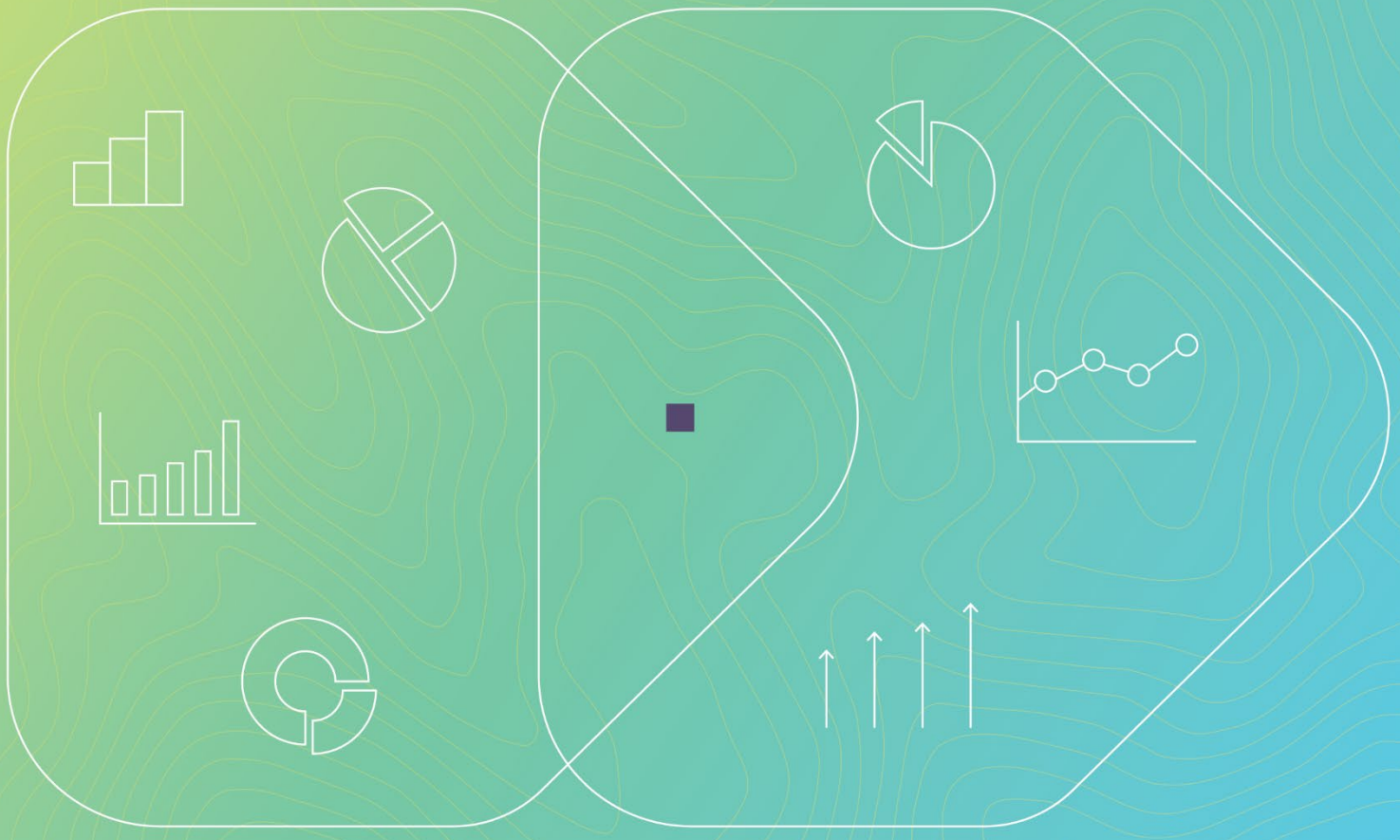
SUPPORTING the DEVELOPMENT of a ROADMAP for the NEW EUROPEAN BAUHAUS FACILITY

Public consultation analysis



New European Bauhaus

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EXECUTIVE SUMMARY

The European Commission conducted public consultations with the Member States and stakeholders in 2024 to help support the development of a roadmap for the New European Bauhaus Facility 2025-2027. The New European Bauhaus (NEB) Facility is a new multiannual financial instrument dedicated to the European Union's initiative to foster the transformation of neighbourhoods towards a more sustainable, inclusive and beautiful built environment.

The consultation questionnaire collected contributions from a total of 323 respondents. The vast majority of these contributions came from general stakeholders (93%) and the rest from national authorities.

Respondents represented a **wide range of European countries**, with a larger proportion from Western and Southern Europe, and most general stakeholders coming from the sectors of **research, architecture, public service and design**.

The key results can be condensed as follows:

- For Destination 1, respondents converged on the importance of research on social infrastructure as well as ownership and acceptability of change, among others.
- For Destination 2, respondents converged on the potential of further exploring digital platforms, innovative bio-based materials and innovative construction approaches, among others.
- For Destination 3, respondents converged on the importance of market dynamics and conditions among others.
- A broad pattern across general stakeholders and national authorities suggests a slight divide in preference for investing in coordination and support versus fundamental research, respectively.
- Strong indicators emerged that some themes proposed under research (i.e. on skilling and education) would fit better at a transversal level within the R&I component or even outside of R&I under roll-out instead.
- When considering the implementation of the NEB Facility, national authorities broadly emphasized the importance of preserving a strong focus on working with the existing built environment rather than creating anew. They were also in favor of more directly involving the social sciences and humanities (SSH) disciplines (i.e. psychology, sociology, communication) in both research and implementation.

The synthesized input from general stakeholders on research ideas for the R&I component largely confirms the content envisioned for the NEB Facility roadmap. In other words, the main work streams defined in the roadmap appear to align well with priorities of actors on the ground, according to respondents.

INTRODUCTION

The European Commission designed and conducted a public consultation to gather input from general stakeholders and national authorities on the development of the New European Bauhaus Facility. The consultation was two-fold, combining an online questionnaire and Member State visits (or online meetings). This report will focus solely on the questionnaire, which was designed to provide national authorities and general stakeholders with the opportunity to share their ideas as to how the New European Bauhaus (NEB) Facility should be shaped. The objective was to harvest novel ideas and gain insight into which themes are perceived as the most important in the NEB Facility according to those working on the ground.

The consultation questionnaire was open between 20 June 2024 and 1 October 2024 and received a total of 323 contributions. It should be noted that 15 contributions were excluded from the analysis because respondents did not consent to the processing of their data. Additionally, not all respondents answered every question, meaning that the response rate varies by question and is often less than the total number of respondents. The specific number of responses for a given question is indicated by 'N=' where relevant.

The analysis of the survey results follows the structure of the questionnaire itself, which is divided into two sections, one for each of the components of the NEB Facility (*Research & Innovation* and *Roll-out)*.

DESCRIPTION OF RESPONDENTS

This section provides an overview of the demographic background of respondents including country of residence, the sectors respondents are involved in and the level at which they operate.

Type of respondents

At the broadest level, respondents can be divided into two groups, national authorities and general stakeholders. Of the 323 respondents that participated in the questionnaire, 300 were general stakeholders and 23 were national authorities (representing 15 countries). A second version of the questionnaire was made specifically for national authorities, with the only difference being an additional section on how to collaborate with the Commission to implement the NEB Facility at the national level.

This report primarily focuses on the general stakeholders data, as they constitute 93% of the contributions and represent a broader range of respondents. The national authorities input provides country-specific insights that are most useful when considered separately, but the analysis occasionally draws on the distinction between these two separate but parallel sets of responses when there are meaningful overlaps to observe.

Among the general stakeholders, a wide distribution of countries contributed, with the greatest number of respondents coming from Spain, Belgium, Italy, Germany, and France, and 32 countries in total (Figure 1). Respondents also represent a mix of stakeholder categories, with nearly half of all general stakeholders coming from academia (27%) or a public entity (19%) (Figure 2). Non-governmental organisations (NGOs) also account for 15% of contributions. The least represented is the social partner category, with only 2% of respondents. Just over one fourth chose not to answer or selected “other.”

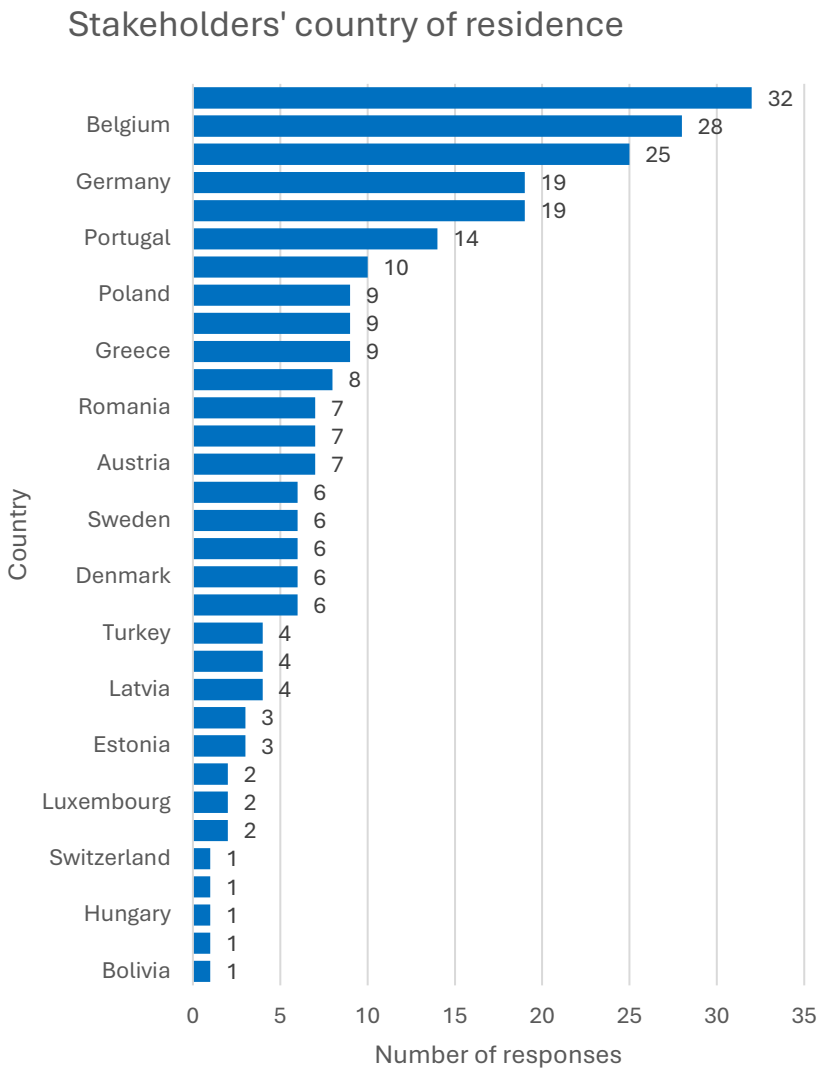

Figure 1.

When asked to indicate the sector(s) that best describe(s) their activities, most respondents classified their field of work as research (33%), architecture (30%), public sector (25%) or design (23%). Additionally, respondents were asked about the scale(s) at which they work, and Figure 2 illustrates that both the national (48%) and EU level (47%) emerge as the most common levels of operation.

Figure 2. Respondents could select multiple options so percentages for each level account for respondents that selected both one or multiple options.

RESULTS OF QUESTIONNAIRE RESPONSES

The analysis mirrors the structure of the questionnaire itself, which is divided into two sections, one for each component of the NEB Facility (*Research & Innovation* and *Roll-out)*.

I. Research & Innovation

The *Research & Innovation* component of NEB Facility roadmap is composed of three focus areas called Destinations— Destination 1: 'Connecting the green transformation, social inclusion and local democracy', Destination 2: 'Circular and regenerative approaches for the built environment', and Destination 3: 'Innovative funding and new business models for the transformation of neighbourhoods.'

Respondents were asked to rank the priority level of each of the three Destinations out of 5, with 1 being "not a priority" and 5 being "extremely high priority." On average, stakeholders consider

Destination 2 to be the greatest priority (4.2), closely followed by Destination 1 (4.1), and finally Destination 3 (3.8), as illustrated by Figure 3.

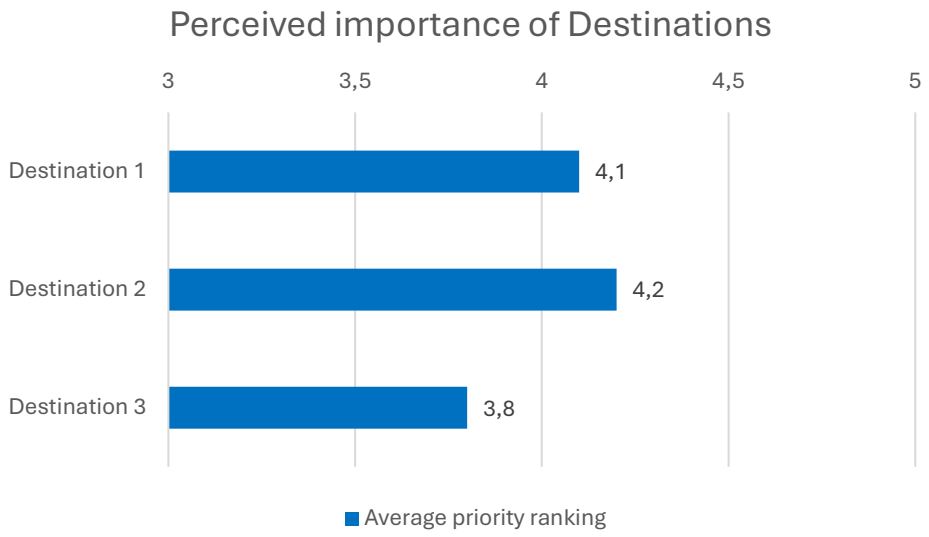

Figure 3. Destination 1 N=269, Destination 2 N=273, Destination 3 N=272

The facility questionnaire envisaged a list of concrete themes for each Destination and posed the same pair of questions under each theme. These questions asked respondents to:

(I) List specific research they deem necessary under each theme (free-response format)

(II) Indicate the type(s) of project that would best define each theme, given the following options:

a. Coordination and support action (CSA)
b. Innovation action (IA)
c. Research and innovation action (RIA)

Destination 1 – ‘Connecting the green transformation, social inclusion and local democracy’

The themes respondents were asked to consider for Destination 1 are listed in the Table 1 below:

#	Destination 1 themes
1	Develop and test innovative methods (e.g. user-centric services and digital platforms) to foster a sense of community in neighbourhoods.
2	Develop and test innovative methods to foster sustainable and inclusive behaviours.
3	New models of organisation and social infrastructure within neighbourhoods to stimulate inclusive and active communities.
4	The use of technologies such as artificial intelligence or virtual reality to involve citizens in decision-making processes.
5	Assessing the impact and transformative potential of participatory practices and alternative governance models.
6	Investigate how design of public spaces and services in neighbourhoods can enhance community involvement and further democratic values.
7	Exploring strategies for meaningful community engagement in the design and construction process.
8	Exploring the role of emotions in creating a sense of belonging and agency, including how they can be the target of policy initiatives.
9	The role of culture and the creative industry in creating citizens’ positive perception about the transformations brought by the green transition.

Table 1.

1.1 Thematic cluster analysis

In response to the first question asking for ideas of necessary research areas, the questionnaire gathered a great number of replies which were synthesized into a set of thematic clusters highlighting the main content patterns of their contributions. These clusters are a product of two-pronged methodology that both extracted general trends with the use of large language models and accounted for outliers via a manual review of the data.

For this Destination, respondents expressed repeated interest in expanding research that focuses on social infrastructure, behavioral insights and community participation, among several other main clusters (which are listed in their entirety in Table 2). The main emerging clusters largely confirm what has been envisioned for the roadmap and can be grouped into four “main work streams” that characterize Destination 1 in the roadmap.

Main clusters from Destination 1	Main work streams
• **Community Engagement and Participation:** emphasis on importance of involving local residents the green transformation, social inclusion, and local democracy. Responses highlight the need for inclusive and participatory approaches to decision-making, involving citizens in the design and implementation of projects, and ensuring that their needs and concerns are taken into account. • **Urban nature and social infrastructure:** testing of new organizational/governance models within neighborhoods, using urban nature, urban nature networks and urban nature-based solutions as a starting point to nourish beneficial social dynamics.	**The social impacts of the built environment**
• **Governance and Decision-Making:** effective governance and decision-making processes supporting green transformation, social inclusion, and local democracy. Responses highlight the need for inclusive, participatory, and transparent decision-making processes. • **Local Resource Mapping and Asset-Based Development:** leveraging digital tools and community engagement to map local resources, needs, and opportunities, and to empower citizens to create their own solutions, with a goal of fostering social inclusion and community development.	**The transformative potential of participatory practices and governance models**
• **Behavioral Insights:** examining the different factors that influence behavior and decision making.	**Ownership and acceptability of change**
• **Social Inclusion and Equity:** This cluster emphasizes the importance of social inclusion and equity in the green transformation, highlighting the necessity to prioritize the needs of marginalized communities and to ensure that their voices are heard.	**Social connections, sense of belonging and local democracy**

Table 2.

The above clusters, however, can be considered in the context of the individual contributions that helped to define them for a more concrete understanding of some of the respondents' priorities. Table 3 displays each of the clusters from Table 2 alongside a corresponding example contribution from respondents. These contributions were not selected based on a value ranking nor as the most representative of all responses. They are merely meant to serve as an example to help concretize the broader cluster, with the understanding that other responses attributed to the same cluster likely differ in content.

Main clusters from Destination 1	Example contributions
Community Engagement and Participation	"*Design of Participatory Urban Services: Research how the design of urban services (e.g., community kiosks, mobile service units, or participatory digital platforms) can support democratic values and community involvement.*"
Urban nature and social infrastructure	"*What is the role of nature (diverse values of urban nature, urban nature quality, access to nature, reconnecting to nature,...) to foster a sense of community in neighbourhoods? Overview and comparison of existing services and platforms, using nature/biodiversity as an entry point (identifying successes, challenges and best practices). Testing and adapting the most promising of these services in real-life cases via a user-centric approach. What do neighbourhood communities actually need? What is the impact of these innovative methods? What are the most effective ways to foster a sense of community in neighbourhoods, with urban nature at its core?*"
Governance and Decision-Making	"*Research AI-Powered Civic Platforms for Participatory Governance: Research how artificial intelligence can be leveraged to create personalized, adaptive platforms for civic participation, enabling citizens to engage with decision-making processes in real-time.*"
Local Resource Mapping and Asset-Based Development	"*Digital tools to map local resources (human and physical), needs and availability connecting people to their local resources and empowering citizens to create their own solutions.- Focus on places/physical spots that gather a wide range of social groups with no interaction.- User-centred design of digital platforms for participatory governance & Data-driven approaches to understanding community engagement.*"
Behavioral Insights	"*Cultural and Emotional Triggers for Sustainable Behavior Change: Investigate the role of cultural identity, values, and emotions (e.g., empathy, pride) in shaping sustainable behaviors. This research could explore how cultural narratives, art, and storytelling can be used to trigger long-term shifts in individual and collective behavior towards sustainability, while ensuring inclusivity and a sense of belonging within diverse communities.*"
Social Inclusion and Equity	"*Strengthening existing (eco)-social infrastructure to address climate issues (how do we multiply, expand and strengthen existing spaces of care and their social arrangements to encompass climate issues? E.g. schools, nurseries, food banks, community gardens, etc that double as cooling rooms during heat waves? That provides climate literacy education? That host a one-stop shop for renovation with circular materials? That welcome neighbourhood assemblies? Participative local neighbourhood governance schemes (neighbourhood assemblies, local stakeholders committee, participatory sustainability budget etc)*"

Table 3.

In addition to the main clusters introduced in Table 2 above, additional clusters, which will be referred to as "secondary clusters," emerged as areas that connect to the main work streams transversally rather than contribute to them directly (see Table 4). For instance, **digitalization and technology** encompasses responses that emphasized the potential of digital tools and platforms to enhance participation, engagement, and decision-making, which is relevant to several work streams simultaneously. At the same time, some respondents cautioned that there are both pros and cons to relying on AI as a means of increasing citizen engagement and others directly warned of its shortcomings.

The clusters **Cultural and creative industries** and **Emotions in urban spaces** are similarly defined by responses that are divided in their support for or questioning of the themes under discussion. A review of the responses grouped under these clusters reveals that some of the content proposed under Destination 1 is thought to fit better at a cross-cutting horizontal level or perhaps is not necessary to the R&I component at all. This finding prompts further review and careful consideration of if and how to integrate them into the roadmap.

Secondary clusters from Destination 1	Example contributions
Digitalization and technology: The role of digitalization and technology in supporting the green transformation, social inclusion, and local democracy. Responses highlight the potential of digital tools and platforms to enhance participation, engagement, and decision-making.	*"AI for Data-Driven Public Consultation [;] Virtual Reality for Urban Planning and Citizen Engagement [;] AI for Predictive Urban Planning Envisioned [;] Data-Driven Public Sentiment Analysis for Policy Decisions"* *"We do not think Artificial [Intelligence] is a main priority for building fruitful learning-action of local communities into Climate adaptation and circular renovation of neighbourhoods, villages. If AI research should be supported by the NEBB FACILITY recurent funding, this should be for simplifying the administration processes in a more human centred way, becoming more adaptative to the diversity of situations, creating simple sustainable conditions for peer to peer involvement and democratic process related to public co-invesment."*
Cultural and creative industries: Responses emphasize the importance of leveraging cultural narratives, creative industries, and artistic expressions to raise awareness and promote positive change.	*"i) creation of new cultural codes around green transition (community, shared values, regeneration, climate optimism, belonging, sharing); ii) understanding the factors of success in creative industry interventions in different cultural context (exploring local v global effects of creative interventions)"*

Emotions in urban spaces and sustainable community development: This cluster examines the role of urban spaces and emotions in fostering a sense of belonging and sustainable community development.	"*Emotions are quite tricky. I don't know if you have sound literature on that, but I would suggest to explore more the role of [psychology] and environment.*"

Table 4.

1.2 Project type analysis

General stakeholders and national authorities tend to answer differently when it comes to deciding what type of project (CSA, IA or RIA) each theme should be. While stakeholder support is more evenly divided across each option with minimal differences in percentages, national authority support is largely consolidated in one of the categories—research and innovation actions (Table 5). Not only is national authorities support for RIA consistently higher than that for the other categories, but it is also consistently higher than stakeholder support for RIA (Figure 4).

To illustrate this point, only 46% of stakeholders believe that theme 1 should be an RIA, as compared to an only slightly larger 51% of stakeholders in support of an IA and 52% in support of a CSA for the same theme. Meanwhile, a 74% majority of national authorities believe that theme 1 should be an RIA project (Table 5). While this difference may truly reflect a greater degree of consensus among national authorities to invest at the fundamental research level, it could also be due to the disparity in sample sizes, given that the number of national authorities is significantly smaller than that of general stakeholders. Patterns or effects detected from smaller samples with lower statistical power are less likely to be accurate[1]. With these caveats in mind, a broad pattern across general stakeholders and national authorities suggests a divide in preference for investing in implementation versus fundamental research across smaller local actors and larger public authorities respectively.

[1] Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: why small sample size undermines the reliability of neuroscience. *Nature reviews neuroscience*, *14*(5), 365-376.

Destination 1 themes *Connecting the green transformation, social inclusion, and local democracy*		% Support for project type[1] : General stakeholders	% Support for project type[1] : National Authorities
1	Develop and test innovative methods (e.g. user-centric services and digital platforms) to **foster a sense of community** in neighbourhoods	CSA: **52%** IA: **51%** RIA: **46%**	CSA: **17%** IA: **52%** RIA: **74%**
2	Develop and test innovative methods to foster **sustainable and inclusive behaviours**	CSA: **46%** IA: **54%** RIA: **50%**	CSA: **17%** IA: **48%** RIA: **65%**
3	New **models of organisation and social infrastructure** within neighbourhoods to stimulate inclusive and active communities	CSA: **60%** IA: **52%** RIA: **45%**	CSA: **43%** IA: **48%** RIA: **57%**
4	The use of **technologies such as artificial intelligence** or virtual reality to involve citizens in decision-making processes	CSA: **37%** IA: **51%** RIA: **58%**	CSA: **26%** IA: **39%** RIA: **74%**
5	Assessing the impact and transformative potential of **participatory practices** and **alternative governance models**	CSA: **62%** IA: **37%** RIA: **49%**	CSA: **43%** IA: **39%** RIA: **65%**
6	Investigate how **design of public spaces** and services in neighbourhoods can enhance community involvement and further democratic values	CSA: **53%** IA: **50%** RIA: **57%**	CSA: **43%** IA: **39%** RIA: **70%**
7	Exploring strategies for **meaningful community engagement** in the **design** and construction process	CSA: **56%** IA: **56%** RIA: **44%**	CSA: **43%** IA: **43%** RIA: **65%**
8	Exploring the **role of emotions** in creating a sense of **belonging and agency**, including how they can be the target of policy initiatives	CSA: **46%** IA: **38%** RIA: **69%**	CSA: **17%** IA: **35%** RIA: **78%**
9	The role of **culture and the creative industry** in creating citizens' positive perception about the transformations brought by the green transition	CSA: **59%** IA: **51%** RIA: **54%**	CSA: **30%** IA: **48%** RIA: **61%**

Table 5.

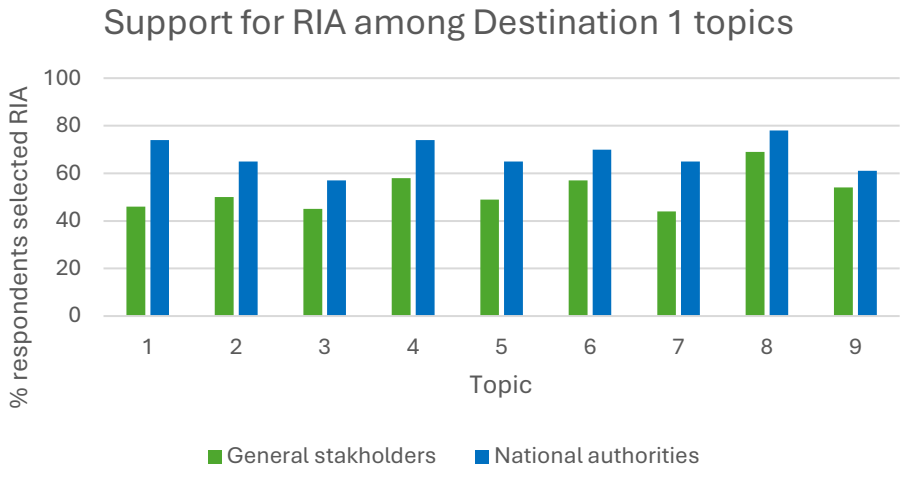

Figure 4.

Destination 2 – 'Circular and regenerative approaches for the built environment'

The themes respondents were asked to consider for Destination 2 are listed in the Table 6 below:

#	Destination 2 themes
1	Designs for modular, adaptable and multi-purpose buildings and public spaces.
2	Innovative bio-based regenerative construction materials for structural and exterior architecture.
3	Better collection, structuring, processing and use of data to increase circularity in buildings.
4	Innovative use of by-products and secondary bio-based materials (including re-claimed wood).
5	Social, aesthetic, and economic impacts of carbon-sequestering materials in the built environment.
6	Artificial intelligence for making the regenerative construction more affordable.
7	Innovative methods to facilitate collaboration among architects, designers, engineers, artists and other stakeholders.
8	Regenerative designs for buildings and public spaces.
9	Exploring synergies between art, creative industries and culture and the built environment.

Table 6.

2.1 Thematic cluster analysis

Responses to the first question asking for necessary research areas were synthesized into a set of thematic clusters highlighting the main content patterns. For this Destination, for instance, respondents expressed repeated interest in expanding research that focuses on the **role of materials** and **regenerative approaches in design**, among several other main clusters (which are listed in their entirety in Table 7). The main emerging clusters largely confirm what has been envisioned for the roadmap and can be grouped into four "main work streams" that characterize Destination 2 in the roadmap.

Main clusters from Destination 2	Main work streams
• **Role of Materials in Circular and Regenerative Approaches:** This cluster focuses on the significance of materials in circular and regenerative approaches. Responses discuss the potential of bio-based materials, recyclable materials, and innovative materials in reducing waste and promoting sustainability. • **AI for material design and post-usage potential:** This cluster highlights the need for further research and comprehensive data to better understand the lifespan of building materials and products, and how this lifespan impacts the overall sustainability performance of the building.	**Innovative materials**
• **Integrating Circular and Regenerative Approaches in Design:** This cluster highlights the importance of incorporating circular and regenerative design principles into the built environment. Responses emphasize the need for a holistic approach that considers social, environmental, and economic aspects. • **Circular Economy and Waste Reduction:** This cluster focuses on the potential of circular economy principles in reducing waste and promoting sustainability in the built environment. Responses discuss the importance of waste reduction, recycling, and upcycling. • **Accessibility and adaptability:** Research topics focus on accessibility standards for construction, user-centric approach for building adaptability, and design for reusing, repurposing, and repair with focus on longevity and efficiency.	**Regenerative and restorative approaches in design (adaptive reuse, circularity, resource optimisation, impact on well-being)**
• **Digital Platforms for Circularity Data Processing and Sharing:** This cluster emphasizes the creation and implementation of digital platforms for processing and utilizing circularity data in building projects.	**Standardization and certification**
• **Environmental Impact and Life Cycle Assessments:** This cluster focuses on the environmental impact of bio-based materials and circular construction, including life cycle assessments and carbon footprint reduction.	**Impact assessment**

Table 7.

In order to grasp each of the above clusters more concretely, Table 8 displays each of the clusters from Table 7 alongside a corresponding example contribution from respondents.

Main clusters from Destination 2	Example contributions
Role of Materials in Circular and Regenerative Approaches	*"There is therefore a significant and urgent need for research and development of bio-based adhesives for structural applications, yet this domain is mostly unexplored"*
AI for material design and post-usage potential	*"How chemically treated wood can be most effectively reused or recycled"*
Integrating Circular and Regenerative Approaches in Design	*"sustainable modular construction for flexibility and resource efficiency Objective: To develop a European standard for modular buildings that enable flexible use and minimise the ecological footprint. Description: This approach promotes the use of recyclable and reusable materials in construction to create adaptable buildings that can be extended, reduced or remodelled as required. The modules should be usable in both the residential and public sectors and be adaptable to different climatic and cultural conditions. The focus is also on energy-efficient and low-carbon production processes."*
Circular Economy and Waste Reduction	*"AI for Predictive Maintenance in Regenerative Buildings. Objective: Utilize AI for predictive maintenance of regenerative building materials and systems to enhance longevity and reduce costs"*
Accessibility and adaptability	*"Explore the integration of bio-based materials in modular construction systems to enhance sustainability and adaptability."*
Digital Platforms for Circularity Data Processing and Sharing	*"EU frameworks, standards and regulations need to incorporate a harmonized approach regarding the accounting of biogenic carbon flows in reused and recycled products... Currently, there is no widely agreed methodology for transferring biogenic carbon flows when products are reused and recycled; thus, LCA assessments fail to reflect the full climate benefits of extending the life of that biomass, which helps to disincentivize reused and recycled bio-based materials"*
Environmental Impact and Life Cycle Assessments	*"Conduct comprehensive life cycle analyses to compare the environmental impacts of bio-based and conventional construction materials"*

Table 8.

In addition to the main clusters introduced in Table 7 above, "secondary clusters" emerged as areas that touch upon several of the main work streams at once rather than contributing to them directly (see Table 9). For instance, **Aesthetics and cultural integration** encompasses responses that speak to the value of design aesthetics as they relate to material design, construction approaches, regenerative principles and well-being, making it a transversal cluster rather than a focused work stream. **Education, knowledge exchange and skilling**, on the other hand, is a cluster that contains mixed perspectives on whether skilling belongs within the R&I component, or would be better addressed as an implementation priority.

Secondary clusters from Destination 2	Example contributions
Education, knowledge exchange and skilling: education, knowledge sharing, and collaboration among stakeholders in the construction sector.	"*I think there is enough knowledge and we are lacking of the will to implement it and develop it by experimental practice*"
Aesthetics and cultural integration: Exploring the aesthetic potential and design implications of using innovative materials and approaches in architecture	"*Examining the role of public art installations in promoting a sense of security and belonging, with CPTED principles applied to maximize natural surveillance and territoriality*"

Table 9.

2.2 Project type analysis

On the whole, the general stakeholders group and the national authorities group tend to agree on the type of project (CSA, IA or RIA) each topic in Destination 2 should be. Most often, both groups agree that the topics should be RIAs, but for topic 1 support is greatest for IA and for topic 7 there is greatest support for CSA (Table 10).

In contrast, the general stakeholders and national authorities groups differ in the type of project they foresee for topics 8 and 9 (Table 10). That said, topic 9 on "exploring synergies between art, creative industries and culture and the built environment" is one of the few topics for which RIA support is the lowest across both groups—with 50% support among stakeholders and 48% support among national authorities—relative to CSA and IA support for the same topic (Figure 5; Table 10). This result stands out given the overwhelming tendency of national authorities to collectively favor the RIA category for most other topics. That said, respondents clearly still value art and culture as a crucial dimension to consider in the revitalisation of neighborhoods, as demonstrated by numerous contributions echoing the sentiment that it is "quite [a] pivotal subject." These two patterns taken together suggest that respondents might favor integrating the

creative and cultural dimension at a horizontal level where they can touch upon all of the main work streams simultaneously rather than establishing a single dedicated work stream.

	Destination 2 themes *Circular and regenerative approaches for the built environment*	**% Support for project type[1] :** **General stakeholders**	 **National Authorities**
1	Designs for **modular, adaptable and multi-purpose buildings** and public spaces	CSA: **40**% IA: **67**% RIA: **57**%	CSA: **14**% IA: **68**% RIA: **55**%
2	Innovative **bio-based regenerative construction materials** for structural and exterior architecture	CSA: **30**% IA: **59**% RIA: **73**%	CSA: **15**% IA: **40**% RIA: **85**%
3	Better collection, structuring, **processing and use of data** to increase circularity in buildings	CSA: **49**% IA: **49**% RIA: **59**%	CSA: **38**% IA: **48**% RIA: **62**%
4	**Innovative use of by-products** and secondary bio-based materials (including re-claimed wood)	CSA: **40**% IA: **60**% RIA: **65**%	CSA: **15**% IA: **50**% RIA: **60**%
5	Social, aesthetic, and economic **impacts of carbon-sequestering materials** in the built environment	CSA: **43**% IA: **52**% RIA: **67**%	CSA: **20**% IA: **35**% RIA: **75**%
6	**Artificial intelligence** for making the regenerative construction more affordable	CSA: **32**% IA: **49**% RIA: **69**%	CSA: **16**% IA: **26**% RIA: **79**%
7	Innovative methods to **facilitate collaboration** among architects, designers, engineers, artists and other stakeholders	CSA: **66**% IA: **48**% RIA: **46**%	CSA: **68**% IA: **23**% RIA: **41**%
8	**Regenerative designs** for buildings and public spaces	CSA: **46**% IA: **61**% RIA: **55**%	CSA: **5**% IA: **55**% RIA: **65**%
9	Exploring synergies between **art, creative industries and culture** and the built environment	CSA: **64**% IA: **50**% RIA: **50**%	CSA: **43**% IA: **57**% RIA: **48**%

Table 10. [1] Respondents could select multiple options so percentages for each project type account for respondents that selected both one or multiple options.

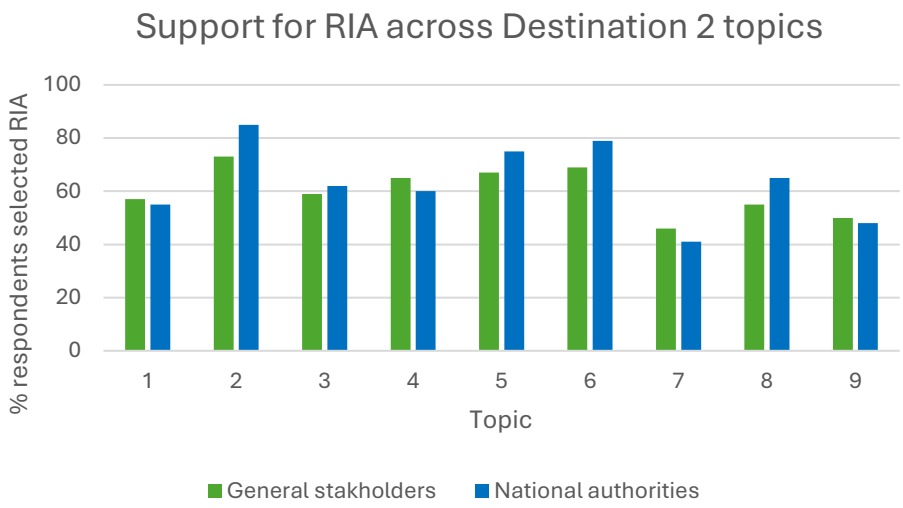

Figure 5.

Destination 3 – 'Innovative funding and new business models for the transformation of neighbourhoods'

The themes respondents were asked to consider for Destination 3 are listed in the Table 11 below:

#	Destination 3 themes
1	Market dynamics, incentives, risks, and barriers affecting the adoption of more circular and sustainable building practices.
2	New strategies to make sustainable and inclusive built environment projects both attractive and affordable for investors.
3	Understanding what non-economic factors trigger investors to cover costs associated with sustainable, regenerative and inclusive construction projects and to overcome the perceived risks.
4	Innovative supply chains that transform waste materials into high-quality secondary construction materials and products.
5	Measuring the social and economic value of aesthetically pleasing, inclusive and sustainable built environment projects.
6	Innovative policy and regulatory frameworks to support and incentivize sustainable, circular and regenerative built environment.
7	Standards, metrics and indicators to measure the impact of circular and regenerative approaches.
8	Economic models for investment in regenerative built environment projects that embed inclusion and aesthetics.
9	New business models that incorporate circular economy principles, life cycle thinking, and sustainable practices.

10	Development of the philanthropic capital market in Europe.
11	Assess the skills investment needs as well as job creation potential for building renovation, repurposing, repair and regenerative construction methods.
12	Innovative models for strengthening education and skilling in SMEs.

Table 11.

3.1 Thematic cluster analysis

In Destination 3, respondents shared interest in expanding research that focuses on **waste reduction in the circular economy**, **incentivising sustainable developments** and **behavioral research on consumers and investors**, among several other equally strong clusters (which are listed in their entirety in Table 12). The main emerging clusters largely confirm what has been envisioned for the roadmap and can be grouped into four "main work streams" that characterize Destination 3 in the roadmap.

Main clusters from Destination 3	Main work streams
• Considering aesthetics and inclusivity in sustainable and regenerative construction	**New business models integrating sustainability, inclusion and beauty**
• Circular Economy and Waste Reduction	**innovative circular supply chains**
• Incentivizing Sustainable Investments • Policy and Regulation • Behavioral studies from the perspective of consumers and investors	**market dynamics and conditions**
• Public-private partnerships	**innovative funding models**

Table 12.

In order to grasp each of the above clusters more concretely, Table 13 displays each of the clusters from Table 11 alongside a corresponding example contribution from respondents.

Main clusters from Destination 3	Example contributions
Considering aesthetics and inclusivity in sustainable and regenerative construction	"*Developing metrics for aesthetic and social value in urban design, social impact assessments for inclusive built environments*"
Circular Economy and Waste Reduction	**"***Investigating how BIM and CPTED-driven designs can overcome market barriers by demonstrating economic benefits of safe, circular building practices [...]***"**
Incentivizing Sustainable Investments	*"Increasing understanding, accepted models, and awareness of community led development, namely Community Land Trusts (CLT) will help identify clear issues associated with the market dynamics and costs associated with conventional development, especially in the case of housing, that act as a barriers to more circular and sustainable building practices. Additionally, how to best align investment practices and attract sufficient capital is necessary for CLT pioneers and frontrunners to establish and subsequently scale-up community led development in their region."*
Policy and Regulation	*"Coordination with policy, regulatory frameworks and affection on technical codes. Most of all, there is a need to develop on all scales, building and non-built area, in urban areas, in rural areas, in agriculture area and in nature a strong and flexible strategic vision on short and long term to reach as quick as possible (2050?) a global carbon net zero situation. More research is needed into market dynamics and large industries which supply materials and components, including by-products, for the construction in built environment. Research needs to challenge tried and tested business models and explore innovative concepts of co-creation and co-ownership of the design and procurement process."*
Behavioral studies from the perspective of consumers and investors	*"Analyze the economic incentives and policy measures that can promote the adoption of circular construction practices"*
Public-private partnerships	*"Develop economic models to quantify the value of aesthetic and inclusive design elements in regenerative built environment projects."*

Table 13.

In addition to the main clusters introduced in Table 11 above, a singular "secondary cluster" emerged as an area that is highly interlinked with several of the main clusters and work streams (see Table 14). This cluster on **skills & education** gathers numerous responses expressing, for instance, the importance of equipping professionals with the skills and knowledge required to innovate supply chains that transform waste into secondary construction materials. Respondents also call for training on flexible learning paths, universal design approaches and digital learning platforms. However, the wording of responses under this cluster tend to describe scaling and coordination actions rather than research, which calls into question where it falls between R&I and Roll-out.

Secondary cluster from Destination 3	Example contribution
Skills and Education: Education and training programs to support the development of skills needed for sustainable and regenerative construction practices.	*"Develop educational programs and resources for SMEs on how to implement BIM and CPTED in their projects, focusing on enhancing safety, inclusivity, and sustainability in their designs. These models should facilitate access to cutting-edge training for small-scale construction and urban planning companies"*

Table 14.

3.2 Project type analysis

As a group, general stakeholders find that a majority (seven) of the twelve topics should be classified as CSAs, whereas national authorities largely prefer RIAs, consistent with their response pattern for other Destinations (Table 15). That said, there are a few exceptions where national authorities as a group demonstrate greater relative support for the CSA category (themes 10 and 12), in consensus with the general stakeholders group. This overlap suggests that developing philanthropic capital (theme 10) and strengthening education and skilling (theme 12) are collectively thought to be less of a research priority. On the topic of skilling, some respondents also affirmed in their free-response contributions that "it is hard to find the Research and Innovation component on this issue. It should be considered to be supported out of the R&I facility. Skilling and education may be considered as cross-cutting most of the topics, but not necessarily to have a separate topic." Due to a number of similar responses, this theme does not have a dedicated R&I work stream in the roadmap.

Destination 3 themes *Innovative funding and new business models for the built environment*		**% Support for project type[1] :** **General stakeholders**	**National Authorities**
1	**Market dynamics, incentives, risks**, and barriers affecting the adoption of more circular and sustainable building practices	CSA: **60**% IA: **43**% RIA: **54**%	CSA: **38**% IA: **29**% RIA: **67**%
2	New strategies to make sustainable and inclusive built environment projects both **attractive and affordable for investors**	CSA: **59**% IA: **55**% RIA: **49**%	CSA: **36**% IA: **36**% RIA: **45**%
3	Understanding what **non-economic factors** trigger investors to cover costs associated with sustainable, regenerative and inclusive construction projects and to overcome the perceived risks	CSA: **47**% IA: **38**% RIA: **67**%	CSA: **29**% IA: **19**% RIA: **71**%
4	Innovative **supply chains that transform waste** materials into high-quality secondary construction materials and products	CSA: **39**% IA: **63**% RIA: **59**%	CSA: **15**% IA: **60**% RIA: **60**%
5	Measuring the social and **economic value of aesthetically pleasing**, inclusive and sustainable built environment projects	CSA: **49**% IA: **43**% RIA: **64**%	CSA: **14**% IA: **29**% RIA: **81**%
6	Innovative **policy and regulatory frameworks to support** and incentivize sustainable, circular and regenerative built environment	CSA: **72**% IA: **42**% RIA: **39**%	CSA: **43**% IA: **48**% RIA: **38**%
7	**Standards, metrics and indicators** to measure the impact of circular and regenerative approaches	CSA: **57**% IA: **40**% RIA: **54**%	CSA: **29**% IA: **33**% RIA: **67**%
8	**Economic models for investment** in regenerative built environment projects that embed inclusion and aesthetics	CSA: **53**% IA: **51**% RIA: **55**%	CSA: **11**% IA: **37**% RIA: **54**%
9	New business **models that incorporate circular economy principles**, life cycle thinking, and sustainable practices	CSA: **54**% IA: **59**% RIA: **45**%	CSA: **32**% IA: **47**% RIA: **53**%
10	Development of the **philanthropic capital market** in Europe	CSA: **70**% IA: **37**% RIA: **34**%	CSA: **67**% IA: **11**% RIA: **37**%
11	Assess the **skills** investment needs as well as **job creation potential** for building renovation, repurposing, repair and regenerative construction methods	CSA: **60**% IA: **44**% RIA: **54**%	CSA: **30**% IA: **20**% RIA: **60**%
12	Innovative models for strengthening **education and skilling in SMEs**	CSA: **59**% IA: **58**% RIA: **41**%	CSA: **65**% IA: **59**% RIA: **29**%

Table 15. [1] Respondents could select multiple options so percentages for each project type account for respondents that selected both one or multiple options.

II. Roll-out

The *Roll-out* section of the questionnaire is based on the 16 themes that comprised Roll-out component during the questionnaire design phase. In this section, respondents were primarily asked two types of questions per theme. Firstly, respondents indicated whether each theme should be a focus of the Roll-out component, choosing between "yes" "no" or "I don't know". In follow up, respondents were asked to list in a free-response format specific actions they believe should be financed under the given theme.

By reordering the themes according to the level of support they received (Table 16 and Table 17), we can focus on the overarching trends where support lies more broadly. For instance, we observe that respondents highly prioritise expanding support for innovation on the ground (themes 2 and 1). They also favor the fostering of solutions for community-based transformation (themes 4, 11, 7, 3 and 6) and addressing the conditions that enable change-making in the first place (themes 15, 8 and 9). While themes listed in Table 17 received slightly less support, notably, all themes were deemed worthy as a Roll-out area by a majority of respondents.

Most supported focus areas:

Focus areas	% in support[1]
A sustainable, circular and affordable built environment	86
Renovation and repurposing of the built environment (building and spaces)	84
Regeneration of neighbourhoods in co-creation with communities	75
Accessible and inclusive buildings and public spaces	75
Protection, preservation, and re-purposing of local cultural heritage	72
Integration of renewable energy sources and improved energy efficiency in the built environment in aesthetically pleasant way	71
Resilient, accessible and sustainable local and natural cultural heritage	71
Innovative funding for neighbourhood regeneration and local cultural heritage projects	68
Skilling and re-skilling of workers in the construction ecosystem for the sustainable transformation of neighbourhoods using the NEB Academy hubs	67
New approaches to education and skilling	65

Table 16. [1] Percentage is a weighted calculation of responses where "yes" = 1, "no" = -1 and "I don't know" = 0.

Less supported focus areas:

Focus areas	% in support[1]
Promoting social inclusion through the revitalisation of neighbourhoods in coastal and rural areas	65
Networks for exchanges of knowledge and best practices among neighbourhoods	63
Public-private cooperation for the regeneration of neighbourhoods	62
Promotion of social entrepreneurship for the revitalisation of neighbourhoods	59
Community of practice on NEB	57
Mobilising investment in the NEB at international level	53

Table 17. [1] Percentage is a weighted calculation of responses where "yes" = 1, "no" = -1 and "I don't know" = 0.

III. Implementing the NEB Facility (National Authorities only)

This section asked national authorities about how they envision the implementation of the Facility specifically in their country, on the key actors that would be involved, the funding that could be mobilised and how to ensure synergies between the R&I and Roll-out components, among other questions. Response rate was slightly lower for this section, with contributions ranging from N=18 to N=14 as well as being highly country specific.

That said, certain notable patterns emerged. When asked about the measures that would ensure a smooth implementation of the NEB Facility in their countries, several national authorities proposed developing tools that (1) help to build knowledge and understanding around the Facility, (2) provide guidance on how to identify key stakeholders, roles and actions, and (3) aid in navigating an action plan, once conceived.

On the topic of synergies between R&I and Roll-out, national authorities converged on the importance of establishing structures that facilitate and ensure the collaboration of both policy NCPs and R&I NCPs. Others stated that the European Commission has a role to guiding and supporting NCPs in their efforts to bridge the two components, with one respondent suggesting the Commission "develop tailored training sessions, workshops, or toolkits that address Horizon's key requirements, opportunities, and integration with the NEB principles."

In closing, national authorities more broadly emphasized the importance of preserving and working with the existing built environment rather than investing in new construction, as well as more directly involving the SSH disciplines (i.e. psychology, sociology, communication) in both research and implementation.