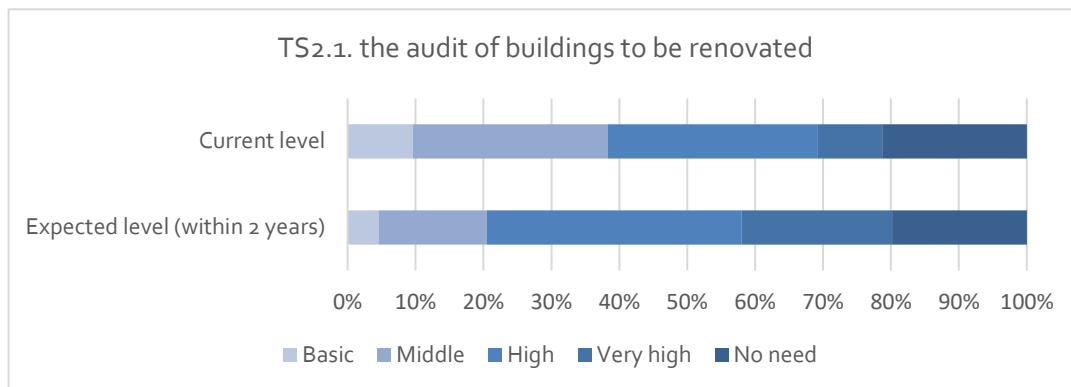


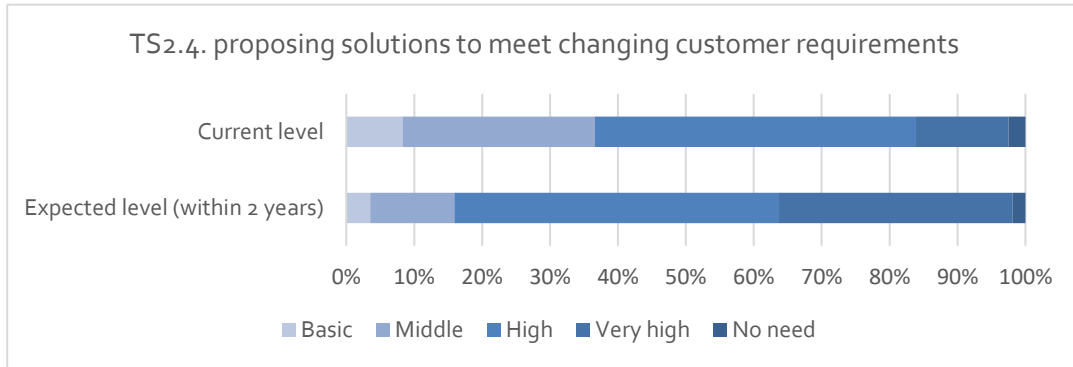
Figure 2 – Average number of employees respondent companies intend to upskill / reskill with 2 years regarding regulatory requirements skills

Transversal skills – preparation, organisation and supervision

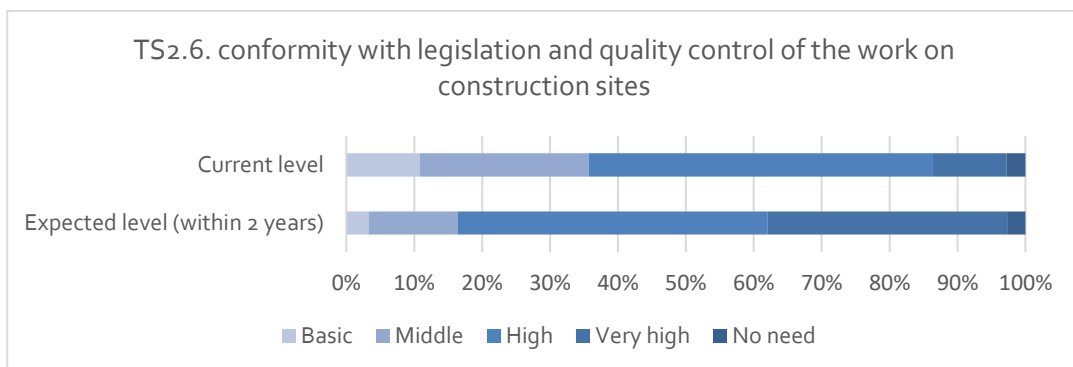
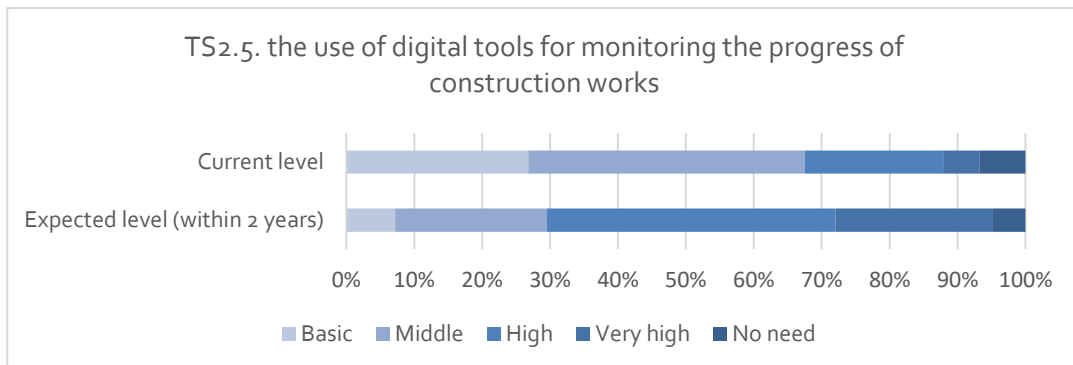
Focus on skills

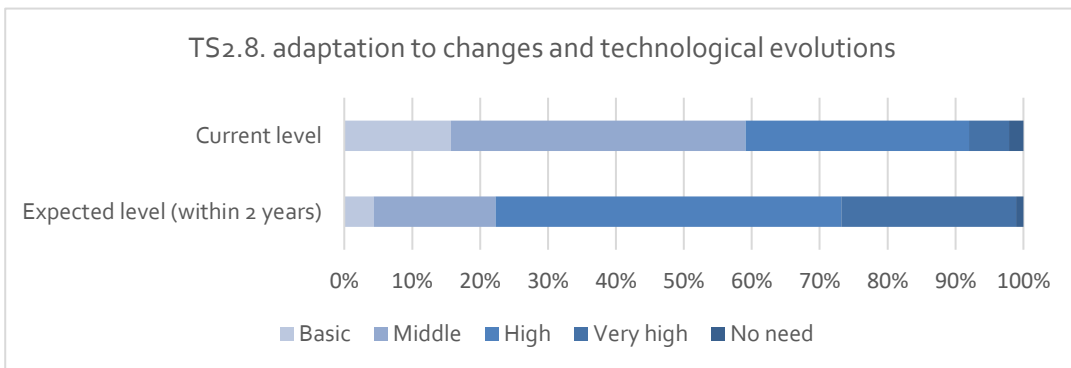
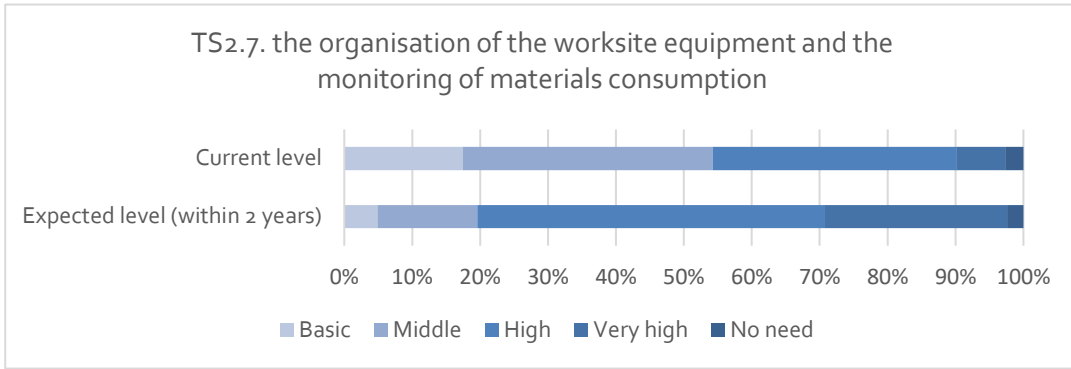
Concerning the audit of buildings to be renovated, 40,5% of the companies over 1309 respondents estimate their skill level between high and very high and this figure is expected to reach 59,6% within 2 years, which represents an upskilling perspective for 255 construction companies. 20% of the companies indicated they have no need for TS2.1 skill, now and in the future. Regarding TS2.2, it represents an upskilling perspective for 308 companies (23,6%) and only 3% of them indicated having no need for it, now and in the future. It represents an upskilling perspective for 311 companies (26,1%) for TS2.3 and for 260 companies (21,3%) for TS2.4.



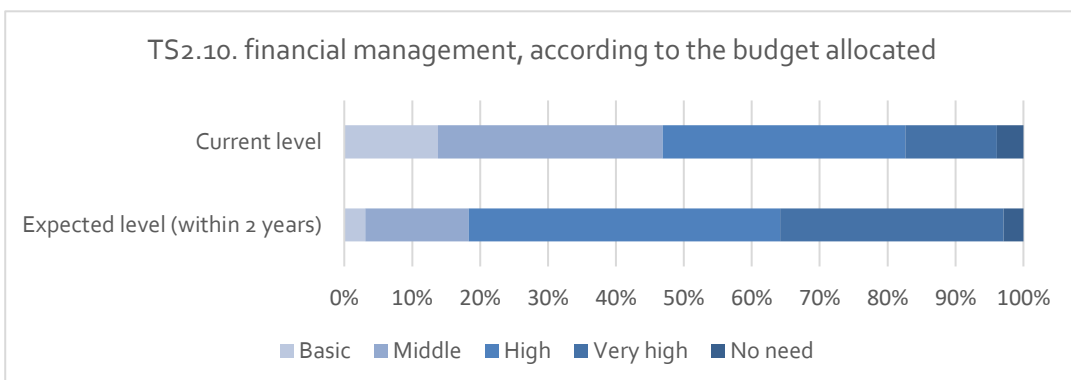
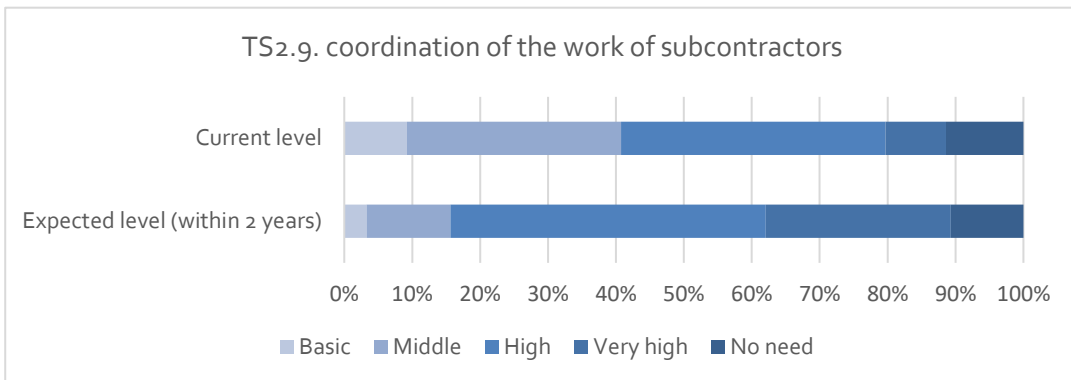


Regarding the use of digital tool to monitor construction works progress, 25,7% of the companies over 1310 respondents estimated their current skill level between high and very high, and this figure is expected to reach 65,5% within 2 years, which represents an upskilling perspective for 453 companies. For TS2.6, the skill level is expected to rise from 61,5% to 81% within 2 years, which represents an upskilling perspective for 253 companies. For TS2.7, it represents a jump from 43% to 78%, which represents an upskilling perspective for 408 companies. Regarding the adaptation to changes and technological evolutions, the number of construction companies highly skilled or very highly skilled is expected to be multiply by 2 within 2 years, representing an upskilling perspective for 452 companies.





Regarding the coordination of subcontractors’ work, 47,8% of respondent construction companies estimate their current skill level between high and very high; this figure is expected to reach 73,6% within 2 years, representing an upskilling perspective for 314 companies. 11% of them indicated they don’t need this skill, whether now or in the future. Finally, regarding financial management skills, 49,2% of respondent construction companies estimate their current skill level between high and very high; this figure is expected to reach 78,8% within 2 years, representing an upskilling perspective for 368 companies.

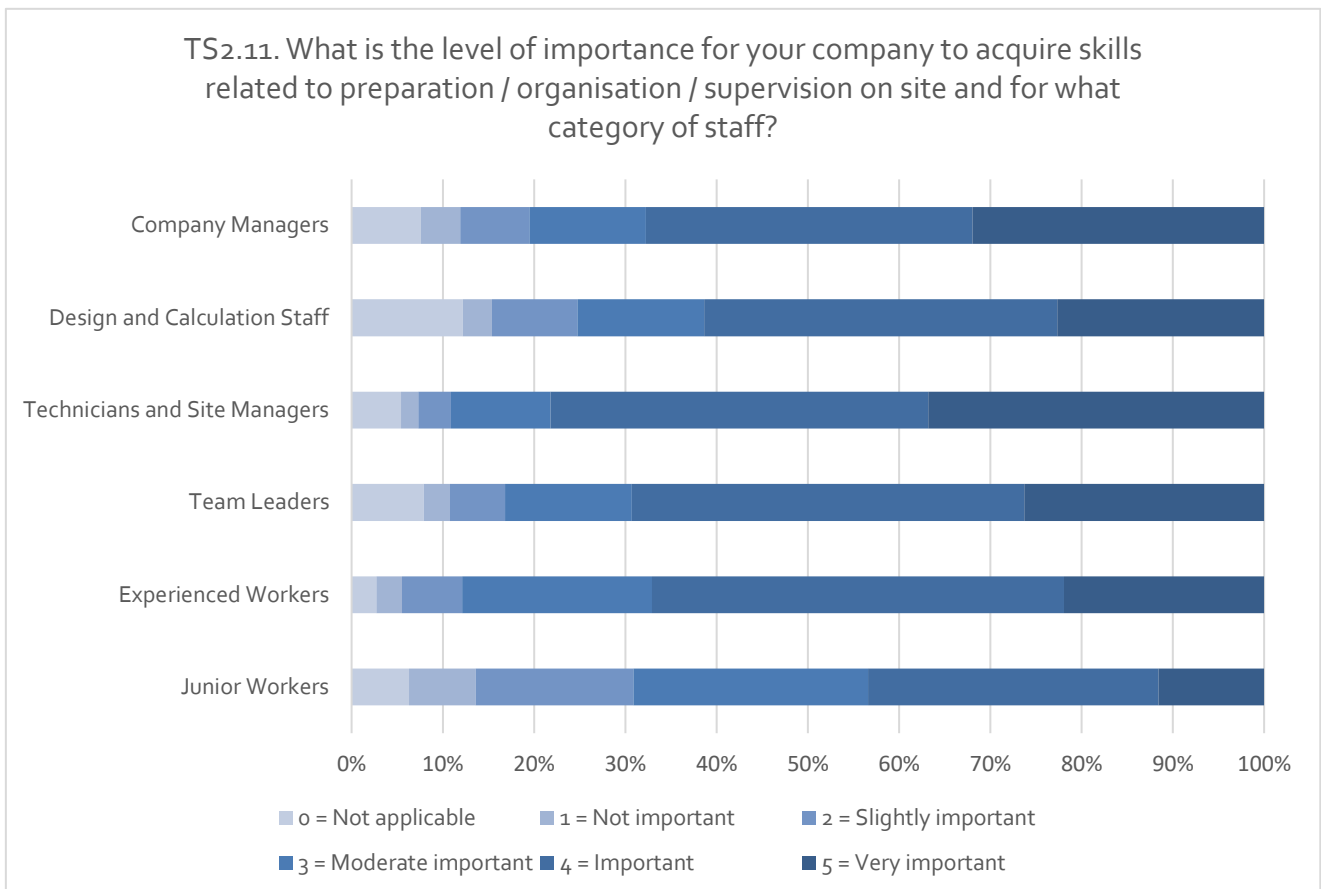


Training needs

For 924 of respondent construction companies (78,2%), preparation / organisation / supervision skills on sites are between important and very important to master for technicians and sites managers. 773 of them (69,3%) consider these skills being between important and very important for team leaders as well.

At the same time, 161 respondent construction companies (12,2%) consider preparation / organisation / supervision skills on sites being not applicable for design and calculation staff (the higher rate for the not applicable category), followed by team leaders (7,9%) and company managers (7,6%).

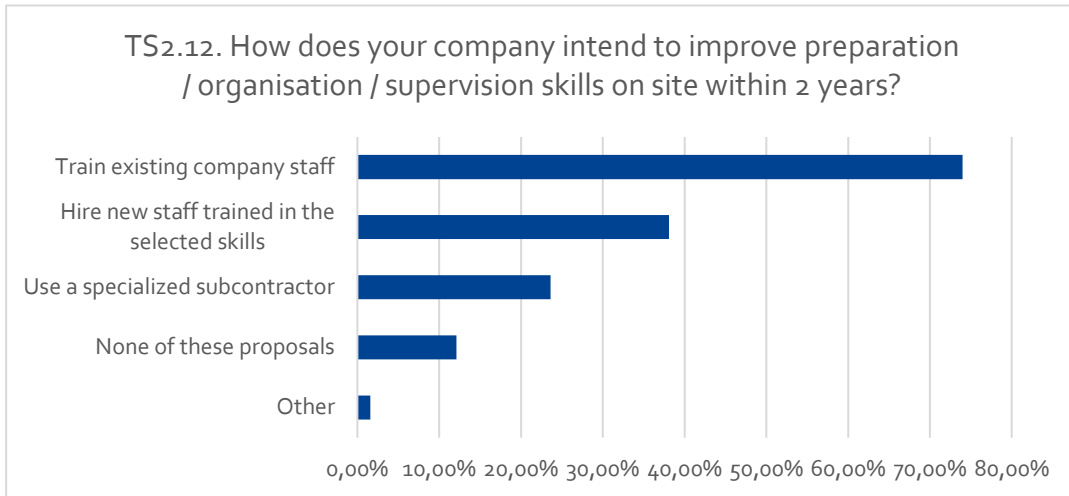
Energy efficiency skills are considered to be moderate important and less for junior workers according to 640 respondent construction companies (50,3%) and 112 (6,3%) of them consider it is not applicable for this category of staff.



853 respondent construction companies (74%) plan to train their existing staff to reach the expected preparation / organisation / supervision skill level within the next 2 years.

462 (38,1%) plan to hire new staff trained in the selected skills and 310 (23,6%) plan to use a specialised subcontractor.

821 respondent construction companies estimated they will upskill / reskill an average of nearly 25 employees within 2 years.



How many employees your company intend to upskill / reskill regarding preparation / organisation / supervision skills on construction sites within 2 years?

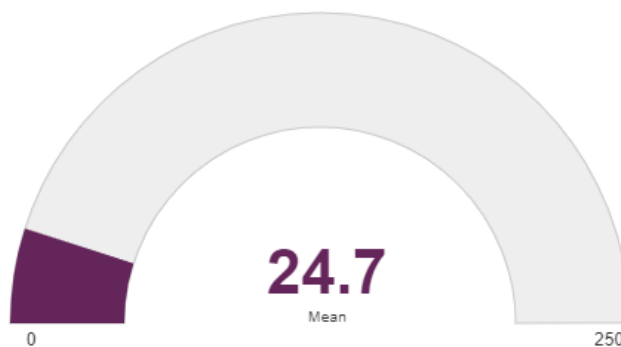
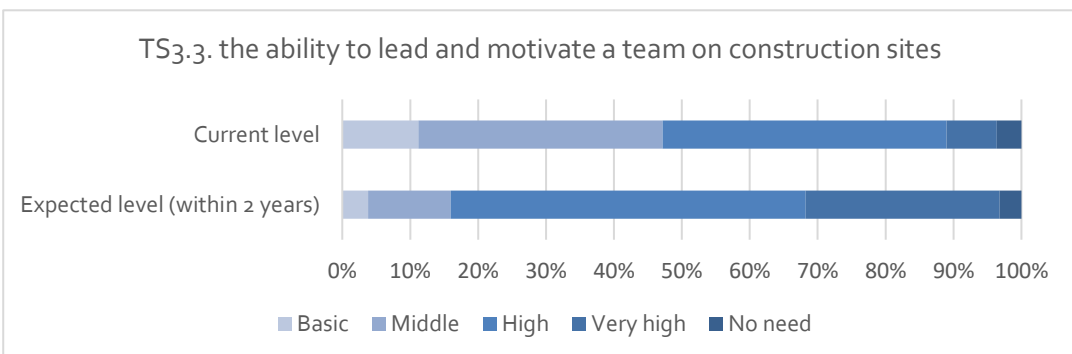
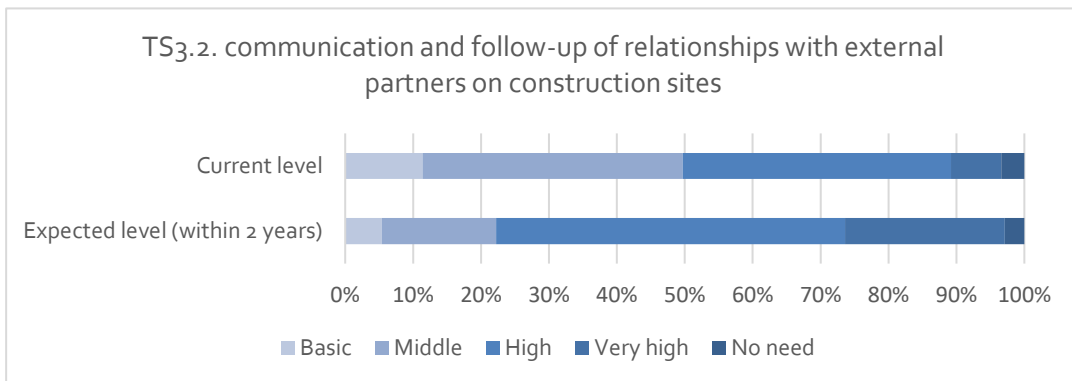
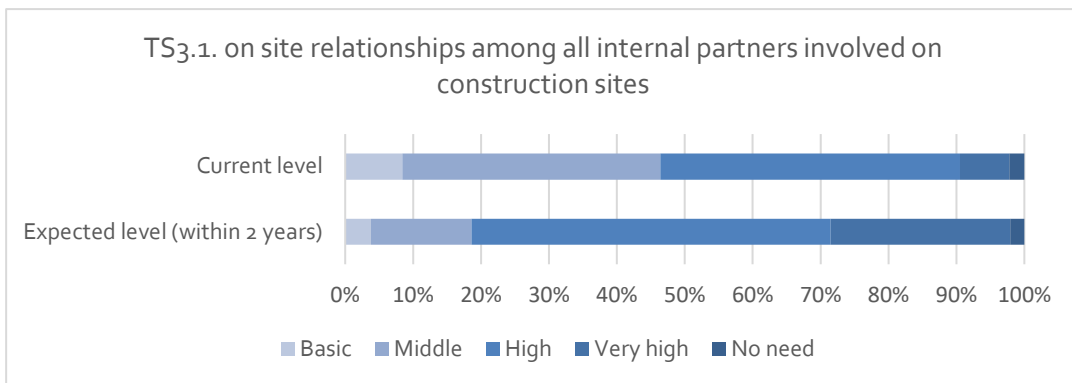


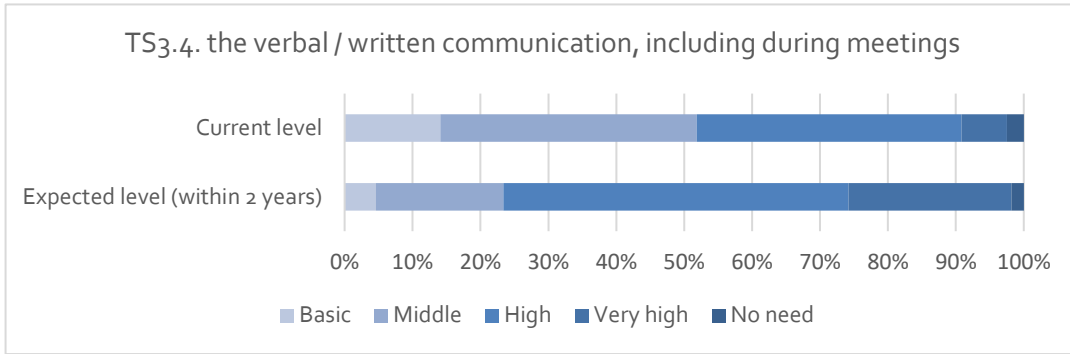
Figure 3 - Average number of employees respondent construction companies intend to upskill / reskill within 2 years regarding preparation / organisation / supervision skills on sites

Transversal skills – develop constructive relationships and behaviour

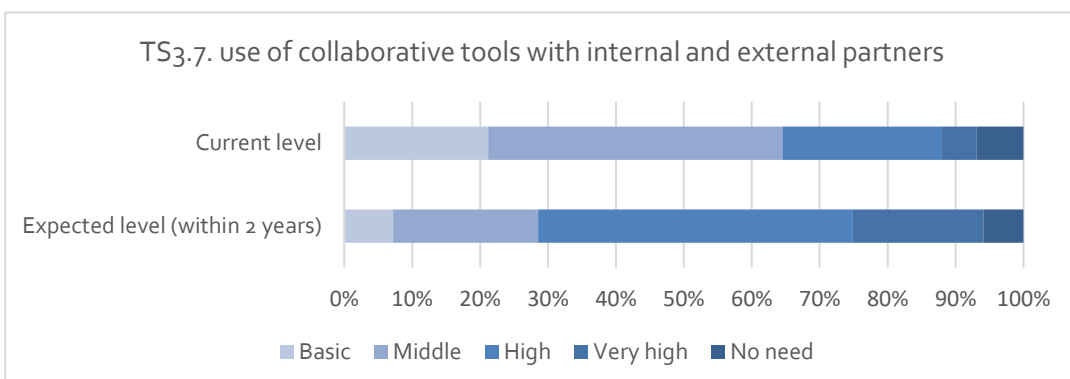
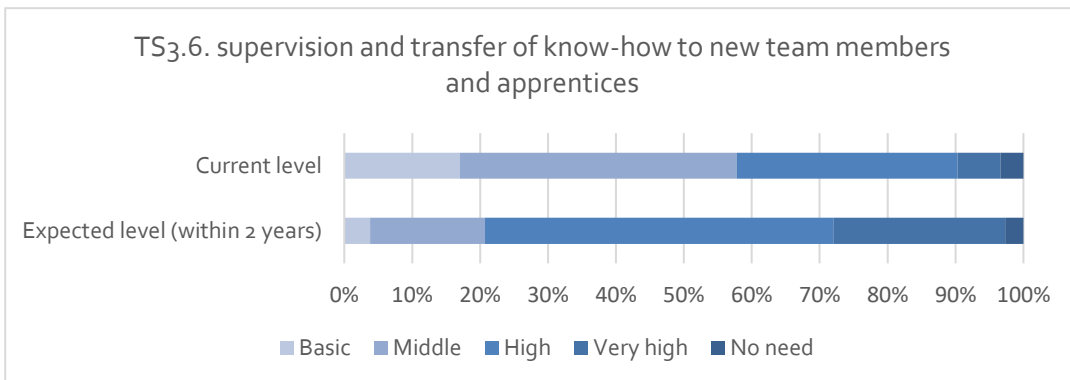
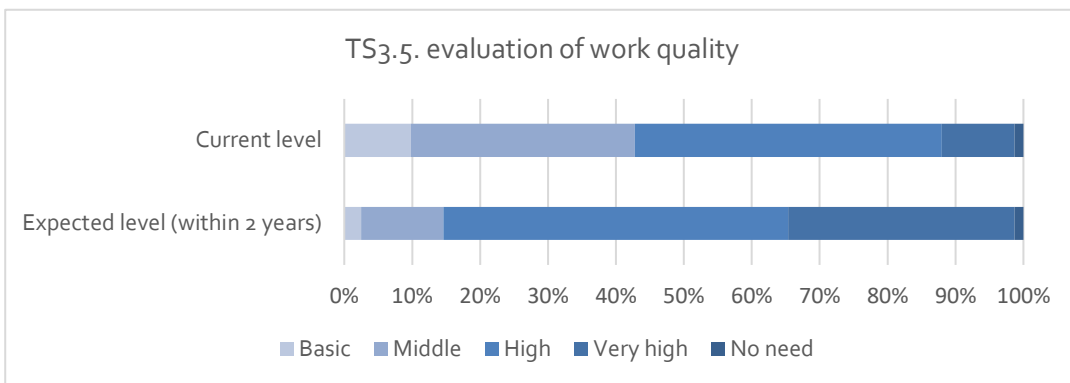
Focus on skills

Regarding the on-site relationships among all internal partners, 51,4% of the companies over 1318 respondents estimated their current skill level between high and very high, and this figure is expected to reach 79,3% within 2 years, which represents an upskilling perspective for 320 companies. For TS3.2, it represents one for 335 companies, 399 companies for TS3.3 and 365 companies for TS3.4.





Regarding the evaluation of work quality, 55,9% of the companies over 1315 respondents estimated their current skill level between high and very high; this figure is expected to reach 84% within 2 years, which represents an upskilling perspective for 323 companies. For TS3.6, it represents an upskilling perspective for 442 companies and for 403 companies regarding TS3.7.

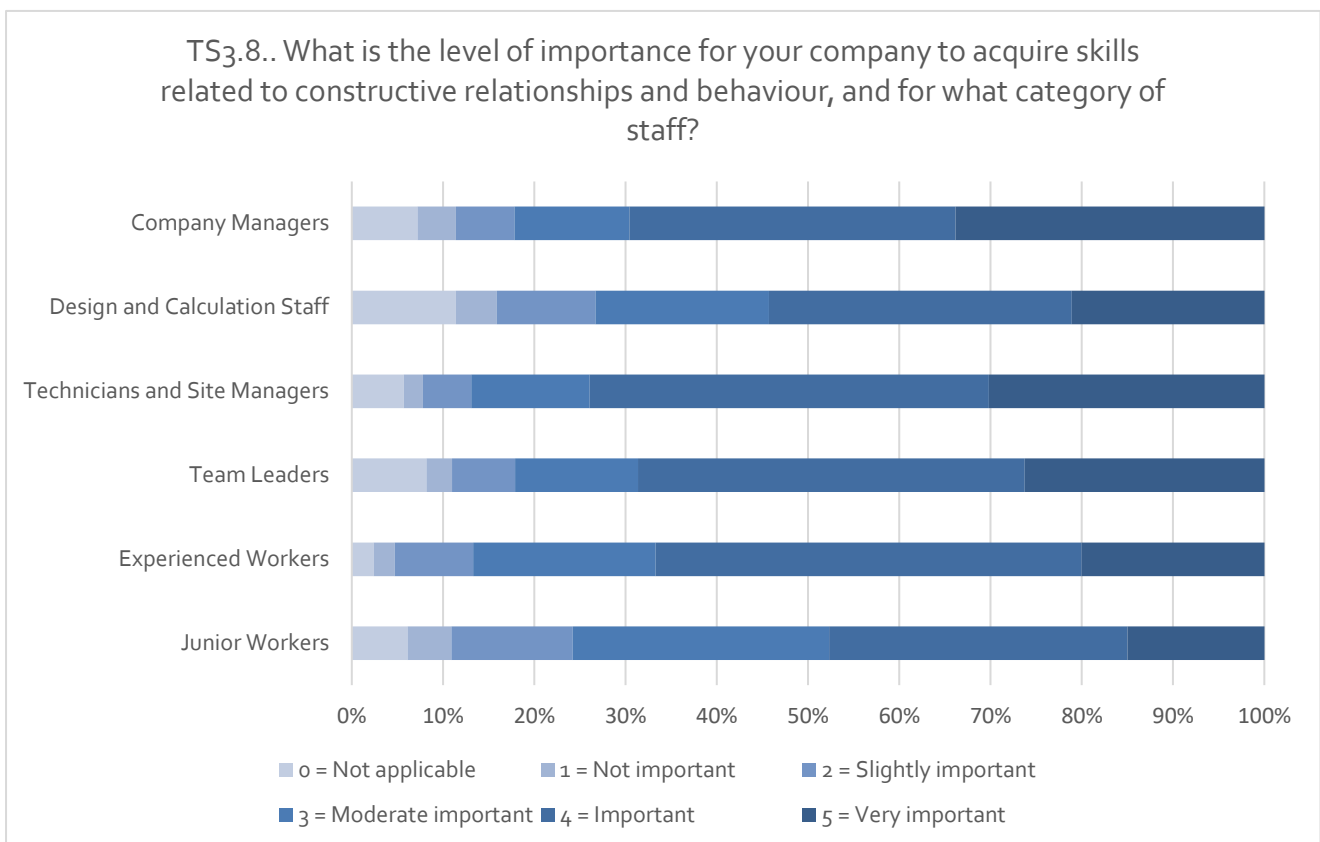


Training needs

For 875 of respondent construction companies (74%), constructive relationships and behaviour skills are between important and very important to master for technicians and site managers. 824 of them (69,5%) consider these skills being between important and very important for company managers, and 789 (68,7%) for team leaders as well.

At the same time, 163 respondent construction companies (11,4%) consider constructive relationships and behaviour skills being not applicable for design and calculation staff (the higher rate for the not applicable category).

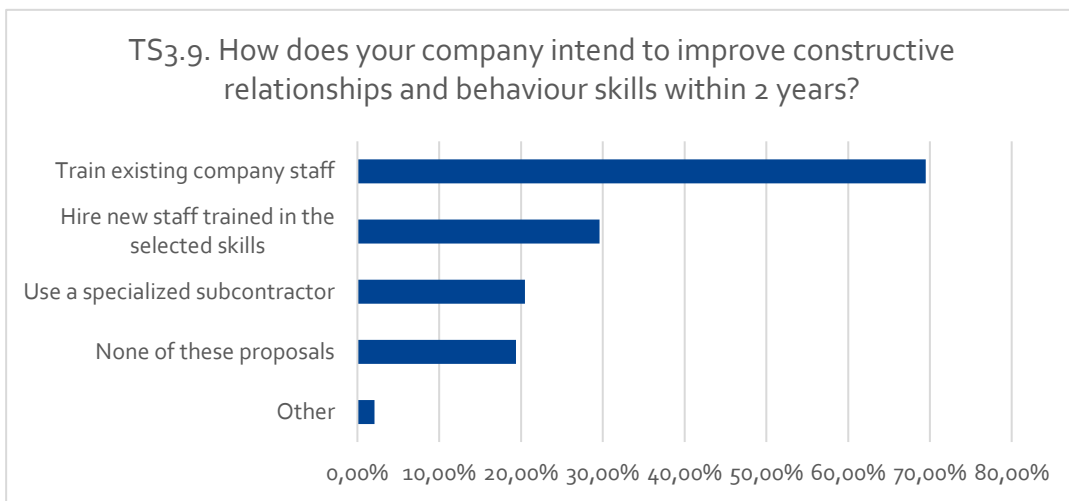
Constructive relationships and behaviour skills are considered to be moderate important and less for junior workers according to 590 respondent construction companies (46,2%) and 106 (6,1%) of them consider it is not applicable for this category of staff.



806 respondent construction companies (69,5%) plan to train their existing staff to reach the expected skill level within the next 2 years regarding the development of constructive relationships and behaviour.

400 (29,6%) plan to hire new staff trained in the selected skills and 259 (20,5%) plan to use a specialised subcontractor.

753 respondent construction companies estimated they will upskill / reskill an average of nearly 28 employees within 2 years in skills related to the development of constructive relationships and behaviour.



How many employees your company intend to upskill / reskill regarding the development of constructive relationships and behaviour within 2 years?

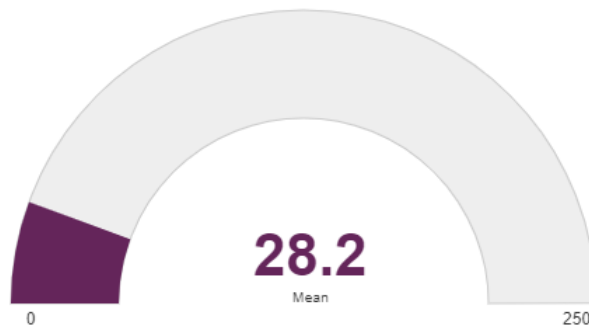
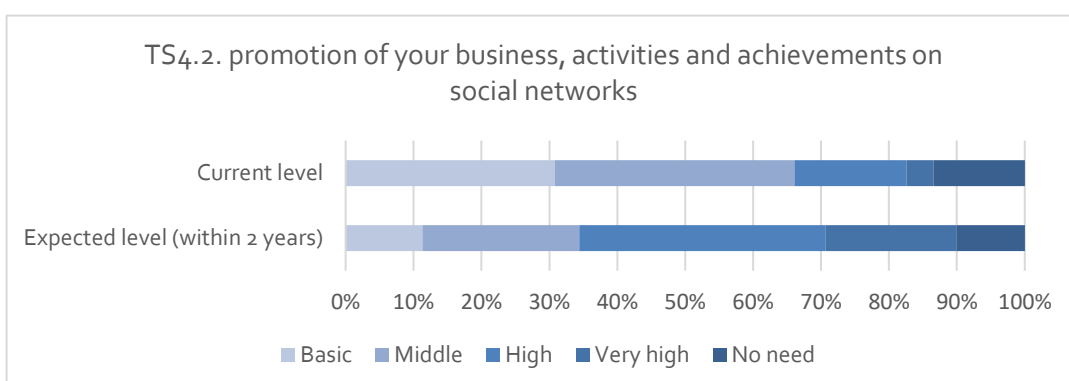
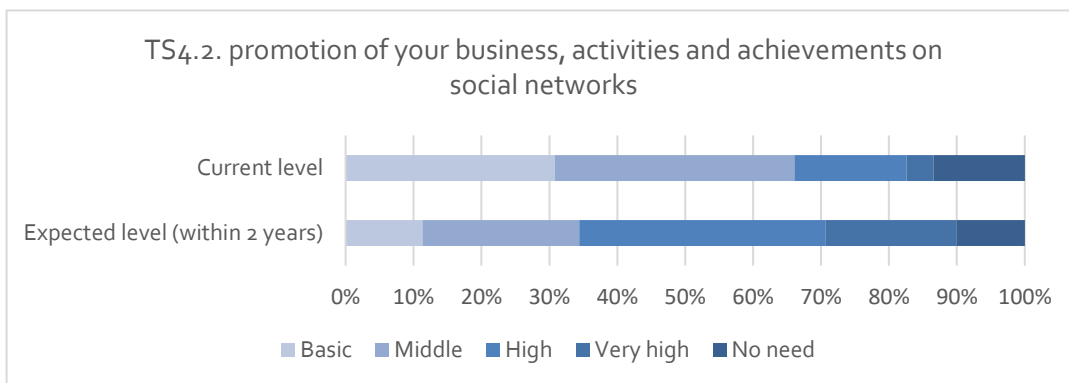
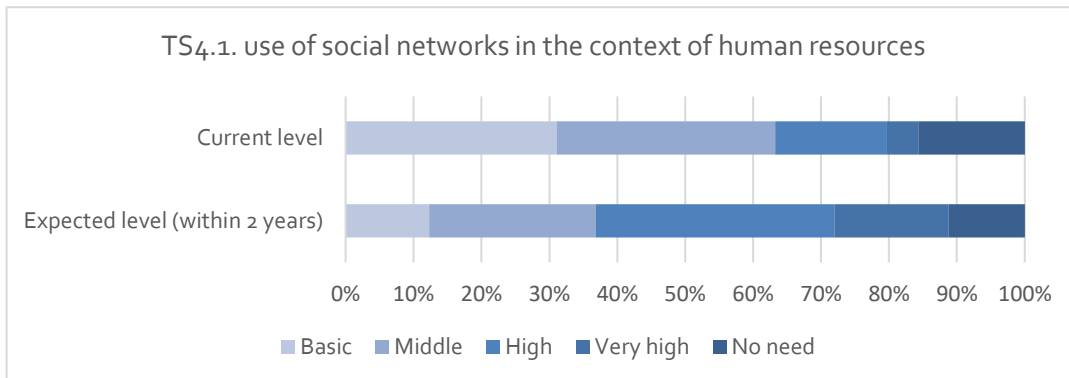


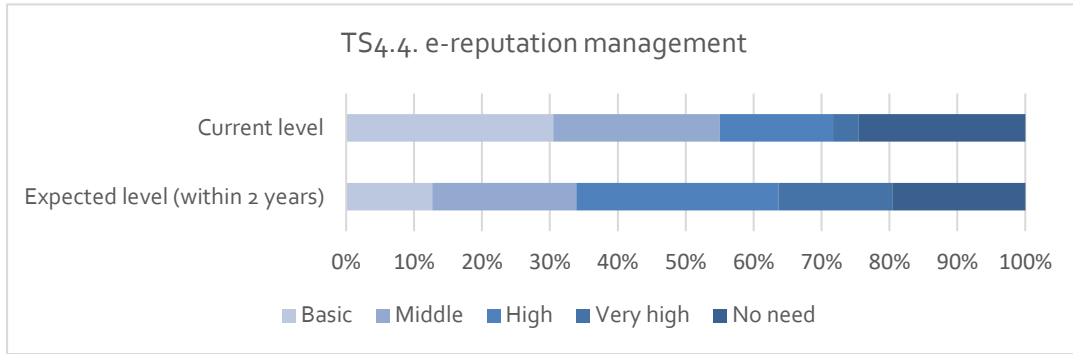
Figure 4 - Average number of employees respondent construction companies intend to upskill / reskill in constructive relationships and behaviour skills

Transversal skills – use of digital applications in company management

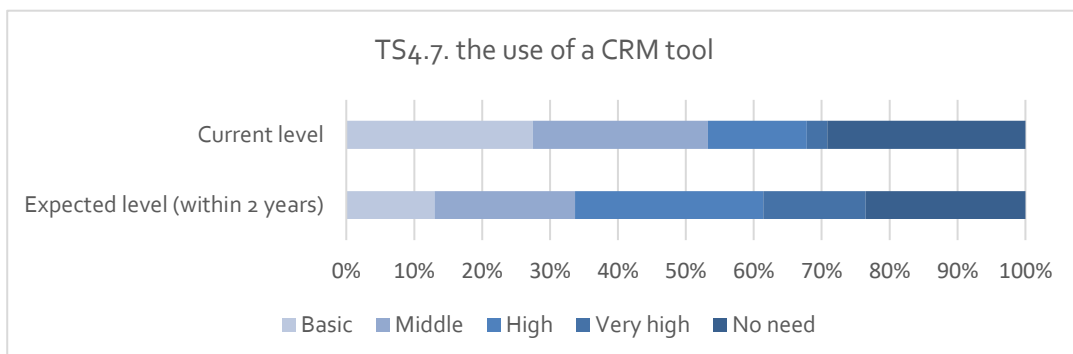
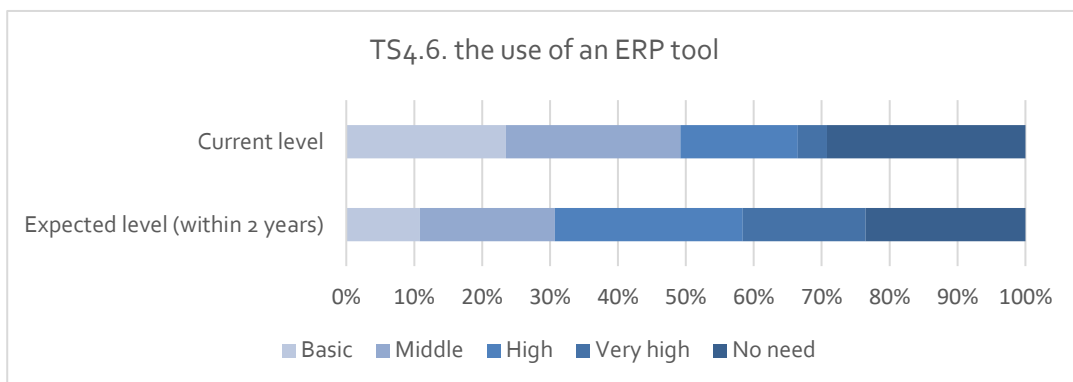
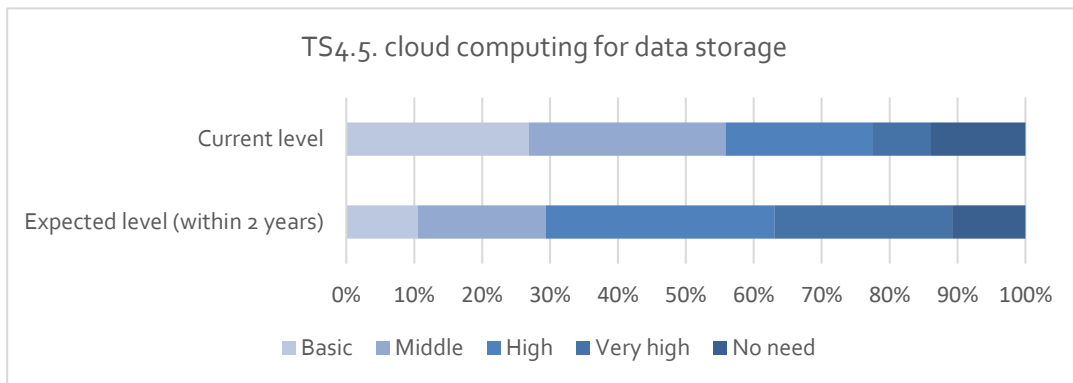
Focus on skills

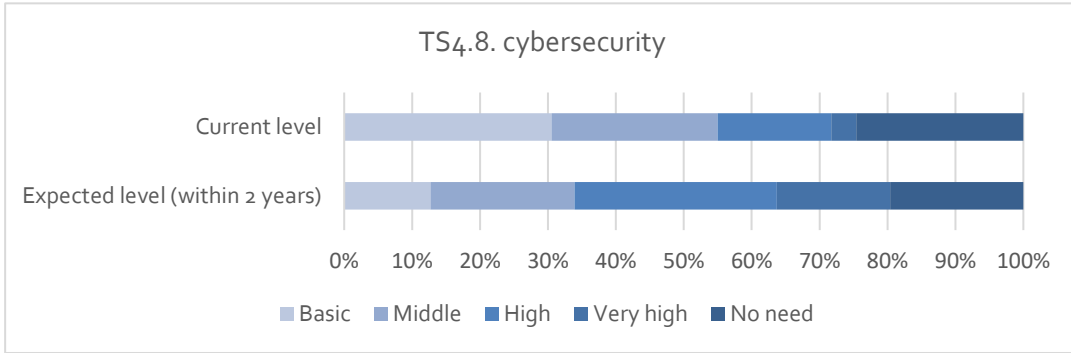
Regarding the use of social networks in the context of human resources, 21,1% of the companies over 1316 respondents estimated their current skill level between high and very high, and this figure is expected to reach 52% within 2 years, which represents an upskilling perspective for 371 companies. For TS4.2, the skill level is expected to rise from 20,5% to 55,6% within 2 years, which represents an upskilling perspective for 397 companies. Regarding e-commerce skills, between 40 and 45% of respondent companies indicated having no need for them, whether now or in the future; the upskilling perspective concerns 215 companies. For TS4.4, it concerns 342 companies.



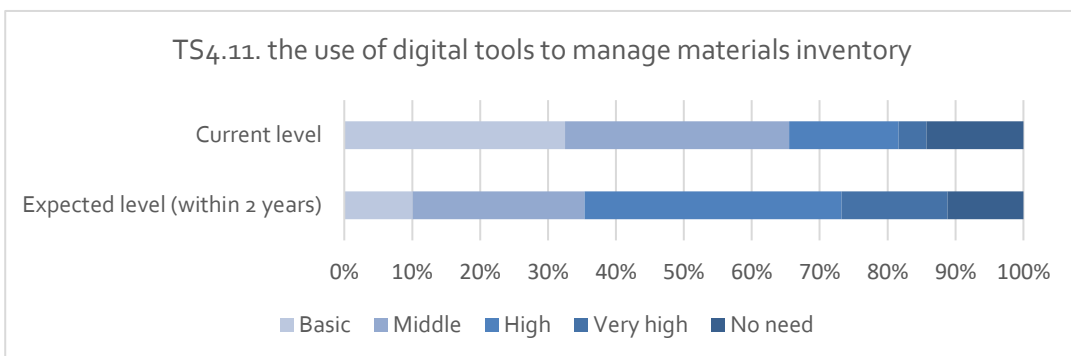
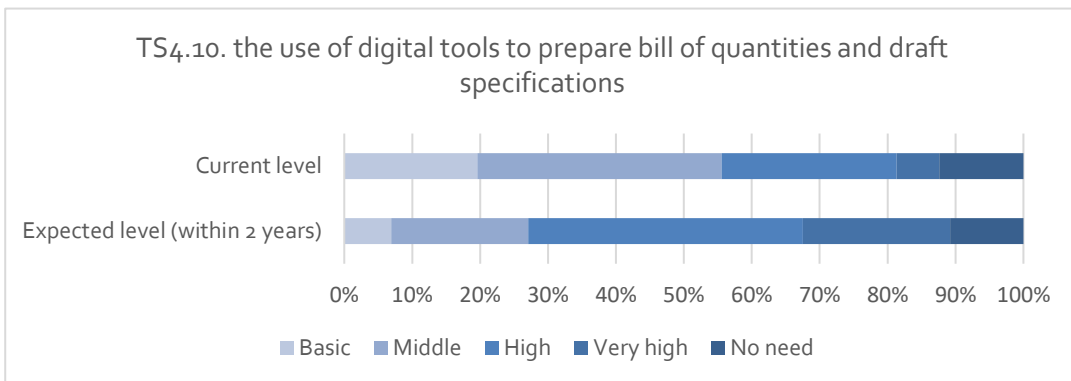
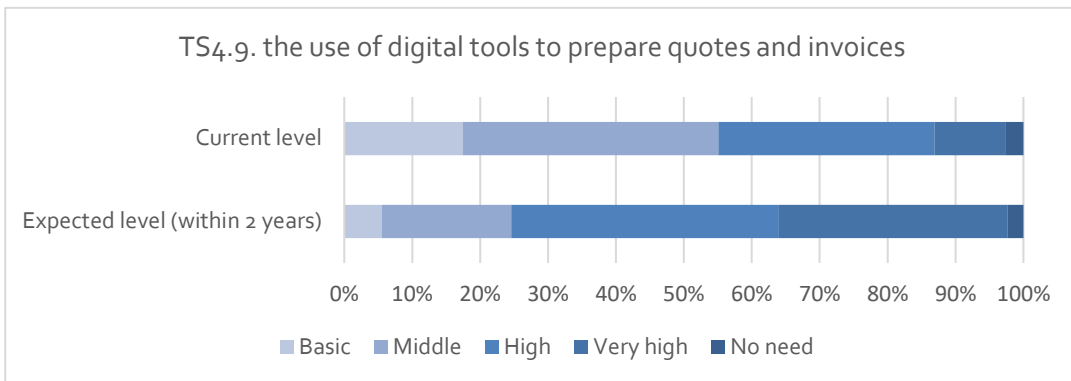


Regarding cloud computing for data storage, 30,3% of the companies over 1308 respondents estimated their current skill level between high and very high, and this figure is expected to reach 59,2% within 2 years, which represents an upskilling perspective for 350 companies. For TS4.6, the skill level is expected to rise from 21,6% to 45,8% within 2 years, which represents an upskilling perspective for 299 companies. Regarding CRM use skills, the upskilling perspective concerns 297 companies, and 390 companies for TS4.8.





Regarding TS4.9, 42,2% of the companies over 1313 respondents estimated their current skill level between high and very high, and this figure is expected to reach 73,1% within 2 years, which represents an upskilling perspective for 377 companies. For TS4.10, the skill level is expected to rise from 32,1% to 62,2%, representing an upskilling perspective for 369 companies. Finally, it concerns 388 companies for TS4.11.

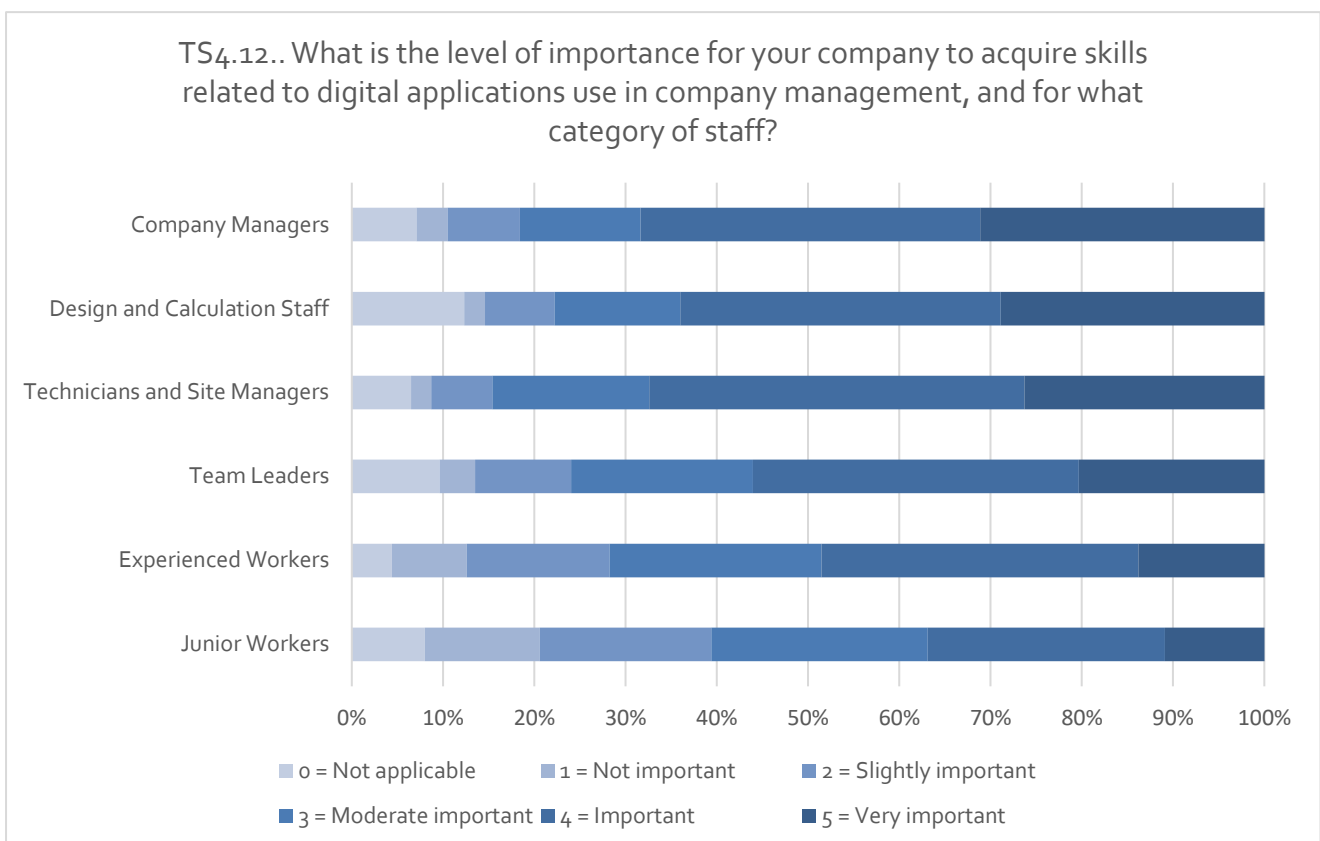


Training needs

For 792 of respondent construction companies (68,3%), digital applications use in company management skills are between important and very important to master for company managers. 789 of them (67,4%) consider these skills being between important and very important for technicians and site managers, and 747 (64%) for design and calculation staff as well.

At the same time, 176 respondent construction companies (12,3%) consider these skills being not applicable for design and calculation staff (the higher rate for the not applicable category).

Digital applications use in company management skills are considered to be moderate important and less for junior workers according to 704 respondent construction companies (55,1%) and 155 (8%) of them consider it is not applicable for this category of staff.

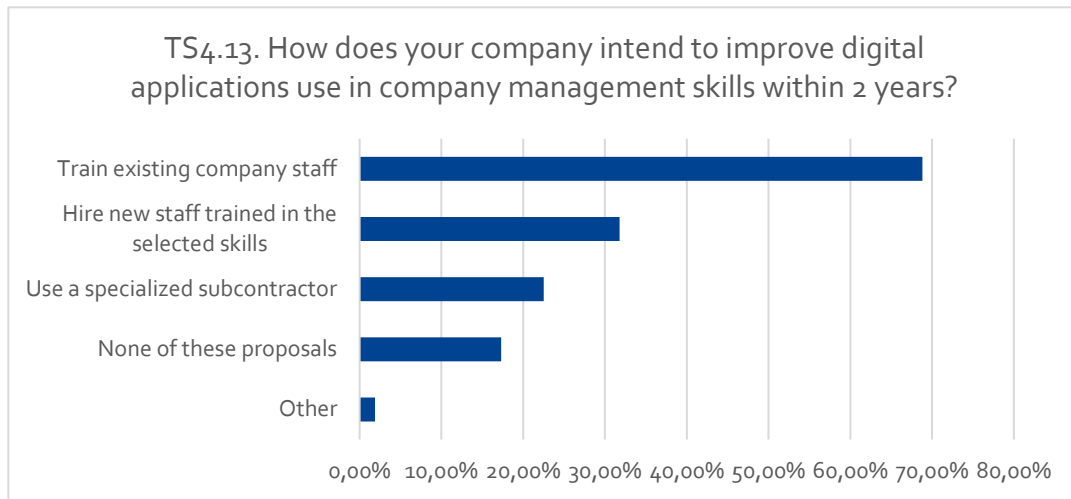


765 respondent construction companies (68,8%) plan to train their existing staff to reach the expected skill level within the next 2 years regarding the use of digital applications in company

management.

383 (31,8%) plan to hire new staff trained in the selected skills and 253 (22,5%) plan to use a specialised subcontractor.

723 respondent construction companies estimated they will upskill / reskill an average of nearly 28 employees within 2 years in skills related to the use of digital applications in company management.



How many employees your company intend to upskill / reskill regarding the use of digital applications in company management within 2 years?

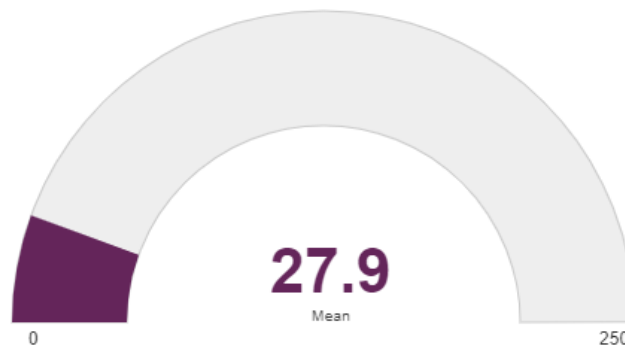


Figure 5 - Average number of employees respondent construction companies intend to upskill / reskill in digital applications use in company management

Conclusions

The answers collected in twelve partnership countries (1 354) were sufficiently significant and qualitatively relevant to formulate valuable conclusions at national and transnational levels. However, the fact that the WP4 leaders obtained less responses compared to the 1st questionnaire (1715 answers, related to specific technical skills) must be considered for the future editions. Therefore, as the surveys in question are macro-economic in scope, they will need to be spaced out over time, not to exceed once a year. Otherwise, national organisers and transnational coordinators will be challenged by a decline in interest from companies.

The quality of the responses to this 2nd questionnaire and of the sample for each question remained high, as respondents answered almost every question, providing sufficiently relevant data. Even though the number of responses was different from country to another, it was well distributed among the twelve countries of the partnership, which made it possible to include everyone in the transnational consolidation.

It is worth noting that half of the respondents were company owners/managers (50.4%) and that administrative staff represented 17.5%. One third of the responding companies (33.1%) had between 1 and 9 employees, 30.7% had between 10 and 49 employees and 18.7% had between 50 and 249 employees, which ensures that the responses are appropriately representative. It should also be underlined that 74.7% of the respondents indicated that their companies have several activities related to the construction sector, and this figure varies from 64% for France to 92.1% for Greece.

The survey reveals that there is considerable scope for skills improvement for all categories of personnel and in all the countries analysed, in particular for **experienced workers, technicians, worksite supervisors and company managers**, which makes it the keystone for building strategies to enrich training offers.

Implement regulatory requirements

- Supervision and control of the application of energy standards – 46% of respondents declare these skills are still basic or medium in their companies,
- Health and safety procedures on construction sites – 40% of respondents declare these skills are still basic or medium in their companies,
- Monitoring the integration of circular economy standards and principles – 32% of respondents declare these skills are still basic or medium in their companies.

75% of the companies responding to the survey intend to train their staff in the above-mentioned areas over the next two years.

Preparation, organisation, and supervision

- Adaptation to changes and technological evolutions – 59% of respondents declare these skills are still basic or medium in their companies,
- Organisation of the worksite equipment and the monitoring of materials consumption – 54% of respondents declare these skills are still basic or medium in their companies,
- Financial management, according to the budget allocated – 47% of respondents declare these skills are still basic or medium in their companies,
- Anticipation and adaptation to potential unforeseen situations on construction sites – 45% of respondents declare these skills are still basic or medium in their companies,
- Planning / coordinating of activities on construction sites – 42% of respondents declare these skills are still basic or medium in their companies,

- Coordination of the work of subcontractors– 41% of respondents declare these skills are still basic or medium in their companies,
- Audit of buildings to be renovated – 38% of respondents declare these skills are still basic and medium in their companies,
- Proposing solutions to meet changing customer requirements – 37% of respondents declare these skills are still basic and medium in their companies,
- Conformity with legislation and quality control of the work – 36% of respondents declare these skills are still basic or medium in their companies,
- Use of digital tools for monitoring the progress of construction works – 27% of respondents declare these skills are still basic or medium in their companies.

74% of the companies responding to the survey intend to train their staff in the above-mentioned areas over the next two years.

Develop constructive relationships and behaviour

- Use of collaborative tools with internal and external partners – 65% of respondents declare these skills are still basic or medium in their companies,
- Supervision and transfer of know-how to new team members and apprentices – 58% of respondents declare these skills are still basic or medium in their companies,
- Verbal / written communication, including during meetings – 52% of respondents declare these skills are still basic or medium in their companies,
- Communication and follow-up of relationships with external partners on construction sites – 50% of respondents declare these skills are still basic or medium in their companies,
- Ability to lead and motivate a team on construction sites – 48% of respondents declare these skills are still basic or medium in their companies,
- Relationships among all internal partners involved on construction sites – 47% of respondents declare these skills are still basic or medium in their companies,
- Evaluation of work quality – 43% of respondents declare these skills are still basic or medium in their companies.

70% of the companies responding to the survey intend to train their staff in the above-mentioned areas over the next two years.

Use of digital applications in company management

- Promotion of your business, activities, and achievements on social networks – 66% of respondents declare these skills are still basic or medium in their companies,
- Use of digital tools to manage materials inventory – 66% of respondents declare these skills are still basic or medium in their companies,
- Use of social networks in the context of human resources – 63% of respondents declare these skills are still basic or medium in their companies,
- Cloud computing for data storage – 56% of respondents declare these skills are still basic or medium in their companies,
- Use of digital tools to prepare bill of quantities and draft specifications – 56% of respondents declare these skills are still basic or medium in their companies,
- E-reputation management – 55% of respondents declare these skills are still basic or medium in their companies,
- Cybersecurity – 55% of respondents declare these skills are still basic or medium in their companies,

- Use of digital tools to prepare quotes and invoices – 55% of respondents declare these skills are still basic or medium in their companies,
- Use of a CRM tool – 53% of respondents declare these skills are still basic or medium in their companies,
- Use of an ERP tool – 49% of respondents declare these skills are still basic or medium in their companies,
- E-commerce – 41% of respondents declare these skills are still basic or medium in their companies.

69% of the companies responding to the survey intend to train their staff in the above-mentioned areas over the next two years.

Priorities to be considered by training organisations and VET centres at EU level

| Field | Topic | Percentage of people with only basic and medium skills: Room for improvement |
|---|---|--|
| Use of digital applications in company management | Promotion of your business, activities, and achievements on social networks | 66% |
| Use of digital applications in company management | Use of digital tools to manage materials inventory | 66% |
| Develop constructive relationships and behaviour | Use of collaborative tools with internal and external partners | 65% |
| Use of digital applications in company management | Use of social networks in the context of human resources | 63% |
| Preparation, organisation, and supervision | Adaptation to changes and technological evolutions | 59% |
| Develop constructive relationships and behaviour | Supervision and transfer of know-how to new team members and apprentices | 58% |
| Use of digital applications in company management | Cloud computing for data storage | 56% |
| Use of digital applications in company management | Use of digital tools to prepare bill of quantities and draft specifications | 56% |
| Use of digital applications in company management | E-reputation management | 55% |
| Use of digital applications in company management | Cybersecurity | 55% |
| Use of digital applications in company management | Use of digital tools to prepare quotes and invoices | 55% |
| Preparation, organisation, and supervision | Organisation of the worksite equipment and the monitoring of materials consumption | 54% |
| Use of digital applications in company management | Use of a CRM tool | 53% |
| Develop constructive relationships and behaviour | Verbal / written communication, including during meetings | 52% |
| Develop constructive relationships and behaviour | Communication and follow-up of relationships with external partners on construction sites | 50% |
| Use of digital applications in company management | Use of an ERP tool | 49% |

| | | |
|---|--|-----|
| Develop constructive relationships and behaviour | Ability to lead and motivate a team on construction sites | 48% |
| Preparation, organisation, and supervision | Financial management, according to the budget allocated | 47% |
| Develop constructive relationships and behaviour | Relationships among all internal partners involved on construction sites | 47% |
| Implement regulatory requirements | Supervision and control of the application of energy standards | 46% |
| Preparation, organisation, and supervision | Anticipation and adaptation to potential unforeseen situations on construction sites | 45% |
| Develop constructive relationships and behaviour | Evaluation of work quality | 43% |
| Preparation, organisation, and supervision | Planning / coordinating of activities on construction sites | 42% |
| Preparation, organisation, and supervision | Coordination of the work of subcontractors | 41% |
| Use of digital applications in company management | E-commerce | 41% |
| Implement regulatory requirements | Health and safety procedures on construction sites | 40% |
| Preparation, organisation, and supervision | Audit of buildings to be renovated | 38% |
| Preparation, organisation, and supervision | Proposing solutions to meet changing customer requirements | 37% |
| Preparation, organisation, and supervision | Conformity with legislation and quality control of the work | 36% |
| Implement regulatory requirements | Monitoring the integration of circular economy standards and principles | 32% |
| Preparation, organisation, and supervision | Use of digital tools for monitoring the progress of construction works | 27% |

The analysis of the above table clearly shows that the topics belonging to the field “Use of digital applications in company management” are the first reservoir of skills improvement that organisations and training centres can offer to construction companies, regardless of the country analysed. For most of the companies surveyed (of all sizes) the level of skills and knowledge in this area is either only basic or average (except for e-commerce where the situation is somewhat more positive). As regards the acquisition of transversal skills and knowledge, it is therefore in this field that the scope for progress is greatest and where the opportunities for training centres are most promising.

This is followed by the field “Develop constructive relationships and behaviour”, where the scope for improvement in skills and knowledge is also significant, as can be seen from the answers given by the companies that responded to the survey. This does not mean that the other two fields of competence and transversal knowledge (“Preparation, organisation, and supervision” and “Implement regulatory requirements”) can be neglected by vocational training centres, especially according to the expectations and needs of local and regional ecosystems.

To update the data in the future at each national level and then to consolidate it transnationally, **the organisation of surveys should be integrated into a more global approach of monitoring, allowing organisations and training centres to adjust their training offer to the evolving expectations and skills needs** of companies in the construction sector.