RE-DWELL
MSCA-ITN

Vocabulary for transdisciplinary research in affordable and sustainable housing

Deliverable 4.4

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RE-DWELL

Deliverable 4.4. Vocabulary for transdisciplinary research in affordable and sustainable housing

Version 1

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Executive summary

The **RE-DWELL vocabulary**, along with the **case library** (Deliverable 4.5) are essential tools for facilitating knowledge exchange among researchers within the RE-DWELL network. These resources aim to promote inter- and transdisciplinary collaboration in addressing the challenges of affordable and sustainable housing. Integrated on the RE-DWELL website (see Deliverables 5.2-5.7), they are publicly accessible, allowing a wide range of stakeholders to benefit from their content.

Researchers often approach complex issues like affordable and sustainable housing from their own disciplinary perspectives, which can lead to overlooking the specialized terminology, priorities, and methodologies of other fields. This lack of awareness can hinder collaboration and impede the construction of inter/transdisciplinary knowledge. The RE-DWELL vocabulary serves to bridge disciplinary boundaries among researchers—spanning architecture, urban planning, economics, social sciences, and sustainable management—helping them develop a comprehensive understanding of contemporary housing challenges.

The RE-DWELL vocabulary serves two main purposes:

1. **Summarizing research findings**: Early Stage Researchers (ESRs) distil their individual research findings into concepts that capture essential ideas related to affordable and sustainable housing.
2. **Sharing concepts**: The vocabulary facilitates the sharing of concepts among researchers, highlighting their relevance for the common research and encouraging cross-disciplinary communication.

As a repository of shared knowledge, the RE-DWELL vocabulary fosters a culture of collective learning among network members. Participants can access and engage with materials produced by their peers, broadening their understanding of various topics. It has been used as a learning resource in educational settings during network activities, such as peer reviewing, clustering concepts, and creating concept maps

The collaborative effort of constructing a shared vocabulary enhances individual research and fosters informed dialogue about critical issues that span different research areas. Moreover, it has enabled researchers to develop competencies in systems thinking, interpersonal communication, and knowledge co-creation within an interdisciplinary framework.

The vocabulary is implemented as an online tool developed by the ARC research group at La Salle School of Architecture. Its structure includes concept names and definitions, associated research areas, and links to related terms and cases. A total of 80 vocabulary entries (see Annex 1 - Concepts) have been created over the three-year project duration by ESRs, either individually or in collaboration with peers and supervisors.

In conclusion, the RE-DWELL vocabulary has proven to be an effective tool for developing essential research skills and fostering interdisciplinary collaboration. The content will remain available online, ensuring it continues to serve as a valuable resource for future learners addressing affordable and sustainable housing from a transdisciplinary perspective.

1. Introduction

The RE-DWELL vocabulary (Figure 1), together with the case library (Deliverable 4.5), serves as one of the key tools for facilitating knowledge exchange among researchers within the network. Both tools aim to foster interdisciplinarity by integrating the diverse perspectives and knowledge of researchers from various backgrounds, all focused on addressing the challenges of affordable and sustainable housing. These two tools are integrated on the RE-DWELL website, and their contents are available to the public (see Deliverables 5.2-5.5-5.6 and 5-7).

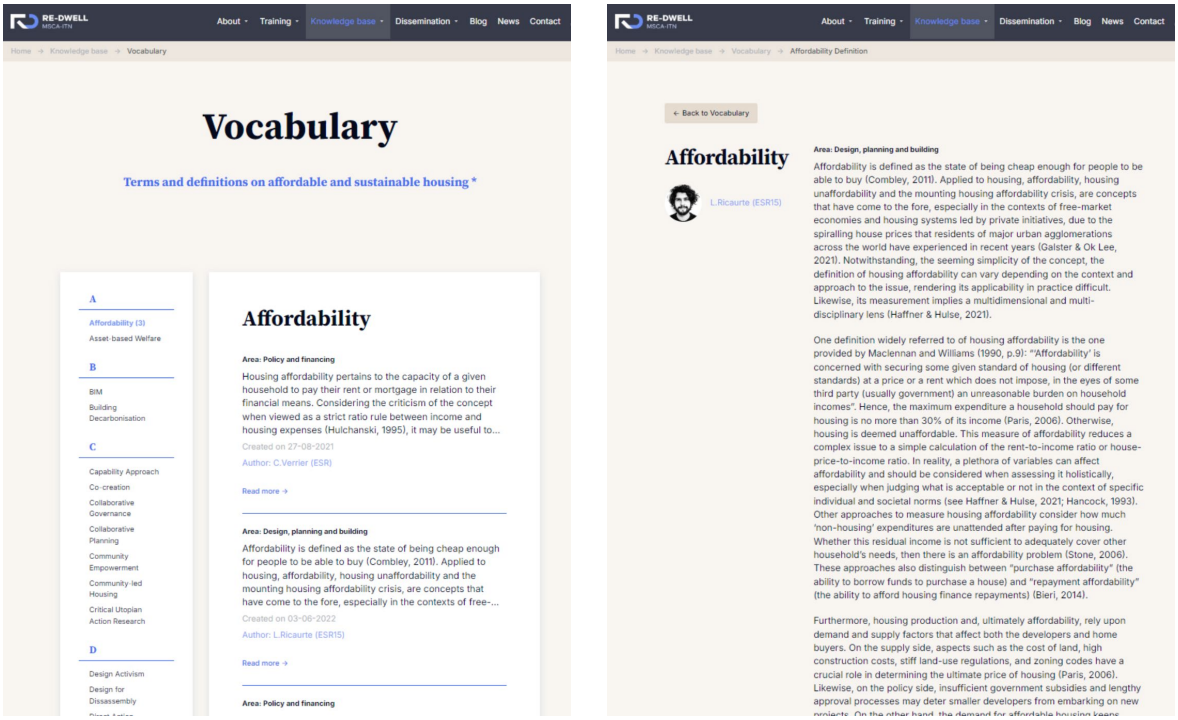

Figure 1. RE-DWELL on-line Vocabulary

In interdisciplinary research, where experts from different fields collaborate, creating a shared terminology is essential for effective communication and for gaining a comprehensive understanding of a multifaceted research area. The purpose of the RE-DWELL vocabulary is to foster the creation of a shared language. It serves as a common framework, ensuring that early-stage researchers (ESRs) from diverse backgrounds—such as architecture, urban planning, economics, social sciences, and sustainable management—can communicate effectively and understand each other's perspectives.

When researchers approach a complex issue like affordable and sustainable housing, they do so from the viewpoint of their own field of expertise. For instance, an architect may focus on the design and materials used in housing design and construction, while an economist might emphasise financial models or market dynamics. Each discipline not only has its own specialised terms, but also its own set of priorities, methods, and theoretical frameworks, which might be unknown to researchers from other backgrounds. This lack of awareness of the knowledge from other fields represents an creates barriers to collaboration.

To overcome this knowledge and linguistic gaps, creating a shared vocabulary becomes crucial. This vocabulary is not just about translating jargon but about building a mutual understanding of the key issues on affordable and sustainable housing procurement identified from multiple disciplinary viewpoints. By collaboratively identifying and defining core concepts from their respective fields, researchers can better understand each other's perspectives. This fosters more meaningful dialogue and allows for a more comprehensive analysis of the problem at hand.

To overcome knowledge and linguistic gaps, creating a shared vocabulary is essential to build mutual understanding of the key issues in affordable and sustainable housing procurement from multiple disciplinary viewpoints. By collaboratively identifying and defining core concepts within their respective fields, researchers can gain a deeper understanding of each other's perspectives. This fosters meaningful dialogue and enables a more comprehensive analysis of the problem.

2. Objectives and process

In the context of the transdisciplinary learning and research environment created in RE-DWELL (see Deliverable 4.6), the vocabulary developed by Early Stage Researchers (ESRs) served two key purposes:

1. **To summarize the main findings of individual research lines**: ESRs, while working on their PhD thesis, engaged in focused research within a specific direction. The vocabulary allowed them to distil their findings into concise concepts, capturing the essential ideas and results of their work. These concepts served as summaries of the critical insights gained in their respective research areas, expressed in a language that could be easily understood by fellow researchers.
2. **To share concepts with peers, highlighting their relevance to the shared research issue**: Communication across disciplines requires making implicit knowledge and assumptions explicit. This involves not only describing a concept, but also explaining its relevance in the context of affordable and sustainable housing and the connections to other areas of research.

3. Implementation

The vocabulary was implemented as an online tool integrated into the project website. It was designed and developed by the ARC research group from the coordinating team of the School

of Architecture La Salle, which had already experience with developing online vocabularies for housing studies carried out in previous EU projects[1].

The vocabulary structure is as follows (Figure 2):

- **Concept**: The unique name assigned to each term.
- **Definitions**: Multiple descriptions of a term, each associated with one of the three RE-DWELL research areas.

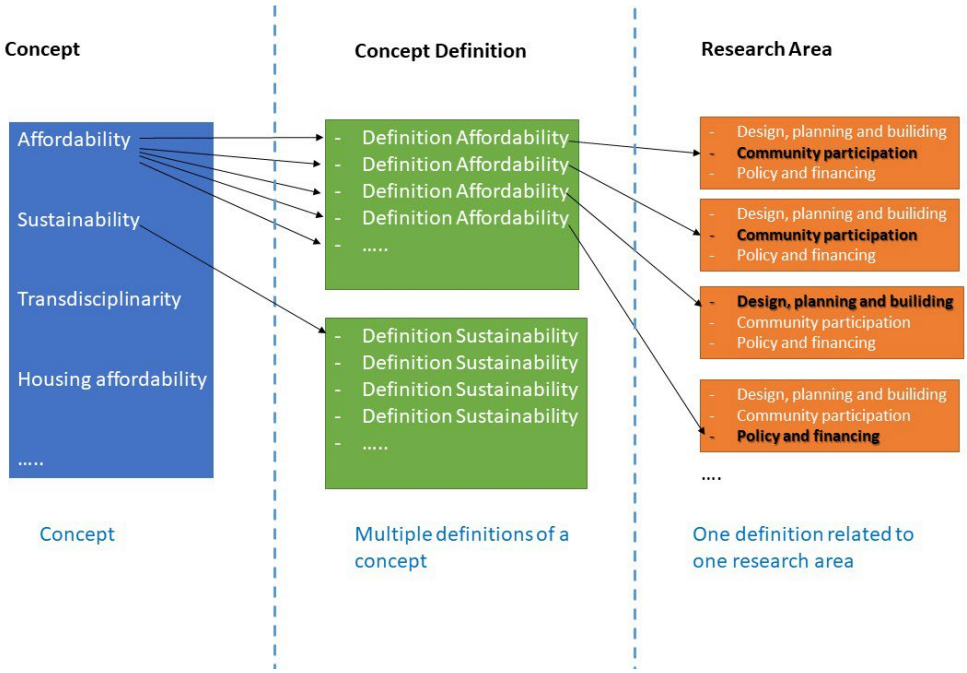

Figure 2. Structure of the vocabulary: concepts, definitions and research areas

The description of a vocabulary entry includes the following fields:

- Description
- Reference sources
- Research area

[1] Madrazo, L., & Massey, J. (2005). HOUSING@ 21. EU. A web-based pedagogic platform for the study of housing in Europe. In *Proceedings of the 23nd eCAADe Conference*. 23nd eCAADe Conference, Lisbon, 21-25 of Septembre 2005.

- Related concepts
- Related cases
- Additional information (files, images, videos)

The entries in the vocabulary can be either single-authored or collaboratively written by network members, including ESRs, supervisors, and partner organizations. They are managed in the back office of the website (Figure 3). Guidelines and recommendations to describe the terms were provided to researchers (see Annex 2 - Guidelines).

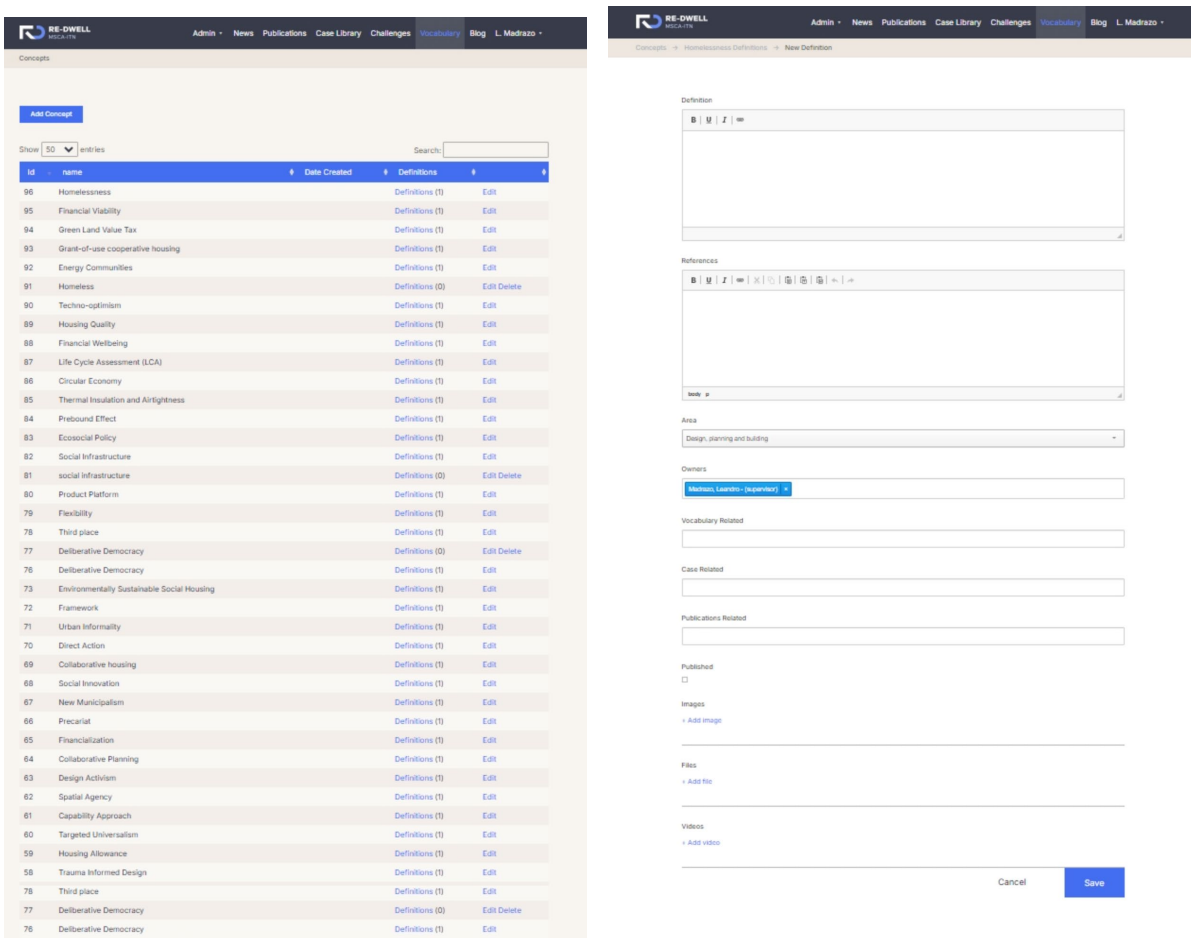

Figure 3. RE-DWELL website back office: Vocabulary

The information entered in the back-office is displayed on the public website (Figure 4). Additionally, it includes a relational map that visually represents the connections between the reference term and other concepts, cases, publications, and blog posts (Figure 5). This map allows users to navigate the website's content in an associative manner, exploring the interconnections between various elements.

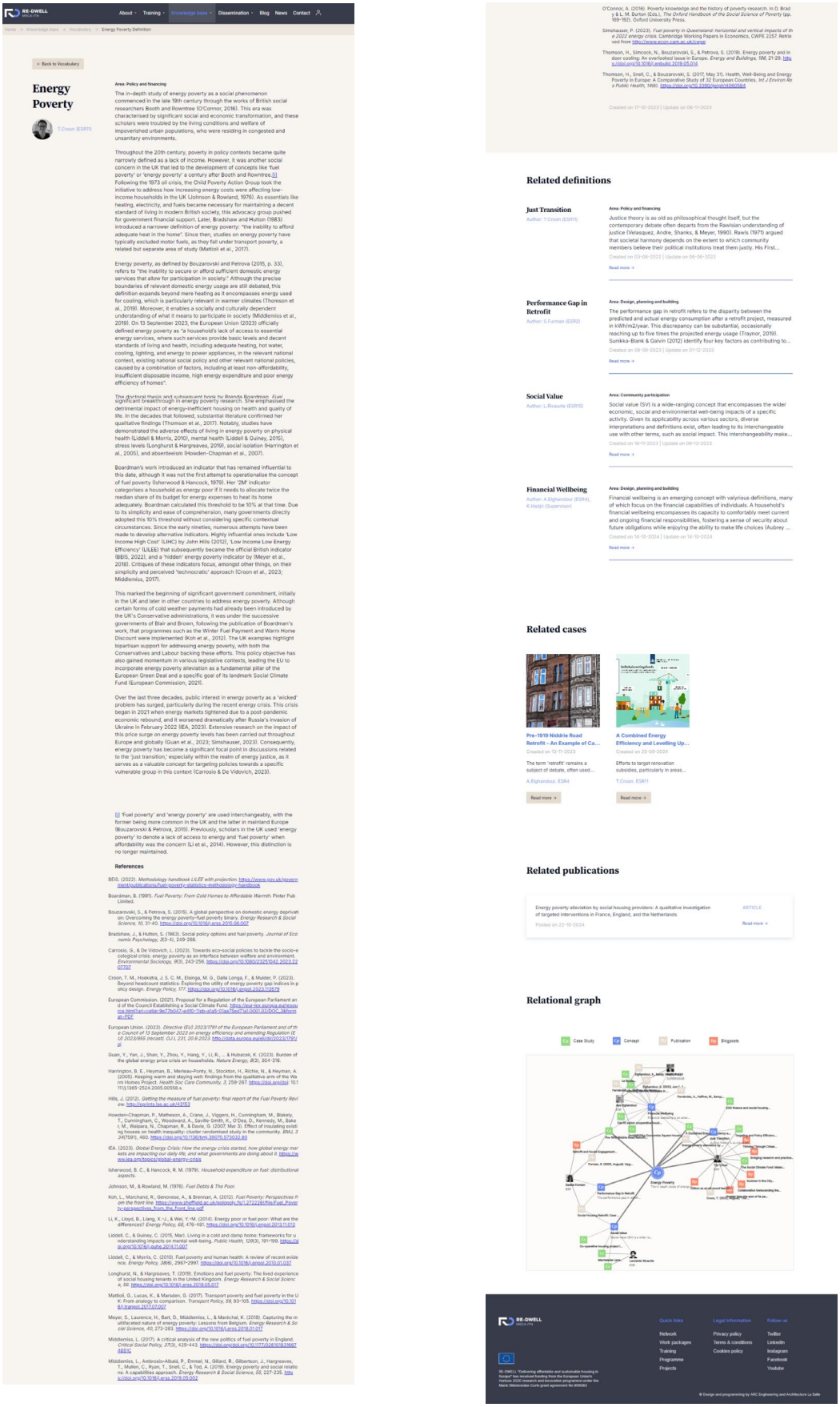

Figure 4. Vocabulary entry “Energy poverty” displayed on the website

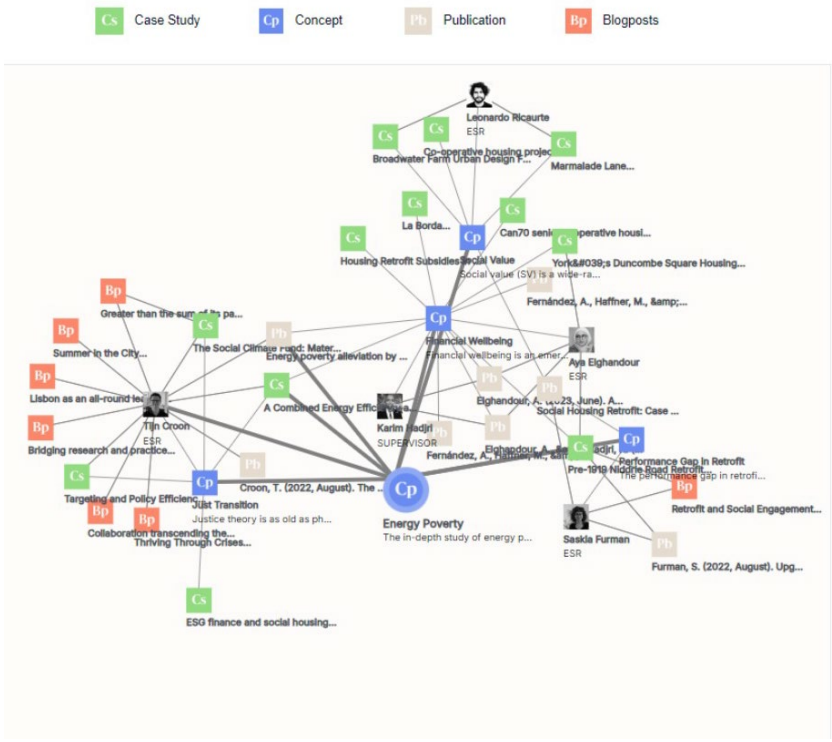

Figure 5. Visual map with a focus on the concept "Energy Poverty" displaying the links between researchers and research outputs

In addition to the entry published on the website, researchers were invited to share the references used in a Mendeley account (Figure 6) created for the RE-DWELL project.

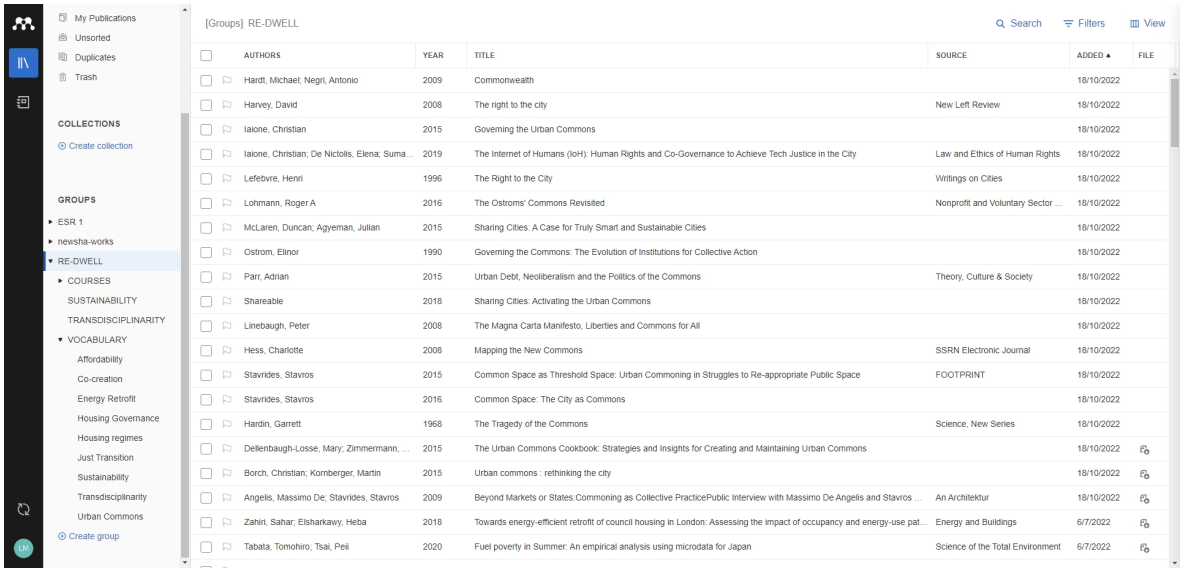

Figure 6. References used in the vocabulary entries shared in the Mendeley group

The vocabulary and case library content has been exported as an RDF dataset, including metadata that third parties can use in applications related to housing affordability and sustainability at various scales. This dataset is publicly available on Zenodo.

4. Vocabulary entries

Over the three-year project duration, a total of 80 vocabulary entries have been created ESRs, either individually or in collaboration with peers and supervisors. Each term is linked to a specific research area, distributed as follows:

- **Design, Planning, and Building**: 40 entries
- **Community Participation**: 21 entries
- **Policy and Financing**: 19 entries

This distribution reflects the predominant backgrounds of the ESRs, who primarily come from architecture and planning disciplines. Most entries were authored individually by ESRs, with 8 entries produced collaboratively among peers and 14 developed in partnership with supervisors.

Even though the vocabulary structured allowed for multiple definitions of the same term, provided by multiple authors, this feature was only used in three key terms: affordability (3 definitions), sustainability (5) and transdisciplinarity (3).

In addition to entries related to research areas, there have been entries focusing on research methodology such as “Capability Approach”, “Critical Utopian Action Research”, “Framework”, “Direct Action”, “Path Dependence.”

5. Vocabulary as learning tool and resource

During the network activities, we used the content collectively created in the vocabulary as a learning tool and resource in various contexts while adopting a diverse range of learning strategies to foster the collaborative creation of knowledge across fields and researchers.

- RMT1 course: vocabulary workshop – October 2021. A session of this course introduced students to have a knowledge of key housing terminology. The task for students was to propose the terms and critically reflect on their importance for their own research and for the overall field of affordable and sustainable housing. The collective work was summarized in a table, with the proposed concepts aligned to the researchers/institutions (Figure 7).

Resource for RMT1_Task 1

LIST OF KEY TERMS SUGGESTED BY RE-DWELL RESEARCHERS

	Key term	RE-DWELL institution(s) that proposed the term					
housing	**affordability**	UREAD	CSS	UPV	UNIZG	FUNITEC	TUD
	action-research collaboration	ISCTE					
	actors	UGA					
	advocacy	UNIZG					
	co-creation	UCY					
	co-design	UCY					
	co-housing	CSS	UNIZG				
	co-production of housing	UNIZG					
	co-production of knowledge	ISCTE					
	collaborative design process	UCY	USFD				
	collaborative housing research	UCY	USFD				
sustainable	**communities**	FUNITEC	USFD				
housing	**cooperatives** / cooperation	CSS	UPV				
urban affordability	**crisis**	TUD					
	decision support method	UPV					
housing	**delivery**	UREAD					
	eco villages	FUNITEC					
	energy	TUD					
	energy poverty	CSS					
housing	**finance**	TUD					
	frame Innovation	ISCTE					
housing, urban	**governance**	UGA	UNIZG	TUD			
	green housing	FUNITEC					
urban	**health / healthy** housing	CSS	FUNITEC	UREAD			
	home	TUD					
	human-centered (design)	UPV					
	inclusive (housing)	TUD					
	industrialised (housing)	FUNITEC					
housing	**innovations**	UNIZG					
	integrated knowledge production	ISCTE					
	knowledge-in-practice	ISCTE					
	landlord (and equivalents in orther languages)	UREAD					
	learning by doing	ISCTE					
Social	**Life Cycle Assessment** (LCA - SLCA)	CSS					
housing	**liveability**	FUNITEC					
	market rental	CSS					
	mass-customized housing	FUNITEC					
	mixed methods	UGA					
	mortgage	CSS					
	multicriteria assessment	UPV					
	multidimensionality	USFD					
	negotiation	UGA					
	neighbourhood	CSS					
	objectivity / subjectivity	UGA					
	participation	UREAD					
	place	UREAD					
public	**policies**	UGA	UPV	TUD			
	post-occupancy evaluation	FUNITEC					
	practice-based research	ISCTE					
housing	**quality**	TUD					
	quality of life	UGA	UREAD				
	reflective practice	ISCTE					
	regeneration schemes	UGA					
housing	**regime**	CSS					
	research by design	ISCTE					
urban	**resilience**	UGA	FUNITEC	TUD			
housing	**retrofit** / renovation	UREAD	UPV				
inter-, cross-, trans-	**sectoral**	USFD					
	social (rental) **housing**	CSS	UNIZG	FUNITEC	USFD		
	social evaluation	UGA					
housing as	**social investment**	UNIZG					
	social mix	UNIZG					
housing	**stakeholders**	UGA					
	state funded housing	UREAD					
housing	**subsidies**	CSS					
housing	**sustainability**	UREAD	UNIZG	FUNITEC	TUD	UPV	
housing	**tenure**	CSS	UREAD				
	transdisciplinary research	ISCTE					
	transitions	UGA					
	urban development	TUD					
social / urban	**vulnerability**	FUNITEC	UGA				
	welfare regime	CSS					
	well-being	UGA	UPV	FUNITEC			

Figure 7. Concepts proposed by researchers produced in the RMT1 course

The responses provided by researchers to the course evaluation form confirmed the usefulness of the vocabulary tool:

> *"The session 5 on vocabulary was very useful for me, as it related to research methods."*
>
> *"The best part of the whole course! It was interesting and useful to understand the importance of identifying my research key terms from the start. Besides, it simplified the idea of definitions."*
>
> *"Most relevant as we are at the stage of dealing with definitions and fit well with ESRs timing."*
>
> *"The vocabulary tasks have been extremely useful and related to my individual work. It has also helped to forged new connections with ESRs which have led to other fruitful conversations about our projects and the potential to write a joint paper."*

- Budapest workshop – March 2022

A session dedicated to working on the vocabulary was included in the workshop programme. It consisted of two parts.

1. Peer review of entries. ESRs were tasked with peer-reviewing a vocabulary entry written by another peer (Figures 8 and 9) , answering the following questions:

- Is it relevant to the network's research?
- Is it intelligible and well-written?
- Are the references used correctly? Do they provide authoritative arguments that are well integrated into the narrative?
- Do the references conform to APA style?

2. Hands-on team activity. The ESRs, organized into teams, worked with the content produced so far in the vocabulary (Figure 10):

- Relating terms
- Creating groups of terms

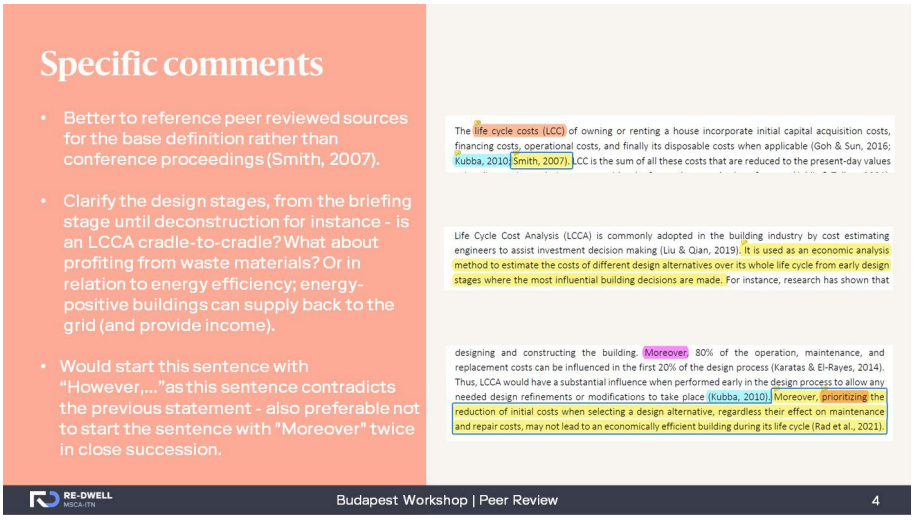

Figure 8. Peer review of the term "Life Cycle Cost Analysis" by Aya Elghandour, conducted by Annette Davis

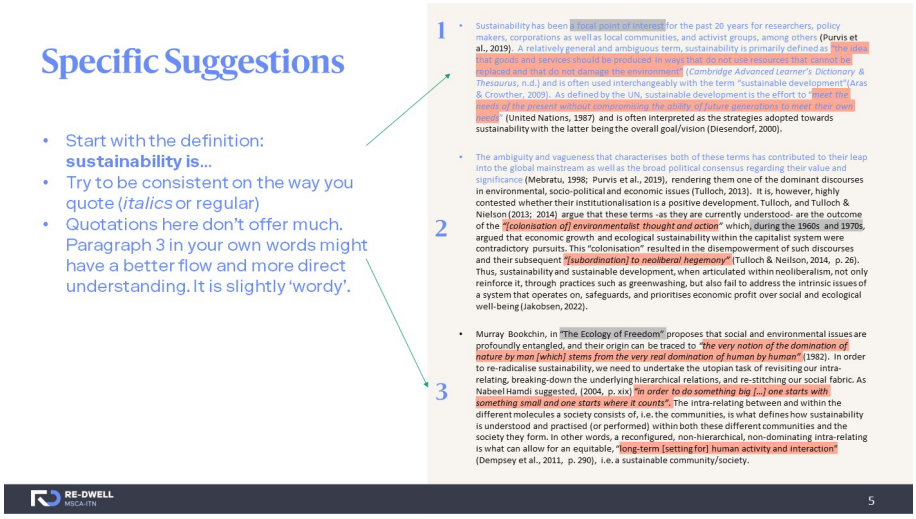

Figure 9. Peer review of the term "Sustainability through community participation" by Effrosyni Roussou , conducted by Androniki Pappa

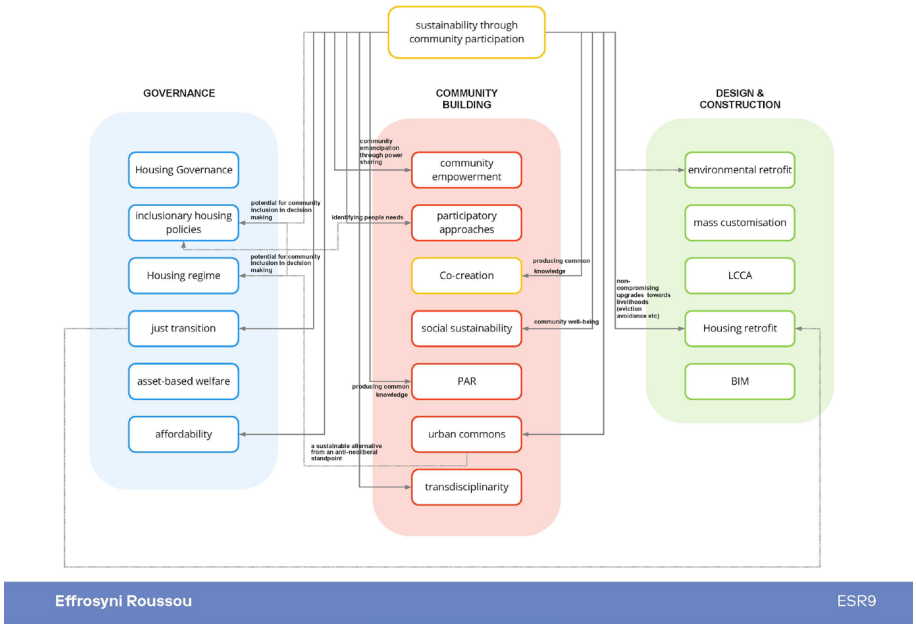

Figure 10. Clustering and interrelating concepts from the vocabulary, by Effrosyni Roussou

The responses provided by researchers to the vocabulary session in the workshop evaluation were the following:

> *"It was really good and more useful to discuss in small groups"*

> *"I really like the way in which the session was addressed. Instead of giving another presentation of a peer review, we had the chance to discuss with our colleagues and give and get more insights about our writing in a more informal but informative fashion."*

"(...) I genuinely appreciate shifting the work to groups, and it was helpful and more efficient."

6. Competencies

The collaborative construction of a shared vocabulary enables researchers to develop competencies in systems thinking, interpersonal skills, and knowledge co-creation within an interdisciplinary context.

The process of developing a shared vocabulary fosters collaboration and the integration of diverse perspectives. By collectively defining terms and concepts, researchers can gain a deeper understanding of the interconnections and relationships within the various fields involved in affordable and sustainable housing. Establishing a common language helps bridge gaps between disciplines, enabling researchers to leverage their unique strengths and insights. Integrating this vocabulary tool into training activities not only facilitates knowledge acquisition but also promotes critical thinking and fosters meaningful discussions among researchers from different fields.

7. Conclusions

The vocabulary served as a repository of shared knowledge, providing researchers with access to their peers' research, summarized in key concepts. The glossary fostered an environment of collective learning, enabling participants to learn from each other's research findings, methodologies, and perspectives. By engaging with the vocabulary, network members expanded their understanding of various topics related to affordable and sustainable housing, reaching beyond their areas of expertise.

The vocabulary will remain publicly accessible beyond the project's lifetime and has the potential to grow further, with additional contributions from former ESRs and other interested parties who are granted access. This will allow it to continue serving as a valuable resource for future researchers, helping them frame issues related to affordable and sustainable housing from a transdisciplinary perspective. Moreover, the current vocabulary can be used by third parties as a learning resource in educational activities, particularly at the graduate and postgraduate levels.

Annex 1 - Concepts

Table 1 summarizes the terms included in the vocabulary, with links to the corresponding website content for further details.

Table 1. Vocabulary entries

Concept	Area	Related terms	Related case studies	Authors
Affordability (8)	Policy and financing	Affordability (30) Affordability (41) Social Housing Measuring Housing Affordability Housing Allowance Financialization Deliberative Democracy Financial Wellbeing Housing Quality Techno-optimism Homelessness Thermal Insulation & Airtightness		Christophe Verrier (ESR3)
Affordability (30)	Design, planning and building	Affordability (8) Financial Wellbeing	Diagoon Houses Housing Retrofit Subsidies in the Netherlands Knight's Walk (Lambeth's Homes)	Leonardo Ricaurte (ESR 15)

Concept	Area	Related terms	Related case studies	Authors
		Housing Regime Mass Customisation Life Cycle Costing Measuring Housing Affordability	La Borda The Elwood Project, Vancouver, Washington	
Affordability (41)	Policy and financing	Affordability (8) Housing Regime Housing Affordability Financial Wellbeing Green Land Value Tax Viability		Marietta Haffner (supervisor) Alex Fernandez (ESR 12)
Asset-based Welfare	Policy and financing			Marko Horvat (ESR 6)
BIM	Design, planning and building	Transdisciplinarity Mass Customisation Life Cycle Costing	Solar Decathlon Europe 2022	Annette Davis (ESR 1) Aya Elghandour (ESR 4)
Building Decarbonisation	Design, planning and building	Sustainability Sustainability Built Environment	85 Social Housing Units in Cornellà Broadwater Farm Urban Design Framework Deben Fields (Garrison Lane) ESG finance and social housing decarbonisation Knight's Walk (Lambeth's Homes) North Wingfield Road social housing complex.	Karim Hadjri (supervisor) Mahmoud Alsaeed (ESR 5)
Capability Approach	Community participation	Community Empowerment		Zoe Tzika (ESR 10)

Concept	Area	Related terms	Related case studies	Authors
Circular Economy	Design, planning and building	Design for Disassembly Industrialised Construction Life Cycle Assessment (LCA)	WikiHouse: South Yorkshire Housing Association	Annette Davis (ESR 1)
Co-creation	Community participation	Social Value	DARE to Build, Chalmers University of Technology Diagoon Houses Die Baupiloten Berlin La Borda Marmalade Lane Navarinou Park Patch22	Andreas Panagidis (ESR 8) Effrosyni Roussou (ESR 9)
Collaborative Governance	Community participation	Housing Governance Community Empowerment	Fondazione per l'Innovazione Urbana (FIU) Lleialtat Santsenca Civic Centre Self-Organisation in a New Dutch Suburb: Housing development in Oosterwold	Andreas Panagidis (ESR 8)
Collaborative housing	Policy and financing	Participatory Approaches		Lucia Chaloin (ESR 3)
Collaborative Planning	Design, planning and building	Co-creation Collaborative Governance Placemaking	Broadwater Farm Urban Design Framework	Andreas Panagidis (ESR 8)
Community Empowerment	Community participation	Co-creation Participatory Approaches Social Sustainability	Broadwater Farm Urban Design Framework Co-operative housing project in Croatia: the case of the city of Križevci DARE to Build, Chalmers University of Technology Diagoon Houses La Borda LiLa4Green Marmalade Lane Mehr als wohnen – More than housing Navarinou Park Rural Studio The Elwood Project, Vancouver, Washington	Zoe Tzika (ESR 10)

Concept	Area	Related terms	Related case studies	Authors
Community-led Housing	Community participation	Co-creation Participatory Approaches Community Empowerment Social Sustainability Urban Commons	Can70 senior cooperative housing: Aging in community Co-operative housing project in Croatia: the case of the city of Križevci La Borda Mehr als wohnen – More than housing	Zoe Tzika (ESR 10)
Critical Utopian Action Research	Community participation			Anna Martin (ESR 7)
Deliberative Democracy	Community participation	Affordability Co-creation Housing Governance Participatory Approaches Community Empowerment Just Transition Urban Commons Community-led Housing Post-occupancy Evaluation Public-civic Partnership		Leonardo Ricaurte (ESR 15) Anna Martin (ESR 7)
Design Activism	Community participation	Co-creation Participatory Approaches Community Empowerment Urban Commons	Die Baupiloten Berlin	Effrosyni Roussou (ESR 9)
Design for Dissassembly	Design, planning and building		85 Social Housing Units in Cornellà APROP | Temporary social housing for people at risk to residential exclusion Flexwoningen Oosterdreef Patch22	Annette Davis (ESR 1)

Concept	Area	Related terms	Related case studies	Authors
			Solar Decathlon Europe 2022 WikiHouse: South Yorkshire Housing Association	
Direct Action	Community participation	Urban Commons Spatial Agency Design Activism	Navarinou Park	Effrosyni Roussou (ESR 9)
Ecosocial Policy	Policy and financing	Just Transition		Tijn Croon (ESR 11)
Energy Communities	Design, planning and building			Anna Martin (ESR 7)
Energy Poverty	Policy and financing	Just Transition	A Combined Energy Efficiency and Levelling Up Scheme: the Dutch 'Volkshuisvestingsfonds' Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and Health	Tijn Croon (ESR 11)
Energy Retrofit	Design, planning and building	Housing Retrofit Sustainability	Broadwater Farm Urban Design Framework HOUSEFUL: Els Mestres, Sabadell Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and Health The Sutton Estate Regeneration, Chelsea	Saskia Furman (ESR 2)
Environmentally Sustainable Social Housing	Design, planning and building	Social Sustainability Sustainability Sustainability Built Environment Mass Customisation Social Housing Life Cycle Assessment (LCA)	Deben Fields (Garrison Lane) Knight's Walk (Lambeth's Homes)	Karim Hadjri (supervisor) Mahmoud Alsaeed (ESR 5)
Financial Wellbeing	Design, planning and building	Affordability Community Empowerment Just Transition Social Sustainability Urban Commons Life Cycle Costing Housing	A Combined Energy Efficiency and Levelling Up Scheme: the Dutch 'Volkshuisvestingsfonds' Can70 senior cooperative housing: Aging in community ESG for Social Housing Housing Retrofit Subsidies in the Netherlands La Borda Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and Health	Karim Hadjri (supervisor) Aya Elghandour (ESR 4)

Concept	Area	Related terms	Related case studies	Authors
		Affordability Energy Poverty Social Value Financialization	York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living	
Financialization	Policy and financing	Affordability Asset-based Welfare		Marko Horvat (ESR 6)
Flexibility	Design, planning and building	Community Empowerment Design for Dissassembly Industrialised Construction Open Building	Diagoon Houses Flexwoningen Oosterdreef La Borda Marmalade Lane Patch22	Carolina Martín (ESR 14)
Framework	Design, planning and building	Co-creation Housing Retrofit Participatory Approaches Housing Regime Sustainability Sustainability Built Environment Housing Policy	Broadwater Farm Urban Design Framework ESG finance and social housing decarbonisation	Karim Hadjri (supervisor) Mahmoud Alsaeed (ESR 5)
Grant-of-use cooperative housing	Design, planning and building		Can70 senior cooperative housing: Aging in community La Borda	Zoe Tzika (ESR 10)
Green Land Value Tax	Design, planning and building	Housing Retrofit Affordability	Housing Retrofit Subsidies in the Netherlands	Alex Fernandez (ESR 12)
Homelessness	Policy and financing	Affordability Just Transition		Marko Horvat (ESR 6)
Housing Affordability	Design, planning and building	Sustainability Life Cycle Costing Affordability Social Housing	ESG finance and social housing decarbonisation LILAC_Low Impact Living Affordable Community_Leeds Mason Place Apartments Rural Studio The Social Climate Fund: Materialising Just Transition Principles? WikiHouse: South Yorkshire Housing Association	Karim Hadjri (supervisor) Aya Elghandour (ESR 4)

Concept	Area	Related terms	Related case studies	Authors
		Community-led Housing	York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living	
Housing Allowance	Design, planning and building	Affordability Housing Policy		Marko Horvat (ESR 6)
Housing Governance	Policy and financing		ESG finance and social housing decarbonisation Housing Fund of the Republic of Slovenia	Marko Horvat (ESR 6) Tijn Croon (ESR 11)
Housing Policy	Policy and financing		ESG finance and social housing decarbonisation Housing Retrofit Subsidies in the Netherlands	Marietta Haffner (supervisor) Alex Fernandez (ESR 12)
Housing Quality	Design, planning and building	Affordability Energy Retrofit Community Empowerment Asset-based Welfare Social Sustainability Sustainability Sustainability Built Environment Housing Affordability Measuring Housing Affordability Post-occupancy Evaluation Design Activism		Aya Elghandour (ESR 4)
Housing Regime	Policy and financing	Housing Governance	ESG finance and social housing decarbonisation	Anna Martin (ESR 7)
Housing Retrofit	Design, planning and building		Broadwater Farm Urban Design Framework HOUSEFUL: Els Mestres, Sabadell Housing Retrofit Subsidies in the Netherlands Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and	Saskia Furman (ESR 2) Zoe Tzika (ESR 10) Alex Fernandez (ESR 12)

Concept	Area	Related terms	Related case studies	Authors
			Health The Sutton Estate Regeneration, Chelsea	
Indoor Thermal Comfort	Design, planning and building	Housing Retrofit Participatory Approaches Energy Retrofit Just Transition Social Sustainability Sustainability Social Housing	Knight's Walk (Lambeth's Homes)	Saskia Furman (ESR 2)
Industrialised Construction	Design, planning and building	BIM Mass Customisation Design for Dissassembly	85 Social Housing Units in Cornellà APROP | Temporary social housing for people at risk to residential exclusion Diagoon Houses Flexwoningen Oosterdreef Patch22 Solar Decathlon Europe 2022 WikiHouse: South Yorkshire Housing Association	Annette Davis (ESR 1) Carolina Martín (ESR 14)
Just Transition	Policy and financing	Housing Governance	A Combined Energy Efficiency and Levelling Up Scheme: the Dutch 'Volkshuisvestingsfonds' ESG finance and social housing decarbonisation Targeting and Policy Efficiency: Exploring the Intended Reform of the Warm Home Discount The Social Climate Fund: Materialising Just Transition Principles?	Tijn Croon (ESR 11)
Life Cycle Assessment (LCA)	Design, planning and building	BIM Life Cycle Costing Design for Dissassembly Industrialised Construction	WikiHouse: South Yorkshire Housing Association	Annette Davis (ESR 1)
Life Cycle Costing	Design, planning and building	Housing Retrofit Energy Retrofit Community Empowerment Affordability Sustainability	Dalarnas Villa - Built Research Project Investigating Sustainability WikiHouse: South Yorkshire Housing Association	Aya Elghandour (ESR 4)

Concept	Area	Related terms	Related case studies	Authors
		Sustainability Built Environment Transdisciplinarity Mass Customisation		
Mass Customisation	Design, planning and building	Co-creation Participatory Approaches Affordability Transdisciplinarity		Carolina Martín (ESR 14)
Measuring Housing Affordability	Design, planning and building	Affordability Sustainability Life Cycle Costing Housing Affordability	ESG finance and social housing decarbonisation York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living	Karim Hadjri (supervisor) Aya Elghandour (ESR 4)
New Municipalism	Design, planning and building			Andreas Panagidis (ESR 8)
Open Building	Design, planning and building	Participatory Approaches Sustainability Built Environment Mass Customisation Design for Dissassembly Industrialised Construction	Patch22	Carolina Martín (ESR 14)
Participatory Approaches	Community participation	Co-creation	Broadwater Farm Urban Design Framework DARE to Build, Chalmers University of Technology Die Baupiloten Berlin La Borda LiLa4Green Marmalade Lane Navarinou Park York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living	Mahmoud Alsaeed (ESR 5) Leonardo Ricaurte (ESR 15) Androniki Pappa (ESR 13)

Concept	Area	Related terms	Related case studies	Authors
Path Dependence	Policy and financing	Housing Governance Housing Regime Housing Policy		Marko Horvat (ESR 6)
Performance Gap in Retrofit	Design, planning and building	Housing Retrofit Energy Retrofit Housing Policy Energy Poverty Building Decarbonisation		Saskia Furman (ESR 2)
Placemaking	Community participation	Co-creation Participatory Approaches Community Empowerment Social Sustainability Urban Commons	Broadwater Farm Urban Design Framework Die Baupiloten Berlin LiLa4Green Navarinou Park	Androniki Pappa (ESR 13)
Post-occupancy Evaluation	Design, planning and building	Housing Retrofit Performance Gap in Retrofit	Deben Fields (Garrison Lane)	Leonardo Ricaurte (ESR 15)
Prebound Effect	Design, planning and building	Housing Retrofit Energy Retrofit Performance Gap in Retrofit		Tijn Croon (ESR 11)
Precariat	Policy and financing	Social Sustainability Housing Affordability		Anna Martin (ESR 7)
Product Platform	Design, planning and building	Mass Customisation Housing Affordability Design for Dissassembly		Carolina Martín (ESR 14)

Concept	Area	Related terms	Related case studies	Authors
		Industrialised Construction		
Public-civic Partnership	Community participation	Community Empowerment Social Sustainability Urban Commons Placemaking		Androniki Pappa (ESR 13)
Social Housing	Policy and financing	Affordability Housing Retrofit Housing Governance Housing Regime Asset-based Welfare	85 Social Housing Units in Cornellà Broadwater Farm Urban Design Framework ESG finance and social housing decarbonisation HOUSEFUL: Els Mestres, Sabadell LILAC_Low Impact Living Affordable Community_Leeds Mason Place Apartments North Wingfield Road social housing complex.	Karim Hadjri (supervisor) Mahmoud Alsaeed (ESR 5)
Social Infrastructure	Community participation	Co-creation Community Empowerment Social Sustainability Urban Commons Collaborative Governance Placemaking Spatial Agency		Androniki Pappa (ESR 13)
Social Innovation	Policy and financing			Adriana Diaconu (supervisor) Lucia Chaloin (ESR 3)
Social Sustainability	Community participation	Housing Governance Collaborative Governance	DARE to Build, Chalmers University of Technology Diagoon Houses Flexwoningen Oosterdreef La Borda LiLa4Green Lleialtat Santsenca Civic Centre Mason Place Apartments Navarinou Park Rural Studio	Andreas Panagidis (ESR 8)

Concept	Area	Related terms	Related case studies	Authors
			The Elwood Project, Vancouver, Washington York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living	
Social Value	Community participation	Community Empowerment Social Sustainability Energy Poverty Post-occupancy Evaluation Placemaking	Broadwater Farm Urban Design Framework Co-operative housing project in Croatia: the case of the city of Križevci ESG for Social Housing Marmalade Lane	Leonardo Ricaurte (ESR 15)
Spatial Agency	Community participation	Co-creation Participatory Approaches Community Empowerment Sustainability Urban Commons Social Value	85 Social Housing Units in Cornellà DARE to Build, Chalmers University of Technology Die Baupiloten Berlin La Borda Navarinou Park Participatory Planning: Re-examining Community Consultation as a process that integrates the Urban Room method with a digital mapping tool	Effrosyni Roussou (ESR 9)
Sustainability Built Environment	Design, planning and building	Social Sustainability Transdisciplinarity	Deben Fields (Garrison Lane) ESG finance and social housing decarbonisation Knight's Walk (Lambeth's Homes) North Wingfield Road social housing complex. Patch22	Karim Hadjri (supervisor) Mahmoud Alsaeed (ESR 5)
Sustainability (5)	Community participation			Joris Hoesktra (Co-supervisor) Tijn Croon (ESR 11)
Sustainability (11)	Design, planning and building			Mahmoud Alsaeed (ESR 5)
Sustainability (13)	Community participation			Andreas Panagidis (ESR 8)
Sustainability (18)	Design, planning and building			Saskia Furman (ESR 2)

Concept	Area	Related terms	Related case studies	Authors
Sustainability (32)	Community participation	Co-creation Participatory Approaches Community Empowerment Social Sustainability Energy retrofit Indoor Thermal Comfort Life Cycle Costing Housing Affordability Measuring Housing Affordability Building Decarbonisation Spatial Agency Framework Environmentally Sustainable Social Housing Housing Quality	DARE to Build, Chalmers University of Technology Deben Fields (Garrison Lane) ESG finance and social housing decarbonisation HOUSEFUL: Els Mestres, Sabadell Marmalade Lane Rural Studio York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living	Effrosyni Roussou (ESR 9)
Targeted Universalism	Policy and financing	Just Transition		Tijn Croon (ESR 11)
Techno-optimism	Design, planning and building		HOUSEFUL: Els Mestres, Sabadell	Saskia Furman (ESR 2)
Thermal Insulation and Airtightness	Design, planning and building	Affordability Housing Retrofit Energy Retrofit Indoor Thermal Comfort Window Guidance Performance Gap		Saskia Furman (ESR 2)

Concept	Area	Related terms	Related case studies	Authors
		in Retrofit Building Decarbonisation		
Third place	Design, planning and building	Social Sustainability Urban Commons Placemaking Social Value		Leonardo Ricaurte (ESR 15)
Transdisciplinarity (35)	Design, planning and building	Co-creation Critical Utopian Action Research BIM Sustainability Built Environment Mass Customisation Life Cycle Costing		Annette Davis (ESR 1)
Transdisciplinarity (9)	Policy and financing			Marko Horvat (ESR 6)
Transdisciplinarity (7)	Community participation			Androniki Pappa (ESR 13) Alexandra Paio (supervisor)
Trauma Informed Design	Design, planning and building		Hope Street	Anna Martin (ESR 7)
Urban Commons	Community participation	Co-creation Participatory Approaches Community Empowerment Social Sustainability	Lleialtat Santsenca Civic Centre Mehr als wohnen – More than housing Navarinou Park	Androniki Pappa (ESR 13)
Urban Informality	Design, planning and building			Andreas Panagidis (ESR 8)

Concept	Area	Related terms	Related case studies	Authors
				Effrosyni Roussou (ESR 9) Zoe Tzika (ESR 10) Androniki Pappa (ESR 13)
Viability	Design, planning and building	Affordability	Housing Retrofit Subsidies in the Netherlands	Alex Fernandez (ESR 12)
Window Guidance	Policy and financing	Housing Retrofit Housing Regime Just Transition Asset-based Welfare		Marietta Haffner (supervisor) Alex Fernandez (ESR 12)

Annex 2 - Guidelines

This Annex contains the guidelines provided to users.

RE-DWELL Vocabulary

The RE-DWELL Vocabulary is part of the collaborative construction of a knowledge repository on affordable and sustainable housing. The vocabulary consists of definitions of key terms related to the combined research conducted by the 15 early-stage researchers. Each term has multiple definitions, each connected to one of the three main research areas: Design, Construction and Planning; Community Involvement; and Policy and Funding.

The joint construction of this vocabulary allows the researchers' projects to be interwoven. As such, the vocabulary is a tool for conducting transdisciplinary research on affordable and sustainable housing.

Entries are reviewed by RE-DWELL researchers and supervisors. The vocabulary is regularly updated.

Vocabulary construction

The proposal to write an entry comes from the early-stage researcher, and their supervisors. The term can be related to the ESRs' research project, a paper jointly written by researchers, a secondment, etc. ; writing an entry is an opportunity for a deeper study of the concept, to delimit their meanings, and to share them with other researchers.

The description of a term must take into account the theme of the network research: affordable and sustainable housing. Each entry can be related to only of the three research areas. If there are many involved, the most relevant one should be selected.

The recommended number of characters for each entry (not including references) is 600-800 words.

The name of the term must be kept simple, a single term (e.g. “BIM”) of a compound of two or three terms (e.g. “Housing retrofit”).

The entry can be written by one single researcher or by several researchers.

Figures might be included; they need to be referenced in the text.

A reference list must be included. APA is used as referencing style.

References are entered in the RE-DWELL group in Mendeley. In the VOCABULARY folder, a new folder is created with the name of the term and the references are inserted there.

Editorial process

The entry is peer-reviewed, first by the supervisor and if necessary by a second RE-DWELL supervisor/co-supervisor.

The peer-reviewed entry is sent to the coordinator for final editorial reviewing. The .doc file is uploaded to Teams RE-DWELL ESRs/VOCABULARY/TERMS/[NAME OF TERM]/REVIEW

Once the reviewing is completed, the final entry is uploaded to the website by the coordinator.