



# The Smart Building Innovation Community

ECTP Conference, Madrid, 03/12/2021

# General information

---



- Call: H2020-LC-SC3-EE-2020-1 → Building a low-carbon, climate resilient future: secure, clean and efficient energy
- Topic: LC-SC3-B4E-9-2020 → Support to the coordination of European smart buildings innovation community
- Starting date: 01/10/2020
- Duration: 30 months

## Partners



## ECTP's LTPs



# Main objectives

---

- Consolidate & support the innovation ecosystem in the SB value chain
- Reference and promote the key innovators and innovations in smart buildings
- Collaborative work:
  - Break silos, share information
  - Identify barriers, opportunities & best practices for the further uptake of SB
- Bridge the gaps between innovation, markets and policy.
- Remove the last barriers slowing down the improvement of the energy performance of buildings through digitalization
- Consolidate these findings into a Strategic Research & Innovation Agenda
  - Feed the design of future HEu calls on smart buildings
  - Draw recommendations to policy makers
- Develop and test tools to support the deployment of the SRI

# Main activities



# Examples of promotion activities

- **Webinars** – in collaboration with Build UP, Leonardo ENERGY, ...
- **Workshops** – Back to back with large events
- **Projects and technology brochures:** promotion of Smart Building (EU-funded) projects & their outcomes



1<sup>st</sup> projects brochure available [here](#).

[Link](#) to be part of the next edition.

# SmartBuilt4EU Task Forces

---



**Task Force 1:  
Interactions with users**

**Task Force 2:  
Efficient building  
operation**

**Task Force 3:  
Interactions with the  
external environment**

**Task Force 4 :  
Crosscutting issues**

*Each task force produces a White Paper every 6 months:*



# Topics addressed in the last semester

TOPIC  
A





Task Force 1: Interactions with users	Task Force 2: Efficient building operation	Task Force 3: Interactions with the external environment	Task Force 4 : Crosscutting issues
<b>End user acceptance and attractiveness</b>  Strategies to improve end-user awareness and acceptance of smart building functionalities	<b>Interoperability</b>  Interoperability among building components & systems	<b>Providing flexibility to power grids</b>  Data interoperability to provide flexibility to the electricity grid	<b>Financing and business models</b>  New services, financing & business models (incl. Building as a Service), integration of new technologies (Blockchain)

White Paper available: <https://smartbuilt4eu.eu/task-forces/>



# Key components of a White Paper: example on topic **User acceptance (TF1)**

## BARRIERS

 TECHNICAL	Weak adaptability of buildings to different end-users' profiles and to their different life phases in the building (e.g. moving in, getting used to the equipment...)
 ECONOMIC	Economic concerns for end-user, occupant, private investor and owner: affordability/short term, compared to benefits (medium to long-term)
 SOCIAL	Fears related to lack of data privacy and lack of control on smart solutions Unknown, different perceptions of comfort for different end-users wrt smart building use
 VALUE CHAIN	Lock-in effect: how the smart solutions will evolve in the future, requirements for updates, upgrades Difficulties to implement successful co-design processes with end-users in order to develop more user-centered products

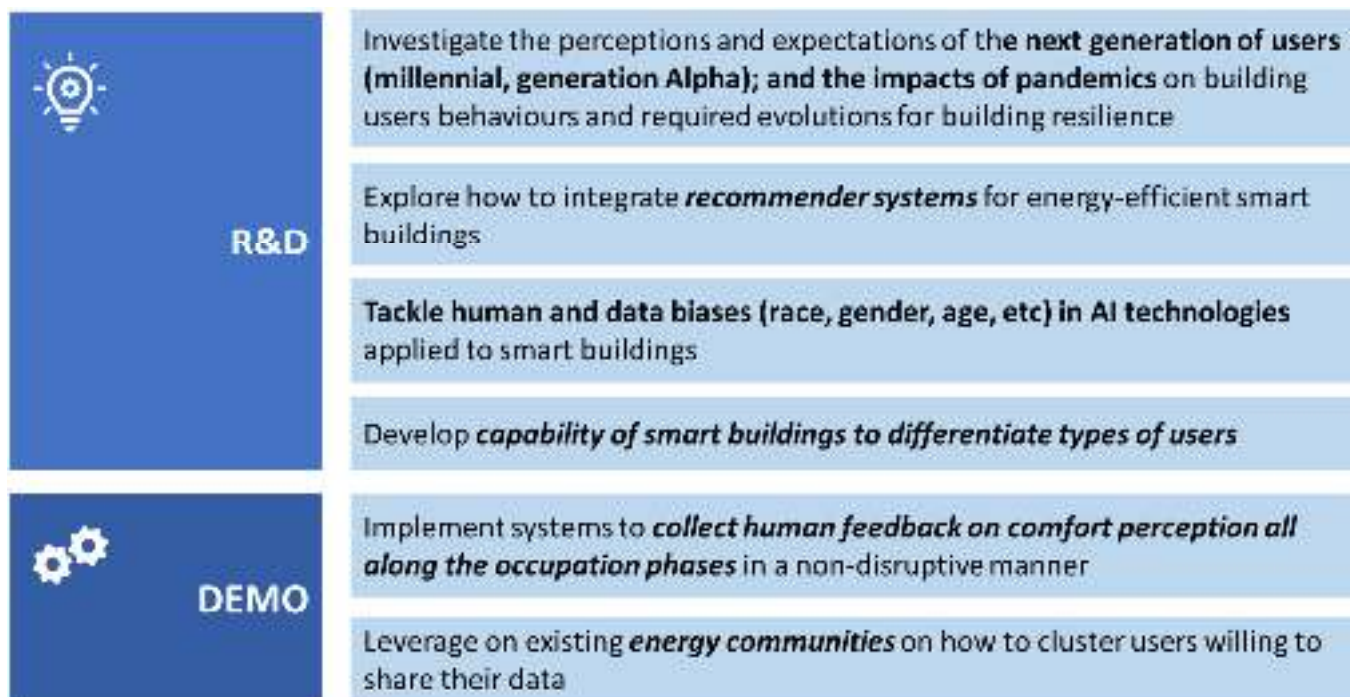
## DRIVERS

 VALUE CHAIN	Implementation and capitalisation on new approaches for collaborative design, such as design thinking, co-creation processes, mental models considerations Best practices in current projects related to gerontechnology and ageing in homes
 SOCIAL	Increasing knowledge of building user behaviours and requirements on specific segments (elderly people at home, students in university buildings) Leverage on specific groups of people with most interest in providing feedback on SB solutions, like elderly people wishing to age in place
 TECHNICAL	Good practices for the development IoT and AI-based apps, featuring easy-for-all and adaptive user experience



# Key components of a White Paper: example on topic **User acceptance (TF1)**

---



# Topics currently addressed

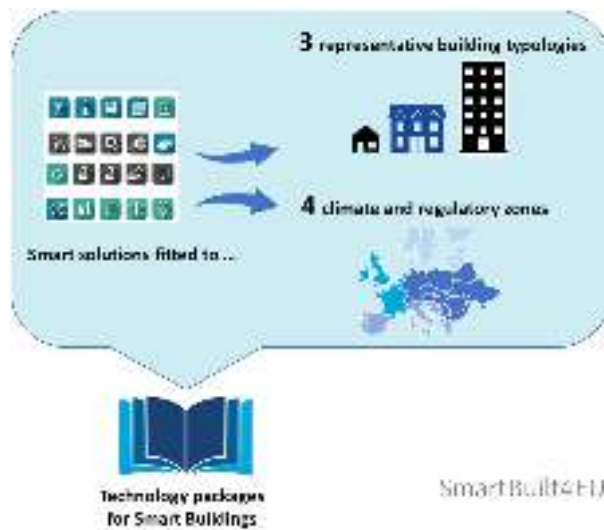
---

**TOPIC  
B**

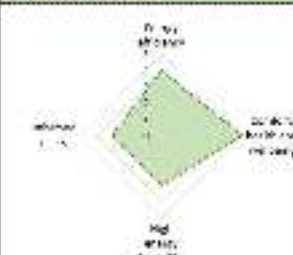




<b>Task Force 1: Interactions with users</b>	<b>Task Force 2: Efficient building operation</b>	<b>Task Force 3: Interactions with the external environment</b>	<b>Task Force 4 : Crosscutting issues</b>
<b>User-centric building</b>  Integrating smart solutions for enhanced well-being, inclusiveness and health of occupants	<b>Optimised building costs</b>  Integrating tools for optimised costs over full life cycle (incl. BIM, digital twin, predictive maintenance, AI, weather forecast, predictive control)	<b>Smart building as enabler of new energy practices and communities</b>  Smart buildings & electromobility; Local Energy communities, Energy efficiency	<b>Security and privacy</b>  Cyber-security; Data privacy & protection

# Contribution to the promotion of the SRI

- **Build on SRI developments and findings:** support its adoption & uptake across Europe
- Address the **lack of clarity** in the marketplace about the **benefits** of smart services/technologies
- Develop:
  - **Co-benefit indicators** associated to SB
  - **Technology solution packages** for SB with a performance assessment (SRI + co-benefits) -> Demonstrate the added value of SB; Promote a business case; Foster market uptake.
  - **Training material** and **workshops** on the SRI & practical testing

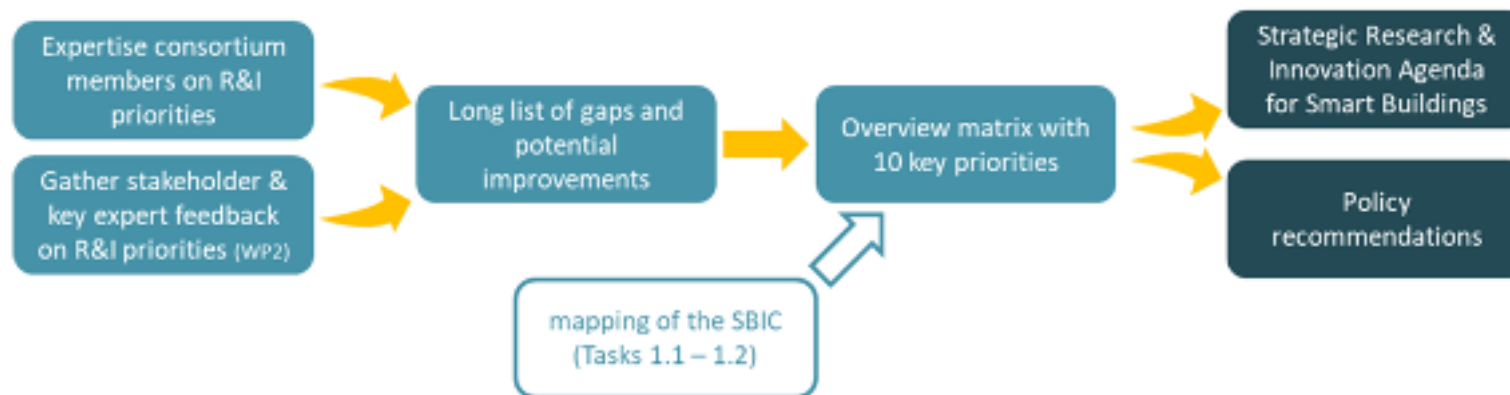


Smart Built4EU - ECTP Conference - 03/12/2021

Technology Solution Package #12	
SRI - Comfort & Health	
	<p>Description</p> <p>Describe smart technology and focused on comfort and health. It includes an integrated smart system for indoor air quality, thermal comfort, and acoustic comfort.</p> 
Applications	
<p>Indoor air quality</p> <p>Thermal comfort</p> <p>Acoustic comfort</p>	
Building typologies	
	
	
Performance indicators	
<p>Indoor air quality</p> <p>Thermal comfort</p> <p>Acoustic comfort</p>	<p>Indoor air quality</p> <p>Thermal comfort</p> <p>Acoustic comfort</p>
Technical building systems	
<p>Heating</p> <p>Cooling</p> <p>Controlled ventilation</p> <p>Lighting</p> <p>Dynamic window</p> <p>Shading and storage</p> <p>Monitoring &amp; control</p>	<p>Heating and ventilation system</p> <p>Control</p> <p>Control</p> <p>Control</p> <p>Control</p> <p>Control</p> <p>Control</p> <p>Control</p>

# R&I roadmap

- Development of a **Research, Innovation and Policy roadmap**
  - Support the EC and MS gaining a better understanding of the state of play of the SBIC needs
  - Identify & tailor key priorities for EU support to research, innovation & market uptake in smart buildings
- **SRIA for smart buildings**
  - Specify how the identified R&I priorities can be implemented and fostered within an EU R&I framework
  - Give a view where to put efforts in the EU R&I agenda (HEu and other EU initiatives)
  - Policy recommendations.
- **Increase the implementation potential and chances for success** of the priority actions, through the synergies SB4EU's larger framework of EU and international initiatives



# Join our community!

---



- Join our “Smart Buildings Innovation Community” and actively contribute to the SmartBuilt4EU project’s activities!

Click on the [Registration page](#)  
or use the QR code:



- Project website: <https://smartbuilt4eu.eu>

 <https://www.linkedin.com/showcase/smartbuilt4eu-project>



@SmartBuilt4EU

- Contact: [contact@smartbuilt4eu.eu](mailto:contact@smartbuilt4eu.eu)



# Thank you for your attention!

**The Smart Building  
Innovation Community**