



Nebula

A Built**4**People Project

B4P INNOVATION

CLUSTER CHARTER

DELIVERABLE D1.2



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DELIVERABLE INFORMATION

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EXECUTIVE SUMMARY

This document is the deliverable D1.2 of the NEBULA¹ project. It synthesizes the outputs of task T1.2 – Setup of the Built4People Innovation Clusters (B4PIC) framework and Charter.

It includes a description of the B4PIC Charter, which defines main principles, rules and process for Innovation Clusters (ICs) to follow towards its maturity and integration into the B4PIC framework.

The B4PIC Charter is a declaration and commitment by which the ICs commit to work together and become integrated in the B4P network to fundamentally contribute to the B4P objectives (as defined in the MoU signed between the European Commission and the Partners other than the Union represented by ECTP and WGBC) and contribute to its expected impact. They also commit to leveraging on the New European Bauhaus (NEB), which provides a set of principles and a framework for a creative and transdisciplinary movement to reimagine enriching, sustainable and inclusive living and allow actors from different backgrounds to join forces. It introduces the process of setup and activation of the B4PIC framework.

The B4PIC Charter is developed by concretizing the outputs of T1.1 - B4P Innovation Clusters (B4PICs) requirements elicitation processes – presented in D1.1. It formalizes three levels of B4P success factors and defines the three types of B4PICs, according to their maturity level. The B4PIC Charter integrates the comments and suggestions of the public and private Partners of the Consortium, Nebula Impact Board and B4P Partnership Board. The Charter is to be endorsed in the next B4P Partnership Board on the 28th June 2023.

This deliverable provides a robust and operational template of the B4PIC Charter, ready for the replication phase. This template is likely to evolve by the end of NEBULA, and will mature as new ICs join the B4PIC network.

¹ [New European Bauhaus Unlocked through Built4People-endorsed Local Actions | NEBULA Project | Fact Sheet | HORIZON | CORDIS | European Commission \(europa.eu\)](#)



THE B4PIC CHARTER

This Charter² is both a declaration and a commitment of Innovation Clusters³ (ICs) to work together and into a network to fundamentally contribute to the Built4People⁴ (B4P) Partnership objectives and expected impacts (as defined in the MoU⁵ signed between the European Commission and the Partners other than the Union represented by ECTP and WorldGBC), while at the same time leveraging on the New European Bauhaus (NEB⁶).

PREFACE

NEBULA⁷ is a project co-funded by and actively contributing to the B4P Partnership. Its main objective is to activate and nurture a network of B4P Innovation Clusters (B4PIC), and provide a package of supporting activities to these Innovation Clusters. It aims to integrate, scale and demonstrate innovations across Europe thanks to a network of national or regional ICs, in view of maximizing impacts towards the transformation of the highly fragmented sector of construction and built environment⁸. The NEBULA project supports innovation clusters to become B4PICs through establishing innovation ecosystems at multiple scales (local/regional/national), support on open innovation, access to a business and finance help desk, and match-making and promotional events. The NEBULA project also makes the bridge between the B4P and the NEB initiative⁹, by building upon both B4P objectives and the NEB values and working principles and facilitating peer learning on NEB concepts.

The B4PIC Charter is intended to galvanize the active engagement of B4PICs within the B4PIC network in order to accelerate people-centric innovation in the built environment that drives the transition towards a sustainable society and economy.

² The Charter template is likely to evolve by the end of the NEBULA project.

³ Innovation Cluster (IC): 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 and their market uptake.

⁴ [Built4People \(ectp.org\)](https://ectp.org/Built4People)

⁵ [Built4People-partnership-signed-MoU.pdf \(worldgbc.org\)](https://worldgbc.org/Built4People-partnership-signed-MoU.pdf)

⁶ [New European Bauhaus: beautiful, sustainable, together. \(europa.eu\)](https://europa.eu/New-European-Bauhaus-beautiful-sustainable-together)

⁷ 101079859 — NEBULA — HORIZON-CL5-2021-D4-02

⁸ The term "built environment" refers to the objective to go beyond the concept of a building *stricto sensu* and to also consider people-centric built environment, meaning human-made surroundings of buildings that provide the setting for people's activities (buildings, urban spaces, parks, green areas, etc.)

⁹ [About the initiative \(europa.eu\)](https://europa.eu/About-the-initiative)



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The Charter commits all B4PICs to work together in the B4PIC network to contribute to the achievement of the B4P objectives, respecting the NEB framework and increasing their maturity level against the B4P success factors.

WE ACKNOWLEDGE THAT

- The construction ecosystem that must deliver a sustainable built environment is complex and highly fragmented, due to the variety and heterogeneity of technologies and stakeholders involved.
- The construction ecosystem employs 24.9 million people and provides a value added of EUR 1 158 billion (9.6% of the EU total)¹⁰, therefore it is one of the key enablers for achieving climate neutrality by 2050, the objectives of the European Green Deal¹¹, the Renovation Wave strategy¹² and the REPowerEU actions¹³. It crucially relies on policy instruments to support and boost innovation in a people-centric, sustainable built environment. It is as such necessary to develop holistic R&I for an effective transition of the construction sector to sustainability, with a people-centric vision: the B4P Partnership targets such a transition, defined by its three General Objectives and seven Specific Objectives (cf. Annex 1).
- The New European Bauhaus aims to “bring *the European Green Deal* to life in an attractive, innovative and human-centred way”, so the built environment should go beyond improving energy and resource efficiency, but develop and support the uptake of all socio-technological innovations that are in line with NEB values and principles (cf. Annex 1): a new paradigm of innovation is therefore needed to go beyond strictly technological models and exclusively functionality needs, but achieve a harmonious relationship between technology and society, by encouraging a dialogue across cultures, disciplines, genders and ages.
- Addressing a holistic transformation of the built environment therefore requires a larger involvement of all players across the whole value chain and throughout the whole building life cycle. Moreover, as 99% of construction companies in the EU are SMEs and these companies are most often affiliated to regional clusters, those latter become crucial cornerstones in engaging them in the innovation value chain.
- The key elements for levelling-up the play of regional clusters to the national and EU arenas are collaboration, sharing resources and knowledge and gaining critical mass. Therefore, the development and nurturing of a network of ICs with long-

¹⁰ Construction transition pathway <https://ec.europa.eu/docsroom/documents/53854>

¹¹ [European Green Deal \(europa.eu\)](https://european-council.europa.eu/media/e30014/p1/1/131920main_en.pdf)

¹² [Renovation wave \(europa.eu\)](https://european-council.europa.eu/media/e30014/p1/1/131920main_en.pdf)

¹³ [REPowerEU: affordable, secure and sustainable energy for Europe \(europa.eu\)](https://european-council.europa.eu/media/e30014/p1/1/131920main_en.pdf)



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lasting activities on collaborative open innovation, delivering sustainable and resilient socio-technical solutions and encouraging behavioural change is required.

- The overarching goal of the NEBULA project is to tackle the above elements of context and build upon the existing initiatives of the New European Bauhaus and Built4People partnership.
- The NEBULA project provides a package of supporting activities to B4PICs that will help to: (1) Improve visibility, adoption and uptake of innovative solutions that are in line with the New European Bauhaus thanks to increased awareness on benefits from innovation and better access to co-financing (2) Foster intensified, cross-sectorial and interdisciplinary peer-learning from front runners as well as cross-border cooperation and networking, (3) Prepare for the long-lasting activities of the network of B4PICs and the integration of future B4PICs.

NEBULA ACTIVITIES

- NEBULA facilitates connections to and among the projects co-funded by the B4P Partnership (B4P topics) and the wider stakeholder community. This could include opportunities to showcase clusters at the meeting of the Stakeholders Forum and bespoke matchmaking between projects and clusters with similar thematic interests and objectives.
- NEBULA provides best-practice guidance and case studies on scaling innovation and leveraging the power of the B4PIC network to accelerate impact and reach.
- NEBULA fosters, continuously nurtures and grows the B4PIC network, adding value to existing members by supporting interactions and recruiting new members, to increase the value of participation for existing members and the opportunities for increasing maturity along the B4PICs.
- NEBULA provides Open Innovation 2.0¹⁴ and strategic support to candidate clusters by sharing lessons learnt on key actors, identification and involvement, definition of maturity levels and definition of joint roadmaps. This includes demonstration and support of setting-up of a B4PIC in the METABUILDING platform and assuring its integration in the B4PIC network.
- NEBULA provides guidance, networking support and opportunities regarding the New European Bauhaus concept (“beautiful, sustainable, together”), and the related initiatives launched by the European Commission. The guidance includes some practical material (including a vade mecum), concrete examples, and peer learning activities such as webinars.

¹⁴ [Open Innovation 2.0: A New Paradigm | FUTURIUM | European Commission \(europa.eu\)](#)



- NEBULA's Finance Helpdesk facilitates access to private funding for the clusters and their members. It provides a better understanding of what type of support Start-up and SMEs need at their development's stage, what is the "typical funding journey" for SMEs at the same level of development, examples of success stories and an analysis of the conditions for success. Among others, the helpdesk provides practical tools to build a funding strategy and get funded as well as regular updates of currently available funding opportunities at national and European levels.
- NEBULA provides opportunities to promote at EU scale the innovations developed by any IC.

COMMITMENTS OF INNOVATION CLUSTERS

The IC commits to:

- Align to the B4P and NEB frameworks and promote the B4P objectives and the NEB vision.
- Implement and update when needed a strategy to become a B4PIC and develop along the B4PIC success factors (cf. Annex 2), by increasing their maturity level (cf. Annex 3) and regularly reporting on progress.
- Actively participate in the ongoing activities of the B4PIC network:
 - Openly and broadly promote innovative approaches and developed scale-up solutions with high-market potential;
 - Intensify cross-sectoral and interdisciplinary peer-learning from front runners (through events, workshops, webinars, etc.);
 - Share own expertise, good practices and success stories;
 - Actively participate in the integration of the next (candidate) B4PICs in the B4PIC network, by raising awareness of other built environment ecosystems about the benefits of this network and by encouraging other ICs to join it;
 - Strengthen cross-border cooperation and networking by enhancing regional, national and European links and helping to improve the B4PIC network with relevant feedback and suggestions.

WE WILL WORK ON THE ABOVE BY

Making use of the expertise within the B4PIC network to coordinate our efforts, increasing our maturity level, exchanging experiences and good practices, developing and maintaining an Implementation Plan specific for our IC that sets out how our IC will meet these commitments in practice, implementing a framework allowing to scale up on the commitments above, as well as seeking external sources of funding to support our ambitions.



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DURATION AND WITHDRAWAL

- The Charter is established for an unlimited period of time, under the following conditions: (i) effective duration of the Built4People Partnership; (ii) effective duration of the B4PIC network.
- The Charter template is likely to evolve at the end of the NEBULA project.
- The IC may withdraw, at any time but with a notice of at least three (3) calendar months before the effectiveness of this withdrawal. The notice of the withdrawal shall be by means of an email to the B4P Partnership Board, sent to the B4P Management Team. This 3-month period is considered as allowing to put in place all activities related to such withdrawal, including appropriate technical and organisational actions for the effective withdrawal of the IC from the B4PIC network.
- Should the B4P Partnership Board consider that the IC is failing in fulfilling its obligations and adhering to its commitments in a given period of time (as established by the Implementation Plan attached to this Charter), it may notify the IC about its intention to withdraw from the signed Charter, and therefore exclusion of the IC from the B4PIC network. Such notification will be by means of an email to the B4P Partnership Board, sent to the B4P Management Team. At the end of this 3-month period, if no agreement to continue the Charter has been reached, it will be terminated and the IC excluded from the B4PIC network.

INNOVATION CLUSTER SIGNING THE CHARTER

The B4PIC Charter is signed by:

Innovation Cluster _____ represented by _____

on _____



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ANNEX 1. TERMINOLOGY AND MAIN CONCEPTS

Built4People (B4P) general objectives:

1. “Scientific”: to generate holistic innovation towards sustainability;
2. “Economic”: to revitalise the sector through decarbonisation and sustainability transition;
3. “Societal”: to induce lasting behavioural change towards sustainable living.

B4P Specific Objectives:

- A. Develop holistic solutions in a systemic approach
- B. Demonstrate overall performance in the life-cycle perspective
- C. Demonstrate clean energy transition potential
- D. Demonstrate sector decarbonisation pathways
- E. Demonstrate sustainable, circular business and value chain
- F. Demonstrate affordability and cost-effectiveness
- G. Demonstrate no trade-offs on economy, comfort, health, functions, cultural heritage.

New European Bauhaus (NEB) core values allowing to co-design and co-create an aesthetic sustainable and inclusive future:

- Beautiful (Enriching),
- Sustainable (Sustainability),
- Together (Inclusiveness).

NEB working principles enabling the green transition of our societies and economy:

- Participatory process,
- Multi-level engagement,
- Transdisciplinary approach.

Innovation Cluster (IC): 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 and their market uptake.

B4P 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. Such a process is supported and monitored by the B4P Partnership representative, so that the B4PIC address, as a group and on a negotiated timeline, the following five dimensions, characterising B4PIC success factors: full value-chain coverage; cross-sectoral integration; combined local and national/ EU networking; cross border connections; and access to testbeds and demonstration spaces such as pilot buildings and living labs.



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B4P Innovation Cluster network (B4PIC network) is composed of the B4PICs that have formally engaged in the B4P maturing process (i.e., signed the B4PIC Charter), assure the exchange of good practices and foster collaboration among B4PICs.

B4PIC success factors (SF):

- *SF1 - Whole value chain*: integrating as many as possible different stakeholder types from the whole built environment innovation value chain (e.g., any entity or organization representing academia, research and industrial innovators, architects and contractors, end users' associations, local authorities, etc.);
- *SF2 - Multi-objectives*: targeting several B4P objectives as well as NEB principles;
- *SF3 - Cross-sectoral*: integrating different industrial sectors, whose members might be transdisciplinary;
- *SF4 - Locally anchored with national and European outreach*: connecting a local territory with networks at national (national clusters or metaclusters, e.g., Construction National Technology Platforms) and European (European clusters or metaclusters, e.g., ECTP, WorldGBC ERN) levels;
- *SF5 - Cross-border*: interconnecting with clusters from other regions or Member States, establishing and promoting interregional activities between two clusters operating in two different local markets or economies (e.g., in the context of Euro-regions, or in two regions within the same Member State or in two different EU countries, with clearly differentiated markets/economies);
- *SF6 - Access to testbeds and demonstration spaces*: integrating or connecting to test beds, pilot buildings, living labs or other facilities to demonstrate innovations and facilitate market uptake.

Three types of B4PICs:

- *Prospective B4PIC (candidate)*: an IC has expressed interest and is exploring becoming a B4PIC, in relationship with the B4P Partnership (supported by NEBULA partners over the duration of the NEBULA project). A Prospective B4PIC should contain the maturity of all 6 success factors at least at level 1 and take an engagement to aim at all B4PIC success factors. An IC can be a candidate up to 12 months before signing the Charter.
- *Emerging B4PIC (Stage 1)*: a cluster has applied and been accepted (the Charter is signed) on the basis of a commitment in the Charter to progress towards required maturity (but is not meeting these minimum requirements yet). If such maturity level is not reached at the end of Horizon Europe (by 2027), the IC will be considered as defaulting and losing its status of Emerging B4PIC.
- *Established B4PIC (Stage 2)*: an accepted Emerging B4PIC has demonstrated it meets the required maturity level in the defined timeline, as agreed in the Charter, which it has signed.



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ANNEX 2. MATURITY LEVELS OF B4PIC SUCCESS FACTORS

The maturity levels of B4PIC success factors are described in Table 1.

Table 1: Three maturity levels (ML) of B4PIC six success factors (SF)

ML	SF1 Whole value chain	SF2 Multi-objectives	SF3 Cross-sectoral	SF4 Locally anchored with national and European outreach	SF5 Cross-border	SF6 Access to testbeds and demonstration spaces
ML1	IC gathers stakeholders with same professions (e.g., only academia or industrials, ...)	IC is focused on one type of objectives (e.g., sustainability, decarbonization, ...)	IC is focused on one sector (but addressing multiple applications)	IC is local/regional	IC has no cross-border interactions	IC has no connection to testbeds and demonstration spaces
ML2	IC gathers stakeholders with a few distinct profiles, but not the whole value chain	IC addresses different groups of objectives (e.g., circularity and integrating cultural values into design, ...)	IC is focused on one sector but clusters with one IC from a different sector	IC is local/regional and is connected to one or a few other local/regional ICs from the same or a different country (i.e., joint activities, exchanges between members)	IC has a few cross-border contacts and is actively promoting interregional activities and programmes to its members	IC has contacts with local/regional testbeds and demonstration spaces to facilitate for its members the demonstration and market uptake of their innovations
ML3	IC gathers stakeholders from research to industry, public authorities and citizen associations/ NGO included	IC addresses the 7 B4P specific objectives as well as NEB values, and actively promotes some or all of them	IC is focused on one sector but actively engages in clustering and joint road mapping with several clusters from different sectors, which members might be trans-disciplinary	IC is vertically integrated in the national construction technology platform and/or ECTP/METABUILDING built environment ecosystem/ B4P network	IC has implemented at least one strategic relationship with a cluster from another country (for example within an Euroregion) and engages in joint road mapping in line with RIS3 of the concerned region	IC is actively seeking testing opportunities for its members using the services of Open Innovation Testbeds like METABUILDING LABS, iClimabuilt, MEZeroE providing co-development and testing opportunities with real users (LivingLabs).



ANNEX 3. B4PIC EVOLUTION

An example of the evolution of maturity of each B4PIC is presented in Table 2. Table 2 is to be filled in by each IC at the moment of signing the Charter, with respect to its engagement to increase the maturity level of each success factor within the agreed timeline. Table 2 sets the basis for the Implementation Plan that each IC should develop before signing the Charter. The Implementation Plan sets out the key points and defines the main stages how the IC will meet these commitments in practice and implement a framework allowing to scale up on the commitments.

Table 2 and the corresponding Implementation Plan should be prepared specifically for each IC and integrated as annexes to the Charter. They comprise:

- The maturity of the IC presented with the information of each success factor and its maturity level at different time in the format $M(SF,ML)$ = Maturity (Success Factor, its Maturity Level).
- The initial maturity is defined at t0: the moment of signing the Charter.
- The evolution of the maturity of IC, which IC commits to achieve at the defined time: t0+'number of months'.

Table 2: Example of the initial and the evolution of maturity of B4PIC

Time	SF1 Whole value chain	SF2 Multi-objectives	SF3 Cross-sectoral	SF4 Locally anchored with national and European outreach	SF5 Cross-border	SF6 Access to testbeds and demonstration spaces
t0 (signing the Charter)	$M(1,1)$ IC gathers stakeholders with same professions (e.g., only academia, only industrials, ...)	$M(2,1)$ IC is focused on one type of objectives (e.g., sustainability, decarbonization, ...)	$M(3,1)$ IC is focused on one sector (but addressing multiple applications)	$M(4,1)$ IC is local/ regional	$M(5,1)$ IC has no cross-border interactions	$M(6,1)$ IC has no connection to testbeds and demonstration spaces
t0+6	$M(1,1)$	$M(2,2)$ IC addresses different groups of objectives (e.g., circularity and integrating cultural values into design, ...)	$M(3,2)$ IC is focused on one sector but clusters with one IC from a different sector	$M(4,1)$	$M(5,1)$	$M(6,1)$
t0+12	$M(1,2)$ IC gathers stakeholders with a few distinct profiles,	$M(2,2)$	$M(3,2)$	$M(4,1)$	$M(5,2)$ IC has a few cross-border contacts and is actively	$M(6,1)$



	but not the whole value chain				promoting interregional activities and programmes to its members	
t0+18	M(1,2)	M(2,2)	M(3,3) IC is focused on one sector but actively engages in clustering and joint road mapping with several clusters from different sectors, which members might be trans-disciplinary	M(4,2) IC is local/ regional and is connected to one or a few other local/regional ICs from the same or a different country (i.e., joint activities, exchanges between members)	M(5,2)	M(6,2) IC has contacts with local/ regional testbeds and demonstration spaces to facilitate for its members the demonstration and market uptake of their innovations
t0+24	M(1,3) IC gathers stakeholders from research to industry, public authorities and citizen associations/ NGO included	M(2,2)	M(3,3)	M(4,2)	M(5,2)	M(6,2)
t0+36	M(1,3)	M(2,3) IC addresses the 7 B4P specific objectives as well as NEB values, and actively promotes some or all of them	M(3,3)	M(4,3) IC is vertically integrated in the national construction technology platform and/or ECTP/METABUILDING built environment ecosystem/B4P network	M(5,3) IC has implemented at least one strategic relationship with a cluster from another country (for example within an Euroregion) and engages in joint road mapping in line with RIS3 of the concerned region	M(6,3) IC is actively seeking testing opportunities for its members using the services of Open Innovation Testbeds like METABUILDING LABS, iClimabuilt, MEZeroE providing co-development and testing opportunities with real users (LivingLabs).



In this example, a B4PIC has reached the full maturity (ML3) on all the six success factors by t0+36 (3 years from signing the Charter).

In a general case, the full maturity is required for 2 mandatory and 1 optional (defined in the Charter) success factors.



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