



1st European Workshop with Stakeholders

D11.3

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Deliverable

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DISSEMINATION LEVEL

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Statement of Originality

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Summary

Deliverable D.11.3 is part of Task 11.2, “Management of Strategic Communication and Dissemination activities” and describes the 1st European Workshop with Stakeholders where we shared our learnings to date, through the four TwinERGY pilots. The focus was our engagement and learning with citizens. Our target audience was broad, and included researchers, local government representatives, policymakers, community, the not-for-profit sector, business, energy regulators and others interested in how to effectively engage citizens with innovative energy technologies. We aimed to encourage discussion, and debate strategies for engaging citizens in contributing to the transformation of the energy markets. The activities within the workshop were co-designed with citizens, involved stakeholders, generated creative content and insights informing the next phase of TwinERGY, and disseminated our learnings and activities to a wider audience.

Specifically, the 1st European workshop event incorporated co-design with citizens through a workshop with participants and residents of Benetutti, (the Italian pilot); a workshop with stakeholders (municipality workers and local politicians) and an online hybrid event that included the voices of the pilot participants; a presentation regarding legal and ethical considerations; and contributions from engagement and energy market experts.

Knowle West Media Centre (KWMC) led the deliverable and worked with University of Patras (UoP), STAM, Benetutti, Ideas for Change (IFC) and Arthur's Legal to deliver an event over 28th/29th September.

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1/ Introduction

1.1 Scope

This part of the report outlines the planning and preparation that took place to deliver the EU Stakeholder event, and the rationale for the approach that we took. Regular meetings were set up between UoP, STAM, IFC and KWMC, with additional meetings with pilots to discuss their contribution to the online event. In addition, all partners were kept updated during online project meetings and were invited to suggest expert contributors, invitees to the online workshop, and support the marketing of the event through their networks.

1.2 Approach and Objectives

Our approach to planning the event was firstly to make sure that all pilots' citizens' learning was represented and that their voices were central. We agreed that the way to achieve this was to run a workshop with Benetutti citizens as part of the EU Stakeholder event. As we were unable to have citizens from the other pilots attending in Sardinia, we agreed that pilots would provide short video content of their citizens talking about the pilot they were involved with.

This section therefore covers our approach in equipping the pilots with the information and skills to be able to create a short film presentation that would be shown during the online event. We initially ran content creation workshops in the UK, and shared our expertise with all pilots.

It was important for us to emphasise the fact that, through widely available technologies such as smartphones and tablets, content creation is accessible for anyone who wishes to tell a story from the ground up. The ability for residents' voices to be heard directly is an important element of the engagement strategy, as is building the confidence of the pilots to use this approach. Our aim is to instil confidence in the ability to use the technology available to the individual.

We assembled a series of instructional documentation (see Annex 3.4) that guided and informed the pilots in best practices for creating both audible and visual content. By

providing the relevant resources, pilots would be confident enough to adopt and apply the information to tell their stories.

As well as guidance around equipment and technique, we also highlighted the considerations and concerns of the participants around their privacy - by underlining the need for contractual consent and ensuring that participants were conscious of their contribution and how it would be utilised within the project.

An emphasis on the influence of participants' contribution is a critical element to the engagement process, long-term retention and interaction with the project and attitudes to change. Through their contributions and participation in the content creation, a synergy is formed and can be built upon for further engagement at later stages of the project.

1.3 Audience Communications and Marketing

To achieve the maximum number of attendees and make the best out of TwinENERGY's communication capacity, a dedicated Dissemination Plan for spreading the PAN EU Workshop across the energy community and consortium was designed. The plan defined a series of audiences to be targeted and actively approached by means of the communication campaign, as well as resources to help the Consortium on its task of spreading the event and the invitations. This was carried out through word of mouth for citizens and local stakeholders, while for institutional representatives, formal invitations were sent out to Sardinian representatives active within the regional green transition.

The audiences targeted for the event were a mix of the following:

- **Internal stakeholders**, partners of the project and stakeholders from each partners' ecosystem.
- **Developers** (practitioners and researchers).
- **Researchers and practitioners** in smart energy systems, DR programmes, digital twin developers, communities around data among others.
- **Policy makers and regulators** in each of the pilot sites and in cities interested in citizen engagement processes around energy.
- **European public sector** looking to adopt solutions that empower end users and citizens to be part of the energy market.

- **Initiatives, NGOs, citizen platforms** and groups eager to solve public and social challenges of the current complex energy context.
- **Intermediaries**
- **Opinion leaders** and experts who could help increase general attention to the project and its objectives.
- **Journalists and Content Creators**
- **EU initiatives** under the shape of other clusters, projects and ideas around energy (i.e. Bridge project).

In parallel, a dedicated communication toolkit with tools, resources and adaptable content was shared with partners to assist them in disseminating the event. (See Annex 3.3).

1.4 Planning and Structure of Event

After establishing the importance of ensuring citizen voice was at the heart of the event, we planned it to include three sections:

Section 1. Introductions to the TwinERGY project and our approach and methodologies employed to engage with citizens and the legal and ethical considerations in decision making.

Section 2. Hearing from the pilots with citizen voice centre stage.

Section 3. Reflection and insights through expert contributions and audience discussion. Finally, after the online event finished, the TwinERGY partners reflected on the learning from the event, and through follow-up workshops during the project review, used this to inform future plans for citizen engagement.

The partners discussed the selection of expert contributors and how to ensure a range of suitable high-level expertise. We particularly wanted to make sure that there were strong links to Bridge, and to ensure we had a good gender balance. Following conversations with potential experts we invited the following experts to participate:

1. **Mia Ala-Juusela**, M.Sc. (Tech), a Senior Scientist with over 20 years of research experience in the area of eco-efficient communities.

Her expertise covers energy efficient buildings, renewable energy in buildings and the optimal connection of demand and supply of energy in the buildings, lately mostly on district scale. The user perspective and human thermal comfort often play a central role in her

studies. Business model planning is included in the work. She has participated in different roles in many national and international projects, recently e.g. as Coordinator of EU-projects STORY (Added value of STORage in distribution sYstems) and IntUBE (Intelligent Use of Buildings' Energy Information). She has participated in the Built4People co-operation, aiming at people-centric innovation in the built environment that drives the transition towards a sustainable society and economy. She is currently conducting PhD studies related to Energy Positive Neighbourhoods, and again, the stakeholder perspective is one of the three central dimensions in the study. Her stakeholder perspective, human thermal comfort, and business modelling interests were highly relevant to this workshop.

2. **Thomas Mikkelson**, is the former CEO of Geco Global, and heads Smart Innovation Norway research section on applied sustainable energy, aiming to establish EU leadership on user aspects of green energy transitions.

Thomas is a leading expert in the fields of customer engagement, communication and behaviour in the utility sector. He was a former energy utility marketing director with experience of effective customer apps and other online services that brought mass customer engagement and behaviour changes. He worked as a Senior Manager with international companies like Panasonic and Green Energy Options in developing the future business of smart home technology and home energy management systems through visualisation of energy use in private homes and creating customer relations through the use of big data. He is engaged in several inter-European networks focusing on user involvement, customer interaction and actual implementation of smart energy technology. Thomas was the first rapporteur of Bridge's Working Group on Customer Engagement and is currently Task Leader Joint Communication Efforts ensuring knowledge exchange between EU-funded projects. Thomas's expertise and role with Bridge and knowledge exchange between EU projects was invaluable.

3. **Christiane Gebhardt** is a Member and Strategic Advisor of the international Triple Helix Association. The focus of her research and work is strategy and organisational development and governance for mastering complex projects and stakeholder driven innovation.

She is an EU expert on smart specialisation and the green deal and carried out research at Chicago University and the MIT/ US. She worked as a management consultant at the Malik Institute in Switzerland, an international consulting firm renowned for leadership, strategy and organisational development advisory for industry, university/science and government.

Among her clients are the German Ministry of Research and Education, the Swiss Federal Agency for Research and Innovation, the European Commission, the Helmholtz Association of German Research Institutes as well as many industries, start-ups and national champions. She organised the BRAINPORT Smart + Sustainable City Syntegration and the FONA funded SMARTilience climate resilience cities project with Fraunhofer IAT, as well as many regional innovation clusters, and was a member of the German Leading-Edge Cluster Commission from 2009 – 2014 after evaluating the German Entrepreneurial Regions program for Eastern Germany. She is an EU expert on smart specialisation and the green deal and carried out research at Chicago University and the MIT/ US.

Christiane currently heads the regional division of the Smart & Sustainable City Group at Drees & Sommer SE in Switzerland. Her expertise in moving stakeholder driven innovation to implementation through strategy and governance was highly relevant in helping us to discuss challenges relating to energy market transformation.

The three experts were invited to share their background and expertise relevant to the TwinERGY project, to listen to our pilot updates and the work we have done relating to citizen engagement and learning and then to reflect on what they heard and offer insights. The ensuing discussion was valuable for informing next steps in the TwinERGY engagement planning.

2/ Stakeholder Event

2.1 Workshop with Benetutti Citizens

Introduction and Overview

The workshop saw 20 people attending, of which four were already TwinERGY participants. The average age was around 60 and the majority of the participants were men. It was designed by KWMC in partnership with IFC and presented by Marco Barbagelata from STAM.

The workshop was created following meetings between KWMC and STAM to find out details such as: the expected number and average age of attendees, their level of technological understanding e.g. if they used smartphones, what technology they already had in their home, what was going to be deployed and the feedback needed from participants.

STAM had already performed a workshop in Benetutti to present the TwinERGY project to interested stakeholders (mainly potential pilots) with a focus on the presentation of the hardware that was going to be installed - the IoT devices, namely the Shelly Smart Plugs and the Aircare Sensors, as well as the Raspberry Pi Devices. After a brief presentation of each device, the installation process was shown to the audience. This was done to overcome the scepticism and doubts about the invasiveness of installations.

STAM was now keen to find out people's response to the TwinERGY Dashboard due to be introduced and to gather feedback on it. Staff also wanted to find out how participants would react to demand response and which appliances they were likely to favour being switched off in the background. They also wanted to see if people's motivations for being part of the project had changed from the start (mainly to save money) and if participants could now see additional benefits.

Workshop Design and Results

KWMC met with IFC while designing the workshop to discuss engaging activities and ways of gathering the information needed in a fun way.

The workshop was designed in three sections:

1) To understand what motivates people to participate in the TwinERGY technology Attendees were offered seemingly opposing options based on different values:

- The future of your children/grandchildren
- Saving money
- Environmental considerations
- Energy crisis
- Helping the grid
- Making your home more energy efficient

Participants held up blue or red flags to visualise their answers or could hold up two if they were motivated by two values e.g. their children's/grandchildren's future and saving money. This was a good way of seeing at a glance what people's motivations were.

For most people the economic component was seen more as a constraint rather than a driver: from a qualitative point of view almost all participants claimed that the main driver was to leave a better world for future generations with a focus on family members. The cost-saving related aspects were seen more as an enabler to make this goal sustainable from an economic point of view.

They also cared about themselves as a society - it was important to them to look outside their houses and at the community level. This was a key learning for the pilot in how they should continue to engage with people - not only showing participants what TwinERGY is achieving in their houses but also how it affects the community.

The future of Benetutti was also of high importance and it was hoped the TwinERGY project would benefit them economically and make their community more attractive, helping to bring back younger people to the town.



2) To get citizens' feedback on the technology offered

Citizens were shown the TwinERGY Dashboard on a large screen and it was explained to them how this worked and what it would enable them to do i.e. allowing them to see monitored appliances in real time consumption as well as the amount of energy produced every 24 hours. The dashboard represented a mockup with three key sections displaying:

- Energy Consumption charts, showing the energy consumption breakdown by day and appliance
- Energy Production charts, showing generated power over the past and power quality
- Control section, allowing users to interact with smart appliances (e.g. turn smart plugs on and off etc).

This dashboard will soon be available for all participants to view on their mobile phones or tablets.

In a co-design session, participants were then asked for feedback on any of this functionality - what they liked or didn't like and what they wanted to include e.g if they would prefer to view energy consumption and production every hour, six hours or 12 hours. There were printouts of the dashboard on each table for them to add post-its with comments on, or use coloured stickers to indicate preferences.

This allowed STAM to gather some very interesting insights on how each dashboard and functionality was perceived. What came out of the session was that the current charts are

clear but possibly an overlapping of production and consumption would help. Moreover, a description of costs would be of value.



As much of the audience was new to TwinERGY, this sparked lots of conversations around energy. The fact that the whole community had some degree of involvement with renewables and energy efficiency gave a solid base for discussion, going from limits of pure self-consumption and self-generation (i.e. no energy community and no storage) to actual perceived benefits of RES. All participants that had installed RES (only PV) were satisfied with the results, but most of them still felt as if they were under-exploiting it as their self-consumption was not as high as they would have expected. All participants wanted a “kick” that would help them increase the benefits of RES but were doubtful about investing in storage before optimising their behaviour.

Secondly, we wanted to understand how likely people would be to engage with demand response technology - and if they had preferences on appliances, they would be flexible about being switched off and on in the background.

We showed them images of different appliances, including air conditioning (AC), fridge, TV, washing machine, kettle, cooker etc and asked them to vote 'yes', 'maybe' or 'never' for each of the appliances using different coloured stickers.

This activity gave the presenter a chance to explain to people about the demand response technology and the benefits which this brings to the grid - and it also gave important information about how people valued different technology in their home.

Participants were flexible around items such as washing machines, kettles, etc being switched on and off, but they were less flexible around TV appliances, and not flexible at all around the fridge, their heating and ventilation (HV) or AC. Comfort/health was important to them and they were not willing to sacrifice this to help the grid. This needs to be included in the technology solutions being developed and is something that is going to change by house and person, which relates to TwinERGY's delivery of a consumer Digital Twin.

In demand response, the majority of flexibility comes from the heating and cooling systems and not the appliances. It is therefore important that participants ideally perceive that their comfort is maintained - even if the AC is participating in demand response for example.



3) To anticipate citizens' visions for energy in the future

To put the final touch to the workshop, IFC together with KWMC and STAM organised a hands-on activity aimed at envisioning the energy market and consumption in the future. Under the theme Energy Future Times, participants were asked to become journalists and think about a newsworthy fact that put the village of Benetutti at the spotlight of good practices related to energy in 2027.

In groups of four or five, citizens exchanged ideas and views on how the smart energy community of Benetutti is leading the change towards a more sustainable, fair and citizen-based consumption. After completing the newspaper headlines, they shared the news piece, roleplaying as if they were conducting a TV programme.



Many learnings can be highlighted from this dynamic. By co-designing and imagining a better energy future, communities put value on the work done in Benetutti across these years which have contributed to make the municipality the first Smart Energy Community in Sardinia. In addition, the activity created a space to share thoughts between neighbours on their energy behaviour and main concerns regarding their daily consumption and future problems derived from the current energy crisis.

There was also value in doing this activity for the project lead: to include people's visions as an output to inform the outcomes and overall KPIs of the project. The most relevant of these visions were about behavioural change and project's legacy, and can be summarised as follows:

- The initial incredulity towards projects like TwinERGY is transformed when results begin to appear and these are maintained: notable savings on bills, maximising the self-consumption rates, and acting more efficiently.

- Confirmation that, with projects such as TwinERGY, we are helping to improve the future of next generations in terms of how we consume and manage energy.
- If everyone contributes, and the economic effort is distributed so that consuming energy better becomes less expensive, the benefit is common and it is also reflected in the way we take care of the environment.
- The exemplary and educational power of the results of initiatives such as TwinERGY, which allows future generations to understand and interact with real, tangible, better energy management.

This also made participants feel empowered, shifting from the view they might have had of the TwinERGY project partners as mere technology providers, to seeing them as innovation partners. Moreover, their active involvement while the developments are ongoing sparked some interesting conversations about the application design.

As this event was attended by many people who were not part of TwinERGY and the Benetutti Pilot - which needed to recruit more participants for their project - it also played a key part as a recruitment activity.

Since the onboarding activities for the project were still ongoing, citizens were able to hear from their peers who were participating in TwinERGY the real effort and benefits of taking part in the project. Shortly after the workshop (less than a month) the remaining spots for participation were filled by workshop attendees.

2.2 Workshop with Policy Makers: Benetutti Municipality Round Table

Introduction and Overview

The Municipality Round Table was organised by STAM, with invitations sent to appropriate local politicians including the mayor, municipality workers and the leader of the local energy company, as well as to regional policy makers.

The aim was to ensure that these leaders were informed about the TwinERGY project, heard the Benetutti citizen opinions about energy, and were given an opportunity to respond by sharing their thoughts and the role they might play in addressing energy challenges.



The Round Table was attended by 30 people with six speakers from the decision makers' group. The audience listened to a short feedback from STAM about the citizens' workshop, and then in turn offered their thoughts. All the decision makers appreciated the community dimension of TwinERGY and made some key points about strengths and potential challenges:

- Local Community dimension: many initiatives at national level fund technology investments. This happened with RES buildings' energy efficiency and will happen with energy communities. However, these measures often lack the local dimension that makes such technologies an actual asset rather than just a tool.
- Funding and co-funding: usually national investments require even public bodies to make an investment. This makes them less attractive to municipalities.

- Communities of communities: the Benetutti municipality itself represents a fairly small use case with limited scaling potential if it's not seen as part of a bigger ecosystem. What came out from the session was that nearby municipalities of similar dimension are gravitating around Benetutti to acquire knowledge and share best practices on green transition. Based upon the results of TwinERGY, they got together to prepare a green community project that will be funded by the Resilience and Recovery Fund.

It is important that the view of energy belonging to the academics and industries must change and that energy belongs to the community of Benetutti. Referring to an Energy Democracy, there is an opportunity to free Sardinia from the traditionally imposed forms of energy such as oil, gas and coal, viewing TwinERGY an exploratory opportunity of all renewable energy sources available to the country as a whole.

Informing citizens of the benefits of participation in the democracy of the territory's energy modernisation and innovation is good for not just themselves but, again, everyone.

As the administrators for small municipalities and thus, small budgets, access to renewable energy presents a vital opportunity to save money which can be administered elsewhere within their particular community. Collaborations like this will strengthen union across the territory through Green Communities.

There was unanimous agreement among the leaders that deeper collaboration, informed decision-making and education would further the steps for Sardinia's smaller municipalities, their leaders and citizens to fully realise the potential of a united "energy community".

A participant closed with: "Energy Communities... It is time to make it ours, not only as a term but to make it ours as a goal."

2.3 Online Event

2.3.1 Introduction and Overview

The online event assumed that most of the audience had little background knowledge of TwinERGY, so the event was structured to provide an overview of the project to date, share

our approach to engagement and legal and ethical considerations, drawing on the work of D2.2, before engaging the audience in discussion about citizen learning.

The first part of the online event was designed to provide an overview from the Project Manager, share our methodological approach to engagement from KWMC, with Arthur's Legal presenting the TwinERGY approach to citizen privacy and rights.

The second section was designed to share learning from citizens, starting with the Benetutti citizen workshop the previous evening, and the municipality and mayor's Round Table that took place in the morning, ensuring that the audience understood the importance TwinERGY places on citizen engagement.

Three short films were then introduced by each of the three other pilot leads, see: Appendix Assets 3.1. This approach was taken to ensure citizens' views were expressed directly to the audience.



This section was designed to finish with a short Q & A from the audience conducted by IFC.

To ensure we were then able to go deeper into thinking about citizen engagement in energy market transformation, we invited three experts to share their expertise and experience, to reflect on what we were doing and to offer insights for TwinERGY next steps. Our approach was to ensure we looked outwards to other initiatives e.g. to the Bridge projects, and to make sure we both learnt from others and shared our experience with the wider energy ecosystem.

The online event was streamed using YouTube and has attracted 217 views to date. This exceeded our target of 150 attendees that was established as a project dissemination KPI. The intention is to continue to promote the content and share a link via the TwinERGY website and to use this to build a following for the 2nd EU Stakeholder event by mid 2023.

2.3.2 Introduction to TwinERGY from Project Coordinator

A short introductory presentation from Dr. Stylianos Karatzas, Project Manager, University of Patras, explained the TwinERGY Project and highlighted the following:

- TwinERGY is developing the first of its kind demand response framework.
- There are nine technology use cases across four pilots.
- The importance and challenges of consumer engagement - it can be difficult to maintain during and beyond project life cycle. The need to support behaviour change is a major target and challenge. Citizens need to be active energy consumers - we need to understand what matters to people.

Dr. Karatzas explained the three core concepts being developed through TwinERGY:

- Digital Twins as the technology for all actors within the community ecosystem. Consumer, building and community digital twin.
- Transactive energy platform integrated energy business model. Decentralised and democratised.
- Consumer engagement - energy citizen - engagement of customer, personalised rewards, feedback and education.

In summary, TwinERGY is focused on changing citizens from passive consumers to active participants and beneficiaries, transforming energy markets.

2.3.3 Approach to Citizen Engagement, Diversity and Inclusion: Adapting the Bristol Approach

Carolyn Hassan, CEO at KWMC presented the TwinERGY approach to citizen engagement sharing the key points from D.2.1 -"Best practice guidelines for engaging citizens in the pilots and metrics for diversity and inclusion". This included explaining how partners had worked together to adapt the Bristol Approach framework, describing the citizen engagement cycle, and the Equity, Diversity and Inclusion (EDI) principles.

Tools and support to pilots were described that helped each pilot to recruit their target number of citizens. Tools and support will continue to be developed as we go forward. Through this event we will be looking at suggestions from our expert contributors and discussing with pilots how best to retain citizens for the duration of the project and beyond using this reflective framework.

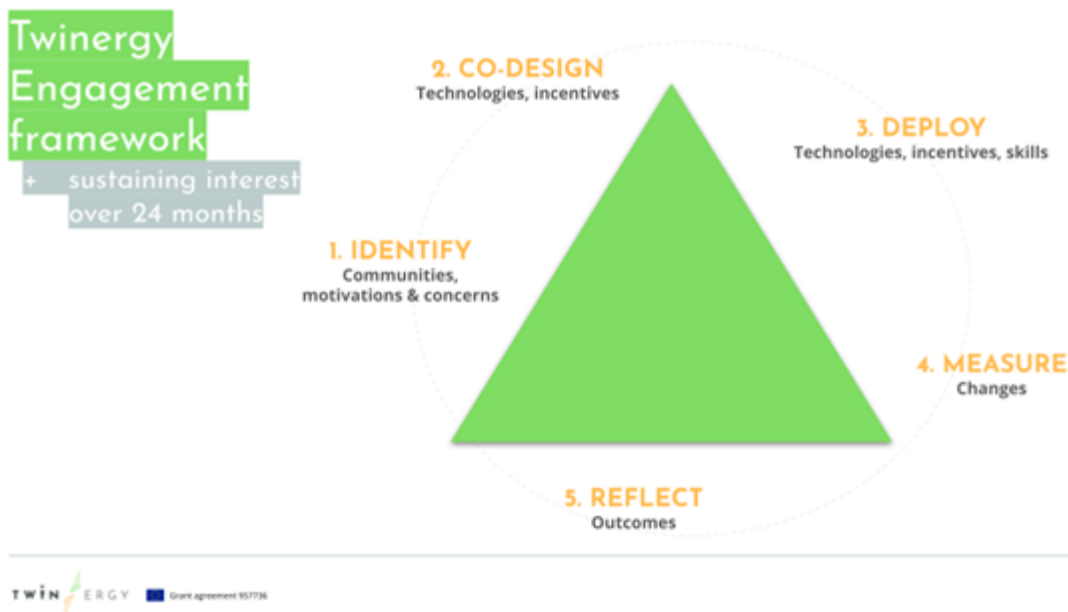


Figure 1. The TwinERGY engagement framework, adapted Bristol Approach

Step 1 Identify: refers to the identification of the community to be engaged in the pilots, taking into account the EDI principles above. Citizens are supported to identify their specific goals and issues in relation to using tools from the TwinERGY system.

Step 2 Co-Design: refers to including participants' inputs and feedback in the design phase of the TwinERGY technologies and proposed incentives. As the system elements, as well as community needs, differ for each pilot, these are unique to each pilot, though there will be overlaps, for example with the modules and with the digital twin.

Step 3 Deploy: the technology and incentives co-designed in step 2 will be deployed in each of the pilot communities. This stage includes installing and setting up technologies at people's home and community centres, as well activities aimed at deploying skills among pilot participants so that they are able to use and make sense of the TwinERGY technologies.

Step 4 Measure: By following a co-assessment approach, this stage includes activities aimed to involve pilot participants in the assessment of the changes brought by TwinERGY technologies – is it energy shifted (Demand Side Management)? Awareness? Engagement? What intervals?

Step 5 Reflect: At the periods of measuring, an initial phase of reflection will be carried out and utilised to iterate the next phase, improving engagement and delivery.

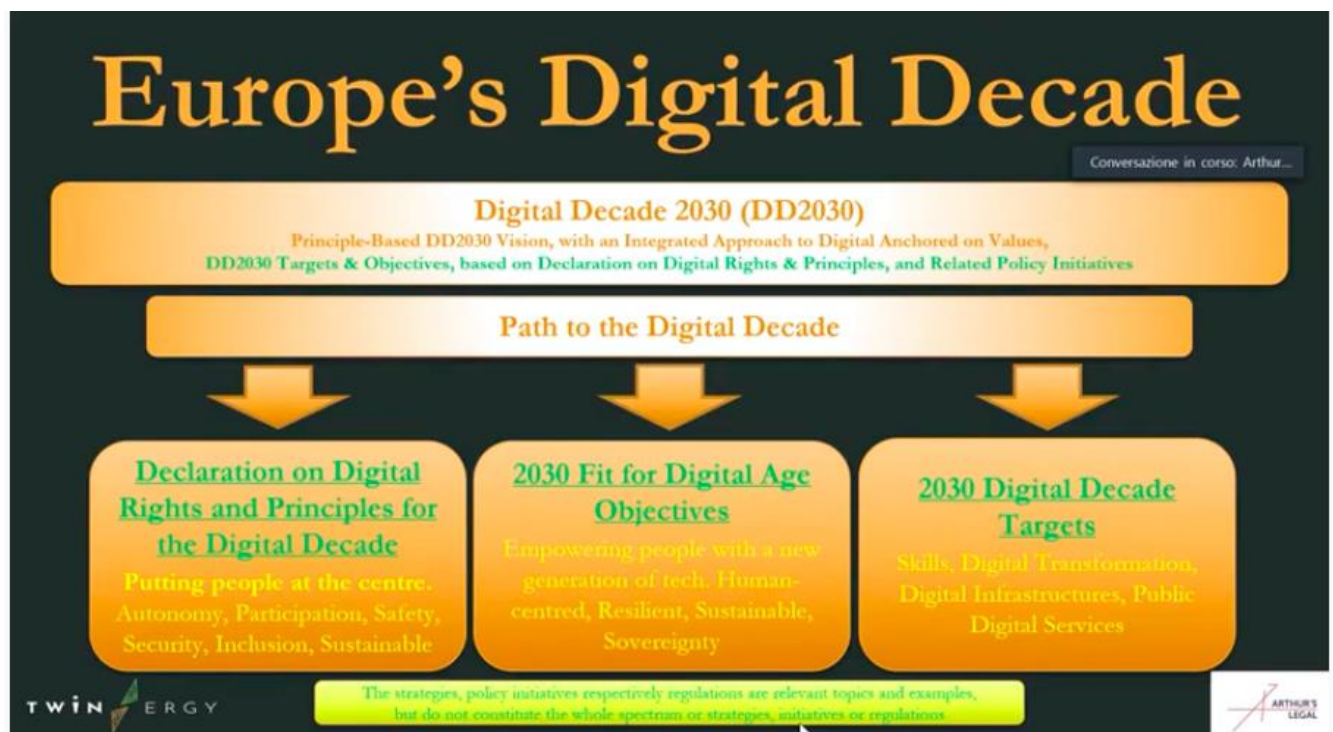
2.3.4 Trusted data sharing as an enabler for citizens' engagement

The importance of putting people central to any data was highlighted during this presentation by Arthur Van der Wees from Arthur's Legal.



Key learnings were:

- It is important to have the big picture but also a personal and local approach.
- TwinERGY is not just about the climate but citizen engagement as well and using the Digital Twin to address other challenges communities may have.
- There is interconnectedness - if you add one thing it has consequences on another.
- Trusted digital is a 'need to have', not a 'nice to have' - we are very dependent on it now.
- The main inhibitors/blockers for using digital technology are also the main enablers:
 - 1) Insufficient knowledge (where knowledge is power)
 - 2) Security
 - 3) (Personal) Data Protection
 - 4) Compliance
- From the European perspective all the initiatives that the commissioner makes are People-Centric. Below is the 2030 Digital Decade Programme:
- The Declaration on Digital Rights and Principles for the Digital Decade - all the notions we are trying to take on and address with TwinERGY are in there - putting people at the centre.



- The way people process technology is different from the way we learnt at school. We need to add data to this equation and put people and society in the middle.
- Data is both a hazard and a means.
- Persona-Centric - we are all individuals but we have partners, children, neighbours, communities, we are professionals, travellers etc. It is important to not only think about an individual but also what their particular role is, interests and values. If you know that, it is easier to start sharing data.



Both Persona-Centric and Data Centric have opportunities and values. Data is not static. Most of Data-Centric is dynamic - meaning it changes all the time and needs to stay fresh.

- Sharing data is a two-way street to raise the level of trust in citizen engagement.
- To share or not to share, that is the trust question. Trust is one of the main enablers. If we understand each other and what we are going to do with data and the purpose, e.g. What do I get back from it? What kind of value do I get? Is it good for me? For my family? Community? For another purpose you appreciate? Then you can start sharing information.
- There are a lot of excuses from people and organisations not willing to share data:

Top 5 Excuses for Data Sharing Blocking

Conversazione in corso: Arthur...

We are not 'allowed' to share, because:

- A. it is our Trade Secret or Intellectual Property ...**
- B. of Compliance & Regulatory Restrictions ...**
- C. it is Technically not possible ...**
- D. we have the Policy not to share ...**
- E. we do Not Know What and How to share ...**

'It is better to offer no excuse than offer a bad one'
George Washington

TWIN ENERGY ARTHUR'S LEGAL

But all these items can be addressed in a way that is both protective and empowering for multiple parties. The European Commission helps out with this on two levels:

EU Digital, Data, Identity & Cybersecurity Strategies

Oversight, Insights, Readiness, Risks & Opportunities

Conversazione in corso: Arthur...

Data Strategy	Data Governance Act	Data Act & Data Spaces
Digital Services Act	Digital Markets Act	Digital Identity & EUDI Wallet
Cybersecurity Strategy	NIS2 Directive	Cybersecurity Act
General Data Protection Regulation	ePrivacy Regulation	Cyber Resilience Act

The strategies, policy initiatives respectively regulations are relevant topics and examples, but do not constitute the whole spectrum of strategies, initiatives or regulations

TWIN ENERGY ARTHUR'S LEGAL

These policy instruments are not rule-based but are frameworks and a domain we can all work in together.

- Summarise with the Four Ts:



- With trust you get engagement, transformation, opportunities and evolutionary approaches to do the energy transition - plus the data sharing.
- Trust is consistency through time - a long term relationship that we all need to work on. Things can go wrong but as long as you are able to fix it, cater for it and discuss it - trust can go up.

2.3.5 Learning from 4 pilots

Benetutti

The Italian pilot was presented by Marco Barbagelata (STAM) who reflected on the learnings from the two workshops that had taken place over 24 hours. The first of the two workshops was facilitated by IFC, KWMC and STAM.

The activities were created by KWMC and sought to engage the Benetutti citizens in thinking about why they might want to take part in a project like TwinERGY and what that might look like for the citizens as a community.

The key factor that emerged was that they cared about themselves as a society and that any positive changes would also be positive changes for everyone in the community; more so than the monetary value of renewable energy. A reflective point that will be reiterated throughout future engagement.

Another exercise designed by IFC allowed locals to share their vision of the future of Benetutti by writing an imaginary news article from five years in the future. The thoughts and hopes for the community will give the Italian Pilot a clearer vision of the goals they wish to work towards.

The locals of Benetutti hope that the benefits of energy independence will also address a key social component facing the community. As more of the younger generation move to the bigger cities, the residents hope that the TwinERGY project and its outcomes can also act as an approach to making Benetutti a more attractive place and encourage them to build their lives there.

They also want to fully exploit their renewable potential. Benetutti is one of the excellences in Italy for the availability of renewable energy resources – so it is not a community problem but a management problem.

The second workshop with the local authorities of the municipality echoed the sentiments of the local residents in thinking about the future of the town and its citizens.

In particular, the key elements of the reflections were:

- United we win: the dimension of Benetutti makes its scaling potential intertwined with its cooperation potential. For this reason, if during the citizens' workshop it came naturally to tackle and reflect on the community dimension of demand response, in the representatives meeting the need for a close cooperation with municipalities nearby was highlighted. Shared services and infrastructures, as well as energy communities are seen as a way to provide key services to citizens in a sustainable way.
- Technology is only a piece of the puzzle: this was a crucial point as the municipality of Benetutti received throughout the years millions of euros in RES and smart grid technology investments. However, the impacts were not the ones hoped for as up until the beginning of the TwinERGY project, the community engagement dimension was only partially tackled in a very unstructured way.
- The energy transition is a tool to make the municipality and, in general, the area, more attractive for younger generations. Benetutti has been witnessing a de-population phenomenon, with younger generations leaving for bigger cities or for the mainland. This is creating a landslide effect that the municipality is trying to cope with. In this

framework, energy transition is one of the tools, together with digitisation and community fostering that is being leveraged to make the area more attractive for younger generations.

- There is no structured integration of funds: regional, national and European funds, although all follow similar guidelines, rarely have a structured synergy scheme. This leaves the coordination between local and higher level initiatives to the administration which, especially for smaller municipalities, is a burden that is often not sustainable.

Pilot Films Presentation

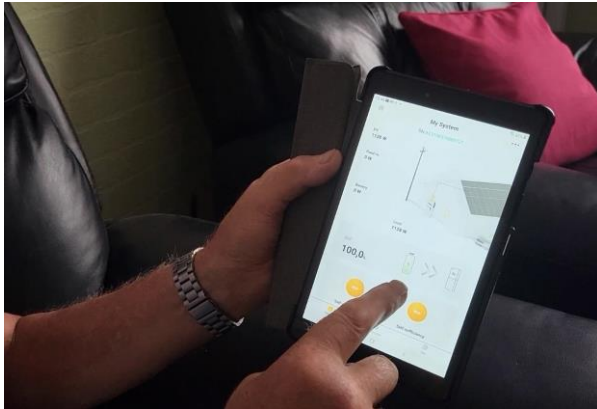
The Bristol, German and Greek pilots then each introduced short films conveying their progress to date and included contributions from citizens in each pilot.

Bristol

The Bristol pilot has been focused on the installation of smart technologies in people's homes. The video covered different aspects of the project - from the initial and continued engagement, participants' learning and understanding of the technology to the empowerment of knowledge and looking forward to the future of the project and solar energy as a whole.



Some of the participants already had either batteries or PVs installed in their homes from previous projects. Data collection has allowed for software to be deployed in order to model and predict energy consumption and optimise battery charging and smart tariff selection.



Engagement has been a key element of the Bristol pilot, with visits to participants' homes both for smart plug technology deployment and check-ins on progress and learning. Findings from visits discovered that the combination of software and battery technology has had a "positive impact" on household consumption and energy bills.

Informative events have been held by KWMC that have given participants the opportunity to meet fellow participants, better understand the technologies installed in their homes, share their learning of energy consumption and savings as well as a chance to ask questions and converse with experts.

Through concerted participation in the project and learning, a number of participants have been able to challenge their energy providers and the energy estimations imposed.

One participant commented: *"...I think that energy companies maybe need training in how to deal with people with solar panels..."*



Participants in the Bristol TwinERGY pilot have been able to change their behaviours in energy consumption through continued engagement and learning. One participant proposed that: *"...a community approach to the building of solar energy collection and distribution be considered."* A second claiming: *"...I would be happy for my spare energy to be shared with my neighbours."*



Another participant said: *"Having green energy is amazing and a great way to teach my children about renewable energy and caring for the future."*

Germany

Germany's pilot covered the topic of communal energy collection and distribution within the small community based in Steinheim. Pilot lead, Johannes Üpping (TH OWL), gave the viewer a walking tour of the village where the pilot is taking place.



A large electric battery will be installed to store the energy collected from the participating PV installations at the transformer station, to both distribute to the community and feed back to the electrical grid. A metering device at the transformer will be continually measuring the usage of the community as a whole.



There are numerous levels of participation taking place within the Hagedorn community. Residents were asked to fill out a questionnaire to determine their level of participation.

Level 1 - Use of the community electric vehicle

Level 2 - In addition to use of the EVs, participants had additional management software and hardware installed in their homes. This includes smart plugs, allowing the participant to choose which appliance consumption they wish to monitor.

Level 3 - Have been classed as the high-level users. In addition to the previously mentioned EV access and smart plugs and monitoring devices, these users have also had Smart Meters installed to provide a further degree of measurements.

One charging station for the EV has also been installed outside the community centre. This centre has been the venue for consultation and informative events for residents to better understand the hardware that has been installed and how and where the data being collected is being used within the project.

Two of the residents were asked about their thoughts on the project and the level of access to information they now have. One said: *"I can now see everything that is being used and the level of CO2 being created. I have never been able to see that before."*

The second said: *"It is good that the project has started here and that we can all use the electric vehicles for the next two years. I am looking forward to every ride!"*



Greece

The Greek TwinERGY pilot project is focused on demand response technology in residents' homes. Pilot lead, Georgia Roussou, interviewed the first participant from their pilot. He is part of a family of three whose motivations for participating in the project are: navigating the global rise in energy costs in an informed manner, to effectively contribute to reducing

pollution and climate change, and to better understand how to reduce the household's overall energy consumption without sacrificing the family's comfort and way of life.

At the time of recording, smart plugs and sensors have been deployed to the participant's home with full installation of hardware and software scheduled for future dates. These tools will allow the participants to monitor their daily consumption and identify where savings can be made.



The participant's knowledge of the demand response technology is an awareness of the plugs and sensors as individual technologies, but he is keen to understand how they will work together.

His hopes for project outcomes are to be more informed in the concept of demand response and in turn see a reduction in the family's household energy bills.

Q&A

There then followed a short Q & A session with questions from the audience and pilots that included the following:

What were the main reasons for participants taking part in the pilots?

In Germany they have been motivated to be part of the project to save money (common to all projects). We provided hardware and software, and with regard to softer motivation, most people are interested in using renewable energy and using our own resources and learning more - and this encourages people.

In the UK, motivation is similar, but some of our participants have also been involved in earlier projects that provided batteries. These were removed when the project finished and now TwinERGY has been able to offer more up-to-date technology and more efficient batteries. A longer, deeper engagement process is also a good way to keep people involved.

In Greece, priority is money, but factors such as being part of a bigger community across Europe, being able to leave the world in a better place and teach their children are also key.

What was one thing that led to better engagement and one thing that didn't work?

For the Italian project, knowing and being in the community makes or breaks the project, knowing what people do in their homes and how technology might serve them. Managing expectations over time is a challenge. Most of the time we are using state-of-the-art technology and new solutions, so the benefit might not be overnight, and it might take a while.

In Germany, it's very necessary to know your participants and communities. You need to identify the variants and understand them because the barriers are different, and you need to identify them to identify solutions. We have a lot of regulations concerning the power grid, and we need to get rid of the bureaucracy. It would help us if the bureaucracy was reduced while we are trying to solve problems and use new solutions.

In the UK, what has worked well is when we have well known technologies like solar panels, they are understood by participants; they work, and we are able to supply them easily. The main problem for us has been the supply chain - there have been many delays and poor customer service and if you are not using an intermediary like us, this will have a bad effect on consumers.

In Greece, one of our incentives was the rapid increase in energy bills, so this helped us to recruit people who wanted us to find solutions to efficiency and cost. To improve our recruitment and retention is to give people feedback so that they can see they are making a difference - but also to see how others are doing to introduce some competitiveness.

What are the challenges to scaling up?

In Germany, it is possible to use the same technology to copy across to other sub-grids, and then scalable to other levels, so the system we are using can scale up to 1,000 villages/communities, and then scale up again.

In Sardinia and Italy, it is possible to replicate the same technology across the whole region possibly. In this scenario the key challenge is related to stakeholders engagement (i.e.

bringing people onboard) and to scale up optimisation measures to exploit synergies at higher level.

In Greece, there are several challenges to scaling up a smart community into a smart village. Firstly, it's people's acceptance; it is really hard to convince someone to invest and buy smart equipment since they are afraid about their data protection. In addition, they don't believe that they will achieve a significant reduction, therefore bills will remain the same and they won't have a payback.

Secondly, it's the house infrastructure; there are a high number of houses with very old electrical appliances and circuit tables. Therefore, it's hard to even capture the energy consumption of these devices.

Lastly, it is the stable Wi-Fi connection; the internet is crucial for communication among these devices and the employment of TwinERGY solutions. As a result, we won't be able to install smart systems everywhere.

In the UK, the price of the technologies and associated installations has increased massively as demand has grown. This potentially makes the business models more challenging to stack up. This, coupled with the limiting UK regulatory market for energy exchange, is a major financial barrier we can currently foresee.

We then moved into the expert panel:

2.3.6 Expert Contribution and Debate

Mia Al Juusula commented on the similarities to her experience in relation to projects she has been involved in; citizens benefited from using an energy app and understanding better when there was good availability of renewable energy. They were also able to compare energy efficiency with other areas in the city. According to their feedback, the app was felt to be very useful, and residents appreciated personalised feeling of having images of their own appliances included. The app was only accessed through a tablet and it would have been good if it was available on a phone/multiple devices. They had public screens describing energy efficiency of buildings and this received good feedback, increasing people's interest and knowledge.

In Mia's project they found out that it wasn't important for participants to learn about the underlying technology, but they did need to know how to use the app better. There were a lot of challenges about data sharing: what to share, if it was coming at the right time and in what format. Mia's comments that she thought interesting regarding the pilots were: people are interested in the money saving, but are also interested in their collective use of renewable, and this encourages a feeling of community. In the German pilot, she commented that storage can be challenging, and her experience of storage was that it was almost always empty in winter and full in summer.

Thomas Mikkelson commented that one common thing he sees is that it can be difficult to understand the starting point - is it the technology we are trying to install, or is it the problem we are trying to solve? We must ask ourselves where we are coming from: is it the same problem for all of the participants that we are involving? In the past European Commission FP7 projects (that ran from 2007-2013) were about installing the tech but we now realise that engagement is more than just getting people to accept technology. This should be seen as part of the problem solving project. Thomas commented that he often sees an isolation between technology development and citizen engagement and there is a real need to make sure parties are talking about the same thing and share the same goals. He recommended that we need the same KPIs that relate to engagement and technology.

An important element should be a close focus on the process to get people involved - we need to focus on the "tipping point", what gets people interested in the first time, and then when people have been involved for a while we need to change; we need to recognise that we need to do more to keep people involved and get to the point of understanding the change we are making. He recommended that we look at Elinor Ostrom - The Commons - what are the things we need to have in place keeping people involved, understanding of change that is happening, and looking at power structures in the community.

Christiane Gebhardt shared Thomas's concerns about keeping people engaged. We need to pay attention to the way we keep people engaged and she recommended getting entrepreneurs involved. She asked the question: what willingness is there to give up current energy systems and move to decentralised systems? It is a question of how these options are communicated and how they become a new reality, how to replicate, how to scale up, and keep people happy. Christiane asked us to consider what was the next big thing we would do. She commented that what she liked was how we are educating and allowing for all these questions to be asked; young people and communities can ask questions that they

couldn't ask policy makers. What is the next step that we take? Do we grow? Do we spread our pilot? What is the next thing in our mission?

Christiane also talked about the Circular Economy - how do we build the gaps that are missing in the supply chain?

Q&A

Insightful and thought provoking questions were raised and lively discussions ensued. The following is a short synopsis of this conversation.

1. Scaling up Energy Pilot projects.

To scale up the TwinERGY project, Christiane suggested to scale little approaches village by village.

2. Behaviour Change.

Thomas explained engagement practices to support behaviour change within communities. It is important to pay attention to the power structures and dynamics within communities to create ambassadors of decision makers to become spokespersons in the communities. Empower people through understanding not only education. For people to be there as part of a common, not out of self-interest.

3. The role of digital tools to empower people to be part of larger energy communities.

Doubts were cast on the role of technology to empower people to be part of larger energy communities. Christiane found the top-down approach problematic as it is difficult to involve citizens in a sustainable way. She also mentioned that the approach was good for serious games and scenarios, but you risk excluding citizens through a tech approach.

4. The roles legislation and National or European policies play in the engagement of citizens.

Thomas commented on GDPR and the ethics on how we use data. Keeping people engaged and motivated by giving them feedback and showing them the consequences of what they

are doing with personalised data is very useful, but legislation makes this difficult. A current example is in Germany where the roll out of smart meters is hindered by legislation. He also raised the question about the amount of freedom users needed to have around flexible loads. Whether flexibility was indeed subjective - as an example turning down AC in an office, as this can lead to a lack of comfort with a saving in energy, but wasting money from a lack of productivity.

Mia confirmed the importance of maintaining the comfort and wellbeing of citizens when introducing flexibility. In households it is easier to encourage people to wear more clothes. Functionality can also be automated, if residents give permission to do this.

Christiana questioned the intervention of the state with money and changing behaviours in tenants. She stated that this was indeed a governance problem, coming to the core of our economic system: Who sets the framing? What is my personal freedom within the framing?

Thomas called for more creativity in policies - to include incentives to support the ambition for users to lower their energy consumption.

5. Robust business models to fund effective engagement activities.

Christiane encouraged debate around the priorities between financial, social and environmental sustainability.

Mia confirmed the importance of making profit in order to evolve technologies and ways to engage with people. Her suggestion was to develop a business model along the energy management and balancing the demand supply of renewables.

6. TwinENERGY has developed an innovative transactive energy platform, where pilots and prosumers can interact with each other: What are obstacles of massive development of local energy communities: technical, legal or something else?

Thomas cast his doubts on the maturity of some technologies. Technology as designed from a technical perspective, is sometimes not designed to work well with how people live their lives. Technology needs to prove its value in a bigger setting, however this will take time for

people to adopt the technology and for the technology to mature. Acknowledging that this is a process, where technology and social innovation work together, addressing legislation after.

Mia agreed that maturity of technology is often lacking and there are still problems with interoperability of different technologies. She called for solutions to be robust enough, not require maintenance, and that the system will work, even if one part drops down.

2.4 Learning and Results

Key learning points for pilots:

Benetutti

- RES are a small part of what can be done.
- Community engagement must start from the community.
- The administration representatives underlined the need to create, through local initiatives, a link between high level initiatives (e.g. national investments and framework programmes) and local ones.
- Most participants want to be informed on the sustainability of their actions as well as on the environmental impact.

Bristol

- No matter how good the technology offer might seem to those from the producer side, the users will also interpret it and its uses in a different way.
- Identifying committed participants is key, they have to want to engage with the project.
- Some concepts, such as the use of smart plugs to switch off appliances to save money/provide grid balancing are difficult to explain and can lead to apprehension from participants. Also, given there are limited low background load appliances in residences, the benefits of such approaches are hard to sell – we have typically recommended they are installed on fridges however the saving they can deliver on such appliances is very minor.
- It is difficult to understand how the level of support being given to participants in this project could be scaled to support regional level behaviour change activities.

Germany

-
- Most participants don't want to interact with technology such as energy management systems (EMS), batteries and PV systems but like to have them (no continuous monitoring of the devices, only if there are errors/system failures). The best EMS is a system which optimises the energy demand/flow without any notice of the user.
 - A forced behavioural change by technology such as cut offs of appliances makes the user angry, but a recommendation of the best times for usage is a way to change the behaviour of the user intrinsically.

Greece

- Participants need feedback and to see the difference they are making in order to remain involved.

Attendances

To keep track of the number of participants for the online format, a registration form was created to accompany the communication pieces. The total number of attendees was as follows:

- Number of people registered through the registration form via Eventbrite platform: 94 attendees.
- Number of views of the online streamed session via Youtube channel: 233 views (last check 21st of October 2022).
- Number of in-person attendees during the PAN EU Workshop: 30 citizens.

In total, 357 people attended the event either online, in person or via the registration form. In addition, 20 citizens attended the Benetutti workshop.

3/ Next Steps

The EU Stakeholder event was planned to inform pilots and contribute to future planning particularly regarding citizen engagement and ongoing retention.

Key insights from the expert contributors proved very useful and led to further discussions post-event. These included:

- Ensuring technology development and citizen engagement are closely linked with ongoing communication, and not running in isolation.
- Make sure that there are shared objectives and shared understanding of the problems to be addressed between partners and with citizen participants.
- Understand ways to engage citizens initially and share these strategies.
- Consider engagement when citizens have participated for a while; we need to think carefully about retention, sustaining motivation and supporting citizens to understand the changes they are contributing to. Consider “The Commons” and power in relation to energy communities.
- Think about scaling up, decentralisation, other models of scaling change, adapting technology and citizen engagement in relation to new energy markets.

Benetutti

- Continue work with engagement and retention
- Integration of TwinERGY modules

Bristol

- Integrating modules
- Delivering battery optimisation to households
- Supplying information re tariff options to households
- Planning engagement around Filwood Community Centre solar install

Germany

- Integration of TwinERGY modules
- Presentation and workshops on the handling of the modules interfaces/apps
- Finalisation of the hardware integration process
- Interaction with the digital twin/presentation of the digital twin of the pilot site to the community

-
- Support of the participants in terms of the shared car, deployed hardware, modules and apps

Greece

- Sustaining participation
- Bring tech development and engagement together – joint development
- Ethics and legal considerations integrated
- Continue learning and sharing
- Internally – future visits to each pilot

As part of T11.4 concerned with Energy Future videos, IFC presented a calendar of future visits to each of the three remaining pilot sites in order to record and get footage from the demonstrations. After internal discussion with the consortium, some dates were scheduled and further conversations were pending to plan relevant activities with citizens in pilots that could be potential audiovisual material.

2nd EU Stakeholder event

Coinciding with the end of the project, IFC will organise a 2nd PAN EU Workshop in M34. The idea is to collect feedback from all the work done in each pilot and prepare a final action with citizens that will then lead into a reflection session with project partners, external experts and stakeholders. The first approach to the location is still under discussion but Barcelona has been placed on the radar.

The completion of this event is also linked to the D11.4 2nd European Workshop with stakeholders that will reflect on the achievements, lessons learnt and conclusions of the workshop. It will also inform dissemination and the Citizen Engagement handbook.

Once the project and the pilot demonstrations finalise in M36, IFC will lead the publication of the D11.7 on the Citizen Engagement handbook, a repository of good practices to engage participants into a research project, specifically focusing on energy.

Annexes

Annex 1 - Assets produced & Attendees

Table of Assets Produced

<p>The role of citizens in energy transformation. The case of TwinERGY's engagement learning.</p> <p>Recording of event</p>	<p>https://www.youtube.com/watch?v=t7NoCaPQBiY</p>
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Table of Attendees

Citizens attending Benetutti workshop	20
Stakeholders attending Benetutti Municipality Round Table	30
Number of people registered through the registration form via Eventbrite platform	90
Subsequent visits to event	233
Total attendances	377

Annex 2 - Communications Kit



The role of citizens in energy transformation. The case of TwinERGY engagement learnings

PAN European Workshop 2022
Communication and dissemination kit

REGISTRATION FORM:

<https://www.eventbrite.es/e/twenergy-pan-eu-workshop-2022the-role-of-citizens-in-energy-transformation-tickets-415241567707>



Sep 29

TwinERGY PAN EU Workshop 2022: The role of citizens in energy transformation

The role of citizens in energy transformation. The case of TwinERGY engagement learnings

By [TwinERGY](#) 10 followers [Follow](#)

When and where

 **Date and time**
Thu, 29 September 2022,
14:00 - 16:30 CEST

 **Location**
Online

About this event

The TwinERGY project, funded by the European Union's Horizon 2020 research and innovation programme under grant agreement N° 957736, together with the Municipality of Benetutti, co-host this event to reflect on **the role of citizens in energy projects**

TwinERGY is committed to understand and promote **citizen participation in energy markets**, providing tools and solutions that help them have a more active role, and proving that a **better energy ecosystem is possible**. It introduces a first of its kind Demand Response Framework, a solution that incorporates **digital intelligence** so that citizens can actively adapt their consumption to market fluctuations through the help of data and automation.

With the aim of exposing the initial learnings and questions when applying the consumer engagement strategy, collecting good practices and existing gaps, the event will be centred on citizen engagement in the energy system.

The idea will be to get feedback and further knowledge, while enabling conversations between citizens and stakeholders on challenges and benefits of taking an active role in energy management.

Relevant experts of the sector and participants of the 4 project pilots will be invited to collaborate throughout different sessions and discussions held during the workshop. In particular, three energy experts will share their views on community engagement and will lead an open-discussion:

- **Thomas Mikkelsen**, Head of Social & Behavioural Innovation at Smart Innovation Norway
- **Mia Ala Juusela**, VTT Technical Research Centre of Finland
- **Christiane Gebhardt**, Head of the regional division of the smart & sustainable city group at Drees & Sommer

You can check TwinERGY privacy policy [here](#).

About Organizers

KWMC

<https://kwmc.org.uk/>

Civil Engineering Department, UoP

<https://www.upatras.gr/en/>

STAM

<https://www.stamtech.com/>

Ideas for Change

<https://www.ideasforchange.com/>

Tags

Online Events

Online Conferences

Online Community Conferences

#community

#energy

#participation

#energytransition

#citizen_science

#digital_transformation

#energy_efficiency

Invitation (image):

TWIN ENERGY

TwinERGY would like to invite you to the 1st hybrid PAN European Workshop in Benetutti



The role of citizens in energy transformation.
The case of TwinERGY's engagement learning.



29 SEPTEMBER
2pm - 4pm CET


 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 957736.

With the support of:

29th ONLINE PAN EU WORKSHOP Full Programme



Agenda of TwinERGY PAN EU WORKSHOP

Thursday 29th September, 2022

Session 1: Introduction to TwinERGY engaging strategy (Online)

TIME	ACTIVITY	WHO
2:00	Introduction and Welcome to TwinERGY workshop	Stylios Karatzas (University of Patras)
2:10	Brief overview of TwinERGY approach to engagement: -Diversity and Inclusion, Adapting the Bristol Approach -Trusted data sharing as an enabler for citizens' engagement.	Carolyn Hassan (KWMC) Arthur van der Wees (Arthur's Legal)

Session 2: Learning from 4 pilots (Online)

TIME	ACTIVITY	WHO
2:30	Introduction to session	Anna Higuera (IFC)
2:35	Italy – feedback and presentation from Benetutti about mornings events and citizen engagement/feedback	Marco Barbagelata (STAM)
2:45	UK, Greece, Germany pilot presentations.	UK: Matt Jones (Bristol City Council) Greece: Georgia Roussou (Protergia) Germany: Johannes Üpping (TH-OWL)
3:00	Q&A from audience	Hosted by Anna Higuera

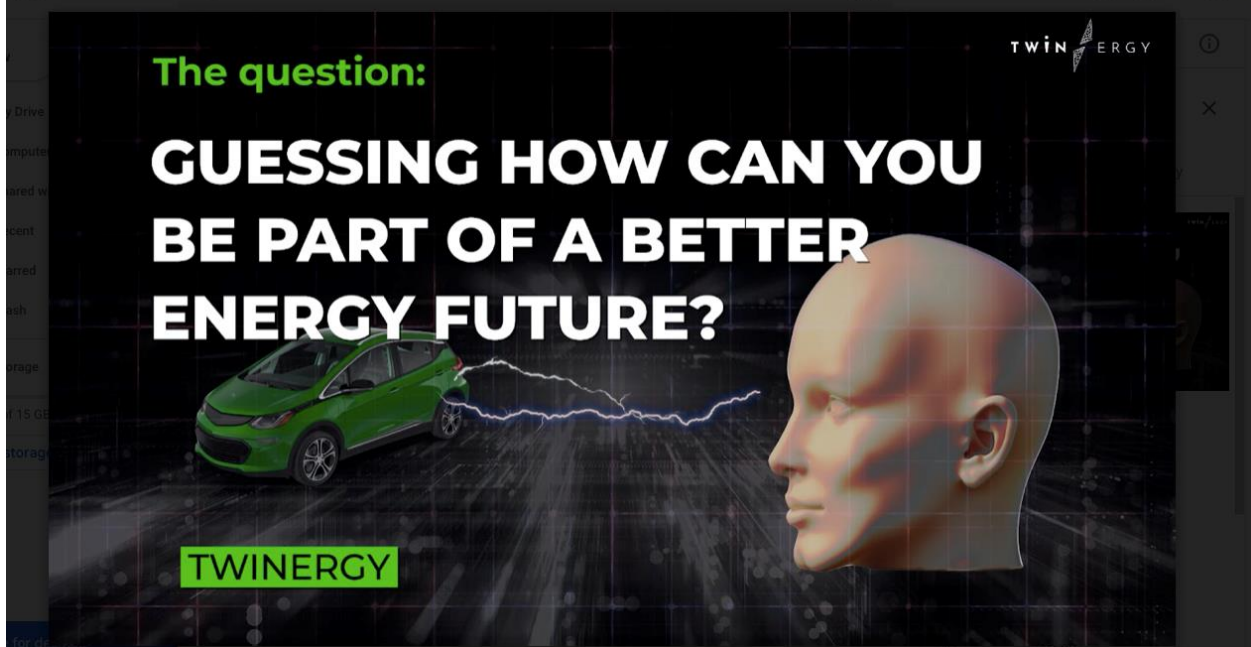
Session 3: Voices on community engagement & energy (Online)

TIME	ACTIVITY	WHO
	Session 3	
3:30	Views from Experts in community engagement and energy. Chaired by:	Mia Ala Juusela (VTT) Thomas Mikkelsen (Smart Innovation Norway) Carolyn Hassan (KWMC)
4:00	Q+A's from online participants, Twinergy partners	Hosted by Anna Higuera (IFC)
4:15	Closing	Stylios Karatzas (UoP)



Audiovisual material and banners (video):





Banners experts & others:

Banners experts & others Twin...

TWIN ENERGY

1st hybrid PAN European Workshop in Benetutti

29 september



*The role of citizens in energy transformation.
The case of TwinERGY's engagement learning.*

 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957736.

Search in Drive

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TWIN ENERGY

Views from Experts in community engagement and energy



Mia Ala Juusela
VTT Technical Research
Centre of Finland

 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957736.

Views from Experts in community engagement and energy




Thomas Mikkelsen

Head of Social & Behavioural Innovation
at Smart Innovation Norway

Blog Article about the event:

Get ready for the TwinERGY event in Benetutti: the agenda uncovered



Agenda of TwinERGY PAN EU WORKSHOP

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4:15	Closing	Stylios Karatzas (UoP)

@twinergy
#twinergy #EngagingTwinERGY



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 957736.

It's happening: next 29th of September TwinERGY hosts the 1st PAN European Workshop on "The role of citizens in energy transformation: The case of TwinERGY engagement learnings.

During three days, TwinERGY's consortium team will meet in person in Benetutti, Italy's pilot site, to discuss the current state of the project, upcoming challenges and opportunities and to organise a series of workshops highlighting the role of communities in the energy market.

Let's stand out some key moments from the [agenda](#)!

- On the **28th of September an interactive and creative session with citizens from Benetutti** will take place, to share their experiences gathered in these first pilot months.
- The **29th of September** is the big day as the **1st TwinERGY PAN EU Workshop** will be held in the village. The event will have a **hybrid format** so that all the knowledge shared is available and open for everyone. In particular, the streaming session will be from 14:00 to 16:15h CET and will be disclosed into: an introduction to the TwinERGY approach to citizen engagement by Project Manager [Stylios Karatzas](#), followed by a brief overview to the participatory framework by [Carolyn Hassan](#) from KWMC and to a trusted data sharing by [Arthur van der Wees](#) from Arthur's Legal.
- Hereafter, the **four pilot coordinators** from Steinheim (Germany), Benetutti (Italy), Athens (Greece) and Bristol (United Kingdom) will present learnings and good practices on citizen participation they have collected across their actions. Afterwards, the last and more exciting slot, three energy experts will share their views on community engagement and will lead an open-discussion hosted by [Anna Higuera](#) from Ideas for Change. This debate will count with popular voices from the energy sector as:
 - **Thomas Mikkelsen**, Head of Social & Behavioural Innovation at Smart Innovation Norway
 - **Mia Ala Juusela**, VTT Technical Research Centre of Finland

With the aim of exposing the initial learnings and questions when applying the **consumer engagement strategy**, collecting good practices and existing gaps, the event will be centred

on citizen engagement in the energy system. The idea will be to get feedback and further knowledge, while enabling conversations between citizens and stakeholders on challenges and benefits of taking an active role in energy management.

Sign up the [registration form](#) and don't miss this grand opportunity!

[Register for free and keep up!](#)

[workshoptwinergyenergyenergy4europehorizonenergyhorizon energyEU energyeuropean energydemand responsesmart devicesdigital twindataenergy systemsmart gridsmartenergy for europeuropeenergy communitiesbenetutticommunity engagementcitizen engagementcitizen participationenergy expertspan european workshop](#)

SUGGESTED INVITATION EMAIL/ colloquial

Dear X,

As part of TwinERGY's engagement and dissemination strategy, I would like to invite you to the 1st hybrid PAN European workshop hosted in Benetutti on the 29th of September:

"The role of citizens in energy transformation. The case of TwinERGY engagement learnings"

[TwinERGY](#) is committed to understand and promote citizen participation in energy markets, providing tools and solutions that help them have a more active role, and proving that a better energy ecosystem is possible. It introduces a first of its kind Demand Response Framework, a solution that incorporates digital intelligence so that citizens can actively adapt their consumption to market fluctuations through the help of data and automation.

With the aim of exposing the initial learnings and questions when applying the consumer engagement strategy, collecting good practices and existing gaps, the event will be **centred on citizen engagement in the energy system**.

The idea will be to get feedback and further knowledge, while enabling conversations between citizens and stakeholders on challenges and benefits of taking an active role in energy management. Energy experts such as Thomas [Mikkelsen](#), Head of Social & Behavioural Innovation at Smart Innovation Norway, and [Mia Ala Juusela](#), VTT Technical Research Centre of Finland, will share their views on community engagement and will lead an open-discussion.

Furthermore, participants of the pilot site in Italy will be invited to collaborate throughout different sessions and discussions held during the workshop. In particular, on the 28th of September an interactive and creative session with citizens from Benetutti will take place, to share their experiences gathered in these first pilot months.

We would like to **count on you online or in person on this special occasion**. You can find the registration form [here](#).

Stay tuned, we will share the programme soon.

Kind regards,

X

SUGGESTED INVITATION EMAIL / formal

Dear X,

Acting as X on behalf of the TwinERGY Consortium, I am pleased to invite you to attend the first hybrid PAN European Workshop, which will take place on September 29th at Benetutti (Sardinia) as part of the project's general assembly.

TwinERGY is an ambitious EU project focused on how citizens can take an active role in their energy management. Through emergent technologies such as Digital Twins and participatory approaches, consumers engage in a first of its kind Demand Response programme while contributing to a more sustainable, open and accessible consumption.

The 2022 PAN European Workshop's theme is **'The role of citizens in energy transformation. The case of TwinERGY's engagement learning'** and will be concerned with enabling an exchange of knowledge and good practices on citizen engagement and learning in the energy sector between stakeholders and citizens. Energy experts such as Thomas **Mikkelsen**, Head of Social & Behavioural Innovation at Smart Innovation Norway, and **Mia Ala Juusela**, VTT Technical Research Centre of Finland, will share their views on community engagement and will lead an open-discussion.

In addition, participants of the pilot site in Italy will be invited to collaborate throughout different sessions and discussions held during the workshop. In particular, the 28th of September will take place an interactive and creative session with citizens from Benetutti to share their experiences so far.

It would be our honour if you are able to attend online or in person. The full agenda of the workshop will be released in the following weeks, and we will be pleased to share with you any further information that could be of help to you.

Meanwhile, you can find the registration form [here](#) for the online event.

Yours sincerely,

X

Social Media

Twitter:

Energy community, we have fresh news:

On 29 September we will hold the 1st European PAN Workshop in #Benetutti IT

"The role of citizens in energy transformation. The case of TwinERGY engagement learnings"

#SaveTheDate for this special occasion and meet us in person or online!

TwinERGY community, good news for this autumn:

On 29 September we will hold the 1st European PAN Workshop in #Benetutti IT!

We would like to share this special occasion in person or online to exchange good practices on citizen learning and participation.

#EngagingTwinERGY

LinkedIn:

Engaging citizens into a project is no easy task and at TwinERGY we have collected good practices and experiences from energy communities participating in the project.

Following this, we'd like to share this news with you:

On 29 September we'll hold the 1st PAN European Workshop in Benetutti on citizen learning and engagement!

"The role of citizens in energy transformation. The case of TwinERGY engagement learnings"

It will be a special occasion for enabling conversations between citizens and stakeholders on challenges and benefits of taking an active role in energy management.

#SaveTheDate for this special occasion and meet us in person or online!

Stay tuned, the full event Agenda will be released very soon :)

Annex 3 - Content Production Guidelines 1

Participant Learning: 6 Minute Presentation

To provide a narrative for the Expert Panel, but also for the viewers who will be participating in the event from all over Europe. (outside of TwinERGY).

This is the ask:

A (maximum) six-minute pre-prepared content:

Two/three key learnings generated through citizen engagement in their pilot.

We are looking for the participants' voices in this, to share their experience and learning from the TwinERGY technology.

1. What to do

We understand that media creation is not everyone's expertise.

A quick way to do this is to do a PowerPoint Presentation Recording.

[How to make a narrated PowerPoint video!](#)



2. How to capture your participants' voices

You can ask people the questions non-verbally (via email or questionnaire) and then translate these as quotes in the presentation.

If you have the time and resources:

This can be done via a recorded Zoom interview, or filming with a mobile phone, then you can add short edited clips to the Powerpoint presentation.

3. Planning the content

To support us in deciding the two/three key learnings, we had a reflective meeting between key partners - KWMC as engagement partner, University of Bristol as technical lead and Bristol City Council Pilot Lead, aligning our thinking with the outcomes as per the *WP9 Logic Map*.

We also critically reflected on our own experiences of our citizen engagement activities. Considerations around the importance of building relationships and explaining the tech to people in ways that they can understand.

WP9 Logic Map for Bristol Pilot (highlights our focus)

<i>Objective:</i>	<i>Outcomes:</i>	<i>Tech:</i>	<i>Notes:</i>
OB1. Install or make use of existing home energy generation/ storage assets to maximise self-sufficiency in up to 12 homes	Residents maximize self-consumption and self sufficiency City Council has a better understanding of the potential value streams and benefits to residents in domestic dwellings	Home energy management system including communication hub, smart plugs to devices, Wi-Fi connectivity, method of sending data out of home. Smart meter linked to dynamic tariff.	Over the summer only energy from panels used, zero taken from the grid in some households.

	<p>Participants feel confident in how the project is using their data and for what purpose</p>	<p>Home interface device or app. New solar/ battery/ other energy assets where required</p>	<p>People feeling generally confident about technology and having it working in the background, autonomously.</p>
<p>OB2. Deployment of home energy management devices to work with energy flexibility services, link to the transactive energy platform and engage households in up to 12 homes</p>	<p>Residents participate in demand response programs / smart energy tariffs to minimize energy costs and support grid balancing</p> <p>Data retrieved from homes and analysed as part of evaluation activities (some available around amount of solar generated vs demand on the grid)</p> <p>Informed decisions about supplier and tariff choices;</p>	<p>Smart plugs, HEMS, API, Wi-Fi. PV hardware. Home interface device or app</p>	<p>Residents use Equiwatt: residents say they are participating in the events.</p> <p>Data shows most people have been participating in events; we can see the PV generation from the households, against their use from the grid.</p> <p>One resident has started looking at changing tariffs to get a better deal to sell their PV energy back to the grid.</p> <p>Small overview of this has been given, but</p>

	<p>Change behaviour to more sustainable patterns</p> <p>Encourage decisions about taking a more active role (e.g. prosumer) and invest in energy systems</p>		<p>this will be <i>next steps</i> in the project.</p> <p>Lots of user cases, when people cook, do their washing etc...</p> <p><i>Next steps</i> - but people are starting to think about this...please refer to questions for participants: Part 2</p>
<p>OB3. Flexibility modelling using digital twinning to understand buildings' potential to participate in flexibility services in up to 12 homes and up to 2 other large scale buildings</p>	<p><i>Not yet started.</i></p>		
<p>OBJ4. To better understand and respond to citizens needs in participating in energy flexibility programmes and deploying energy</p>	<p><i>Not yet started</i></p>		

technologies through co-design methodologies and engagement			
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4. How to decide who to interview

From our engagement with participants, we have been able to observe and have conversations with people. We noticed things like behaviour change, engagement with technology, life changes and general attitudes about TwinERGY technology.

We also considered Equal, Diverse and Inclusive representation in our selection of participants to interview.

We filmed people asking them specific questions. The list of questions are at the bottom of the document.

5. Ways to tell the story

Introduction (voice over or pilot representative)

- Overview of the pilot.
- Overview of the tech installed
- Who are the partners and who does what?
- Who is involved? (participants) demographics, locality etc.

How did we run the project?

Engagement:

- How did we recruit?
- How have we carried out and manage the engagement?

Tech:

- Participants' experience of the tech including installs and general experience.

Consequences (what has changed for people?)

Align this with your project outcomes as per the WP9 Logic Map.

We found that most of the changes could be identified in the points 1, 3,5 & 6.

We could identify user cases next to each of these points to tell their own experience.

1. Residents maximize self-consumption and self sufficiency
2. Participants feel confident in how the project is using their data and for what purpose
3. Residents participate in demand response programs / smart energy tariffs to minimize energy costs and support grid balancing
4. Informed decisions about supplier and tariff choices
5. Change behaviour to more sustainable patterns
6. Encourage decisions about taking a more active role (e.g. prosumer) and invest in energy systems

6. Example Questions

Participant video interviews (please pick what you find useful)

For Participants – Part 1:

- What tech have you got installed in your house?
- What was your experience of getting the tech installed?
- How confident do you feel about understanding the technology in your home?
- What do you need to better understand the technology?
- Do you feel confident to get support in regard to tech if you need any? Tell me more?
- Has using the apps helped you to change any of your daily habits around energy? If yes, can you give an example? (i.e., when you do washing, cook food).
- How has your use of the tech(apps) changed since the project started?
- Have there been any benefits to you and your household since the tech has been installed? (i.e., cost savings).
- Is there anything else you would like to tell us about what has changed for you since you started being part of the TwinERGY project?

Part 2: (going deeper)

- Are you comfortable with the tech making changes in and around your home in the background?
- Does this technology and the way it is presented/works suit you?

-
- How do you think this project can work on a larger scale in your community, like all the homes in your street/area?
 - How do we prolong the life of a project/movement after the pilot and funding has finished?
 - Having access to the raw information/data, does this give you more power about your choices? Do you have an example of where you used this info or data to challenge or query a bill or something?
 - What is your level of trust in big energy companies and their business models?
 - What do you think needs to change in the energy market to better suit individuals and communities?
 - What would it take for this type of project to be community owned?

Annex 4 - Content Production Guidelines 2



Partners' Tools and How-to-Guide

WP11. Task 11.3 Citizen Learning and Dissemination

June 2022



Co-financed by the Connecting Europe Facility of the European Union

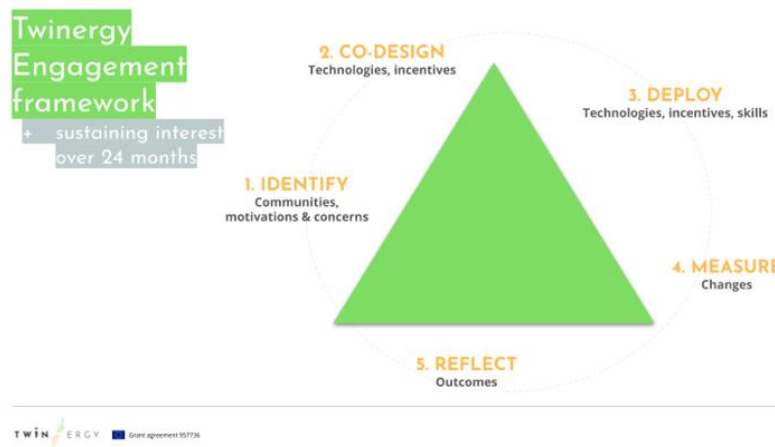


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1. The Bristol Approach: TwinERGY Overview
2. Keeping Track of the Participants' Learning Journey
3. Guidance Questions to track progress
4. Curating Content - Tools and Tricks (To Download)
 - 4.1 Content Capture (Film)
 - 4.1.1 Checklist for Filming with a Smartphone
 - 4.2 Content Capture (Audio)
 - 4.3 Collecting Participants' media
 - 4.4 Storing Participants' content
 - 4.5 Guide for Participants - Recording your Video Diary (Vlog)

1. The Bristol Approach- TwinERGY Overview

The Best Practice Guidelines for Engaging Citizens in the Pilots and Metrics for Diversity and Inclusion D2.1 June 2021 shared an Engagement Framework across the TwinERGY pilots. This document builds on this framework and provides tools to help partners in capturing the learning of citizens.



Step 1 Identify: refers to the identification of the community to be engaged in the pilots.

Step 2 Co-Design: refers to the inclusion of participants' inputs and feedback in the design phase of the TwinERGY technologies and proposed incentives.

Step 3 Deploy: the technology and incentives co-designed in step 2 will be deployed in each of the pilot communities. This stage includes installing and setting up technologies at people's homes and community centres, as well activities aimed at deploying skills among pilot participants - so that they are able to use and make sense of the TwinERGY technologies.

Step 4 Measure: by following a co-assessment approach, this stage includes activities aimed at involving pilot participants in the assessment of the changes brought by TwinERGY technologies.

Step 5 Reflect: At the periods of measuring, an initial phase of reflection will be carried out and utilised to iterate the next phase, improving engagement and delivery.

This document will focus on **Step 4: Measure and Step 5: Reflect.**

2. Keeping Track of the Participants' Learning Journey

Step 4: Measure

In order for us to measure the participants' experience of the technology and their involvement in the TwinERGY project, we identify and create opportunities where they can share, learn and give feedback. We are then able to capture and share their experiences with TwinERGY partners, other participants and the wider community using different technologies and platforms.

Citizen Learning and Dissemination will be unique to the different pilots, directed by preferences in communication technologies and tools available to the partners.

Things to consider:

- Be flexible to be able to adapt to peoples' personalities, abilities and comfort-levels to capture learning - making it enjoyable for them too.
- Participants will be more confident with specific mediums, so give people different options and opportunities to contribute.
- It is important that the medium supports the content.
- Data sharing is personal, so it is important to have consistency across engagement, to support trust.

For the Bristol Pilot we have designed different engagement activities and learning opportunities.

These include:

Round Table Gatherings

Participants are invited to come together in an informal setting with the project partners. During these events, they have an opportunity to meet their fellow citizens, share their experiences, learn from each other and ask questions of the experts.

Outcomes:

- Sense of community: Participants meet their project peers and this motivates their participation in being part of a group.
- Builds confidence: Participants have an opportunity to share their experiences together, building on their own learning and expertise.
- Extend expert knowledge: Project partners are able to identify knowledge gaps, and facilitate conversations to cover specific topics.
- Co-design: Participants can feed back on the topics they would like to learn more about.
- Identify use cases and narratives: Project partners are able to get first-hand feedback from the participants, allowing us to identify different narratives and use cases.

Personal Video Diaries (Vlogs)

Participants are invited to respond to specific questions over time, by recording themselves on their tablets or smart phones, and sharing this with the project partners. This can be very useful to keep track of their learning and involvement after new technology has been deployed. Participants are equipped with the right tools and training to provide the feedback, as well as the flexibility to choose a platform which they feel comfortable with, like recording and sending a voice note on WhatsApp.

Video Interviews - Headshots

The video interviews with participants are produced by the project partner as outward facing mechanisms to show the participants' narratives. Informed by the vlogs, they can be useful to capture immediate experiences of participants. This can then be published on a private YouTube channel to be shared with pilots and the local community via a blog or newsletter.

Blog

In order to share the knowledge and learnings from the TwinERGY project within the local community, with participants as well as a larger audience - we are publishing a blog at regular intervals on a community website, [The Knowledge](#) and through social media channels.

Podcast

The audio content from the Round Table Gatherings is recorded and published as a podcast on the community website. This allows project partners to share the rich content generated during these discussions - to have a wider impact, beyond the participants' experience.

Step 5 Reflect:

In order to be able to track our participants' journey, it is important to ensure their progress is captured individually, as well as for the group as a whole.

This involves documenting and analysing not only the feedback from the evaluation sheets or content generated by the participants, but also taking into account the observations made during the deployment of the technology in people's homes and taking note of informal conversations taking place.

Documenting and sharing all of these soft skills in observation can construct a fuller picture of the participants' learning journey, mapping their individual progress and helping to better support them along the way.

3. Guidance Questions to track Participants' progress

- Why did you decide to get involved in the TwinERGY project?
- How would you describe your/the current situation in relation to energy use?
- When you think about your energy use, what are you interested in?
- How would you describe the project to a friend? (or What do you understand about the technology being installed in your home?)
- What have you learnt in the project so far?

4. Curating Content - Tools and Tricks

4.1 Content Capture - Film

How to record your video interviews



Your smartphone can do a lot of things and one thing it does well is recording video. Even some Hollywood films have been [shot entirely on an iPhone](#).

Of course, we are not making Hollywood blockbusters, here, but films like this prove that with some knowledge and the right planning, you can maximise the potential of your smartphone as your primary video and film making device.



Freshness/spontaneity/veracity/realism look very good when they are filmed with a smartphone.

Before you hit record...

There are some things to consider before you press the record button. Lighting, room acoustics, sound and locations are some key considerations in getting quality film footage. Another important aspect is permission from your subjects. Let us go through some of them briefly.



It may seem like there is a lot of information to consider here but arming yourself with these basics will result in less frustration, successful shoots, and better end results when you look back over your recordings.

Permissions for Filming and Photography (Release Forms)

The purpose of a release form is to protect both you as a content creator and the subject of your content, be that video or photos. It is important that you get written consent from your subject(s) so that they are aware of how and where the content will be used.

Using content that features a person who has not given consent could (in a worst-case scenario) lead to lawsuits or a refusal for your content to be used in the public domain.

The article below offers a good overview of why you will need consent for your projects and includes a list of free release form templates available for you to use.

[Releases for use in Film and Video \(Video University\)](#)

Watch this video to better understand the [importance of having signed release forms](#).

'Filming in Progress'



If you happen to be filming in a public location, there is every chance that someone could end up in the background of your shot(s).

By having appropriate signage placed around your filming location, members of the public will have fair warning so that they can both avoid the shot and keep themselves and their faces from unwittingly ending up in your production.

The article below outlines the importance of these signs and offers some free templates which you can use.

[Free 'Filming in Progress' and other release forms"](#)

Good Communication



It is good practice to keep good communication when planning and carrying out a shoot, no matter how big or small.

If you are shooting in a building or an office, who do you need to contact if the location is closed when you arrive? Are there any rules around filming at the location? Are there power sources available on the day, should you need to charge batteries etc?

If you are filming at a subject's home, a courtesy phone call and introduction are important. Do they have pets you may be allergic to? They may have time schedules to adhere to, like picking up children from school, errands and work commitments. All things to consider when planning and scheduling.

Be sure to have a set of your contact details ready to share with whoever may be involved. If circumstances change leading up to your shoot, this will avoid any confusion and time wasted for both parties.

Planning

Before your scheduled filming, be sure to make some free time to write a checklist of the things you will need on the day. For example, if you are filming with your smartphone, simple things like a portable battery charger and cables can often get overlooked.

One example that is often a hindrance is available storage on the device itself. Video files are large and fill up space quickly. Do you have enough space for your requirements?

Filming your interviews

Now we have gone through some basic considerations, let us move to some tips for the filming itself. These are some simple things to think about when setting up your shot.



Location and Framing

Where you decide to shoot can change the feel of your footage. Interviews are best shot indoors where it is a quiet and controlled space. This will aid you in getting good audio (see Recording Audio section) as well as allowing you to dictate how your shot will look. The position of the camera should be horizontal.

It is important to take notice of what is in your shot when filming. Background distractions and poor choices of shot angles can hinder the outcome of your content.

If the location is unfamiliar to you and is accessible, it is a good idea to plan a visit prior to your shoot. This will allow you to think about such things as challenges you may face on the day and ideal spots for shooting. It is not always possible to do this but any kind of preparation like this will result in a smoother and less stressful experience for both you and your subject.

Lighting

One thing smartphone cameras are not so good at is shooting in low light. If you have ever taken a photograph in a poorly lit space or at night-time, you will have seen that your photo looks 'grainy.' This is known as 'noise.' A visual noise, of sorts. The lens on a camera needs

lots of light to produce sharper and cleaner images. The same principle applies to video and is much harder to 'clean up' compared to a photograph, after the fact.

If you are shooting your interview indoors, look to place your subject near natural light sources such as windows and open doors. Wherever most light up the room. It is also important to have your subject face the light source to illuminate their face. Be careful for over lighting to "wash out" the subject though.

Shooting with the light behind them, will result in your subject being shadowed as the camera will be looking for all the light it can find. You may have seen this mistake made on Zoom calls.

Watch this video for [tips on using natural light for your videos](#)

Test recording

Once you have set up your equipment (video and audio), the framing you are happy with and your subject is in place, it is time to do a test recording.

Unfortunately, when using a smartphone to record your videos, it is not always possible to 'monitor' the audio being recorded.

This is especially true if you are using an external microphone such as a Lavalier or shotgun microphone as these will be plugged into the headphone jack of your

device. The connectors on these mics have an extra ring connection that allows the headphone jack to receive incoming audio, like how the microphone works on a set of earphones for voice calls. As the port is now in use, we cannot hear the sound volume or quality coming into the recording.

To combat this, you will need to do a couple of test recordings and review them until you are happy with the results. Be sure to let your subject know that you are doing this process so that they are not sat waiting, not knowing what is happening. Do not feel rushed or under pressure to do this process quickly. It is far more important to get this right.

A simple sound test is to ask your subject a few warmup questions like

- What did you have for breakfast this morning?

- What did you do today before this session?

Not only do these kinds of questions allow you to tune your sound levels but, in most cases, it will also put your subject at ease. Sitting in front of a camera can be a nervous experience for many of us!

You Looking at me?

Before you start recording you will need to decide on where you want your subject's eyes to focus. If you watch some interviews, you will notice that the subject is looking past the camera and towards the interviewer. In some cases, subjects are asked to look into the camera lens.

The latter often gives a more intimate feeling as if the subject is talking directly to the viewer. This method tends to be used a lot in documentaries.

We would suggest that you opt for the former and have your subject look to the interviewer, who ideally will be behind or to the side of the camera. However, this is your content and your creativity and if you have planned your time well, you will have allocated enough set up time to even try both methods and see which one you think looks best!

Conclusion

Hopefully, the information in these documents will give you enough knowledge and confidence to go out and start shooting your interviews. We have included a checklist of tips for filming with smartphones, also.

Remember. Do not put pressure on yourself for it to be perfect on the first go. The more you do, the better you will get. Keep these tips handy, watch the videos (make notes!) and enjoy the creative process!

For Some further explanations on filming interviews – watch these videos:

[Shooting an Interview on your Phone](#)

[How to Film a High Quality Interview with your phone](#)

4.1.1 Checklist for filming with a Smartphone

- Size: 1920 x 1080 full hd or 4k

- The position of the camera should be horizontal

Composition

- Rule of thirds. Avoid the focus of your shot always being in the centre of the frame. Watch this for a beginner's explanation: <https://www.youtube.com/watch?v=U9izgAqa-fA>
- Try to make shots where movements are smooth and stabilised
- Use your phone's external camera (not selfie mode)
- Repeat each shot at least 3 times by changing the distance between camera and subject/object. (Feel that changing the distance incorporates something new into the shot).

Stabilisation (tripods)

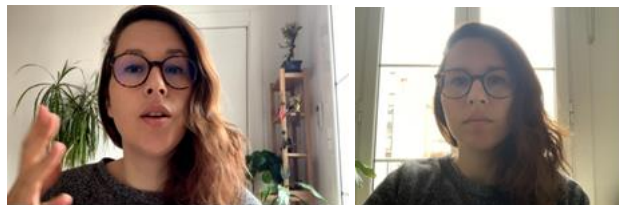
- Where possible, always use some form of stabilisation – either tripod, body or something else steady. *If you don't have access to a tripod, hold your phone in landscape and tuck your elbows into your ribs. Outstretched arms will tire, and stabilisation of your footage will become shaky.*

Zoom/framing

- Avoid zooming if possible – actively move closer to a subject if you can. Digital zoom degrades film quality.

Lighting - where to sit a subject

- Try to make sure your subject is facing a light source – try and use natural light where possible.
- Also, pay attention to the windows in your background. The ideal case is that you light yourself up from the front.



Exposure & focus

- Your phone should be set to automatically focus and exposure – however check this before pressing record.

Audio recording

- If possible, use a microphone, avoid windy conditions or background noise (crowds, traffic etc). Try to shoot a test and listen back to check sound levels.
- Built-in mics on smartphones are generally pretty good these days, so don't let the lack of an external mic stop you from getting started.
- When setting up, try to avoid places that could generate echoes.
- Speak close to the camera or record a separate shot where audio is the priority/without so much background noise.

Planning

- Arrive early, give time to setup, have confidence to make the space work for you.
- Here <https://www.youtube.com/watch?v=mo3cQb5YtQo> is an overview video:

4.2 Content Capture (Audio)

How to record your audio interviews

Most of us have heard audio interviews either on the radio or a [podcast](#). If you wish to capture an audio interview with your subject without computers, expensive microphones and software, there are a couple of ways you can do this.

The first would be using a dedicated digital audio recorder that has everything you need, built into it. These devices have been around for many years and their features and capabilities have grown over that time.

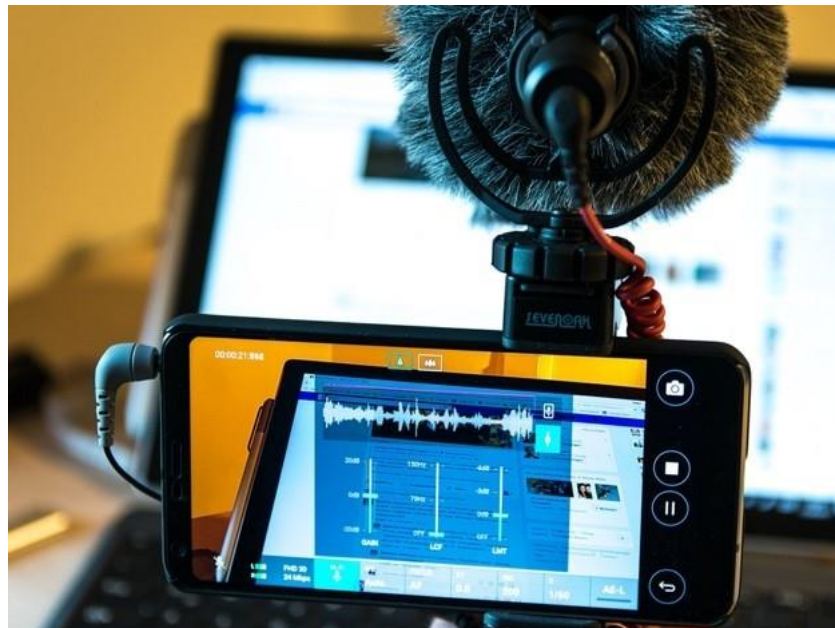
In terms of prices, they can range from simple and affordable, like the Tascam DR05x to much more expensive options like the Zoom H6 which offer much more functionality.



Tascam Dr05X (left) and Zoom H6 (right)

Fortunately, whilst their microphones might not be quite as good as those found built in to dedicated audio recorders, the smartphones we have in our pockets are increasingly capable digital audio recorders, too!

Whether you have an iPhone, iPad, or Android device, they can all record high quality audio that you can use to capture your interviews.



The built-in microphone on your smartphone is highly capable and your recordings can be improved with post-editing (after it has been recorded). For basic recordings or if you do not have access to additional equipment (such as an external microphone), It will do the job.

However, if you wish to take your audio quality to the next level and add some professionalism to it, you will need to invest in a microphone such as a lavalier or shotgun microphone. Like the digital recorders, there are both expensive and affordable options.

Lavalier:

[Boya BY M1 Microphone for smartphones and cameras](#)

YouTube overview [HERE](#)



Shotgun:

[Boya MM1 Universal Shotgun microphone for cameras and smartphones](#)

YouTube overview [HERE](#)



So, now you know what equipment you need, how do you get started?

Check out the videos below to learn more about setting up and recording better audio with your smart device.

[Record Better Sound with Your Smartphone](#)

[5 Ways to Get Better Audio in Your Videos \(Smartphone Edition\)](#)

4.3 Collecting Participants' Media

Uploading and collecting video diaries



For our UK pilot programme, we asked our participants to record short video diary entries to talk about their individual journey and experiences. If your participants are also recording video diaries, you will need a way to retrieve and collect these videos.



We recommend using a file transfer service such as [WeTransfer](#). This service will allow the user to upload files of up to 2GB in size

for free and is an easy way to get them.

You can read the user guide for sending files [here](#)

For more support and information on using WeTransfer, visit [Knowledge Base](#)

For a detailed guide to sending files through WeTransfer.com, watch this tutorial video.

[WeTransfer Tutorial - Transfer Large Files Online 2022](#)

4.4 Storing Participants' Content

In the previous module, we discussed the ways in which your participants can share their recorded content through platforms such as [WeTransfer.com](#).

As your participants share their content, you will need to do two things. Organise and back up! It is good to have a planned process in place before the various content starts rolling in, whether that is from the participants themselves or if you are the one recording and collecting the media.

Cloud storage options such as [Google Drive](#), [Microsoft Onedrive](#), [PCloud](#) (and many others) are a good way to store your content safely online. It's easy to upload from a browser to your cloud storage space and, once there, is accessible from any device that is connected to the internet.

Most if not all these services offer free introductory storage space ranging from 5-15 GB. Do some research and see which service will suit you best.



Additionally, it is also good practice to have your files backed up on a physical storage device such as an external hard drive. There are many options available in this category.

While it may be tempting to opt for cheap storage on sites such as Amazon and Ebay, we recommend that you look at reputable brands in this space such as Samsung and Western Digital.

Again, please do some research and decide which works best for you and your budget.

So now you have your storage devices, we need to organise how the data will be stored.

Folders are a good way to manage lots of files. We have created general folders as well as folders for each of our participants for us to be able to manage and access their content and files easily.

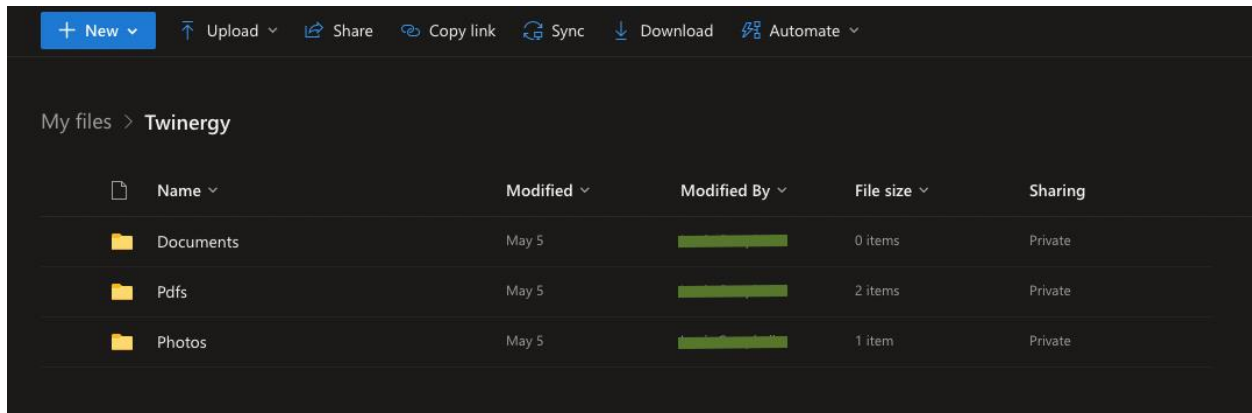


Figure 1- Our Onedrive folder for General Twinergy files

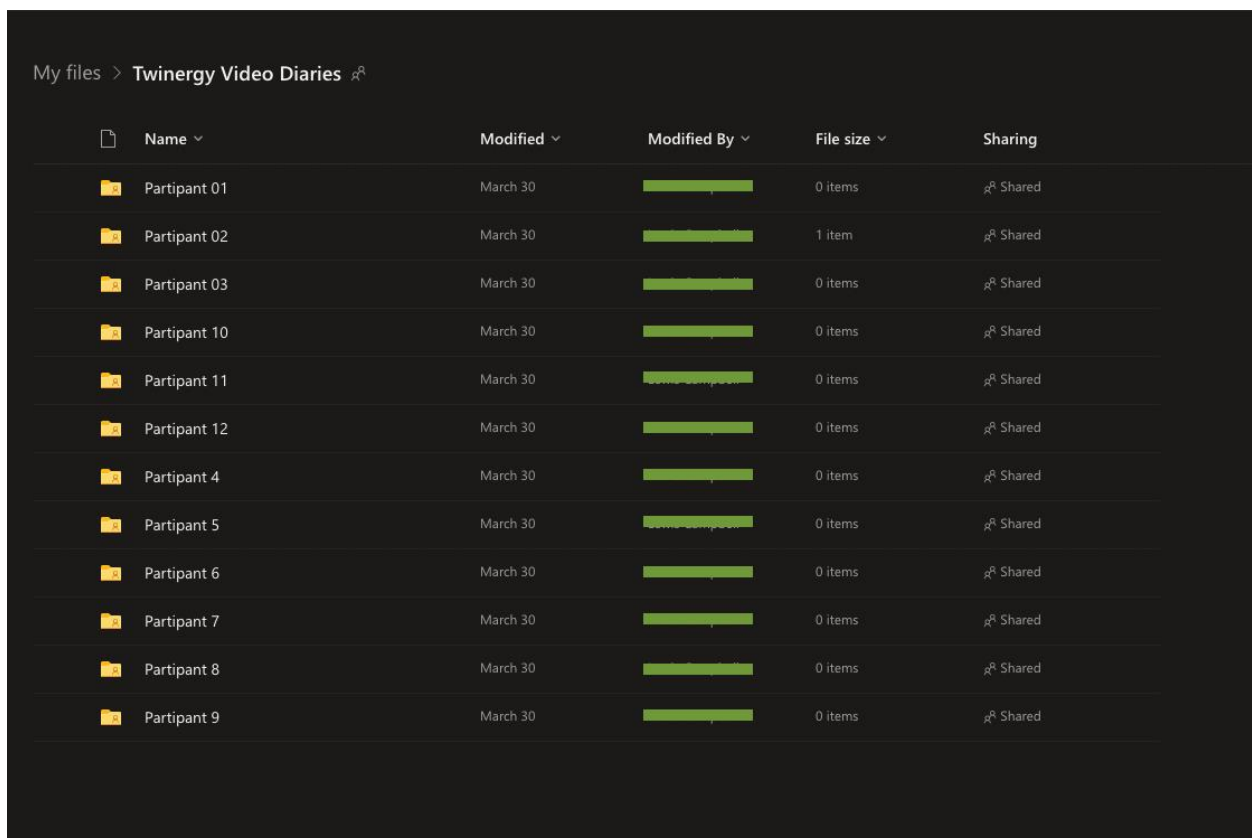


Figure 2 - Participants folders in Onedrive

As you can see from the images, by having your folders and storage plan ready, managing all the files that you collect throughout the project becomes easier and tidier overall.

There are many different methods for organising your files. For more tips on how to better organise and store your files watch this video, below:

[Best Practice to organise your computer files](#)

4.5 Guide for Participants Recording your Video Diary (Vlog)

Recording your video diary

Use these tips to get the best recordings of your journey.

Don't be afraid of the camera and its settings.

By implementing these tips, you will build confidence as you shoot more of these videos.

Video Settings

- Clean the lens of the camera with a soft cloth
- Turn on Airplane Mode to avoid interruptions
- Go to the settings, then find camera. Open these settings and select Record at 1080P at 30FPS
- Go to Camera, then Formats and choose Most Compatible

Prepare your room

- Try and make sure you sit around 6FT away from the wall behind you.
- Observe your background and remove any distracting objects.
- Use natural light from a window or doorway to illuminate yourself.
- Use books, a shelf to bring your camera up to eye level.
- Listen to the room. Are there any distracting sounds, devices (washing machine, television) that can be turned off?
- Sit 2 to 3 FT away from the camera for good audio quality.

Recording

Now that you have checked your video settings and prepared your space, it's time to hit record.

- Start by doing a test recording and check that you are happy with the result.
- It's OK to be nervous. Take a deep breath, relax and try to speak slowly.
- When answering questions, start your sentence with the question.

As example:

Question: "What have you noticed since your battery was installed?"

Answer: "Since having the battery installed, I have noticed that..."

Conclusion

Your journey, views and opinions are of matter to us and is of great value to the future of sustainable energy in homes like yours.

We hope you enjoy learning the process of recording your video diary throughout this pilot project.

Annex 5 - Agenda



Agenda of TwinERGY PAN EU WORKSHOP

Thursday 29th September, 2022

Session 1: Introduction to TwinERGY engaging strategy (Online)

2:00	Introduction and Welcome to TwinERGY workshop	Stylios Karatzas (University of Patras)
2:10	Brief overview of TwinERGY approach to engagement: -Diversity and Inclusion, Adapting the Bristol Approach -Trusted data sharing as an enabler for citizens' engagement.	Carolyn Hassan (KWMC) Arthur van der Wees (Arthur's Legal)

Session 2: Learning from 4 pilots (Online)

2:30	Introduction to session	Anna Higuera (IFC)
2:35	Italy – feedback and presentation from Benetutti about mornings events and citizen engagement/feedback	Marco Barbagelata (STAM)
2:45	UK, Greece, Germany pilot presentations.	UK: Matt Jones (Bristol City Council) Greece: Georgia Roussou (Protergia) Germany: Johannes Üpping (TH-OWL)
3:00	Q&A from audience	Hosted by Anna Higuera

Session 3: Voices on community engagement & energy (Online)

3:30	Session 3 Views from Experts in community engagement and energy.	Mia Ala Juusela (VTT) Thomas Mikkelsen (Smart Innovation Norway) Carolyn Hassan (KWMC)
4:00	Chaired by: Q+A's from online participants, Twinergy partners	Hosted by Anna Higuera (IFC)
4:15	Closing	Stylios Karatzas (UoP)

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