D2.7 Final monitoring report

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❑ Confidential, only for members of the consortium (including the Commission Services)

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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 were targeted in the START2ACT project have a maximum of 50 employees and have been operating for 5 to 10 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 has been to facilitate behavioural change by understanding the motivations, attitudes and knowledge levels of managers and employees of young SMEs and startups. These have been monitored longitudinally, so that the impact of training and mentoring programmes over time can be evaluated.

This report is a follow-up of the [first monitoring report (D4.2)](#) which was published in May 2018 and introduced the first survey results of the monitoring activities in START2ACT as well as the theoretical models and the methodology applied.

The first part of this monitoring report describes the final survey responses now that all data collection efforts have been completed. The final survey response after the **energy conscious mentoring for startups (WP5)** is provided, as well as the final survey response after the different visits of the **on-site capacity building for SMEs (WP4)**. The second part of this report describes the preliminary results regarding current and future energy saving behaviour of startups and the mentoring evaluation. The third part of this monitoring report describes some preliminary results regarding current and future energy saving behaviour of employees working for SMEs before and after they received the trainings. Moreover, it describes the SME training evaluations. More in-depth results will be provided in **D2.5**, the **Report on the assessment of the behaviour of the target groups**.

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[1] Definition from Startups Belgium.

2. Final survey response

This chapter presents the final responses of the surveys conducted with young SMEs and startups in START2ACT. In section 2.1 the survey response for startups is described per country. In section 2.2 the survey response for SMEs is described per country and across data collection waves.

2.1 Survey response progress: startups

Energy-conscious startup mentoring activities were conducted in each of the nine target countries (BE, BG, CZ, HR, HU, PL, RO, SK, UK). Each START2ACT partner aimed to recruit 50 startups for the mentoring sessions. In total, 320 survey responses were collected from startups, with an average of 35 responses (range between 19 and 68). Figure 2.1 shows the total survey response over time, and Table 2.1 shows the survey response per country.

Figure 2.1: Survey response over time startups (total), and Table 2.1: Survey response split by country (May 2019)
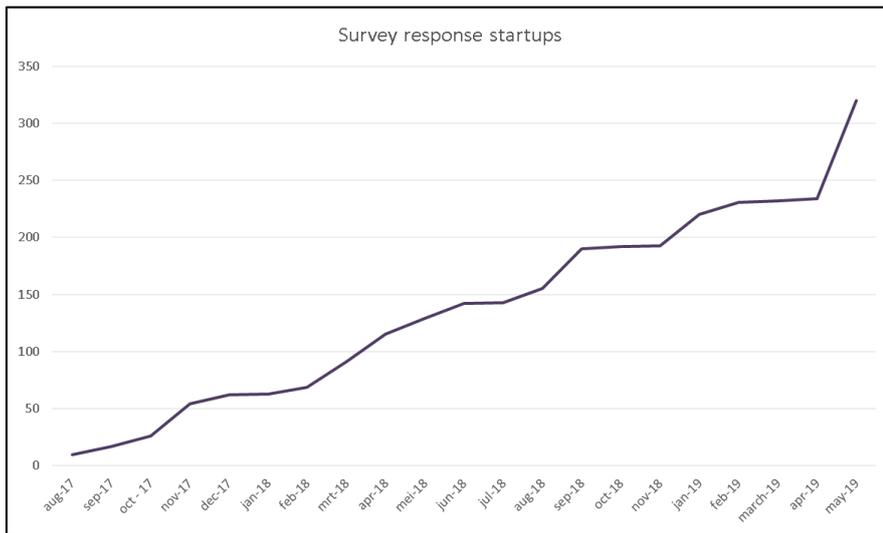
Country	May 2019
BE	62
BG	68
CZ	19
HR	19
HU	28
PL	25
RO	32
SK	25
UK	42
Total	**320**

The relative survey progress (as percentage of the target) per START2ACT partner, at the end of May 2019, is displayed in Figure 2.2. In general, 71% of the target response has been reached. Startups.be (BE) and SOFENA (BG) reached more start-ups than the targeted numbers. Most countries reached 50%, or more than 50%, of the targeted numbers, except ENVIROS (CZ) and EIHP (HR).
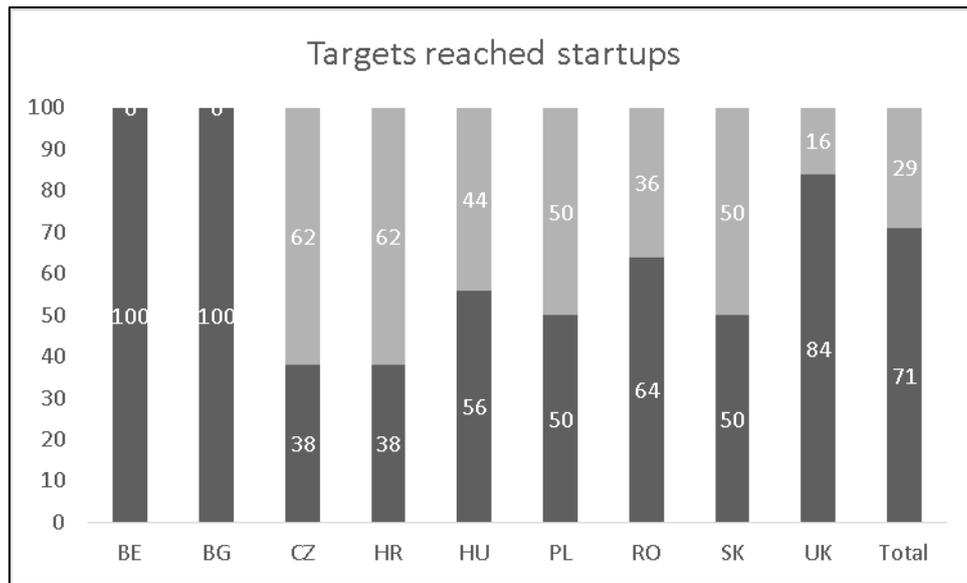
Figure 2.2: Survey response as percentage of the target per country (start-ups)

## 2.2 Survey response progress: SMEs

For the SMEs, the first survey (wave 1) took place before the company received a training, the second survey (wave 2) took place after the first company visit / training, the third survey (wave 3) after the second company visit / training, and the fourth and final survey (wave 4) after the third company visit / training (see Figure 2.3).

Figure 2.3: Evaluations of the on-site capacity building activities

The **on-site capacity building** activities were planned to be conducted in eight countries (BG, CZ, HR, HU, PL, RO, SK, UK), at around 50 offices with an average of 20 employees at each SME. Each START2ACT partner had to recruit 50 SMEs, and for each SME three training sessions had to be provided. In practice, this was sometimes difficult to achieve, and partners had to apply a number of countermeasures to tackle the challenges they encountered. At the end of May 2019, **732 total survey responses** were collected from SMEs (including all data collection waves). Figure 2.4 shows the total survey response over time, and table 2.2 provides the survey response per country by the end of May 2019, summed over waves.

Figure 2.4: Total survey response over time, and Table 2.2: Survey response per country (SMEs, summed across waves)
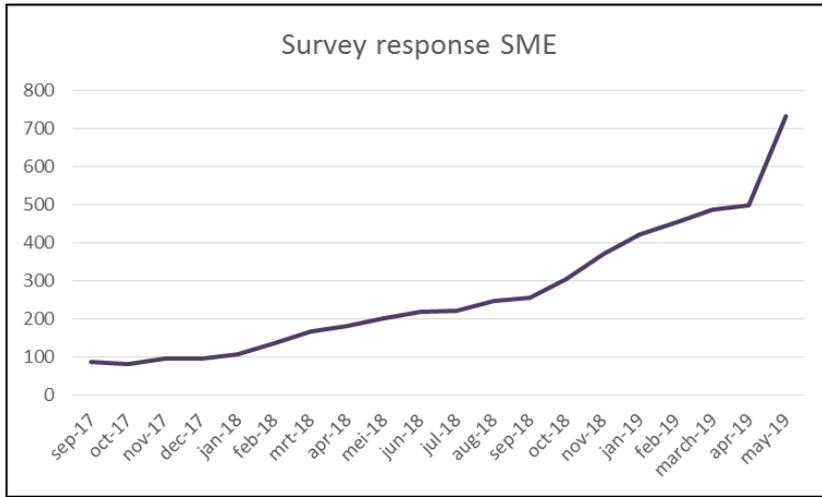

Country[2]	May 2019
BG	196
CZ	63
HR	72
HU	66
PL	107
RO	182
SK	1
UK	45
Total	**732**

There were 290 responses in wave 1, 187 in wave 2, 119 in wave 3, and 137 in wave 4. The number of responses is higher in wave 4 because in some countries the second and/or third data collection wave were skipped.

Figures 2.5a-d present the relative progress per partner for each of the different waves. The figures show that SOFENA (BG) reached the targeted numbers for wave 1, 2, 4 and more than 50% of the targeted numbers in wave 3. Also, ENERO (RO) reached the targeted numbers for wave 1 and 2 and more than 50% of the targeted numbers in wave 3 and 4.

In the first wave, almost all partners except ENVIROS (CZ, 46%) and SIEA (SK, 2%) reached more than 70% of the targeted numbers. Responses after the trainings (Figure 2.5b-d) are below 50% for ENVIROS (CZ, wave 2: 28%, wave 3: 24%, wave 4: 28%), EIHP (HR, wave 2: 30%, wave 3: 16%, wave 4: 26%), the Carbon Trust (UK, wave 2: 8%, wave 3: 6%, wave 4: 2%), and for Geonardo for wave 3 and 4 (HU, wave 2: 54%, wave 3: 4%, wave 4: 0%). For KAPE the responses were higher than 50% in wave 2 and 3, and for wave 4 it is 30%.

Looking at the total response, in wave 1 73% of the targeted numbers are reached, in wave 2 47%, in wave 3 30% and in wave 4 44%.

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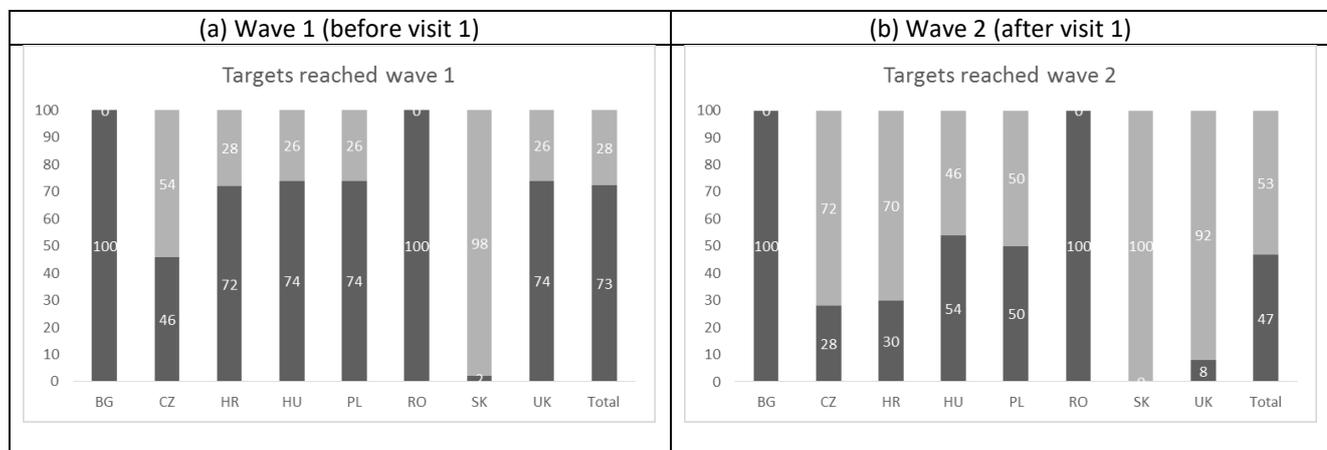
[2] Note that Startups.be is not involved in the training sessions for SMEs.
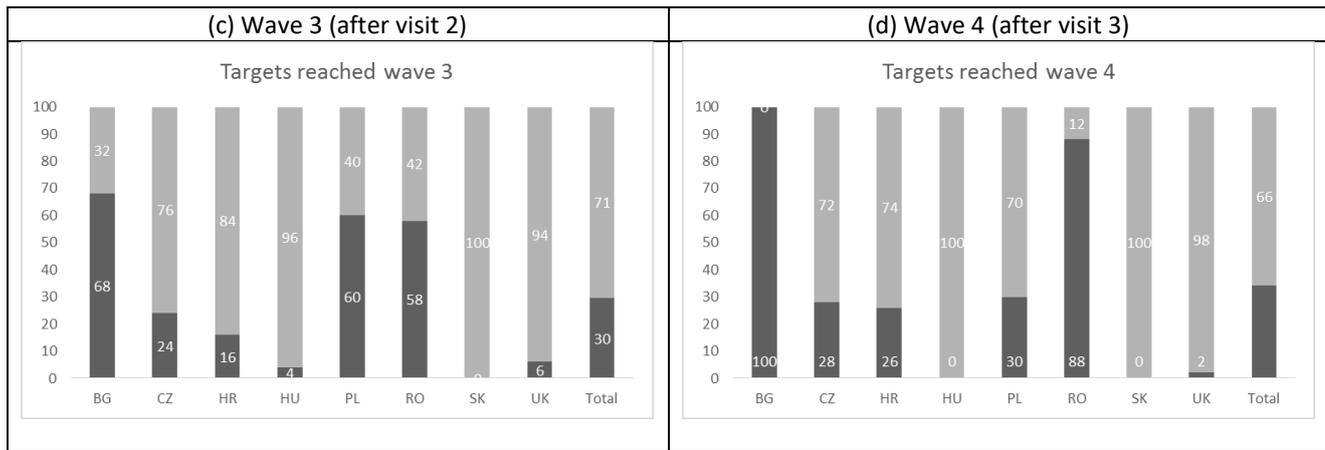
Figure 2.5: Survey response as percentage of the target country and wave (SMEs)

3. Preliminary results: startups

This chapter describes the preliminary results for startups regarding their current and future energy saving behaviour at work (section 3.1) and presents mentoring evaluations (section 3.2). More in-depth analyses will be provided in D2.5, the Report on the assessment of the behaviour of the target groups [3].

3.1 Current and future behaviour

Figure 2.1 shows the startups' current energy saving behaviour at work and Figure 2.2 future behavioural intentions to save energy at work and at home. Startups indicated that they try to conserve energy at work (M = 3.91) and try to encourage colleagues to behave in an environmentally friendly way (M = 3.69). Also, startups seem willing to take more actions in the next few months to conserve energy at work and at home.
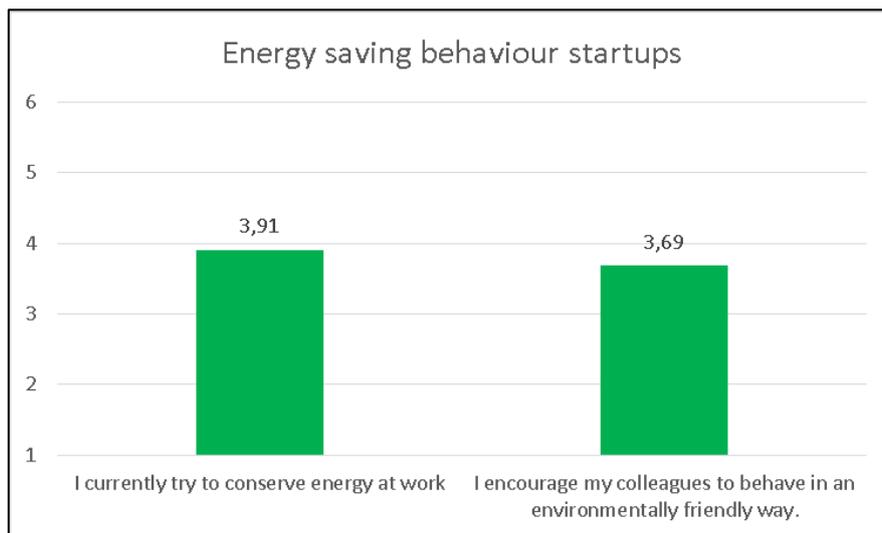

Figure 3.1: Current energy saving behaviour (left), and encouraging others to save energy (right) (startups)

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[3] Note that this chapter only presents descriptive results. Tests for significance will be provided in D2.5, the Report on the assessment of the behaviour of the target groups.
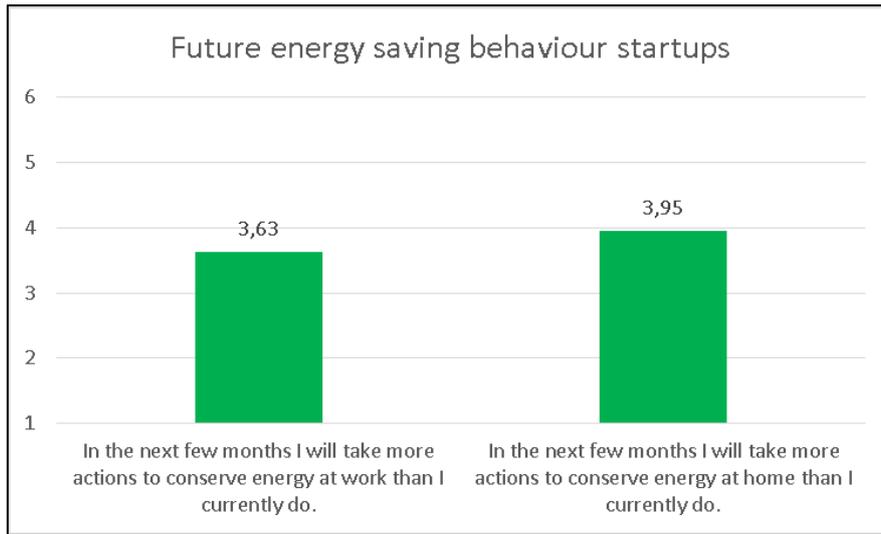
Figure 3.2: Intention to engage in more energy-saving behaviour at work (left) and at home (right) (startups)

3.2 Mentoring evaluations

The mentoring sessions have been evaluated very positively by the startups. The participants indicated that the trainings were useful, brought them new insights and that the trainings will have an impact on their future energy efficiency behaviour (see Figure 3.3).
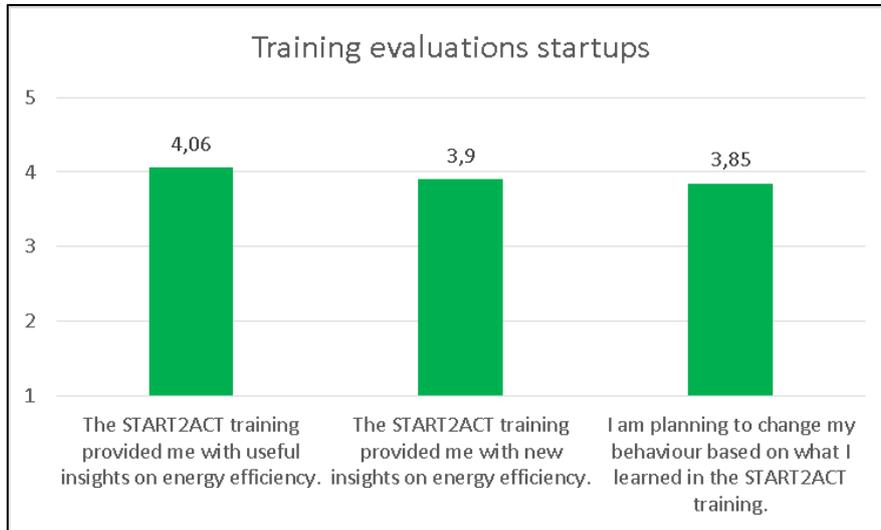

Figure 3.3: Mentoring evaluations (startups)

4. Preliminary results: SMEs

This chapter describes the preliminary results for employees working at SMEs regarding their current (section 4.1) and future (section 4.2) energy saving behaviour at work, and training evaluations are presented (section 4.3).[4]

4.1 Current behaviour

Figure 4.1 shows the employees' current energy saving behaviour at work. Before the trainings started, employees already indicated that they tried to conserve energy at work (with an average of 3.82 on a 5-point scale). After the trainings this seems to further increase. Similarly, it seems that after the trainings employees of young SMEs are more motivated to encourage their colleagues to behave in an environmentally friendly way (see Figure 4.2).
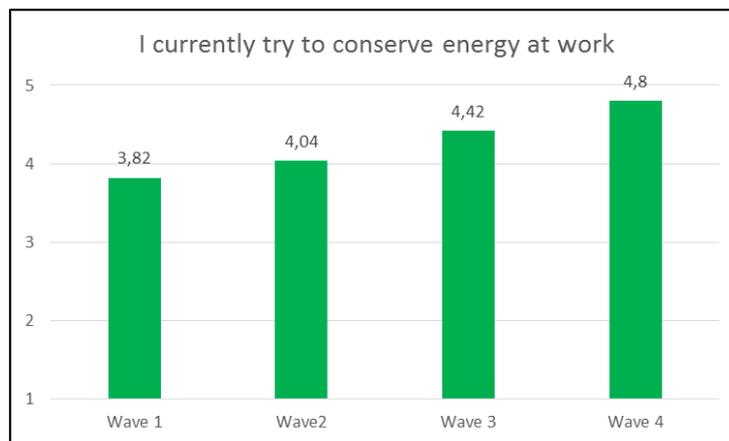

Figure 4.1: Current energy saving behaviour, per wave (SMEs). Note: N_{wave1} = 289; N_{wave2} = 187; N_{wave3} = 118; N_{wave4} = 137.[5]

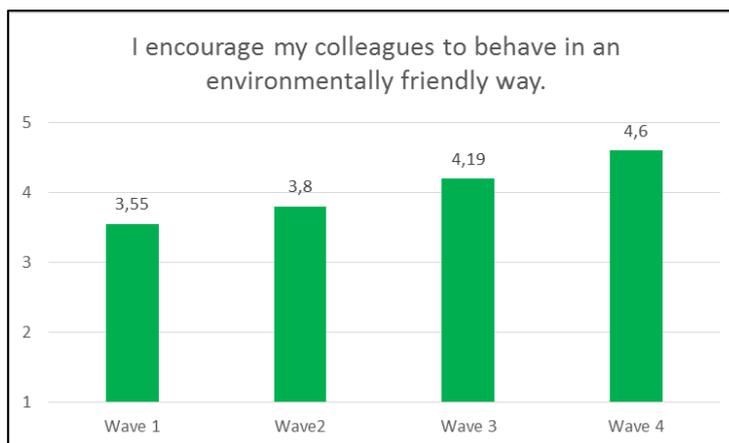**Figure 4.2: Encouraging others to save energy, per wave (SMEs). Note: N_{wave1} = 289; N_{wave2} = 187; N_{wave3} = 118; N_{wave4} = 137.[6]**

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[4] Note that this chapter only presents descriptive results and that differences between waves have not been tested for significance. Tests for significance will be provided in D2.5, the Report on the assessment of the behaviour of the target groups. It is also important to note that the sample size for wave 1 is much larger (*N* = 289) than the sample size for wave 4 (*N* = 137). The averages reflect averages at group level; no comparisons over time at the individual level were made.

[5] *N*: sample size

[6] *N*: sample size

4.2 Future behaviour

Employees of young SMEs are willing to take more actions to conserve energy at work in the future, and this intention seems to have strengthened after they received the training (see Figure 4.3).
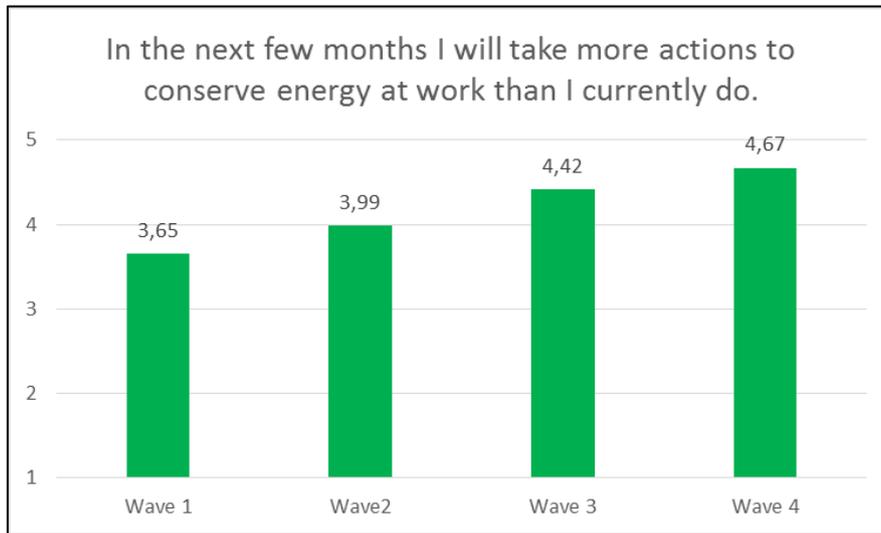

Figure 4.3: Intention to engage in more energy saving behaviour, per wave (SMEs). *Note: N_{wave1} = 289; N_{wave2} = 187; N_{wave3} = 118; N_{wave4} = 137.*[7]

4.3 Training evaluations

Respondents see the added value of the trainings, as the trainings were evaluated very positively. Employees of young SMEs indicated that the trainings were (1) very useful, (2) brought them many new insights and (3) would make an impact on their future energy efficiency behaviour at home and at work (see Figure 4.4).
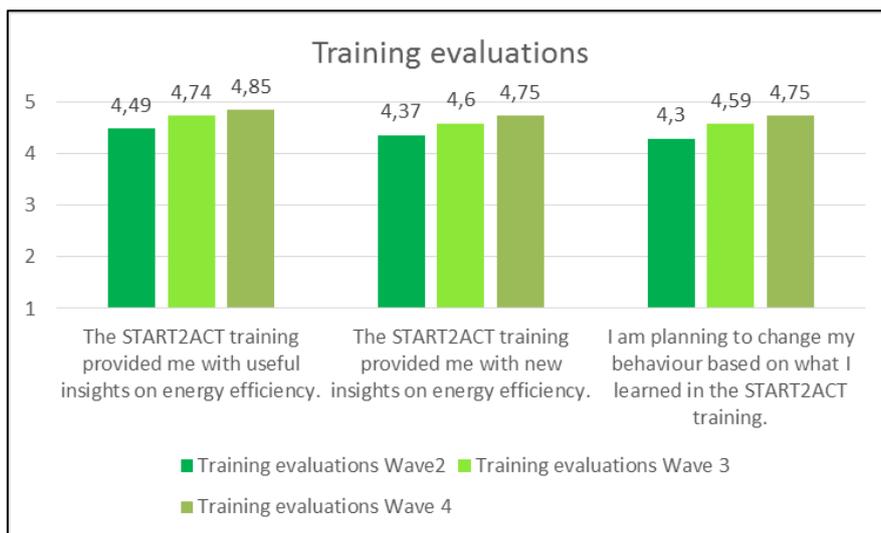

Figure 4.4: Training evaluations, per question and wave (SMEs). *Note: N_{wave2} = 186; N_{wave3} = 117; N_{wave4} = 135.*[8]

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[7] *N*: sample size
[8] *N*: sample size