sustainability

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Scaling Deep with Local Community Champions in Living Labs

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Abstract

Living Labs are collaborative, real-world environments for co-creating sustainable innovations that rely on trust-based engagement with local communities. However, while many studies emphasise scaling up or out of such innovations, the potential for achieving qualitative transformations in relation to local values ("scaling deep") remains underexplored. In response, we adopted a design ethnographic approach that blended immersive, reflexive ethnographic methods with the participatory co-design characteristics of Living Labs. This approach involved closely partnering with a local community champion through participant observation and co-creation workshops embedded in the community's daily life. Our findings show that community champions acted as co-creators and mediators, building trust and aligning Living Lab activities with local values through a relational ethic of care. By immersing the research team in day-to-day community life via shared activities and open dialogue, champions enabled situated learning about local needs, thereby facilitating "scaling deep" through mutual trust and understanding. Overall, the study demonstrates that scaling deep in Living Labs hinges on embodied researcher–community partnerships in mutual care and shared responsibility. The study contributes to the Living Lab literature by illustrating how community champions can bridge understanding about sustainable transformations through relational engagement.

Keywords: living labs; scaling deep; community champions; design ethnography

Academic Editors: Dimitri Schuurman, Abdolrasoul Habibipour, Valentino Piana, Teemu Santonen and Sebastian Stefaniga

Received: 10 May 2025
Revised: 11 June 2025
Accepted: 18 June 2025
Published: 26 June 2025

Citation: Weberg, O.; Fors, V.; Lund, J. Scaling Deep with Local Community Champions in Living Labs. *Sustainability* **2025**, *17*, 5888. https://doi.org/10.3390/su17135888

1. Introduction

Living Labs (LLs) have gained interest as experimental, living spaces for prototyping and learning related to complex societal challenges through real-life co-creation. LLs typically involve a wide range of stakeholders including researchers, policymakers, businesses, and citizens [1,2]. Rooted in a vision of innovation through participation, LLs aim to develop, test, and refine ideas within situated learning contexts to support sustainable transitions [3]. Their promise lies in the ability to engage people not just as passive recipients of innovation, but as co-designers of alternatives and co-producers of knowledge related to change.

Yet, critiques of LLs have pointed out some reasons for concerns. Many LLs operate within limited project timelines, often associated with project funding, which can restrict the continuity and depth of transformative change [4,5]. Additionally, studies have questioned the authenticity of participation, arguing that co-creation is frequently used but not reflected in terms of lived realities of local communities involved in LLs [6,7]. Furthermore, LLs often rely on metrics and evaluation models that are quite linear, leading to overlooking cultural, relational, and long-term impacts [8,9]. As such, studies call for research that

goes beyond institutional actors to examine how LLs can scale "deep", that is, identify and enable changes in underlying values, behaviours, and social structures [1].

Scaling deep goes beyond expansion or influencing systemic structures per se and instead entails gaining deeper understandings of values and relationships in striving for meaningful change [10]. Thereby, scaling deep pivots lived realities and embedded knowledge of people instead of generalising contextual specificity. Achieving deep scaling requires a more nuanced understanding of stakeholder engagement and involvement within Living Lab approaches. Yet, existing LL frameworks seldom provide concrete strategies for the meaningful inclusion of local community actors [6,7]. Similarly, Torma [11], underscores through an extensive literature review how limited our knowledge remains regarding how LL projects identify and engage stakeholders, despite this being widely recognised as fundamental to the LL model's capacity for sustainable transformation.

In this article, we will address these gaps by highlighting the role of a particular type of stakeholder, the local community champion. The concept of champions is increasingly relevant for describing local stakeholders who act as gatekeepers to community values, practices, and relationships, particularly in initiatives that seek to embed change within local contexts [12]. The emerging literature extends the notion of champions beyond formal organisational roles to include community-rooted actors who wield influence through trust, local knowledge, and everyday engagement. While traditional accounts frame champions as institutional figures who mobilise resources and overcome resistance to innovation (e.g., [13,14]), contemporary research highlights their roles within cross-organisational ecosystems [15,16]. However, much of this work continues to focus on formal actors. In contrast, a growing strand of research emphasises informal champions—individuals embedded in local networks who act as connectors, translators, stewards, and sometimes critics [17–19]. These community champions are particularly valued in participatory settings for their role in grounding and sustaining initiatives.

This study draws on design ethnography to investigate how community champions act as relational nodes across community domains such as knowledge and participation. Rather than focusing solely on experimental interventions, we trace how champions help embed values and practices that inspire LL activities. This attention to embeddedness is particularly relevant in communities where trust in institutional actors may be low, and where existing networks play a central role in social sustainability [12]. We argue that this reciprocal nature of the ethnographic LL approach fosters meaningful relationships and mutual understanding, which can support ongoing change and sustainable transformation beyond the formal lifespan of the project. We present empirical examples from a design ethnographic Living Lab project on future mobility, conducted between 2024 and 2025, which illustrate how the process of reciprocal alignment between project ambitions and the perspectives of local champions unfolded in practice. Drawing on this fieldwork, we explore the following overarching question: how can Living Lab projects scale deep through sustained ethnographic engagement with local champions?

In doing so, we propose that a better understanding of community champions may also inform how to design a tailored LL approach that can potentially support long-term sustainable transformation and social impact beyond the Living Lab. Our contribution lies in the development of the concept of "scaling deep" by mapping the situated and relational dimensions of champion co-creation captured in our Deep Scaling Reciprocity Map (Figure 2). From this, we suggest how LLs can move from temporary interventions toward long-term, locally rooted change.

2. Literature

In the following section, we present literature related to sustaining change through LLs via communities, and the transformative potential of LLs through scaling deep with community champions.

2.1. Sustaining Change Through Living Labs

Sustainability is increasingly recognised not as a fixed target but as a dynamic and normative concept—one that evolves through interpretation and contextual negotiation. As McCrory [1] suggests, "sustainability [is] not only normative, but also dynamic in definition and interpretation," and innovation itself "may need to be reconceived in order to move beyond the co-creation of products, towards the co-creation of new worlds and desirable futures by change of overall societal systems." These perspectives invite a broader understanding of sustainability as an open, relational concept defined within specific social and institutional contexts [1]. Accordingly, it can be seen as a property that emerges from networks of interactions, extending beyond the analytical boundaries typically constructed by researchers [1].

Within this broader view, research on sustainable transitions increasingly emphasises the necessity of deeper and more inclusive citizen engagement in shaping urban futures. While participatory processes are frequently invoked in sustainability discourse, recent scholarship suggests that such engagement often remains fragmented and superficial. Ref. [20], for instance, argues that citizen involvement is too often confined to consultative roles, thereby sidelining the agency and situated expertise of local actors such as community champions. For transitions to be genuinely meaningful, the authors contend, citizens must play an active role in shaping both decisions and infrastructures, allowing local knowledge to inform not only the process but also the outcomes of sustainability-oriented planning.

In response to these limitations, community-driven design has gained traction as an approach that embeds local values, knowledge, and participation within urban development processes. Rather than designing for communities, this approach emphasises designing with them, positioning residents and grassroots organisations as co-creators in identifying problems and generating solutions [21]. By leveraging lived experience, such participatory approaches enhance the relevance and legitimacy of design outcomes, while simultaneously contributing to community capacity-building and resilience [22]. Within this framework, community champions often serve as crucial intermediaries and advocates, ensuring that interventions align with local aspirations and social needs.

Operating as experimental platforms situated in real-life contexts, LLs convene diverse actors, such as policymakers, researchers, practitioners, and community members, around shared sustainability challenges. Importantly, sustainability in LLs is rarely a fixed endpoint [1]. Scholars therefore call for studies that explore what sustainability means in specific contexts, uncovering which values and trade-offs are prioritised within local agendas.

Given that LLs operate across diverse domains and cultural settings, how sustainability is defined and enacted can vary substantially. Compagnucci et al. [2] advocate for a more contextualised understanding of LL practices, arguing that closer attention to local values, norms, and capacities can reveal how communities shape and pursue sustainability in practice. Such reflexive and locally attuned approaches underscore the potential of LLs to act as sites for negotiating socially robust and situated transitions through openness and explorativity [23], thereby offering a bridge between abstract policy goals and lived urban realities.

Taken together, these perspectives underscore the importance of viewing LLs not merely as experimental spaces for technical innovation, but as platforms for sustained

social learning that foster knowledge, competencies, and trust within local networks [3]. If LLs are to move beyond the pitfalls of tokenistic engagement [5], there is a pressing need to understand how they can empower communities over time, positioning citizens as genuine partners in co-creation rather than passive consultees. This entails decentralising decision-making and recognising community members as legitimate actors in shaping both process and outcomes [7]. Crucially, such empowerment requires the inclusion of diverse voices and the creation of spaces where local leadership, often emerging informally through grassroots initiatives, can thrive and be acknowledged as integral to LL governance [9]. Community champions, in this regard, serve as key figures in extending the life and relevance of LLs beyond the confines of time-limited projects. Their ability to sustain engagement, translate institutional objectives into community realities, and build trust among stakeholders can play a pivotal role in scaling deep. In essence, future research must explore how LLs can foster and support such local leadership as a means of anchoring long-term, contextually embedded change [8]. The following section reviews the evolution of LLs as a vehicle for sustainable transitions, focusing particularly on their potential to support deep, relational, and locally grounded change.

2.2. Scaling Deep and the Transformative Potential of Living Labs

LLs are increasingly recognised not merely as experimental sites for innovation but as vehicles for cultivating enduring transformations in societal values, relationships, and institutional cultures. Beyond the immediate scope of individual projects, their broader ambition is to foster lasting change within systems of practice and belief. However, a recurrent critique within the literature is that many LLs remain short-lived and disproportionately focused on near-term deliverables, thereby constraining their potential for deeper, systemic transformation [24]. For instance, Koens et al. [5] observe a "plethora of 'living labs' [...] often as part of project-based research", a phenomenon that significantly curtails the ability of LLs to effectively engage with and address so-called wicked problems. In response, several scholars have called for a more grounded realism in articulating what LLs can and cannot achieve, and advocate for their reconfiguration to support greater longevity and learning [24,25] through partnership with users [26]. This includes deeper institutional integration and collaboration with public actors to ensure sustained support, both financially and politically, thereby fostering an "experimentation mindset" conducive to long-term sustainability transitions [24]. Fundamentally, this implies embedding LLs within broader community and institutional frameworks such that their innovations may extend beyond the life of the initial project and gradually inform mainstream practice [9].

In the literature on social innovation and systems change, this orientation toward enduring, qualitative transformation is referred to as "scaling deep". As conceptualised by Moore et al. [10], scaling deep entails transforming cultural values, norms, relationships, and collective mindsets in pursuit of durable and meaningful change. It stands in contrast to "scaling out" (expanding reach to more people or contexts) and "scaling up" (influencing policies and systemic structures) by instead prioritising the depth and embeddedness of change within specific communities. Within LLs, this has manifested in practices that promote shared understandings of co-creation and inclusivity, the alignment of stakeholder values through user empowerment, and capacity-building efforts that position stakeholders not as passive participants but as long-term agents of change [27]. Moreover, this perspective has fostered the development of co-learning and reflexive environments, in which continuous adaptation and learning are not merely encouraged but structurally integrated [28]. While scaling has long been a concern within research projects, particularly in terms of applying insights beyond the immediate context, scholarly attention has tended to concentrate on scaling out or up [24], with relatively limited focus on the

logics and practices of scaling deep. The latter shifts the emphasis from generalisability to contextual specificity, advocating for a deeper attention to the lived realities and embedded knowledge of participants within a given setting. Nevertheless, this approach introduces its own challenges. For example, Compagnucci et al. [2] highlight the difficulties many participants face in maintaining active, long-term engagement, pointing to the need for enhanced strategies to sustain genuine citizen involvement.

The concept of a "champion" has evolved, particularly in relation to social innovation projects. Traditionally, champions were viewed as organisational assets, individuals within a company who championed internal projects or technological advancements [15]. Their focus was often on driving innovation within the organisational structure, leveraging their influence and access to resources, ensuring project success [15]. This role was often tied to organisational goals rather than needs presented outside the organisational structure. However, recent research has increasingly recognised the role of community champions; individuals embedded in their local contexts who drive social innovation by leveraging trust, communication, and contextual understanding rather than formal authority [16]. Particularly in fields such as digital inclusion, these actors bridge institutional and community domains, facilitating engagement and supporting underrepresented groups [29,30]. Champions are individuals who mobilise others to advance initiatives despite resistance, drawing on traits such as persistence, networking, and influence [16]. While not always originators of ideas, they play a vital role in recognising and promoting them, with their actions shaped by contextual settings and being essential for overcoming barriers and securing support for innovation [15,31]. The shift toward sustainable futures increasingly highlights the importance of collaborative, community-driven innovation, with community champions playing a vital mediating role between residents, organisations, and institutions [31]. Focused on collective well-being rather than institutional goals, they mobilise resources, advocate for change, and connect local values with broader practices, positioning them as key facilitators in transitions towards sustainability [16,30,32], which goes in line with Puerari et al. [33] regarding empowerment of citizens.

3. Methods

3.1. Empirical Setting

This research was conducted within the MeMo project (short for Medborgardriven Mobilitet, or Citizen-Driven Mobility), which aimed to co-develop alternative mobility solutions grounded in principles of local social sustainability, ensuring that transport initiatives were designed with and for communities experiencing transport poverty. The study context was Biskopsgården, a district located in the outskirts of Gothenburg, Sweden. The area is home to approximately 25,000 residents and is characterised by high cultural diversity. Biskopsgården has historically faced challenges related to socio-economic exclusion, public safety concerns, and infrastructural underinvestment. Meanwhile, the area is known for its strong associational life, with active civil society organisations and grassroots networks working to address local needs.

The selection of Biskopsgården as a site for this LL project was both strategic and purposeful. Its marginalised position within broader urban structures made it a critical case for understanding how sustainable innovations must resonate with a broad variety of people and context-bound, local needs. The district's dense network of informal champions and community-led initiatives offered a fertile ground to explore how deep scaling processes unfold when mediated by trusted, embedded actors.

These areas, frequently marginalised in mainstream urban planning and policy frameworks, pose particular challenges regarding equitable access to mobility. This topic was evident as the geographical location of the research project "suffered" from transport

poverty, as it was labelled by the city. Furthermore, police labelled the area as "challenged" due to complications regarding gang-related activity. Thereby, in short terms, the area was left out by mobility companies, who focused their resources on surrounding areas instead.

3.2. Design Ethnographic Approach

A design ethnographic living lab approach was adopted, serving as a collaborative, real-world research environment that integrated the immersive and reflexive methods of ethnography [34] with the co-creative, user-centred ethos of LLs [27]. Design ethnography is an approach that integrates ethnographic methods with design processes to gain deeper insights into people's lived experiences, practices, and contexts. Pink et al. [34] emphasise that design ethnography is not just about observing users but about engaging with them reflexively and collaboratively to inform the creation of meaningful products, services, or systems. Grounded in qualitative, interpretive inquiry, this approach enabled us as design ethnographic researchers to work closely with residents in their everyday settings, eliciting situated knowledge and co-designing both methodological tools and practical mobility interventions that aligned with local values and lived experiences [35]. The ethnographic stance related well to studies on how to deepen knowledge around champions, and was specifically called for by Renken & Heeks [15].

Ethnographic research in this study adhered to an interpretive and reflexive methodology, drawing on O'Reilly's conceptualisation of ethnographic encounters as immersive and participatory engagements [36]. Rather than remaining passive observers, we as ethnographers positioned ourselves as active participants within the social life we studied, developing situated understandings through sustained interaction and relationship-building. This methodological stance ensured that the mobility design concepts were grounded in participants' lived experiences while remaining attentive to the co-constructed nature of ethnographic knowledge [37].

The ethnographic research findings presented in this article formed a foundational part of establishing the design ethnographic LL, as this approach necessitated in-depth ethnographic inquiry to ground subsequent co-creative design iterations in the lived realities and values of local communities. However, effective community engagement required navigating issues of trust and scepticism towards external researchers. The recruitment of participants proved challenging and necessitated a rethinking of conventional outreach strategies. To address this, a network-based approach was implemented, leveraging established relationships between residents and trusted intermediary local communities to facilitate meaningful participation. Through collaboration with a professional intermediary body, a list of local champions—individuals actively involved in community development initiatives ranging from employment support to recreational activities—was compiled to support engagement and foster trust within the study.

In this article, we focus in depth on our collaboration with one of the most engaged community champions in the project, referred to here as Solveig, a person recruited through snowball sampling [38], which is a conventional practice in ethnographic work, from a meeting with the municipality's transportation team. Solveig is a long-standing local resident and a committed member of a community organisation with decades of experience in facilitating grassroots initiatives. Her involvement proved pivotal in bridging the distance between the research team and the wider community. Through her efforts, she fostered dialogue, mobilised local residents, and helped to organise research activities that aligned with our bottom-up approach in promoting more just and inclusive mobility futures. This collaboration began with an initial stakeholder workshop aimed at establishing a shared project vision and was followed by a series of co-design workshops exploring local values and mobility practices, as well as ongoing ethnographic fieldwork through

participant observation, interviews, and engagements, alongside other community events and activities (Figure 1).

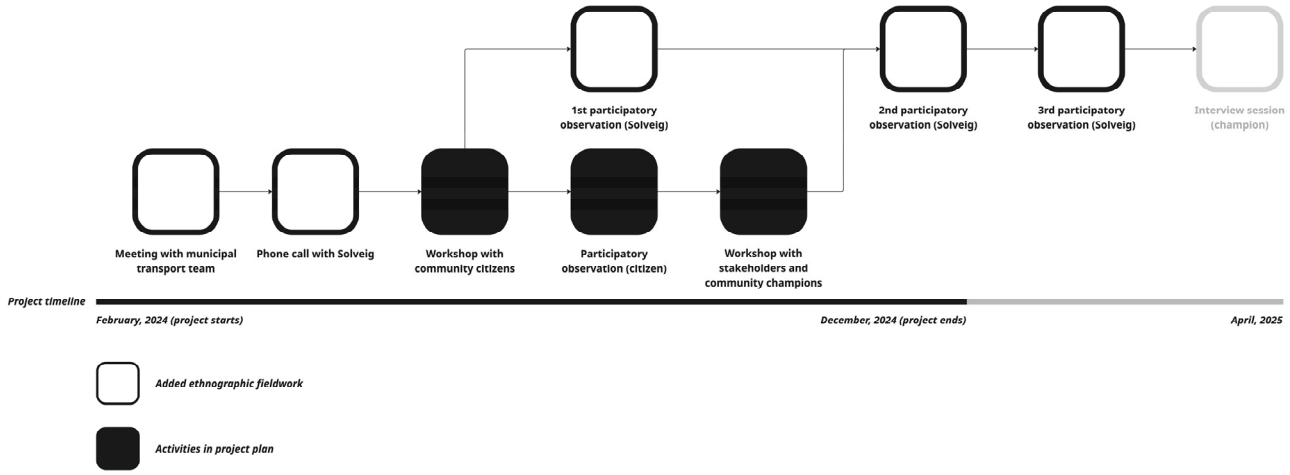

Figure 1. Project timeline and continuation beyond project end date.

3.3. Data Collection Procedures

The research drew on a design ethnographic approach grounded in sustained participant observation and co-design activities. Over the course of a year, the research team conducted five distinct field visits centred on a community champion and her local network of community residents. Each visit included tailored ethnographic techniques such as walking interviews, participatory observations through meetings and events, and documentation of interactions or activities. The activities were recorded through physical fieldnotes taken in a notebook, with complementary pictures of objects and events so as not to disturb the everyday flow of the participants.

The study design centred around five meetings with the primary community champion Solveig. These meetings served both as data collection points and as opportunities for situated co-creation. Below is a summary of their structure and contribution.

Our first physical encounter with local community champions occurred during a design workshop aimed at shedding light on local values around mobility alternatives beyond private car ownership after a phone call. The workshop took four hours and was structured as a future-making activity inspired by everyday routines related to mobility. A total of 28 participants co-created representations of their daily practices through prompts and scenarios. Our second meeting was initially designed as a mobility shadowing session following a local resident through their daily patterns. However, our encounter with Solveig led us to iterate on the initial plan as we received access to her daily activities. We were introduced to champion colleagues and other organisations in the area. From this session, we learned about local forms of citizen dialogue and how top-down initiatives failed to attract local traction. The third meeting with Solveig took place in a workshop facilitated by the research team, inviting municipal organisations and key stakeholders together with two local community champions. The workshop aimed at bridging understandings between city architect guidelines and local values in attempts to co-create community-centred mobility alternatives. The fourth occasion took place in the same manner as the second. However, as the second session focused more on one spot for the event in the evening, this day contained visits to varying spaces around the area. We were shown local initiatives, stores, the square, and met with more contacts within the champion network that emerged during the course of the project. Our fifth meeting was another participatory observation where we followed Solveig through a day of planning the structure of upcoming activities, organising colleagues, and taking part as panellist in a course for parents on digital

tools and family activities, connecting us with five additional champions to involve in future studies.

3.4. Analysis

Ethnographic analysis was conducted as an iterative–inductive process, following O'Reilly's approach in which data collection, interpretation, and theoretical reflection are continuously interwoven [36]. Rather than adhering to a linear model, the analysis proceeded through cycles of immersion in the field, reflexive engagement with both empirical material and the relevant literature, and the gradual emergence of meaning through comparison, contrast, and thematic development. Ethnographic encounters are inherently iterative and inductive, with analytical insights emerging gradually and organically through ongoing cycles of fieldwork, reflection, and interpretation. Rooted in interpretive and phenomenological traditions, this mode of analysis foregrounds participants' lived experiences and social practices, while also attending to the researcher's positionality and influence within the research setting. This was employed iteratively, meaning that we engaged in a continuous cycle of producing written data through ethnographic engagement [39] in observations, interviews, and participation, then interpreting and reinterpreting the findings in relation to ongoing activities. For example, preparation could include structuring handwritten templates in the notebook for quick notetaking and categorization of observations, which was followed by a longer description and analysis once a suitable opportunity was given in order to then further reflect upon observations in relation to other research activities or literature.

Our iterative approach to analysis was grounded in the fieldnotes produced during the fieldwork described above. In keeping with an iterative ethnographic orientation, writing was not treated as a mere record of events, but as a central mode of analysis. The process of writing fieldnotes facilitated the emergence of insight through iterative engagement with situated experiences. Rather than beginning with predefined categories, we used writing to navigate between observation, reflection, and interpretation, allowing patterns and meanings to gradually surface. As Emerson et al. [40] notes, the act of writing is itself constitutive of ethnographic understanding, enabling the transformation of lived moments into analytically meaningful material. Through this process, we were able to gain a deep, evolving understanding of the reciprocity that developed through the design ethnographic LL project implementation and the local context mediated through the champions. Through the analysis of the fieldwork, five key categories of relational practices of reciprocity were identified. These will be presented in the next section.

4. Results

The principal findings emerging from the research and the development of the Living Lab highlight five relational practices of reciprocity that evolved in collaboration with the community champion over the course of the project. Each of these practices directly engages with the research question posed in this article: how can Living Lab projects scale deep through sustained ethnographic engagement with local champions? As outlined below, the practices exemplify the processual, relational, and co-creative dimensions of deep scaling as they unfolded in practice. They are presented through a series of focused ethnographic scenes, grounded in thick descriptions [41], that illuminate key moments from 18 months of fieldwork. Rather than aiming for comprehensive coverage, these scenes are carefully selected to represent broader patterns in our data, capturing how reciprocity evolved in situ through sustained engagement with local champions in a Living Lab context.

This mode of representation is deliberately chosen to foreground the situated, relational, and contextually embedded character of the interactions. It enables the reader to

encounter lived experiences as they unfold within specific spatial and social environments, illustrating how meaning is co-produced over time.

Particular attention is paid to moments where the local champion engaged with us as researchers, highlighting the emergence of reciprocal, co-creative relationships. These scenes are not purely descriptive; they are analytically inflected accounts that illustrate what we identify as core relational practices to emphasise how writing does not simply communicate ethnographic insights, but, as a result of the activity of texts, it was also part of generating them through the ongoing analysis of interpreting observations into text [40]. Each scene is followed by a brief interpretive commentary that draws out its significance, thus combining narrative texture with analytical insight. This approach is consistent with ethnographic traditions that seek to capture ambiguity, nuance, and the complexity of human interaction through layered and grounded storytelling [36].

4.1. From Gatekeepers to Co-Creators

The first contact with Solveig did not follow any formal protocol or prearranged meeting, but instead took place over the phone, prompted by a list of "local, intermediate organisations" from the municipality's transportation team. Though no names were provided, the transportation team's willingness to engage grew as I explained the difficulty of recruiting participants from the area. They mentioned the area's many active volunteers, directing me toward grassroots actors, or "driving spirit", without naming anyone specific. Among the organisations listed, Solveig's stood out, described as "one of the most active", hinting at her role not only as a civil society actor but as a key figure with deeper access to the community.

Instead of following official routes, access came through ad hoc, relational negotiations with local gatekeepers. A quick online search led me to a phone number, and when I called, Solveig answered. Despite my preparations—notes on the project's aims, ethical protocols, and research goals—her response was immediate. She invited me to visit the very next day, positioning herself not as a gatekeeper but as a co-actor in initiating the project. I had to decline, explaining that we were still fine-tuning the details. The contrast between her proactive approach and my institutional need for preparedness highlighted a misalignment between academic and community timelines.

When I called her again the following day, Solveig had already spread the word, speaking to others and beginning the recruitment process without waiting for formal confirmation. This was no longer a simple facilitation; Solveig had taken on the role of a community leader, invested in our project.

Initially, we approached the field with a more traditional view of champions as gatekeepers: as a one-directional power dynamic where gatekeepers were seen as facilitators and access points for us as researchers. However, through our ongoing fieldwork in the project and interactions with our local champion, a more nuanced view began to emerge. As the scene describes above, the champion was not only a mere participant or facilitator in the research process, but an active co-creator of the project and LL design. That is, shaping the direction, framing, and outcomes of the project itself.

4.2. Relational Ethics in Practice

The workshop day came. It took place on the ground floor of a rented apartment building connected to another local organisation. The room was filled with everyday signs of community life: flyers, a small kitchen area, and a bulletin board crowded with events, announcements, and reminders. This board was not just informative; it was a pulse of collective activity, reminding people that "things are happening, and you are invited." It

served as an open invitation to the community, and some glanced at it casually, while others studied it closely.

We arranged six or seven tables into small islands, hoping to encourage openness, but underestimated the social dynamics of how these spaces were used. At 16:03, Solveig was pouring coffee, laying out fika, and answering questions about everything from visa issues to upcoming events. She moved effortlessly between topics, offering care, attentiveness, and weaving connections as she went. People arrived slowly, some left, and others returned as the flow of participation was far from linear. It became clear that our time-based, structured approach was less relevant than we had anticipated. The atmosphere was in-and-out as you want, rather than punctual.

When presenting our research, we handed out GDPR-compliant forms meant to ensure informed consent. However, the legal language disrupted the workshop's flow, leaving participants hesitant. They seemed to question, "Who are these people, really? And why do they want me to sign something so official?" A noticeable sense of distrust lingered—not directed at us personally, but at the institutional culture we brought with us. Solveig stepped in, not by explaining the legalities, but by translating the forms into familiar language, framing them within the context of the community. What could be won by committing to the session, and most importantly, signalling her own trustworthiness.

This workshop scene, intended to map mobility patterns, revealed more than we expected. It highlighted the friction between institutional taken-for-granted practices (such as research ethics protocols) and their practical applications in this particular LL setting. In this case, the forms, designed for protection, underscored the effort needed to establish trust. As participants eventually picked up pens to map their daily mobility, it became clear that the act of participation was co-created. Responses were achieved not through perfect workshop design, but through Solveig's relational work, making it possible for people to engage. Her presence bridged the gap, showing that this was a process worth trusting. Solveig encouraged people to talk to us, despite the scepticism that sparked from the GDPR documents.

4.3. Immersing the Researchers

On September 4th, I met up with community champion Solveig to follow her along during a day in the area. This day was the first Wednesday of the month, meaning residents would meet up at a local physical spot to discuss happenings and plan for coming events, while also introducing themselves and their organisations to community members.

The physical setting was a centrally located place on the bottom floor of a rental apartment house built in the latter half of the 1900s. It contained a small stage for talks, with seats for listeners, a back-room workshop area for art and construction, a small kitchen for preparing food and drinks, and an open space organised with tables and chairs for people to gather around during this Wednesday. The walls had bulletin boards containing upcoming and outdated events, which was the second physical artefact Solveig interacted with upon her arrival after making sure registration lists were placed accessibly by the entrance.

The atmosphere could be described as informal, and time was not prioritised as Solveig felt it was more natural to use "human time" than anything else. People could come and go as they wanted, and at a quarter past the appointed time the premise was full, leading to a queue being formed outside the venue. The guests were mainly community members and community organisation members, but there were also local business owners, local politicians, and newcomers to the community, ranging from children with their parents to seniors.

After welcoming everyone by name, Solveig used the brought-in microphone and speaker to introduce the agenda for the get-together, which included a co-created speaker list that anyone who visited could write their name on to speak about their visions, organisations, or interests for one minute. The list was soon filled with intermediate organisation representatives, including the research team and our background, and local community members encouraged by Solveig and other community champions. The way Solveig designed and invited us into the community meeting highlighted the reciprocity that was quietly being negotiated. When the speaking list was run through, we ate injera cooked by an Ethiopian organisation and moved around to speak to other community leaders and members of interest. I approached two men that recently started a handball club for kids. We found common interests for future studies. I have never called them. Yet.

Rather than the formal introduction of the researcher into the community, Solveig's approach was one of subtle co-creation. She did not just allow our presence in the space—she actively made it part of the fabric of the meeting, positioning us alongside other community actors. In this particular scene, by including us on the speaker list, she signalled not just tolerance, but a shared stake in the success of the gathering. Through this relational dynamic, Solveig created a space where our role as researchers was woven into the ongoing, organic flow of community interactions. The invitation was not only an introduction to the community, but an invitation to participate fully in the co-creative process, where mutual trust and respect were the foundation. Everyone could talk; everyone had one minute each.

4.4. Situated Learning Through Moving Around

Solveig and I took a walk from The Spot—our usual meeting point—at around 16:00 on one of those spring afternoons that slows everything down. The square was alive with market shoppers, workers drifting home, friends gathered on benches. As we walked, Solveig pointed out places where community organisations had once gathered, fizzled, or re-emerged. Near a sunken garage entrance, she paused: "Maybe here," she said, imagining a future prototype session of a design concept. Our walk became a kind of spontaneous community visioning, co-mapping spaces of potential for coming project activities.

She carried her worn tote—"Hjärnan", (Swedish for "the brain") as she called it—filled with flyers that worked like memory prompts. She handed them out selectively, depending on who she expected to meet. "This one's for [name], we've got a meeting tomorrow," she said. It was not just distribution. It was care, timing, recognition. People received the flyers as something meaningful, not generic. She remembered what might interest them, and the flyers reminded her of what to tell. She had a way of making it feel natural, sometimes even generous.

We stepped into the local library, tucked behind what used to be a bank vault. I signed up for a card I would never use, just to show a kind of presence. On the wall hung "book bags" filled with curated selections for parents. They were age-specific, multilingual, and designed with care for parents who may not have the time or knowledge to select books for their kids themselves. Later, we passed a taped-up flyer on a metal door; a part-time bike repair shop, quietly combining circular economy goals with grassroots employment. It was closed, but Solveig spoke about it with quiet pride as it was envisioned to combine informal community needs with employment.

Throughout our walk, Solveig occasionally checked her phone, her WhatsApp group more specifically. It had grown from 30 to over 400 members, all women. It had begun with "a bit of cheating", she joked, referencing an early workshop where all participants joined. She never added me to the group. "We're trying to keep it safe," she said. I respected that boundary.

We eventually arrived at the venue for the champion network meeting. Shoes spilled across the entryway. Inside, a coffee pot gurgled behind a glass door. The room was informal, the agenda hand-held and barely visible. We went round introducing ourselves short, grounded, not rehearsed. I was new, a PhD student from Halmstad. Others were long-time collaborators, community leaders, volunteers, city reps. No formalities, just shared purpose. We later walked to the event site to plan placements and responsibilities. It was my first time. Solveig knew everyone.

This scene demonstrates how ethnographic engagements are more than a tour or a pre-meeting. It was a form of mutual learning. Solveig shared her world; I shared our project. Through her actions, not words, she modelled co-creation, relational access, and trust-building. Reciprocity emerged not through formal agreements, but through shared steps, time spent, and a way of moving together. As we wrapped up, this session made it possible for us to speak more freely about the possibility of future collaboration where her organisation could step in not just as a "community contact" but as a committed, strategic partner.

4.5. Holding Trusting Conversations

Solveig and I set off towards The School, where she and three other community leaders were due to speak on a panel tied to a local parenting course. Just as we left The Spot, the community centre, her phone rang as someone needed the keys back. At that very moment, a young woman passed us. "Hi, Solveig!" she called. Solveig waved, phone still to her ear, and quickly asked if the woman could deliver the keys on her way. It was a smooth, offhanded relay of trust.

Moments later, Solveig turned to me with a look of mild concern. "That ring has my house keys," she said. "If it disappears, I'm done for." Then added, almost to herself, "Let it be worth it." She didn't mean it dramatically. Just a quiet, everyday kind of risk, trusting others for the sake of the wider community's flow. "For the greater cause", I replied. We smiled, but the exchange held a trace of the fine line between personal exposure and collective effort. Solveig coordinated care, and practiced it, even when it cost her something small but vital.

As we walked, she told me about a course she had just completed with local police and support services. It focused on the shifting methods of youth recruitment into criminal networks—less at youth centres now, more through encrypted apps. "It's Discord, Snapchat. . . and this one?" she asked, showing me an unfamiliar icon. "Wickr", I said. "It deletes messages after they're read". "Yes! That one". She saw learning these new codes not just as information, but protection. A part of a growing role she played in both physical and digital guardianship of her neighbourhood. "No one dares to speak anymore", she added later, touching on the silent fear that had crept into the community, referring to tactics used by criminal gangs in the area. Solveig mentioned she was in a Zoom meeting the other day with other community champions across Europe to discuss the issue. They had all met through a course that ended in February but continued connecting independently for mutual learning. "It's joint", Solveig said when I asked who was teaching whom, indicating a sense of shared leadership and knowledge sharing.

Talk shifted to legacy. Many long-time community figures were ageing out of active work. But now, twelve younger people had stepped forward. "Four even applied for funding, and got it!" she said, visibly hopeful. But the catch was clear: "They often have to give up income to do this. And they're sharp! Strong networks. But [one of them] will probably stick to their profession." I asked what could change that. "Money," she said bluntly. Support wasn't just moral—it needed to be material. After the panel, we walked back to The Spot. Solveig reflected on the growing gap between institutional metrics and

community experience. "Agenda 2030, or whatever it's called. Look at things, we're not going to make it," she said. "So why do they only care about CO_2?". Her frustration was with the selective urgency of policy that rarely aligned with daily, lived emergencies.

This, and similar walks and their moments, reveals how reciprocity developed not through grand gestures, but in accumulated acts of trust, and shared risk. Through Solveig's actions, such as delegating with care, she translated institutional discourse into lived meaning and gradually wove the researchers' presence into the community's own rhythms. Solveig did not treat us as researchers visiting the community, but invited us into a relationship, built on trusting conversations and daily exchanges. By doing so, Solveig showed how micro-relational acts bind people together within a community.

5. Discussion

The champion's involvement throughout the research project exemplifies a critical role of champions in fostering trust, participation, and knowledge exchange in participatory research [30]. Through her longstanding connections and community leadership and insight, we were able to initiate a bottom-up approach that emphasised justice and inclusivity in mobility planning by cherishing our champion's situated expertise [20]. The results show how a design ethnographic approach to building Living Lab relations with community champions can enable conditions for relational practices that evolve between project agendas and local social ways of doing things. This process of enabling reciprocity is presented in Figure 2, and in this section, we will discuss how this process can be beneficial for deep scaling impact to unfold.

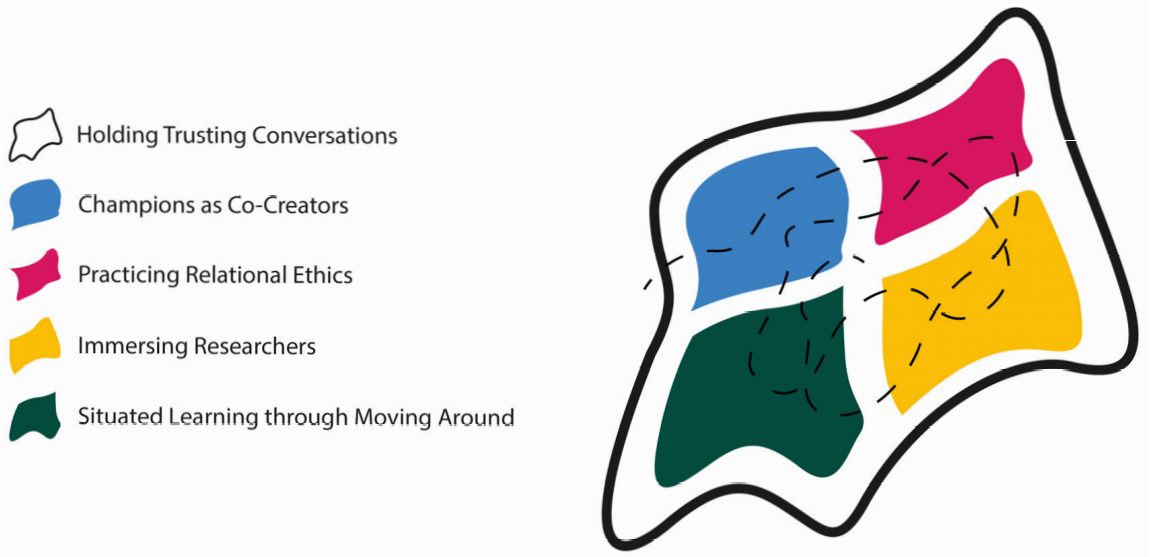

Figure 2. The Deep Scaling Reciprocity Map illustrates the not necessarily process-oriented conditions for how deep scaling unfolds through ethnographic engagement with community champions, and how researchers move between these (dashed line) parallelly or sequentially.

5.1. Connecting Empirical Methodology with Conceptual Contribution

The findings presented in this paper emerged not from predefined categories or fixed roles, but through sustained and situated ethnographic engagement over time. By embedding ourselves within the everyday practices of community champions, our design ethnographic approach made visible how local actors enact trust, care, and shared responsibility in ways often missed in more instrumental LL engagements. This approach allowed us to follow champions as they moved across spaces, negotiated responsibilities, and practiced relational ethics that were not only observable but often co-experienced by the researchers.

This methodological way of doing responds directly to limitations identified in earlier LL research, which often treats community engagement as an input to be optimised rather than a social dynamic to be understood from within (e.g., [11,18]). Where the earlier literature tends to present champions as fixed organisational roles or strategic assets for innovation, our ethnographic material reveals a more nuanced picture of champions not only enabling research access but shaping the project itself.

This co-creation relationship between the researchers and champion was not incidental but a central insight in regard to the slow, embodied presence invited by the approach. It is worth noting that the conditions for deep scaling could have remained partial or invisible without such commitment. In this sense, the empirical design did not simply confirm existing theories but generated new ones, particularly around the reframing of champions as organic actors central to deep and lasting transitions in marginalised contexts.

5.2. Champions as Co-Creators

Rather than simply facilitating researcher access to the community, the champions in this study took on leadership roles in guiding LL activities. The study's findings align with calls in the LL literature to move beyond tokenistic involvement towards empowering community members as equal partners in innovation practices [7,9,33]. When local actors gain co-ownership of the process, as we experienced when our champion took lead in recruitment and organisation for our first workshop just after our initial contact, the initiative can tap into their "real" contextual knowledge and long-term commitment, thereby reinforcing project resonance with local values from the start. For example, champions often act as "direction-setters" when it comes to social innovation, using their deep understanding of local needs to navigate projects in meaningful directions [16]. As Gallagher notes, champions from the community led the development of participation processes when formal efforts failed, thereby redesigning projects to fit local realities better [42]. Similarly, the study's findings indicate that the champion's input related to the shaping and planning of project activities and methods, including the recruitment of community members, as a way of linking these to local culture and ways of doing. This concept of the co-creative champion becomes a key condition of scaling deep as it embeds new ideas in the community's own ways of doing rather than forcing external agendas. It also reflects shared responsibility as both researchers and champions share accountability for project processes. By treating local champions as co-creators rather than gatekeepers, the project nurtured local leadership, which is seen as a crucial aspect of sustaining innovation beyond the life of a single project [32].

5.3. Practicing Relational Ethics

Another condition for deep scaling was the practice of relational ethics as champions and researchers navigated the friction between formal, institutional protocols and the situated needs of trust-building, actively assisted by champions. LL projects often come with institutional requirements including data contracts and predefined activity formats that can clash with organic, trust-driven processes of community relationships. Our study shows moments were adhering strictly to institutional protocol would have undermined, and possibly alienated, community values and trust. This reflects an ethic of care and responsiveness as researchers approach contexts, putting the relationship before the rule when necessary to maintain mutual understanding and respect, much in line with Gallagher [42]. Our champion did, likewise, mediate the project's formal demands and preplanned arrangements with community comfort levels. As in the case of our first workshop with the community, where Solveig shared her trustworthiness with us by relating formal GDPR contract to community benefits, this sometimes meant redefining project-associated

contracts in context-appropriate ways, a situation also observed by Molloy et al. [16], who noted the need for champions to reframe institutional norms to serve the overall social mission better.

Embracing such relational ethics is not always easy, as they are tied to institutional mandates. Still, our study suggests it is pivotal for sustained engagement as it builds mutual understanding and credibility. Over time, the reciprocity-enhanced trust allowed for further, open dialogue through added ethnographic fieldwork which was not planned from the start. As identified by Berberi et al. [7], maintaining situated trust-building may require negotiation, and our study details that understanding by showcasing how such negotiation may take place with the assistance of community champions. By practising relational ethics, champions can help projects signal respect for local ways of knowing and doing, encouraging investment into collaboration, opening a reinforcing cycle and enabling deeper understanding and change.

5.4. Immersing Researchers

A third condition for achieving deep scaling is the sustained immersion of the researcher in the community's everyday life. This immersion extends beyond formal interactions and involves consistent, informal engagement that builds relational depth and contextual understanding. By participating in local events, spending time with community champions and residents, and observing daily life routines, we gained insights that are inaccessible through brief site visits or short-term workshops. In line with Von Wirth et al. [24], who emphasise the importance of "learning by doing" in transformative research, our ethnographic engagement deepened our relationship with the community and the champion. It also signalled a long-term commitment, which was necessary for establishing trust.

The role of the community champion was particularly instrumental in facilitating this process, as she supported our integration into the community, helping us become recognised participants in the local setting by inviting us to monthly meetings and get-togethers. Thereby, we were allowed to participate without any rules tailored specifically for us. We took part in the same way as everyone else. This embedded presence supported our credibility and reduced social distance while lowering residents' barriers to sharing their thoughts, concerns, and aspirations, enriching the Living Lab's learning processes. Moreover, the champion's practice of relational ethics, grounded in mutual care and accountability, complemented our immersive approach. Our visible and consistent participation—showing up, contributing effort, and actively engaging in community meetings—allowed us to demonstrate trustworthiness over time. This helped reposition us from detached observers to engaged participants in the community's practices. While such immersion is inherently demanding and time-intensive, the presence and support of our committed champion made it both feasible and meaningful.

5.5. Situated Learning Through Moving Around

The study's findings also show situated learning as a condition of deep scaling, especially in considering learning as something that occurs in moving through spaces where everyday life unfolds. As such, understanding between researchers and champions is not necessarily achieved in set research activities in formats such as workshops, but through moving around together in the community, walking through neighbourhoods, visiting local sites of importance, and literally following champions in their daily routines. Just as when Solveig visioned future implementations from the project by the sunken garage (see Section 4.4), these shared spatial experiences created informal moments of visioning and reflecting upon project concepts whilst letting the researchers learn more about the community they designed with, as the champion was prompted to articulate insights about

their community that might not surface in a formal setting. This mode of mutual learning by being on the move is supported by design research methods that use "go-alongs" or mobile interviews to reveal context-specific knowledge [43,44]. Beyond data collection, such activities enable mutual transactions to occur as researchers and champions share and envision through the characteristics of local space, making the context a prompting machine itself through informal activities, as sought after by von Wirth et al. [24]. As prior scholars suggest, social learning in sustainability initiatives is amplified when people engage in real-world activities together [32]. Moving through the physical community landscape with champions broke down formalities. It prompted storytelling (project-related and non-project-related) that enriched both the researchers' and champion's understanding of the issues and opportunities at hand.

5.6. Holding Trusting Conversations

The final condition is a foundation that ties all the above conditions together. Trust-building in our project was not a one-time event but an ongoing practice through a series of trusting conversations where both champions and researchers listened, responded, and followed through on commitments. We use "conversation" broadly to include dialogue and any interaction where goodwill, understanding, or assistance is exchanged. Over and beyond our research project, the researchers frequently revisited champions for informal check-ins. This reciprocity created a safe space where risks could be taken, and occasional missteps were tolerated. As Koens et al. [5] formulate, trust is essential for community members to invest time or open up about real issues.

Furthermore, when trust is present, communities show greater ownership and initiative. In digital inclusion projects, for example, local champions serve as trusted and personal "touches", bridging concepts or services and sceptical residents [30]. In our LL, community champions similarly acted on their promises, demonstrating accountability that nurtured trust. By reciprocating, by helping champions with their own community initiatives outside the research scope, the researchers demonstrated mutual care for both community well-being and project goals. As a result, the growing project team of researchers and community champions developed open communication, enabling discussions on sensitive topics related to local politics and happenings and fostering the possibility of deeply rooted interventions, such as the example during the walk with Solveig that turned into a discussion on local challenges and underlying problems. The literature highlights that authentic dialogue and long-term relationship-building are core to any successful co-creation process related to social good [30,42]. Therefore, the trusting conversations in our study could be seen as the glue of the deep scaling process as they bound together the researchers and community champions with a shared mission. In the following subsection, we discuss how LLs can be designed to cultivate deep scaling in relation to the unfolding conditions found in this study.

5.7. Designing for Deep Scaling Living Labs

The study's findings carry implications for how LLs can be designed and operated in complex communities. In such settings, conventional top-down engagement orchestrated through a governance structure, leadership, and power distribution falls short, as genuine inclusion requires patience, trust, and flexible facilitation [45]. From our analysis, five key conditions emerged as prerequisites for deep scaling through community champion engagement. These conditions align the LL with the community's social fabric of existing values and knowledge, which enables interventions to take root rather than remaining as isolated experiments. They illustrate a commitment to scaling deep as they prioritise shifts in culture and relationships over scaling up approaches. In practice, this

calls for LLs that invest in relationship-centred processes. Even though they are considered to be slower, these processes cultivate a longer-lasting and more sustainable understanding of local values. A recurring critique is that many labs are too short-lived and output-focused, limiting their transformative potential [8]. To counter this, our study calls for structuring labs for longevity, for example, by embedding them into existing communities to increase the possibility of initiatives' continuation beyond the project's end. The study's findings indicate that the champion used existing mechanisms to follow through on the LL project and extend beyond project timelines. These findings align with what is reported by contemporary research, where subjectively short project phases are used as stepping stones for long-term change [16,32]. Engaging community champions supports the idea of deep scaling in LLs, embedding the social, relational fabric of a community instead of just scaling up in size, as this scaling may emerge organically through anchoring champion-led change [46]. Together with a "slower" ethnographic approach, this proved invaluable in creating the trust and mutual understanding needed for learning and co-creation. The research team gained insight into local norms, struggles, agendas, and aspirations by spending extended time in the field and even becoming part of everyday community life. This study points out that LLs are inherently relational, and this relational immersion created social capital, leading to further engagement. In our case, such deep immersion through the community champion assisted researchers in defining project success as something grounded in locally meaningful terms while providing enough safety to voice ideas and routines. Furthermore, the presence of a community champion was important as she acted as a cultural interpreter and mobilizer who translated the lab's goals into the community's language and vice versa. In line with Gallagher [42], this again confirms the importance of community champions in creating personalised, creative approaches when formal methods fail to engage. Thereby, in light of Puerari et al. [33], LLs in communities are suggested to actively identify, include, and empower local champions as co-creators rather than relying solely on official procedures or outside expertise.

5.8. Study Limitations and Future Research

Even though this is inevitable in a qualitative context, it is worth noting that the nature of this ethnographic study is open for subjective analysis based on researchers' predispositions, ideas, and emotions. As such, further studies on community champions for scaling deep could triangulate and thereby complement this study by observing the reactions and comments of other participants to strengthen study outcomes and further support the arguments for scaling deep. As an additional limitation, this study focused mainly on one of the identified champions. Further research is needed with additional champions to increase the generalisability of research findings and thereby heighten the possibility of mapping out community structures, power relations, and tensions. Lastly, the study was conducted within a country where social life has a strong tradition related to associations and community organisations, which highlights the need for research in other countries that do not follow the Scandinavian societal model. Our hope is that our suggested Reciprocity Map (Figure 2) encourages further research on how these conditions for scaling deep may inform research in longitudinal studies and also brings inspiration to designers of LLs in underserved communities.

6. Conclusions

This paper explores ethnographic approaches with local community champions for scaling deep in Living Labs by answering the following research question: how can Living Lab projects scale deep through sustained ethnographic engagement with local champions? The study indicates that scaling deep is enabled by five conditions presented in the concept

of a Deep Scaling Reciprocity Map: From Gatekeepers to Co-Creators, Practicing Relational Ethics, Immersing the Researcher(s), and Situated Learning through Moving Around, which enable Trusting Conversations to occur and further enhance conditions. These findings contribute to understanding how Living Labs may slow down research processes and cultivate sustainable transformation. However, it is worth noting that this study relied on small, homogenous samples within a specific context. This implies that further research should explore the identified conditions for scaling deep by studying them in different Living Lab contexts and sizes. In our study, deep scaling depends on embodied and relational engagements rooted in trust, care, and shared responsibility between researchers and the community. With such contextually grounded commitment, LLs in complex communities will have a better possibility of addressing so-called "wicked" problems and shifting mainstream practice toward sustainable alternatives.

Author Contributions: Conceptualization, O.W., V.F. and J.L.; methodology, O.W. and V.F.; analysis, O.W. and V.F.; investigation, O.W., V.F. and J.L.; resources, O.W.; data curation, O.W. and V.F.; writing—original draft preparation, O.W., V.F. and J.L.; writing—review and editing, O.W., V.F. and J.L.; visualisation, O.W.; supervision, V.F. and J.L.; project administration, V.F. and J.L.; funding acquisition, V.F. and J.L. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Horizon Europe research and innovation programme, grant number 101096664 and VINNOVA, grant number 2023-04183.

Institutional Review Board Statement: This study was granted an exemption from ethical review as the research was conducted in accordance with local ethical guidelines, specifically the Ethical Research Act (Lag (2003:460) om etikprövning av forskning som avser människor). The project was deemed eligible for this exemption by the University Research Ethics Advisory Board.

Informed Consent Statement: Consent was obtained from all subjects involved in the study.

Data Availability Statement: Data will be made available upon request.

Acknowledgments: During the preparation of this manuscript the author(s) used ChatGPT and Grammarly for the purposes of ensuring an academic level of language. The authors have reviewed and edited the output and take full responsibility for the content of this publication.

Conflicts of Interest: The authors declare no conflict of interest.

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