Built4People
(B4P)
Partnership
(Co-Programmed)

European Commission

ECTP
INNOVATIVE BUILT ENVIRONMENT

WORLD GREEN BUILDING COUNCIL

Introduction to the Built4People (B4P) Co-Programmed Partnership

Alain ZARLI
ECTP Secretary General
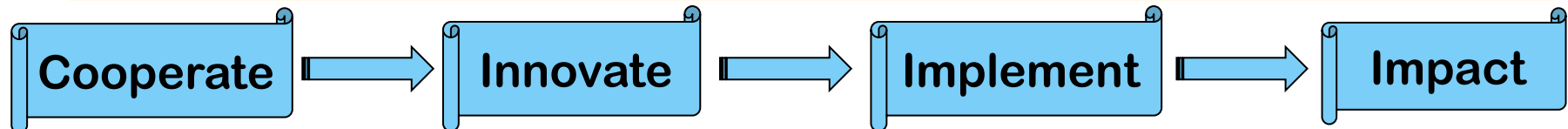*B4P Management Team*

May 2023

Built4People

ECTP in a nutshell

European Construction, built environment & energy-efficient buildings Technology Platform

Continuously nurturing an integrated vision, roadmap and development approach on challenges such as **climate change, resources, efficiency & sustainable development** for the **Built Environment (buildings, infrastructures, utility networks…)** and **Construction sector**

- ECTP: *AISBL* legal entity, based in Brussels
- **150** member-organizations from the Construction sector and other sectors from the whole supply chain of the **Built Environment.**
- <u>Main mission</u>: develop new **R&D&I** strategies to improve **competitiveness**, meet **societal needs** & take up **environmental challenges**.
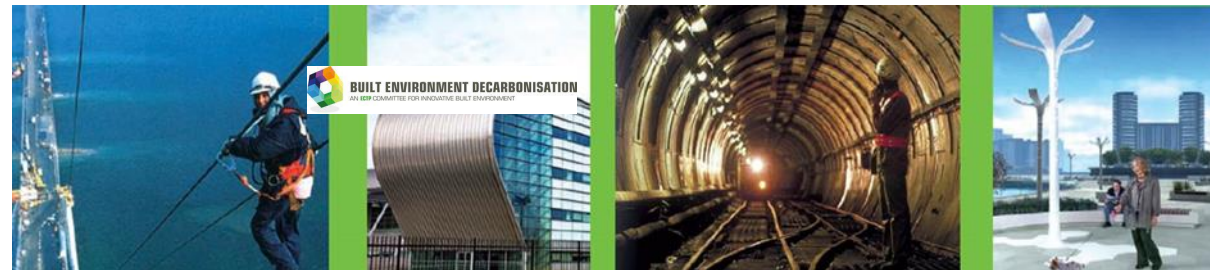
Cooperate → **Innovate** → **Implement** → **Impact**

ECTP with 6 thematic Committees

INFRASTRUCTURE MOBILITY
AN ECTP COMMITTEE

HERITAGE REGENERATION
AN ECTP COMMITTEE

MATERIALS SUSTAINABILITY
AN ECTP COMMITTEE

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BUILT ENVIRONMENT DECARBONISATION
AN ECTP COMMITTEE FOR INNOVATIVE BUILT ENVIRONMENT

DIGITAL BUILT ENVIRONMENT
AN ECTP COMMITTEE

BUILT FOR LIFE
AN ECTP COMMITTEE

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ECTP & its ecosystem

Memorandum of understanding (MoU) / Agreements
- EMIRI - Energy Materials Industrial Research Initiative
- ENCORD - European Network of Construction Companies for Research & Development
- ETIP PV – European Technology and Innovation Platform for Photovoltaics
- FEHRL – Forum of European National Highway Research Laboratories
- IWBI – International WELL Building Institute

SET Plan IWG – Implementation Working Groups
- IWG Action 3.2 – Positive Energy District
- IWG Action 5 – Energy Efficiency Solutions for Buildings

European Commission
- DG Connect
- DG Energy
- DG Environment
- DG Growth
- DG REGIO
- DG Research & Innovation
- CINEA

Friends
- AIOTI
- BEA-SE4ALL
- CoolingEU
- EUMAT
- MANUFUTURE

ECTP

ECTP Members
- Industry: 23 Members
- SMEs: 35 Members
- Research organisations: 80 Members
- Other organisations: 12 Members

ECTP Committees (composed of ECTP Members)
- Built4Life — Chairing: Eindhoven University of Technology (Faculty of Built Environment)
- Digital Built Environment — Chairing: INDRA
- Built Environ. Decarbonisation — Chairing: ACCIONA Construcción
- Heritage & Regeneration — Chairing: TECNALIA
- Infrastructure and Mobility — Chairin: DRAGADOS
- Materials & Sustainability — Chairing: HeidelbergCement

Built4People Co-Programmed Partnership
- European Commission
- ECTP & World Green Building Council (WGBC)

NTP Network – National Construction Technology Platforms
- Countries: Austria, Belgium, Cyprus, Denmark, France, Germany, Greece, Hungary, Italy, Lithuania, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, UK

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ECTP - Reasons to join…

Influencing innovation and strategic research

- Participate in the definition of the European Strategic Research Agendas

- Interact with the Built4People Partnership Board

- Close links with key representatives from the European Commission

- Take advantage of ECTP's strategic presence in the heart of Brussels

Access to knowledge, resource and expertise

- Information on upcoming European funding calls and programmes

- Access to ECTP publications and research

- Contribute to technology transfer and research exploitation

- Participate in experts and Committees meetings

- Private access to a Collaborative Workspace (CWS)

- Access to the dataset of sectorial projects funded by the H2020, Horizon Europe and LIFE framework programmes

Opportunities for networking, training & development

- Discount for participants in the ECTP Biennial Conference to disseminate project outcomes

- Seminars and workshops to discuss technical challenges and facilitate networking

- Meet potential partners for your research projects

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Built4People (B4P) Partnership (Co-Programmed)

A policy cross-cutting initiative, addressing buildings climate-neutrality but also broadly speaking sustainability, reducing resource intensity and increasing recyclability, taking into consideration other policies relevant to buildings, including the need to preserve our European Cultural Heritage.

Scope:
- Decarbonisation, sustainability and better living (Europe & beyond)
- Gather partners across the built env. value chain for a *cleaner, safer, affordable, smarter, decarbonised & sustainable Built Env*.

Aim:
Produce & deliver on the market holistic innovation
→ long-lasting transformations & behavioural change
→ deliver long-term goals set by the EGD

Approach:
- People-centric holistic innovation
- High quality architecture → low carbon, highly energy & resource efficient built env.
- Drive the societal and economic transition towards sustainability.

Coordination:
- EC: DG ENER Lead contact → co-creation process among 12 EC services responsible for the policies focusing on the BE: ENER.B2, B3, B5; RTD.D1; GROW.C1; ENV.B2; MOVE.B3; CLIMA.C1; CNECT.H5; EAC.D1, D2; EMPL.C3.
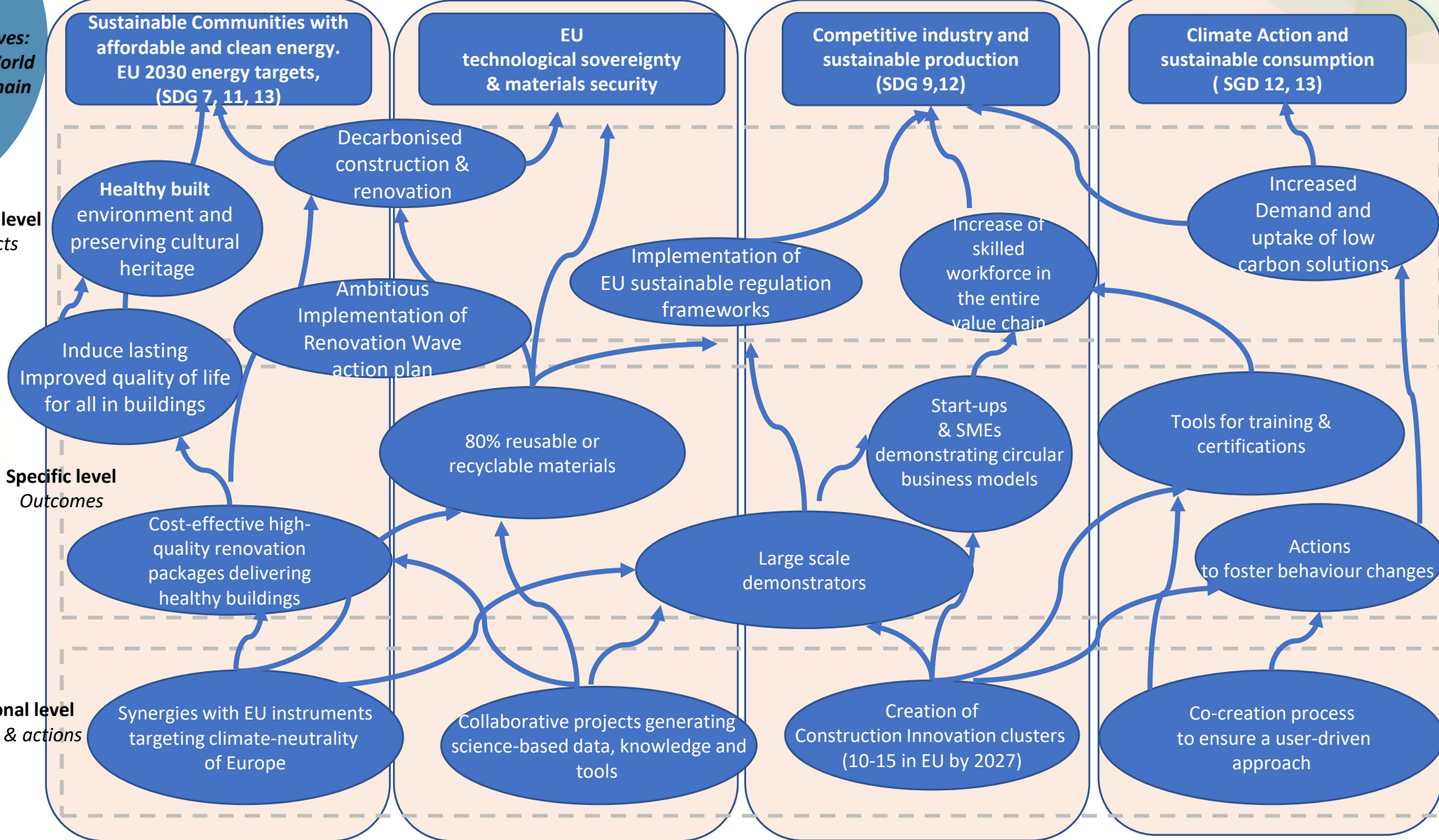- Partners others than the EU:

https://www.ectp.org/built4people/

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Built4People
PSIP (Partner-specific Impact Pathway)

Link to macro-level objectives: SDGs, Green Deal, OECD, World Bank, WEF, EU specific domain

General level
Impacts

Specific level
Outcomes

Operational level
Resources & actions

Built4People Partnership vision

Sustainable Communities with affordable and clean energy. EU 2030 energy targets, (SDG 7, 11, 13)

EU technological sovereignty & materials security

Competitive industry and sustainable production (SDG 9,12)

Climate Action and sustainable consumption (SGD 12, 13)

Healthy built environment and preserving cultural heritage

Decarbonised construction & renovation

Induce lasting Improved quality of life for all in buildings

Ambitious Implementation of Renovation Wave action plan

Implementation of EU sustainable regulation frameworks

Increase of skilled workforce in the entire value chain

Increased Demand and uptake of low carbon solutions

80% reusable or recyclable materials

Cost-effective high-quality renovation packages delivering healthy buildings

Start-ups & SMEs demonstrating circular business models

Tools for training & certifications

Large scale demonstrators

Actions to foster behaviour changes

Synergies with EU instruments targeting climate-neutrality of Europe

Collaborative projects generating science-based data, knowledge and tools

Creation of Construction Innovation clusters (10-15 in EU by 2027)

Co-creation process to ensure a user-driven approach

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Built4People - Summary of objectives in MoU

3 general objectives

GO1 | **Generate holistic innovation in the built environment towards sustainability** by 2027/28

GO2 | **Revitalise the sector through decarbonisation and sustainability transition** by 2030

GO3 | **Induce lasting behavioral change towards sustainable living** by 2030

10 specific objectives

SO1 — Develop holistic solutions that break "technological silos" in built environment, lower carbon and resource intensity and mainstreaming LCA-based approach

SO2 — Develop solutions that enable/increase interactions of building with networks or increase sectors integration

SO3 — Demonstrate profitability and job creation potential of new sustainable and circular business models

SO4 — Demonstrate sector decarbonisation pathways across all the players in the value chain

SO5 — Demonstrate industrialization potential and economies of scale, as well as applicability to a large share of the EU buildings stock/infrastructure

SO6 — Develop strategies, methods and tools to adapt skills, culture and way of working to the opportunities arising from the new solutions

SO7 — Engage the whole value chain as well as policy makers and civil society in the design, development and implementation of the new solutions

SO8 — Orientate and demonstrate innovation to achieving outcomes for users in terms of functionality, comfort, convenience, accessibility, health etc

SO9 — Demonstrate safeguarding and promotion of architectural elements that represent cultural / historical value and heritage

SO10 — Develop strategies, solutions and tools to reduce time to market of the new technologies

10 operational objectives

OO1 — Cost-effective multi-functional and/or prefabricated holistic renovation packages

OO2 — Set of smart-grid ready and smart-network ready buildings acting as active utility nodes

OO3 — Tools and applications to facilitate a life cycle-based approach

OO4 — New design models for buildings, infrastructure, public spaces and efficient and resilient cultural heritage

OO5 — New protocols and approaches to zero-carbo construction and retrofitting and circular and bio-based economy

OO6 — New services from home and in the community, incl. solutions for healthier indoor and outdoor environment

OO7 — New solutions and tools for public and private (green) as well as new business/financing/risk mgt models

OO8 — Solutions for smart and responsive buildings exploiting an improved knowledge of user experience (BaaS)

OO9 — EU-wide open databases and digital Data Management Platforms on the performance of the built environment

OO10 — Innovation clusters /ecosystems integrated with the construction value chain and other sectors

Built4People - Summary of KPIs in MoU

KPI's on general objectives		
GO1	**Generate holistic innovation in the built environment towards sustainability**	1. R&I investment in the sustainable built environment area catalysed by the partnership 2. # innovative products/services/processes linked to sustainability that are catalysed by the partnership and number of jobs created 3. Contribution to the successful deployment of relevant EU instruments and frameworks 4. # training programmes developed for the sustainable built environment
GO2	**Revitalise the sector through decarbonisation and sustainability transition**	5. Energy savings (MWh) 6. GHG emission reduction (tCO2e) / Pollution reduction 7. Share of reused/recycled materials used in construction (%) 8. Share of buildings designed and constructed based on a life cycle approach. 9. # buildings with on-site RES production 10. # of workers trained on working methods and tools in the fields covering the B4P objectives
GO3	**Induce lasting behavioural change towards sustainable living**	11. Share of the EU population living and working in green neighbourhoods 12. # of private and public building owners with sustainable behaviour in their building stock

KPI's on specific objectives

SO1, SO2, SO3, SO4, SO5, SO6, SO7, SO8, SO9, SO10

13. # demonstrated innovative solutions and packages for sustainable construction and renovation
14. # demonstrated innovative solutions for the sustainability of the built environment value chain
15. # innovative services developed and demonstrated
16. # living labs established and involved in the partnership's projects
17. Total floor area and # buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities
18. # and type of heritage buildings involved in/enhanced by the partnership's projects, in line with the safeguarding of the historical environment and architectural values of the building stock
19. # building occupants and users involved in the partnership's projects demonstration activities
20. # people trained across the whole value chain in the deployment of innovative sustainable technologies, systems and methods

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Built4People Overall governance

B4P Stakeholders Forum

A balanced representation of experts and stakeholders from across Europe to advise on priorities and suggest adjustments and re-orientations where necessary
- ≈200 persons (or more) meeting
- At least once per year
- Besides B4P representatives, a focus on involving of interested stakeholders

Other EU-level initiatives

Aim to cooperate and achieve synergies in overlapping domains
- Representatives from other co-programmed or co-funded Partnerships & Missions, or from relevant research and innovation initiatives

B4P Partnership Board

Main forum for dialogue and steering to reach the objectives set out in the MoU
- ~60 representatives, 3-4 annual meetings, co-chaired by EC and non-EC partners
- Representatives of partners: EC (all involved DGs), ECTP and WGBC
- Observers can join upon invitation

(Invitation as observers)

State Representatives Group

Advise and support the achievement of the B4P objectives and ensure complementarity with national policies, priorities and programmes and provide information or make proposals to the Partnership Board
- Representatives from Member states and associated countries (including from SET-Plan IWG5)

Ad hoc request for input and support on:
- *SRIA*
- *Draft call topics Work Programme*
- *Additional Activities Plan*
- *KPIs (informal subworking group)*
- *Innovation clusters (informal subworking group)*
- *Stakeholders Forum*

(operational alignment between management teams where relevant)

B4P team

Coordination and operational management and preparation of meeting and support in deliverables and B4P Partnership's activities
- Representatives from ECTP and WGBC
- Currently: Alain Zarli, Anastasiya Yurchyshyna, Stephen Richardson, Laura Pallares

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Built4People Partnership Board

2022-2023

- PB members:
  - **EC** representatives
  - **ECTP** representatives
    - Innovation / industry, Academic research (& RTOs), Technologies
  - **WGBC** representatives
    - Environmental sustainability, Social sustainability, Financial / Investment, Impact reporting & MLE

Permanent		Substitute		Affiliation
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Xavier Le Den (Denmark)	xald@ramboll.com	Rikke Bjerregaard Orry	rbo@ramboll.dk	WGBC / ERN
James Drinkwater	j.drinkwater@laudesfoundation.org	Nazaket Azimli	n.azimli@laudesfoundation.org	WGBC / ERN

Built4People States Representatives Group (SRG)

- **20 confirmed Countries**
  - Austria
  - Belgium
  - Czech Republic
  - Denmark
  - Estonia
  - Finland
  - France
  - Germany
  - Hungary
  - Ireland
  - Italy
  - Luxembourg
  - Malta
  - Netherlands
  - Poland
  - Portugal
  - Slovenia
  - Spain
  - Sweden
  - Turkey

- SRs invited as <u>observers</u> in the B4P PB (*2022, cont. in 2023*):
  - **Annett KUHN** (*Germany*) – Chair of the SET-Plan IWG (5) on energy efficiency in buildings
  - **Annabelle RONDAUD** (*France*)
    - FR holding the rotating presidency of the European council Q1-Q2 '22
    - Overall interesting to consider linking (to some extent) one observer to the MS holding the presidency of the Council
  - 20 confirmed countries (@01/05/2023)
    - *New countries can join at any time*
  - First SRG online meeting: April 20 2022, 2:30-4:30pm (CET)

Built4People Stakeholders Forum

- **Objective:**
  - Advise and review on the priorities to be addressed, in line with the SRIA and the Horizon Europe strategic planning
  - Provide with suggestions & recommendations for adjustments or re-orientations to the PB, where and when necessary

- **Members:**
  - should reflect a balanced representation of experts and stakeholders from across Europe within the scope of the priorities of the European Partnership
    - including e.g. from academia, industry, SMEs, end-users, non-governmental and civil society organisations, stakeholder associations and regulatory bodies
  - The Stakeholders Forum will elect a chairperson from among its own members, who will be invited as an observer to the PB meetings

- → *objective is to create a strong community around B4P!*
  - ECTP & WGBC affiliated entities, MS/AC via SRG…
  - DG ENER, ECTP, WGBC media channels (News,…)
  - Participants through European associations (not affiliated): CECE, EUREC, UIPI,…
  - …

- **1st B4P Stakeholder Forum meeting**
  - Online – Wed 1st June 2022
  - Attendance: 350 registrations & more than 170 joining live

Next meeting planned in Q4 2023

Built4People Additional Synergies (1/2)

- Synergies → SET-Plan
  - Exchange of information:
    - Through the B4P SRG
    - Through the IWG5-CSA in support to IWG5 activities
      - Working on common policy recommendations
      - Organising common events
      - …

Smart PEBs

- Positive-energy Buildings / Blocks
- Producing on a **yearly basis** more primary energy than used.
- Bioclimatic architecture, advanced materials, ICT…

Energy-driven Urban renovation

- Renovation wave
- Building Retrofitting
- Decarbonasition heating & cooling in Buildings

SET-Plan IWG 5
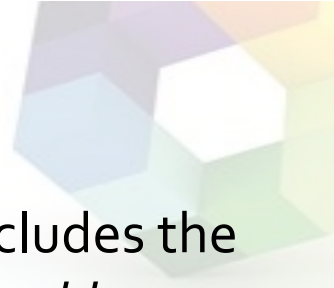*Energy Efficiency in Buildings*

Built4People Additional Synergies (2/2)

- Synergies with Partnerships
  - Example: Process4Planet
    - built environment deals with a complex value chain which includes the process industry → *Making the built environment more sustainable requires collaboration with the process industry and vice versa*
  - In the future: *CET, DUT, Made in Europe?, …*

ASPIRE
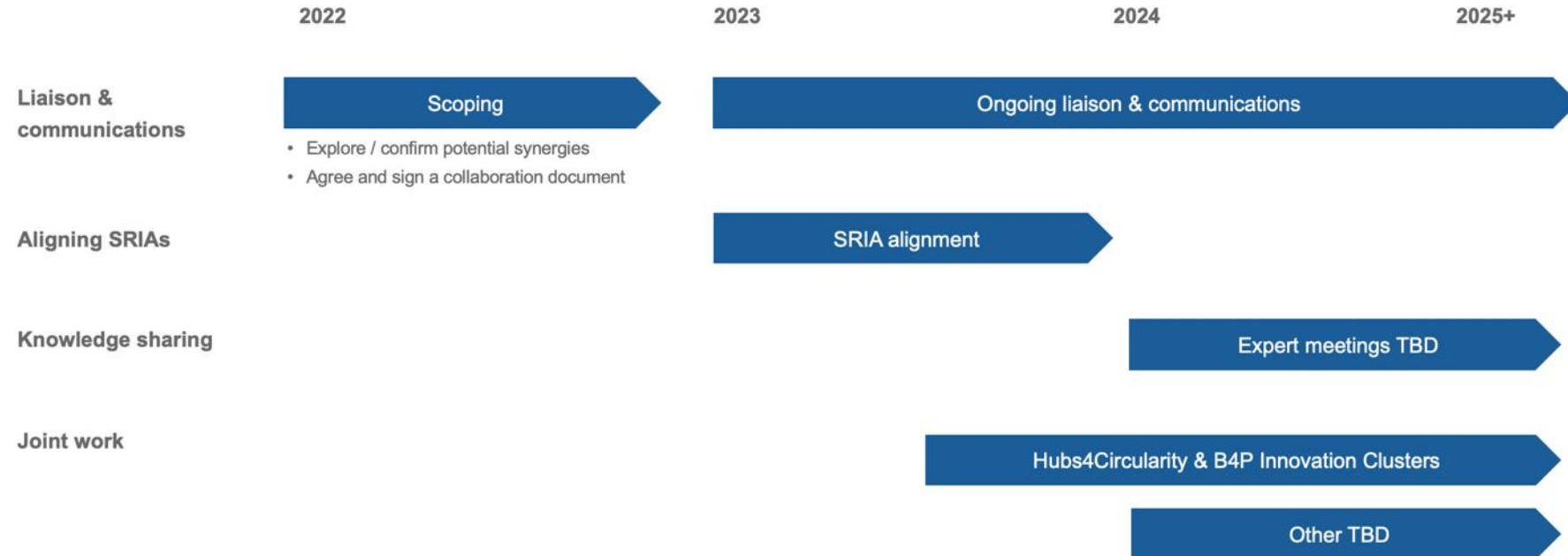PROCESSES4PLANET RESEARCH ASSOCIATION

Main synergies

Embodied energy/carbon: reduce energy/carbon embodied in construction materials

CO2 Capture and use (CCU): develop materials that capture and store CO2

Circularity and new materials: re-use, re-cycle, up-cycle waste streams from both sectors

Industrial Urban Symbiosis: collaborations between hubs4circularity and innovation clusters

Collaboration plan

	2022	2023	2024	2025+
Liaison & communications	Scoping	Ongoing liaison & communications		
	• Explore / confirm potential synergies • Agree and sign a collaboration document			
Aligning SRIAs		SRIA alignment		
Knowledge sharing			Expert meetings TBD	
Joint work			Hubs4Circularity & B4P Innovation Clusters	
			Other TBD	

Built4People - Horizon Europe WP preparation

SRIA

input

Member State and associated states

input

Internal EC alignment

≈2 weeks

Chance to materially influence call topics and way they have been elaborated

1st draft Work Programme

Call topics description without budgets

Internal EC alignment

≈1 week

Chance to give input on budget / final wording (no material changes possible)

2nd draft Work Programme

Revised call topic description with budgets

Internal EC alignment

≈1 week

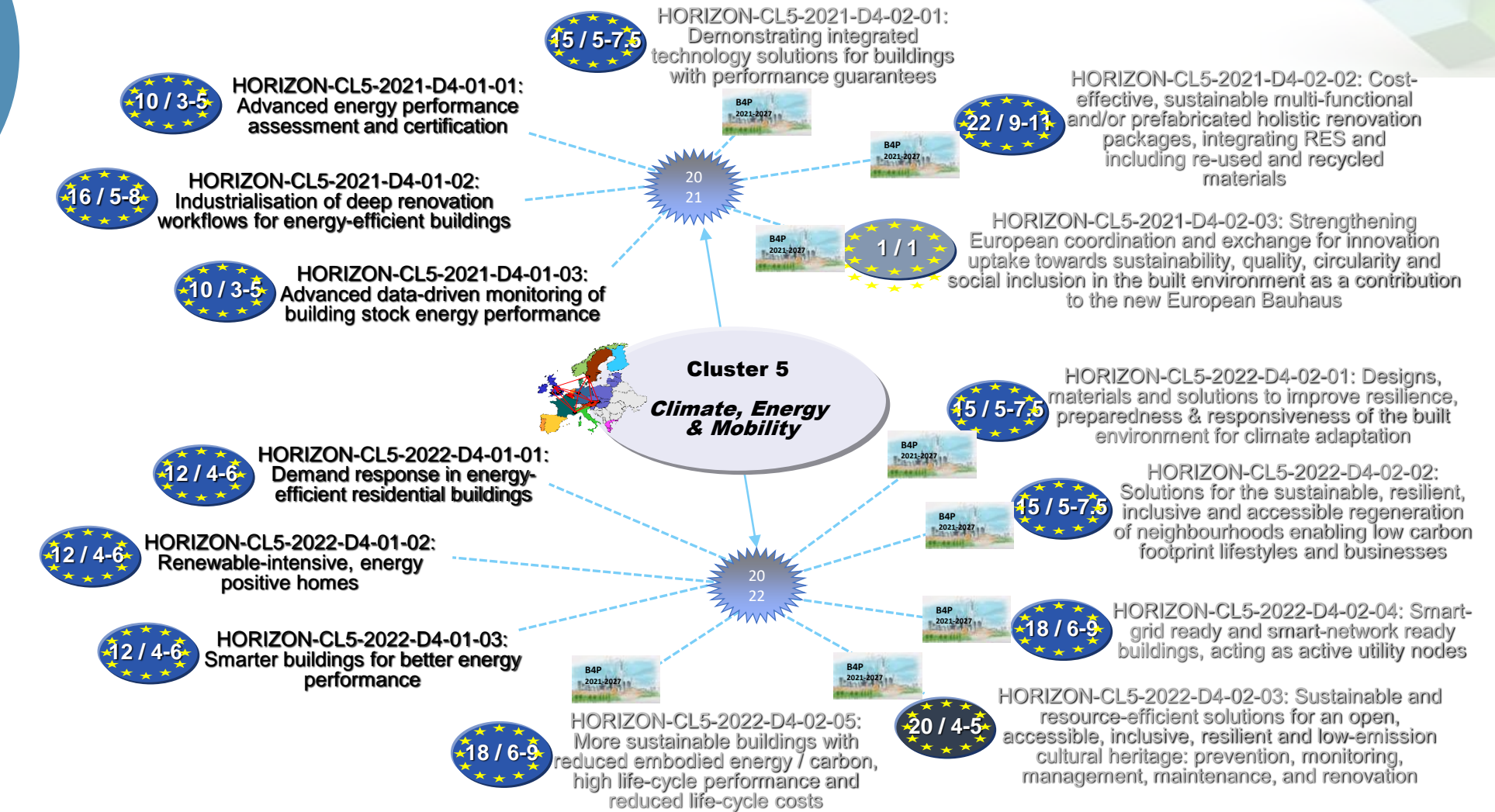*Final input – more of a sanity check*

3rd draft Work Programme

Final draft call topics

Final Work Programme

Published and open for participation

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Built4People - Horizon Europe WP2021-2022

Cluster 5
Climate, Energy & Mobility

2021

HORIZON-CL5-2021-D4-01-01: Advanced energy performance assessment and certification — 10 / 3-5

HORIZON-CL5-2021-D4-01-02: Industrialisation of deep renovation workflows for energy-efficient buildings — 16 / 5-8

HORIZON-CL5-2021-D4-01-03: Advanced data-driven monitoring of building stock energy performance — 10 / 3-5

HORIZON-CL5-2021-D4-02-01: Demonstrating integrated technology solutions for buildings with performance guarantees — 15 / 5-7.5

HORIZON-CL5-2021-D4-02-02: Cost-effective, sustainable multi-functional and/or prefabricated holistic renovation packages, integrating RES and including re-used and recycled materials — 22 / 9-11

HORIZON-CL5-2021-D4-02-03: Strengthening European coordination and exchange for innovation uptake towards sustainability, quality, circularity and social inclusion in the built environment as a contribution to the new European Bauhaus — 1 / 1

2022

HORIZON-CL5-2022-D4-01-01: Demand response in energy-efficient residential buildings — 12 / 4-6

HORIZON-CL5-2022-D4-01-02: Renewable-intensive, energy positive homes — 12 / 4-6

HORIZON-CL5-2022-D4-01-03: Smarter buildings for better energy performance — 12 / 4-6

HORIZON-CL5-2022-D4-02-01: Designs, materials and solutions to improve resilience, preparedness & responsiveness of the built environment for climate adaptation — 15 / 5-7.5

HORIZON-CL5-2022-D4-02-02: Solutions for the sustainable, resilient, inclusive and accessible regeneration of neighbourhoods enabling low carbon footprint lifestyles and businesses — 15 / 5-7.5

HORIZON-CL5-2022-D4-02-03: Sustainable and resource-efficient solutions for an open, accessible, inclusive, resilient and low-emission cultural heritage: prevention, monitoring, management, maintenance, and renovation — 20 / 4-5

HORIZON-CL5-2022-D4-02-04: Smart-grid ready and smart-network ready buildings, acting as active utility nodes — 18 / 6-9

HORIZON-CL5-2022-D4-02-05: More sustainable buildings with reduced embodied energy / carbon, high life-cycle performance and reduced life-cycle costs — 18 / 6-9

Legend: RIA   IA   CSA   Global / project — Funding (M€)

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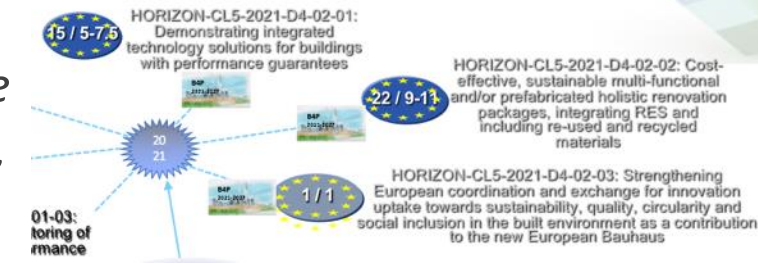| Topic	Type of Action	Proposal Number	Acronym	Title	Coordinating organisation
HORIZON-CL5-2021-D4-02-01 : Demonstrating integrated technology solutions for buildings with performance guarantees (Built4People)	HORIZON-IA	101079888	EBENTO	Energy efficiency Building Enhancement through performance guarantee Tools	ETRA INVESTIGACION Y DESARROLLO SA (ES)
HORIZON-CL5-2021-D4-02-01 : Demonstrating integrated technology solutions for buildings with performance guarantees (Built4People)	HORIZON-IA	101080029	FORTESIE	CBDC powered Smart PerFORmance contracTs for Efficiency, Sustainable, Inclusive, Energy use	EUROPEAN DYNAMICS LUXEMBOURG SA (LU)
HORIZON-CL5-2021-D4-02-02 : Cost-effective, sustainable multi-functional and/or prefabricated holistic renovation packages, integrating RES and including re-used and recycled materials (Built4People)	HORIZON-IA	101079961	AEGIR	DigitAl and physical incrEmental renovation packaGes/systems enhancing envIronmental and energetic behaviour and use of Resources	FUNDACION TECNALIA RESEARCH & INNOVATION (ES)
HORIZON-CL5-2021-D4-02-02 : Cost-effective, sustainable multi-functional and/or prefabricated holistic renovation packages, integrating RES and including re-used and recycled materials (Built4People)	HORIZON-IA	101079951	REHOUSE	Renovation packagEs for HOlistic improvement of EU's bUildingS Efficiency, maximizing RES generation and cost-effectiveness	FUNDACION CARTIF (ES)
HORIZON-CL5-2021-D4-02-03 : Strengthening European coordination and exchange for innovation uptake towards sustainability, quality, circularity and social inclusion in the built environment as a contribution to the new European Bauhaus (Built4People)	HORIZON-CSA	101079859	NEBULA	New European Bauhaus Unlocked through Built4People-endorsed Local Actions	DOWEL INNOVATION (FR)

+ 1 new project (from Reserve list):

RE-SKIN (101079957)

Built4People - Horizon Europe WP2021-2022 *Main Focus* (1/2)

- *Highly energy-efficient and climate neutral EU building stock*
- *Addressing energy demand side & a more efficient use of energy as regards buildings and industry.*
- *Promoting an open strategic autonomy by leading the development of key digital and enabling technologies, sectors and value chains*
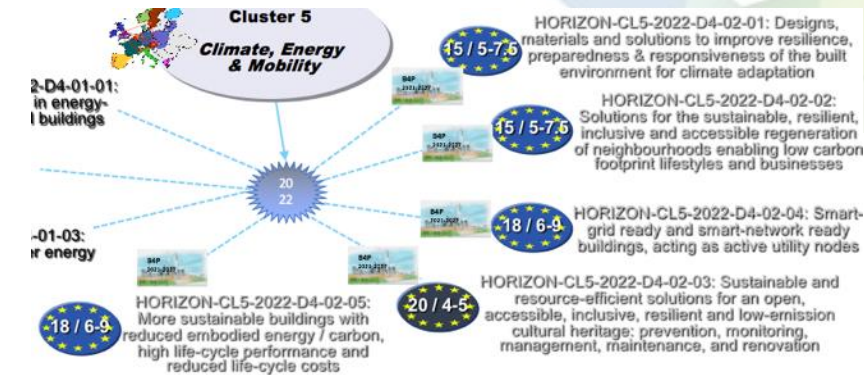- **2021**
  - Proven integrated technology solutions for <u>performance guarantees and performance-based contracts</u> to increase buildings energy performance
  - Enhanced <u>awareness of end users and capacity building of businesses</u> on performance-based contracts + enhanced trust in guarantees of performance & related contracts
  - Construction / renovation processes for sustainable multi-functional and/or prefabricated <u>holistic renovation packages</u> – demonstrating:
    - reduction of embodied energy and CO2 of renovation over LC
    - affordability of sustainable renovation and RES systems in buildings & multi-purpose (heating, cooling, electricity) renewable energy generation
    - improvement of insulation and air-tightness compared to standard renovation solutions
    - Faster uptake of EU-wide standards or certification of reused and / or recycled construction materials / products
    - *3 large-scale demonstration of the solutions in diverse geographical areas, with various local environmental, social, and economic conditions, addressing both residential and non-residential buildings*
  - (CSA) support to the network of B4P Innovation Clusters

- *Highly energy-efficient and climate neutral EU building stock*
- *Addressing energy demand side & a more efficient use of energy as regards buildings and industry.*
- *Promoting an open strategic autonomy by leading the development of key digital and enabling technologies, sectors and value chains*

- **2022**
  - Designs, materials and solutions (including digital interoperable tools) to <u>improve resilience and climate proofing of the built environment</u> (new and existing buildings) in a cost-effective and reliable manner - making use of natural, easy to manage, advanced, evolutive materials and technologies to combat the effects of global warming (cooling demand, heat island effects, etc.)
  - Methods and solutions for the <u>regeneration of neighbourhoods</u> with focus on energy efficiency, sustainability, resilience, health, inclusiveness and accessibility, based on participatory planning processes and innovative (IT-based) decision-making procedures
  - Innovative, sustainable, energy and resource-efficient solutions for the cost-effective <u>improvement and preservation of cultural heritage</u> built environment along all relevant aspects: inclusiveness, accessibility, resilience, environmental and energy performance
  - <u>Smart-grid ready and smart-network ready buildings</u> – improving interoperability and synergies between electricity/energy carriers & buildings as flexible assets for grid/network management
  - <u>Sustainable buildings with reduced embodied energy / carbon, high LC performance and reduced life-cycle costs</u> – with Mainstreamed affordable high life-cycle performance, and improved circularity of buildings in construction and renovation

Acknowledgement: not an official view from B4P Partnership!

- Keep on the renovation needs, with more industrialised processes (for construction or renovation, as well as deconstruction / reuse) and a focus on circular renovation as well as principles of circular economy
- Improve the role / coordination of construction stakeholders value chains towards innovation in renovation
- Innovative design(s) and decarbonisation pathways for people-centric / people-inclusive new & renovated buildings
- **Resilience of buildings towards changing climate / disruptive events**
- A strong accent is continuously put on Digitalisation at every stage of the construction process - e.g.
  - BIM, DTs, Automation (including e.g. Drones, Robotics) to improve renovation & optimise maintenance in a twin transition (green & digital)
  - Increased use of LC data / data lakes to manage buildings, data validation / certification
  - Increased involvement of users in participative design, planning, management, renovation, of buildings and districts

European Commission

ECTP
INNOVATIVE BUILT ENVIRONMENT

WORLD GREEN BUILDING COUNCIL

Built4People - Horizon Europe WP- 2023

Open: 4 MAY 2023

Closed: 5 SEPT 2023

10 / 5 — HORIZON-CL5-2023-D4-01-01: Innovative cost-efficient solutions for zero-emission buildings

9 / 4.5 — HORIZON-CL5-2023-D4-01-02: Future-proofing historical buildings for the clean energy transition

8 / 4 — HORIZON-CL5-2023-D4-01-03: Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources

6 / 3 — HORIZON-CL5-2023-D4-01-04: Thermal management and energy optimisation of high energy demand IT systems equipment in tertiary buildings

25 / 12.5 — HORIZON-CL5-2023-D4-01-05: Innovative solutions for cost-effective decarbonisation of buildings through energy efficiency and electrification

Cluster 5

Climate, Energy & Mobility

10 / 5 — HORIZON-CL5-2023-D4-02-01: Innovative uses of lifecycle data for the management of buildings and buildings portfolios

10 / 5 — HORIZON-CL5-2023-D4-02-02: Solutions for the identification of vulnerable buildings and people-centric built environment, and for improving their resilience in disruptive events and altered conditions in a changing climate

12 / 6 — HORIZON-CL5-2023-D4-02-03: Demonstrate built-environment decarbonisation pathways through bottom-up technological, social and policy innovation for adaptive integrated sustainable renovation solutions

2 / 2 — HORIZON-CL5-2023-D4-02-04: Fast-tracking and promoting built environment construction and renovation innovation with local value chains

10 / 5 — HORIZON-CL5-2023-D4-02-05: Supporting the creation of an accessible and inclusive built environment

Legend

RIA **IA** **CSA** **Global project**

Funding (M€)

Built4People - Horizon Europe WP- **2024**

Open: 17 SEPT 2024

Closed: 21 JAN 2025

10 / 5 — HORIZON-CL5-2024-D4-01-01:
Low-disruptive renovation processes using integration of prefabricated solutions for energy-efficient buildings

10 / 5 — HORIZON-CL5-2024-D4-01-02:
Smart grid-ready buildings

16 / 5.3 — HORIZON-CL5-2024-D4-01-03: Alternative heating systems for efficient, flexible and electrified heat generation in industry

Cluster 5

Climate, Energy & Mobility

16 / 8 — HORIZON-CL5-2024-D4-02-01:
Industrialisation of sustainable and circular deep renovation workflows

8 / 4 — HORIZON-CL5-2024-D4-02-02:
Robotics and other automated solutions for construction, renovation and maintenance in a sustainable built environment

8 / 4 — HORIZON-CL5-2024-D4-02-03:
BIM-based processes and digital twins for facilitating and optimising circular energy renovation

8 / 4 — HORIZON-CL5-2024-D4-02-04:
Design for adaptability, re-use and deconstruction of buildings, in line with the principles of circular economy

10 / 5 — HORIZON-CL5-2024-D4-02-05:
Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts

Legend

Funding (M€)

RIA | **IA** | **CSA** | **Global / project**

- **LIFE Clean Energy Transition (CET) sub-programme**
  - Support the delivery of EU policies in the sustainable energy field, in particular:
    - the European Green Deal
    - the Energy Union (2030 energy and climate targets)
    - the European Union's 2050 long-term decarbonisation strategy
  - LIFE CET budget of ≈EUR 1 billion over 2021-2027 – targeted at:
    - breaking market barriers that hamper the socio-economic transition to sustainable energy;
    - engaging multiple small and medium-sized stakeholders, multiple actors including local and regional public authorities and non-profit organisations, as well as consumers
  - 2022 – examples of topics targeting construction/Built Env.:
    - ***TOPIC ID: LIFE-2022-CET-BUILDPERFORM:*** *topic specifically dedicated to energy performance and smart readiness of buildings*
    - ***TOPIC ID: LIFE-2022-CET-DEEPRENO:*** *topic addressing challenges related to the energy performance of the European building stock, e.g. on building renovation*
  - 2023 - LIFE Calls for proposals 2023 published ≈Mid-April @ *https://cinea.ec.europa.eu/programmes/life/life-calls-proposals_en*

    And calls for LIFE CET sub-programme published ≈Mid-May

- Shaping and maturing innovation clusters in European countries:
  - …for a widespread change of practices in the construction and renovation of the built environment as defined in the B4P objectives

- An innovation cluster (IC):
  - is a local or regional socio-technical ecosystem bringing together actors of the built environment sector
  - where pools of capital, tacit knowledge, expertise and talent foster
    - the development of new innovations
    - their demonstration (e.g. how innovations are implemented, demonstrating their added value, etc.)
    - their market uptake (regional, national or beyond)
  - is based on an existing national/regional cluster organisation or a grouping of various organisations of this type (a 'meta-cluster')
  - has both
    - a geographic focus
    - a focus on one or more SRIA topics

- A Built4People Innovation Cluster (B4PIC):
    - a group of innovation-driven stakeholders, typically formed by one or two local/regional cluster(s), that engage in a maturing process to foster EU-scale, multidisciplinary and sustainable innovation in the Built Environment
    - this process is supported and monitored by the B4P Partnership partners (ECTP and/or WGBC)

- B4PIC address, as a group and on a negotiated timeline, the following six dimensions / B4PIC success factors:
    - whole value chain
    - cross-sectoral
    - multi-objectives
    - locally anchored with national and European outreach
    - cross-border
    - access to testbeds and demonstration spaces

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- The B4P network is composed of the B4PICs that have formally engaged in the B4P maturing process (i.e. signed the Charter), assures the exchange of good practices and fosters the collaboration between B4PICs

- The <u>Charter</u>:
  - is a brief document presenting the objective of the Charter signature, including maturity defined by the Innovation Cluster on the number of dimensions achieved at signing, and/or to be achieved according to a given timeline
  - presenting the objective of the Charter signature, by clarifying and aligning expectations
  - describing the various engagements from the clusters under the form of a list of actions to be undertaken on their side

  The Charter is signed when a cluster becomes a member of the network of B4P Innovation Clusters (network of B4PICs)

The Charter sets out the basic requirements for a three-tiers membership:

- **Prospective B4PIC** (candidate, *optional status*): a cluster has expressed interest and is exploring becoming a B4PIC, in relationship with the B4P Partnership
- **Emerging B4PIC** (Stage 1): a cluster has applied and been accepted (charter is signed) on the basis of a commitment in the charter to progress towards required maturity (but is not yet meeting these minimum requirements)
- **Established B4PIC** (Stage 2): an accepted B4PIC has demonstrated it meets the required maturity level in the defined timeline, as agreed in the charter the IC has signed.

Built4People Innovation Cluster (under elaboration) 5/7

B4P Innovation Clusters network - value proposition

INCREASE VISIBILITY IN HIGH-LEVEL EUROPEAN NETWORKS

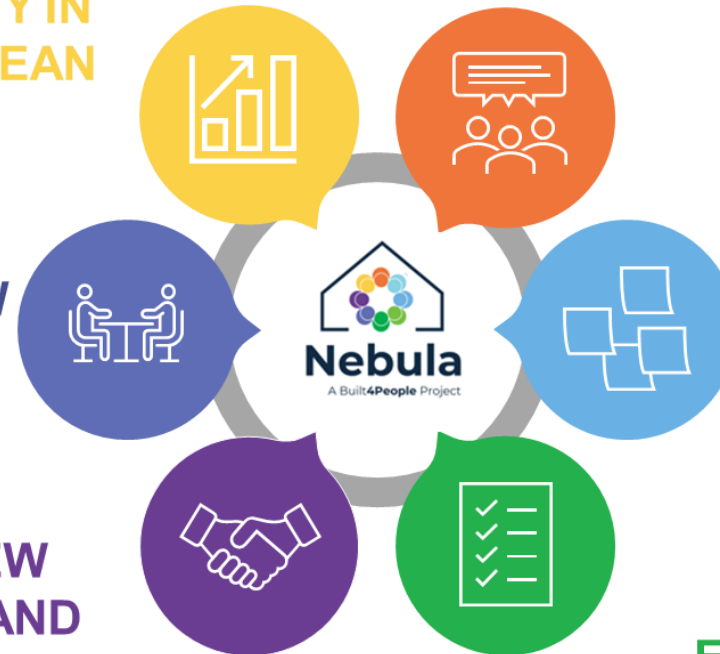MEET WITH OTHER NATIONAL CLUSTERS

TAKE A BROADER APPROACH TO RESEARCH AND INNOVATION

BENEFICIATE FROM NEW SERVICES TO ENGAGE MEMBERS

ATTRACT NEW RESOURCES AND FUNDINGS

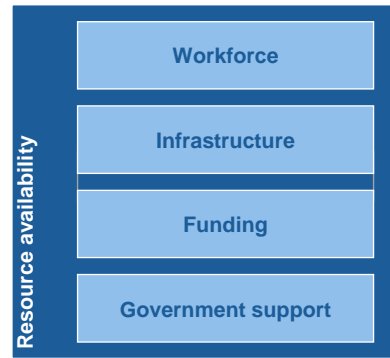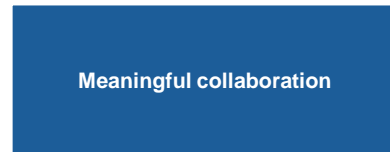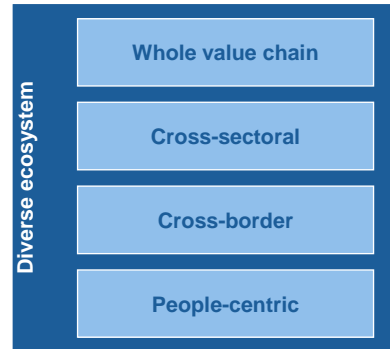COMMUNICATE KEY MESSAGES TO THE EUROPEAN COMMISSION

Nebula
A Built4People Project

European Commission

ECTP
INNOVATIVE BUILT
ENVIRONMENT

WORLD
GREEN
BUILDING
COUNCIL

Impact drivers

Definition of high impact contribution
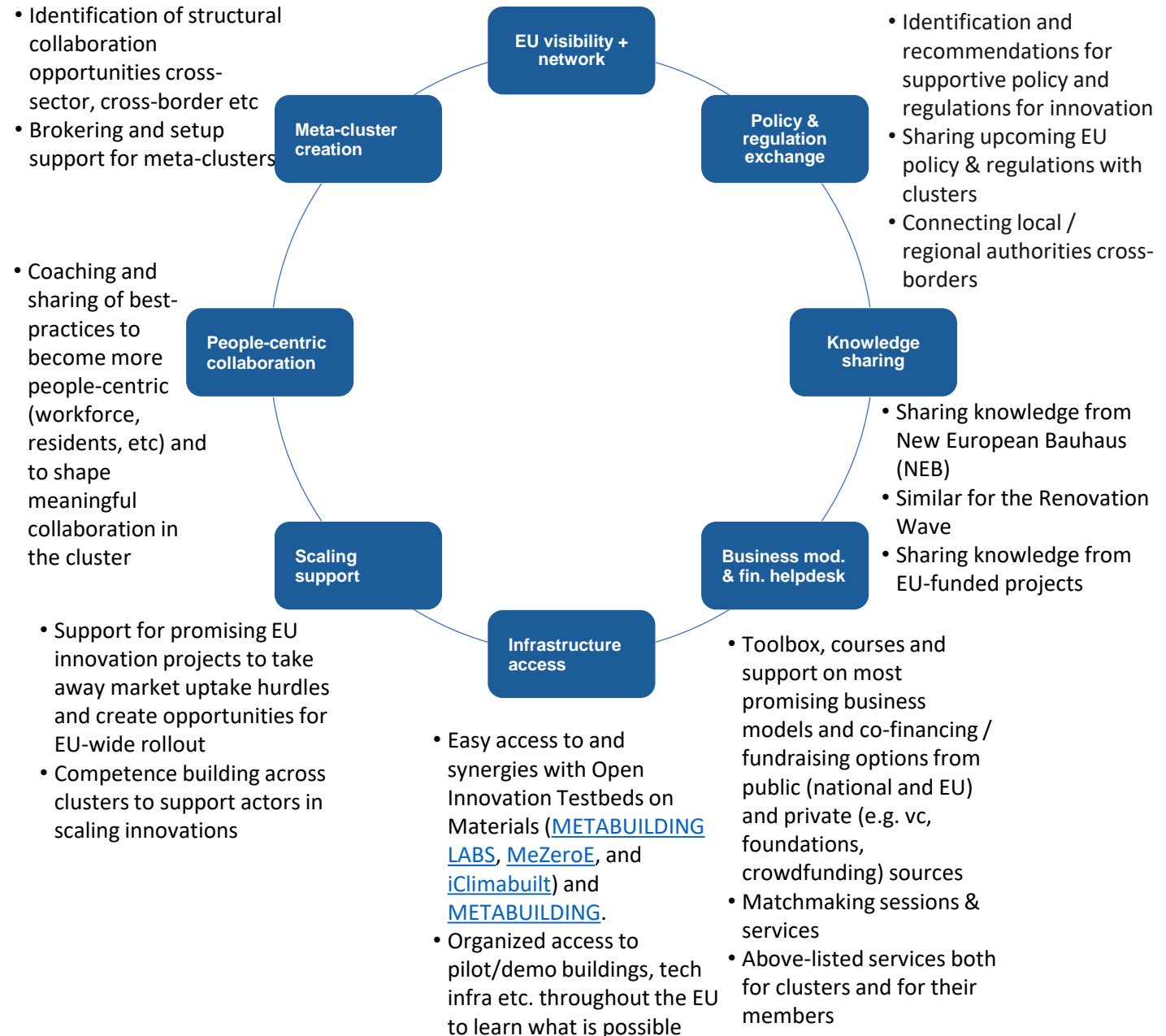
Diverse ecosystem

Whole value chain
- All value chain players are represented: academic & industrial innovators, architects, contractors, planners, local authorities, developers, investors, end user associations. Ample focus on SMEs.

Cross-sectoral
- There are anchors for and meaningful exchanges with other sectors, e.g. additive manufacturing, ICT, nature-based solutions, and others related to the new Bauhaus

Cross-border
- There are ongoing relationships, rich exchanges, and partnerships with clusters in other regions / Member States to stimulate innovation and scaling

People-centric
- Residents and construction workers participate in priority setting, innovation development and other decision-making and brainstorming.

Meaningful collaboration
- Goal-guided & well facilitated exchanges that engage key stakeholders, build trust, connections, collaborations, and stimulate flow of ideas, knowledge, and opportunities. E.g. personalized messages, thematic groups / brainstorms, on-site visits, hackathons, joint projects, online platforms, co-working, social mingling, job hopping (no spamming to hit communication KPIs)

Resource availability

Workforce
- Well-trained workforce including in SMEs. Creation of new jobs. Cluster is a magnet for innovation talent and business leadership. Cluster provides training & knowledge sharing.

Infrastructure
- Easy access to test-beds, demo-spaces, pilot buildings, living labs, training facilities, commercial buildings, transport infrastructure, tech infra. Generalise learnings beyond unique test cases.

Funding
- Sustainable funding model for the innovation cluster ensuring longevity
- Innovation ideas get help and find it easy to get funding from venture capital, philanthropic foundations, government, banks

Government support
- Cluster works with local and national authorities for simplified access to their buildings/infra, flexible adaptation of building standards, zoning regulations; export support; tax cuts and grants

Results focus

Theme & Roadmap
- There is a widely agreed theme/core competency and a roadmap for development for the cluster, developed with high participation from stakeholders (not just vested interests).

Innovation culture
- A young and dynamic, risk-seeking mindset, through involvement of start-ups and younger generation professionals, residents and workers

Scaling focus
- A focus on going beyond research and help innovations scale by supporting market/business development to respond to market demand (focus on pull, not push)

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Built4People Innovation Cluster
(under elaboration)
7/7

European Commission

ECTP INNOVATIVE BUILT ENVIRONMENT

WORLD GREEN BUILDING COUNCIL

- Enhanced visibility and networking among all B4P ICs, their members, EU funded projects, EU / national /local policy makers, clusters in related fields, and media.

EU visibility + network

- Identification of structural collaboration opportunities cross-sector, cross-border etc
- Brokering and setup support for meta-clusters

Meta-cluster creation

Policy & regulation exchange

- Identification and recommendations for supportive policy and regulations for innovation
- Sharing upcoming EU policy & regulations with clusters
- Connecting local / regional authorities cross-borders

Knowledge sharing

- Sharing knowledge from New European Bauhaus (NEB)
- Similar for the Renovation Wave
- Sharing knowledge from EU-funded projects

People-centric collaboration

- Coaching and sharing of best-practices to become more people-centric (workforce, residents, etc) and to shape meaningful collaboration in the cluster

Scaling support

- Support for promising EU innovation projects to take away market uptake hurdles and create opportunities for EU-wide rollout
- Competence building across clusters to support actors in scaling innovations

Infrastructure access

- Easy access to and synergies with Open Innovation Testbeds on Materials (METABUILDING LABS, MeZeroE, and iClimabuilt) and METABUILDING.
- Organized access to pilot/demo buildings, tech infra etc. throughout the EU to learn what is possible

Business mod. & fin. helpdesk

- Toolbox, courses and support on most promising business models and co-financing / fundraising options from public (national and EU) and private (e.g. vc, foundations, crowdfunding) sources
- Matchmaking sessions & services
- Above-listed services both for clusters and for their members

Built4People Innovation Cluster – *The Roadmap*

2023-2025

2025-2028

Minimum 10-15 **fully mature** B4P Innovation Clusters by 2028

Test the added value of B4PIC with 'test clusters'

Select additional 'follower clusters'

Provide 'maturity push' services to these 5-7 clusters

Elaborate replication plan

Involve OITB & EDIH to support B4PICs network

Continuous support to push the maturity of new clusters

Building blocks to be created by the project

Building blocks to be created later by the B4P partnership

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