

24 September									
09:00   10:30	ONSITE PAPERS	User Engagement for Energy Transition	Industrialised Deep Energy Retrofit	EPBD Implementation: Smartness for Energy Efficiency	Digital Building Logbooks and Permit Processes	Standardizing Technical Assistance to Geographical Islands	Innovations for Whole Building Energy Self-Assessment	ONSITE PAPERS	Building Data Hubs Supporting Energy Transition
10:30   11:00									
11:00   12:30	ONSITE PAPERS	Innovative Solutions for Sustainable Energy	Unlocking the Renovation Wave	EPBD Implementation: Smartness for Energy Efficiency	Digital Building Logbooks and Permit Processes	Standardizing Technical Assistance to Geographical Islands	Innovations for Whole Building Energy Self-Assessment	ONSITE PAPERS	ONLINE PAPERS
12:30   14:00									
14:00   15:30	ONSITE PAPERS	Energy Communities for Smart Energy Transition	New European Bauhaus; R&D Project Challenge	EPBD Implementation: NexGen EPC Cluster	Efficient and Impactful Digital Building Logbooks	A Compact and Sustainable Heat Storage Solution	Real-Time Data for Building Energy Optimization	From Energy Simulations to Standards	ONLINE PAPERS
15:30   16:00									
16:00   17:30	ONSITE PAPERS	Construction Sector Open Innovation Test Beds	Advanced Manufacturing of Renewable Plants	EPBD Implementation: NexGen EPC Cluster	Resource-Efficient Solutions for Cultural Heritage	CEN Workshop Agreement for Island Energy Transition	Advanced BMS Platforms and Augmented Intelligence	From Energy Simulations to Standards	ONLINE PAPERS
25 September									
09:00   10:30		ONSITE PAPERS	Circular Economy Value Chain Innovations	Demand Flexibility for a Faster Energy Transition	Environmental and Social LCA in the Built Environment	Sustainable and Inclusive Neighbourhood Regeneration	Digital Twins, Machine-Human Collab & Sustainable Materials	SmartSPIN (title TBD)	Renovation Passport Proposal for the EPBD Recast
10:30   11:00									
11:00   12:30	SBA LUX	Positive Energy Districts: Strategies and Implementation	Data Management for Enhanced Built Environment Circularity	Demand Flexibility for a Faster Energy Transition	Environmental and Social LCA in the Built Environment	Sustainable and Inclusive Neighbourhood Regeneration	Real-Time Self-Assessment for Building Energy Management	SmartSPIN (title TBD)	Social and Technical Aspects of the Hydrogen Revolution
12:30   14:00									
14:00   15:30	LUX INNOVATION	Energy Communities 2050	Data-Driven Smart Buildings	Best Practices for Energy Efficient Manufacturing	Towards Sustainable 6G Mobile Networks	Semantics and Construction with Building Digital Twins	Circular and Bio-based Building Solutions		Cultural Engagement Through Digitalization for Energy Transition
15:30   16:00									
16:00   17:30	Matchmaking	Energy Communities 2050	Data-Driven Smart Buildings	Bridging the Entire Hydrogen Value Chain	Smart Readiness in Non-Industrial Buildings	Semantics and Construction with Building Digital Twins	Bio-based Materials in the Emerging Circular Economy		EnTRACK (title TBD)
ONSITE WORKSHOPS									
ONLINE WORKSHOPS									

## 24 September

### 09:00 - 10:30 Onsite paper session

- *“Interoperable and Sovereign Data Sharing in Building Permit Management Data Space”* Gonzalo Gil, Tekniker
- *“Energy community platforms and applications - A psychological perspective on the development of user-friendly energy applications”* Julia Blanke, University College Cork
- *“The Multifaceted LEGOFIT Approach to Tackling Barriers to Energy-Positive Homes”* Giulia De Aloysio, Certimac soc. cons. a r.l
- *“What are the carbon costs of providing adaptability within a building structure?”* Harry Watt, University of Sheffield
- *“We talk BIM for LCM and sustainability – The importance of qualification frameworks for professionals”* Tarja Makelainen, VTT Technical Research Centre of Finland

*“Scaling up user engagement strategies for sustainable energy transition”*  
(onsite, 90’)

This workshop will explore practical approaches and innovative solutions to enhance user involvement in energy transition initiatives. It will draw on results from HESTIA, ACCEPT, and SENDER projects, on overcoming

barriers and maximizing engagement across diverse contexts. Key objectives include identifying best practices for user engagement, addressing challenges, and optimizing project timelines to align with evolving user needs.

*“Navigating the Shades of Industrialized Deep Energy Retrofit: Strategies for a Sustainable EU Building Stock”* (onsite, 90’)

This workshop explores barriers to the EU's renovation wave and examines scalable solutions from participant projects to meet 2050 targets. It also considers short and long-term sustainability policies. Researchers, industry experts, and conference attendees will discuss these issues, aiming to draft a policy-informing paper to expedite the Renovation Wave. The workshop explores cutting-edge retrofitting approaches, collaborative approaches, and market activation. Key discussion points include combining digital and physical technologies, addressing regional adaptation, and discussing strategies for industrialization.

*“EPBD Implementation: Smartness for Energy Efficiency - tools for buildings and their users”* (onsite, 180’)

This workshop will revolve around the presentation of tools for the (smart) energy efficiency of buildings. After an introduction to smartness in buildings and the Smart Readiness Indicator, presenters will pitch and/or demonstrate tools / training programs for energy efficiency. This workshop will also address challenges such as information dispersion, apparent overlap, and blurred focus. It aims to expedite the search for smarter building solutions by focusing on energy efficiency personas and offering relevant tools in bulk.

*“Digital Building Logbooks and Permit Processes for Sustainability”* (onsite, 180’)

The workshop will consist of two parts. The first part, approximately 60 minutes long, will feature presentations from experts on digital building permits and logbook processes for sustainability from R&D projects. The second part will focus on the challenges and opportunities of these processes, addressing user perspectives on their contribution to sustainability, challenges in the digital transition, and the use of Building Information Modeling (BIM) for Life Cycle Assessment.

*“Standardizing Technical Assistance to Geographical Islands to make them Leaders of Green Energy Transition”* (onsite, 180’)

This workshop will bring together sister projects focusing on islands' decarbonisation and clean energy transition, aiming to reinforce synergies between H2020-HEU-LIFE-Interreg projects. The European Commission is focusing on making islands the engines of the EU energy transition due to their unique features, such as poor interconnection with energy grids, high production costs, and climate-related risks. Solutions for decarbonization on islands offer high energy, environmental, and socio-economic benefits, which can be replicated on mainland regions.

*“Smart innovations for whole building energy self-assessment and optimization”* (onsite, 180’)

The workshop will focus on key innovations, lessons learned and obstacles to self-assessment and optimization of building energy. It is the final event of the SATO project, an H2020-funded initiative, which aims to improve building energy efficiency by enabling real-life assessment of energy use. The platform consists of an IoT middleware, a self-assessment framework, optimization services, and end-user applications. It uses semantic models to support data and systems interoperability, allowing self-discovery, orchestration, and execution of KPIs, assessments, and computational tasks.

*Onsite paper session*

- *“Fostering sustainable energy projects in cities and regions – lessons learnt and key takeaways from a peer-to-peer capacity building programme”* Danai Sofia Exintaveloni, University of Piraeus Research Centre and Giulia Viero, Institute for European Energy and Climate Policy
- *“Twin4Resilience: Transforming Territorial Planning with Local Digital Twins”* Slim Turki, LIST
- *“Pan-European energy system storylines aligned with European policies like REPowerEU and Fit-for-55”* Siri Mathisen, SINTEF Energi AS
- *“Estimating material stocks, embodied carbon and circular economy potential in existing buildings”* Charles Gillott, University of Sheffield
- *“Quantifying the Impact of Nature Based Solutions (NbS) on Outdoor Thermal Comfort using Dynamic Simulation Tools”* Niall Buckley and Koldo Urrutia Azcona, IES R&D
- *“Towards the energy transition: the role of the RES, the energy storage systems and the hydrogen”* Anna Pinnarelli, University of Calabria

*“Sustainable operation of building data hubs in support of the energy transition”* (online, 90’)

The H2020 BuiltHub project worked towards building data collection in support of the energy transition in the EU. It was originally conceived in support of the Building Stock Observatory and targeted as lead users those willing to share and upgrade their data repositories, as well as end users seeking data-backed insights. Now in its final year, BuiltHub aims to share some of its key insights, while seeking direct feedback on its business and marketing models for long term sustainability. The feedback will be useful beyond BuiltHub itself, supporting other similar and follow-up initiatives towards dynamic and automated building data collection within the EU.

**11:00 - 12:30** *Onsite paper session*

- *“Home Energy Optimization using Vehicle-to-Home”* Shuo Zhang, University College Dublin
- *“Multi-objective approach for flexibility management in renewable energy communities”* Fairouz Zobiri, Centrica

- *“An overview of the Advanced Distributed Storage for grid Benefit (ADSorB) project”* Robert Barthorpe, University of Sheffield
- *“To each their own: Exploring the possibilities of design and transmedia storytelling in the energy transition”* Cyril Tjahja, Vrije Universiteit Amsterdam
- *“Exploring Sustainable Energy Potential in Positive Energy Districts (PED) via Geographic Information System (GIS)”* Beril Alpagut, Demir Enerji
- *“Social LCA of recycled PVC products”* Nirvana Marting, LIST

*“Innovative solutions for sustainable energy”* (onsite, 90’)

This session will showcase the achievements and methodologies of three pioneering projects, HESTIA, ACCEPT, and SENDER, advancing renewable energy adoption and demand response initiatives across Europe. HESTIA develops energy management strategies for Renewable Energy Communities (RECs), ACCEPT engages communities in demand response schemes, and SENDER develops advanced technologies for home automation. These projects' success is evaluated through key performance indicators, providing valuable insights into cost savings and environmental impact reduction.

*“Unlocking the Renovation Wave: Deep-renovation solutions”* (onsite, 90’)

This NEBULA-led workshop will showcase seven EU projects, each discussing cross-cutting issues and embracing circularity, inclusiveness, and aesthetics. To meet 2050 targets, buildings must reduce energy needs and adopt a circular approach, reducing carbon throughout their life cycle. These projects are developing solutions for deep building renovation, including innovative packages, circular approaches, and digitalized business models.

*Onsite paper session*

- *“Dwelling overheating in cool climates: Key Risk Factors”* Mark Mulville, Technological University Dublin
- *“LIFE IN-PLAN: how integrated spatial planning can help building the sustainable city of tomorrow”* Irene Biancani, FEDARENE
- *“Validation of energy savings using the Smart Readiness Indicator through experiments in real buildings”* Tristan Emich, KIT
- *“Design for circularity, a demonstration building – Petite Maison”* Jie yang, ArcelorMittal
- *“Life Cycle Assessment of an Underground Car Park’s Retaining Walls”* José Humberto Matias de Paula Filho, ArcelorMittal

*Online paper session*

- *“The Pilot cases of FORTESIE project: Establishing innovative renovation packages towards the Renovation Wave acceleration”* Maria Flouri and Christos Kontzinos, National Technical University of Athens
- *“Accelerating deep renovation through prefabricated solutions in the European Building Sector: an approach for matching effective modular*

*retrofit technologies for different ecosystems” Giulia Paoletti, Eurac Research*

- *“Development of a Grey-box model for a Multi-Residential Passive Building incorporating Radiant Wall and Radiant Floor Heating Systems” Jordi Macia, International Energy Research Center*
- *“The skills energy equation” Paul McCormack, Belfast Municipality*
- *“Grid verification and monitoring layer by blockchain technology” Rafael Camarero Rodriguez, CIRCE Technology Centre*

**14:00 - 15:30** Onsite paper session

- *“Minority Report: Mitigating Environmental Disruptive Events using People-Centric Predictive Digital Technologies to Improve Disaster and Climate Resilience” Niall Byrne and Niall Buckley, IES R&D*
- *“Funding instruments that would support roll-out of Positive Energy Buildings” Mia Ala-Juusela, VTT Technical Research Centre of Finland; Andreas Tuerk and Clemens Mayer, Joanneum Research*
- *“Replication and Upscaling Methodology for Reducing Energy Poverty” Beril Alpagut, Demir Enerji*
- *“Super-Heero: Results of three crowdfunding campaigns for the EE renovation of supermarkets” Thomas Messervey, R2M Solution Italy*
- *“Integration of Building Information Modeling in the Life Cycle Assessment of an office building, considering various structural materials” Nitesh Karmacharya, ArcelorMittal*
- *“Whole life carbon impacts of non-residential retrofit at scale” Danielle Abbey, University of Sheffield*

“Energy Communities for Smart Energy Transition” (onsite, 90’)

This session discusses the HESTIA, ACCEPT, and SENDER projects' contributions to sustainable urban energy landscapes. The HESTIA project encourages residents to adopt renewable energy sources and demand flexibility, while ACCEPT focuses on maximizing grid robustness through community involvement. SENDER focuses on sustainable innovation in the energy market, promoting energy efficiency, and community-driven trading.

“New European Bauhaus (NEB): challenging your R&D project against the NEB approach” (onsite, 90’)

The New European Bauhaus (NEB) initiative, launched in 2020, aims to promote sustainable, inclusive, and aesthetic solutions in living spaces. It is implemented through three principles: participatory process, multi-level engagement, and transdisciplinary collaboration. This workshop aims to raise awareness among EU-funded project partners about incorporating NEB practices in their R&D approach and collect feedback on how to facilitate adoption. Projects NEBULA, DIGINEB, CrAft Cities, AEGIR, NEB-STAR, Re-Value, ENACT 15mC, ARV and Syn.ikia will participate in the workshop.

“EPBD Implementation: NextGen EPC Cluster” (onsite, 180 minutes)

This workshop showcases results from the Next Generation Energy Performance Certificates cluster, which aims to maximize quality, relevance, utility, and effectiveness through a coordinated and convergent approach.

This approach empowers decision-makers at EU and Member State levels and the overall EPBD-related stakeholder community to swiftly leverage emerging results for continuous EPBD transposition, implementation, and monitoring, ensuring the meaningful weave-together of policy instruments.

“Creating Efficient and Impactful Digital Building Logbooks” (onsite, 90’)

Digital building logbooks are crucial in modern construction and facility management, streamlining data entry, storage, and retrieval processes, minimizing human error, and ensuring accurate information for decision-making and compliance. However, challenges include initial setup costs, data security concerns, resistance to change, and interoperability issues. To advance digital building logbooks, industry standardization efforts should focus on developing common formats, data structures, and protocols, providing comprehensive training programs, continuously improving software, and collaborating with technology vendors, industry associations, and regulatory agencies.

“A compact and sustainable heat storage solution for clean energy” (onsite, 90’)

This workshop will showcase results from HEAT-INSYDE, a user-centric project aiming to develop a compact domestic heat storage prototype using thermochemical material. The prototype combines compact storage with an efficient heat pump effect, balancing central and decentralized renewable energy supply. The system will revolutionize the built environment by accelerating decentralised heat storage in renewable energy systems. The consortium consists of multidisciplinary partners, including industrial material suppliers, application developers, and network/service providers, to facilitate scale-up and commercialization.

“Real-Time Data for Building Energy Optimization” (onsite, 90’)

In this workshop, the PRELUDE project will showcase smart retrofitting strategies that can improve indoor living conditions in European cities. The project combines innovative, low-cost solutions with a proactive optimization service, providing clear feedback and cost-efficient retrofitting recommendations. The service assesses the necessary household smartness and provides optimal tools based on user needs. It uses natural ventilation and cooling to reduce energy consumption, prioritizes passive solutions, and uses big data and advanced analytic tools for flexible building-side demand.

“From energy simulations to standards” (onsite, 180’)

This workshop aims to identify functional applications of energy simulations and establish a potential standardization, enabling reusable components, real-time use, and connections between systems. This could lead to more reliable solutions for electrical generators, protections, and consumers. Mathematical simulation is used in complex installations to test energy simulations, but many EU projects lack standardization due to legacy systems and poorly documented libraries. This results in interoperable scenarios and knowledge silos.



Online paper session

- “Validation of a smart energy service for the commercial rented sector in Ireland, Spain and Greece” Luciano De Tommasi and Ruchi Agrawal, International Energy Research Center
- “Transforming Agriculture with Photovoltaic Technology: PV4Plants for Enhancing Climate, Water, and Light Spectrum Control for Safer, Healthier, and Improved Crop Production” Maria Ruiz, R2M Solution Spain
- “A Holistic IoT and Big Data Platform for Smart Building Energy Management Systems” Mohamed Bakhouya, International University of Rabat, Morocco
- “Horizon Europe PEDvolution – Interoperable solutions to streamline Positive Energy District evolution and cross-sectoral integration” Maria-Ioanna Pavlopoulou, Sympraxis
- “PREMISES: Impact of predictive maintenance and IoT on the SRI” Igor Perevozchikov, R2M Solution France

**16:00 - 17:30** Onsite paper session

- *“Life-Cycle Assessment of an Office Building: Influence of the Structural Design on the Embodied Carbon Emissions”* José Humberto Matias de Paula Filho, ArcelorMittal
- *“AI for Sustainability in the Construction Industry”* Camila Cervantes, University of Minho
- *“Digital tools for management of new and innovative Energy Performance Contracts including comfort and flexibility into EBENTO one-stop-shop platform responding to new business models”* Elena Leal Lorente and Raquel Castán, ETRA I+D
- *“Sustainable Housing and Construction”* Moses Ssekyanzi, Easy Housing
- *“Sustainable urban renewal after the war: opportunities for Ukraine”* Olena Kononenko, Humbolt University of Berlin
- *“Using low-cost sensors and a Living Lab approach towards the roll-out of the Smart Readiness Indicator: A case study of a small European city”* Niall Buckley, IES R&D

*“Boosting the competitiveness of EU construction sector product producing SMEs via Open Innovation Test Beds [METABUILDING, MEZeroE and iCLIMABUILT]”* (onsite, 90’)

This workshop will discuss three ongoing projects funded under call topic DT-NMBP-05-2020 - Open Innovation Test Beds for materials for building envelopes (IA). The projects, with over 70 partners, aim to generate over 150 million euros in new economic activity in the construction sector over five years. The workshop will present the state of each project, its services, and potential outcomes.

*“Advanced manufacturing of new-generation renewable plants”* (onsite, 90’)

This workshop convenes EU-funded projects that develop flexible automated manufacturing methods for new generation renewable energy sources (RES) design at pilot line level, focusing on innovative approaches, industry 4.0 concepts, artificial intelligence, and big data. The European energy plant stock needs to increase RES to meet global energy transition needs. However, the latest RES technologies pose challenges due to their complexity and potential for defects.

*“Sustainable and resource-efficient solutions for cultural heritage”* (onsite, 90')  
This workshop, led by the CALECHE project, addresses cultural heritage preservation in built environments. It will focus on sustainable solutions, including inclusive designs and energy-efficient practices. These solutions aim to maintain the intrinsic value of heritage sites, blending tradition with innovation. The research emphasizes renewable energy integration, cost-effective improvements, and stakeholder involvement. The project also provides decision-support tools for low-disruptive renovation, contributing to the Horizon Europe Partnership on 'Driving Urban Transitions.'

*“CEN Workshop Agreement for Island Energy Transition”* (onsite, 90')  
In this workshop, the recently completed NESOI project consortium will present, under the moderation of UNI, the Italian organization for standardization, the CEN Workshop Agreement that is being developed based on the procedures developed in the project for providing technical assistance on energy topics to EU islands.

*“3rd Auto-DAN Roadshow: Integrating Advanced BMS Platforms and Augmented Intelligence Solutions for Energy-Efficient Smart Buildings”*  
(onsite, 90')

This workshop, led by the Auto-DAN and SATO projects, discusses innovations and fosters collaboration towards a sustainable energy future. The SATO project, which developed a modular cloud-based platform for real-life energy assessment, will showcase their contributions to improving energy efficiency in buildings. The Auto-DAN project aims to optimize energy usage in EU buildings by combining automation and human intelligence. The project includes Smart Hardware Infrastructure, Inter-operable Software Architecture, and a Self-Energy Assessment Framework.

#### Online paper session

- “Renewable Energy Implementation: Does Farm Anaerobic Digestion Get Good Press? A lexicometric analysis of the daily press in France” Philippe Hamman, University of Strasbourg
- “The Transformative Power of Energy Communities: Insights from Within” Mélanie Michel, University of Applied Sciences Technikum Wien
- “The emerging role for cities in coordinating secure, green and locally powered energy systems” Laia Guitart, E.DSO
- “An overview of CBDCs and their potential role in the green economy” Christos Kontzinos, National Technical University of Athens



## 25 September

### 09:00 - 10:30 Onsite paper session

- *“Increasing transferability for automated fault detection and diagnosis in HVAC systems through a hybrid AI methodology”* Sebastien Dietz, University of Luxembourg and Nicolas Rehault, Fraunhofer Institut for Solar Energy Systems
- *“The impact of optimised set-values in secondary school-buildings”* Branca Delmonte and Stefan Maas, University of Luxembourg
- *“Circular economy-based materials development to foster the transition to sustainable and high energy performance buildings at optimal costs”* Juan Carlos Guerrero Ramos, AIDIMME
- *“Data collection techniques and technologies for digital building logbooks: Three logbooks and a case study”* Sultan Cetin and Henk Visscher and Sun Ah Hwang, Delft University of Technology
- *“District Energy Concept Evolution: From Positive Energy Districts (PEDs) to Positive Clean Energy Districts (PCEDs) – What are the main considerations from annual surplus energy to climate neutrality?”* Merve Mermertaş and Beril Alpagut, Demir Enerji
- *“Responding to Climate Emergencies in the City of Jijel (Algeria) by Sensor Systems and Smart Technologies”* Amir A. M. Duhair, University of Jijel

#### “WASABI, RaRe2, DeremCo, CoreU, YourBan: circular economy innovation focused on the creation of new participative value chains in industrial and urban environments” (onsite, 90’)

This workshop presents five projects focusing on sustainability and the circular economy, involving diverse stakeholders to enhance value chains. Techniques include knowledge transfer, information exchange, material and technology sharing, and strategic matchmaking. The workshop concludes with discussions on living labs and communities of practice, enabling innovation delivery to end-users and advocating for open science.

#### “Energy Demand Flexibility for a Faster Energy Transition” (onsite, 180’)

This workshop addresses highly insulated buildings can reduce energy needs by up to 80%, promoting a transition towards renewable energy. Deep thermal retrofits can increase comfort intervals and enable intelligent, flexible buildings. The Smart Readiness Indicator (SRI) concept finds greater effectiveness in deep thermal retrofit buildings. Projects like SATO and SMART2B contribute to leveraging building flexibility and improving indoor comfort and energy efficiency.

#### “Life cycle sustainability assessment: Environmental and social applications of LCA in the built environment” (onsite, 180’)

This workshop will explore sustainability assessment approaches in innovation projects in the built environment, focusing on environmental, social, and economic pillars. It will use various methodologies, including dynamic modeling of material flows, hybrid urban building stock performance modeling, urban regeneration interventions, circular economy initiatives, Photonic Meta-Concrete development, and holistic assessment tools. The goal is to achieve sustainability without compromising ecological ceilings while meeting social needs. The workshop will also discuss local circular economy initiatives, photonic meta-concrete development, and energy poverty reduction in residential building stock.

*“Regeneration Workshop: Crafting Sustainable and Inclusive Neighbourhoods”* (onsite, 180’)

The REGEN project is hosting a workshop to showcase B4P projects funded under the HORIZON-CL5-2022-D4-02-02 call. The workshop aims to encourage collaboration among B4P stakeholders to create an inclusive, positive built environment. The workshop will focus on neighborhood regeneration towards sustainable, inclusive, and low-carbon environments, focusing on innovation actions in buildings and urban environments. The workshop will be promoted among ECTP and WorldGBC members, supporting the REGEN project.

*“Exploring Digital Twins, Machine-Human Collaboration, and Sustainable Construction”* (onsite, 90’)

This workshop focuses on digital twins, machine-human collaboration, and sustainable materials. It aims to facilitate networking and foster synergies among projects, addressing challenges such as sustainable materials, skilled workforce, and waste management. The TECH4EUCONSTRUCTION cluster, funded by the European Commission, showcases projects developing technologies to digitalize and automate the European building sector.

*“SmartSPIN”* (onsite, 180’)

*“The Horizon 2020 iBRoad2EPC renovation passport proposal in the context of the recast Energy Performance of Buildings Directive”* (online, 90’)

This workshop explores the H2020 project iBRoad2EPC, which integrates Building Renovation Passports with Energy Performance Certificates (EPC), successfully concluded in 2024. It proposes an individual building renovation passport with new indicators like indoor environment quality and Smart Readiness Indicator, integrated with national EPC schemes. The project aligns with EU climate and energy policy targets, promoting deep energy renovation and supporting additional benefits for building owners and tenants.

**11:00 - 12:30** *Empowering Cities Through Positive Energy Districts: Strategies and Implementation* (onsite, 90’)

In collaboration with leading European projects focusing on Positive Energy Districts (PEDs), this workshop aims at exploring innovative strategies and practical approaches to accelerate the transformation of cities towards

sustainability and resilience. Participants will gain insights into cutting-edge initiatives, exchange best practices, and discuss actionable steps to foster the development and implementation of PEDs in diverse urban contexts. The participants represent a diverse set of sister projects from Smart Cities and Communities, Climate Neutral Cities Mission focusing on PEDs planning, design development and implementation.

“Data management for enhanced circularity in the Built Environment” (onsite, 90’)

This workshop aims to discuss best practices in digital solutions for circularity in the construction sector. It will analyze barriers and state-of-the-art digital tools and discuss roadmaps for sustainable building solutions. The workshop will also examine the feasibility of reusing construction components and the need for top-level whole life-cycle performance and digital traceability. The workshop will also discuss new digital tools under development for sustainability assessment and decision-making.

Energy Management of Buildings through Real-time Self-Assessment and Optimization: SATO project final event (onsite, 90’)

This workshop, led by the SATO project, discusses the importance of building self-assessment, optimization, and control in real-time energy resource management and system fault detection. It highlights the potential benefits of BIM integration and self-assessment results in supporting building management in decision-making related to maintenance and system upgrades. The workshop also explores the reasons for the building sector's lack of self-assessment and the barriers to its development.

“The hydrogen revolution: social and technical aspects for a sustainable transition to hydrogen technologies” (online, 90’)

The workshop will introduce the HYPOP project. Specifically, addressing aspects such as social impacts, acceptance indicators, and installation requirements. Stakeholders will interact with HYPOP partners and external experts to understand gaps and share best practices. The workshop aims to enhance citizen involvement and increase trust in hydrogen implementation.

**14:00 - 15:30** Luxembourg Innovation (onsite, 90’)

“Energy Communities 2050: Renewables, Citizens, and Collective Self-Consumption” (onsite, 180’)

Around 45% of renewable energy production in the EU could come from citizens by 2050, and energy communities are a clear enabler of this projection. In this two-part workshop, the first session will address technologies and user engagement, with participation from the LocalRES, MASTERPIECE, DE-RISK, RESCHOOL, and COMMUNITAS projects. The second session will address regulations and barriers, with participation from the COMANAGE, SUSTENANCE, BECKON, ACCEPT, and FEDECOM projects. The solutions and insights from these ten EU projects are crucial to support the growth of energy communities.

*“Data-Driven Smart Buildings”* (onsite, 180’)

The workshop discusses the achievements of four EU-funded innovation projects, DigiBUILD, MODERATE, BuildON, and DEDALUS, on data models & interoperability and data-driven services. It focuses on the integration of ontological frameworks, advanced technologies, and panel discussions on the future of Data-Smart Buildings. The workshops highlight the benefits of these technologies in enhancing energy efficiency, reducing operational costs, and improving occupant satisfaction.

*“Sharing and Validating Best Practices for Energy Efficient Manufacturing”*  
(onsite, 90’)

This workshop will share best practices and highlight innovative technologies for energy efficiency management in manufacturing. The DENIM and E2COMATION projects, funded by Horizon 2020, aim to improve industrial energy efficiency by combining various technologies and approaches. They develop energy-efficient best practices, integrating data across silos, and leveraging digital technologies. The projects have achieved more sustainable, resource- and energy-efficient manufacturing processes, resulting in innovative products and services.

*“Towards Sustainable 6G: A Workshop on Integrating Environmental Considerations in Next-Generation Mobile Networks”* (onsite, 90’)

This workshop aims to explore the connection between sustainability and 6G mobile networks, focusing on integrating environmental considerations into the design, deployment, and operation of future wireless communication systems. It will convene EU-funded collaborative projects to develop energy-efficient network architectures, renewable energy integration, life cycle assessments, eco-friendly materials, and policy frameworks. The goal is to catalyze advancements towards a more sustainable and environmentally responsible era of wireless communication, promoting innovative approaches, green technologies, and holistic strategies for minimizing the ecological footprint of 6G networks.

*“Semantics and construction”* (onsite, 180’)

This workshop will address the use of semantics in the construction sector. It will be led by the Building Digital Twin Association (BDTA), which aims to create an international initiative that promotes an open ecosystem for Building Digital Twin Environments. It develops research, certifications, and assets to drive the sector’s development, and is composed of companies and individuals working together to shape the future.

*“Circular and Bio-based Building Solutions Workshop - 2nd Edition”* (onsite, 90’)

The workshop brings together EU-funded projects on bio-based solutions for construction to discuss synergies and collaboration strategies for increasing energy efficiency and achieving climate neutral conditions. Experts will discuss building envelopes and renovation materials that boost energy

savings, save resources, and decrease carbon emissions. Bio-based materials aim to reduce environmental impact, increase energy efficiency, and promote sustainable development. They offer low embodied energy, carbon footprint, renewable, biodegradable, and improve indoor air quality. The workshop will feature presentations, demonstrations, and ongoing results.

*“Cultural Engagement Through Digitalization as a Driver of the Clean Energy Transition”* (online, 90’)

The workshop will discuss the role of culture and digitalization in empowering citizens for the success of the clean energy transition. The topic will be introduced through the presentation of a recent analysis conducted by the EERA Joint Programme e3s on Energy and Climate R&I experiences with the cultural and creative sectors, focusing on digitalization and impact assessment. Experts will then contribute to the discussion by providing their own views, experiences, and insights on the topic.

**16:00 - 17:30** *Matchmaking session* (onsite, 90’)

*“Hydrogen Synergy: Bridging the Entire Hydrogen Value Chain”* (onsite, 90’)

This workshop aims to foster collaboration and knowledge exchange in the global hydrogen sector. Drawing on the LuxHyVal project, it covers hydrogen production, storage, distribution, and utilization in industrial and mobility applications. The workshop will include keynote speeches, panel discussions, technical sessions, and real-world case studies to accelerate the adoption of hydrogen technologies and contribute to a sustainable energy future.

*“Using novel digital technologies to enhance smartness and smart readiness in large non-industrial buildings. The cases of COLLECTiEF and SATO projects”* (onsite, 90’)

This workshop compares the use of advanced technologies like Artificial Intelligence, Collective Intelligence, Digital Twinning, and Predictive Maintenance in upgrading outdated building systems in European pilots. The study uses Smart by Powerhouse and Smart Readiness Indicator assessments to evaluate smartness and readiness. The SATO project developed a modular cloud-based platform for self-assessing and optimizing buildings' energy resources, focusing on performance, fault detection, and resource consumption.

*“Exploring the Potential of Bio-based Materials in the Emerging Circular Economy”* (onsite, 90’)

The workshop aims to expand the use of bio-based materials, particularly bioplastics, in durable goods. It will explore the limitations and opportunities of bio-based polymers in durable applications, focusing on sustainable urban renewal. Key areas of focus include selecting bio-based materials, addressing communication challenges, assessing circularity through methodologies like Life Cycle Assessment, and identifying gaps in standardization and supply

chains. The workshop will also address communication challenges and consider end-of-life scenarios and recyclability of bioplastics.

**“EnTRACK”** (online, 90’)