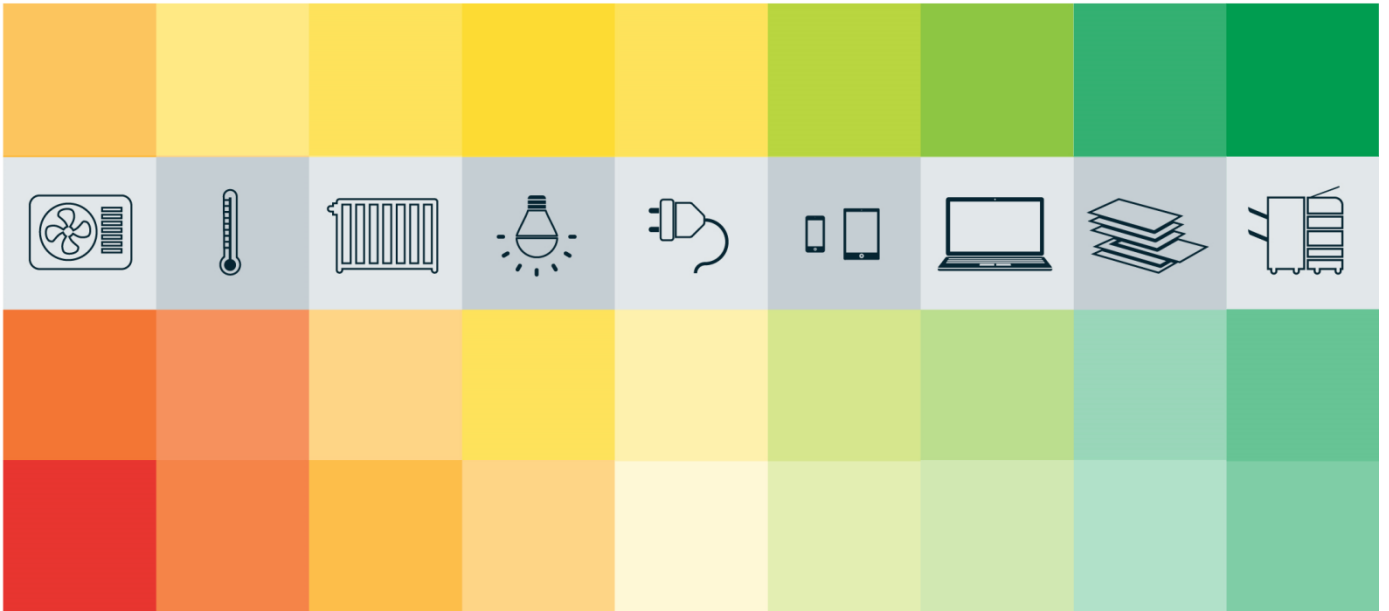




ENGAGING EUROPEAN STARTUPS AND YOUNG SMES FOR ACTION FOR SUSTAINABLE ENERGY



D3.3 START2ACT interactive online platform





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

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1. Introduction

This deliverable presents the Interactive Energy Saving Platform of the START2ACT project that is accessible via <http://start2act.eu>. This feature is one of the project's core activities for supporting young SMEs and startups in Europe with integrating energy efficiency measures into their everyday work routine and applying these at home too.

The Platform takes a substantially different approach in addressing this aim compared to the other three core START2ACT activities (i.e. business breakfasts for energy efficiency, on-site training for SMEs and mentoring startups), which will support the target groups through physical interaction. The Platform is integrated into the START2ACT webpage and provides the target groups with the opportunity to remotely tap into a rich pool of information and self-training sources. With these two different approaches, START2ACT seeks to offer a complementary support scheme which fits the varying needs and interests of people at young SMEs and startups while at the same time boosting its cumulative outreach.

The Interactive Online Platform consists of four sections intended to provide the visitor with a wide range of possibilities to make progress towards more energy efficient behaviour at work and at home:

- » Knowledge Base
- » Energy Saving Competition
- » E-Learning
- » Interactive Social Platform

2. User access

Visitors of the START2ACT website can enter the Interactive Energy Saving Platform through the access button (Figure 1) on the START2ACT home page. The Knowledge base with its rich pool of information and tools on energy efficiency can be entered without registration. To enter the E-learning section and the Energy Saving Competition of the platform we ask the user to complete a quick free-of-charge registration.

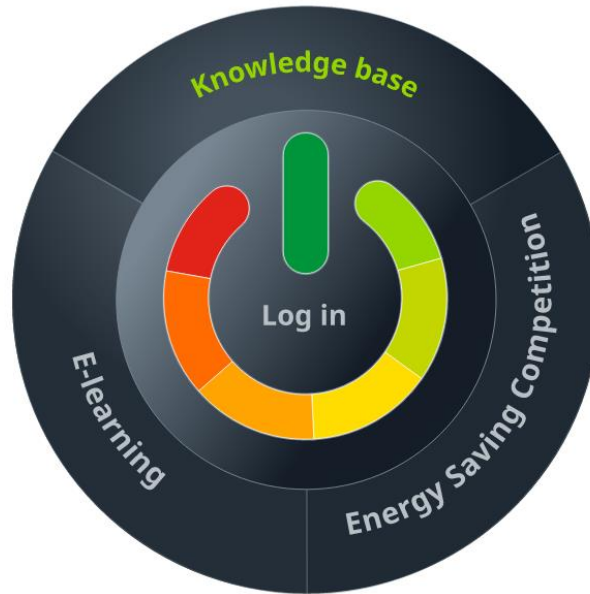


Figure 1: Access button to the Interactive Online Platform on the START2ACT web page

3. Knowledge base

This tool can be accessed without registration by any interested user. The START2ACT knowledge base is a structured repository of available knowledge on energy efficiency in office environments and at home. START2ACT amalgamates a large pool of information in these areas from partner expertise, previous initiatives and projects. Its aim is to engage people at young SMEs and startups across Europe in acting more energy efficiently in their everyday life by presenting this information in an interactive, interesting and freely accessible way.

All content is structured in a manner easily and intuitively accessible by the user. Within just a few clicks, any person entering the platform will be able to select topics that suit her/his interest and background. The above-mentioned pool of information is broken up in smaller digestible chunks presented via different topic areas. The topic areas can be browsed via a pre-selection. The screenshots taken from the START2ACT web page in Figure 2, Figure 3, Figure 4 and Figure 5 illustrate these pre-selection steps.

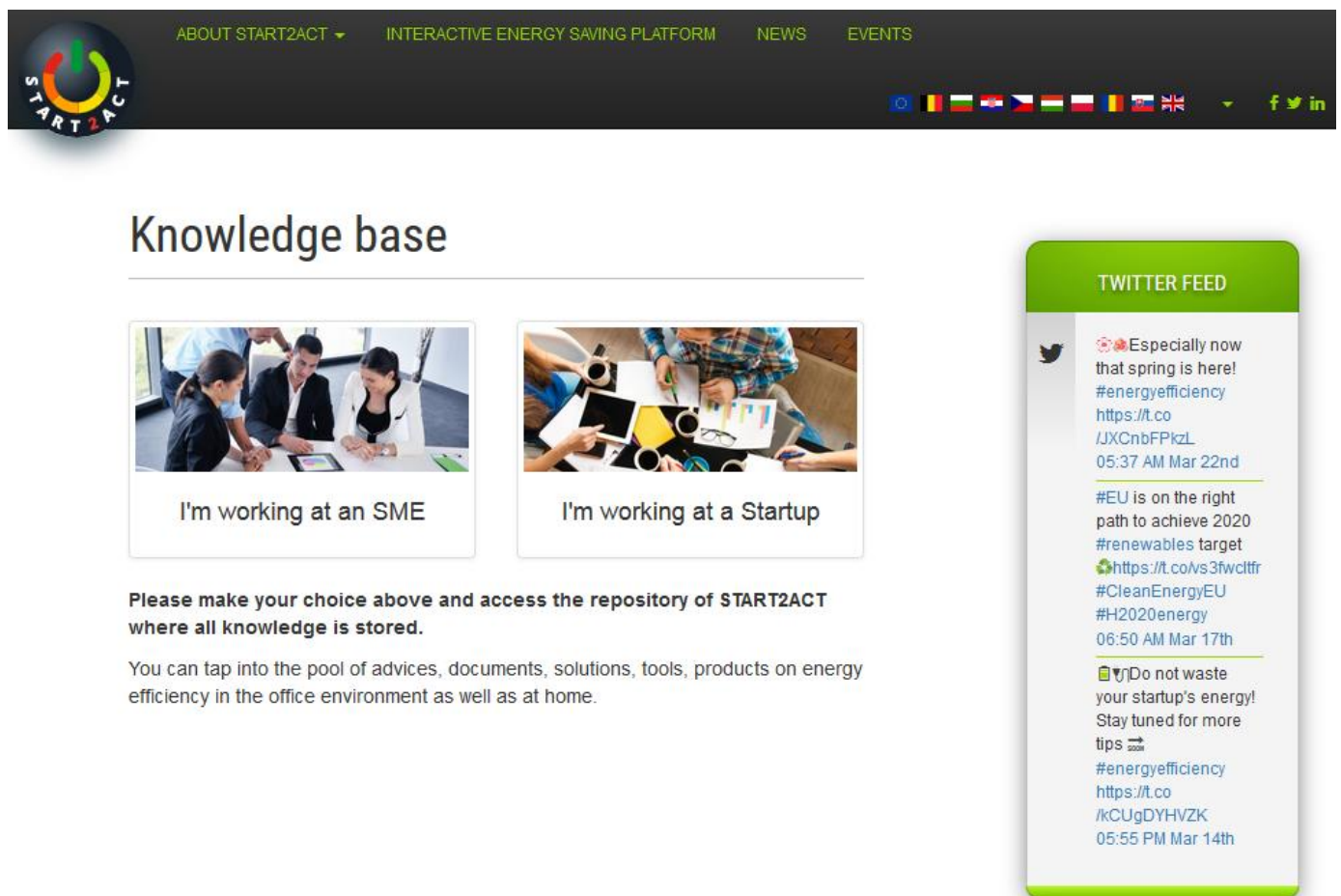


Figure 2: Entry page to the START2ACT Knowledge base; the user can make the first selection: SME - Startup

The screenshot displays the START2ACT Knowledge base interface. At the top, there is a navigation bar with the START2ACT logo on the left and menu items: ABOUT START2ACT, INTERACTIVE ENERGY SAVING PLATFORM, NEWS, and EVENTS. On the right side of the navigation bar, there are flags for various European countries and social media icons for Facebook, Twitter, and LinkedIn.

Energy efficiency at an SME

I'm a manager at an SME

I'm an employee at an SME

Why save energy?
There are many reasons to save energy at work and at home. Check out [this page](#) and read why it will pay off for your business and for our climate.

[Read more](#)

Green finance for SMEs
There are plenty of financing options available-make sure you do your homework. Financing sustainability measures might be easier than you think.

[Read more](#)

Save energy at home
Making some [simple changes](#) and energy efficiency improvements in your home can make it more comfortable and cheaper to heat and cool, and has the added benefit of reducing your impact on the environment.

[Read more](#)

Tools and resources
The internet is full of tools, resources and advices on energy efficiency. But it is difficult to find them if you are in need of one. We have prepared [a collection of tools and resources](#) for you to aid the energy efficiency in your SME.

[Read more](#)

TWITTER FEED

The impact of your emailing on the #environment can be huge. Read more here <https://t.co/s0Lccq6bcD> #energyefficiency 04:39 AM Mar 24th

TIP OF THE DAY

Measure energy consumption and energy savings and make the results visual.

Was it useful?

Yes No

Figure 3: START2ACT Knowledge base: Energy Efficiency at an SME; after the user has chosen SME in the first selection (Figure 2) she/he can further select whether to see contents for a manager or an employee.

Knowledge Base / Startup

Energy efficiency at a Startup

I'm a manager at a Startup

I'm an employee at a Startup

Why save energy?

There are many reasons to save energy at work and at home. Check out [this page](#) and read why it will pay off for your business and for our climate.

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TIP OF THE DAY

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Was it useful?

Yes No

Figure 4: START2ACT Knowledge base: Energy Efficiency at a Startup; after the user has chosen startup in the first selection (Figure 2) she/he can further select whether to see contents for a manager or an employee.

The screenshot shows the START2ACT Knowledge Base interface. At the top, there is a navigation bar with the START2ACT logo on the left and menu items: ABOUT START2ACT, INTERACTIVE ENERGY SAVING PLATFORM, NEWS, and EVENTS. On the right of the navigation bar are flags for various European countries and social media icons for Facebook, Twitter, and LinkedIn. Below the navigation bar, a breadcrumb trail reads "Knowledge Base / Startup / Employee". The main heading is "I'm an employee at a Startup".

There are four main content cards, each with an icon, a title, and a short paragraph:

- Buy Smart: Procurement**: The cost of resources, energy, transport and waste disposal are all increasing, and this can have a significant impact on profitability. Reducing your costs and improving efficiencies will have a positive impact on the bottom line and reduce risks to your business, customers and supply chain. With energy prices for SMEs users predicted to rise by almost 30% in the next 5 years, installing energy efficiency measures now could help reduce the energy bill of your SME or start-up by 10-25%.
- Find a green office: choosing energy efficient premises**: Your biggest opportunity for drastically reducing your office energy use is when you move to a new premises.
- Greening your Products and Services**: Businesses which offer sustainable products and services stand out in the marketplace – so reduce your impact, boost your sales and achieve green growth by responding to this demand.
- Save on heating and cooling: HVAC**: Heating, ventilation and air conditioning (HVAC) systems typically account for over 40% of energy use in offices and form a significant proportion of energy use in other areas of a business. HVAC is a key area of focus for identifying energy saving measures.

On the right side of the interface, there are two sidebars:

- TWITTER FEED**: A tweet from @energyefficiency stating "The impact of your emailing on the #environment can be huge. Read more here https://t.co/s0Lcqq6bcD #energyefficiency 04:39 AM Mar 24th".
- TIP OF THE DAY**: A tip that says "Measure energy consumption and energy savings and make the results visual." Below the tip is a poll: "Was it useful?" with radio buttons for "Yes" and "No".

Figure 5: START2ACT Knowledge base: Energy efficiency measures available for employees at startups; after the user has chosen startup in the first selection (Figure 2) and employee in the second selection (Figure 4) she/he will see a collection of relevant opportunity areas for energy efficiency

Knowledge Base / Startup / Employee

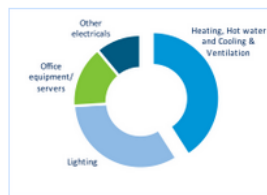
Save on heating and cooling: HVAC

Heating, ventilation and air conditioning (HVAC) systems typically account for over 40% of energy use in offices and form a significant proportion of energy use in other areas of a business. HVAC is a key area of focus for identifying energy saving measures.

Introduction

Heating, ventilation and air conditioning (HVAC) systems control the temperature, humidity and quality of air in buildings to provide a comfortable environment for people and equipment in our buildings.

As an employee, you are unlikely to be able to make the decision to replace your existing heating and cooling system with a more efficient one. However, there are plenty of ways in which you can modify your behaviour to reduce energy use from heating and cooling in your building.



Recommendations

- Find out who controls your HVAC systems:** This allows you to report any issues or requests to the correct person, so that they are addressed as soon as possible. It will also help you to understand how the system works across different rooms.
- Report any issues:** You need to report issues, such as any signs of damp or visible gaps in the walls, floors, roofs, windows or doors of your building.
- Reduce sun radiation:** If you sit near a window, and the heat from the sun is making you uncomfortably warm, adjust the blinds away from your desk and direct the light towards ceilings and walls. Blinds or curtains should be closed at night to reduce early morning solar heat gains from the sun in the summer and heat loss in the winter.
- Turn the heating down before opening a window:** If you are too hot, first check whether the heating is on and whether it can be turned down before opening a window. If it is on, opening a window can cause the heating system to work even harder.
- Use natural ventilation and cooling:** Before turning the air conditioning on, first check whether opening windows on opposite sides of the room can achieve a comfortable temperature. If this does not achieve a comfortable temperature, close the windows and turn on the air conditioning. Air Conditioning should never be operating while the windows are open.
- Dress appropriately:** Do not expect to be able to work in the same outfit during different seasons. In offices, it is common to have a 3°C temperature difference between winter and summer.
- Leave controls alone:** Do not adjust the central heating or cooling controls, unless you have permission and the understanding to do so. If there is an issue, report it.
- Avoid using portable heaters and coolers:** Do not bring heaters or coolers into the office without permission. These devices are often a health and safety hazard and should never be left in unoccupied areas or plugged into an extension lead. If you are feeling too hot or too cold report it first.

TOOLS

3EMtool for energy management

[Carbon Trust Creating an Awareness Campaign Guide](#)

[Carbon Trust Introduction to Energy Management Guide](#)

[Read more](#)

TWITTER FEED

We are in London, attending the #trainingoftrainers organized by @thecarbontrust #energyefficiency #cleanEnergyEU <https://t.co/TtowOzFh1r>
05:03 AM Mar 28th

TIP OF THE DAY

Use curtains and shades! This will make your air conditioner work less.

Was it useful?

Yes No

Figure 6a: Example of one Opportunity Area for employees of startups: Save on heating and cooling: HVAC. Part 1.

Additional Information

Improving building fabric

Poorly maintained building fabric will lead to increased heating or cooling costs, as the building will be less able to retain the heated or cooled air. Gaps in your building fabric can also lead to draughts, which are not only a cause of discomfort and complaints from staff, but are also causing higher energy bills. A door with a 3mm gap will let in as much air as a hole in the wall the size of a brick. When a building is draught-free, its heating and cooling systems don't have to work so hard resulting in lower energy bills.

Don't expect that those responsible will be aware of the draughts you are experiencing, or any issues with the building fabric, so make sure that you report them.

Reducing excess heating

Before using cooling equipment, it's important to try and avoid excess heating, for example from sunlight, equipment, lighting and refrigeration. Sunlight is the easiest to control as you can adjust blinds to redirect the sunlight towards the ceiling or walls. If your window hasn't got a blind, or special heat reflective film or glass, let those responsible know. If you play a role in procurement, consider the energy efficiency of the products you are buying as the more efficient the product is, the less it will cost you in the long run.

Don't open windows whilst the heating is on

If you are too hot and the heating system is on, it may be that the thermostat is set too high. If you immediately open a window to cool yourself down, it will cause the heating system to work harder to maintain the temperature the thermostat is set to. This will use more energy and cost more money. Instead, let the person responsible know so that they can turn down the heating system. It may also be worth reminding this person of the recommended thermostat settings. In the UK, it is recommended that thermostat settings are in accordance with the Chartered Institute of Building Services Engineers (CIBSE) guidance:

- Heavy activity: 11 - 14 °C
- Light activity: 16 - 19 °C
- Sedentary: 19 - 21 °C
- Offices: 21 - 23 °C

Setting the thermostat just 1°C lower can reduce heating costs by about 8%. When cooling, setting the air conditioning level to 1°C higher saves 2-4%.

Natural cooling and ventilation

Before asking for the air con to be turned on, ask whether you can open windows on opposite sides of the building to allow natural ventilation to cool down the internal temperature. This free cooling of the building reduces energy consumption, leading to significant cost savings.

Why to dress appropriately

As you've read above, excessive heating and cooling significantly increases energy costs. Therefore, if you do not dress appropriately, energy consumption will need to be increased just to make you comfortable. Dressing appropriately will ensure there isn't any excessive energy consumption.

HVAC controls

HVAC systems can be automatically controlled. They can be set on a timer to control when they turn on and off, and they are also programmed to maintain a certain temperature. Contact the responsible personnel to ensure that time controls are only set for the required times.

If the thermostat is adjusted, for example by increasing the temperature at which the cooling system turns on, you probably won't be aware of how to adjust the heating system accordingly. This could

Figure 7b: Example of one Opportunity Area for employees of startups: Save on heating and cooling: HVAC. Part 2.

result in simultaneous heating and cooling. A 'dead band' needs to be set of approx. 4 - 5°C which ensures that neither the heating and cooling is operating between given temperatures. The diagram below shows a dead band of 5°C from 19°C - 24°C

If you notice that the HVAC systems are coming on at the wrong times, or are set to the incorrect temperatures, notify the person that is responsible.

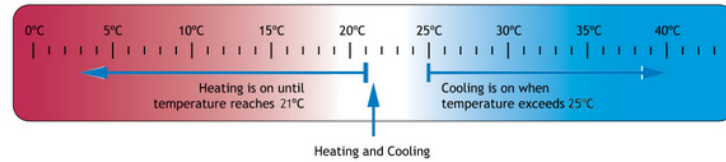


Diagram of 'dead band' control indicating recommended temperatures

Portable heaters

If you are always cold, but the heating system is set up correctly, it is a sign that there is a problem with the system or building fabric. Ask the person responsible for heating and cooling if the air conditioning flow rates can be reduced - these are often set too high, which causes a draught for staff sitting nearby.

If it is not possible to fix, it is worth asking whether there is any local control of the heating system in your part of the office (for example thermostatic radiator valves).

The problem with portable heaters is that they can affect the general temperature control of the space you are trying to heat or cool. These devices are also often a health and safety hazard and should never be left in unoccupied areas or plugged into an extension lead.

Be mindful that portable heaters in the workplace will be subject to PAT testing.

Tools

- Calculators
- Documents
- Key Fact Sheets
 - [SEAI Energy Awareness Resources](#)
SEAI energy facts for employee awareness, to use in your own campaigns.

Find out more information on how to save energy in other opportunity areas:

- Office equipment
- Heating, cooling & controls
- Lighting & controls

Figure 8c: Example of one Opportunity Area for employees of startups: Save on heating and cooling: HVAC. Part 3

4. E-learning

This virtual learning environment within START2ACT will provide the user with a highly interactive and engaging opportunity to complete short courses on energy efficiency. The E-learning environment will be available for the user after a short registration. As one of the features of the Interactive Energy Saving Platform, the E-learning section of START2ACT can be used as a standalone tool or as thematical supplement to the knowledge base. It offers the possibility to the user for (i) flexible and distant self-education on energy efficiency and (ii) a more structured and guided approach towards facilitating the easy uptake of the various energy saving options.

The E-learning modules will encompass the following three topic complexes:

1. Energy efficiency in the workplace
2. Taking energy efficiency home
3. Smart energy management for managers and owners

A detailed description of the START2ACT E-learning is available in the Deliverable **D3.4 E-learning structure and content**.

5. Energy Saving Competition

This feature of the START2ACT Interactive Energy Saving Platform is designed for small businesses with offices and employees (this will entail, other than young SMEs, also partly startups in later stages of development). Participation in the Energy Saving Competition will be arranged on a company level, meaning that each company will have one account, and within that account there will be two types of registered users: a main contact and multiple company members.

After registration, the participating companies will have the chance to self-assess the status of energy efficient practices and behaviour in their offices. The self-assessment tool allows participants to upload evidences of their actions, grouped into five sectors of activity, to the company account. The evidences are reviewed within the START2ACT consortium and a score is given accordingly. The participants can earn START2ACT bronze, silver, gold or platinum awards based on the scoring of the first self-assessment achieved.

In order to show progress in energy efficient behaviour and awareness within the entire company, participants are encouraged to revisit the competition pages again and complete the self-assessment. It is intended that the self-assessment tool is revisited several times by each participant to show the progress towards energy efficiency in the company.

A detailed description on the START2ACT Energy Saving Competition is available in the Deliverable **D3.5 Energy-saving competition**.

6. Interactive Social Platform

The Interactive Social Platform will allow the users of the various START2ACT services (Interactive Energy Saving Platform, business breakfasts, on-site training of SMEs, mentoring of startups) to communicate their own experiences, achievements, interests and needs on the topic of energy efficiency at work and at home, and to offer support and advice to each other. With this function, the platform is directed towards people from young SMEs and startups, either involved in the physical activities of START2ACT or visitors of its online services. As all START2ACT activities are focused on several topic areas in regards to energy efficiency at work and at home the interactive social platform will provide a similar topical structure to give users the chance to launch communication in these specific sectors.

In addition to this, the Interactive Social Platform will provide an "Ask the Expert" function where participants will have the chance to directly seek advice from the national START2ACT partners. A specifically designed section within the Interactive Social Platform will be set up where questions, comments or discussion items can be posted by registered users and the respective national START2ACT partners are responsible to provide tailored web-based expert advice.

A more detailed description of the Interactive Social Platform will be available in the deliverable **D3.6 Interactive social platform** in May 2017.