

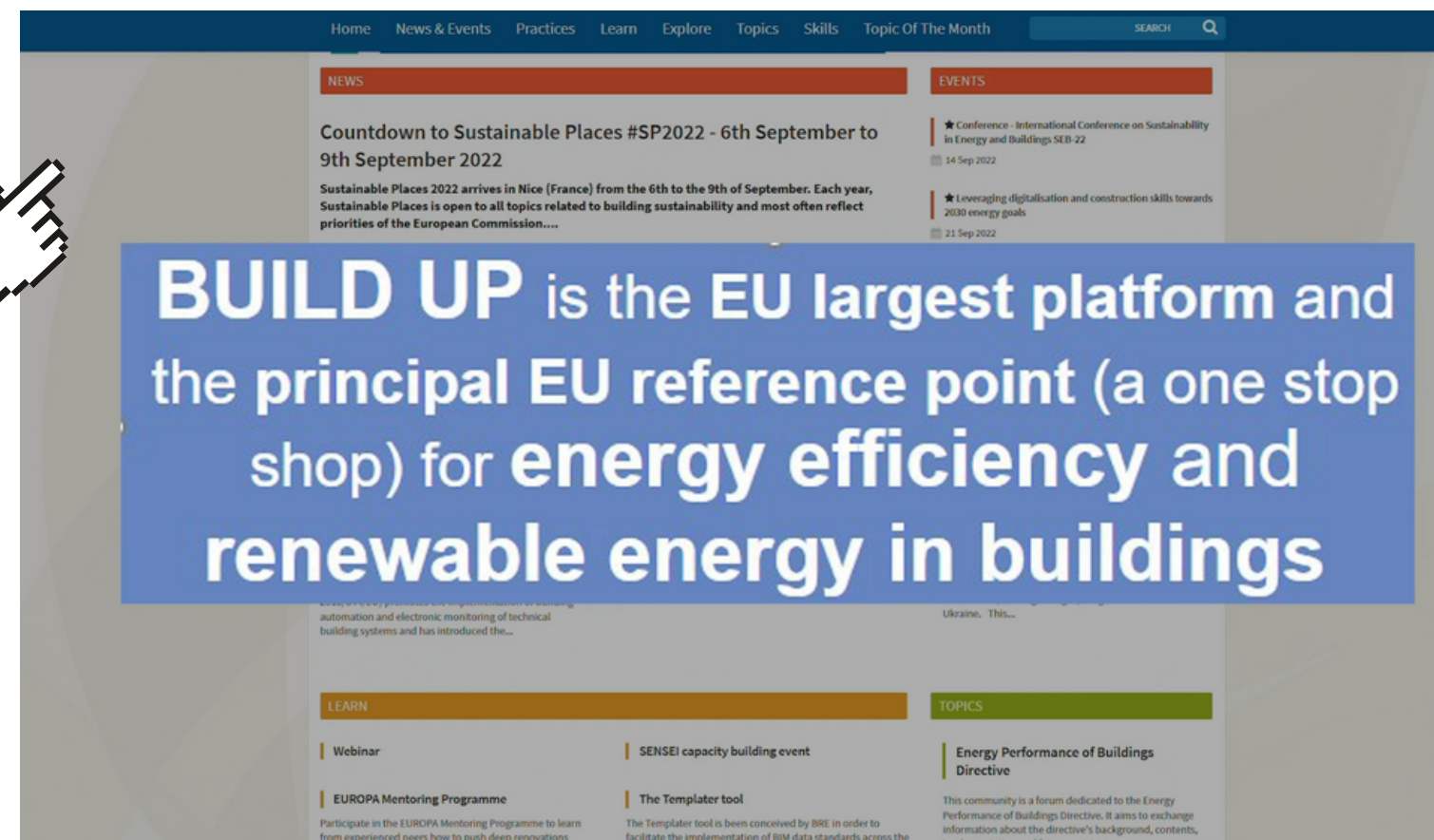
Welcome to **BUILD UP**

The European Portal For
Energy Efficiency In Buildings

W E B I N A R

BUILD UP

presentation



BUILD UP

The European Portal For Energy Efficiency In Buildings

SmartBuilt4EU – The future of smart buildings in Europe



March 06th, 2023



From 10:00 to 11:00 CET



Online



BUILD UP

The European Portal For
Energy Efficiency In Buildings

AGENDA

Topic	Who	Duration
Welcome and Introduction of SmartBuilt4EU project	Alain Zarli, ECTP	10 min
SRIA – Strategic Research & Innovation Agenda	Birgit Vandeveldel, VITO	15 min
Policy Recommendations	Karine Laffont-Eloire, DOWEL Innovation	10 min
Q&A	Moderated by Toqa Khalifa, R2M Solution	20 min
Wrap up and conclusions	Nerea Gómez, ECTP	5 min

Introduction of SmartBuilt4EU project

Alain ZARLI, ECTP

Build Up webinar, 6th of March 2023

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 956936.



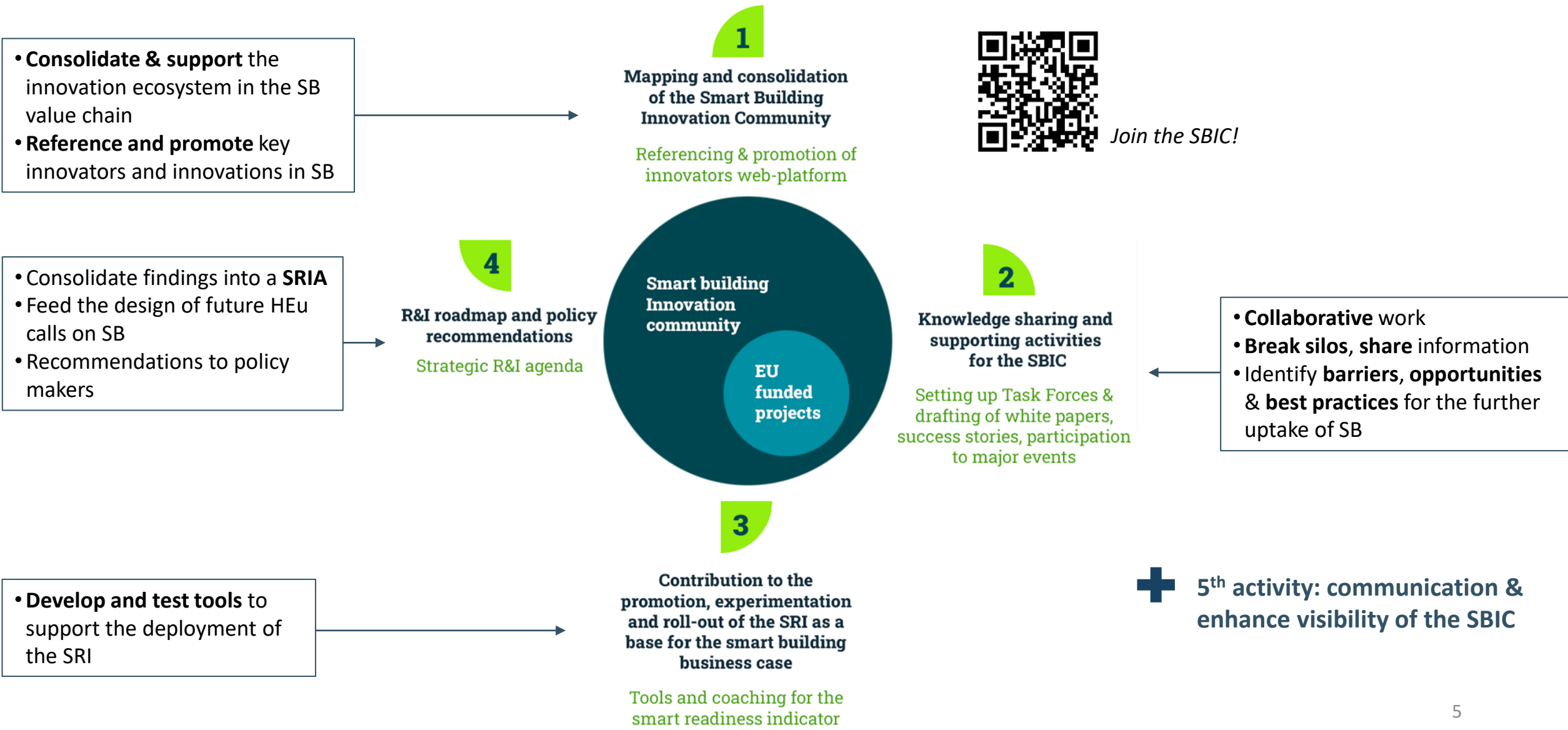
SmartBuilt4EU in a nutshell

Support to the coordination of European smart buildings innovation community

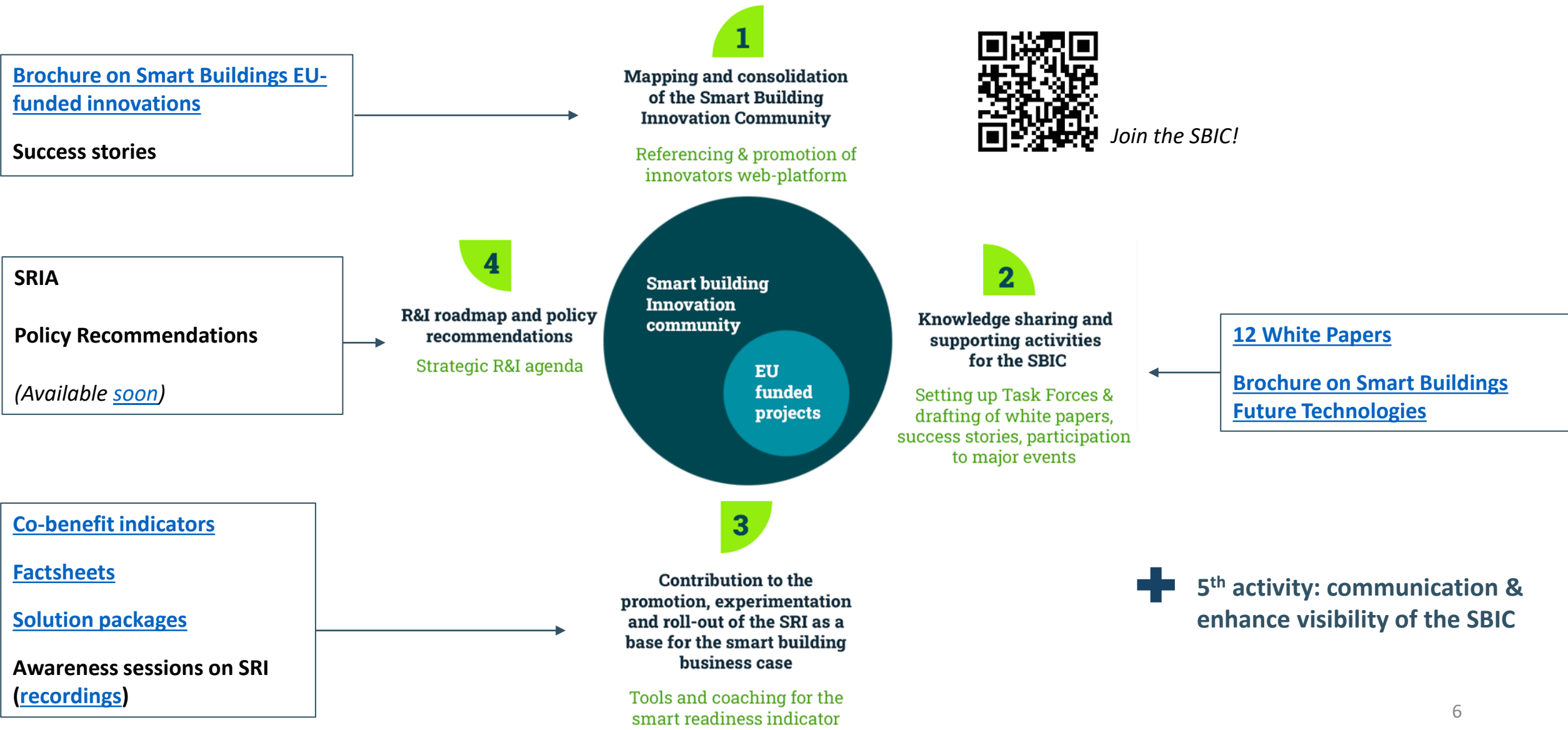
- *Call: Building a low-carbon, climate resilient future: secure, clean and efficient energy*
- 01/10/2020 – 31/03/2023
- Duration: 30 months
- SmartBuilt4EU has supported the emergence of a smart buildings market in Europe. In addition to promoting exchanges between innovators, the project has coordinated a large stakeholder's community in promoting and testing the Smart Readiness Indicator (SRI).



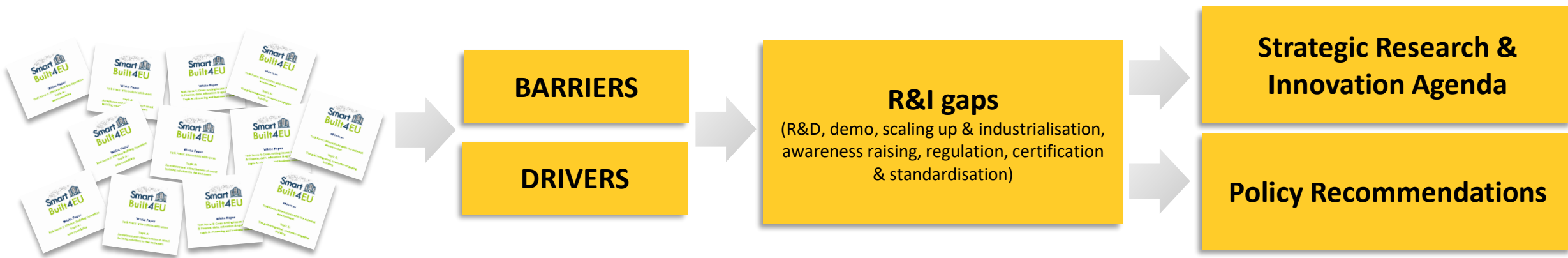
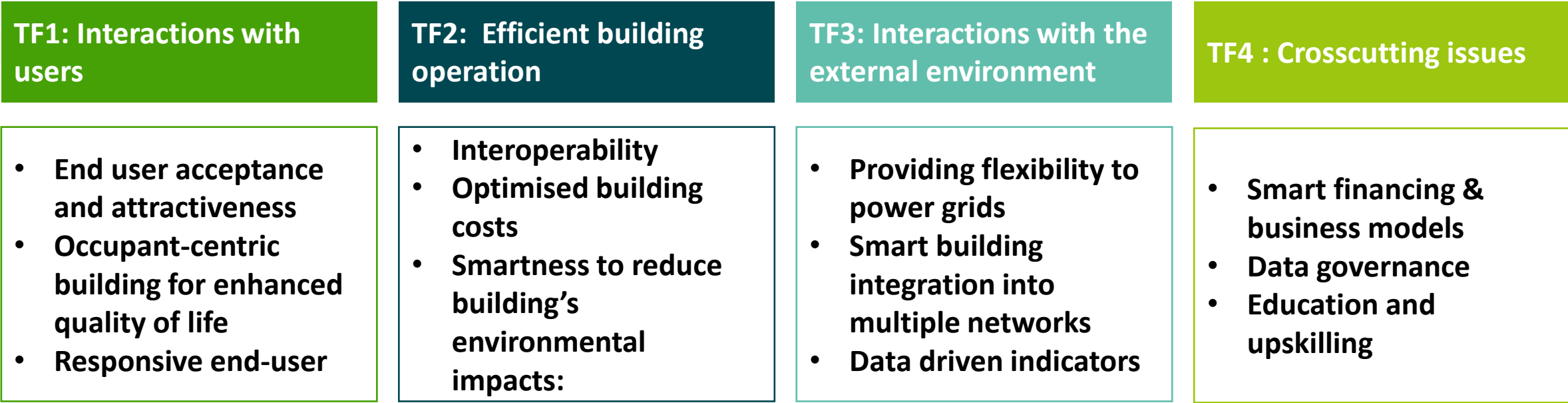
Main objectives & activities



Key results and outcomes



12 White papers – 4 Task forces



White papers available [here](#).

SmartBuilt4EU Final Conference



Smart
Built4EU
The European Smart Buildings Community



Smart buildings in Europe

Project Final conference

 March 23rd , 2023

 From 9:00 to 16:00 CET

 COMET LOUISE, Place Stéphanie 20, 1050 Brussels, Belgium



[Register here!!](#)

https://ec.europa.eu/eusurvey/runner/SmartBuilt4EU_FinalConference_SmartbuildingsinEurope

SmartBuilt4EU Final Conference

9:00-9:15	Welcome & Breakfast	
9:15-12:00	Opening session	<i>Moderation</i>
9:15-9:20	Opening – Alain Zarli, Secretary General, European Construction Technology Platform (ECTP), project coordinator	Alain Zarli, (Secretary General, ECTP)
9:20-9:30	Welcome – Aneta Willems, CINEA Head of Department for Natural resources, climate, sustainable blue economy and clean energy	
9:30-10:30	<p>Presentations: Smart buildings - policy framework, institutional support and overarching initiatives:</p> <ul style="list-style-type: none"> The EU energy efficiency and buildings policy framework – Mathieu Daloze (policy officer, EC DG ENER.B2) The EU Action Plan on digitalising the energy system – Karsten Krause (team leader, EC DG ENER.B5) The LIFE Clean Energy Transition programme – Ulrike Nuscheler (tbc) (senior project adviser, CINEA) Horizon Europe Cluster 5 Destination 4 – Stavros Stamatoukos (project adviser, CINEA) The Built4People R&I Partnership – Nerea Gomez, European Construction Technology Platform (ECTP), & the Nebula project and New European Bauhaus – Anastasiya Yurchyshyna, European Construction Technology Platform (ECTP) 	Pierre-Antoine Vernon (project adviser, CINEA)
10:30-10:45	Coffee break	
10:45-12:00	Plenary session I - Supporting smart buildings policy	
10:45-11:15	<p>Project pitches and panel session: Supporting the implementation of the Smart Readiness Indicator.</p> <ul style="list-style-type: none"> EasySRI – Dimos Ioannidis (CERTH/ITI) SRI2MARKET – Filippou Anagnostopoulos (IEECP) Smart² – Andrei Vladimir Litiu (REHVA) SRI-ENACT – Laura Junasová (Euroheat & Power) 	Karine Lafont (Senior Consultant & Associate Partner, DOWEL innovation)
11:15-11:45	<p>Project pitches and panel session: Smartness upgrades and the Smart Readiness Indicator.</p> <ul style="list-style-type: none"> COLLECTIEF – Vahid Nik (Byggtek) PHOENIX – Alfonso Ramallo (UMU) SATO – Pedro M. Ferreira (FCIENCIAS.ID) DigiBUILD – John Kapetanakis (Euroheat & Power) 	Regis Decorme (Managing partner & co-founder, R2M Solutions France)
11:45-12:00	Q&A	

12:00-13:15	Lunch	
13:15-14:30	Plenary Session II - Innovation for smarter buildings	
13:15-13:45	<p>Project pitches and panel session: EPC & Buildings data</p> <ul style="list-style-type: none"> MATRYCS – Roman Mendle (ICLEI) BuiltHub – Federico Garzia (EURAC) D²EPC – Stavros Koltsios (CERTH/ITI) Auto-DAN – Celina Solari (RINA) 	Federico Garzia (EURAC)
13:45-14:15	<p>Project pitches and panel session: smart building integration & Digital Building Logbook</p> <ul style="list-style-type: none"> SMART2B – Nuno Mateus (EDP) Smart Buildings in Use – Ruben Delvaeye (Buildwise) Interconnect – Laura Daniele (TNO) OpenDBL – Soumya Kanti (Digiotech) Digital Building Logbook Study – Michael Flickenschild (Ecorys) 	Clementine Coujard (Senior Consultant & Associate Partner, DOWEL Innovation)
14:15-14:30	Q&A	
14:30-15:00	Coffee break (15mn)	
15:00-16:00	Plenary Session III	
15:00-15:40	<p>Presentations: future perspectives for smart buildings in Europe</p> <ul style="list-style-type: none"> SmartBuilt4EU final recommendations for policy and innovation – Maarten De Groote (senior expert, VITO) What's next? Future of the SmartBuilt4EU Smart Buildings Innovation Community & future Smart Buildings activities – Regis Decorme (Managing partner & co-founder, R2M Solutions France) 	Pierre-Antoine Vernon (project adviser, CINEA)
15:40-15:50	<p>Concluding remarks:</p> <ul style="list-style-type: none"> Mathieu Daloze (policy officer, EC DG Energy) Alain Zarli (secretary general, ECTP, coordinator) 	



Register here!!

Elaboration of the Strategic Research & Innovation Agenda (SRIA) for smart buildings

Birgit Vandavelde
Paulina Rodríguez

VITO

06 March 2023

*This project has received funding from the European Union's
Horizon 2020 research and innovation programme under grant
agreement N° 956936.*



- The SmartBuilt4EU project consortium is tasked with drafting a European **Strategic Research & Innovation Agenda (SRIA)** for smart buildings for the European Commission.
- Starting from a longlist of R&I gaps and possible areas for improvement, **ten concrete key priorities for EU** were derived in order to support to research, innovation and market uptake in the field of smart buildings.



Topics covered

- 1 INTEROPERABILITY IN BUILDINGS
- 2 INTEROPERABILITY FOR GRID FLEXIBILITY
- 3 INNOVATIVE BUSINESS MODELS
- 4 TESTING FACILITIES AND LIVING LABS
- 5 CO-BENEFITS
- 6 LIFE CYCLE ENVIRONMENTAL IMPACTS
- 7 MAKING BETTER USE OF THE DATA
- 8 SUPPORTING INCREASED PUBLIC AWARENESS
- 9 DATAPRIVACY AND CYBERSECURITY
- 10 SUPPORT POLICY DEVELOPMENTS

Topics & Priorities

INTEROPERABILITY IN BUILDINGS	PRI01: STANDARDISATION FOR INTEROPERABLE PRODUCTS AND SERVICES IN A BUILDING
INTEROPERABILITY FOR GRID FLEXIBILITY	PRI02: STANDARDS AND BUSINESS MODELS FOR CONNECTING SMART BUILDINGS TO THE EXTERNAL ENVIRONMENT
INNOVATIVE BUSINESS MODELS	PRI03: INNOVATION IN PRODUCTS AND RELATED BUSINESS MODELS FOR SMART BUILDINGS.
TESTING FACILITIES & LIVING LABS	PRI04: TESTING FACILITIES, BENCHMARKING AND LIVING LABS FOR INTEGRATED ANALYSIS AND DEMONSTRATION OF SMART BUILDINGS
CO-BENEFITS	PRI05: BETTER UNDERSTANDING OF CO-BENEFITS
LIFE CYCLE ENVIRONMENTAL IMPACTS	PRI06: ADVANCES IN PRODUCTS AND SERVICES TO IMPROVE LIFE CYCLE ENVIRONMENTAL IMPACTS OF SMART BUILDINGS
MAKING BETTER USE OF THE DATA	PRI07: MAKING BETTER USE OF THE DATA
SUPPORTING INCREASED PUBLIC AWARENESS	PRI08: R&I FOR SUPPORTING INCREASED PUBLIC AWARENESS, END-USER ACCEPTANCE AND TRAINING OF WORKFORCE
DATA PRIVACY & CYBERSECURITY	PRI09: DATA PRIVACY AND CYBERSECURITY IN SMART BUILDINGS
SUPPORT POLICY DEVELOPMENTS	PRI010:R&I TO SUPPORT POLICY DEVELOPMENTS

PRIO1: Standardisation for interoperable products and services in a building

1

Development of a methodology for assessment of semantic interoperability using open, standardised ontologies

(aiming at TRL 4-6) – RIA

2

Reference implementation for assessment of semantic interoperability using open APIs and standardised ontologies

(aiming at TRL 6-8) - IA

3

Support programme for stakeholders on ontologies standardisation

CSA

4

Interoperability label

5

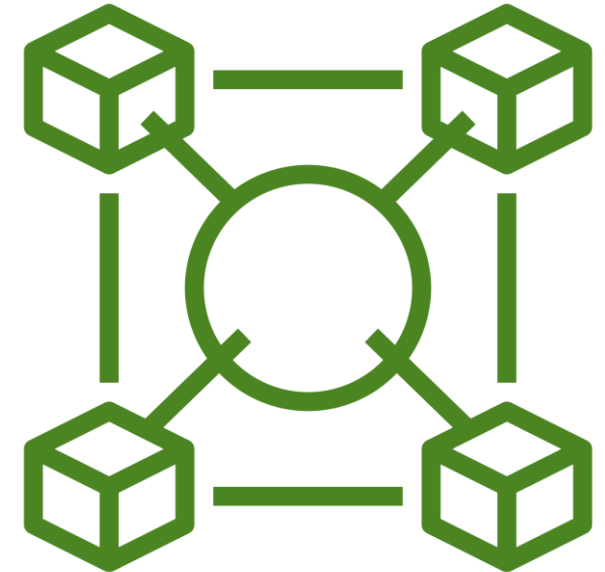
Marketplace for interoperability services and user-friendly software tools

(aiming at TRL 4-6)

6

Citizen lab initiative about interoperability to quickly show benefits of giving access to (certain parts of) their data

(aiming at TRL 4-6)



PRI02: Standards and Business Models for connecting Smart Buildings to the External Environment

1

Harmonised definition of roles and responsibilities for actors involved in energy flexibility

(aiming at TRL 8)

2

Regulation for flexibility market

3

Development of a flexibility certification scheme at EU level

(aiming at TRL 8)

4

End users as new and valuable partner in the energy flexibility ecosystem of the future

(aiming at TRL 4-6)

5

Interoperable data exchange environment to provide power flexibility to the grid

(aiming at TRL 4-6)

6

“Ready to service” and “ready to grid” buildings

(aiming at TRL 6)



PRI03: Innovation in products and related business models for smart buildings.



1

Develop new concepts
and solutions for
occupant centric
buildings
(aiming at TRL 5-6)

2

Develop and design
participatory business
models
(aiming at TRL 7-8)

3

Legal framework for
Deployment of universal
digital infrastructure at the EU
level
(aiming at TRL 6-7)

PRIO4: Testing facilities, benchmarking and living labs for integrated analysis and demonstration of smart buildings



1

Create EU strategy for physical testing facilities that support the testing of innovations on smart buildings

(aiming at TRL 4-6)

2

Create a program of living labs for higher TRL applications of smart buildings to be tested in realistic conditions

(aiming at TRL 6-9)

3

Development of common testing protocols, benchmarks and reporting standards

(aiming at TRL 1-9)

PRI05: Better understanding of co-benefits

1

Quantification
methods for non-
energy benefits

(aiming at TRL 4-5)

2

Data-driven Smart
Buildings'
indicators

(aiming at TRL 4-5)

3

Develop &
demonstrate new
business models

(aiming at TRL 6-7)

4

Qualitative
Methods-Develop
education &
awareness raising
actions



PRI06: Advances in products, services and decision support methods to improve Life Cycle Environmental Impacts of Smart Buildings

1

Further development of common Life Cycle Assessment methods and indicators

2

Streamline the use of dynamic data in Life Cycle Assessment approaches

3

Develop methods to assess and limit the impacts of the 'smart' devices

4

Investigate performance gap and rebound effects



PRI07: Making better use of the data

1

Expand the data collection
(amount/type)
(aiming at TRL 4-5) RIA

2

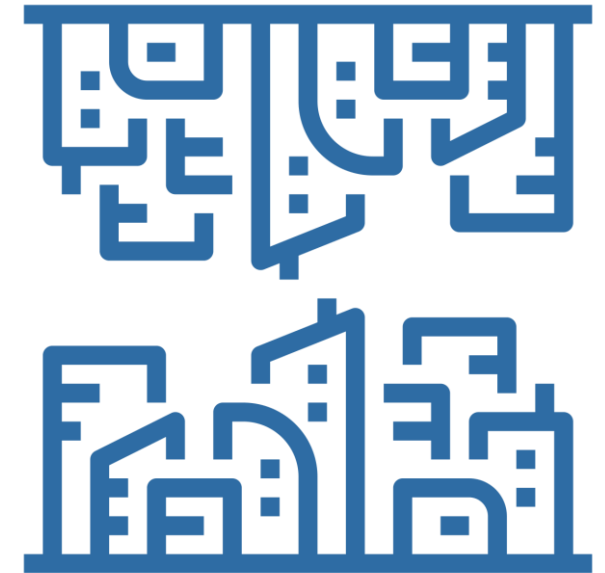
Strive for multi-use data possibilities
(aiming at TRL 8-9) RIA

3

Expand the Digital Twin Concept
(aiming at TRL 6-7)

4

Encourage/showcase testing of data collecting/usage
(aiming at TRL 7-8)



PRI08: R&I for supporting increased public awareness, end-user acceptance and training of workforce



1

R&I to support an increased end-user acceptance of smart building solutions and services

(aiming at TRL 8-9)

2

Showcase smart building innovations and their impacts

(aiming at TRL 8-9)

3

Training on the fly - contextual learning and upskilling for the workforce

(aiming at TRL 6-7)

PRI09: Data privacy and cybersecurity in smart buildings



1

Development of regulatory frameworks & legislations and certifications

(aiming at TRL 4-6)

2

Develop models and methodologies to strengthen the value chain

(aiming at TRL 6-9)

PRIO10: R&I to support policy developments

1

Investigate new market design and regulatory options for smart buildings to provide flexibility services to the electricity grid

2

Develop and test potential synergies to improve and simplify existing certification schemes related to smartness and building performances

3

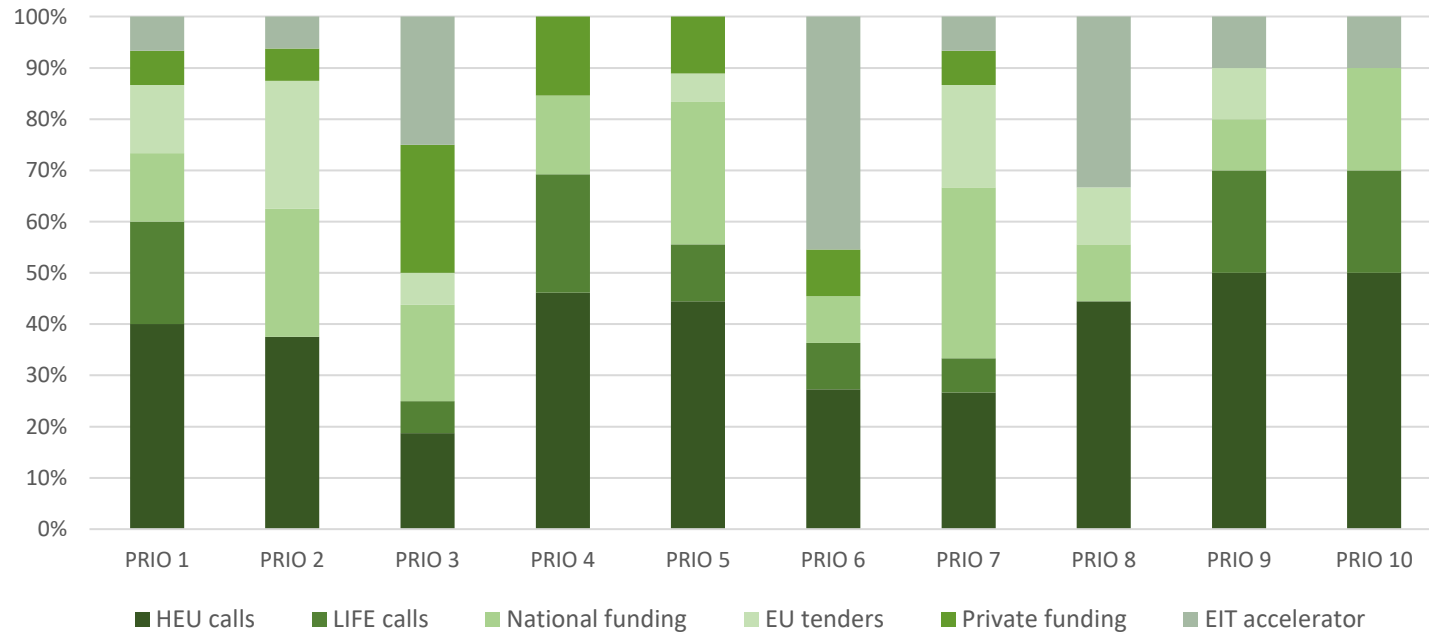
Showcase examples on successful financial and administrative incentives that can speed up the deployment of smart buildings

4

Design principles and rules for improved regulation



EU initiatives



Besides the **EU initiatives** and **EU tenders**, also **national and private funding** were considered relevant for some priorities and suggested as potential funding option to the consortium and the expert board.

Policy recommendations

Karine LAFFONT-ELOIRE, DOWEL Innovation
Build Up webinar, 6th of March 2023

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 956936.



Policy recommendations – approach

Our policy recommendations are based upon the work done with the Smart Building Innovation Community from February 2021 to July 2022:

- 12 White Papers written by 4 Task Forces:



Task Force 1: Interactions with users

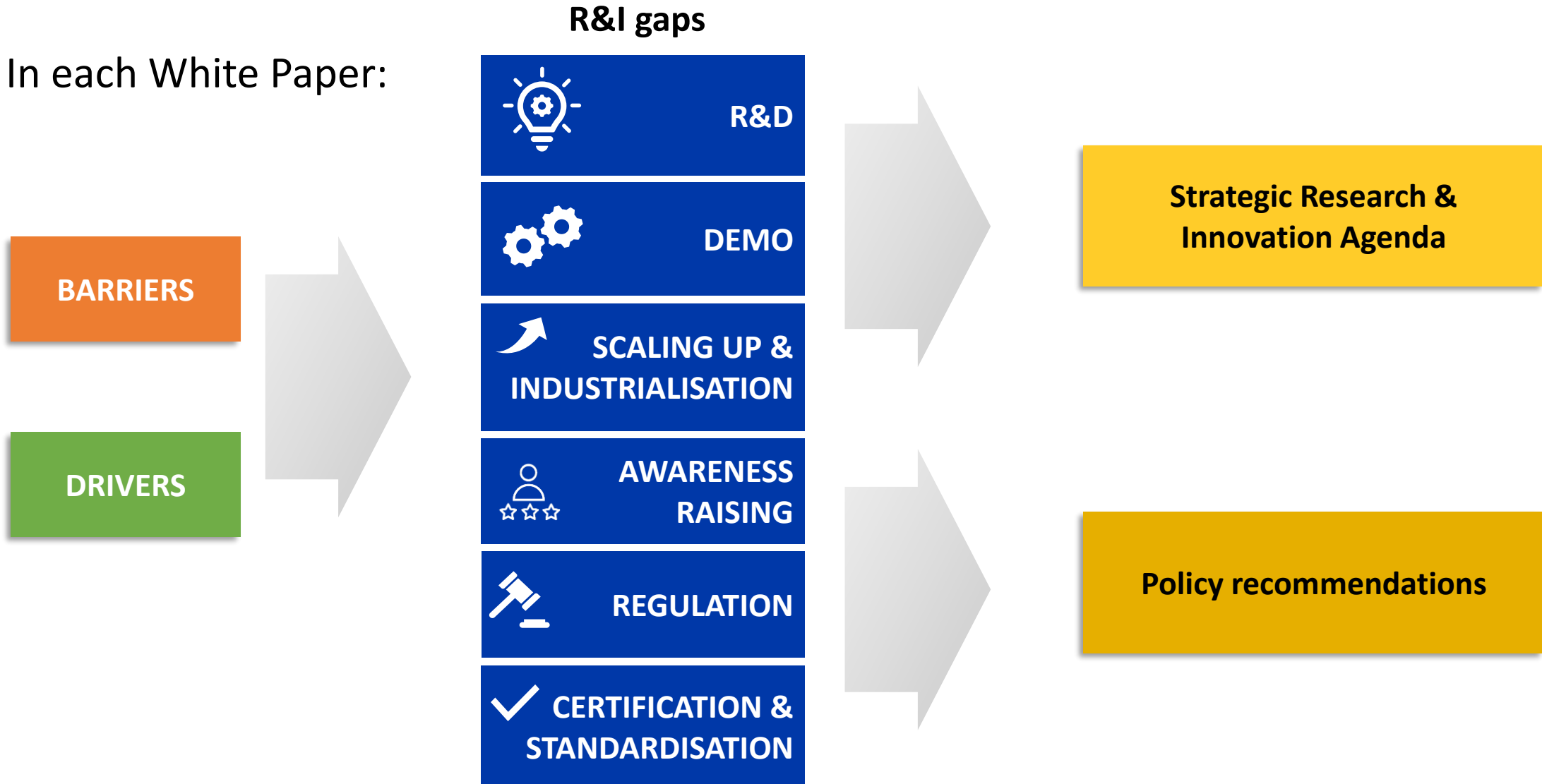
Task Force 2: Efficient building operation

Task Force 3: Interactions with the external environment

Task Force 4 : Crosscutting issues

Policy recommendations – approach

- In each White Paper:



Policy recommendations – overview of topics covered

- 1 smart buildings data governance
- 2 open data culture/framework
- 3 national or local regulations supporting the smartening of the building stock
- 4 regulatory sandboxes
- 5 labelling of devices and building certification
- 6 dynamic building certificates (e.g. logbook)
- 7 SRI implementation support
- 8 interoperability of smart solutions and flexibility of smart buildings
- 9 (green) public procurement
- 10 upskilling

You will be asked to rank them at the end 😊

PR1: Define clear rules at EU level for smart buildings data governance (data access, ownership, privacy, usage rights, consent) to build trust and enable new business models

1

Action 1.1 Design and implement clear guidelines on data collection and data management procedures for smart buildings, in line with the proposal for the revision of the EPBD

2

Action 1.2 Clearly define the governance framework and the role of trusted third parties as warrant of cybersecurity and data privacy to build trust, in line with the Data Governance Act

3

Action 1.3 Set up a central registry or data space to give users a personal unique interface to make their data available and control it, in a just and safe way



PR2: Develop and enforce an **open data culture** to improve knowledge sharing and replication on building performances



1

Action 2.1 Develop a framework for an open-access platform to enable data access and data sharing in buildings and districts, and to promote the replication of successful stories

2

Action 2.2 Include “open source” requirements in regulation

PR3: Encourage Member States to set up national or local regulations supporting the smartening of the building stock through stricter building codes, with clear long-term objectives and incentives

1

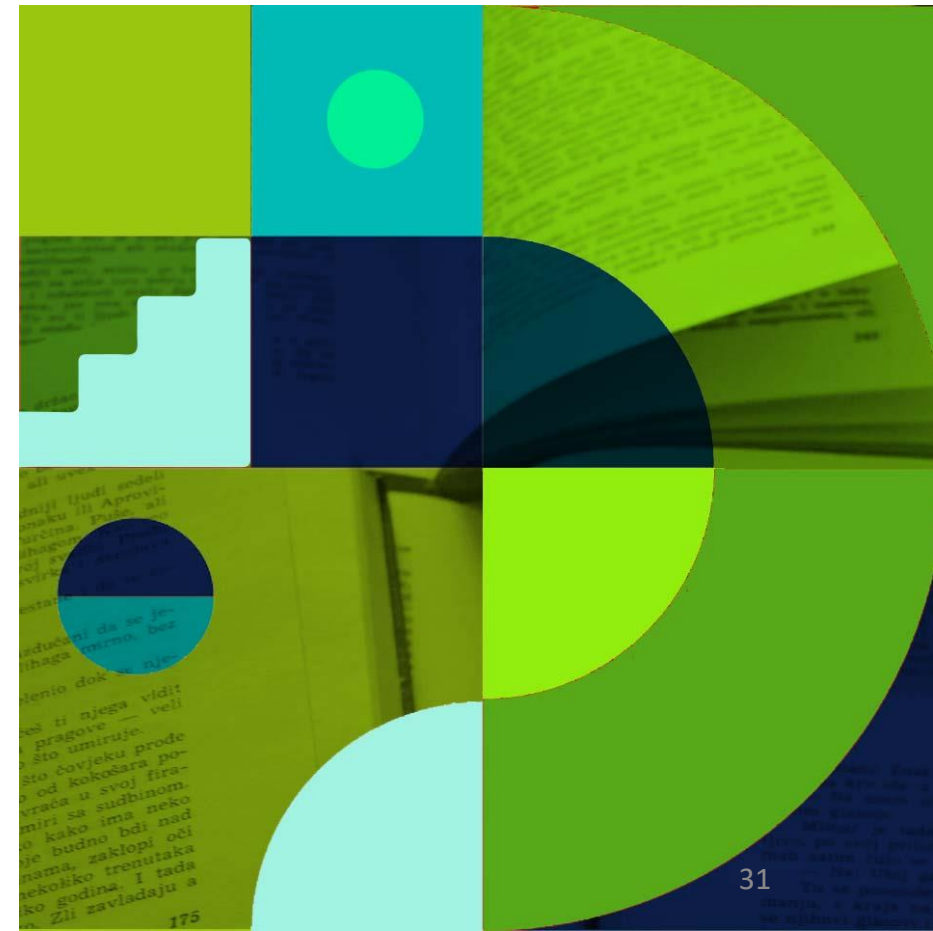
Action 3.1 Update and subsequently enforce compliance with building regulations to impose a minimum level of smartness (according to SRI) for new and renovated buildings

2

Action 3.2 Implement a set of positive encouragement measures to incentive the specification of smart building components and their integration from the planning and design phase

3

Action 3.3 Enforce adoption of SRI in building permitting processes



PR4: Enable **regulatory sandboxes** to test new concepts and business models involving smart building management in real-life environment



1

Action 4.1: Build regulatory sandboxes for new business models related to smart buildings

2

Action 4.2 Facilitate the development and access to 'Demo Spaces' (living labs and scaled demonstrators) to test & validate concepts and business models

PR5: Make a convincing case for building smartness: make visible and easy to understand the benefits of smartness for building owners/managers and occupants through **labelling of devices and building certification**

1

Action 5.1 Facilitate third-party certification and third-party certified labelling through easier and simple process, and standardised evaluation of methods of benefits

2

Action 5.2 Link with other certification programmes and adapt existing certifications such as LEED, BREEAM, WELL, R2S to include economic and environmental benefits as well as user comfort and health



PR6: Have **building certificates** evolve towards a more **dynamic evaluation** of performances, taking into account the contribution from smart technologies, addressing not only energy performance but also comfort, health, environmental impact and flexibility potential

1

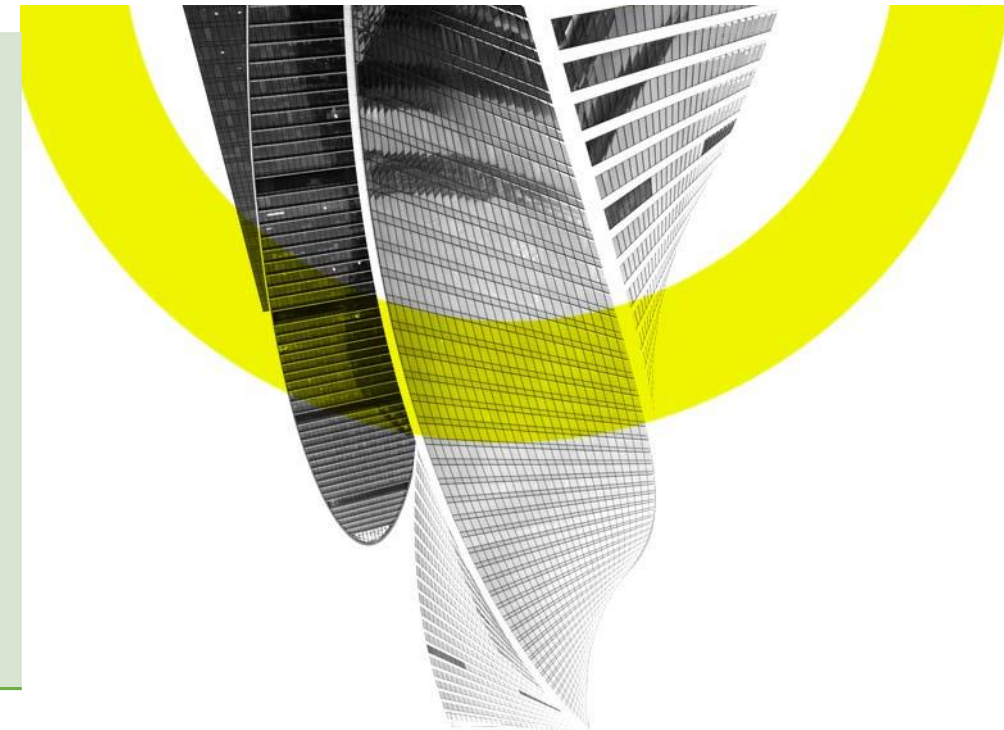
Action 6.1 Seek for integration or alignment amongst the various existing policy-oriented certificates and similar initiatives such as EPCs, BRPs, SRI as well as private schemes

2

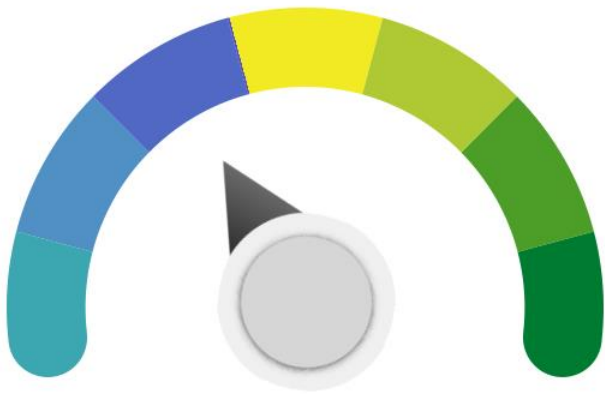
Action 6.2 Evaluate the value added by dynamic evaluations to policy makers, their potential contribution to policy objectives and foreseen implementation

3

Action 6.3 Raise awareness amongst public authorities and private organisations in charge of certificates on the potential in the consideration of dynamic data



PR7: Support the **implementation of the SRI** in all Member States based on a harmonised, common EU calculation methodology.



1

Action 7.1 Provide technical and financial support for the testing of the SRI instrument

2

Action 7.2 Provide technical assistance to further detail the common EU SRI framework to unequivocally specify the SRI scheme for application to a variety of building types and locations throughout the EU

3

Action 7.3 Provide support for the definition, introduction, expansion and strengthening of minimum building smart readiness standards and the establishment of appropriate monitoring, evaluation and enforcement frameworks in the MS

PR8: Support the roll-out of **interoperability of smart solutions and flexibility of smart buildings** through data-driven standards and regulation

1

Action 8.1 Design principles and rules for integration of interoperability in EU regulation

2

Action 8.2 Develop open, modular end-to-end interoperability and data management frameworks

3

Action 8.3 : Support the development of certifications with the establishment of end-to-end interoperability between energy networks, BEMS and devices



PR9: Integrate smartness and user-centric requirements in (green and pro-innovation) public procurement

1

Action 9.1 Manage externalities in public procurement, by further encouraging the use of LCA approaches, also accounting for social impacts

2

Action 9.2 Request a minimum level of smartness when developing new buildings or when carrying out a deep renovation

3

Action 9.3 Promote user satisfaction and feedback mechanisms in public procurement, from the design phase and along the building life cycle

4

Action 9.4 Develop requirements for data management and protection

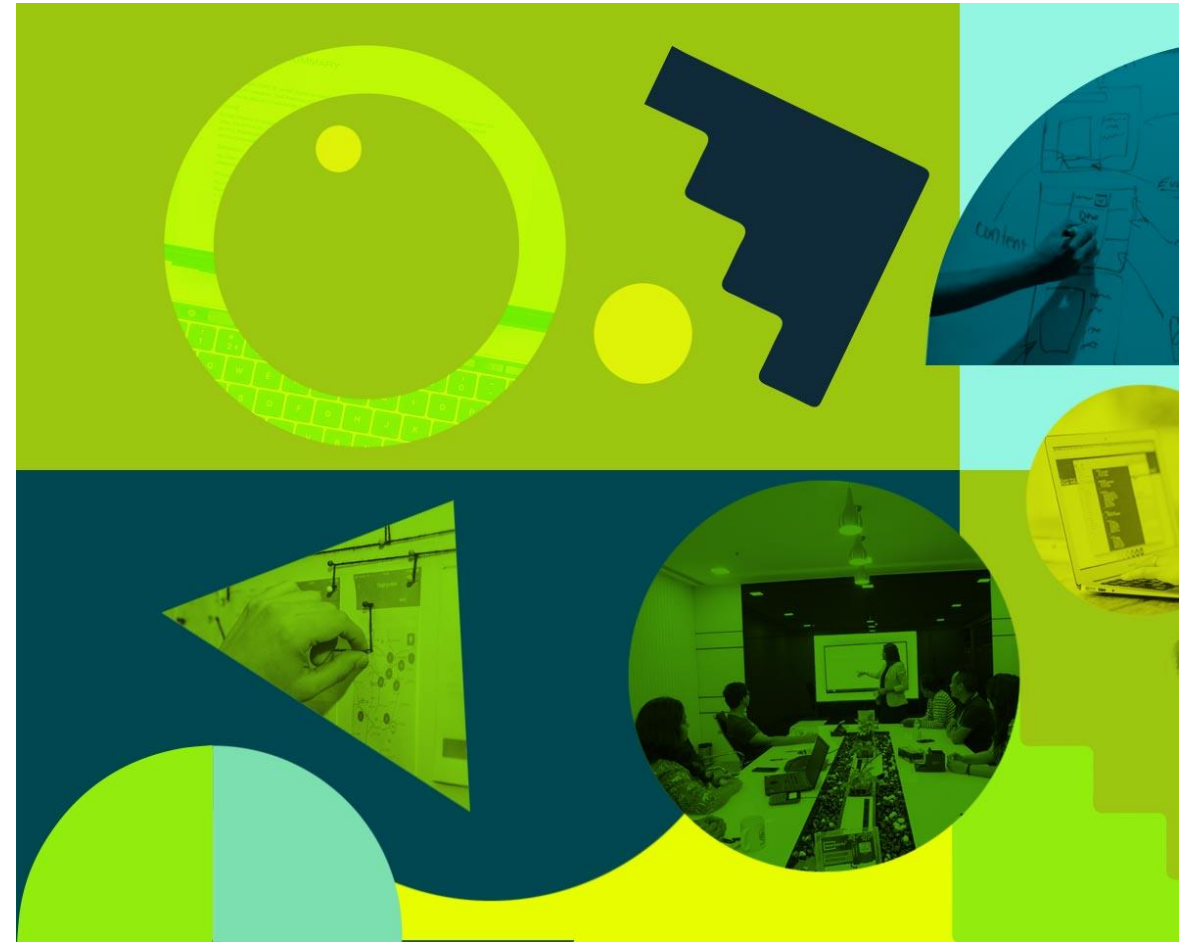
PR10: Support **upskilling related to digitalisation, cybersecurity, open standards, LCA and performance-based approaches, relying on closer academic/industrial cooperation**

1

Action 10.1 Improve transparency and efficiency of higher education and vocational education training related to smart buildings

2

Action 10.2 Make continuous training compulsory (e.g. through training clauses in public procurement) and accessible for SMEs, and monitor implementation through government bodies

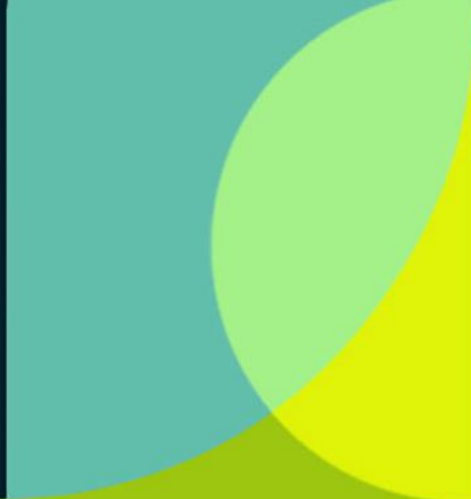


Please rate the following Policy Recommendations from 1 (MOST IMPORTANT) to 10 (LESS IMPORTANT) according to their relative importance

Join at
slido.com
#3916 824



<https://app.sli.do/event/6vp35tW5c3U7pXX56Z5RoH>



Q&A

**Moderator: Toqa Khalifa, R2M Solution
Build Up webinar 6th of March 2023**



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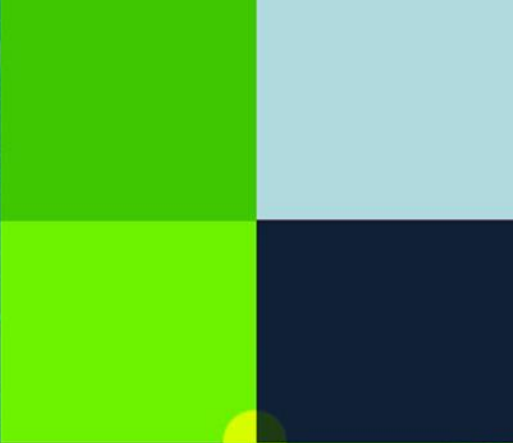
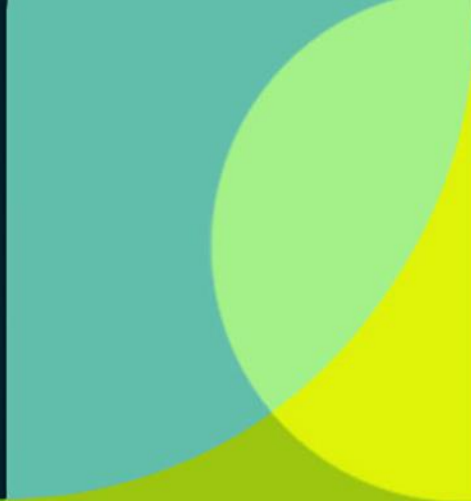




To which extent do these policy recommendations reflect the views of experts and innovators from the Smart Building sector?

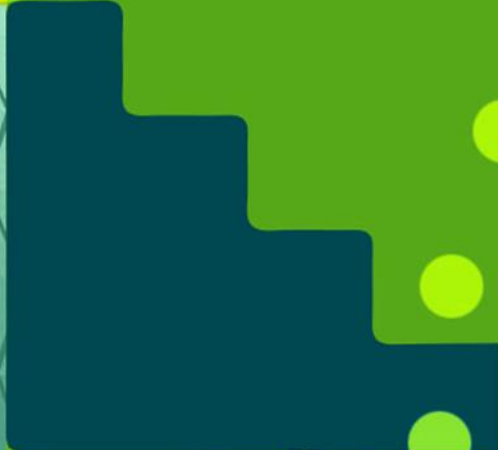


Is there any key element missing in the SRIA or the Policy Recommendations?



Conclusions

Nerea Gómez, ECTP
Build Up webinar 6th of March 2023



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The Smart Buildings community

**Thank you for your
attention**



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Horizon 2020 research and innovation programme under grant
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