SAVE @WORK

SAVING ENERGY, CUTTING CARBON

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The Energy Saving Competition for Public Authorities

Pre-Campaign Survey Report I.

First findings based on the analysis of pre-campaign survey responses

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Authors:
Edina Vadovics, Szandra Szomor

GreenDependent Institute

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Authors: **Edina Vadovics**, **Szandra Szomor** (GreenDependent Institute, HU)

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save@work – The Energy Saving Competition

www.saveatwork.eu

save@work is a year-long energy saving competition for public authorities and their employees between March 2016 and February 2017 because the public sector has an exemplary role in energy efficiency as well as adapting to climate change.

Public sector employees are taking action for climate change and are promoting energy efficient behaviour in their buildings.

For further information on this document contact Edina Vadovics at edina@greendependent.org.
For information on the save@work project contact Anke Merziger at amerziger@bsu-berlin.de or visit www.saveatwork.eu.

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INTRODUCTION

Buildings are responsible for 40% of energy consumption and 36% of CO_2 emissions in the European Union, and 10-12% of the buildings are public. Since public buildings are important not only in as much as how much energy they use but also as role models for the population, it is very important that their energy saving potential is realized. Furthermore, since up to 15% of energy saving can be achieved through various behaviour change measures, thus without considerable funds and investment, it is important that public employees learn about their potential to reduce their contribution to climate change and resource use as well as are empowered to enact the change and become role models.

Save@work is a European programme conceived to help realize the energy saving potential in public buildings and support public employees to change their everyday energy use practices. In nine countries, save@work involves more than 17.000 public employees in close to 180 buildings in a behaviour change based programme for one year.

The save@work programme has a research-based methodology, based partly on the analysis of behaviour change programmes in Europe and in Australia, and success factors identified in the relevant literature. Pre- and post-campaign participant surveys are important and integrated parts of save@work as they are intended to

(1) support internal learning and evaluation;
(2) learn more about the impact of the project;
(3) help identify success factors and barriers in energy saving projects in different local settings.

Furthermore, although it was not foreseen when the original project plan for save@work was prepared, the outcomes gained based on the analysis of the pre-campaign surveys can be used to assist the further adaptation of the overall methodology even within countries to the particular needs of and situation in individual buildings. To facilitate this feedback process, work package leader GreenDependent Institute (GDI) prepared templates and guidelines for partners to assist in the analysis and feedback to buildings.

Finally, the analysis of the pre- and post-campaign surveys will also be used to inform the design and implementation of future projects as well as to help identify further research needs.

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CHAPTER 1: ABOUT THE PRE-CAMPAIGN SURVEY IN SAVE@WORK

1.1 The contents of the pre-campaign survey

The contents of the pre-campaign survey were planned and discussed by the consortium in several stages through different face-to-face project meetings and feedback/commenting cycles. There were various issues that needed to be considered during this process:

(1) As much as possible, the survey should be suitable for gaining information on respondents and participating organizations in terms of their current attitude and belief in energy saving, energy saving practices, knowledge in relation to applying the energy saving practices as well as their readiness to initiate change. Finally, the consortium should also be able to collect socio-economic data.

(2) As the pre-campaign survey is administered at the beginning of the project, when employees in participating buildings need to perform a variety of activities simultaneously to ensure a smooth campaign start - i.e. form energy teams, gain support for the campaign within their buildings, organize and participate in initial training events, prepare action plans, register in the online energy saving tool, etc. -, it was of utmost importance that the survey should be as easy to complete as possible. Furthermore, the length of the survey was also crucial, it could not be too long for public employees to complete.

Thus, the save@work consortium grappled with **competing objectives**, and had to make decisions about the content of the survey to be able to collect useful information as well as ensure that a sufficient number of people would fill it in through limiting its contents. The consortium, led by GDI for this task, thus decided to have the following main parts in the pre-campaign survey:

(1) **Current energy saving practices** in relation to 8 specific actions, and enquiring about both the respondents' and in the respondents' view, their colleagues' current practice. The 8 practices range from easy (e.g. turning off lights) through medium difficulty (e.g. minimizing printing) to difficult (e.g. adjusting the heating temperature). The consortium together decided about which practices should be included.

Furthermore, respondents would be offered the opportunity to list any other energy saving practice that they engage in.

(2) Enquiring about respondents' **past intentions and experience to initiate change** in their office in order to find out about how easily change happens in the participating offices, whether employees engaged in the past in such activities, and what their experience has been.

(3) **Identifying some of the barriers** to routinely practising energy saving activities, such as knowledge about performing the activities (e.g. using energy saving setting on equipment), belief in the importance and effectiveness of energy saving practices, and the support experienced for performing such practices in the office from colleagues, the management and the IT department.

(4) Learning about the **motivation** of employees **to join the save@work campaign**; and finally

(5) **Collecting socio-economic data** on respondents.

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However, in order to limit the time for completing the survey - which was a very important factor identified by the consortium, the members of which have extensive prior experience in conducting similar pre- and post-campaign surveys - even the number of questions in each of the five survey sections had to be restricted. As a result, the number of items in each survey section was considered very carefully.

Finally, some questions that are routinely asked as part of the socio-economic data collection, for example, income, were considered too sensitive for inclusion in order to ensure that employees feel confident and relaxed to fill in the survey. Even though the survey was anonymous, and the consortium has transparent data management and data privacy principles, the public authorities participating in save@work required that the type and amount of information collected should be limited.

The final version of the pre-campaign survey is presented in Annex I. Even though the survey was translated into all local languages, it had exactly the same structure and content in every participating country and building. Consortium partners were free to add their own questions if required to the very end of the survey, but none of the partners used this opportunity.

1.2 Administering the pre-campaign survey

In order to collect as many responses as possible in all the 9 participating countries, several actions were taken. First of all, the save@work consortium decided to allow employees in participating buildings to fill in the survey in different ways:

- in a **paper-based format** that the local consortium partner than entered into the online survey system;
- **electronically through the online survey system** (Survey Monkey).

Then, the consortium decided to keep the survey 'open' for several months, originally between February - April 2016, so beginning 1 month before the campaign to 2 months into it. However, in practice, due to difficulties in some countries with recruiting participating buildings, the survey was kept open in several countries till the end of May and in some cases even till June. However, in countries where the recruitment went as planned, the survey was closed at the end of April to avoid the 'contamination' of data by late respondents who otherwise already received campaign input.

1.3 Challenges related to collecting responses

Save@work consortium partners prepared carefully for administering the survey as based on their prior experience, the expectation was that it would prove to be challenging to collect the required number of responses.

Based on the Description of Work for the save@work project, 40% of employees in participating buildings were required to fill in the survey. This is a rather high number, but the save@work consortium wanted to gain a sufficient amount of information on campaign participants and buildings.

As partners did not expect the survey response collection process to be easy, the consortium spent time and effort on brainstorming and collecting ways in which employees in participating

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buildings could be motivated to fill in the survey. The different ideas and methods the consortium collected are summarized in Annex II. From among these methods partners in different countries selected different ones, and, indeed, different methods worked well in different settings. For example, giving a small prize for buildings that managed to complete the largest number of surveys as compared to their total employee count proved to be very successful in Hungary, but did not motivated employees in Germany.

Similarly, different countries experienced different challenges, but challenges were most apparent in Austria, Germany and the UK, where employees in participating buildings were extremely reluctant to fill in the survey - in spite of the different methodological solutions partners used. Methods that were very successful in other countries (e.g. setting a prize in Hungary) did not work here. Thus, in these countries the **response rate is lower than would be desirable** (see Table 1). The reasons in these countries for the lower return rate are as follows:

- **Austria:** The survey was kept open longer than first planned, as a late roll-out of the campaign was faced in Graz. Consequently, employees were informed late about save@work, initial workshops were delivered late where energy team members could be informed about the survey, and since the survey could not be kept open longer (in order to be able to start the analysis), not enough employees filled it in.
- **Germany:** The questionnaire was distributed via the energy teams to the employees of each building. BSU did send the questionnaire and reminders several times to each team. As the response rate remained quite low for some time a prize (100 EUR book voucher) was announced. Still the final response rate was lower than expected at the end. The main reason for this is that many energy teams decided not to forward the questionnaire to their fellow colleagues, as they had the feeling that already without this additional task a lot of information needed to be forwarded in order to get the competition started. Also, BSU received the feedback that - despite all the effort the Consortium took to reduce the length, the questionnaire was still too long, and that it was not possible to ask employees to fill it out in their working time.
- **The UK:** the most important challenge here was that some of the participating buildings have centrally controlled heating, lighting, computer and printing systems. This fact was not known when the survey content was planned. As a result, employees felt that the questionnaire was not relevant enough for them, and even though in each case there was a reply option 'not relevant', they could not be convinced to fill in the survey.

1.4 Summary of the responses collected

Table 1 summarizes the number of responses collected in each participating country. Please note that there are two different numbers provided for each country, as not all respondents completed the survey fully. The higher number is a reflection of responses that were suitable for the analysis, meaning that the respondents replied to a sufficient number of questions, i.e. filled in information at least on their and their colleagues' current energy saving practices, which meant the completion of the first part of the survey. The lower number shows how many respondents completed the survey fully. This difference is not significant in any of the countries. Still, the largest difference was found for Belgium and Hungary (2.7 and 2.2 % respectively), where the greatest number of people left

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some questions unanswered, and lowest for Austria and German (0.8 and 0.6 % respectively), where most people who started to fill in the survey completed it.

Country	No. of employees	No. of filled in surveys ALL	Response rate	No. of filled in surveys No. of those completing the WHOLE survey	Response rate for those completing the WHOLE survey
Austria	2 494	149	6.0%	130	5.2%
Belgium	1 960	694	35.4%	641	32.7%
France	1 280	125	9.8%	105	8.2%
Germany	2 126	119	5.6%	106	5.0%
Italy	1 699	483	28.4%	438	25.8%
Hungary	2 010	714	35.5%	670	33.3%
Latvia	687	270	39.3%	257	37.4%
Sweden	1 049	319	30.4%	300	28.6%
UK	3 975	92	2.3%	53	1.3%
total ***average***	**17 280**	**2 965**	**17.2%** ***21.4%***	**2700**	**15.6%** ***19.7%***

Table 1: Surveys collected in each country participating in save@work

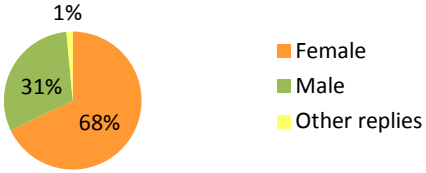
1.5 Description of the respondents

As can be seen from the pre-campaign survey in Annex I, the socio-economic questions were placed at the end of the questionnaire, so the people who abandoned the survey without completing it fully, were most likely to not fill in these questions. However, luckily, the overwhelming majority of people persevered till the end (see Table 1). In the current chapter all the data is based on the number of respondents filling in the whole survey.

The gender distribution of respondents

In the whole sample, the number of female respondents was higher (Figure 1). If we look at data for individual countries, the same is true for all of them. The countries where the ratio of male respondents is highest are the UK and Austria (40% and 42% respectively, see Figures 2a and b). At the other end of the scale we find Latvia, where the ratio of women was the highest, 78% (Figure 3).

Figure 1: The ratio of women and men in the whole sample



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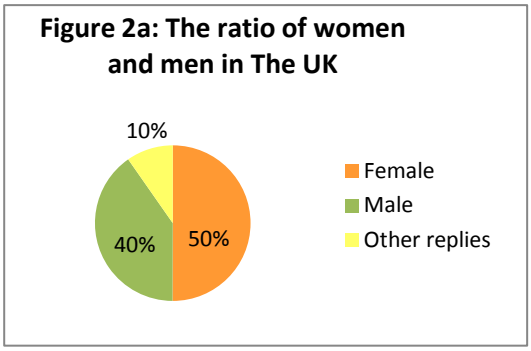

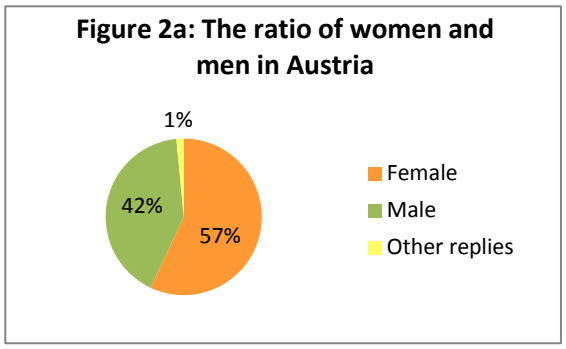

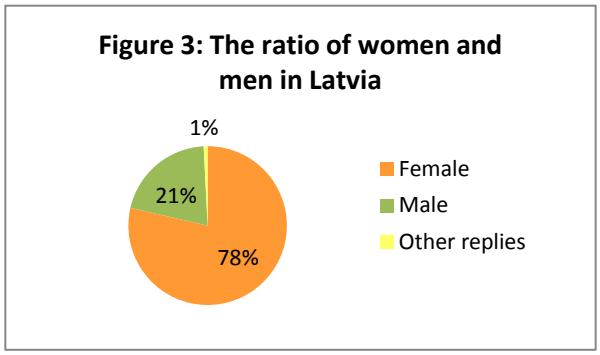

The age distribution of respondents

As for the age of respondents, most of them are between 40-60 years old (60%, see Figure 4). There are no countries where this is different. The second largest age group in the sample is the one in which people are between 26-39 years of age (33%). Again, there is no difference between countries in this regard. Rather, the difference lies in the ratio of respondents in the age groups where people are younger than 26 or older than 60. From this point of view, two countries need to be mentioned, Austria (Figure 5), where the highest ratio of young people (7.7%) is found, and where the ratio of respondent above the age of 60 is the lowest, less than 1% (0.8%), in our sample. On the other hand, it is Sweden where the highest number of those over 60 participated in the pre-campaign survey (11%, see Figure 6). However, in the case of both of these countries it can be clearly seen in the figures that the ratio of the two 'middle' age groups in the sample is almost the same as in the whole sample. Thus, the difference is to do with how many people under 26 and over 60 participated.

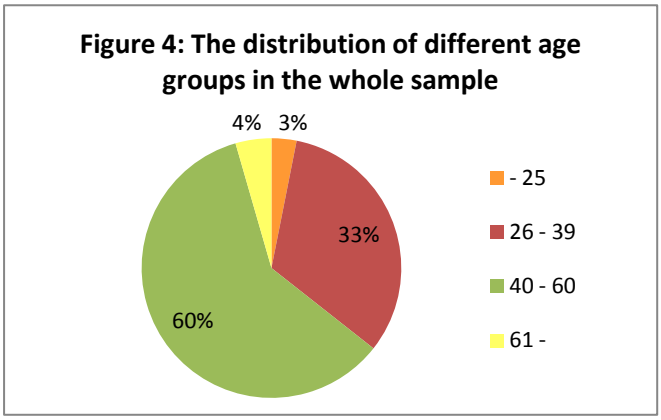

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Figure 5: The distribution of different age groups in Austria

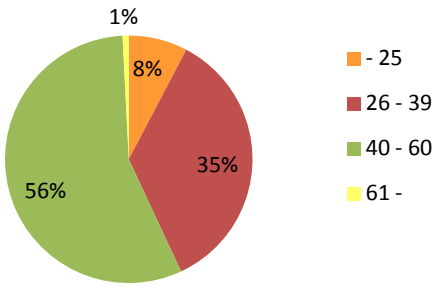
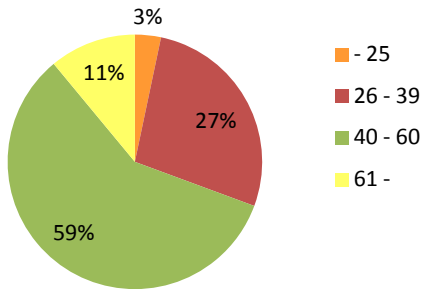


Figure 6: The distribution of different age groups in Sweden



The position of respondents

The save@work consortium also wanted to find out about which positions people who responded to the survey are in. In the whole sample incorporating respondents from all nine countries the ratio of 'general employees' is the highest (77%) as shown in Figure 7. The ratio of people in management (either middle or top) filling in the survey is 20% altogether. The very notable exception to this trend is France, where, as shown in Figure 8, the ratio of respondents in management positions filling in the survey is higher (altogether 63%) than that of general employees (35%). In fact, it is in France that the highest number of people in top management positions (31.4%) filled in the survey.

Another interesting exception is Germany, where the number of people in management positions participating in the survey is also higher than in the whole sample (33%, see Figure 9). Furthermore, it is here that the number of people in 'other' positions is the highest among all the participating countries (13%). Some of these people are scientific officers or researchers (professors).

The higher number of people in management positions in the case of these two countries may be due to the fact that the set-up of the save@work project is different here as compared to most of the other countries. In these countries instead of several municipalities and authorities participating with one or more buildings in the campaign, there is one authority participating with a lot of buildings. Thus, the overall structure of the project management and implementation is different.

Figure 7: The distribution of people in different positions in the whole sample

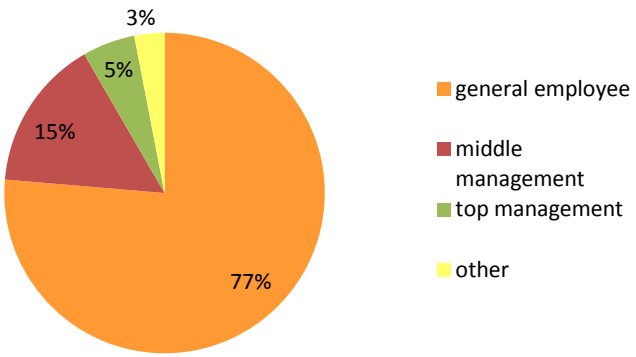


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Figure 8: The distribution of people in different positions in France

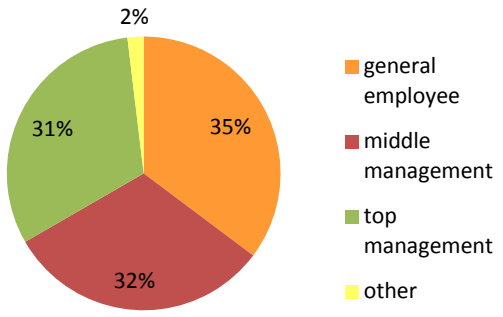
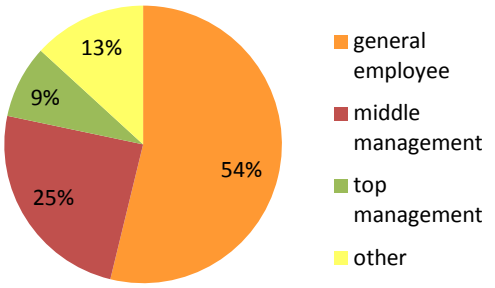


Figure 9: The distribution of people in different positions in Germany



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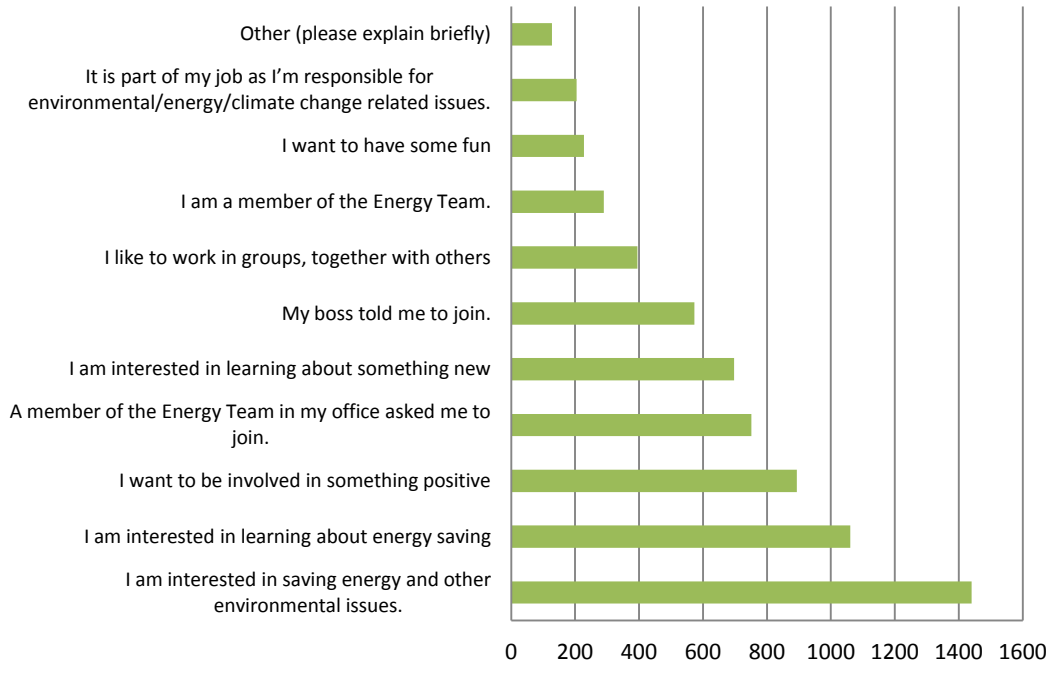
CHAPTER 2: REASONS FOR PARTICIPATING IN SAVE@WORK

In the pre-campaign survey respondents were also asked about their reasons for participating in the save@work campaign (see Annex I., question 1 in Part 4). We wanted to find out whether employees joined voluntarily or out of some kind of obligation, and to later[1] investigate whether the reason for their participation impacts their view of energy saving and their related activities.

The question on the reasons for participation was included with the socio-economic questions. Respondents had the opportunity to select more than one reason for participation. The only exception to this was Germany where during the translation of the survey the question was transformed accidentally into a question where only one response was allowed. Still, it is possible to make comparisons between countries, especially as to which are the most important reasons for respondents to participate.

Figure 10 provides an overview of how important each of the options provided was considered by respondents. As can be seen in the figure, the most often selected reason for joining save@work in the whole sample was an interest in saving energy and other environmental issues and the second most important one was learning more about energy saving. Also, a lot of respondents selected wanting to be involved in something positive as a reason, the third most important if we look at the data from all countries. This is very encouraging for the campaign: respondents appear to consider participation something very positive. At the same, having fun through participating in save@work does not appear to be important. This may be something that all partners and energy teams working in the participating buildings need to consider when planning campaign activities: to increase motivation, it is important to increase the fun and enjoyment element in the various activities planned.

Figure 10: Why did you decide to participate in save@work?



[1] In the final report on the pre- and post-campaign surveys, expected to be published on the save@work website (saveatwork.eu) in August 2017.

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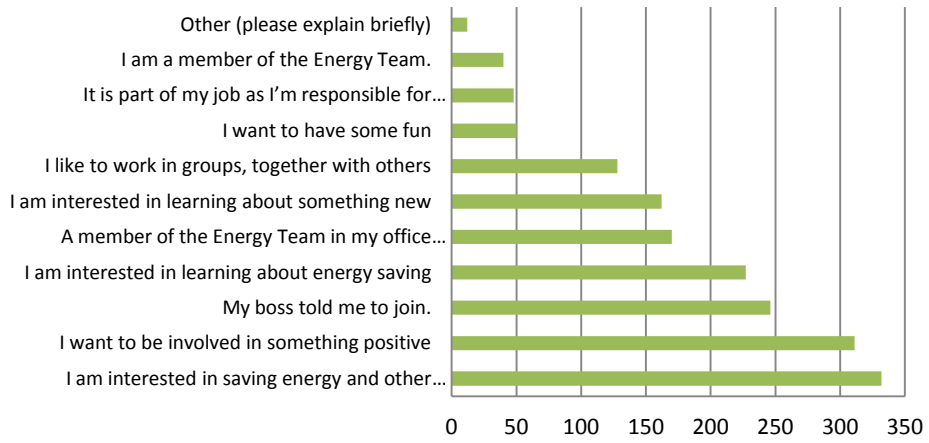
2.1 Do respondents in different countries participate for the same reasons?

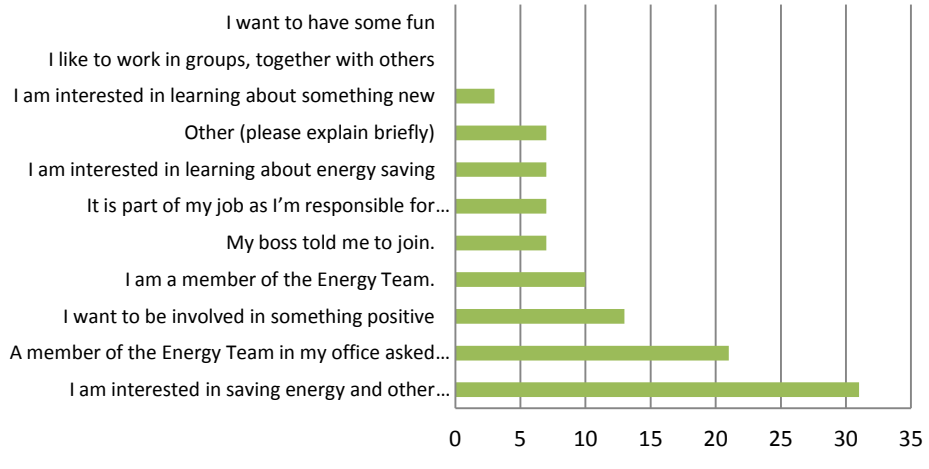
As for differences between countries in terms of the most often selected reasons for taking part in save@work, data from most countries support that indeed 'interest in saving energy and other environmental issues' and 'interest in learning about energy saving' are the two most important reasons. In Latvia the order of these two reasons is different ('interest in learning more about energy saving' being more important). The countries that stand out to some level as being different in this regard are Hungary and Germany. In Hungary (see Figure 11) the most important reason for participation is the same as in the whole sample, but the second most important one selected is wanting to be involved in something positive, followed by 'my boss told me to join', which only comes sixth for the whole sample.

Figure 11: Why did you decide to participate in save@work?
Data for Hungary



In Germany (Figure 12), where respondents were only able to select one reason for participation, there is also some difference as to the whole sample. Here, people selected 'a member of the Energy Team asked me to join' as their second most important reason for participation.

Figure 12: Why did you decide to participate in save@work?
Data for Germany



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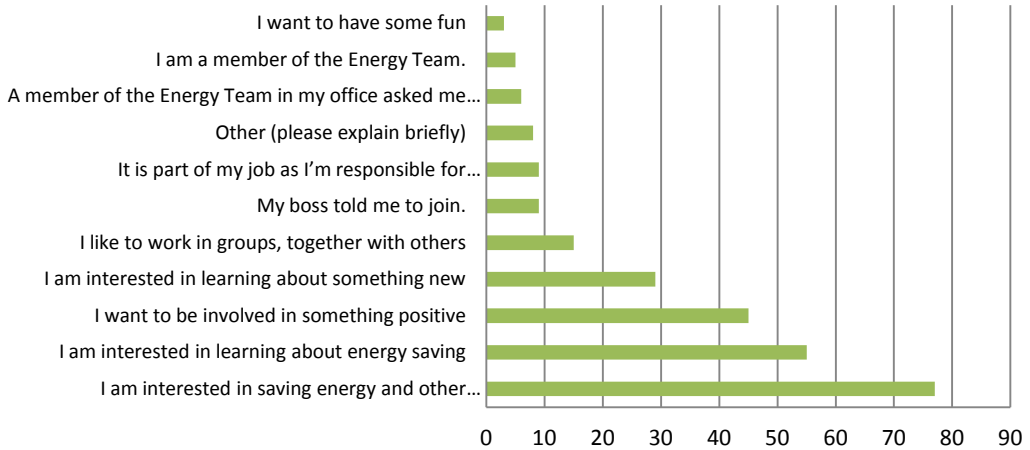
As shown earlier, in France and Germany, but especially in France, the ratio of respondents participating in the survey at management level was considerably higher than in other countries. Thus, we were interested to see whether there was any difference in the reasons for participation in these countries. Figure 12 shows the results for Germany, and Figure 13 for France.

On the one hand, it can be concluded that in France, the three most important reasons for participation in save@work are the same as in the whole sample. What is different, though, is that the ratio of replies for 'my boss told me to join' is considerably lower here as well as in Germany; lower than, for example, in Hungary where it is the third most important reason and close to 84% of the respondents are general employees.

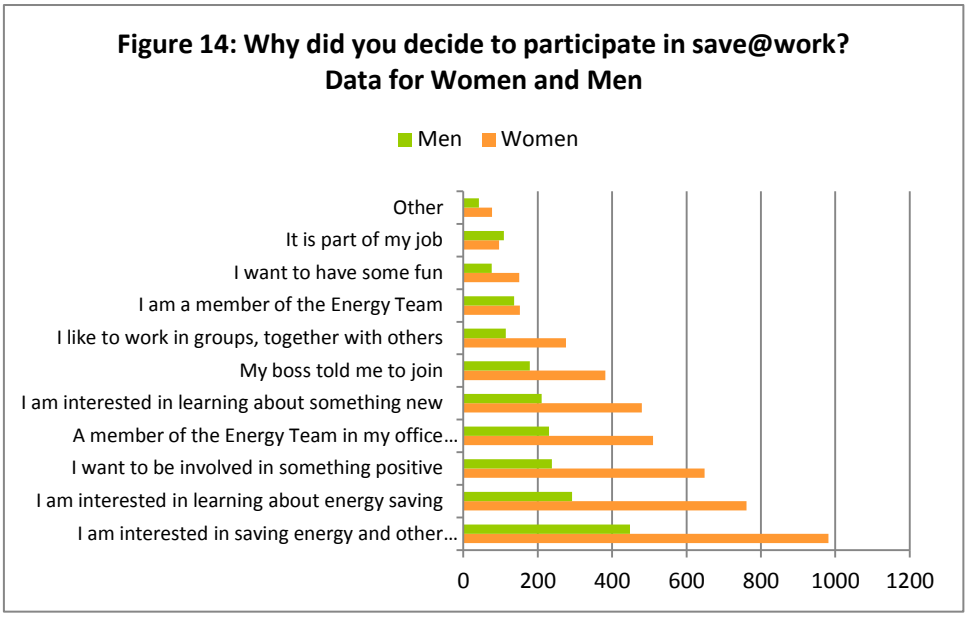
Figure 13: Why did you decide to participate in save@work?
Data for France



2.2 Do men and women participate for the same reasons?

Finally, we wanted to see whether there was any difference between why men and women participate in save@work. As Figure 14 shows, looking at the whole sample, women and men in general joined save@work for almost exactly the same reasons: the six most important reasons are the same for both groups.

Figure 14: Why did you decide to participate in save@work?
Data for Women and Men



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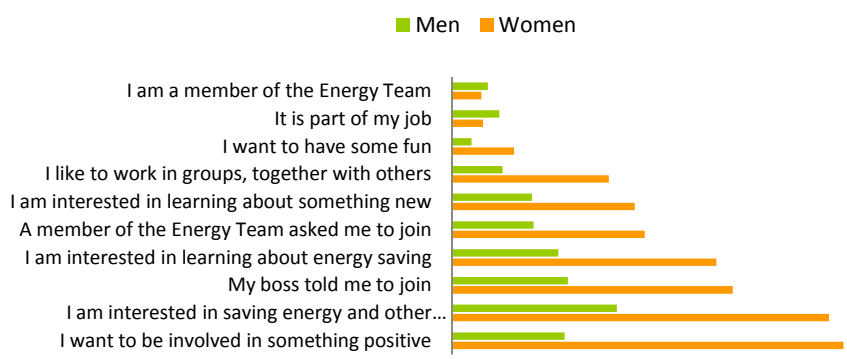
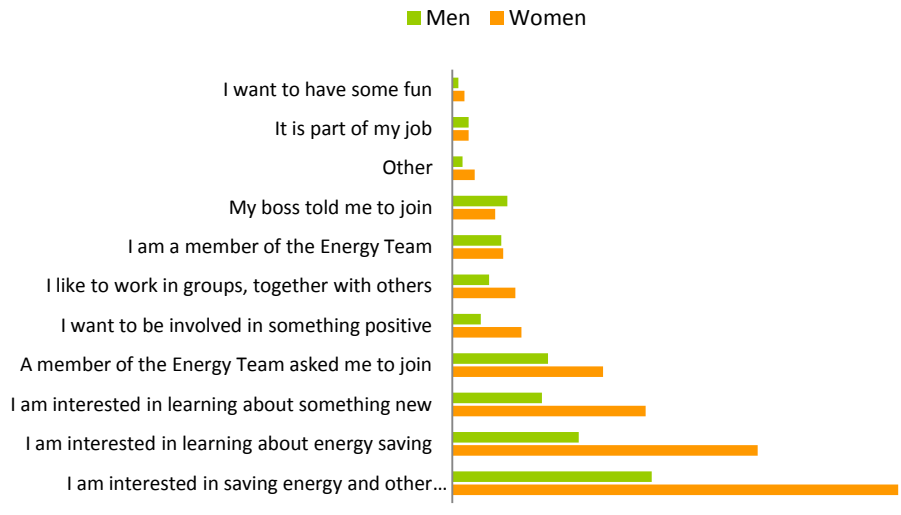
Even though there is no difference between men and women as to what are the more and less important reasons for their participation in the whole sample, if we look at the data from specific countries, we find that there are, in fact, some differences. For example, in Hungary (Figure 15), for men the most often selected reason for participation is that they are interested in saving energy and other environmental issues, while for women it is the wish to be involved in something positive. In fact, in terms of the latter, i.e. wishing to be involved in something positive, there is a significant difference between men and women in Hungary. At the same time, men are more likely to participate in save@work if it is part of their job or they are part of the energy team.

Figure 15: Why did you decide to participate in save@work?
Data for Women and Men in Hungary



If we look at Italy, the reasons for men and women to participate are also slightly different as shown in Figure 16. Here both men and women selected 'I am interested in saving energy and other environmental issues' and 'I am interested in learning about energy saving' as their two most important reasons for participation; however, women selected it significantly more often than men. For men being part of the energy team or being asked by their boss were also important reasons, significantly more so than for women.

Figure 16: Why did you decide to participate in save@work?
Data for Women and Men in Italy



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CHAPTER 3: ATTITUDE TO AND IMPORTANCE OF ENERGY SAVING

3.1 Importance of energy saving

The survey included six statements that measured the perceived importance of energy saving in different dimensions. Respondents had to express agreement or disagreement on a scale of 5 with statements such as 'Saving energy is important for... ' and '... actively supports energy saving' (see Annex 1, Part 3, Question 4). **In all participating countries respondents consider energy saving important** (on average: 4.49)**, but at the same time they think that for their colleagues it is considerably less important** (on average: 3.53, 21.4 % less, see Figure 17). In France, Italy and Germany this gap is larger than in other countries, the respondents in these countries are often not even entirely sure whether energy saving is important for their colleagues at all.

Besides, Germany is also worth noting for another reason: many respondents believe that energy saving is not clearly important in their office either. This opinion could be taken into account when preparing the save@work action plans, for example, greater emphasis could be put on communicating the significance of energy saving and on rewarding related everyday practices.

In every country respondents believe that they themselves take energy saving most seriously, more so than their office and their colleagues.

Figure 17: Opinions on energy saving

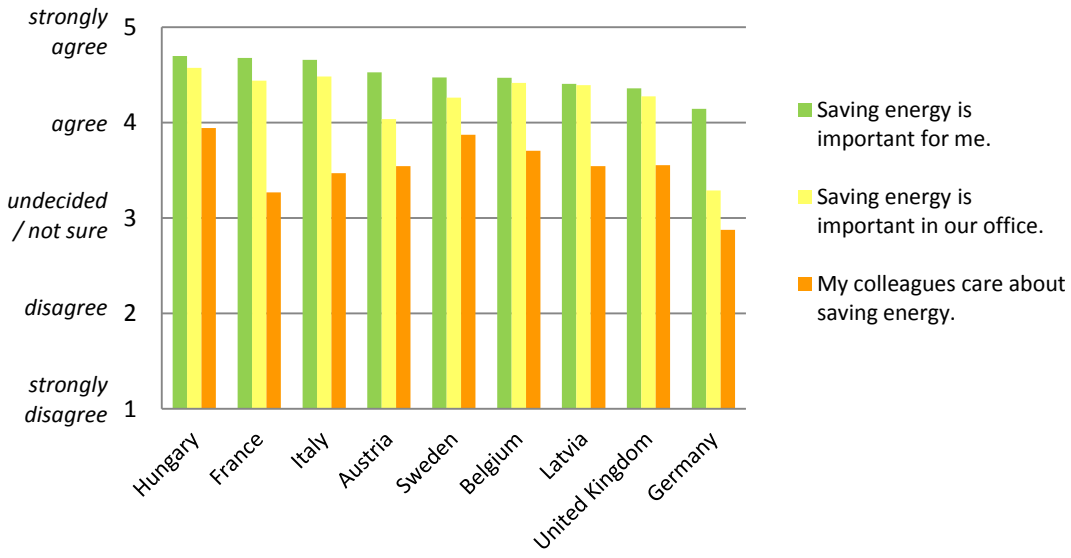

Figure 18 presents the summary of the answers showing how much support the respondents feel they receive for their energy saving activities 1) in general, 2) from the IT department and 3) from top management. Compared to Figure 17 it seems that **respondents do not feel the support as strongly as when they are asked more specifically**. So while the value for expressing agreement with 'saving energy is important in our office' is 4.24, it is 3.60 in case of 'we are all encouraged to save energy where we can in the office' on average for all participating countries. It is only in Germany that the opinions on these two very similar statements are very close.

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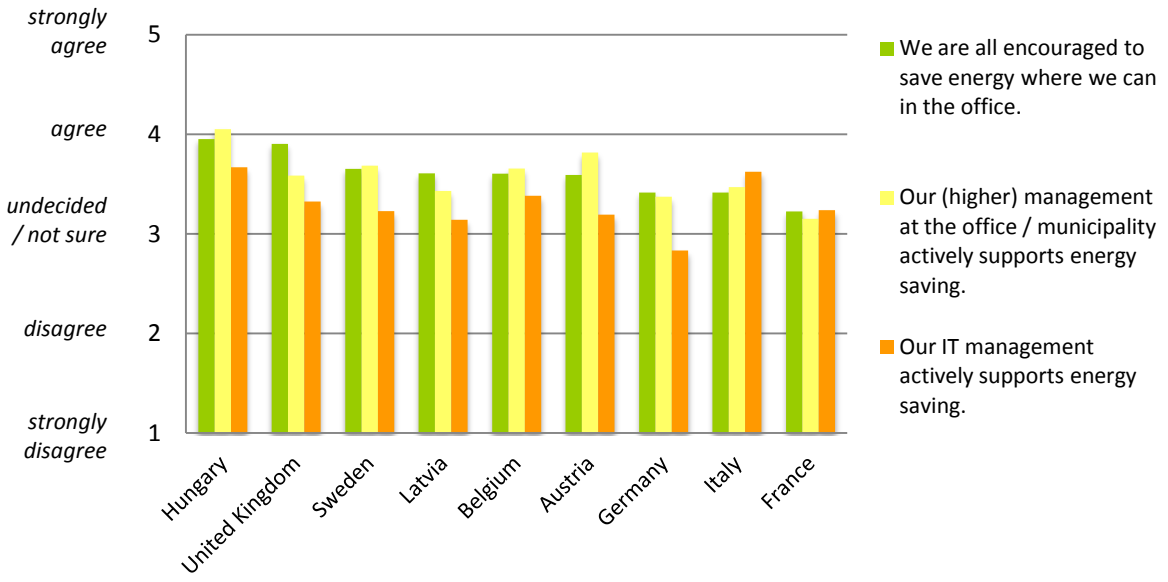
- In the United Kingdom, Latvia and Germany employees feel the general support (i.e. 'we are all encouraged to...') most strongly, while in Hungary, Sweden, Austria and Belgium support from the top management is considered to be the most significant.
- In Italy and France support from the IT department was felt the most strongly. At the same time, the latter two countries had the lowest values for general support.
- In Belgium, Italy and France the opinion on all three statements was quite similar, while in the United Kingdom, Austria and Germany there was a marked difference between at least two of the statements.

Figure 18: Supporting energy saving



3.2 Awareness of and attitudes towards energy saving practices

In the survey six questions were asked to see whether respondents are aware of the basic energy saving practices in offices. They had to express agreement or disagreement on a scale of 5 with statements starting with 'I believe we can effectively save energy by... ' (= 'I believe that it is a good thing to save energy by...', see Annex I, Part 3, Question 1). The survey tested if respondents know that 1) turning off unnecessary lights, 2) opening or closing windows as needed, 3) changing the settings of the air-conditioning, 4) changing the settings of the thermostat, 5) changing the settings of the copier and printer 6) changing the settings of any ICT (information and communications technology) equipment can effectively help to save energy in office buildings (see Figure 19).

Overall, the majority of respondents in all countries are well aware that through these practices they can save energy. For all six practices only Sweden, the United Kingdom and Latvia had values less than 4 (=agree), the least being 3.77.

The most popular choice in all countries but Germany was turning unnecessary lights off. On average, next in line was opening or closing the windows. It is worthwhile noting that these two are the easiest means of saving energy among the practices included in the question, so there is a

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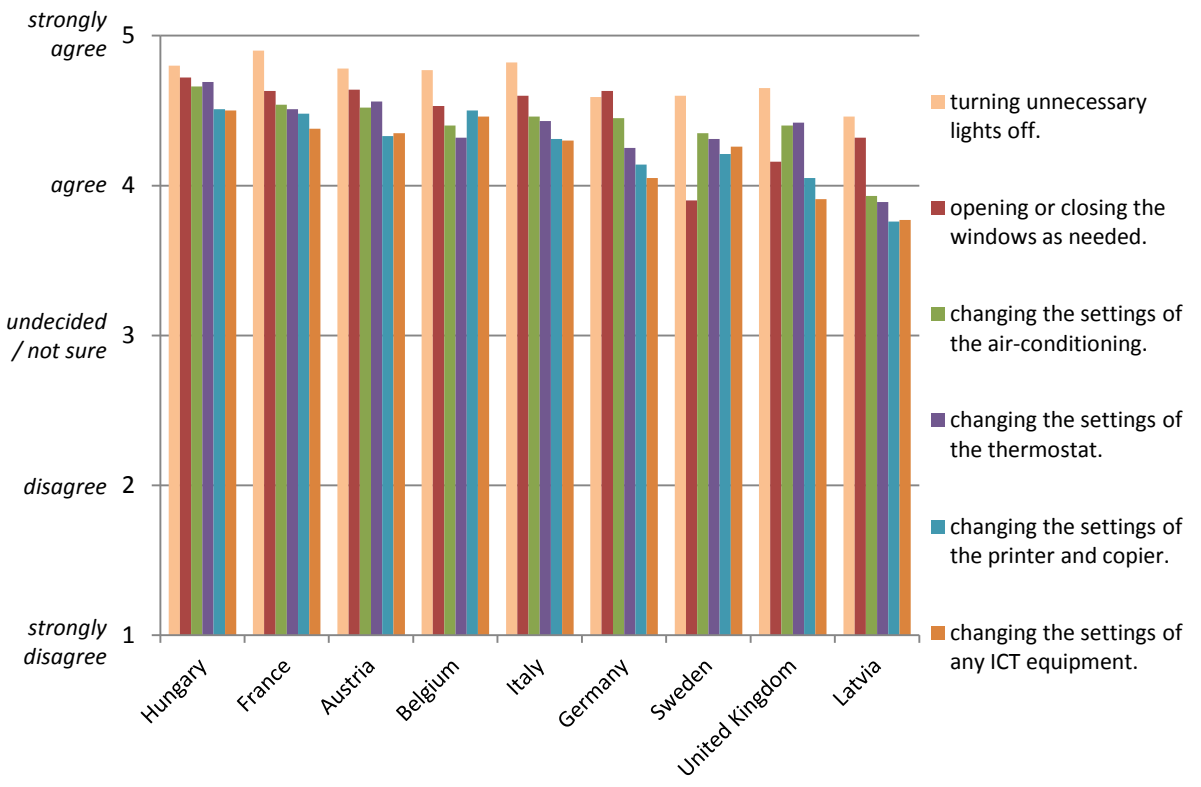
possibility that the easier (and therefore the more well-known) it is to carry out a practice, the more likely it is perceived as effective. Then follows changing the settings of the air-conditioning, the thermostat, the printer and the copier, and finally the information and communications technology equipment. However, it should be noted that even the practice with the lowest number of '(strongly) agree' answers reached a value of 4.22 on average in all countries. The same value for turning unnecessary lights off is 4.71, so the scale of difference is not significant.

Thus, **based on the survey responses in each of the participating countries, it seems that respondents do believe that it is meaningful and worthwhile to engage in the listed activities in order to save energy.**

In Hungary, Austria and the United Kingdom changing the settings of the thermostat was slightly more likely to be believed an effective way to save energy than changing the settings of the air-conditioning. Moreover, in the United Kingdom changing the settings of the thermostat and the air-conditioning overtook opening or closing the windows in effectiveness. In Belgium changing the settings of the printer and the copier were considered to be more effective ways to save energy than changing the settings of the thermostat or air-conditioning. These national differences are most likely due to different infrastructural (e.g. HVAC, IT) conditions, and are important to bear in mind when planning energy saving campaigns.

Figure 19: I believe we can effectively save energy by ...



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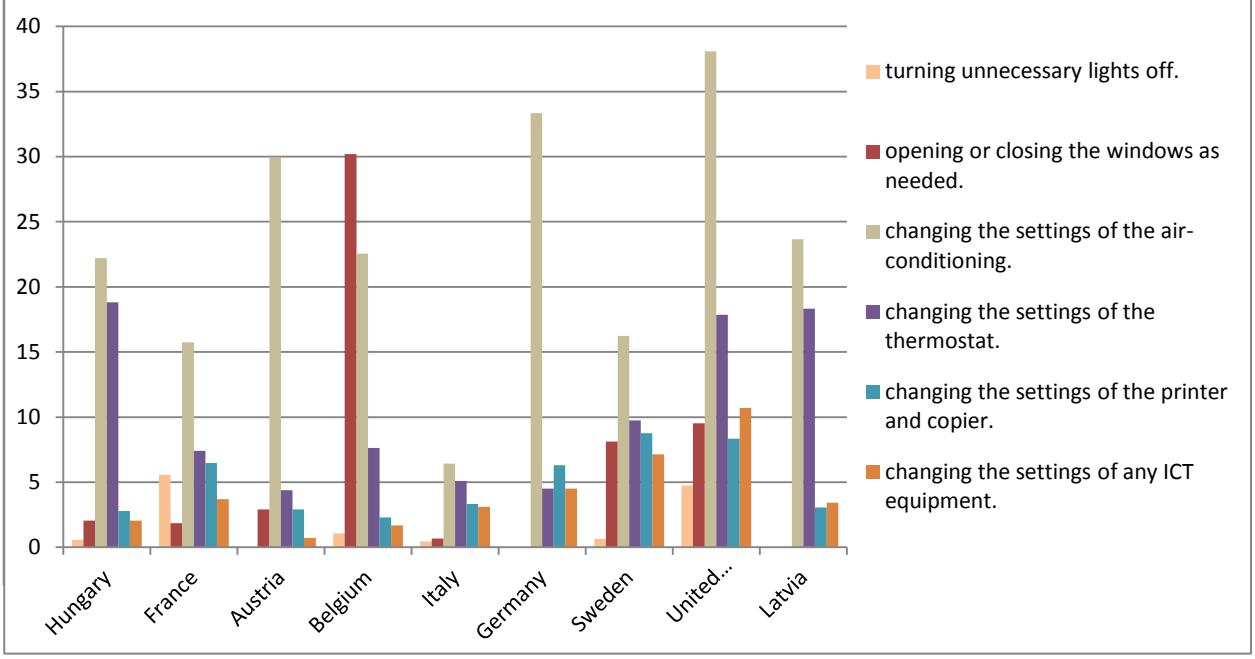
If we look at the results of how many employees chose 'not relevant/ possible' in each of the countries for all six practices one by one (Figure 20), we can see that **in all countries changing the settings of air-conditioning is one of the practices most likely to be considered 'not relevant/ possible'**. Everywhere, except for Belgium, this practice was marked by the biggest ratio of respondents as 'not relevant/ possible'. In Belgium opening or closing the windows is standing out as the least relevant or possible. For many respondents in Hungary, the United Kingdom and Latvia changing the settings of the thermostat is also likely to be irrelevant or impossible. **In each country except for Italy the difference is substantial between one or two and the rest of the practices.**

So in general the indoors temperature related answers were more likely to be marked as 'not relevant/ possible' than the lighting or office equipment related ones. At the same time, it is more effective to save energy by controlling the office temperature, so at the moment it seems like that in most countries the possibilities for this are unfortunately somewhat limited. But exactly because it is an important source for saving energy, **further exploration would be needed to discover why it was marked 'not relevant/ possible'**, preferably building by building. Is it because heating / cooling is centrally controlled? If yes, could the system be altered easily to allow individual (e.g. room by room) control? Or is it because employees simply do not know about the possibility of controlling temperatures?, etc. In case of air-conditioning the reason for selecting 'not relevant / possible' could also be because it is not installed in the building, which is actually more favourable from an energy consumption point of view.

It is interesting to observe that while in France the most effective way to save energy is believed to be turning off unnecessary lights – reaching 4.9, the highest value overall –, it is here where the highest ratio of employees (5.6 %) marked this activity as 'not relevant/ possible'.

Figure 20: I believe we can effectively save energy by...
- % of 'not relevant / possible' answers



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CHAPTER 4:ENERGY SAVING ACTIONS, SKILLS AND KNOWLEDGE

In this chapter we analyse the survey results related to basic energy saving actions, investigating to what extent the practices listed in the survey are implemented, and whether respondents have the necessary knowledge and skills to carry them out. We had a look at how respondents see their colleagues in these respects, and we also explored if either gender or age influence implementation.

4.1 Energy saving actions

In the survey **we enquired about the following everyday energy saving practices in offices** (see Annex I, Part 1, Question 1):

- Turning the lights off when nobody is in the room.
- Turning off the computer/laptop when not in the office (i.e. it's not left on stand-by at night or at the weekends).
- Using the stairs at work instead of taking the elevator.
- Using desk lamps instead of the central lights if areas of the office are unoccupied.
- Avoiding printing unnecessarily.
- Using energy saving settings on the office equipment (e.g. printer, copier).
- Only boiling the amount of water needed for hot drinks.
- Turning down the heating when it gets too warm in the office.

We wanted to know how regularly the respondents themselves and – in their opinion – their colleagues follow these practices, and if yes, how often they do them: all the time, often, sometimes, rarely or never. They also had the option to select 'not possible / relevant' if in their building it is not possible to perform a specific activity (e.g. they cannot turn the lights off because they are automated). Respondents also had the opportunity to provide comments and explanations in a text box following the questions.

Below there is an analysis of each of the eight practices.

Methodological considerations

Many of the figures below show a so-called rating, that is a calculated value between 1 and 5. The value was calculated by converting all the possible answers to one of these numbers: 'never' and 'strongly disagree' correspond to 1, 'rarely' and 'disagree' correspond to 2, 'sometimes yes, sometimes no (50-50 %)' and 'undecided/ not sure' to 3, 'often' and 'agree' to 4, and finally 'all the time' and 'strongly agree' correspond to 5. Therefore, an average could be calculated and thus countries, for example, could be directly compared. 'Not possible / relevant' answers were not included in this value, the ratio of these answers is shown in a separate figure in case it was deemed relevant.

We analysed differences between countries, but this chapter – similarly to the rest of the report – does not explore deviations of by specific participating buildings compared to the overall or country average values.

The red line on Figures 21, 23, 25, etc. shows the average of all countries for that particular energy saving action.

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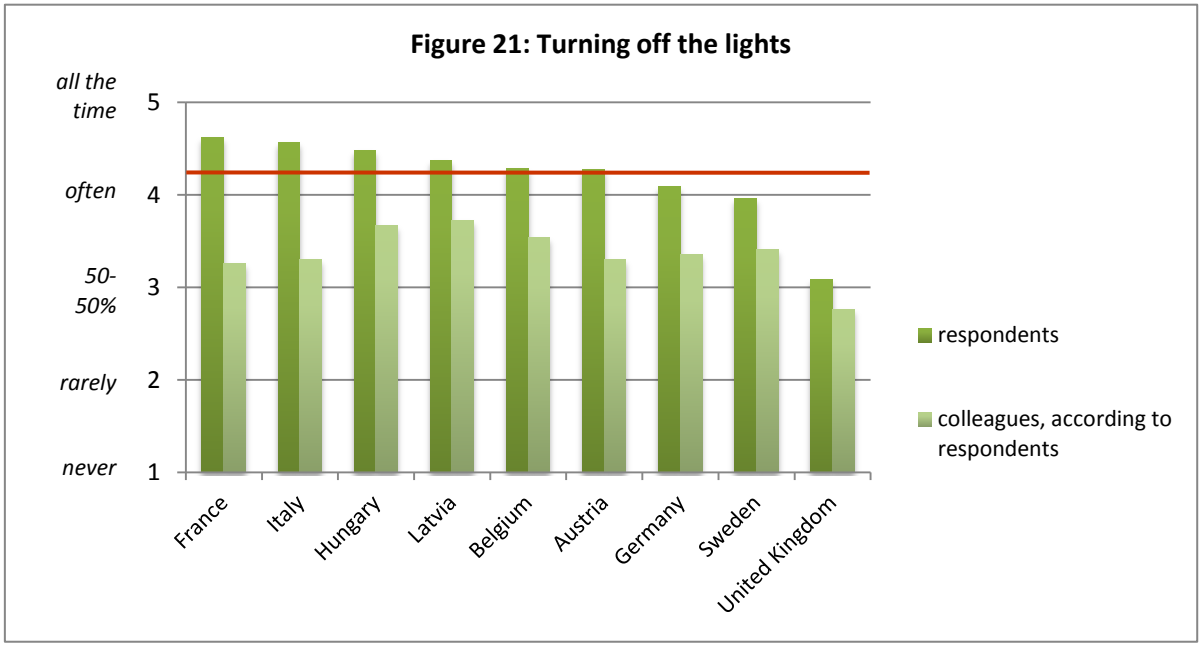
Figures in Chapter *4.2 Are some respondents more likely to perform a certain energy saving action? The influence of gender and age* – as well as in *Chapter 5* – include N/A columns. 'N/A' shows the proportion of those respondents who did not answer questions on gender or age, because they did not complete the survey (see also in Chapter 1.4). As these questions are in the survey's last section (see Annex I, Part 4), if there were respondents who did not complete the survey, they were most likely not to reply to these questions while still answering the questions on energy saving actions in Part 1.

Turning off the lights

As it can be seen in the graph below (Figure 21), **in all the countries except for the United Kingdom employees think that they almost always turn off the lights** if nobody is in the room. However, when it comes to their colleagues, they are not so positive anymore. The gap between what respondents think about themselves and about their colleagues is most significant in France and Italy, where respondents agreed the most strongly that they themselves turn off unnecessary lights. The country with the narrowest gap is on the other end of the graph, the UK, where the least people turn regularly off the lights.

It might be surprising to see in Figure 21 that the UK is well behind the other countries regarding such an easy task. To understand this better, it is important to take a look at Figure 22, which reveals that the ratio of 'not relevant / possible' answers is very high in the UK. Moreover, many respondents who chose 'not relevant / possible' also made a comment that in their building they have automatic lighting systems; thus, there is no need to turn the lights off. Based on this it can be suspected that some respondents answered 'rarely' or 'never' instead of 'not relevant / possible', hence the low rating in Figure 21.

Figure 21: Turning off the lights



In France the ratio of 'not relevant / possible' answers is also relatively high, and many of those responding this way also mentioned the automatic lighting system. Though it probably affects less people and those affected were more likely to answer 'not relevant / possible' rather than 'rarely' or

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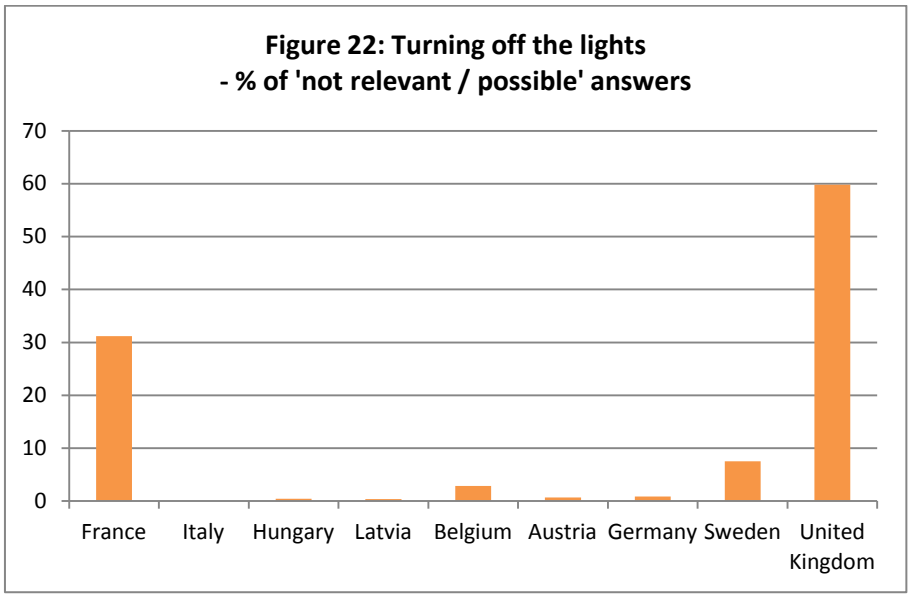
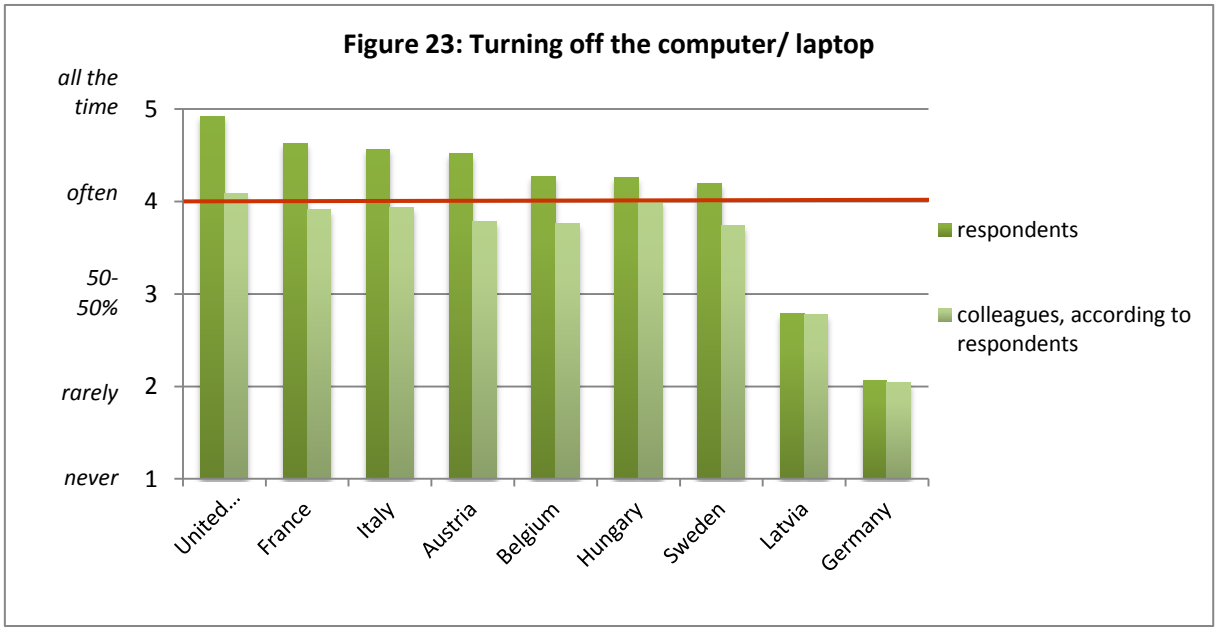
'never'. On the other hand, Figure 22 also shows – supported by the almost complete lack of comments on lighting – that in Germany and Sweden the lower than average proportion of those who switch off the lights is not due to technical reasons, but to people being negligent.



Turning off the computer/ laptop

As regards turning off the computer/ laptop, there is a larger scale of difference between the participating countries (Figure 23) than in case of lighting. **These devices are least likely to be turned off in Latvia and Germany**, and according to the responses, it is not because the employees are unable or not allowed to do so for some reasons. The ratio of 'not relevant / possible' answers was somewhat substantial only in Germany, where it was 14.3 % (Figure 24), but there is only one German respondent who mentioned that (s)he is not allowed to switch off the PC.

As regards the other seven countries, however, respondents are very likely (between 'all the time' and 'often') **to turn off the computer/ laptop when they leave for home**.



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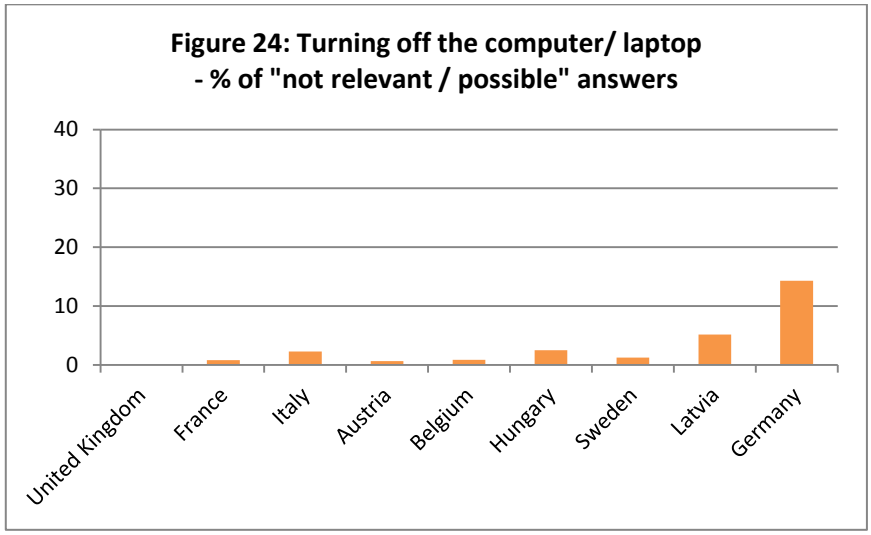
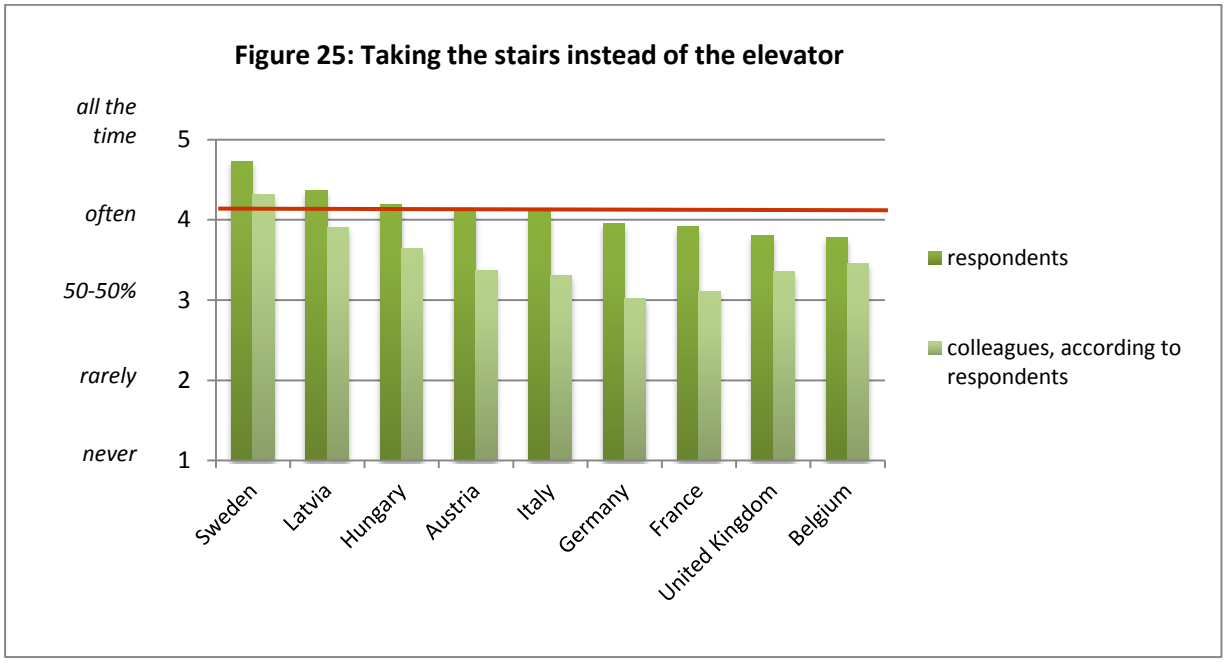


Taking the stairs instead of the elevator

On average, respondents in the nine participating countries 'often' (4.11) **use the stairs instead of the elevators**, and the distribution of the countries around this average value is well-balanced (Figure 25).



It is interesting to see, though, that for this action **the ratio of 'not relevant / possible' answers was highest in Latvia and Hungary**, the two Eastern European participants (Figure 26). At the same time, they perform well in terms of employees using the stairs, so in buildings where there is a possibility to choose the stairs over the elevators, the majority of the respondents do it 'all the time' or 'often'. It should also be noted that in Belgium, where the lowest number of employees choose the stairs, 8.1 % of the respondents answered 'not relevant / possible', so in some of the Belgian buildings using the stairs over the elevator is not an option for some reasons.

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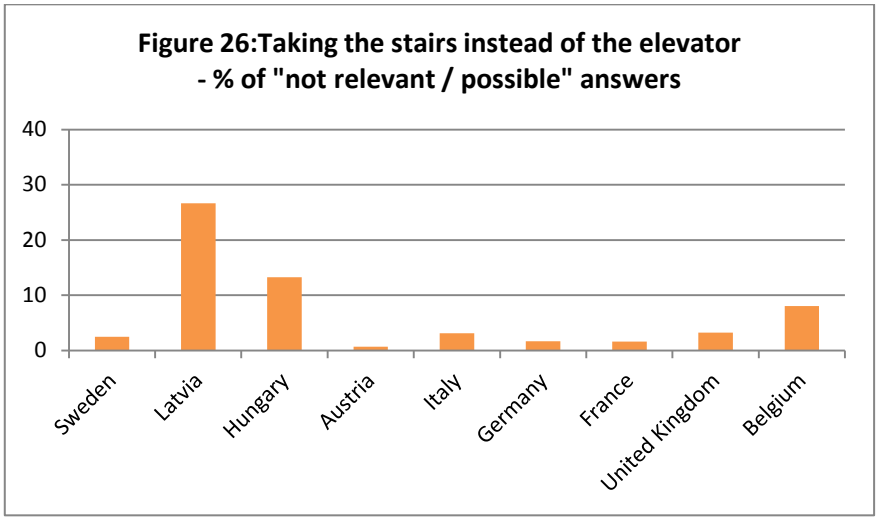
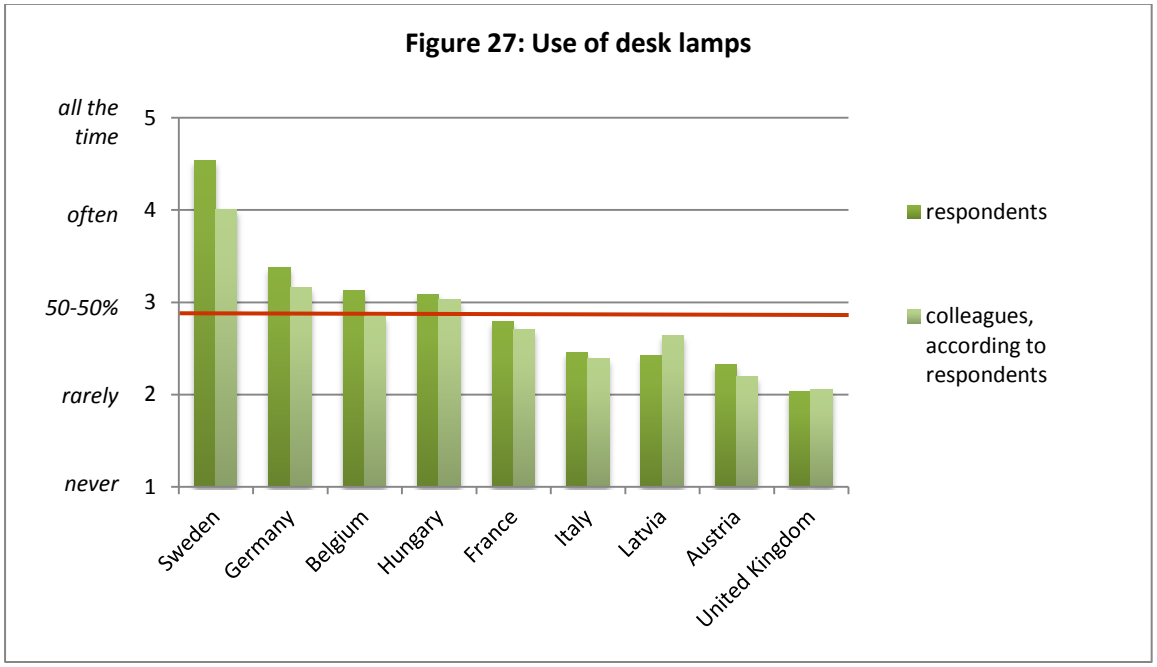


Using desk lamps

Figure 27 illustrates very well that compared to turning off the lights or the computer/ laptop – in all countries with the exception of Sweden – far fewer employees take advantage of local lighting and use desk lamps when they are alone in the office room and central lighting could be turned off. Here **the likelihood of regularly using desk lamps is** 2.9 on average – **the lowest among all the actions**.



There might be different reasons behind the avoidance of using desk lamps in each building, however, very often it is simply because **employees do not have them**. This argument is supported by the overall very high ratio of 'not relevant / possible' answers (Figure 28). An overall trend can be observed: the smaller the value for using desk lamps was, the higher the ratio of 'not relevant / possible' answers is in a given country. In the United Kingdom as high as 57.6 % of the respondents

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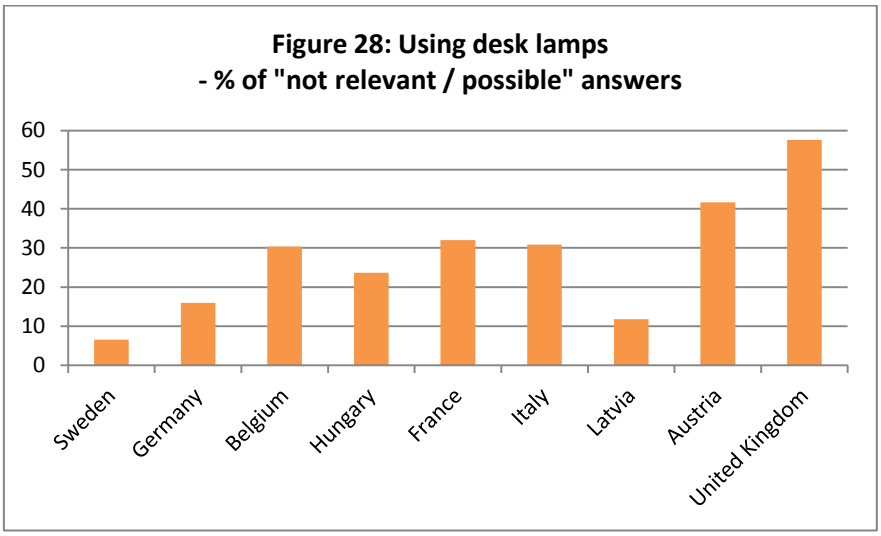
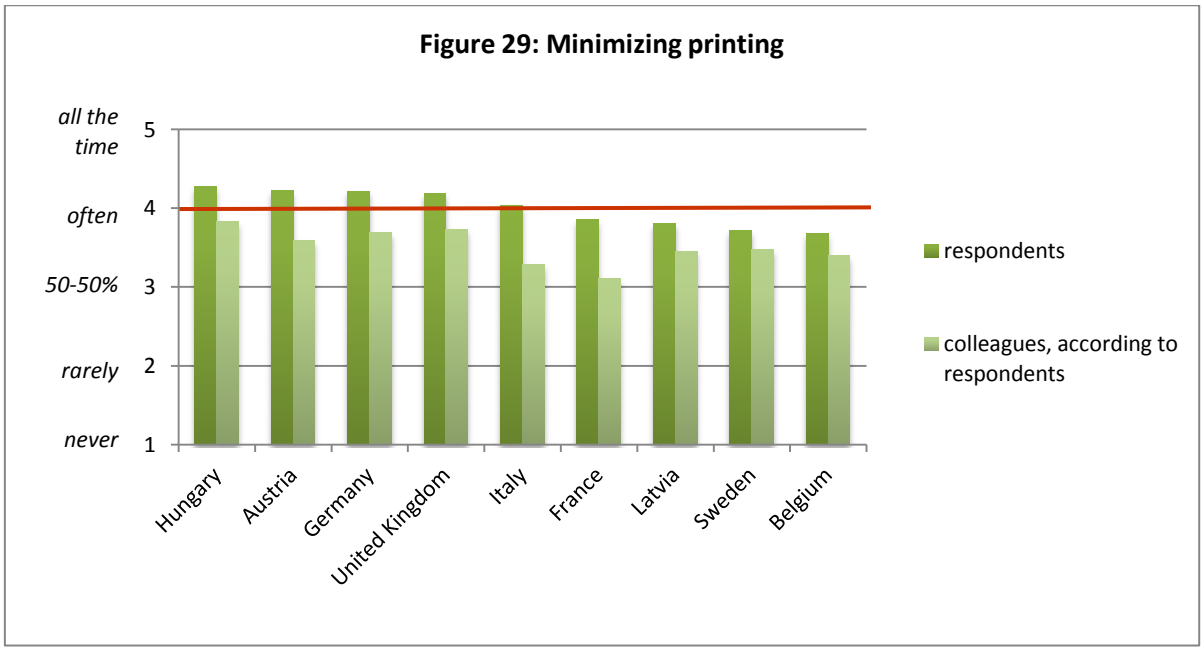
gave a 'not relevant / possible' response. In many buildings investing in desk lamps is worth considering, for improving energy efficiency as well as workers' health and well-being.



Minimizing printing

As the pertaining average value for all countries is exactly 4.00, it can be said that **respondents 'often' make an effort to minimize printing** (Figure 29). The difference between the various countries is not significant, the slight deviation from the average value is gradual. The printer is a core element of any office, moreover, **the practice of minimizing printing can take many forms**, such as printing only when necessary, duplex printing, decreasing the margin of the document, printing on the other side of an already used document, etc. Therefore, as expected, **the number of 'not relevant / possible' answers is minimal** (even 0 in some places) in all countries.



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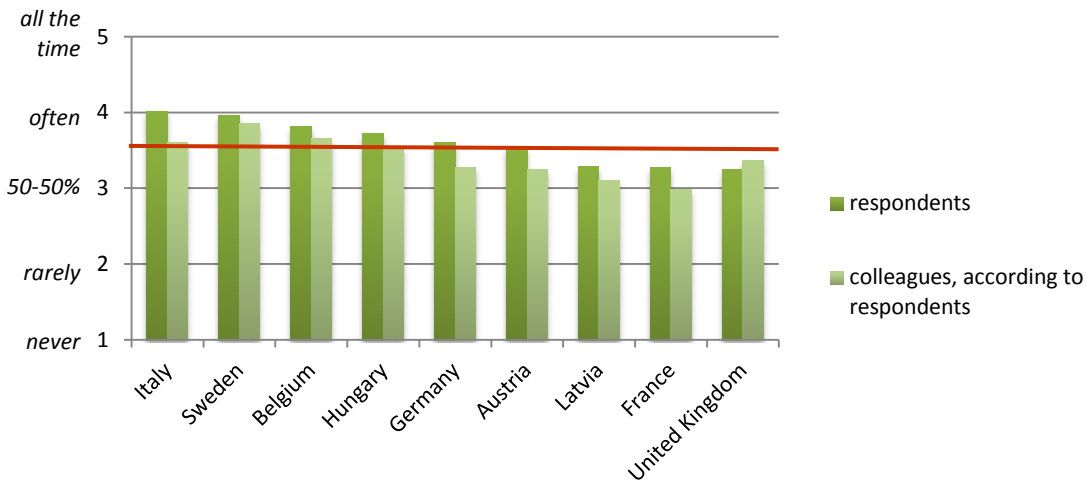
Using the energy saving settings

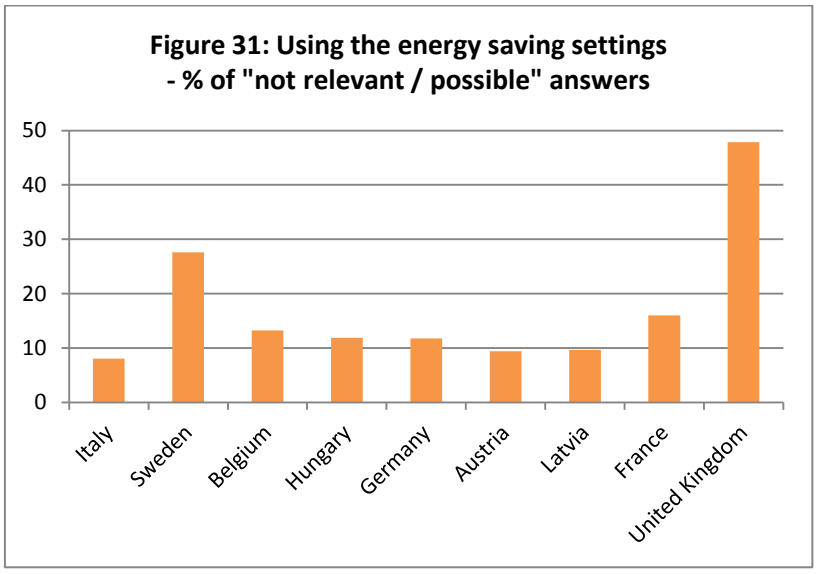
The question investigated how frequently respondents use energy saving settings on the office equipment, including the printer and copier, as well as the computer and the monitor. The replies vary between 'often' and 'sometimes yes, sometimes not', the average of all countries being 3.61, the **second lowest** among all the energy saving actions listed in the survey (see Figure 30).

Figure 30: Using the energy saving settings



As can be seen in Figure 31, the ratio of 'not relevant / possible' responses is relatively high in Sweden and the United Kingdom. Even though it is possible that some of the energy saving settings – such as the ones on computers – are centrally managed and cannot be altered by the employees, there is no evidence in the comments to support this.

Figure 31: Using the energy saving settings - % of "not relevant / possible" answers



The reason for the relatively lower ratings with respect to this energy saving practice could theoretically also be because respondents are not sure how to change these settings. This is why in the survey they were also asked about their knowledge related to this (see Annex I, Part 3, Question 2 and also below in Chapter *4.3 Knowledge and skills available to realize energy savings*).

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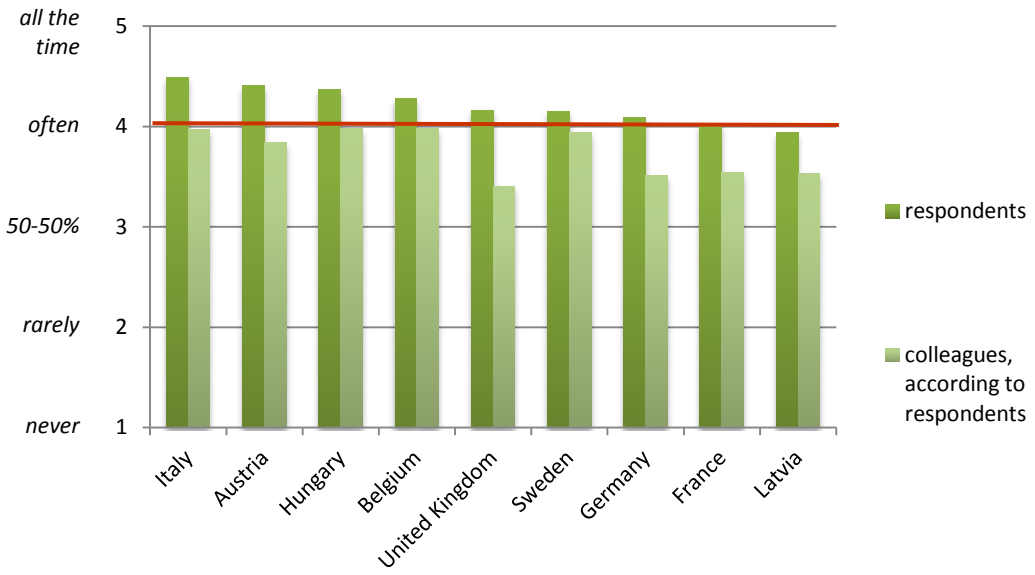
Only boiling the amount of water needed for hot drinks

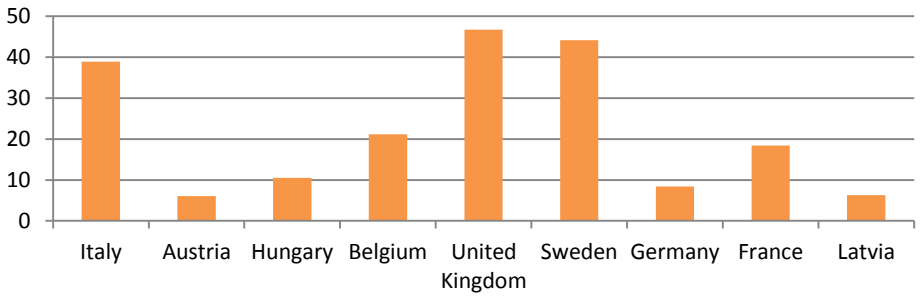
Based on relevant literature[2], people usually boil more water than necessary when preparing hot drinks, and as a result waste a great amount of energy. According to the pre-campaign survey results (see Figure 32), **most of the respondents pay attention to only boiling the amount of water that is ultimately necessary for their hot drinks**.

Figure 32: Only boiling the amount of water needed for hot drinks



But the survey analysis also shed light on the fact that in many buildings introducing this energy saving practice is not possible because, for example, the employees take hot water from water dispensers. Figure 33 highlights the importance of paying attention to the viability of a proposed energy saving action when planning and implementing energy saving campaigns. Although there are simple and potentially effective energy saving activities such as boiling just the correct amount of water, promoting them will be in vain if water is not boiled in a kettle but taken from a dispenser.

Figure 33: Only boiling the amount of water needed for hot drinks
- % of 'not relevant / possible' answers



[2] See http://ec.europa.eu/clima/sites/campaign/control/switchoff_en.htm

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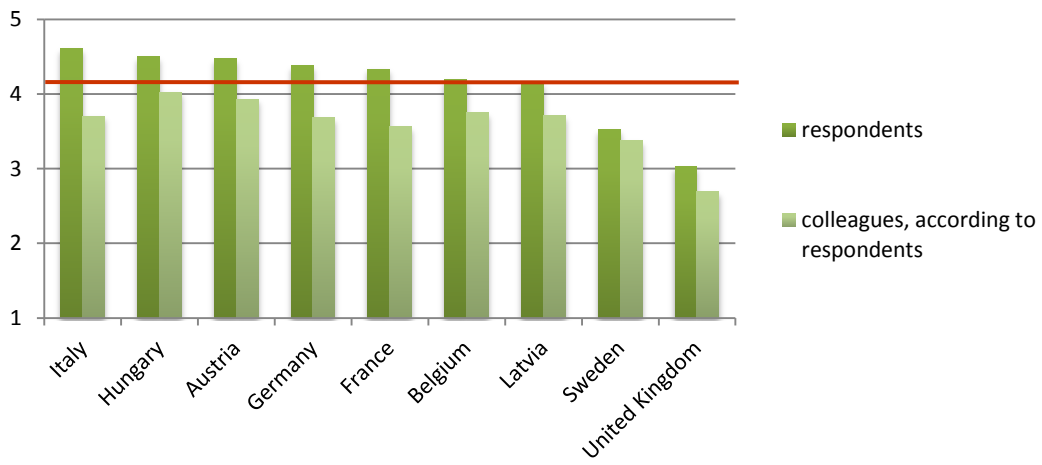
Turning down the heating

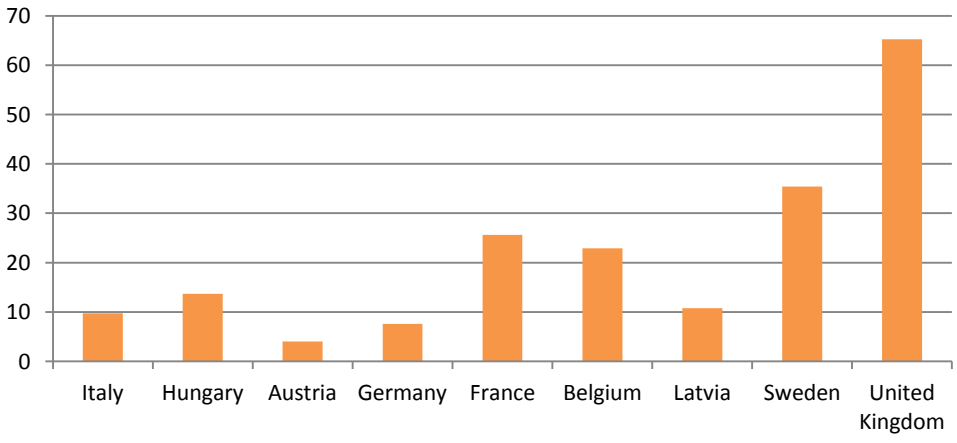
The question explored how likely respondents are to turn down the heating when it gets too warm in the office. The average popularity of this energy saving action is very close to that of choosing the stairs over the elevator (Figure 34). Although this may well be unrelated or a coincidence, it seems that **respondents are most likely to turn down the heating in participating country with the warmest climate, Italy, while in colder countries, such as Latvia and Sweden, they are less ready to do so**. The key to understanding this outcome lies in the comments respondents provided. In Sweden many people commented that it is usually too cold in their office, so to them it seems like it hardly ever gets unnecessarily warm there in wintertime.

Figure 34: Turning down the heating



Besides, just like in the case of lighting, chances are that there are some buildings where heating is centrally controlled. The high percentage of 'not relevant / possible' responses (Figure 34) for some of the countries, the comments, and Figure 20 in *Chapter 3* show that this is indeed the case in several buildings.

Figure 34: Turning down the heating
- % of "not relevant / possible" answers



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Energy saving practices and habits: summary of results

- **The action that is done most frequently by all respondents was boiling just the correct amount of water and switching off the lights when nobody is the room**.
- Using the stairs instead of the elevators and turning down the heating when it gets too warm in the office are second in line with roughly the same likelihood of doing them, which slightly more frequently than 'often'.
- The rating correlates to exactly 'often' in case of minimizing printing and turning off the computer/ laptop after work for the evenings and the weekends.
- Using energy saving settings is next,
- and the last in line is the use of desk lamps, which does not even reach the frequency of 'sometimes yes, sometimes not'.

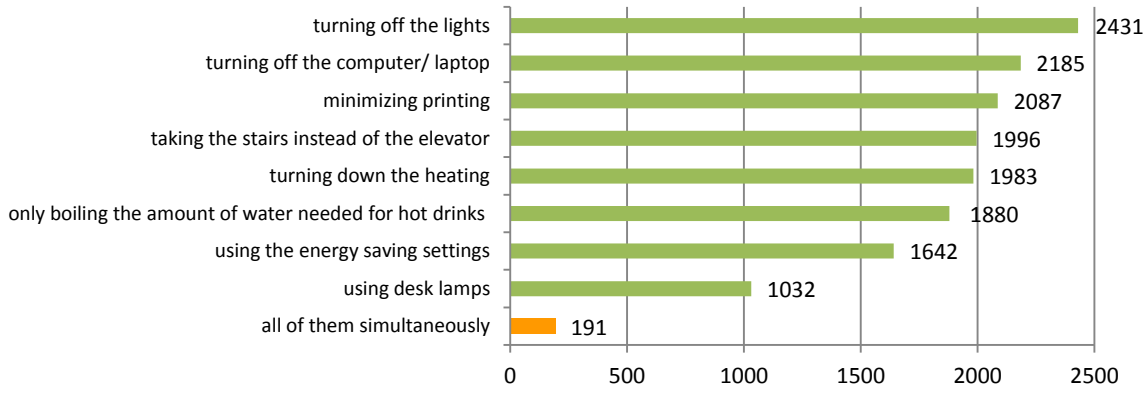
However, on a scale of 1 ('never') to 5 ('all the time') **the ratings for all answers are somewhere between 2.90 and 4.21 on average** – so from a slightly below 'sometimes yes, sometimes not' to somewhat above 'often'.

For each of the actions there was a 'not relevant/ possible' option – as mentioned already at several places above. The ratio of respondents selecting this answer was highest in case of using a desk lamp, which was followed by only boiling necessary amount of water for hot drinks and turning down the heating. **The differences in the ratio of 'not relevant/ possible' answers** among each country – and in fact building – are important because they **accentuate the differing technical circumstances** in the participating buildings and countries, **which require different approaches to saving energy**.

For example, the United Kingdom is clearly standing out with more than 40 % of the respondents selecting 'not relevant/ possible' for 5 out of the 8 questions on energy saving actions. In relation to this it should also be noted that the ratio of employees who filled in the pre-campaign survey is relatively low in the UK, only 2.3 % of all employees in participating buildings. The high ratio of 'not relevant/ possible' responses in some cases also seem to correlate with a higher proportion of 'never' and 'rarely' answers, which is especially distinct in the UK. Even when it was not possible to carry out a certain action, some of the respondents probably chose 'never' instead of 'not relevant/ possible' there.

Out of the 2965 respondents 191 (6.4 %) do all the eight actions 'all the time' or 'often' (Figure 35), and only 10 people responded that they 'never' or 'rarely' do any of the actions listed.

Figure 35: 'I do the following energy saving action 'all the time' or 'often' - all countries



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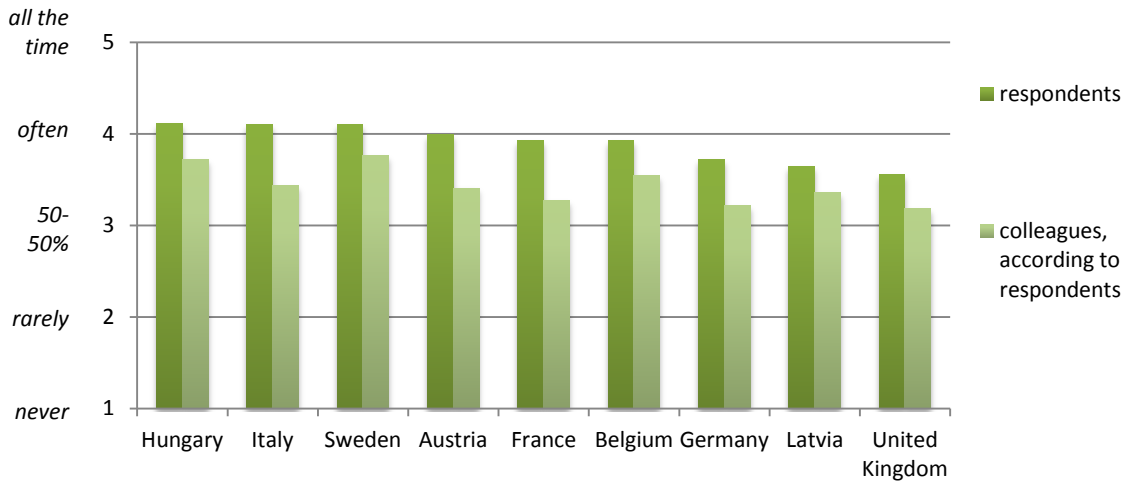
In Figure 36 all the answers related to the eight energy saving practices are summarized for each country, showing the overall average values.

Figure 36: Average of all answers related to energy saving practices



Overall, respondents carry out the analysed energy saving activities most frequently in Hungary, Italy and Sweden – though compared to the other participating countries the difference is not significant. However, in the save@work campaign our aim is to reach the targeted 15 % energy saving partly through following these simple energy saving practices all the time (not just often!) and without exception. In other words, **everyday energy saving behaviour should become part of the office culture**: turning off the lights and electronic equipment, controlling the heating if necessary, knowing and applying the energy saving settings, etc. should become the norm.

4.2 Are some respondents more likely to perform a certain energy saving action? The influence of gender and age

The possible influence of gender and age on the likelihood of carrying out the energy saving actions was also investigated. Therefore, we had a closer look at two selected actions to see whether the gender and age distribution of those who answered 'all the time' or 'often' for those two actions is different from the distribution in the whole survey sample (2965 responses). One of these actions was the most popular and probably the easiest one, namely turning off the lights when nobody is in the room. The other action, using the energy saving settings was chosen because it needs some extra technical skills which is more likely to be associated with male skills. Furthermore, this was also one of the least practised actions. However, **no significant difference in distribution could be observed for either gender** (Figure 37) **or age** (Figure 38).

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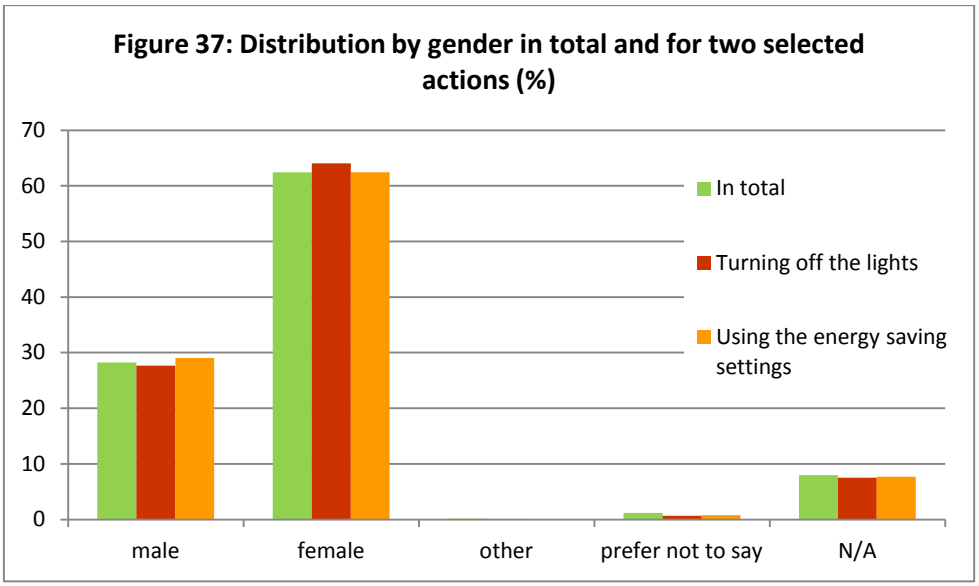
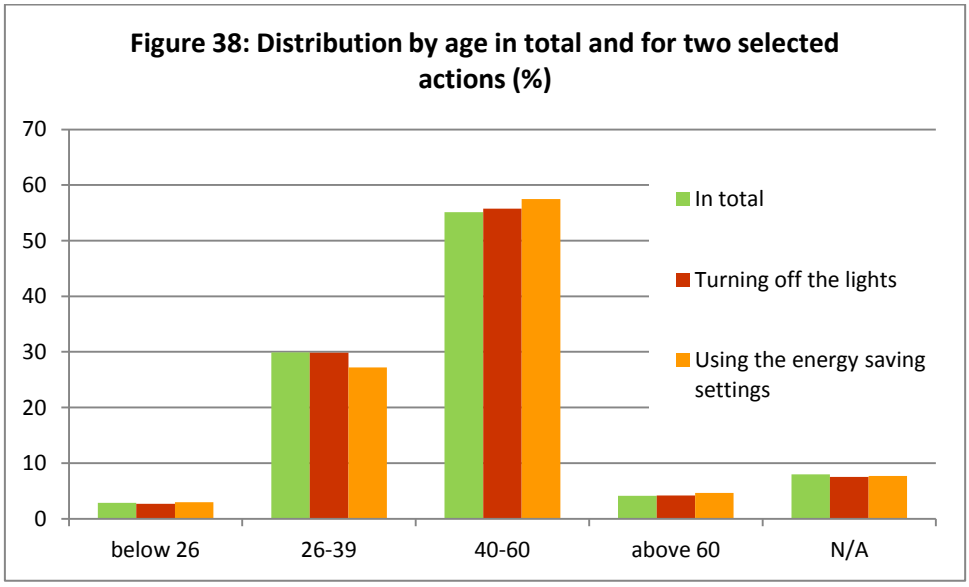


For age there is only a slight increase in the proportion of the 40-60-year-old respondents accompanied by a slight decrease in the proportion of those between the ages of 26 and 39 for one of the practices, which is somewhat surprising given that it's about office equipment settings, but this difference is by no means significant.



We also checked if there is any difference in the gender or age distribution among the 191 respondents who selected 'all the time' or 'often' for all eight energy saving actions simultaneously (Figure 39 and Figure 40). Again, we compared these values to the gender and age distribution seen in the total survey sample. **The proportion of women is 5.1 % higher, while the proportion of men is 3.2 % lower** than for the whole survey.

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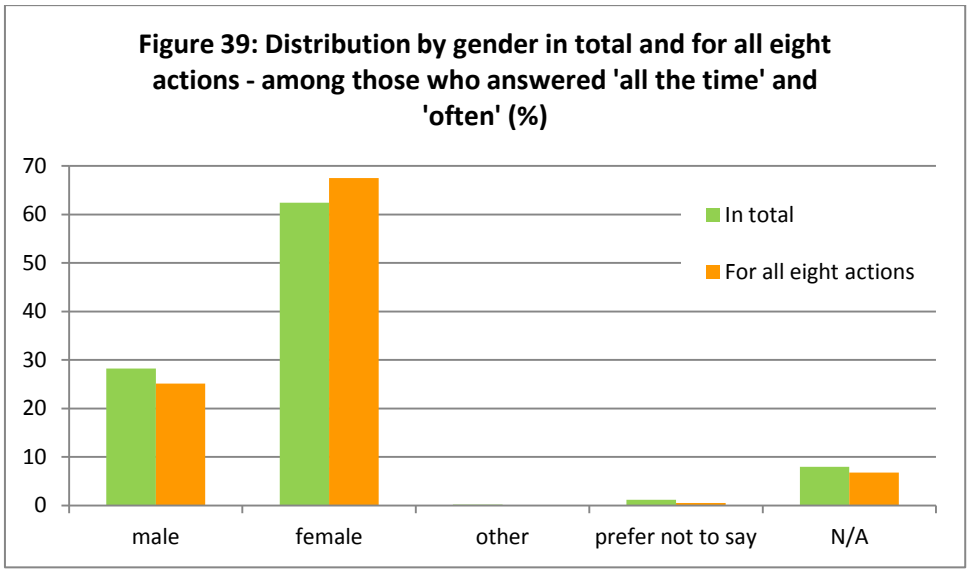
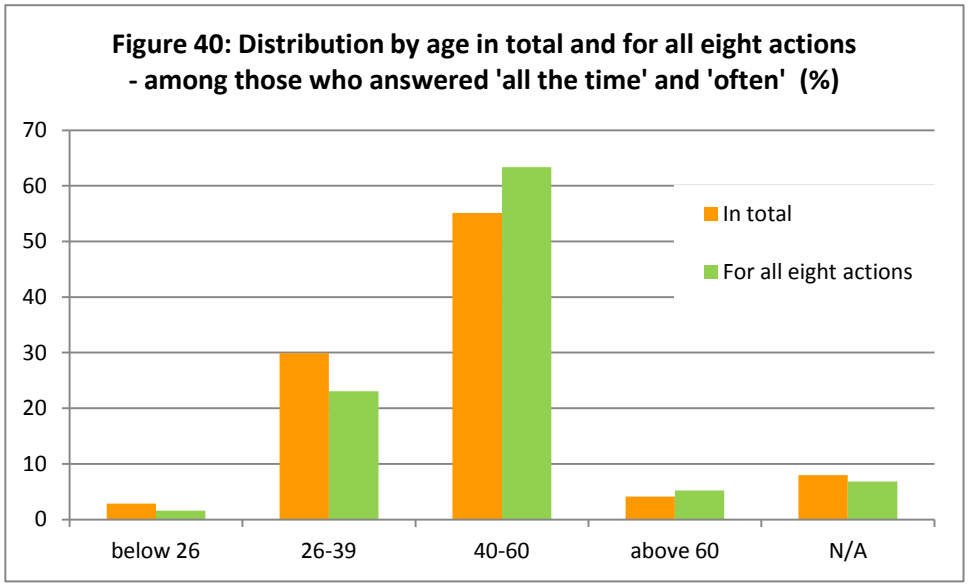


As regards the age, **the ratio of 40-60-year-old respondents is 8.3 % higher and the ratio of 26-39-year-olds is 6.9 % lower** compared to the 2965 sample. The ratio of respondents below 26 years of age who answered 'all the time' or 'often' for all eight energy saving actions is almost half compared to the ratio within the whole survey. At the same time, it should be noted that their proportion is quite low anyway (1.6 % and 2.9 %, respectively), and the differences detailed here might be partly due to the limited number of responses – 191 is only 6.4 % of the total number of surveys.



4.3 Knowledge and skills available to realize energy savings

In *Chapter 3* we already analyzed to what extent respondents are aware of the various basic energy saving practices. In addition, the survey included another question to check whether respondents know how to carry out these actions (see Annex I, Part 3, Question 2), which is also useful additional information as to how regularly respondents carry out those actions. The actions investigated here are identical to the ones examined in relation to awareness. The only action not

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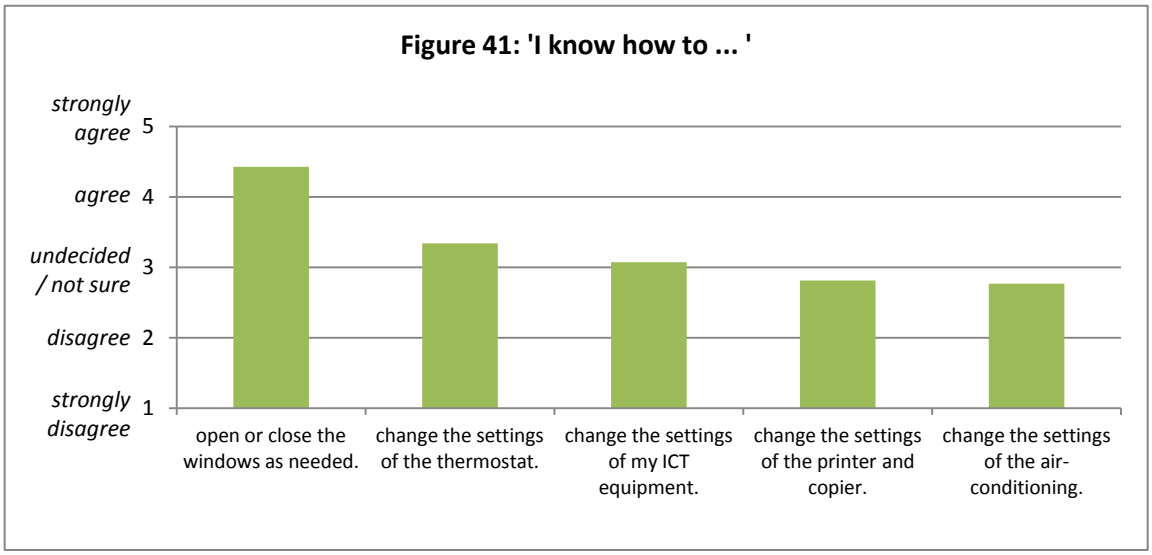
included here is 'turning unnecessary lights off', supposing that all employees have the necessary skills and knowledge for doing it. While the values for awareness on energy saving actions are quite high with an overall average of 4.40 (see *Chapter 3*, Figure 19), the same calculated value for knowing how to do them is only 3.28. This definitely indicates that **besides emphasizing the importance of performing these energy saving actions, there is a strong need to educate employees on how exactly to perform them**.

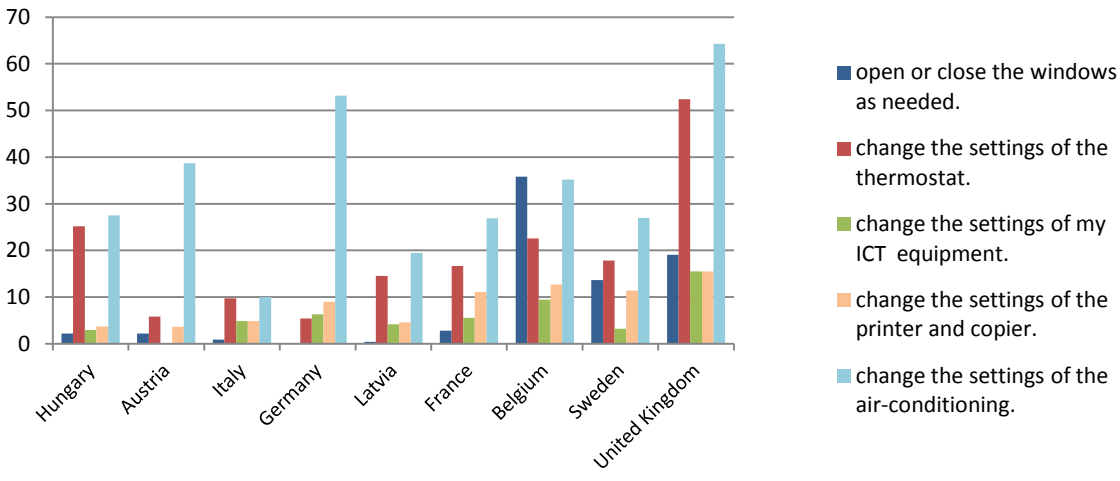
Among the five actions **'opening or closing the windows as needed' got the highest rating in all countries without exception**, which is no surprise, obviously this is the easiest action to carry out. The other four actions all received considerably lower ratings, the difference between the four of them is minimal, on average they correspond to 'undecided / not sure', the action with the lowest value (2.77) being 'changing the settings of the air-conditioning' (Figure 41). Thus, a rather high percentage of the employees are not sure or do not know how to change the settings of their equipment or heating / air-conditioning systems.

Figure 41: 'I know how to ... '



It is probable that many of the participating buildings do not have air-conditioners as this action received the highest number of 'not relevant / possible' replies in all countries except for Belgium, where it was the second most cited action as 'not relevant / possible'. (see Figures 42 and 43).

Figure 42: 'I know how to ... '
- % of "not relevant / possible" answers



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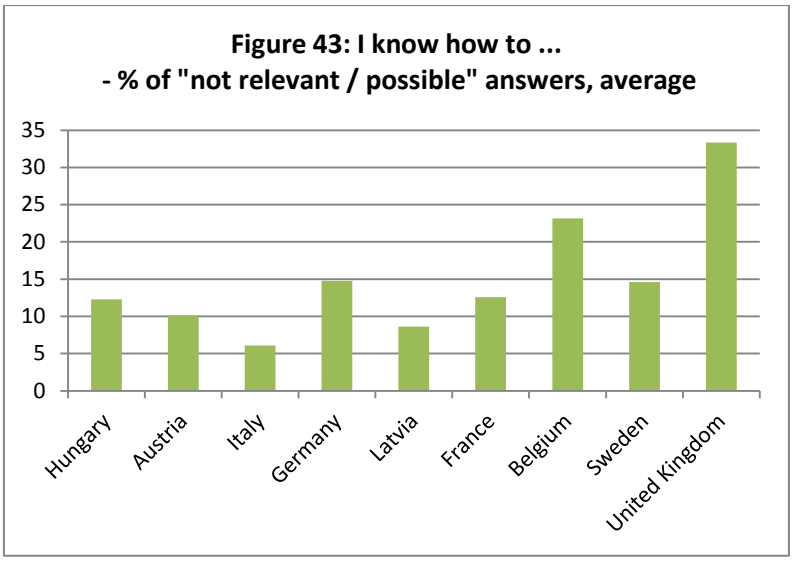
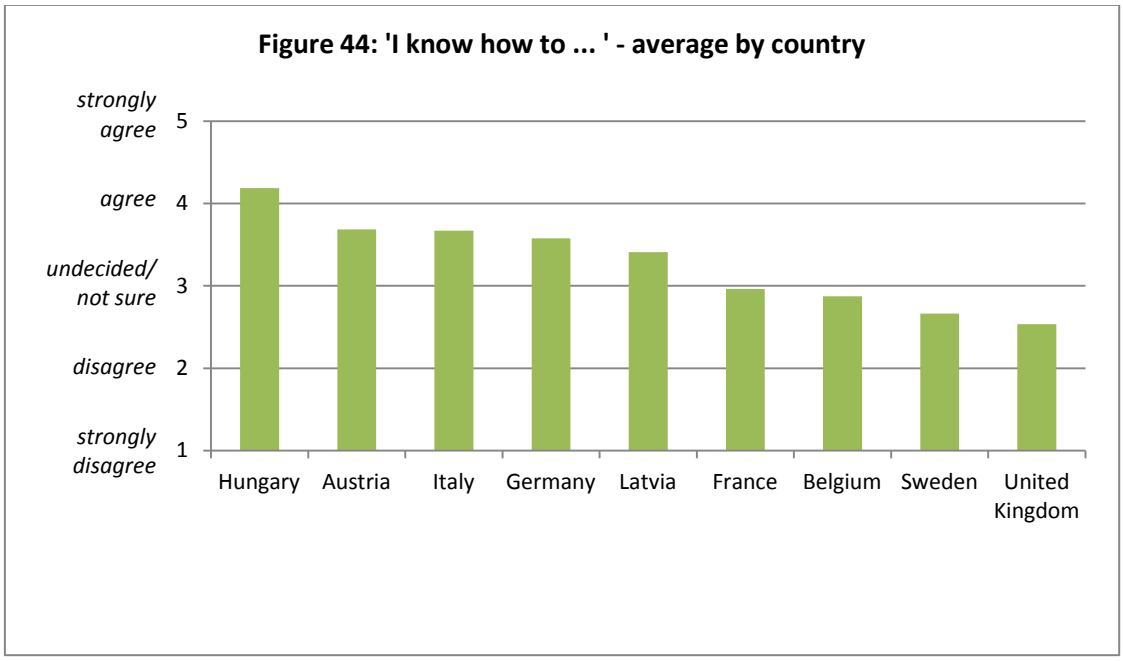


We also had a look at the responses country-by-country, taking the average of knowledge to perform all five actions (Figure 44). **Hungary has the highest value with 4.19 and respondents in the United Kingdom are the least sure about how to perform the studied energy saving practices, with an average value of 2.53**. The scale of difference among the participating countries is more significant in comparison to Figure 36 above in *Chapter 4.1* that shows the average values related to carrying out all eight energy saving actions.



Moreover, settings of the thermostat, the ICT (information and communications technology), the printer and copier can be directly related to some of the questions discussed in chapter *4.1 Energy saving actions* (Figure 45 and 46). It might look strange at first that for almost all countries the values for performing the actions are higher than knowing how to do them. Therefore, it is important to point out that while the scale of ratings for doing the actions was from 'all the time' - 5 to 'never' - 1, for the question on knowing how to do the actions respondents could choose from 'strongly agree' - 5 to 'strongly disagree' - 1. While there is an obvious distinction between 'all the time' - 5 and 'often'

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- 4, the semantic difference in case of 'strongly agree' - 5 and 'agree' - 4 is not so big, so people might have chosen 'agree' more easily than 'strongly agree'.

Figure 45: Changing the settings of the electronic equipment - comparison

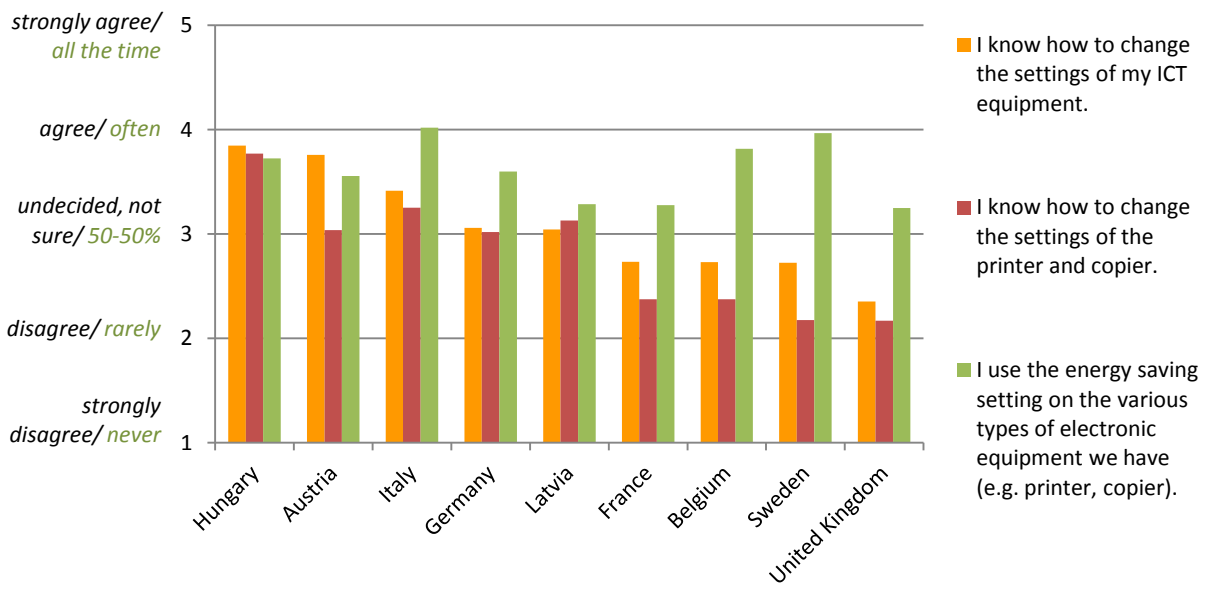
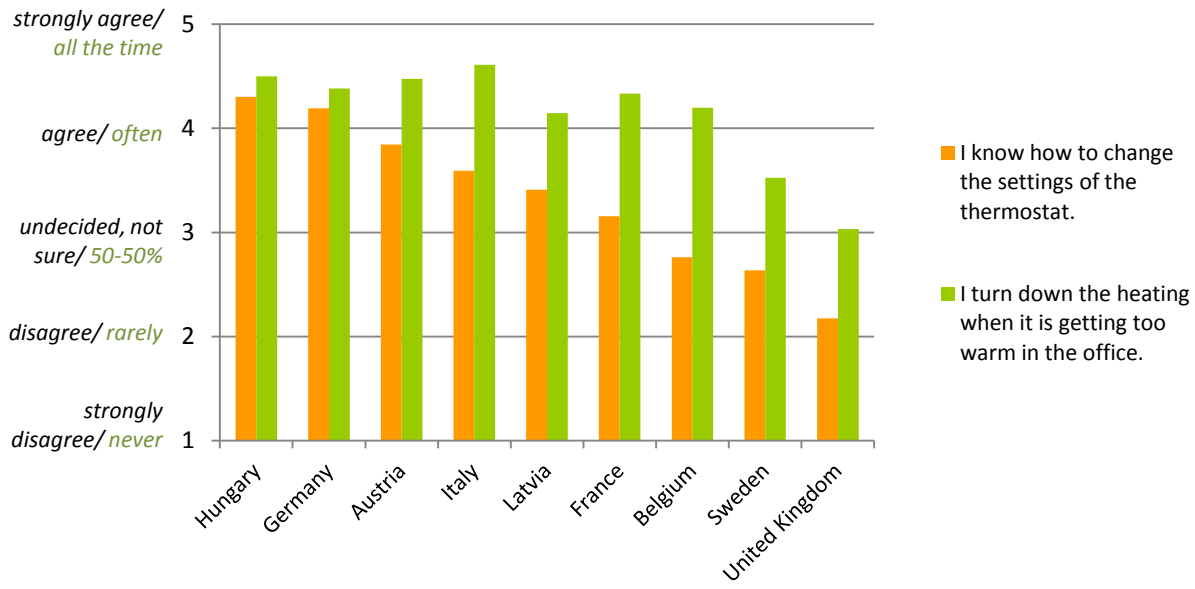


Figure 46: Changing the settings of the thermostat - comparison



Based on the comparisons no apparent relation is visible between whether people know how to do a certain energy saving practice and whether they do it regularly. While some relationship can be observed in case of the thermostat, regarding the use of the energy saving settings on the various electronic office equipment there are many divergent results, e.g. while knowledge on these settings was one of the lowest in Sweden, respondents there are the second most likely to use them regularly. The ratio of 'not relevant/ possible' answers should also be taken into account, since it is possible for example that the majority of employees know very well how to do an energy saving

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action but it is centrally controlled. Or the opposite is true, they do not know for instance how to use set energy saving features but it is already set automatically by the IT department, so as a result they use them, etc. All in all, results indicate that **knowing how to do the energy saving practices is imperative, but there are other important factors as well at play, affecting how regularly these practices are carried out**. It might be useful to further investigate the reasons for the differences between knowledge and implementation. Employees should be trained well in case of those basic energy saving practices where knowledge seems to lag well behind.

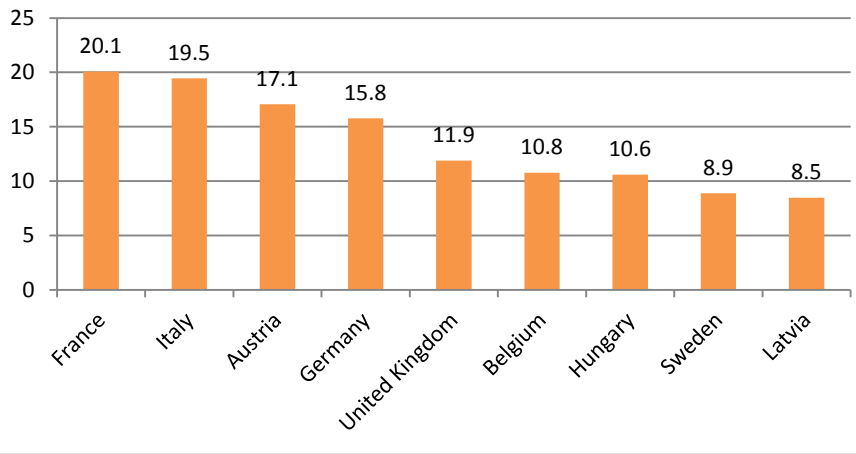
4.4 Difference between how respondents see themselves and their colleagues

Looking at Figure 17 in *Chapter 3* it could already be seen that energy saving is important for the majority of respondents in each participating country: it received a rating of 4.49 on average, where 5 means that the respondent strongly agrees with the statement 'saving energy is important for me'. However, this rating is considerably less when it comes to agreeing with the statement 'my colleagues care about saving energy', with an average value of 3.53.

When taking a glimpse at all the different energy saving practices one by one, it can also be noticed that **what respondents think that their colleagues do is almost always – apart from a few exceptions – less optimistic than what they themselves do in order to save energy**. Looking at the first two actions (Figures 21 and 23) one might be under the impression that the more likely it is for the respondent him/herself to do a certain action regularly, the bigger this gap is. This argument also seems to be supported by actions which are less popular on average, such as using the energy saving settings (Figure 30) or using desk lamps (Figure 27), because for these actions the gap between how the respondent views him/herself and his/her colleagues is smaller.

At the same time, in case of other actions – e.g. switching off the computers/laptops or taking the stairs instead of the elevator – such a tendency is not particularly distinct, and it rather seems like the size of the gap depends on the country and not on how frequently the respondent is carrying out a certain action. Also, having a look at Figure 36 on page 31 we can see that **France, Italy, Austria and Germany are leading in this respect, with France having the largest gap with 20.1 % between the two figures on average for all eight actions. The smallest gap is in Latvia, with 8.5 %** (Figure 47).

Figure 47: Difference between own and colleauges' energy saving practices - as seen by respondent (%)



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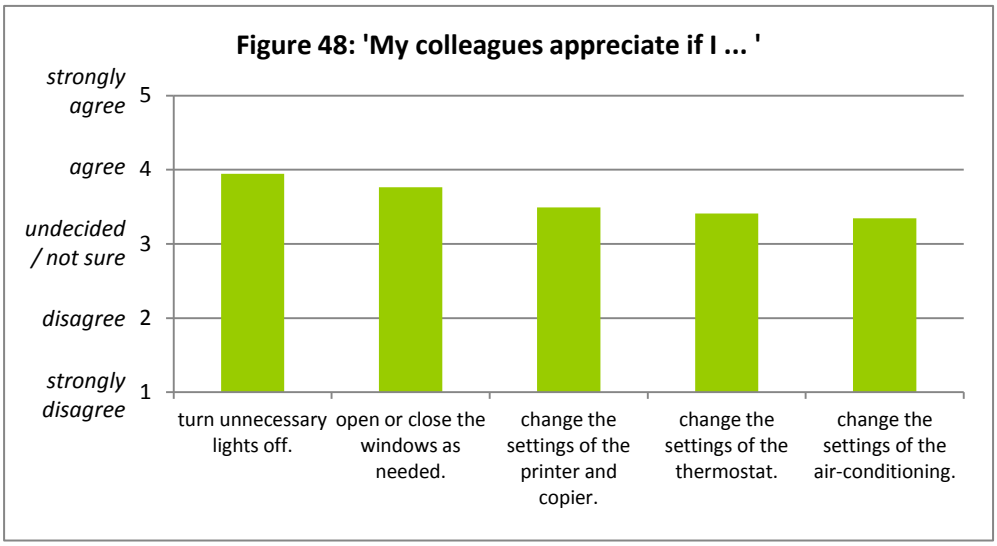
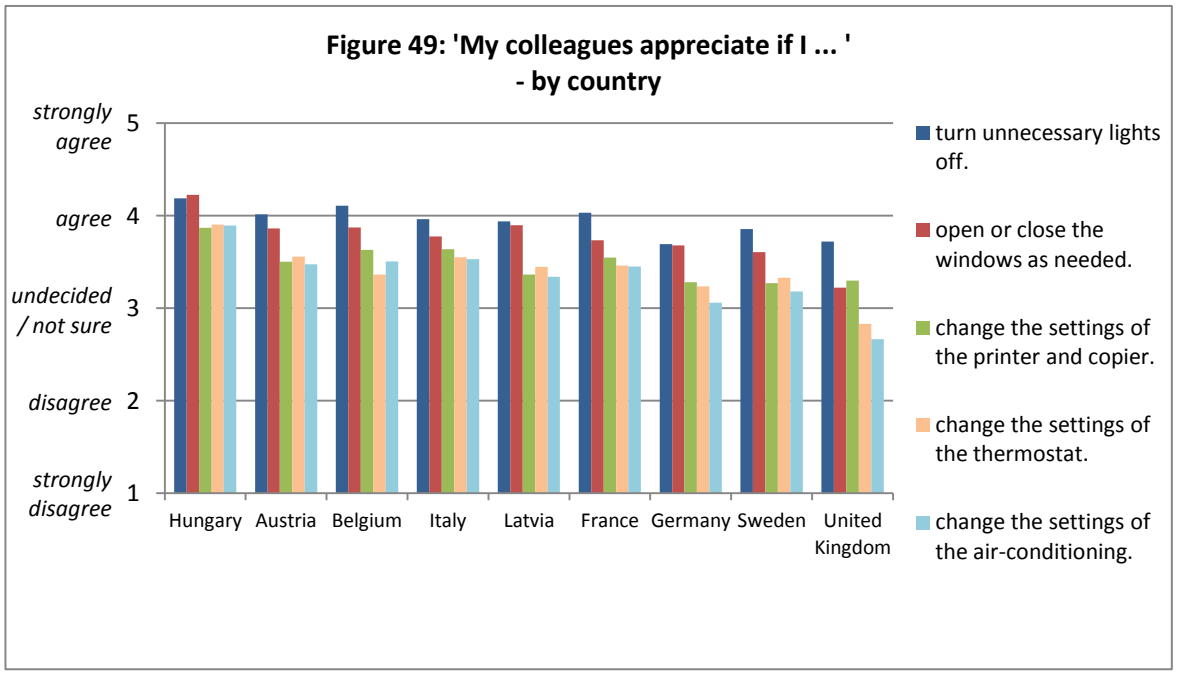
Besides, there was a question in the survey regarding five energy saving actions (see Annex I, Part 3, Question 3), asking respondents to express their agreement as to how much they think their colleagues appreciate it if they perform them (see Figure 48). The ratings are all below 4 which corresponds to 'agree', and there is no significant difference between the various types of actions, the values are scattered between 3.95 and 3.35. **The two actions which are most likely to attract colleagues' appreciation are the two easiest as well as the most visible ones**: turning unnecessary lights off and opening or closing windows as needed. The average value for all five actions in all participating countries is 3.59, that is exactly halfway between 'agree' and 'undecided / not sure', so the **doubt about whether colleagues appreciate energy saving can be detected here too**.



If we have a look at the results country by country, then we can see that the opinions differ somewhat with Hungary having the highest average rating with 4.02, and the United Kingdom is on the other end with of the graph with a average of 3.15 (Figure 49). The indifference attributed to colleagues does not seem to correlate with the size of the gap between how respondents assess themselves and their colleagues regarding the frequency of doing the listed energy saving practices, as shown in Figure 47.



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It is also our aim during the project to eliminate or at least reduce the difference between how the respondents see themselves and their colleagues. Group activities can contribute to this, moreover, if somebody feels that the colleagues are also eager to save energy, then him/herself is also more likely to engage in such actions. Different countries (and within countries different buildings) need to take this aspect into consideration when planning and implementing their save@work campaign, and put various degrees of emphasis on it, depending on the above results.

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CHAPTER 5: INITIATIVE TAKING: MAKING CHANGES TO SAVE MORE ENERGY AND GREENING THE OFFICE

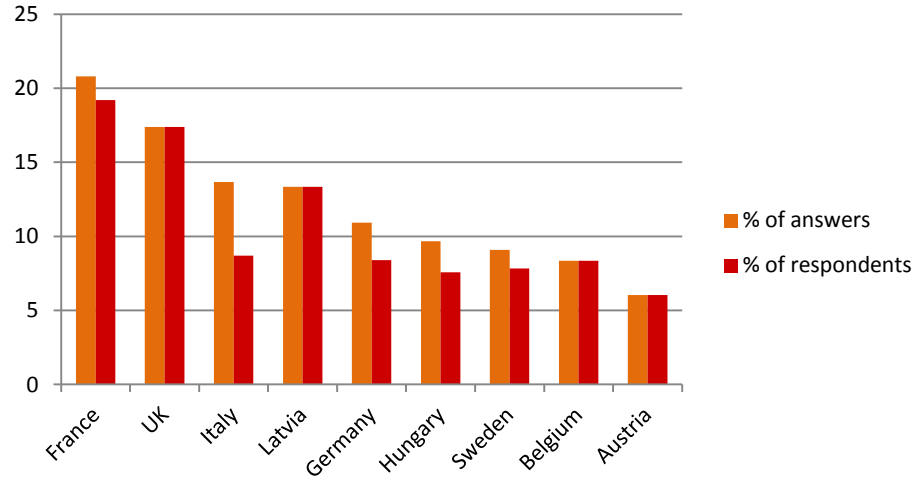
The survey contained two questions (see Annex I, Part 1, Question 4 and Part 2, Question 1) to investigate whether employees have been active in initiating change in their workplace that contributes to energy saving or more broadly to 'greening' the office.

5.1 Making changes to save more energy

The first question was right after the eight inquiries about energy saving actions (see Annex I, Part 1, Question 4). We asked respondents to list any activities they do to save energy beyond the aforementioned actions. **There were altogether 338 answers from the nine participating countries, which is 11.4 % of all the surveys filled in** (2965). Out of this, 322 answers from 274 respondents (9.2 %) were translated by partners from the national languages to English. While the 338 responses formed the basis of investigating the possible influence of gender and age, only the 322 translated answers could be analysed in terms of content. Nevertheless, we can say that about every tenth respondent performs energy saving actions in addition to the ones already listed in the survey.

From the translated answers it seems that people were most eager to answer in France, with 19.2 % of all French respondents listing additional actions, while in Austria 6 % of all respondents gave an answer to this question (Figure 50). In some countries some respondents listed more than one activity, hence the difference between the orange and red columns in Figure 50. The ratio of such respondents was the highest in Italy.

Figure 50: Proportion of additional activities – by countries



The largest proportion of answers (29.5 %) contained actions that have been already asked for earlier in Part 1, Question 1 and 2 of the survey (Figure 51). Apart from these, **respondents were most likely to mention actions related to air-conditioning and ventilation, lighting** (other than turning off the lights when nobody is in the room), **switching off electronic devices, reducing waste, heating** (other than turning down the heating when it is getting too warm in the office) **and closing the doors and windows** – each category was mentioned in at least 5 % of the answers.

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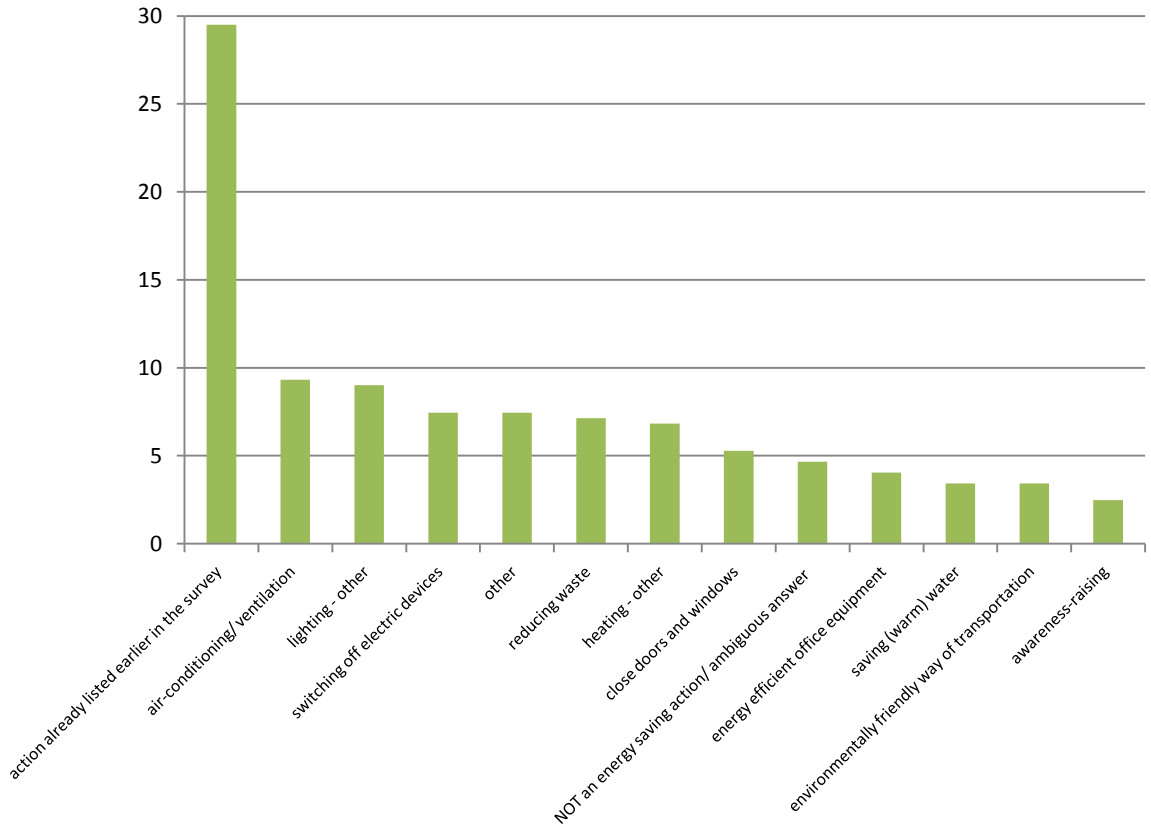
In Italy the number of people citing an energy saving action related to air-conditioning or ventilation stood out, while heating (other) was mostly mentioned in Belgium, Italy and Latvia. Besides, in Latvia answers pertaining to lighting (other) were marked, too.

Figure 51: Types of additional activities



In addition, the 338 answers from all countries were filtered to see the distribution of respondents by gender (Figure 52), age (Figure 53) and position (Figure 54)[3]. Although only small differences can be detected, it appears that **female respondents and those between the ages of 40 and 60 are more likely to initiate further energy saving actions.** The distribution of females is 7.1 % and the distribution of those between the ages of 40 and 60 is 6.1 % higher among those who answered this question than among all the respondents. This result is in line with those shown in Figure 39 and 40 in *Chapter 4.2*, which show the distribution of respondents who do all eight energy saving practices listed at the beginning of the survey 'all the time' or 'often', where the proportion of females and 40-60-year-old respondents is also higher.

[3] Technical remark to the figures following below: N/A shows the proportion of those respondents who did not answer questions on gender, age or position, because they did not complete the survey. These questions are in the survey's last section (see Annex I, Part 4), while the questions on energy saving and green initiatives are in an earlier section, Part 1 and 2.

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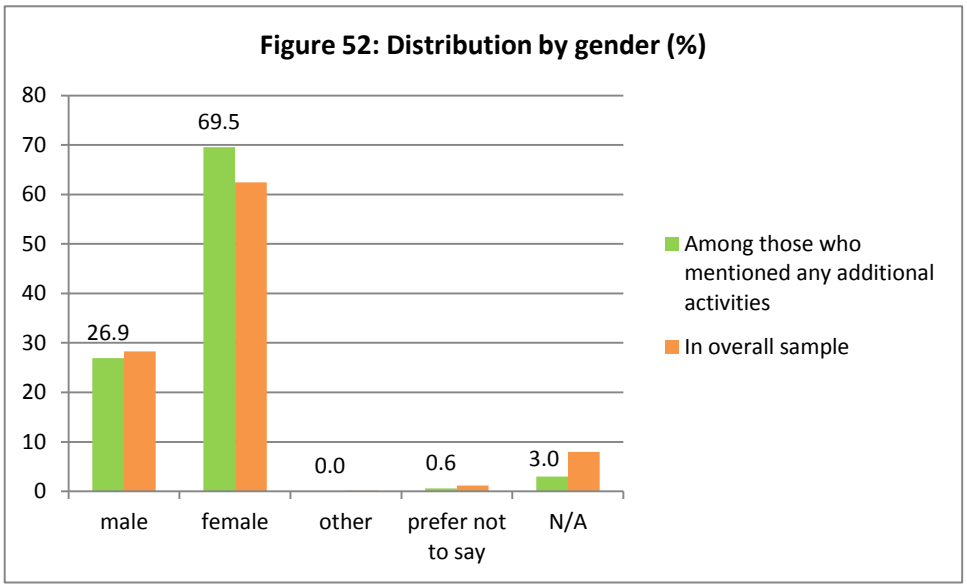

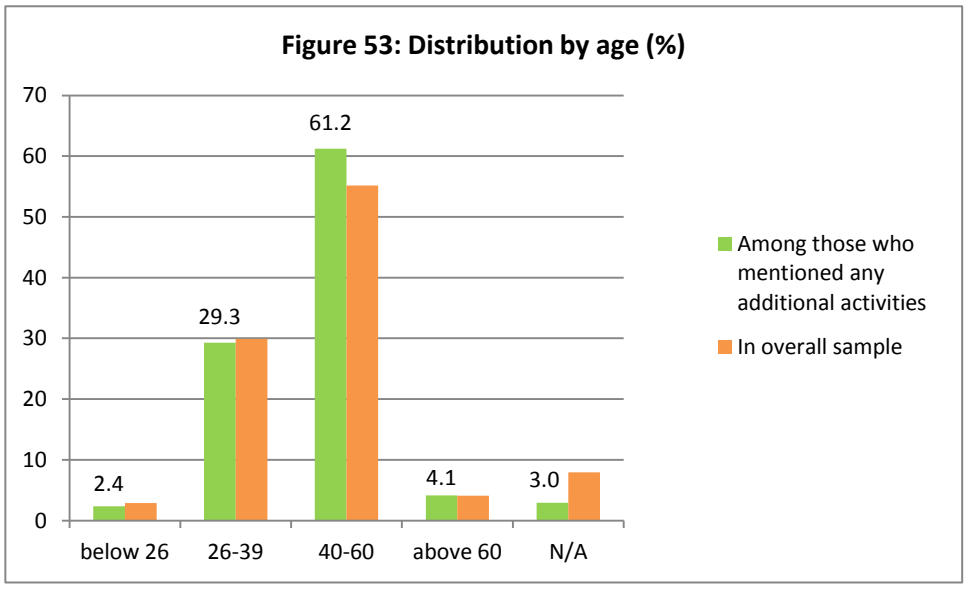

Regarding position, **respondents in middle management are slightly overrepresented** (by 2.8 %) in the sample of those people active in initiating change **in comparison to the same number in the overall sample**. Same is true for respondents in the top management, though their ratio is higher by only 0.6 %.

Finally, it is interesting to note that those who admittedly do further energy saving actions were less likely to leave the survey without completing it – this can be seen by the lower percentage of N/A replies.

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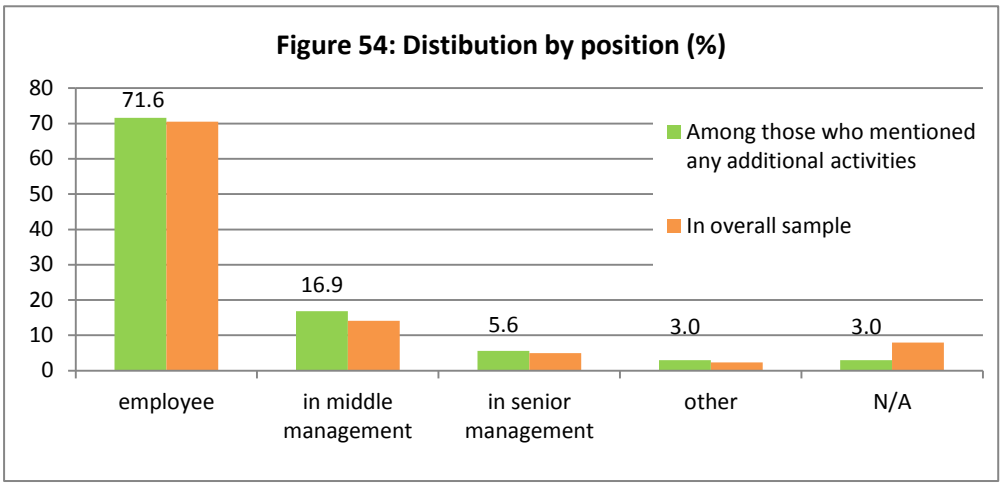
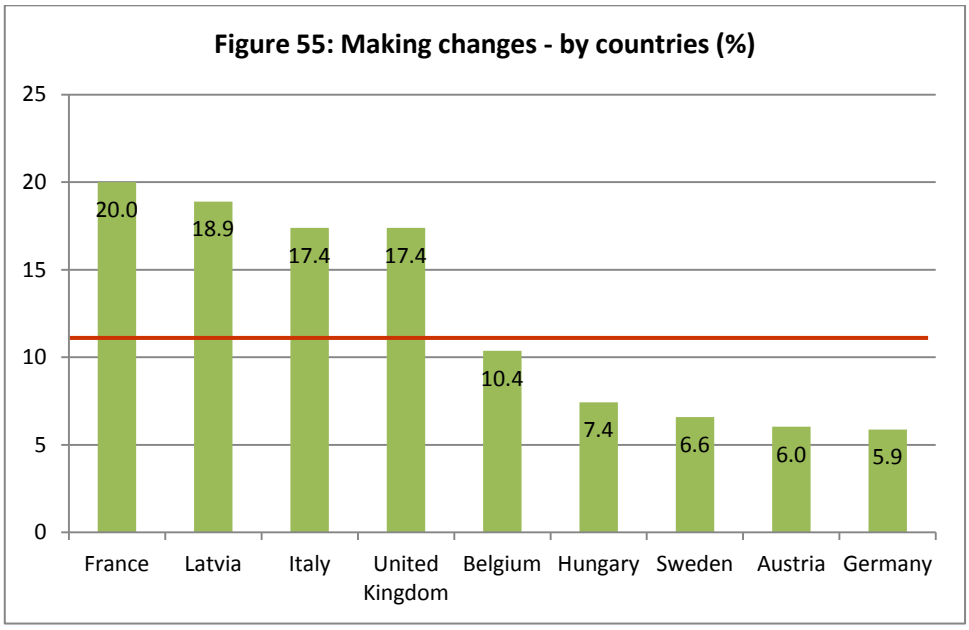


The 338 responses were also grouped according to which of the nine participating countries they originate from. We checked the ratio of those respondents who provided an answer to this question compared to all those who filled in the survey for each country (Figure 55). The red line represents the average of 11.4 %, of which France, Latvia, Italy and the United Kingdom are above. Belgium is close to the average value, while in Hungary, Sweden, Austria and Germany the proportion of those respondents who have done something beyond the listed actions to save energy and were ready to report on it in the survey is more moderate.



5.2 Greening the office

The second question enquiring about the readiness of employees to initiate environmentally positive change in their offices was put as **'Have you ever wanted to change something in the office to make it more "green" or to save energy?' Out of the 2965 respondents 1221, that is 41.2 %, selected 'yes', while 1731 or 58.4 % selected 'no' and 13 respondents did not answer this question.**

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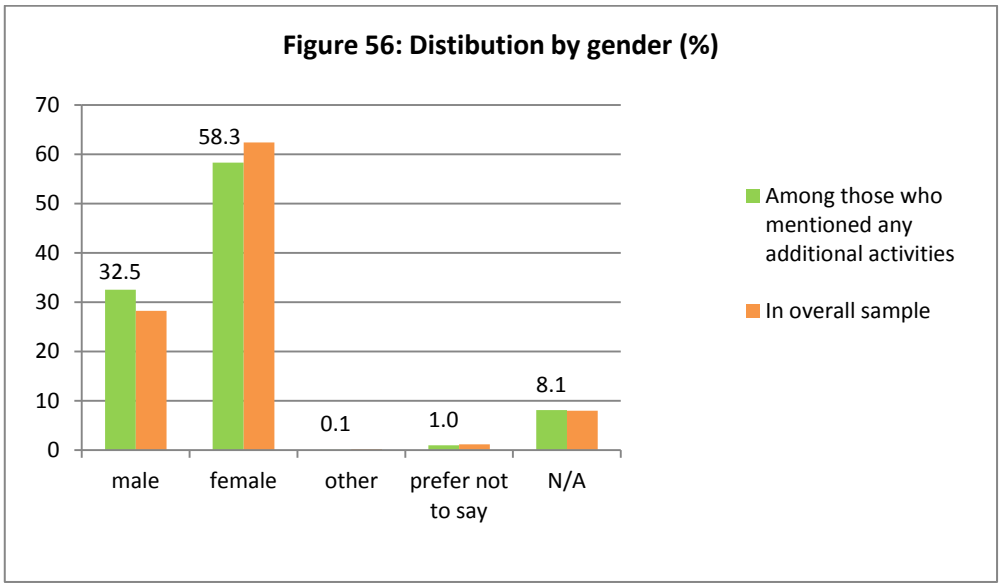
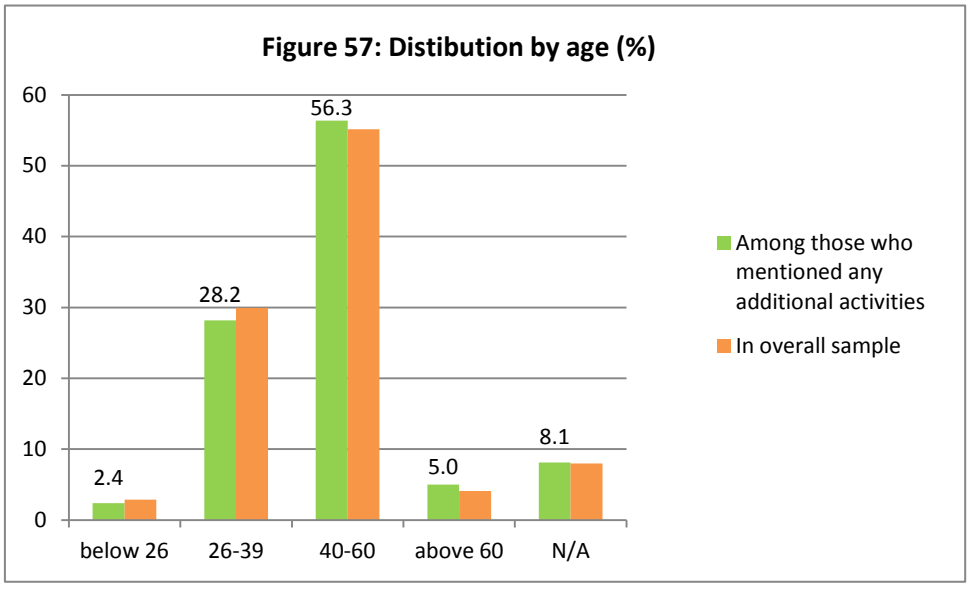
The distribution of gender, age and position for those who answered 'yes' was first analyzed. In contrast to the question on additional energy saving activities, **the ratio of male respondents was higher here by 4.2 %, while the ratio of female respondents was 4.1 % lower** (Figure 56).



The difference was no higher than 2 % in the distribution of the various age groups (Figure 57).



On the other hand, **the distribution of respondents by position shows some differences when compared to the overall sample** (Figure 58). Those who answered 'yes' to the question on initiating something green in the office are more likely to come from the middle (by 2.7 %) or the top management (by 1.7 %), and 5.0 % less likely to be employees.

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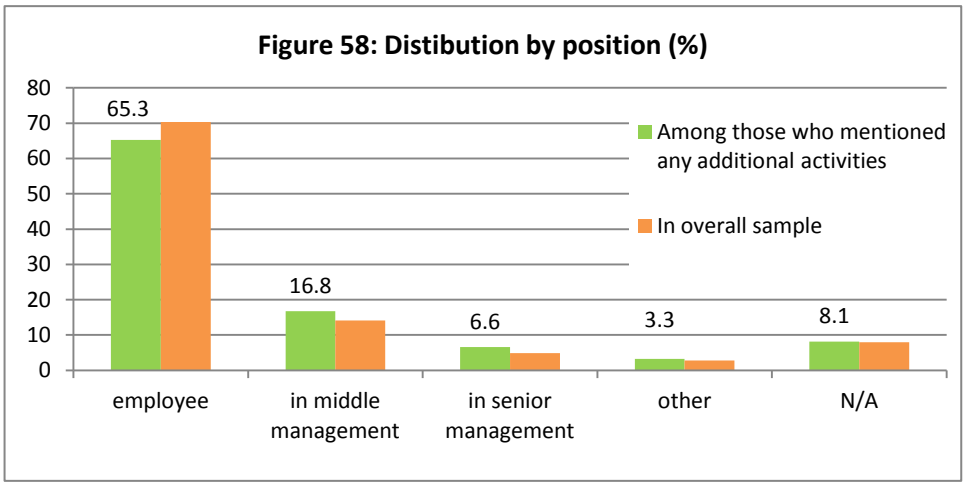
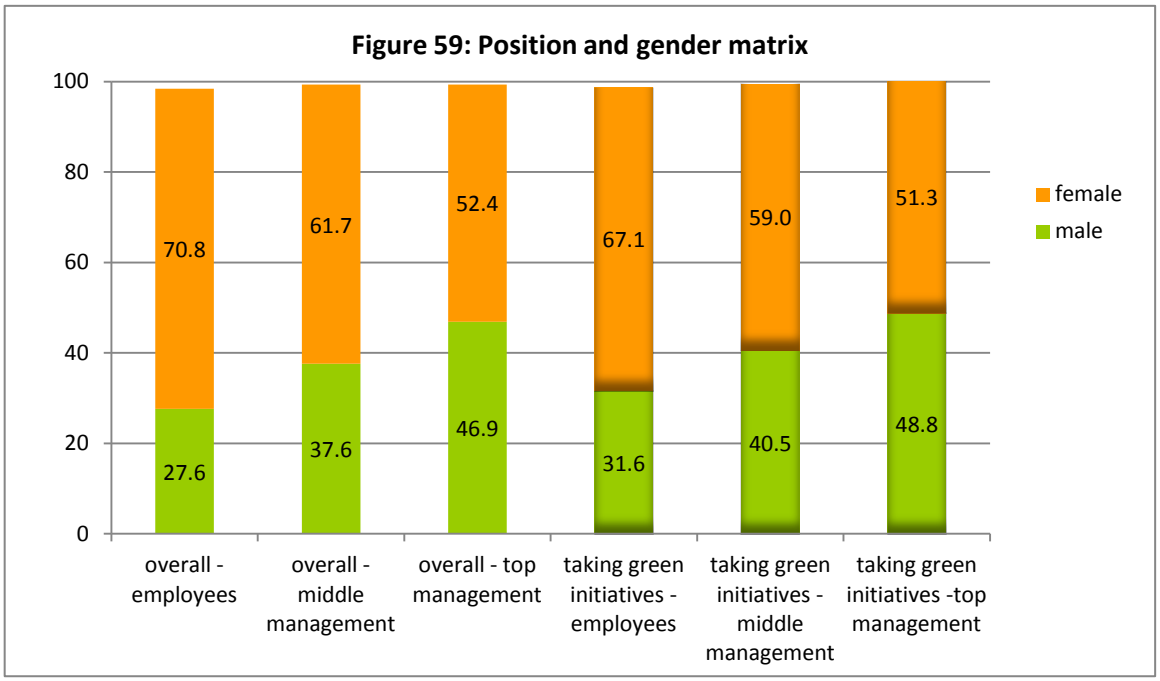


This might be the reason behind the distribution figures of gender, since while among all the respondents (2965) 28.3 % are male, in the middle management the ratio of males is higher (37.6 %) and in the top management it is as high as 46.9 %. Figure 59 shows a position and gender matrix which reveals the differences in the distribution of gender depending on the various position categories, within the overall survey sample (see the 3 columns on the left of the figure) and among those who initiated something green in the office (see the 3 columns on the right). This explains why respondents from the middle and top management are more likely to initiate change also when it comes to environmental issues.



Respondents were also asked what the desired change exactly was. Out of the 1221 respondents as many as 1005 responded to this optional question (see Annex I, Part 2, Question 2), providing 1052 answers. Half of the respondents (50.4 %) answered this question in France and 8.7 % responded in Italy. Interestingly, these – at the two ends of the figure – are the countries where the ratio of more answers per respondent was highest (Figure 60).

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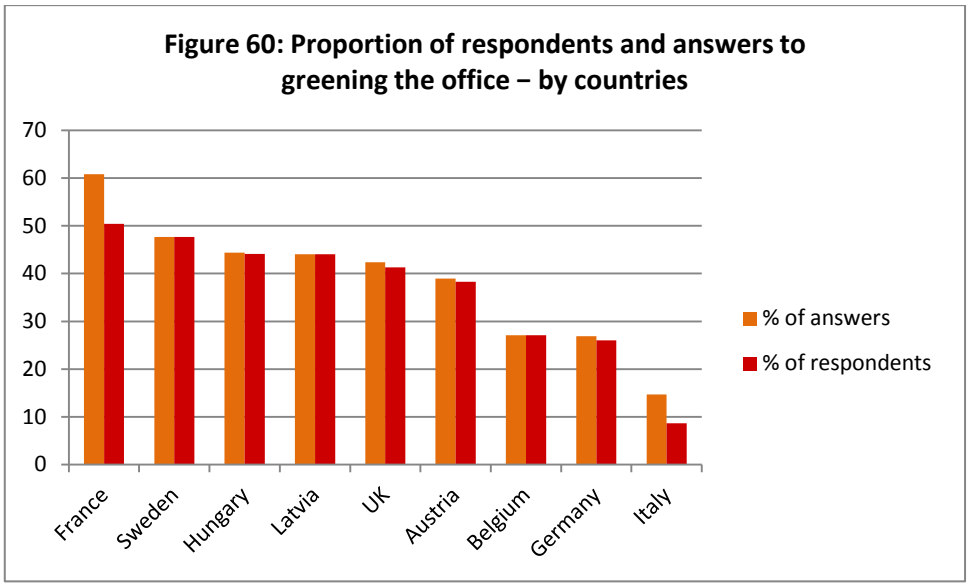
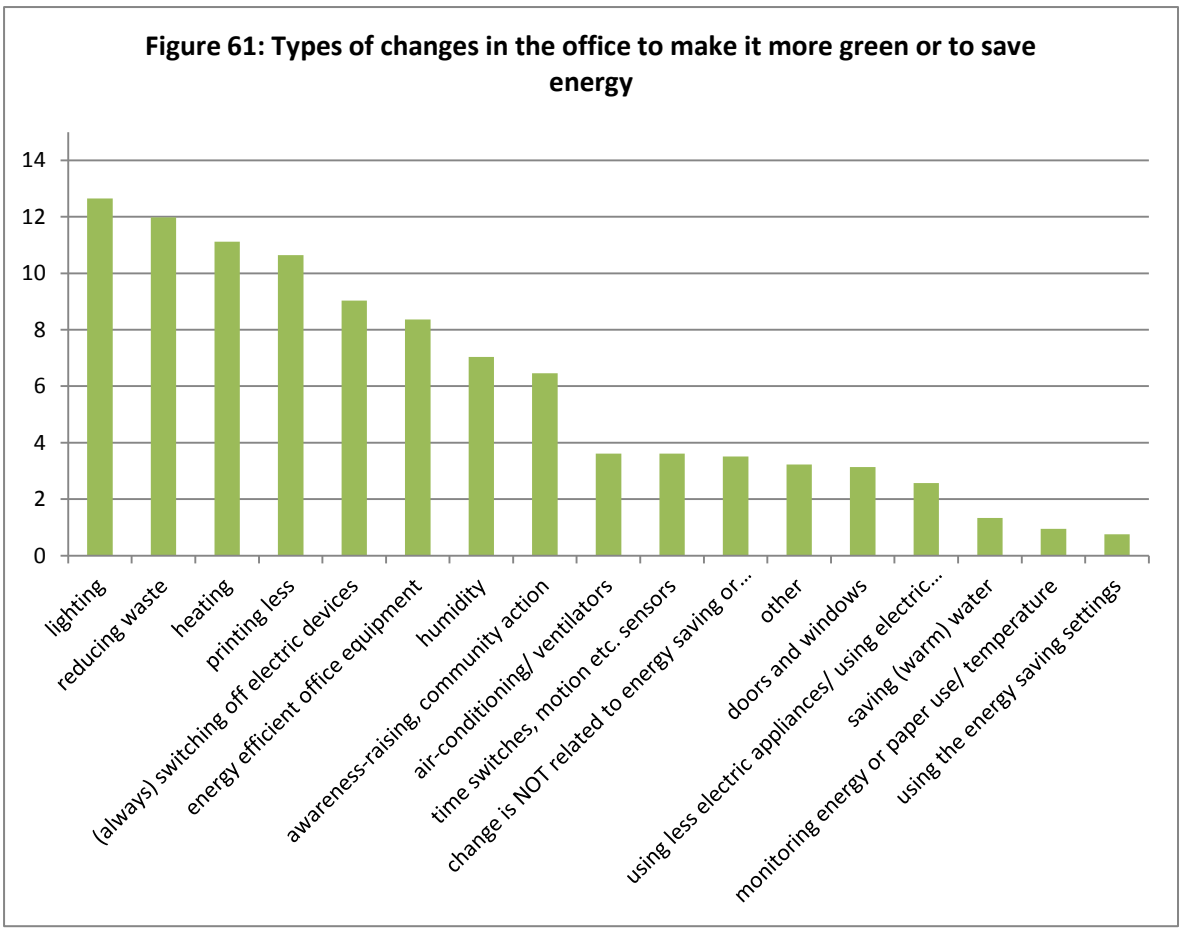


Some of the answers were similar to the ones provided for the question on any additional activities to save energy in the office. Therefore **answers related to lighting, reducing waste, heating, switching off electric devices were** also **popular choices** here, as well as **printing less, purchasing energy efficient office equipment, and activities related to increasing humidity** (i.e. introducing more plants) **and awareness-raising** – all between 12.6 and 6.5 % (Figure 61). Reducing waste was mentioned by especially many respondents in Sweden and Hungary, printing less in Hungary, awareness-raising and community action along with (always) switching off electric devices was important in Belgium.



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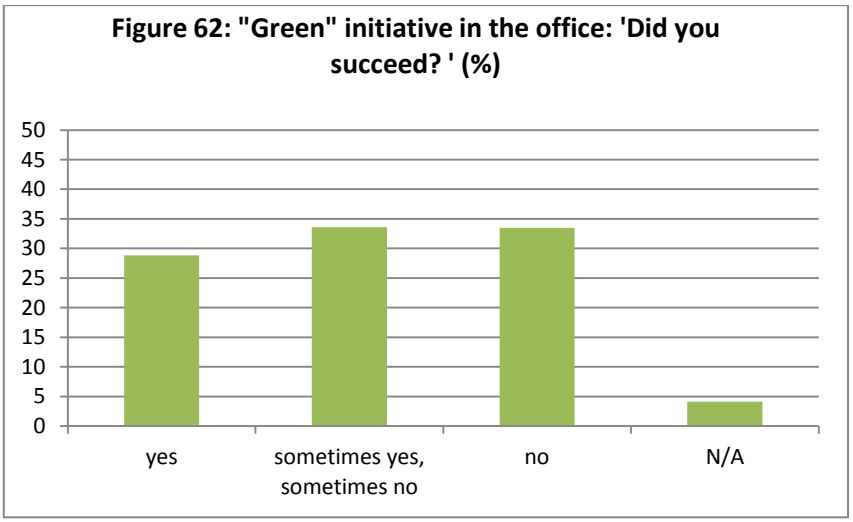
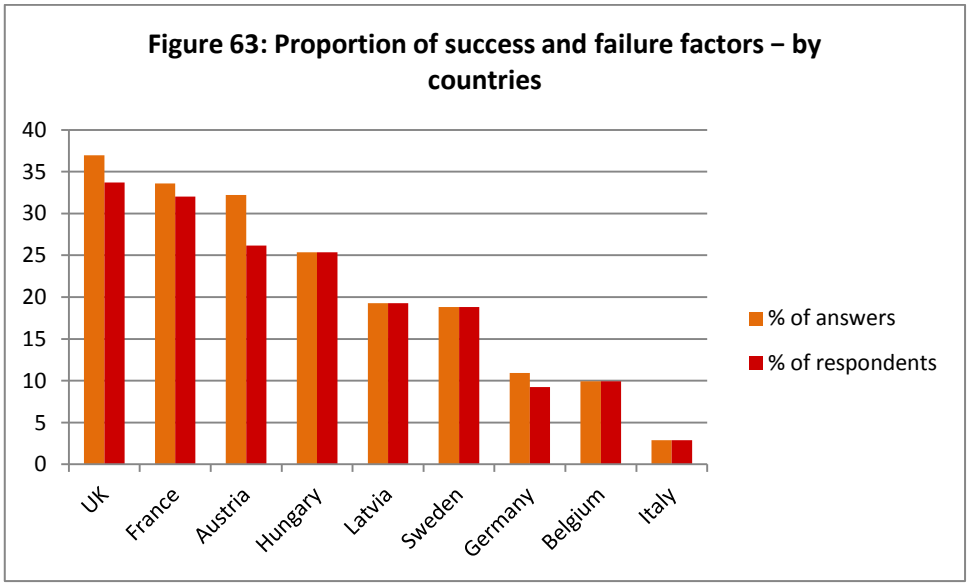
The survey also included a question on whether these green initiatives succeeded (Figure 62). Out of the 1221 respondents to this question 28.8 % replied that their initiative succeeded, 33.6 % selected 'sometimes yes, sometimes no' and 33.5 % failed in their attempt. Based on the results it seems that **the chances for succeeding or not in introducing a green initiative in the office are almost equal, with failure being slightly more likely**.



The survey also included a question on what the reason for success or failure was in the respondent's opinion (see Annex I, Part 2, Question 4). 513 different inputs from 497 respondents were translated from the national languages into English for analysis. Respondents were most likely to answer this optional question in the United Kingdom with 33.7 % of them providing information. At the same time in Italy only 2.9 % of the respondents answered (Figure 63). Austrian respondents were the most likely to provide more than one answer to this question.



When grouping the answers, the success and failure factors were analysed together. This means that, for example, if someone indicated that (s)he succeeded with making a change because (s)he could convince the colleagues, while another respondent wrote that (s)he failed to make a lasting "green" change in the office because the colleagues remained indifferent to it, then both of these answers were put into the category of "involvement of colleagues".

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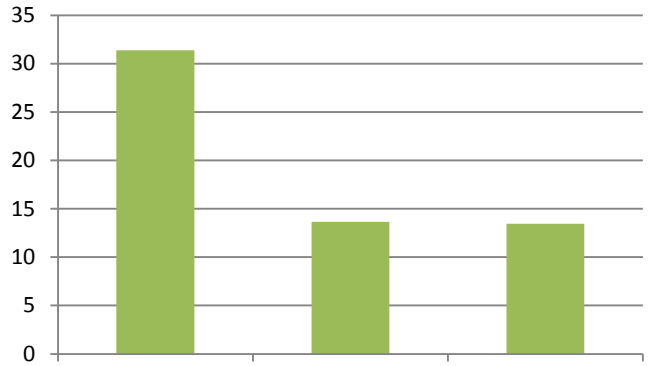
The above example, namely **the involvement of colleagues, proved to be the most decisive factor** influencing the success of change with as high as 31.4 %, or almost one third of the answers relating to it. Since the focus of save@work is energy saving by means of behaviour change, this result is in fact promising: the project aims to tackle a problem that is indeed seen by many in the participating buildings as one.

Financial and technical reasons (13.6 % and 13.5 % respectively) **were also important factors** in deciding whether a change aiming to make the office greener or to save energy would succeed or not (Figure 64). These are factors that cannot be influenced by the save@work project on a large scale, though save@work prizes for the best performing buildings, which will be related to energy saving, can make the situation somewhat better.

Figure 64: The 3 most important success and failure factors



The other reasons that we identified were indicated by below 6 % of the respondents, and include factors such as

- personal differences in needs and comfort zones etc.;
- one time efforts by individuals;
- support (or lack of support) from the management;
- regular awareness-raising;
- good communication; and/or
- organisation (Figure 65).

Again, all of these are reasons that can be influenced by behaviour change, targeted by the save@work campaign.

As for differences between the countries participating in save@work, the involvement of colleagues was emphasised by respondents especially in Hungary, and financial reasons were mentioned primarily in Austria, Latvia and Hungary. The owner-tenant problem, namely that employees in the building cannot make a change in favour of energy saving options or solutions because the owner of the office or building is an entity different from the tenant, was marked in Belgium and Sweden.

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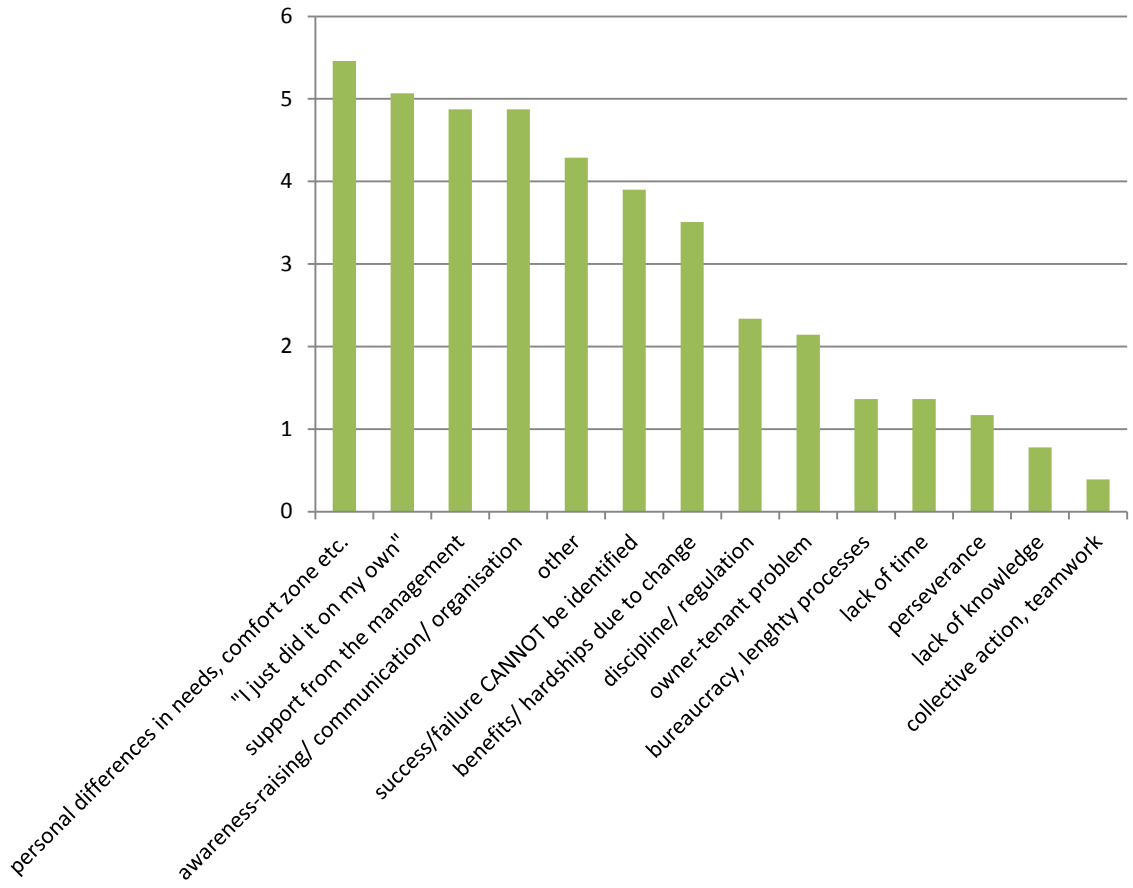
Figure 65: Categories of success and failure factors – others



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CHAPTER 6: CONCLUSIONS

The analysis of the save@work project pre-campaign surveys shows **that including and integrating such surveys into energy behaviour change and energy saving programmes can be very useful, and can contribute to adjusting the design, content and methodology of the programme to specific local circumstances** to best fit the needs of the building or municipality in question. Investigating

- the motivations for people to participate in energy saving campaigns;
- their belief in the usefulness of performing energy saving actions;
- their current practice of energy saving;
- their knowledge of how to perform energy saving actions;
- their opportunity to perform energy saving actions; and
- their willingness to initiate change

can provide very important information as to what should energy saving campaigns in specific building and municipalities build and focus on. However, in order to motivate employees to fill in such surveys, it is important to spend time on planning their content carefully, and indeed make the content relevant to them so that even filling in the survey makes sense to them and thus becomes an organic element of the programme.

To increase the reliability of information gained in such surveys, if it is possible, it is advisable to **supplement it with either the observation of employees in their daily activities and performance of energy saving actions, or with group discussion** with employees, or both. As a rather high number of employees in the save@work survey reported performing the energy saving actions with a high level of regularity, observation and group discussion could help confirm whether this is indeed the case and may, at the same time, call people's attention to the importance of the actions and increase the group spirit in relation to building an energy efficient office culture.

At the same time, it is important to note that **less than 10% of respondents reported performing all the energy saving actions simultaneously**. Thus, an important objective seems to be to **promote 'packages' of energy saving actions together**, for example, adjusting the settings of all office equipment and systems to energy efficient options, etc. To increase the practice of performing as many energy saving actions as possible by all employees, those who engage in more than one regularly should be rewarded. This should be possible and should make sense to most employees as based on the survey **most respondents believe in the usefulness of performing energy saving actions**. Thus, campaigns do not generally need to focus on convincing people to engage in them, but rather on

- engaging in as many as possible;
- instructing them in how exactly to perform the activities correctly; and
- strengthening the group spirit in terms of performing energy saving actions in order to reduce the difference between how people perceive their own and their colleagues' action.

It appears that a **strong and clear communication** of "saving energy is important for us as we are aiming to be an energy efficient office that sets the example for others" would be beneficial for all the buildings participating in the save@work programme.

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Furthermore, in addition to emphasizing the need for performing several energy saving actions simultaneously and regularly, most employees also seem to be **ready for learning about less usual energy saving opportunities** related to, for example, commuting, eating and drinking in the office, creating a personalized and energy efficient office space (e.g. with the use of plants, personal items, e.g. leg warmers for those experiencing cold), etc.

Finally, although a great many employees participate in save@work because they would like to learn more about energy saving and environmental issues, taking part in something positive also seems to be important and could be built on in the campaigns. At the same time, the fact that 'my boss asked me to join' was also found to be an important reason for participation, it is important not to forget the important **role of management in facilitating energy efficient behaviour** in the office. Furthermore, as people's motivation to participate varies, when planning campaigns this should be kept in mind so that the interest and needs of a wide variety of employees will be catered for, so as many as possible will be reached and motivated to engage in energy saving actions.

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ANNEX I. Save@Work - Pre-campaign survey

Final 15th January 2015

Dear Save@Work Participants,

Thank you for coming to this page to complete the pre-campaign survey!

It should not take long, only about 5-7 minutes of your time. However, it is very useful for us, the organizers of the campaign in the different countries, because it will help us:

- learn about the situation of energy saving in the different participating buildings;
- see whether there are any differences in energy saving practices between the participating 9 countries; and
- assist you better during the campaign.
- Finally, as there will be a similar short survey at the end of the campaign, we will be able to see how much change we have managed to achieve together.

Once we have analyzed the surveys, we will be able to share the results with you.

So, as Save@Work is about how we use energy in our offices, in this survey we ask you some questions about how you and your colleagues use energy and what kind of related practices you have. Don't worry, you do not need to be an expert to answer the questions, even if you have never thought about saving energy through your everyday actions (e.g. turning lights on and off), you will be able to fill in everything.

The questions with a red * need to be answered by everyone, the others are optional.

Finally, we would like to assure you that this questionnaire is anonymous. Furthermore, we are storing and using all the data according to current European and national (please add your nationality here) data protection legislation, and we will not share it with any third parties.

If you have any questions about the survey or data protection, please write to us at XXX@XXX. (please add an email at your organization

Thank you for taking part in the Save@Work campaign and filling in this survey!

NAME OF DIRECTOR, ETC.

to increase the credibility and transparency of the survey process, we suggest including the name of the local project manager or the director etc. of your organization here

NAME OF NATIONAL PARTNER

please add the name of your organization

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Part 1

*** 1. Please say how often you and your colleagues do the following activities at work.**

	Never	*Rarely*	*Sometimes yes, sometimes not (50-50%)*	*Often*	*All the time*	*Not relevant / not possible*
1. I turn off the lights when nobody is in the room.						
I think that most of my colleagues at the office do this.						
2. I completely turn off the computer/laptop when I'm not in the office (i.e. I don't leave it on stand-by for the night or the weekends).						
I think that most of my colleagues at the office do this.						
3. I take the stairs instead of the elevator.						
I think that most of my colleagues at the office do this.						
4. I use local lights instead of the central lights if it's just me in the room.						
I think that most of my colleagues at the office do this.						

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*** 2. Please say how often you and your colleagues do the following activities at work.**

	Never	*Rarely*	*Sometimes yes, sometimes not (50-50%)*	*Often*	*All the time*	*Not relevant / not possible*
5. I minimize printing.						
I think that most of my colleagues at the office do this.						
6. I use the energy saving setting on the various types of electronic equipment we have (e.g. printer, copier).						
I think that most of my colleagues at the office do this.						
7. I boil just the correct amount of water for hot drinks.						
I think that most of my colleagues at the office do this.						
8. I turn down the heating when it is getting too warm in the office.						
I think that most of my colleagues at the office do this.						

3. Please share with us any comments that you have about the questions above.

4. Please share with us any additional activities that you do at work in order to save energy.

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Part 2

*** 1. Have you ever wanted to change something in the office to make it more "green" or to save energy?**

☐ Yes ☐ No

*** *2. (If yes:)* What was it?**

*** *3. (If yes for 1.)* Did you succeed?**

☐ Yes ☐ No ☐ Sometimes yes, sometimes no

4. If you like, please share with us briefly what you think the reason for your success/failure was.

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Part 3 - Please evaluate to what extent the following statements are relevant for your situation.

* 1. I believe that it is a good thing to save energy by

	Strongly disagree	*Disagree*	*Undecided / not sure*	*Agree*	*Strongly agree*	*Not relevant / not possible*
- turning unnecessary lights off						
- changing the settings of my ICT *(information and communications technology)* equipment						
-changing the settings of the printer and copier						
- changing the settings of the air-conditioning						
- changing the settings of the thermostat						
- opening or closing the windows as relevant						

* 2. I know how to do the following in order to save energy:

*(You can choose from one side of the scale of **Strongly disagree** = 'I have no idea', and the other end of the scale of **Strongly agree** = 'I know everything about it'.)*

I know how to do the following in order to save energy:	*Strongly disagree*	*Disagree*	*Undecided /not sure*	*Agree*	*Strongly agree*	*Not relevant / not possible*
- change the settings of my ICT *(information and communications technology)* equipment						
- change the settings of the printer and copier						
- change the settings of the air-conditioning						
- change the settings of the thermostat						
- open and close the windows as relevant						

* 3. My colleagues will appreciate when I do the following in order to save energy:

	Strongly disagree	Disagree	Undecided /not sure	Agree	Strongly agree	Not relevant / not possible
- turn unnecessary lights off						
- change the settings of the printer and copier						
- change the settings of the air-conditioning						
- change the settings of the thermostat						
- open or close the windows as relevant						

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*** 4. What do you think of the following statements?**

	Strongly disagree	*Disagree*	*Undecided / not sure*	*Agree*	*Strongly agree*	*Not relevant / not possible*
Saving energy is important for me.						
Saving energy is important in our office.						
My colleagues care about saving energy.						
We are all encouraged to save energy where we can in the office.						
Our IT management actively supports energy saving.						
Our (higher) management at the office/municipality actively supports energy saving.						

5. Please share with us any comments that you have about the questions above.

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Part 4

*** 1. Please share with us why you decided to participate in the save@work programme. Choose from the list below, you can choose more than one answer.**

- My boss told me to join.
- A member of the Energy Team in my office asked me to join.
- I am a member of the Energy Team.
- It is part of my job as I'm responsible for environmental/energy/climate change related issues.
- I am interested in saving energy and other environmental issues.
- I am interested in learning about something new.
- I am interested in learning about energy saving.
- I want to be involved in something positive.
- I like to work in groups, together with others.
- I want to have some fun.
- Other, please explain briefly: _____

*** 2. Your gender:**

☐ Male

☐ Female

☐ Other

☐ I prefer not to say

*** 3. Your age:**

☐ - 25

☐ 26 - 39

☐ 40 - 60

☐ 61 -

*** 4. Your position:**

☐ I'm a general employee.

☐ I'm in middle management.

☐ I'm in top management.

☐ Other, please specify: _____

*** 5.Please select which building/office you work in:**

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DEAR PARTNERS, PLEASE LIST ALL THE PARTICIPATING BUILDINGS WHEN YOU TRANSLATE THE SURVEY ONLINE + AN OPTION FOR "OTHER" - IN CASE WE HAVE SOMEONE JUST BEING INTERESTED IN THE SURVEY.

- Building 1
- Building 2
- etc
-
-
-
- Other (please specify): _____

6. Please share with us any comments you have about this survey.

7. Please share with us any comments you have about the save@work campaign.

Thank you for your cooperation!

National partner name (and email)

If you want to learn about some saving tips for the office please visit please put here the link to your national S@W webpage

If you want to test how good you are at energy saving, you can use the please put here the link to your national GREENCLICKS page

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ANNEX II. Methods and ideas for collecting as many survey responses as possible

Ideas collected by the save@work consortium members at the Graz Consortium Meeting,

Dec 2-3, 2015

- **Different ways of filling in the survey -**

  Communicate message: "we need you to make our project better!":

  - **ONLINE**, through the Survey Monkey link
    - link can be put on national website + can also appear as a pop-up reminder
    - link can be sent out to Energy Teams + by ETs to employees - but CON'T PUT 'SURVEY' IN SUBJECT!
    - link can be put on the site / internal site of municipalities
  - online, at computer specially placed in office building participating, with a note/poster reminding people to fill in
  - online, at computer specially placed at opening event
  - online, at computer specially placed at initial training
  - online, at computer specially set up in front of canteen/restaurant
  - ET members going around at workplace with a tablet
  - **ON PAPER**: *(partner's responsibility for entering data into Survey Monkey!!!)*
    - at opening event, given to all participants and collected from them when they leave
    - at initial training, given to all participants and collected at the end of training
    - by ETs, going around and distributing to people at work - ET divides employees between themselves, and approach them personally
- Partners could develop a **checklist for the local Energy Teams** (ETs) for the start of the project:
  - things that need to be done at the beginning
  - things that need to be communicated at the beginning

  SURVEY should be part of both of these lists!
- filling in the survey should be **part of the action plan** developed by the Energy Teams
  - the **action plan template** should include a reference to the survey, a reminder that it should be done
- **communicate importance of survey to working group**
- **set 'number of surveys filled in' targets for buildings/municipalities -** communicate this through the working group
- **numbers of surveys filled in could become part of the 'best campaign' criteria**

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