D2.4 First monitoring report

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1. Introduction

START2ACT aims to reduce residential energy consumption in the EU via changing the behaviour of consumers in their everyday lives by approaching them at their workplace. With a focus on European startups and young SMEs, the project aims at triggering action by young entrepreneurs and their emerging enterprises as well as by the owners and staff of young SMEs to introduce energy efficiency measures within their daily routines. Even though each startup and SME consumes relatively small energy amounts, the collective environmental impact of 20 million SMEs in the EU is massive, contributing to 64% of environmental impact. Active engagement of startups and young SMEs is essential in order to reach the 2030 Energy Strategy and there is market potential for almost all enterprises to cost effectively reduce their energy consumption.

The young SMEs that are approached in the START2ACT project have a maximum of 50 employees and have been operating for no longer than 5 years. Startups are defined as independent, unlisted, innovative, tech enabled, scalable enterprises designed by intent from day one to become a large company — by either disrupting an existing market and taking customers from existing companies or by creating a new market — aiming to provide significant returns to their founders and investors using all available outside resources.[1]

An important part of the START2ACT approach is to facilitate behavioural change by understanding the motivations, attitudes and knowledge levels of managers and employees of young SMEs and startups. These are monitored longitudinally so that the impact of training and mentoring programmes over time can be evaluated.

The aim of this report within Work package 2 (WP2) is to discuss the first survey results of the monitoring activities in START2ACT. First, in Chapter 1 the theoretical model is briefly introduced (more details can be found in report D2.1 Baseline Assessment Report). Chapter 2 provides a short recap of the methodology of the monitoring survey and information about the sample. Chapter 3 provides the survey results and in Chapter 4 preliminary conclusions and recommendations are made. Finally, the appendix shows the questionnaire.

1.1 Energy efficient behaviour

Energy efficient behaviour depends on many factors. Two widely applied theoretical frameworks for explaining behaviour and behaviour change are the Theory of Planned Behaviour (TPB) and the Value-Belief-Norm theory (VBN).[2] These theories have also been applied to energy efficiency.[3,4] The model we describe integrates aspects from both theories applied to energy efficiency. The model is displayed in Figure 1.1 and was taken as a starting point for developing the surveys in START2ACT. The model is explained in more detail in report D2.1. Below a short summary of the model is presented.

On the right side of the model the 'desired' **behaviour** – conserving energy – is displayed. Within START2ACT, energy efficient behaviour applies to both behaving energy efficiently in the office, during work time, and the potential spill-over of energy efficient behaviour at home.

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[1] Definition from Startups Belgium.
[2] Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In Action control (pp. 11-39). Springer Berlin Heidelberg.
[3] Abrahamse, W., & Steg, L. (2011). Factors related to household energy use and intention to reduce it: The role of psychological and socio-demographic variables. Human Ecology Review, 18(1), 30-40.
[4] Dixon, G. N., Deline, M. B., McComas, K., Chambliss, L., & Hoffmann, M. (2015). Saving energy at the workplace: The salience of behavioral antecedents and sense of community. Energy Research & Social Science, 6, 121-127.
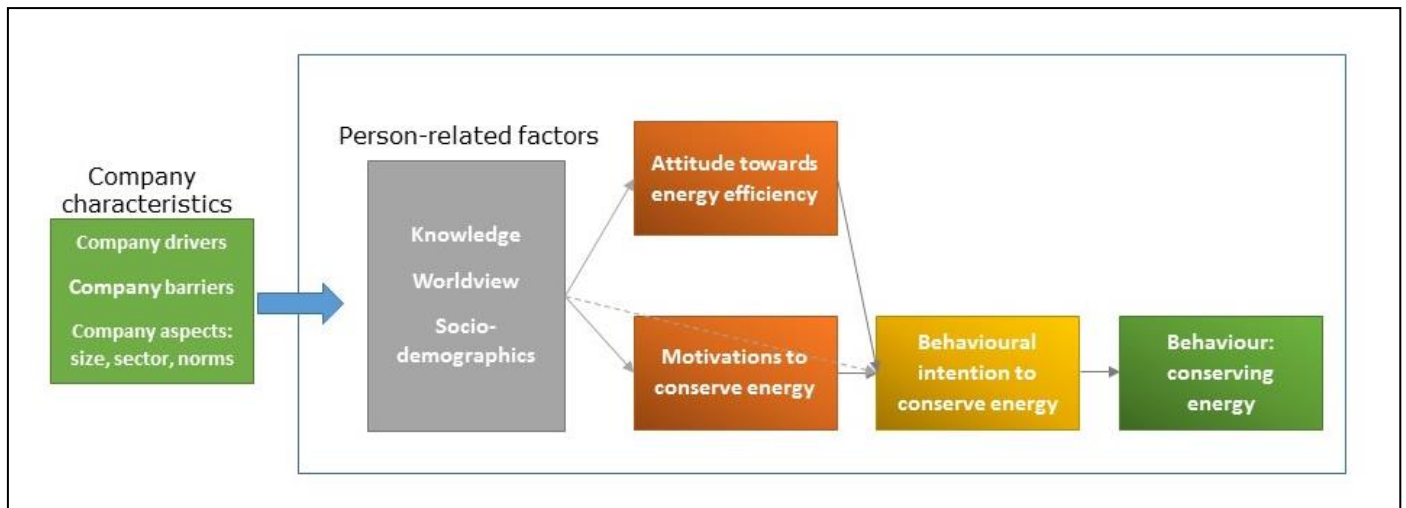
Figure 1.1: Model to explain energy efficiency behaviour – or the lack thereof (based on TPB)

Behavioural intentions can be seen as the closest predictor to perform the behaviour. Behavioural intentions are an indication of the extent to which people are willing to perform the behaviour (in the future). In the current study, information on energy usage is collected, self-reported behaviour and future behavioural intentions.

Behavioural intentions are in turn influenced by **attitudes** and **motivations** to conserve energy. Attitudes refer to the degree to which a person has a favourable or unfavourable evaluation towards energy efficiency. Motivations refer to the degree to which a person is motivated to perform energy efficient behaviour.

Furthermore, attitudes, motivations and behaviour are influenced by **person-related factors**, such as:

- knowledge about (the importance of) energy efficiency;
- worldview: general values such as environmental concern;
- socio-demographics (such as age, gender).

In the current context of behaviour change among employees of startups and SMEs it is also of key importance to take into account **company characteristics**, such as company drivers, barriers, company size and norms.

2. Method

Startups were invited to a mentoring workshop. At the end of the workshop, they participated in the survey. For SMEs the monitoring surveys were administered on a periodic basis among employees who are engaged in the START2ACT trainings. For SMEs there were three training sessions and four short surveys. The first survey took place prior to the first training and provides a baseline of the target group to which the follow-up surveys can be compared. The first monitoring survey took place after the first training, the second monitoring survey after the second training, and the third monitoring survey after the third training (see figure 2.1). A large part of the surveys overlapped so that longitudinal comparisons can be made to investigate whether the attitudes and behaviour of respondents change over time.
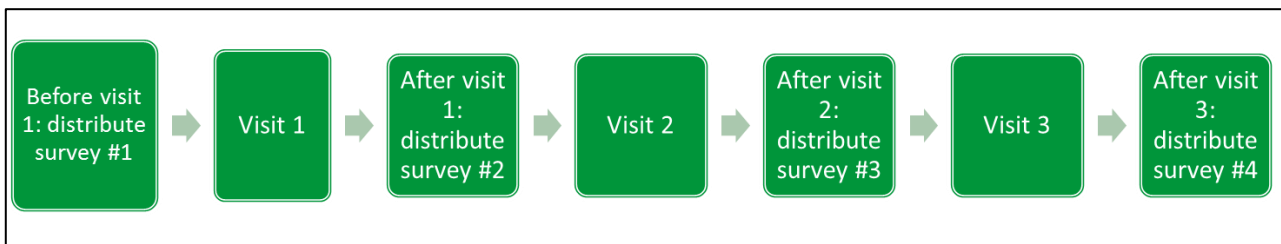

Figure 2.1: Survey flow SMEs

2.1 Survey topics

The survey consisted of questions regarding personal motivations, attitudes, current behaviour and future behavioural intentions at home and at work. Furthermore, some company characteristics and socio-demographics were measured. In the SME survey, company motivations and hard indicators (such as actual energy usage as provided on energy bills) were also measured, where possible. Finally, in the monitoring surveys, which took place after each training session, the training was evaluated. Table 2.1 provides an overview of survey topics per survey, which we will shortly explain below.

Table 2.1: Survey topics

Survey	Topics
Survey for startups	Personal motivations, attitudes, current behaviour and behavioural intentions at home and at work, company characteristics and socio-demographics + workshop evaluation
SME Baseline survey target group	Company motivations, personal motivations, attitudes, subjective knowledge, current behaviour and behavioural intentions at home and at work, hard indicators, company characteristics and socio-demographics
SME First monitoring survey	Baseline + training evaluation (effectiveness)
SME Second monitoring survey	Baseline + training evaluation (effectiveness)
SME Third monitoring survey	Baseline + training evaluation (effectiveness)

Note. Company motivations and hard indicators are not measured in the survey for startups but are added in the SME baseline survey.

Introduction

The questionnaire started with a general introduction of the START2ACT project, explaining the aim of START2ACT. Also, respondents were explicitly asked for their informed consent.

Company motivations regarding energy efficiency (SME only)

We asked questions about the reasons that would motivate the company to save energy, the drivers to conserve energy (cost reductions, contributing to the fight against climate change, etc.).

Personal motivations and knowledge regarding energy efficiency

This part of the questionnaire asked about the personal motivations and knowledge toward energy conservation. For instance, whether respondents consider it important to help the company conserve energy and how well informed they are on saving energy.

Current behaviour and future behavioural intentions at home and at work

We measured the current energy saving behaviour at home and at work by asking questions related to energy saving actions, such as switching off a computer when being finished for the day or switching off lights when leaving a room. We also measured the likelihood that the respondent will take more actions to conserve energy at work and at home in the next few months.

Hard indicators (SME only)

(Energy) managers of SMEs were asked to provide information on their energy consumption (i.e. electricity (kWh), gas (kWh), oil (litres), others (e.g. biomass, coal)).

Company characteristics

We asked background questions regarding the company in terms of size, operation time, and office type.

Socio-demographics

Age, gender, and education level were measured.

Training evaluation

Respondents evaluated the training by indicating whether the training provided them with useful and new insights and whether they will change their behaviour because of what they have learned in the training(s).

All items were measured on 5-point scales. Appendix A provides an overview of the survey questions. For a full overview of the survey methodology, we refer to our previous reports "D2.1. Baseline Assessment Report" and "D2.3. Monitoring methodologies".

2.2 Sample/ socio-demographic information

Data collection took place between May 2017 and March 2018 by the local partners. In the SME surveys, in total 169 respondents participated, of which 167 respondents were included in the data analysis.[5] Of these 167 responses 117 responses were collected before the first training, 32 responses after the first training, and 18 responses after the second training.[6] In the final report, when more responses have been collected in the follow-up surveys, the changes in attitudes and perceptions over time will be discussed. In the current report, the combined responses of all waves are discussed. In the startups survey 96 respondents participated and 91 were included in the data analysis.[7] Table 2.2 provides an overview of the number of responses per country. Table 2.3 provides an overview of the socio-demographic make-up of the startups and SME sample.

Table 2.2: Number of responses per country

Company	Country	Response SMEs	Response Startups
Carbon Trust	United Kingdom	24	22
Startups Belgium	Belgium	-	1
SOFENA	Bulgaria	9	13
ENVIROS	Czech	24	0
EIHP	Croatia	15	8
Geonardo	Hungary	2	5
KAPE	Poland	60	25
ENERO	Romania	34	22
SIEA	Slovakia	1	0
Total		169	96

Note. Startups Belgium is not involved in WP4 activities. The response for SMEs involves wave 1, 2, 3.

Table 2.3: Socio-demographic information

Variable	Categories	SME Percentage (N=110)[8]	Startups Percentage (N = 88)
Gender	male	60.9%	55.7%
	female	39.1%	35.2%

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[5] Due to the timing of the visits / workshops the responses for SMEs and Startups for Hungary are not included in the analysis.
[6] In the first wave 109 respondents completed the questionnaire, for the other 8 respondents no information on gender, age and education was recorded. Due to the timing of the visits / workshops the responses for SMEs and Startups for Hungary are not included in the analysis.
[7] For startups, 88 respondents completed the questionnaire.
[8] This regards wave 1 data, as only in wave 1 socio-demographic information was collected.

Variable	Categories	SME Percentage (N=110)[8]	Startups Percentage (N = 88)
	Prefer not to say		9.1%
Education level	Primary school	1.8%	1.1%
	Intermediate secondary education	1.8%	1.1%
	Higher secondary education	2.7%	2.3%
	Intermediate vocational education	2.7%	6.8%
	Higher vocational education	13.6%	6.8%
	University	73.6%	78.4%
	Prefer not to say	3.6%	3.4%
Age	18-24	4.5%	21.6%
	25-34	29.1%	38.6%
	35-44	38.2%	20.5%
	45-54	19.1%	6.8%
	54-64	3.6%	8.0%
	65 and older	2.7%	0%
	Prefer not to say	2.7%	4.5%

2.3 Company-specific information

Most SMEs in the sample have a company size of 0-10 persons (76.6%), followed by 11-25 persons (13.5%). There were only a few SMEs with a company size of 26-50 persons (5.4%) and over 50 persons (4.5%). Most SMEs had been active for less than 3 years (48.6%), followed by 3-5 years (22.5%), over 8 years (19.8%), and 5-8 years (9%). To reiterate, the criteria for the target group are: (1) SMEs with less than 50 people, (2) SMEs with less than 5 year operation time. According to an agreement with the Project Advisor 90% of the sample should meet each criteria. The first condition is met as only 4.5% of the SMEs have a company size over 50 persons. The second condition has not been met yet as 28.8% of the SMEs have an operation time longer than 5 years.

Most startups in the sample have a company size of 0-10 persons (83%), followed by 11-25 persons (8%), over 50 persons (5.7%) and 26-50 persons (3.4%). Most startups were active for less than 3 years (71.6%).

Figure 2.2 shows that for startups the largest group works from home (30%) or rents a permanent office (30%), whereas SMEs typically rent (47.2%) or own a permanent office (43.5%).
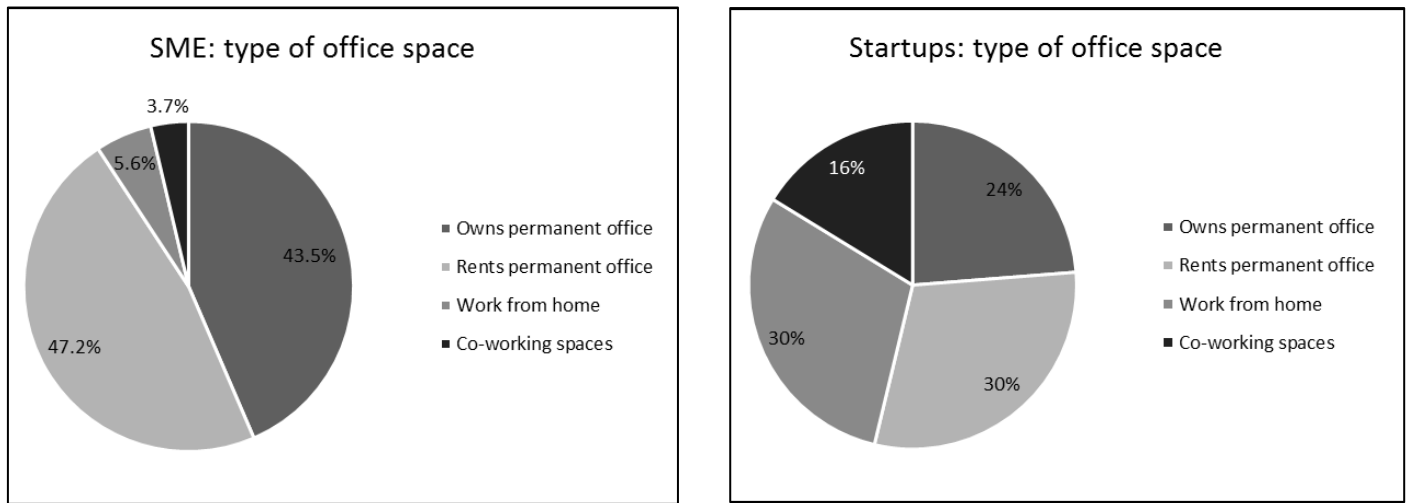
Figure 2.2: Use of office space for SME (*N* = 110)[9] and startups (*N* = 80)

3. Results

Chapter 3 provides the survey results for SMEs and startups. In the final report, when more responses have been collected in the follow-up surveys, the changes in attitudes and behaviour over time will be discussed. Also, the hard indicator data will be discussed in the final report.

3.1 Training evaluations

An important part of the survey is the evaluation of the trainings and workshops. So far, responses to the trainings have been very positive. Startups received the survey after their workshop ($N = 85$). SMEs received a second survey after the first training and then also evaluated the first training. For SMEs only some respondents received the first and second training ($N = 30$ in wave 1 and N=18 in wave 2), no respondents received the third training yet.

The respondents that received a workshop or training evaluated this as very positive. Looking at the averages, the training provided them with useful ($M_{Startups} = 4.1$; $M_{SME} = 4.8$) and new ($M_{Startups} = 3.9$; $M_{SME} = 4.8$) insights. Moreover, respondents were likely to change their behaviour because of what they had learned in the trainings ($M_{Startups} = 3.8$; $M_{SME} = 4.8$). Respondents also indicated that the training would impact their energy efficiency behaviour at work ($M_{Startups} = 3.8$; $M_{SME} = 4.7$) and at home ($M_{Startups} = 3.8$; $M_{SME} = 4.7$), see also figure 3.2.[10]
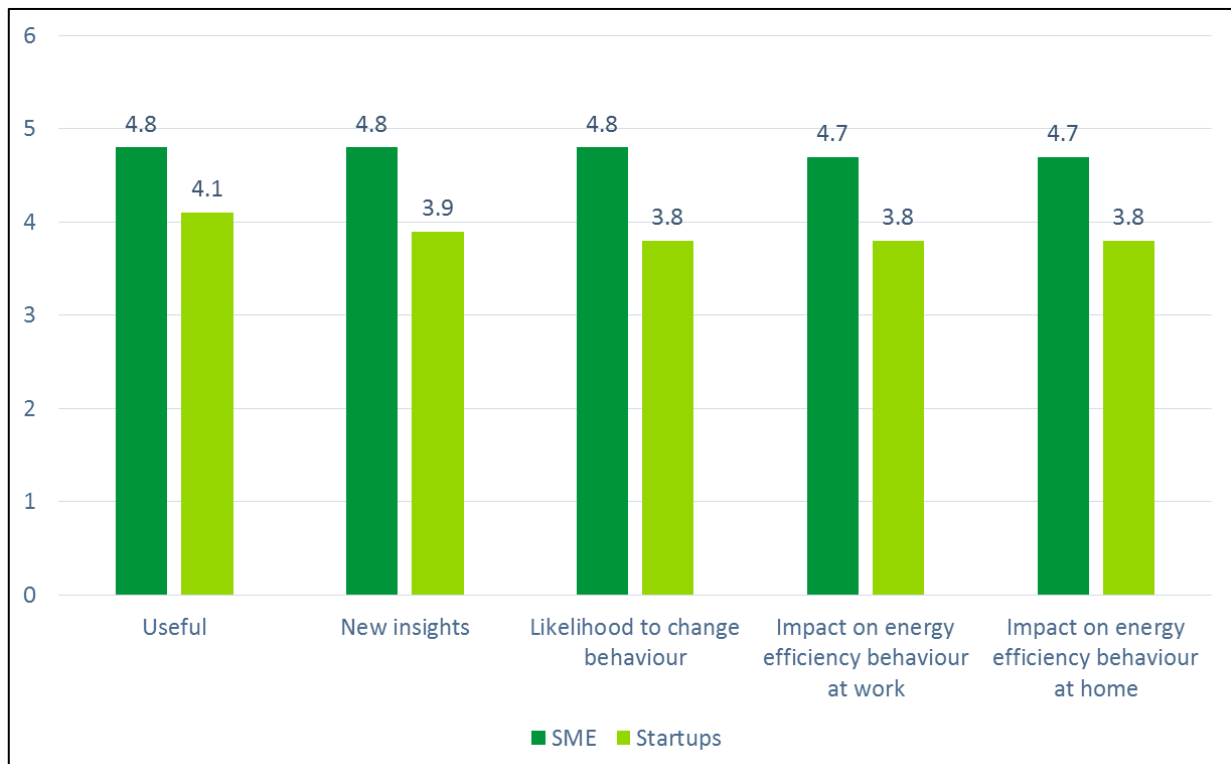

Figure 3.2: Evaluations of trainings

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[10] Averages for Wave 1 (N=30): useful ($M = 4.7$), new insights ($M = 4.7$), change behaviour ($M = 4.7$), impact energy efficiency behaviour at work ($M = 4.6$), impact energy efficiency behaviour at home ($M = 4.5$). Averages for Wave 2 (N=18): useful ($M = 4.9$), new insights ($M = 4.8$), change behaviour ($M = 4.9$), impact energy efficiency behaviour at work($M = 4.9$), impact energy efficiency behaviour at home ($M = 4.9$).

3.2 Company motivations (SME only)

Respondents working for SMEs were asked which company motivations regarding energy efficiency are the most important to them. Figure 3.1. shows that 27.8% of respondents indicate that reduction of energy bills is the company's number one motivation.[11]
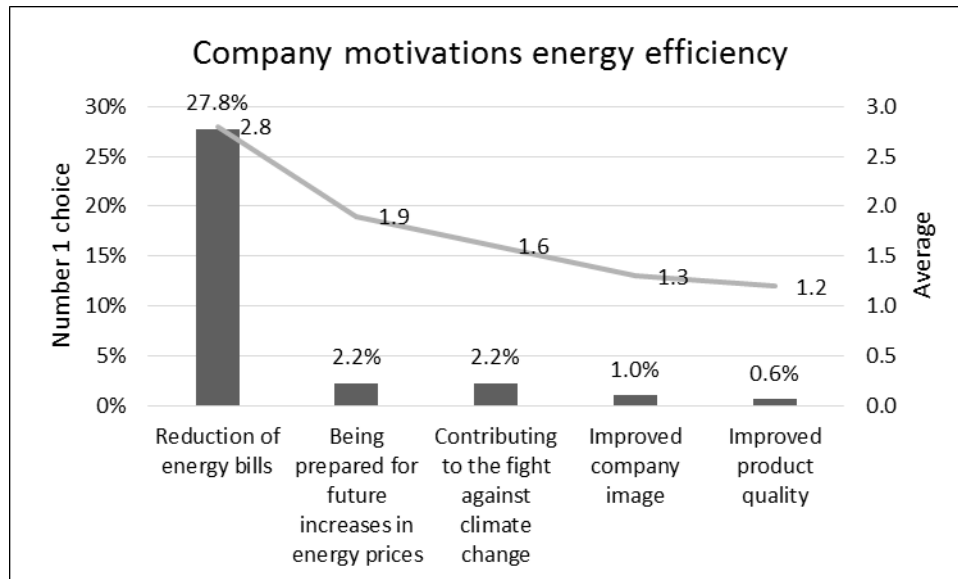

Figure 3.1: Company drivers to energy efficiency

The top three of most important company motivations for energy efficiency is (see figure 3.1):
1) reduction of energy bills;
2) being prepared for future increases in energy prices;
3) contributing to the fight against climate change.

3.3 Company attitudes, personal motivations, knowledge

Respondents were asked about attitudes towards energy efficiency in their company. These attitudes were only asked in the SME sample. An important key driver to conserve energy is the lower costs. Only 16.8% of the respondents indicate that energy saving is **not** a priority in their company and that the cost savings are **not** sufficient to justify the effort of energy efficiency (12.6%). Most respondents agree that by saving energy they can contribute to lowering the company's energy bill (74.5%), see Table 3.1.

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[11] Respondents could select a top three out of the following statements: (1) reduction of energy bills, (2) being prepared for future increases in energy prices, (3) contributing to the fight against climate change, (4) improved company image, (5) improved product quality. The percentage is computed as the frequency that the statement was selected as number one choice divided by the total frequency of the top three. In this way we take into account the relative importance in relation to the other statements.

Table 3.1: Company attitudes energy efficiency

Company attitudes energy efficiency (1= strongly disagree; 5 = strongly agree)	SMEs		
	Overall mean (*N* = 166)	(Strongly) disagree	(Strongly) agree
Energy saving is **not** a priority in my company.	2.13	65.7%	16.8%
The cost savings from energy efficiency are **not** sufficient to justify the effort.	2.27	60.8%	12.6%
By saving energy, me and my colleagues can contribute to lowering the energy bill of the company.	4.06	14.5%	74.7%

Respondents were also asked about their own attitudes and the company norm towards energy efficiency (see Table 3.2). Respondents consider it worth paying a little more for energy efficient products (84.4% for SME, and 83.2% for startups). Furthermore, respondents consider it important to help their company conserve energy (86.1% for SME, and 74.1% for startups). Also, respondents agree that it is the company norm to switch off office equipment (63.2% for SME, and 74.1% for startups).

Table 3.2: Attitudes energy efficiency

Attitudes energy efficiency (1= strongly disagree; 5 = strongly agree)	SMEs			Startups		
	Overall mean (*N* = 166)	(Strongly) disagree	(Strongly) agree	Overall mean (*N* = 89)	(Strongly) disagree	(Strongly) agree
It is worth paying a little more for a more energy efficient product.	4.21	2.4%	84.4%	4.26	6.7%	83.2%
I consider it important to help my company to conserve energy.	4.33	1.8%	86.1%	4.06	10.1%	74.1%
It is the company norm to switch off office equipment (e.g. PCs, lights) when not in use.	3.84	11.4%	63.2%	3.89	14.6%	74.1%

Furthermore, looking at the averages, there is room for improvement regarding how well-informed respondents are on how to save energy, for both respondents from SMEs (M = 3.46) as well as startups (M = 3.48).[12]

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[12] For SMEs: 51.2% of the respondents agreed that they are well informed on how to save energy, and 18.7% disagreed, for startups this was 49.1% and 16.5% respectively. Note also that SMEs answered these questions before receiving a training and startups after receiving a workshop.

3.4 Current and future behaviour, comparisons of actions at work and at home

We measured current energy saving behaviour of respondents in several ways. First, we asked in a more general way whether respondents tried to conserve energy at work. This seems to be the case, namely 78.3% of respondents in the SME sample try to conserve energy at work and 67.4% of startups. We then asked whether respondents encouraged colleagues to behave in an environmentally friendly way. The percentages are slighter lower now, namely 71.6% of respondents in the SME sample encourage colleagues and 58.4% in the startups sample. Third, we investigated specific energy saving behaviours. It seems that many respondents turn off their computer after having finished their day, most respondents turn of the lights when they leave a room, and many turn off the heating/air-conditioner before leaving. Not so many turn off their monitor when not using the computer (see Table 3.3).

We not only investigated current energy saving behaviour in relation to the work environment, we also investigated energy saving behaviour at home. We see a similar picture emerge, namely when asking whether respondents save energy at home in a more general sense, many respondents indicate that they do this, 85% in the SME sample and 83.8% in the startups sample. Also, for encouraging family and friends at home the percentages are still high, but slightly lower (71.6% and 79.7%). Looking at more concrete behaviours we see that not so many respondents turn down the heating at home and put a jumper on instead.

It could be the case that respondents consider it more important to conserve energy at home compared to the work situation, as energy saving at home translates more directly into monetary savings (e.g. lower energy bills). We therefore tested whether there were significant differences between behaviour at work and at home. The *p*-value shown in Table 3.3 (and other tables) indicates whether the differences between behaviour at work and at home is statistically significant, which means that they are very unlikely to have occurred by chance. A small *p*-value ($<.05$) indicates that there are significant differences in behaviour at home and at work. Especially for employees working for startups we see that they try to conserve energy more at home than at work, and that they encourage their family and friends more than their colleagues to behave environmentally friendly. Both respondents from SMEs and startups turn their computer more often off at work than at home. For startups, this seems contradictory but it could be due to the fact that a large group of startups work from home. Finally, respondents working for SMEs more often switch off heating and air conditioner at work than at home.

Table 3.3: Current behaviour at work and at home[13]

Current behaviour at work and at home (1= strongly disagree; 5 = strongly agree)	SMEs			Startups		
	At work	At home	P	At work	At home	P
I currently try to conserve energy [at work / a home]. (N_{SME} = 166; $N_{startups}$ = 89; $N_{startups\ \_at\ home}$= 74)						
% (strongly) agree	78.3%	85%		67.4%	83.8%	
% (strongly) disagree	3.6%	3.6%		11.2%	6.8%	
Average	4.1	4.2	.30	3.9	4.3	.008
I encourage [my colleagues (work) / friends (home)] to behave in an environmentally friendly way. (N_{SME} = 166; $N_{startups\_at\ work}$ = 89; $N_{startups\ \_at\ home}$= 74)						
% (strongly) agree	71.6%	67.6%		58.4%	79.7%	
% (strongly) disagree	6%	9.9%		13.5%	9.5%	

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[13] The number of respondents varies across items because respondents could indicate if a situation was non-applicable to them. Thus, only the number of respondents for whom the situation was applicable were included.

Current behaviour at work and at home (1= strongly disagree; 5 = strongly agree)	SMEs			Startups		
	At work	At home	P	At work	At home	P
Average	3.9	3.9	.70	3.7	4.1	.013
When I have finished using my computer [for the day / at home], I turn it off. ($N_{SME\_at\ work}$ = 162, $N_{SME\_at\ home}$ = 163; $N_{startups\ \_at\ work}$= 87; $N_{startups\ \_at\ home}$= 71)						
% Often/ always	77.8%	68.7%		71.3%	63.4%	
% Never / rarely	11.1%	18.4%		12.6%	19.8%	
Average	4.1	3.8	.017	4.1	3.7	.025
When I leave a room [in a work area / at home] that is unoccupied, I turn off the lights. ($N_{SME\_at\ work}$ = 158, $N_{SME\_at\ home}$ = 161; $N_{startups}$ = 89; $N_{startups\ \_at\ work}$= 87; $N_{startups\ \_at\ home}$= 74)						
% Often/ always	91.7%	91.3%		90.8%	90.6%	
% Never / rarely	8.2%	2.5%		4.6%	2.7%	
Average	4.6	4.5	.60	4.6	4.6	.80
I turn down the heating/air-conditioner when I leave the room/building at last. [at work] (N_{SME} = 155; $N_{startups}$ = 74)						
% Often/ always	78.1%	61.6%		77.0%	71.2%	
% Never / rarely	6.5%	11.9%		9.5%	15.1%	
Average	4.2	3.8	.005	4.2	4.0	.267
When I am not using my computer [at work], I turn off the monitor. (N_{SME} = 146; $N_{startups}$ = 81)						
% Often/ always	57.5%			49.4%		
% Never / rarely	22.6%			30.9%		
Average	3.6			3.3		
I print documents that are essential to have in hard copy form, and store and read all other documents electronically. [at work] (N_{SME} = 161; $N_{startups}$ = 87)						
% Often/ always	79.5%			79.3%		
% Never / rarely	3.1%			9.2%		
Average	4.3			4.1		
When I am feeling cold **at home** I put on a jumper rather than turning up the heating straight away. (N_{SME} = 160; $N_{startups}$ = 74)						
% Often/ always		48.8%			63.5%	
% Never / rarely		23.1%			16.2%	
Average		3.4			3.7	

Note. Table 3.3 shows the averages and percentages for all respondents that had actual behavioural control. For instance, in case a respondent did not have the option to switch off lights they could indicate that this situation was non-applicable.

Furthermore, we also investigated future behavioural intentions (see Table 3.4). Respondents from startups indicated that they would take more actions to conserve energy at home than at work in the future. SMEs are willing to take more actions to conserve energy at home and at work in the future. For SMEs there is no significant difference in whether they would take more actions at work or at home.

Table 3.4: Future behavioural intentions

Future behavioural intentions at work and at home (1= strongly disagree; 5 = strongly agree)	SMEs (*N* = XX)			Startups (*N* = 85)		
	At work	At home	*P*	At work	At home	*P*
In the next few months I will take more actions to conserve energy [at work / at home] than I currently do.						
% (strongly) agree	68.2%	72.4%		58.8%	78.8%	
% (strongly) disagree	8.4%	4.8%		10.6%	9.4%	
Average	3.9	3.8	.57	3.7	4.1	.013

4. Conclusions

This report examined training evaluations, company motivations, attitudes and current and future behaviour of startups and SMEs regarding energy efficiency. The surveys analysed in this report were carried out from May 2017 towards mid-March 2018. All local partners contacted startups and SMEs to which they gave workshops or trainings and in exchange asked them to participate in the survey. Startups received the survey after participating in a workshop on energy efficiency.[14]

On the basis of the few data that is currently available no conclusions can yet be drawn about the change in attitudes and behaviour over time and the impact of the trainings/workshop on energy efficient behaviour. This will be addressed in the final report when more responses have been collected. What appears in any case is that the trainings and workshop are evaluated very positively. Namely, employees working for SMEs and startups indicate that they have learned a lot from the trainings/workshop and that the trainings/workshop yielded many useful and new insights. Furthermore, respondents indicated that the trainings/workshop impact their future energy efficiency behaviour. We can thus conclude that respondents see the added value of the trainings and workshop. Also, trainers receive positive reactions about the trainings from employees working for SMEs.

In general, attitudes towards energy efficiency are positive. One of the key drivers for companies to conserve energy is to lower costs for the company. Company norms are still somewhat behind. There is not always a clear company norm to turn off office equipment, so this can be further improved.

When looking at concrete behaviours, we see that employees working at SMEs and startups already take some actions to conserve energy, such as turning off their computers, lights, and the heaters / air-conditioners. Also, most documents are stored electronically and not printed. Still, some more energy conscious behaviour can be achieved. At the work place, this can be done by encouraging employees to switch off monitors when not using a computer. In the home situation, this can be done by encouraging people to first put on a jumper when feeling cold before turning on the heater. For startups, we see that it is more likely the case that they change behaviour at home than at work. This could be due to the fact that a large group of startups work from home. Also, it could be the case that employees working for startups have less control in changing heating, lighting and energy settings as when they work in co-working spaces or hubs these are often centrally organised.

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[14] Note that for startups there was no baseline measurement, so startups' responses could be slightly more positive than they would be in reality.

Appendix

NOTE: startups will receive the questionnaire below without question 1, 2, and 7. Evaluation questions will be added (Q10). Also, the italic parts in the introduction will be removed.

SMEs will receive the same questionnaire after each training session. Compared to the baseline questionnaire, in the monitoring surveys the background questions about the company and person-specific characteristics will not be asked again. Q10 will be added to the questionnaire. Also, the introduction will slightly be adjusted. The hard indicator question will be asked prior to the start of the training and after the last training session.

A.1 General questionnaire

[introduction screen]

Welcome.

Thank you for participating in this START2ACTquestionnaire [mouse roll-over 1].

The purpose of this questionnaire is to monitor the effectiveness of the START2ACT activities in which you are participating. *We will send follow-up questionnaires after each training activity to track your energy efficiency progress throughout your participation in the programme.*

If you are the manager of your company, we ask you to have information on your energy costs ready. START2ACT hopes to track the actual energy savings achieved by participants over the course of the programme. This will also help your organisation to define the success of the trainings you received in terms of energy monetary savings. If you do not have access to this information you can skip this step.

Your data will be kept confidential and will not be provided to third parties.

Thank you in advance for your help!

On behalf of the START2ACT team,

CentERdata and [local partner]

Once you have read the text and agree to participate in START2ACT, please click the box below and press the 'next' button to start the first questionnaire. If you do not agree to participate, please indicate so.

- ☐   I agree to participate
- ☐   I do not agree to participate

[mouse roll-over 1: START2ACT is a three-year project supported by the European Union's Horizon 2020 programme for research and innovation under Grant Agreement No. 696069.]

[if respondents do not agree to participate, the following screen appears]

You indicated that you do not want to participate in this questionnaire. By clicking the 'Next' button you will leave the questionnaire, and you will not be able to fill it out at a later time.

If you want to return to the questionnaire please click 'Previous' and change your answer.

[q1] To what extent do you think the following options would motivate your company to implement energy efficiency measures? Please indicate your top 3 (1st, 2nd, 3rd).

	1	2	3
Reduction of energy bills	☐	☐	☐
Being prepared for future increases in energy prices	☐	☐	☐
Contributing to the fight against climate change	☐	☐	☐
Improved company image	☐	☐	☐
Improved product quality	☐	☐	☐
Other, namely…	☐	☐	☐

[q1a if, other, namely: text box appears]

You indicated that other options would motivate your company to implement energy efficiency measures. Which other options(s) do you consider? [open textbox]

[q2]

To what extent do you agree with the following statements?

	Strongly disagree		Neutral		Strongly Agree
Energy saving is **not** a priority in my company.	1	2	3	4	5
The cost savings from energy efficiency are **not** sufficient to justify the effort.	1	2	3	4	5
By saving energy, me and my colleagues can contribute to lowering the energy bill of the company.	1	2	3	4	5

[q3]

To what extent do you agree with the following statements?

	Strongly disagree		Neutral		Strongly Agree
It is worth paying a little more for a more energy efficient product.	1	2	3	4	5
I consider it important to help my company to conserve energy.	1	2	3	4	5
I am well informed on how to save energy.	1	2	3	4	5
It is the company norm to switch off office equipment (e.g. PCs, lights) when not in use.	1	2	3	4	5

[q4] Please indicate how likely it is that you will do the following:

	Not likely at all				Very likely
I currently try to conserve energy at work.	1	2	3	4	5
I encourage my colleagues to behave in an environmentally friendly way.	1	2	3	4	5
In the next few months I will take more actions to conserve energy at work than I currently do.	1	2	3	4	5
I currently try to conserve energy at home.	1	2	3	4	5
I encourage my family and friends to behave in an environmentally friendly way.	1	2	3	4	5
In the next few months I will take more actions to conserve energy at home than I currently do.	1	2	3	4	5

[q5] Please indicate whether you do, or do not do the following:

	never	rarely	sometimes	often	always	N/A*
When I have finished using my computer for the day, I turn it off.	O	O	O	O	O	O
When I leave a room in a work area that is unoccupied, I turn off the lights.	O	O	O	O	O	O
When I am not using my computer, I turn off the monitor.	O	O	O	O	O	O
I print documents that are essential to have in hard copy form, and store and read all other documents electronically.	O	O	O	O	O	O
I turn down the heating/air-conditioner when I leave the room/building at last.	O	O	O	O	O	O

* e.g. when this turns off automatically or is centrally controlled.

[q6] Please indicate whether you do, or not do the following actions at home:

	never	rarely	sometimes	often	always	N/A
When I have finished using my computer **at home**, I turn it off.	O	O	O	O	O	O
When I leave a room **at home** that is unoccupied, I turn off the lights.	O	O	O	O	O	O
When I am feeling cold **at home** I put on a jumper rather than turning up the heating straight away.	O	O	O	O	O	O
When I leave home, I turn down the heating/ air-conditioner	O	O	O	O	O	O

[q7] The following question addresses managers/directors, namely those who oversee the company's day-to-day business operations and are in charge of decision making.

Are you the energy manager / START2ACT contact person?

- ☐ Yes
- ☐ No

If yes continue with hard indicator question q7a. If no, continue to general questions.

[q7a] What was the energy cost during the past year?

In order to easily answer this question you will need to have this information ready (i.e. in the form of energy bills). **Note that if you close the browser of this questionnaire before you finished the questionnaire, all data will be lost and you would have to start again if you want to finish the questionnaire. Moreover, the questionnaire will time out in one hour, so if you need to look up the information needed for this question, make sure you do so within one hour. Otherwise you would have to start again as well.**

If you do not have access to this information you can skip this step.

Instructions

You can type in the information in numbers. If you do not know the exact amount of energy used, please provide a rough estimation of the energy cost. You only need to enter the amount **OR** the cost. Please also indicate whether these are actual or estimated costs/amounts by ticking the corresponding box.

	Energy amount	Energy costs (in Euros)	Actual	Estimate	N/A
Electricity (kWh)	Open textbox	Open textbox	☐	☐	☐
Gas (kWh)	Open textbox	Open textbox	☐	☐	☐
Oil (litres)	Open textbox	Open textbox	☐	☐	☐
Other (e.g. biomass, coal)	Open textbox	Open textbox	☐	☐	☐

In case it is difficult to provide the information in the format above you can provide the information that you do have here: [open textbox]

[general questions]

[q8a] Finally, we have some general questions for you. Please note that your data will be kept confidential and will not be provided to third parties.

What is the name of your company?

[open textbox]

[q8b] What is the size of the company in terms of personnel? Please provide a numerical value.

- ☐ 0-10 persons
- ☐ 11-25 persons
- ☐ 26-50 persons
- ☐ > 50 persons

[q8c] Does your company have a permanent office/site?

☐ Our company owns a permanent office/site.

☐ Our company rents a permanent office/site.

☐ Our company works from home.

☐ Our company makes use of co-working spaces.

[q8d]
How long has your company been operational?

o <3 years

o 3-5 years

o 5-8 years

o > 8 years

[screen 2 general questions]

[q9a] What is your age?

o 18 - 24 years

o 25 - 34 years

o 35 - 44 years

o 45 - 54 years

o 55 - 64 years

o 65 years and older

[q9b] What is your level of education?

o primary school

o intermediate secondary education (e.g. junior high school)

o higher secondary education/preparatory university education (e.g. senior high school)

o intermediate vocational education (e.g. junior college)

o higher vocational education (e.g. college)

o university

o prefer not to say

[q9c] What is your e-mail address? Please fill in the same e-mail address to which the invitation for the workshop / training was sent.

[open textbox]

[q9d]Do you have any questions/comments about the questionnaire?

- o   Yes

- o   No

If yes -> open textbox appears. If no, go to outro.

 [outro]

Thank you for participating in the START2ACT questionnaire.

If you do not want to participate in the next questionnaire please contact [local partner].

Please click the 'Next' button to submit your questionnaire.

A.2 Evaluation of the training

Q10 will be part of the startup questionnaire. For SMEs Q10 will be part of the questionnaire in survey 2, 3, 4.

[q10a]

	Certainly not				Certainly so
The training provided me with useful insights on energy efficiency.	1	2	3	4	5
The training provided me with new insights on energy efficiency.	1	2	3	4	5
I am planning to change my behaviour based on what I learned in the training.	1	2	3	4	5

[q10b]

	Strongly disagree		neutral		Strongly agree
The training will not have an impact on my energy efficiency behaviour at work.	1	2	3	4	5
The training will not have an impact on my energy efficiency behaviour at home.	1	2	3	4	5