SPEEDIER engagement for the SME community

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Abstract:

This paper presents the work of the SPEEDIER project in the context of the Article 8 of the Energy Efficiency Directive (EED) which includes a requirement for the EU Member States to develop programmes for small and medium-sized enterprises (SMEs) that encourage them to undertake energy audits and implement the identified energy efficiency measures. The papers looks at outcomes of the project that can contribute to the European Green Deal and the carbon neutrality target by 2050.

Introduction

The Intergovernmental Panel for Climate Change (IPCC) issued a very important report on the impacts of global warming. Based on scientific evidence, the report demonstrates that human-induced global warming had reached 1°C above pre-industrial levels. That report was published in 2018. Subsequently, it was envisaged that the rate will be increased by approximately 0.2°C per decade. Today (August 30th, 2021), it is read from *CNN that* Human-caused climate change is <u>making hurricanes more dangerous</u>. They are producing more rainfall, moving slower once they make landfall and generating larger storm surges along the coast. <u>Hurricane Ida was a prime example</u> of those changes, and scientists say storms like this will become more common as the planet warms.[1] The World Metrological Organization (May, 2021) stated that there is a 90 per cent likelihood of at least one year between 2021-2025 that will become the warmest on record, which would dislodge 2016 from the top ranking. According to Greta Thunberg, even if we stop all emissions from non-food sectors (energy and industry) today, food emissions alone would take us well beyond 1.5°C by 2100[2].
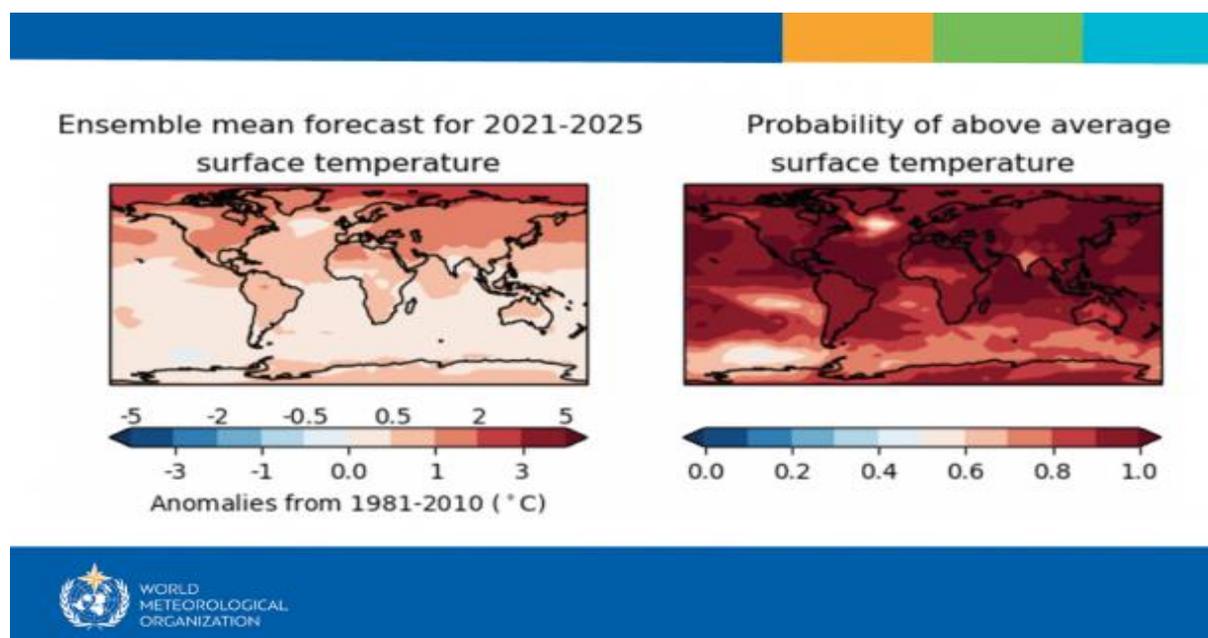

Figure 1 - Source: World Meteorological Organisation

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[1] https://edition.cnn.com/2021/08/30/weather/hurricane-ida-climate-change-factors/index.html
[2] https://twitter.com/GretaThunberg (August 28th, 2021)

The above text is not written for pleasant induced reading. Words on the impact of climate warming are no longer necessary. We all know action and even more action is required. Will people change their habits? Global carbon neutrality is also challenge. Climate change does not respect legacies and jurisdictions.

Without clear direction, bullish determination, both at personal and governmental levels and stepping up the international climate action, global average temperature increase could more easily reach 2°C soon after 2060. It will continue rising afterwards to the decrement of planet earth and all its inhabitants across many facets of life and society. *It is in our hands.*

In 2021, we see it, be it the dreadful and more frequent forest fires across Europe and America, those horrific flash floods or the drought - the world (no, 'our' world) is no longer what it used to be. Can it be restored? Carbon neutrality is a challenge. *The livelihood of future generations is in our hands.*

European Policy Level

The importance of the new Green Deal cannot be understated. It plays an extremely significant role in the future of Europe and consequently on the global field. It was delivered in coherence with two key international initiatives in the climate domain, namely the Paris Agreement, which is aimed at counteracting the horrific climate change phenomena through the aim of limiting the increase in the global average temperature to below 2°C above pre-industrial levels. The second area is the United Nations 2030 Agenda for Sustainable Development. This sets in motion seventeen (17) Sustainable Development Goals to be reached for the eradication of poverty and for the achievement a global sustainable development by the year, 2030. The European Green Deal is mainly aimed at attaining EU's (27 members and the United Kingdom) climate neutrality by the year 2050, through the process of coupling environmental protection and economic growth, which is fundamental for sustainability. The European Commission has also published its proposal for recasting the EU Directive on Energy Efficiency. The Green Deal specifically aims to improve the well-being and health of citizens and future generations through the provision of a) fresh air, clean water, healthy soil and biodiversity, b) renovated, energy efficient buildings, c) healthy and

affordable food, d) more public transport, e) clearer energy and cutting-edge clean technological innovation, f) longer lasting products that can be repaired, recycled and re-used, g) future-proof jobs and skills training for the transition as well as h) globally competitive and resilient industry.

The European Green Deal focuses on 3 key principles for the clean energy transition, which will help reduce greenhouse gas emissions and enhance the quality of life of our citizens:

1. ensuring a secure and affordable EU energy supply.
2. developing a fully integrated, interconnected and digitalised EU energy market.
3. prioritising energy efficiency, improving the energy performance of our buildings and developing a power sector based largely on renewable sources.

The 'Delivering on the European Green Deal' package targets a reduction of net greenhouse gas emissions by at least 55 per cent by the year, 2030. The ultimate objective is to become climate neutral by 2050. This is interlinks with a number of today's other proposals, notably the revised Renewable Energy Directive, the Emission Trading Scheme (ETS) and the new Social Climate Fund and the revision of the Effort Sharing Regulation.

Greenhouse Gas Emissions from transportation in Europe increased in 2018 and 2019, according to the European Environment Agency, and road transport was responsible for almost three-quarters of those emissions. In its 'Sustainable and Smart Mobility Strategy', the European Commission aims to shift traffic from road to rail and double its high-speed passenger rail traffic across Europe by 2030 and double rail freight by 2050.[3]

Figure 2 – European Transportation Greenhouse Emissions

The European Commission Directive seeks to introduce a higher target for reducing primary (39 percent) and final (36 percent) energy consumption by 2030. This is binding at EU level and is in line with the Climate Target Plan. At a national level, the directive introduces a

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[3] https://ec.europa.eu/research-and-innovation/en/horizon-magazine/how-future-trains-could-be-less-noisy?pk_campaign=transport&pk_source=twitter&pk_medium=social

benchmarking system for the European Union Member States to set their national indicative contributions to the binding EU target.

National Policy Level:

To obtain a 1.5°C pathway involves a significant effort and change for the greenhouse emission (GHG) reduction to be realised. Here is a snapshot of what is understood to be some of the activities to be going on across key regions of Europe. In Ireland, the government published a <u>Climate Action and Low Carbon Development (Amendment) Bill 2021</u>. This is set to put Ireland on the road to net zero emissions by the year 2050. The Climate Bill makes the Irish government legally accountable for this target. Objective of countries, such as Romania, have set to guarantee an efficient operation of their national energy system with plan to meet the goals set by the EU in terms of GHG emissions through the "Climate changes — renewable energies" legislative package. In Italy, the present government has established energy and climate at the center of its political agenda. The Italian national energy plans have set ambitious targets for renewables by 2030, aiming for it to reach around 30 per cent of the total energy consumption[4]. The Italian policy is heavily focus on renewables. In Spain, the Spanish framework for energy and climate is based on the 2050 objectives of national climate-neutrality, with 100 per cent renewable energy in the electricity mix and 97 per cent renewable energy in the total energy mix. The focus for Spain is to develop renewable energy (i.e., solar and wind), energy efficiency, electrification as well as renewable hydrogen. In Germany in 2019, we saw for the first time renewable energies, actually produced more electricity than coal-fired power plants. This is most encouraging. Initiatives that would contribute to a positive impact on Mother Nature can only be good for the long term sustainability of planet earth and its inhabitants. Obstacles are steadfast and some will be difficult to overcome but nevertheless fresh initiatives are to be encouraged across each EU member state jurisdiction and the UK. **We need to see more fresh initiatives having impact, but with necessary change there can be a cost. This in the short-term can be hard**.

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[4] International Energy Agency

What SMEs can do

SMEs play a crucial contributing role to realise climate and energy policy objectives. Across Europe, industry and services SMEs are encouraged to support the implementation of national climate action changes to reduce Greenhouse Gas emissions, achieving set EU targets and driving technology development to progress low-carbon, clean and energy efficient product development and solutions worldwide. To date, few EU SMEs have undertaken an energy audit and even less have taken action to implement energy-saving measures. Lack of time, knowledge, and finance, coupled with the low priority that SMEs give to energy management are the most commonly cited barriers to effective energy management in SMEs. Article 8 of the Energy Efficiency Directive (EED) includes a requirement for the EU Member States to develop programmes for small and medium-sized enterprises (SMEs) that encourage them to undertake energy audits and implement the identified energy efficiency measures. It is estimated that SMEs make up over 99 per cent of all businesses and employ over 100 million people[5]. They account for approximately 13 per cent of global final energy consumption.

A number of European projects, including SMEmPower Efficiency, E2DRIVER, Innoveas and SPEEDIER aim to improve the energy efficiency of European SMEs by helping them to undertake energy audits and implement the recommended energy efficiency measures. Each of these projects are developing their own capacity-building activities. They are targeting SMEs in a variety of countries across a range of sectors with the aim of demonstrating the effectiveness of the different approaches. In their joint projects article, 5th January 2021, titled 'Energy Efficiency Solutions for Small and Medium-Sized Enterprises', collectively they concluded that energy efficiency is unfortunately not a high priority for SMEs. The current level of energy management within SMEs is low. This is a main reason why most SMEs have not carried out an energy audit. A positive outcome was that 72 per cent of the companies who did conduct an energy audit continued to implement some energy efficiency improvements. The main motivation to implement energy efficiency actions is the reduction

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[5] https://ec.europa.eu/growth/smes_en

of cost, followed by the contribution to fighting climate change. The most common measures implemented are related to technical systems, i.e., lighting, ventilation, heating, cooling, and automation, which are lower risk and have quick payback, avoiding any risks to the production line or product quality. Less favoured measures are those related to the building envelop, along with demand response actions and energy management processes. These are the key findings, based on survey conducted across participating SMEs were from Cyprus, France, Germany, Greece, Ireland, Italy, Poland, Romania, Slovenia, Spain, and the UK, covering different sectors, such as construction, manufacturing, the food industry, services, chemicals and chemical products, hospitality, commercial and trade, heavy industry, education, energy, and the automotive industry.

If we take a look at the SPEEDIER (www.speedierproject.eu), it represents fresh-thinking! The project is supported by the European Commission (Grant number 847034). The initiative gathered much impetus as it progressed to give the target market what is believed to be needed. The focus on Small-to-medium sized enterprises (SMEs) is imperative for the outcomes and a Service provision through engagement with Energy Efficiency experts is core to its implementation. The SPEEDIER Service plays a contributing role to improve climate change and sustainable development. It is based on clear innovation. The project is due to run to November 2021. The benefit of the SPEEDIER Service to the SMEs and also to the Energy Expert are further addressed in the article.

SPEEDIER as a Service is a highly innovative *one-stop-shop solution* that applies an integrated approach to energy management for SMEs, providing information, advice, capacity building, energy assessment, financing as well as the implementation of energy efficiency solutions and for the monitoring of implementation impacts. SPEEDIER, delivers a Service that is self-financing for outsourced energy management with several benefits for SMEs. The SPEEDIER Service enables energy, cost and carbon savings associated with the implementation of Energy Conservation Measures (ECMs) to be more readily realized. The composition of the SPEEDIER Service includes the development of a software energy expert support tool for use by the registered expert during an energy assessment process at an SME client site. The tool

provides a clear framework to assist the individual experts to gather the data required to conduct a robust energy assessment and to enable them to present to their SME client with a range of possible ECMs, classified into no-cost, low-cost, medium-cost and high-cost categories.

Table 1 – SPEEDIER Energy Conservation Measures

ECMs measures	
No-cost:	Cost nothing to implement, yet result in energy and/or cost savings. Immediate payback period
Low-cost:	Small cost associated with their implementation that are comparable to the cost of regular maintenance of the energy consuming equipment. Short payback period
Medium-cost:	Some investment from the SME to implement while delivering a reasonable return on investment. Medium payback period
High-cost:	Large investment in order to implement, but can result in greater energy savings and therefore greater returns on investment. Long payback period

The information is gathered and entered into the SPEEDIER software tool supports, which enables the Energy Expert to identify the package of ECMs that are most appropriate for their client SME and it calculate the likely energy and cost savings. It also measures the actual savings post ECM implementation against the baseline. A ring-fencing of the subsequent cost savings, delivered as part of the SPEEDIER Service, can enable the SME to invest in further energy conservation measures, which can be low, medium or high cost. The point being, is that the savings accumulated over time are reinvested into further energy efficiency internal undertakings for the common good of the business and a positive contribution to a reduction in Greenhouse gas emissions.

Article 8 of Energy Efficiency Directive (EU EED) (2018/2002) is very relevant to SPEEDIER (Twitter: @Speedierproject). It requires the European Member States (EU-27) to develop instruments (i.e., Projects, Tools and Policies) that encourage SMEs to undergo energy audits and to implement their recommendations. The policy framework was updated in 2018 and is addressed up to the year 2030. The key element of the amended directive is a headline energy efficiency target for 2030 of at least 32.5 per cent. In absolute terms, this means that EU energy consumption should be no more than 1,128 Mtoe of primary energy and no more than 846 Mtoe of final energy. The directive allows for a possible upward

revision in the target in 2023, in case of substantial cost reductions due to economic or technological developments.

SPEEDIER also contributes to the development of the important interoperability concept, which is in line with the European Commission Directive [COM (2017) 134] for the European Interoperability Framework – Implementation Strategy. This is also in line with the 3rd principle of the European Green Deal. The project developed a Better Practice Guide based on the interoperable component of the SPEEDIER Service software support tool for energy experts. The software tool was developed by the Institut de Tecnologia de la Construcció de Catalunya, Barcelona, Spain (ITeC). The tool aims to strengthen the support for the take-up of the SPEEDIER Service, benefiting European based SMEs, contributing to climate readdress initiatives and sustainable development.
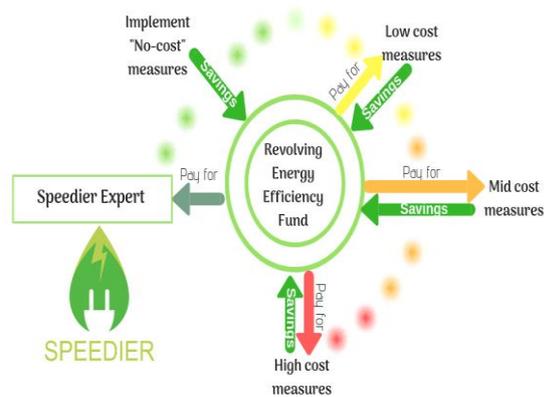

Figure 3 - SPEEDIER Service self-financing mechanism

The SPEEDIER Energy Expert Support Tool

By design, the software tool is linked to the information capture and the ITeC BEDEC databases that will be used and describes how each of the various elements of the tool will be related to each other The information captured is used to perform the calculations using the information that an individual user would complete in the menu: e.g., use details, the economic data, the energy contributions and the building information. BEDEC is the ITeC database of construction elements. It is the parametric bank that contains 860,000 elements of new work and maintenance on buildings, urbanization, civil engineering, rehabilitation and restoration, safety and health and quality controls. The database provides technical, environmental as well as economic information regarding all kind of elements used in every situation in the construction market.

Figure 4 – ITeC database outline
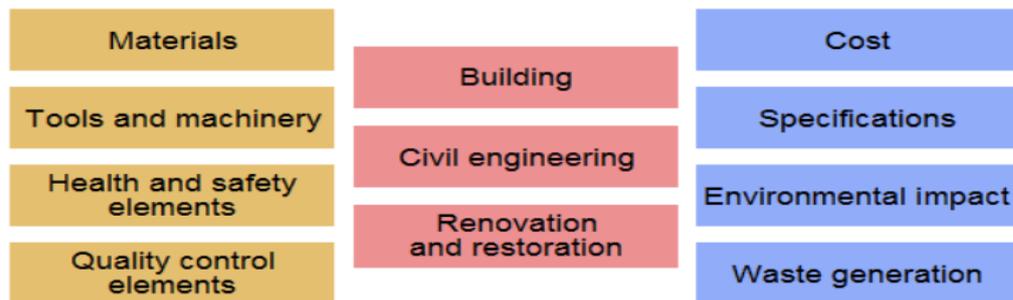
Every element has a price, and is annually updated according to the market situation, and it includes a specification data sheet[6] that is based on the current standards and codes. Additionally, it has data on CO_2 emissions and embedded energy. The database also provides data on the type and amount (weight and volume) of waste that it will generate. Through the application of the ITeC database, the SPEEDIER energy expert support tool includes the following features:

- project management of each SPEEDIER Energy Expert,
- creation of a project with the data from the previous energy audit,
- characteristics of use of the building or floor of the SME,
- the economic data for the subsequent calculation of the measures,
- building definition with all the characteristics of the envelope and building facilities,
- proposed measures of energy savings according to the project data,
- price, energy savings, CO_2 savings and economical return of each measure,
- simulations of the selection of different measures,
- application of a group of measures,
- periodic monitoring of the application of the measures,

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[6] A data sheet, technical sheet or datasheet, also data sheet or data sheet, is a document that summarizes the operation and other characteristics of a component or subsystem in sufficient detail.

- gamification of the results obtained according to the type of project or the measures applied.

For SPEEDIER Energy Experts, the SPEEDIER support tool is linked to the database of construction solutions and categorised ECMs. The tool subsequently delivers for the relevant SPEEDIER Expert, a proposal of a package of ECMs that could potentially be suitable for the client building. This is highlighted in the following Figure.
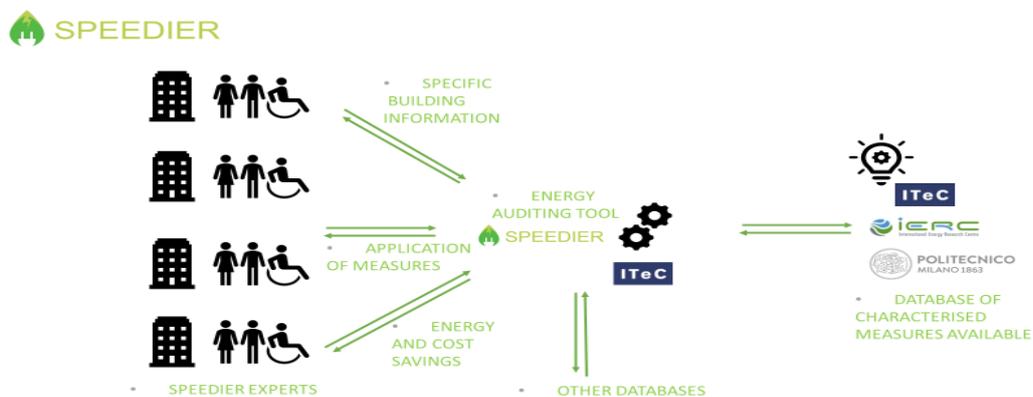

Figure 5 - SPEEDIER support tool for energy expert tool - dataflow

Simultaneously, the SPEEDIER Software energy expert support tool can be used to:

- examine the cost of implementing the measures,
- provide an economic return and
- predict energy saving for the building.

Figure 3, below, describes the various data sources of information used by the tool. This includes building fabric, construction elements and climatic conditions. It also describes how the SPEEDIER Energy Expert will use the data to define the building. Figure 4, also below, shows how the tool will select suitable measures for the building and calculate the likely energy and cost savings for the specific building. Finally Figure 5, illustrates how the tool will keep learning from the data included and will provide a more accurate data in the future.
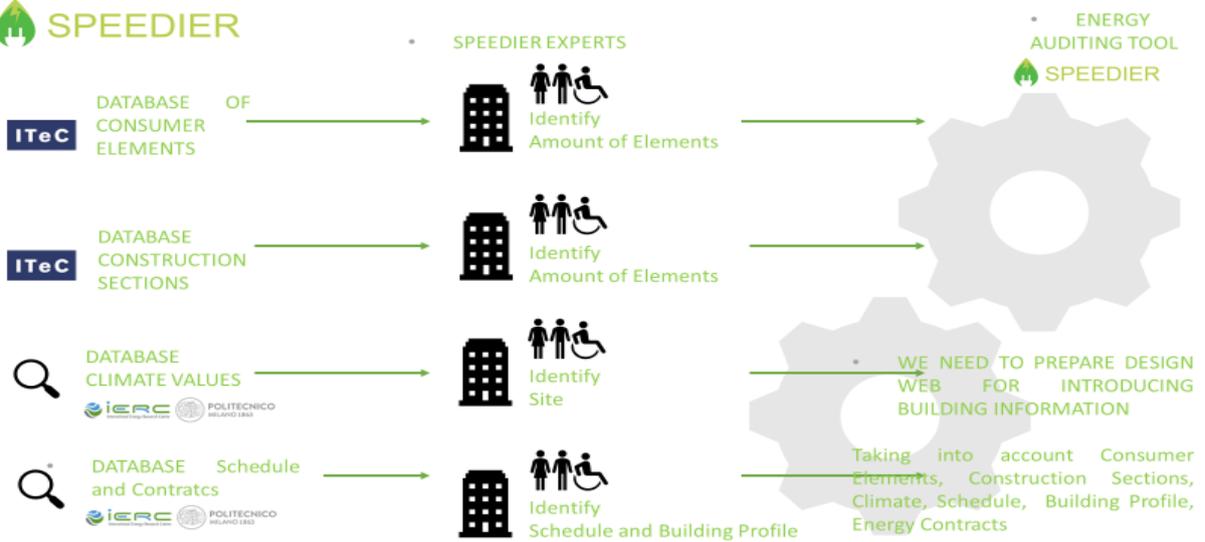
Figure 6: Databases that will be needed to define and build the tool.
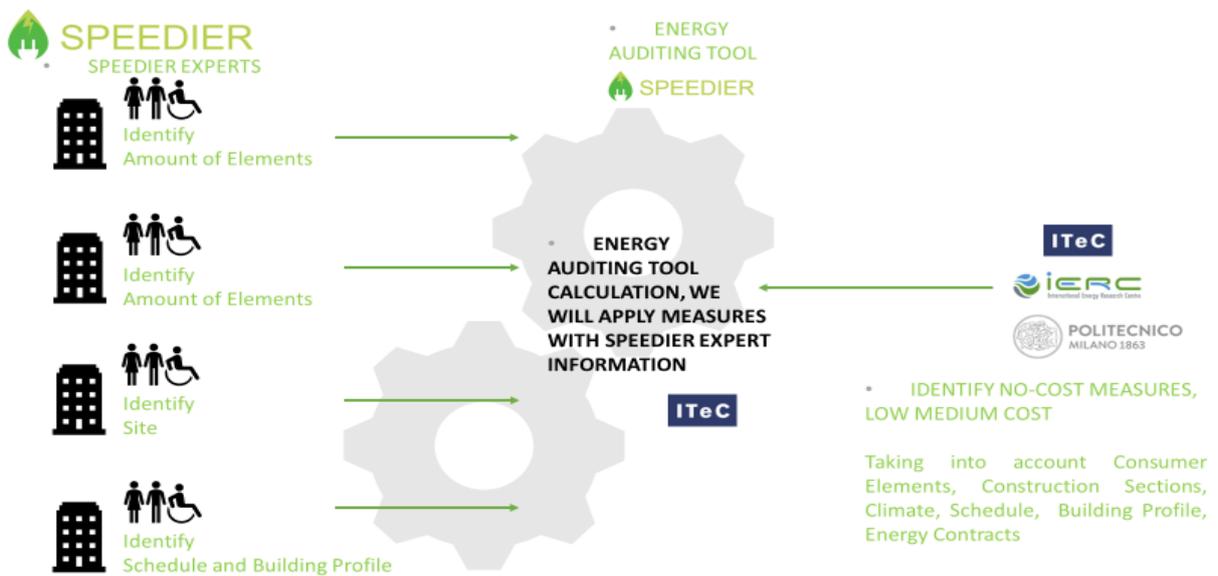

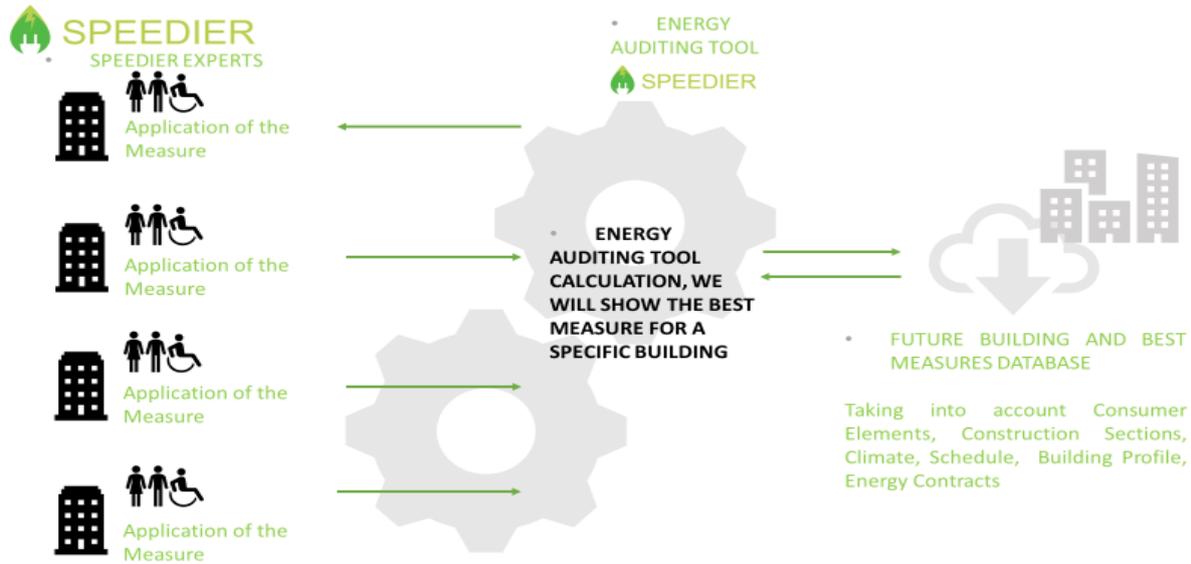*Figure 7: Proposed workflow of SPEEDIER Tool for Experts*

Figure 8: Proposed workflow of SPEEDIER Tool to improve solutions

The design of a tool is linked to the information and databases that will be used and describes how each of the various elements of the tool will be related to each other.

Benefits for SMEs

For SMEs, the greatest benefit is that they have a more understandable and practical way of seeing the energy saving measures that can be applied in their case and understanding the options they have, both at the cost and energy benefit level. On the other hand, they can obtain reports on both the selected solutions and the development of energy savings that are obtained from the application of energy conservation measures.

Benefits for Energy Efficiency Experts

For Energy Efficiency Expert it is a way to always have all the projects that it manages online and in a joint way, it can also improve the way of showing our clients, SMEs, the result of simulations and the periodic report of the state of the application of the measures.

Finally, they can use the Ranking as a way of positioning themselves within all the projects, creating a community with the other experts and checking which measures are providing the greatest savings according to the country or the type of SMEs.

The SPEEDIER Energy expert support tool is designed for easy management by the Energy Efficiency Expert and understandable communication with customers.

The SPEEDIER App.

The second instrument developed in SPEEDIER is a Mobile App (commonly referred to as the SPEEDIER App.). The concept for inclusion in the SPEEDIER project was driven from the brain-child of TFC Research and Innovation Limited and the development was overseen by the International Energy Research Centre – University College Cork, Ireland in the project.

The SPEEDIER App serves as a tool for virtual/remote capacity building training for an organisation and its employees. The aim of the App is to help an organisation/SME to build an energy culture by encouraging behavioural changes in their employees that lead to reductions in energy consumption. The App provides a means for virtual/remote training as per the need of organisation and availability of their employees. Web and mobile version (Android and iOS) of the App has been developed. Presently (October 2021), a beta version of the App has been tested by the consortium, but it has yet to be tested within a business as a working prototype. This direction is part of the planning process currently under construction for the next stage for the development of the App.

To provide some insight into the App, there are two different types of accounts, the Admin account and User account. Admin account is for the SPEEDIER Energy Experts or the designated SPEEDIER energy efficiency champion within the organisation. The User account is for general employees of the organisation. The Admin is responsible for maintaining and sharing energy related information of their organisation to the User accounts of their organisation. Admin is also responsible for managing user accounts in the app for their respective organisation. These energy data will be protected for each of the organisations; one organisation cannot see another organisation's App applicable data. However, data sharing and training can be setup according to the organisation's energy management policy and energy culture targets.

In order to encourage Users to use the App, energy monitoring and gamification features have been introduced, where users will be rewarded for each of their activity in the app. The aim of the energy monitoring feature is to create energy-use awareness within the employees across the organisation. Energy monitoring features enable Users to:

1. View present and target building energy rating and energy performance indicator of all the buildings of their organisation.

2. View and download organisation's monthly/annual energy use and energy cost in table/pie chart/line graph format.

3. See the list of energy consuming equipment along with number and power rating of each equipment.

4. See the list of probable Energy Conservation Measures (ECMs) that could be applicable to their organisation. Users can also see cost category and status of implementation within their organisation for each ECM.

The gamification features aim to motivate employees to use the app and make their opinion heard within their organisation. The Admin will be responsible to take actions on the opinion provided by the Users. According to Lorenzo Morales Martinez (Dekra Industrial), *'Gamification and mobile app is brilliantly conceived and with its KPI facility, SPEEDIER is hugely attractive.'*

Presently, the following gamification features are available in the App: -

1. 'Feedback' feature provides an opportunity to employees to give feedback on their satisfaction with their working environment in terms of thermal comfort, indoor air quality and lighting conditions. This feature enables them to bring issues to the attention of their managers/Energy Champion so they can be addressed with a view to make an improvement. Users will be rewarded with some points for providing feedback in the app.

2. 'Suggestion' feature enables individual Users (employees) to make suggestions on energy saving opportunities for their organisation. This feature helps the manager/SPEEDIER Champion to apply the knowledge of employees working in

different areas of the business to improve their energy efficiency undertaking. It furthers strengthens employee interest and perhaps, ownership of energy efficiency actions. All the users will be rewarded with some points for providing any energy saving suggestion and best suggestion could be rewarded on monthly basis according to the Admin and User ratings. A User voting feature has also been introduced in the suggestion section of the App. This feature enables the Admin to release a list of received suggestions for user's voting on a periodical basis.

3. 'Quiz' feature is comprised of quiz and learning section where employees can learn about importance of energy efficiency and its benefit and check their knowledge. This section can be targeted as per the energy management policy and implementation plan of individual organisation. In learning section, the admin can upload documents that help the employees of their organisation to gain knowledge around energy efficiency. These documents could be uploaded in either word, pdf, power point, picture or web address format and user can download these documents. The questions in the quiz section will be based on the information uploaded in the learning section. In order to make ease of access and not to lose the user's interest, different categories and rounds of the quiz has been introduced. Admin will be solely responsible to manage learning documents and quiz section along with categories, rounds and questions of quiz. Users will be rewarded some points for each of their correct answers in the quiz.

4. 'Reward' feature allows the User to view all the rewards earned for their activities in the App. The App capability can reward the User with some points, each time they take part in one of the activities (e.g. feedback, suggestions, quiz, learning material) in the App. The game and point scoring feature keeps people coming back. Admin can introduce a new type of reward for their organisation to encourage users to actively participate in app.

5. 'Notification' feature provides a quick means of communication for organisation's designated SPEEDIER Champion / energy manager with the other working employees, for example to give reminders.

Benefits of the App are highlighted in the following illustration:

Figure 9 - SPEEDIER App Benefits

The SPEEDIER Better Practice Guide

On the interesting developments from the SPEEDIER project is the development of the Better Practice Guide, which is centred on the interoperable component of the SPEEDIER software energy expert support tool, which again is from the brain-child of <u>TFC Research and Innovation Limited</u>. TFC believe that the European projects must empower more SMEs to take ownership of their contributions. Standardisation is one such area where the empowerment of the SME is crucial. The main European body is CEN / CENELEC. This organisation aims to function as a business catalyst in Europe, with the purpose of removing trade barriers for European industry and consumers. Their mission is to foster a European economy for global trading, the welfare of European citizens and the environment. Standards are developed and agreed by three officially recognized European Standardization Organizations: the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications

Standards Institute (ETSI). Through their services, they aim to provide platforms and an efficient infrastructure to interested parties for the development, maintenance and distribution of coherent sets of standards and specifications. The organisation is understood to have in excess of 490 technical committees and that it involves standardization bodies of the thirty national members, represent the twenty seven member states of the European Union, three countries of the European Free Trade Association (EFTA). This all sounds very impressive and it is, but issue exist. Both CEN and national standards bodies promote a pre-standardisation scheme commonly as the CEN CWA (i.e., Workshop Agreement). This is often promoted as a fast track mechanism to standardisation. Even though the scheme has been in operation for in excess of 20 years and recently updated in the STAIR4SECURITY project, the proportion of CWAs that have been turned into a full standard is very low. The cost to develop a CWA, in particular the cost of the appointed Secretariat and CEN/CENELEC direct involvement. Under the scheme only a national standardisation organisation can fulfil the role of a Secretariat and costs can be very expensive.

What is not promoted very well by CEN / CENELEC is that if an individual or an organisation wants to develop a standard then they should contact the relevant Technical Committee and start proceedings there. Through this route cost alone should be significantly less in direct comparison to the CWA costing mechanism. The SPEEDIER Interoperability Better Practice Guide initiative is presently under-construction. It is being led by partners TFC Research and Innovation Limited in conjunction with Institut De Tecnologia De La Construccion De Catalunya (ITeC), Spain. The development of the Better Practice Guide in SPEEDIER is one example of a Guide presently being developed in European projects in different domains including energy, operational security and ehealth.

The development of the SPEEDIER Better Practice Guide contributes to the fulfilment of Article 8 EU EED directive. Interoperability has been identified as a key characteristic for the SPEEDIER energy expert support tool to aid the implementation of the Article. Interoperability is central to the development of this Better Practice Guide, which is a 'living' document under the control of ITeC and as mentioned, focuses on the integration component

of the SPEEDIER software energy saving measures tool for SMEs. The Guide acts to address the tool architecture, vocabulary and application programming interface (API) constructs of a common information space for the sharing of knowledge at semantic level. This newly created defined capability can enable other related software tools and platforms to suitably engage with the SPEEDIER software energy saving measures tool, which was developed in the SPEEDIER project by Institut De Tecnologia De La Construccion De Catalunya (ITeC). To not comprise their company security policy, direct contact to ITeC is necessary. However, the initiative strengthens the support for the take-up of the SPEEDIER Service, benefiting European based SMEs, contributing to climate readdress initiatives and sustainable development. The theme of the Better Practice Guide is also in line with the European Commission Directive [COM (2017) 134] for the European Interoperability Framework – Implementation Strategy. The capability of related energy management tools and platforms to share common information, to interconnect and communicate with the SPEEDIER software for energy saving measures further strengthens the ability of the Energy Experts and the individual SME energy managers to accurately predict and measure the impact of the proposed Energy Conservation Measures (ECMs). This too contributes to the respond for the urgent need to reduce greenhouse gas emissions that lead to adverse climate conditions and in tandem to strengthen Europe sustainable development goals. Further details on the SPEEDIER Energy Expert Support Tool Interoperability Connectivity – ITeC Better Practice Guide can be located on the SPEEDIER website (www.speedierproject.eu)

Energy Efficiency – Community of Users

Another fresh thinking initiative driven again by TFC Research and Innovation Limited is the development of the Energy Efficiency – Community of Users. The aim of the Energy Efficiency Community of Users (EE CoU) is to facilitate interaction across the **research community** for the energy efficiency sector (referred to as inner circle) and to engage with the sector at levels from policy making through to implementation, training and awareness (**referred to as outer circle**) in support of the realisation of a low-carbon, clean and energy efficient world. It brings together parties committed to Energy Efficiency and the market economy from around the

world. The realisation of the EE CoU contributes to the implementation of the European Green Deal and responds to the need for a reduction of greenhouse gas emissions, which is performed from a research driven, bottom up and cross-fertilization engagement perspective.
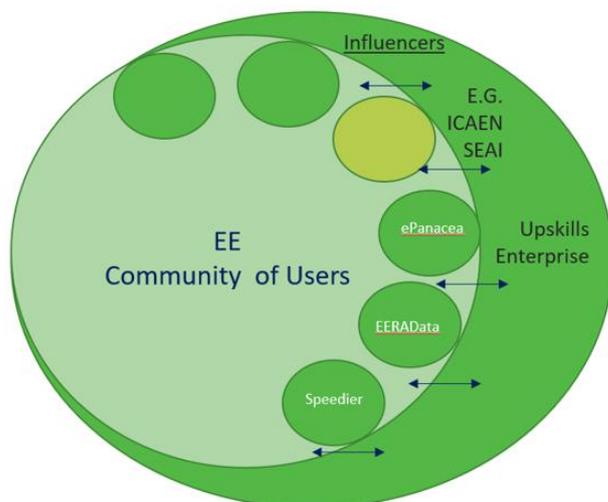

Figure 10 - Energy Efficiency - Community of Users Illustration

The specific aims are to:

- Act as a beacon to help strengthen research project outcomes through greater engagement and collaboration undertakings – *principle:* cooperation for the common good.

- Analyse research identified capability needs and gaps in the relevant areas in a more shared capacity – *principle:* working more as a collective unit.

- Identify synergies, remedies and solutions to address the identified needs and gaps - *principle:* cooperation for the common good.

- Help, where deemed appropriate, to translate the capability gaps and the potential remedies and solutions into needs at regional, national, European or global basis, including research – *principle:* provide advice and strategic thinking based on cooperative engagement.

- Identify funding opportunities and synergies between different instruments to support energy efficiency and sustainable outcomes as well as the growth of EE CoU. – *principle:* proactive intent.

- Identify better practices and standardisation research-related needs empowered by consumers, energy efficiency practitioners and the engaging community - *principle:* proactive intent.

- Critically, integrate the views of the citizen and the consumer - *principle:* proactive intent.

- Contributes to green growth in world trade - *principle:* proactive intent.

The EE CoU provides a setting where stakeholders share experiences, seek answers to perceived common problems, identify better practices and coordinate initiatives for the common good of the realisation of a low-carbon, clean and energy efficient world.

Energy Efficiency - CoU Stakeholders

The stakeholders of the Energy Efficiency - Community of Users will include members from energy efficiency and civil society representatives, retrofit and technology specialists, EE associations, industry, researchers, academia, consumer associations and invited interested parties.

Get in contact

If you are an SME or an Energy Efficiency Expert and would like to know more about the SPEEDIER project then check out:

www.speedierproject.eu

If you would like to know more on either the ongoing Interoperability Connectivity Better Practice Guide or the Energy Efficiency Community of Users initiatives then contact TFC Research and Innovation Limited please at:

www.tfcengage.com