

THE PRESERVATION OF ROMANIAN VERNACULAR URBAN HERITAGE THROUGH SOCIAL ENTREPRENEURSHIP. A DEBATE BASED ON UNIVERSITY–RESEARCH CENTER–COMMUNITY COLLABORATION

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Abstract

The paper explores the transition from sustainable entrepreneurship (SuE) to social entrepreneurship (SE) in Romania, focusing on the role of collaborative networks between universities, research centers, and local communities, generating the Triple Helix model (supported by a collaborative ecosystem). The scientific debate considers the importance of enterprises operating in the field of vernacular architecture and traditional earth-based building materials, highlighting the potential of integrating cultural heritage conservation with social impact objectives. Furthermore, innovative conservation methods in Romanian vernacular urban heritage and digital self-learning content for developing self-learning skills, provided by higher education institutions (HEIs), are explored. Thus, it is demonstrated how research and academic expertise can effectively strengthen sustainable business practices that also address social inclusion, community empowerment, and environmental stewardship. Furthermore, the critical role of HEIs in promoting digital self-learning and social entrepreneurship education to bridge the gaps between knowledge production and community needs is explored. The paper proposes a strategic roadmap for the development of SE, supported by policy analyses, feasibility-impact matrices, and key performance indicators. The research conclusions suggest that SE can play a transformative role in preserving cultural heritage, promoting sustainable lifestyles, and fostering social cohesion - provided that structural challenges and resource constraints are addressed.

Keywords: Social entrepreneurship (SE); Sustainable entrepreneurship (SuE); Traditional housing heritage conservation; Earthen-based building materials; Engineering research; Collaborative ecosystems; University–community partnership; Triple Helix model

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Introduction

Sustainable Entrepreneurship (SuE) integrates economic, social, and environmental objectives into business practices, aiming to create long-term value while minimizing negative impacts on society and the environment. The first part of this paper provides the conceptual and contextual foundations for analyzing the transition from SuE to *Social Entrepreneurship* (SE) within the Romanian context, with particular attention to the protection of vernacular heritage and the promotion of earthen-based building materials [1], [2].

Sustainable entrepreneurship in Romania has proven growing relevance in the last years, in the context of the general drive of sustainable development, situating it within broader European and national policy frameworks. Public institutions are encouraged to facilitate public funding, especially to *Micro-, Small-, and Medium-sized Companies* (SMEs), for supporting the sustainability objectives, which determine direct impact on business model designs. The evolution of SuE in Romania is directly influenced by the country's socio-economic context, dominated by SMEs, which account for 99% of businesses and two-thirds of private-sector employment in the EU. Recent studies highlight that Romanian entrepreneurs increasingly prioritize sustainability, with 71.25% considering social implications and 82.33% emphasizing environmental impacts in their decisions, surpassing averages in middle-income countries [2], [3]. However, access to funding remains a critical challenge, particularly for startups in niche sectors like heritage and traditional materials.

While Romania has made notable steps in advancing SuE, its potential for generating substantial social impact - particularly in rural and heritage rich regions - remains underexploited. Many of these areas face persistent socio-economic challenges, including depopulation, high unemployment, and limited access to modern infrastructure [4], [5]. Simultaneously, they hold valuable but fragile cultural assets, such as vernacular architecture and traditional construction techniques, which are at risk of being lost due to neglect, inadequate maintenance, or unsympathetic modernization [1], [5], [6], [7]. Overall, in Romania, SuE is gaining traction, as local entrepreneurs increasingly prioritize sustainability; an IRES (Romanian Institute for Evaluation and Strategy) study indicates that over 75% of Romanian entrepreneurs acknowledge the negative impact of climate change on businesses, and almost half recognize sustainable practices and waste management as crucial for their companies' future success [8].

The main identified issue in this context is that Romanian sustainable enterprises often focus on environmental performance and economic viability but lack a structured approach to embedding social objectives into their core mission. This gap is especially evident in sectors tied to cultural heritage and traditional building materials, where economic activities could be designed not only to preserve architectural heritage but also to empower local communities through skills training, job creation, and the revitalization of traditional crafts.

Furthermore, the transition from sustainability-focused to socially oriented business models faces systemic obstacles: limited access to tailored funding [3], [9], insufficient networks linking entrepreneurs to research and education institutions [7], [8], and the absence of integrated policies that address both cultural preservation and socio-economic development. Without a deliberate strategy for incorporating SE principles, the opportunity to transform heritage-related industries into engines of inclusive, community-driven growth risks being overlooked.

A key focus of the discussion is on Romanian vernacular architecture and earthen-based materials. Historically, earthen construction has been integral to Romanian rural identity, offering ecological benefits such as low embodied energy, recyclability, and local availability. At the same time, these materials embody cultural value, anchoring communities to their traditions and landscapes. However, the sector suffers from neglect, inadequate maintenance practices, and pressures from modernization. Thus, vernacular architecture is not only a technical resource but

also a socio-cultural asset that can be revitalized through innovative entrepreneurial models, bridging sustainability with community-based development [1], [7], [8].

To tackle the complex challenges facing sustainable and social entrepreneurship in Romania, especially in heritage conservation and rural development, the paper proposes the Triple Helix Collaborative Model. This approach brings together universities, research institutions, and community actors to co-create solutions that are both technically sound and socially relevant:

- Universities contribute by offering formal education and digital self-learning tools (e.g., the DigiFunCollab platform), equipping students and professionals with skills in social innovation and sustainability;
- Research centers, such as the National Institute for Research and Development in Constructions, Urbanism and Sustainable Spatial Development “URBAN-Incerc”, Romania, which provide scientific expertise in sustainable construction materials and technologies, forming the technical backbone of heritage-based entrepreneurship;
- Community stakeholders (including NGOs, local governments, and entrepreneurs) serve as the real-world testing ground, ensuring that initiatives are grounded in local needs and capable of delivering tangible social impact.

These three pillars form a dynamic ecosystem that supports Romania’s transition from isolated sustainable enterprises to robust social entrepreneurship models that preserve cultural heritage while empowering communities.

By weaving together these three dimensions, the Triple Helix framework promoted by the current study demonstrates significant potential to facilitate Romania’s transition from isolated SuE initiatives to robust SE models, capable of generating sustainable economic value while preserving cultural heritage and strengthening community resilience.

Basic concepts supporting the proposed objective

Sustainable vs. SE – Key definitions, differences and overlaps

SE represents a multifaceted concept that collects initiatives aimed at addressing social issues through innovative solutions, often prioritizing social value over profit. It involves various organizational forms, including nonprofit and for profit ones, and is characterized by a commitment to social missions that approach problems such as poverty, education, and environmental sustainability [10]-[14]. The field has evolved over the years to include a broad range of activities, from small businesses to informal social initiatives, all aimed at creating social impact through entrepreneurial approaches [15], [16].

SuE and SE are related but distinct concepts, each reflecting different priorities within the broader mission of generating positive change through business. SuE, as previously stated, focuses primarily on creating ventures that balance economic viability with environmental friendly standards and goals, ensuring that current needs are met without compromising the ability of future generations to meet theirs [17]. Ecological and resource-efficiency goals are integrated into the core business model, often emphasizing innovations in clean technologies, Circular Economy principles, and responsible resource provisions and consumption. SE, by contrast, centers on addressing pressing social issues, such as poverty alleviation, inequality reduction, or community empowerment through entrepreneurial initiatives [18]. Social entrepreneurs aim for a “double bottom line” (or even a triple bottom line): People (social value creation, namely impact on communities, equity, wellbeing); Planet (environmental responsibility by sustainability, resource conservation and reduced emissions); and Profit (financial health and longevity of the business). Consequently, the primary success measure in

SE is the scale and depth of social impact, with financial sustainability serving to that end rather than the end itself.

Despite these differences, the two domains increasingly overlap, particularly in contexts where environmental degradation directly affects social well-being, such as rural heritage regions, which are vulnerable to several socio-economic issues (population decline, elevated unemployment rates, and inadequate modern infrastructure) and environmental issues as well, like climate change. In these cases, entrepreneurs adopt hybrid models that combine sustainability-oriented innovation with social-mission-driven governance, creating ventures that simultaneously generate environmental and societal values. This convergence is particularly relevant in heritage-rich rural areas, where preserving vernacular architecture through eco-friendly, traditional building techniques can protect cultural identity while also creating local employment and fostering community resilience, and identifying concrete and adequate strategy, means, and methodology for its achievement represents the main objective of the current study.

Romanian SE development

Romanian context for SE development

SE has also emerged in Romania as a mechanism for addressing complex social issues while fostering community development. The interplay between public administration, supporting policies, and individual motivations has significantly shaped the landscape of SE in the country. Exploring the state of SE in Romania by 2015 [19] indicated that Romania performed poorly: The majority of social organizations were associations, followed by foundations and companies; most non-governmental organizations (NGOs) operate nationally, with only few internationally. The empirical study performed by *C. M. Crisan et al.* [19] shows that NGOs rely heavily on volunteers and part-time staff; very few companies employ people with disabilities. In addition, it was identified that NGOs show stronger commitment to social missions than companies and greater awareness due to EU-funded projects; at the same time, 63.15% of company managers were unfamiliar with the term “SE”. Bureaucracy, lack of legislation, low collaboration, and transparency issues were identified as major barriers against SE development in Romania.

In addition, the increasing involvement of local public administrations in SE initiatives is strongly correlated with the perceived importance of social projects for local communities [20]. The study of *G. C. Schin Cristache and N. Matis* [20] also has found a significant, but moderate, correlation between high involvement of local public administrations and citizens' interest in supporting social causes and projects that add value to the community, clearly suggesting that public administration efforts can influence public engagement in social initiatives. Another positive factor is represented by local public administrations increasing capacity to attract non-reimbursable European funds for SE projects. At the same time, low interest of private companies in co-financing social projects is still a reality.

In Romania, the gradual institutionalization of SE has been supported by legislative developments such as Law 219/2015 on the Social Economy and Law 292/2011 on Social Assistance, alongside European Union policy frameworks. Despite these steps, the social economy sector remains underdeveloped, yet it carries high potential for addressing rural depopulation, unemployment, and the preservation of fragile cultural assets. Together, these instruments provide a legal and strategic foundation for fostering SE, yet practical challenges remain in awareness, administrative capacity, and long-term financial sustainability (particularly in rural and rich heritage regions where such models could have transformative socio-economic impact).

Romanian vernacular architecture and earthen-based materials – Historical importance, environmental benefits, and social value

The heritage sector in Romania, including Romanian vernacular architecture and traditional building materials, particularly visible in rural areas, could represent a vital component for SE development, aligning with the basic principles of using eco-friendly materials and promoting fair labor practices. These sectors are gaining traction due to growing Romanian consumer demand for authentic, sustainable products and due to a substantial increase in social awareness, too [1]. Traditional Romanian houses were built to last generations using locally sourced, sustainable materials such as wood, clay, and reeds. These materials are durable, energy-efficient, and environmentally friendly, allowing homes to blend naturally into the landscape and reflect regional cultural identity [21]-[27].

Romania has a long-standing construction tradition dating back to the Neolithic period, when homes were built with wooden frames and infill made of reeds and yellow clay. Over time, construction techniques evolved to include elevated foundations made of river stones and improved beam joining systems for enhanced durability [1]. The construction system using wood, reed panels, and clay was widely used until the mid-20th century. It adapted to regional conditions and available resources, evolving from simple clay-coated wicker panels to more complex systems using wooden boards, unburnt clay bricks, and eventually fired bricks (Fig. 1).



Fig. 1. Traditional Romanian houses a) Traditional Romanian one-story house (Stângaceaua, Mehedinți) [26], [27]; b) Rural dwelling (Vaideeni, Gorj) [26, 27]; c) mountain region wood house in - Izvoarele village, Harghita County [1] d), e), and f) Mailat village, Vinga commune, Arad County [1]: d) Traditional house in an advanced state of decay, suitable for consolidation and repair works using traditional materials and techniques; e) Traditional house (in use); c) and d) Traditional house renovated with adequate materials to preserve the architectural specificity

A short but comprehensive overview of the typology of traditional Romanian houses and their evolution is presented by Studies of traditional architecture with a view to conservation and enhancement through standardization, Rural Housing in Romania, ICCPDC, 1989 [27] (Fig. 2). This evolution demonstrates the adaptability and resilience of vernacular architecture in Romania. These techniques provided cost-effective and sustainable housing while preserving cultural heritage and showcasing the ingenuity of traditional builders [27]-[30].

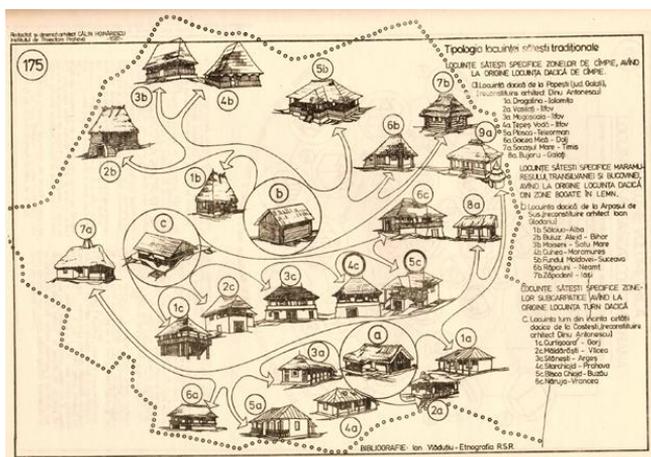


Fig. 2. Short overview of the typology of traditional Romanian houses and their evolution (Source: Studies of traditional architecture with a view to conservation and enhancement through standardization, Rural Housing in Romania, ICCPDC*, 1989) [27]

*The nowadays NIRD URBAN-Incerc, previously Incerc, was part of ICCPDC and stands for Central Institute for Research, Design, and Management in Construction in Romania. This structure was established in 1976 with the role of coordinating research and design activities in the field of construction, operating under the authority of the Romanian Ministry and the National Council for Science and Technology (CNST)

The 2011 population and housing census and data analyses provided by the Romanian National Institute of Statistics showed that nearly half of Romania’s population lives in rural areas, around 2 million residential buildings are constructed using earth-based materials (e.g., adobe, cob, wattle and daub), 75% of these earthen buildings being located in rural regions; also, approx. 32.9% of all Romanian homes are made with adobe and plaster, often supported by wooden structures [1].

Regarding some regional insights, Timiș County was identified with a high concentration of 33.5% of its total residential structures representing earthen buildings (adobe or rammed earth systems) (Fig. 3). This high percentage derives from the fact that Timiș is a lowland county with an obvious tendency to have more earthen homes due to limited access to wood compared to mountainous regions. Many of these buildings in Timiș County, were constructed before 1945, reflecting longstanding local building traditions [1].



Fig. 3. Traditional houses in the Banat region [32]: a) Rammed earth house; b) Adobe brick house

An interesting aspect of the Timiș County and of the Banat region, compared to other Romanian regions, is the diversity of the earth-based techniques, due to the cultural diversity of

its inhabitants: rammed earth housing of the German and Hungarian inhabitants and adobe and wattle and daub of the Serbian and Romanian ones, but also the hybrid system of their cultural dialogue [28]-[32].

The above presented data highlights the cultural and architectural significance of Romania's vernacular housing, also emphasizing the need for conservation, repair, and sustainable development of these structures, also creating various opportunities for SE development in valorizing traditional construction techniques in modern contexts

The collaborative Triple Helix model for SE development

The SE education and research framework provided by universities in Romania

The integration of entrepreneurial principles with social and environmental goals has become a critical driver of innovation and resilience in contemporary economies. In this context, SE education plays a pivotal role by equipping future entrepreneurs with the skills, knowledge, and mindset needed to design and implement business models that generate both economic value and positive societal impact. Through dedicated curricula, experiential learning, and interdisciplinary collaboration, universities can help students understand how market-based approaches can address complex challenges such as inequality, environmental degradation, and cultural heritage loss. By embedding topics like impact measurement, ethical leadership, stakeholder engagement, and sustainable resource management into entrepreneurship programs, higher education institutions not only prepare graduates to respond to pressing global issues but also foster the capacity to create viable, mission-driven enterprises. In doing so, universities act as catalysts for cultivating socially conscious innovators capable of integrating environmental stewardship and social responsibility into the DNA of their ventures, thereby bridging the gap between academic knowledge and real-world problem-solving.

Research and educational programs have been instrumental in advancing the institutionalization of social enterprises in Romania [33]. Since Romania's EU accession in 2007, the direction shifted towards EU-aligned paradigms of social economy and social enterprise, increasingly engaging Romanian policymakers, practitioners, and academics, shaping sectoral understanding, clarifying the profile and characteristics of social enterprises, and mapping the diversity of organizations that meet the legal criteria. The availability of European Social Fund (ESF) financing has further stimulated interest and development in the field.

Higher Education Institutions (HEIs) have responded to this momentum by introducing or adapting bachelor's and master's programs focused on social economy and entrepreneurship over the past decade. Universities such as West University of Timisoara, Dimitrie Cantemir University, Babeş-Bolyai University, and the University of Oradea have implemented government-subsidized programs, while institutions like the University of Bucharest and the Bucharest Academy of Economic Studies have integrated social economy and SE courses into existing majors, even without EU funding support.

This academic engagement parallels a rise in research output. Interest in social enterprises has drawn scholars from diverse disciplines, including sociology, management, and social work. While publications in the field were relatively scarce before 2010, research activity expanded markedly between 2010 and 2013. For example, a literature review identified 107 studies addressing social economy, social enterprise, and disadvantaged groups [34]. Furthermore, numerous social science journals and even books have dedicated special issues to topics such as social economy, social enterprises, and SE [33]-[36].

Furthermore, aspects regarding the DigiFunCollab project objectives and implementation at Politehnica University of Timisoara (Romania) are discussed. The DigiFunCollab Erasmus+ project (<https://digifuncollab.eu/>) has provided a valuable framework for SE self-skills

development. The collaborative methodological approach was ensured by four teams of trainers from Italy, Romania, Slovenia, and Germany [36]. The developed framework is therefore considering the SE specificity of the four countries involved and is aligned with the EU strategic framework in the SE field of education and entrepreneurial practice.

The project aims to develop an innovative online self-learning course in SE, targeting students and interested staff from Higher Education Institutions (HEIs), but also entrepreneurs, researchers, public administration representatives, and community members. Aligned with the European Union’s Higher Education Agenda, it prioritizes strengthening universities’ civic roles and fostering active participation in local communities. Participants will collaborate with institutional mentors to design and implement SE initiatives. By addressing the skills and knowledge needs of HEI personnel and students, the program seeks to advance community engagement and stimulate social innovation. The synthetic structure of the proposed educational and mentoring framework proposed by the project is presented in figure 4 [2].

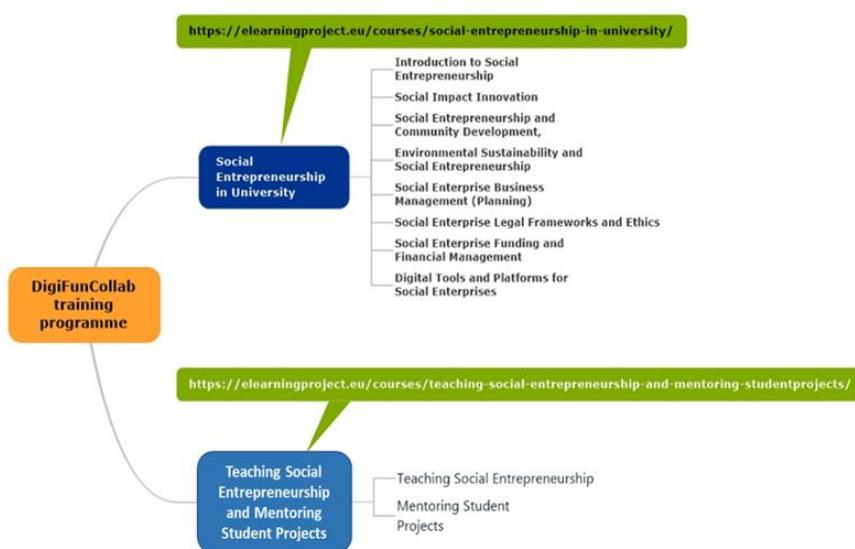


Fig. 4. DigiFunCollab training program structure [2]

Regarding the scope and flexibility of SE, while all countries aim to support entities with social objectives, their methods vary. Romania's framework includes specific provisions for “social insertion enterprises”. Slovenia's status-based approach offers flexibility. Italy's broad framework allows various legal entities to qualify. Germany's fragmented approach means that the scope and nature of support can differ significantly across regions [36].

Engineering research for sustainable heritage-based SE

Within the Romanian context, engineering research conducted by specialized institutes such as URBAN-Incerc, Romania has played a critical role in bridging scientific innovation with the preservation and revitalization of vernacular heritage. The institute’s work with traditional building materials and structures [1, [36]-[55], including earthen-based building materials (traditional adobe, cob, and poured and rammed earth techniques), combines rigorous material characterization with sustainable construction practices. The specified studies performed in the last 10 years [37]-[54] address both technical performances, such as thermal efficiency, moisture regulation, and structural durability, and socio-cultural dimensions, including the safeguarding of traditional craftsmanship. By providing validated methodologies for the restoration and

adaptation of heritage buildings, this body of research offers a robust scientific foundation for social enterprises seeking to operate in rich heritage regions. Such enterprises can leverage the outcomes of engineering research to create community-centered business models that generate employment, preserve cultural identity, and promote environmentally responsible construction solutions.

Engineering research in Romania can offer a fundamental role in enabling the transition towards heritage-based SE, as exemplified by the PN 23 35 04 01 (ECODIGICONS) project conducted by URBAN-Incerc Timisoara and funded through the national Nucleu Programme (2022–2027) [1], [55]. This initiative focuses on the development and validation of eco-intelligent construction products and circular design solutions by leveraging local resources, including traditional earthen materials such as adobe and cob, alongside industrial by-products. The anticipated outcomes align with the two distinct but complementary axes of project research (Fig. 5a) and the four General Objectives (GOs) (Fig. 5b) [1], [55], formulated in accordance with the overarching aim of the project and taking into account both the general and specific objectives outlined in SNCISI 2022–2027 [56] and SNEC 2022 [57].

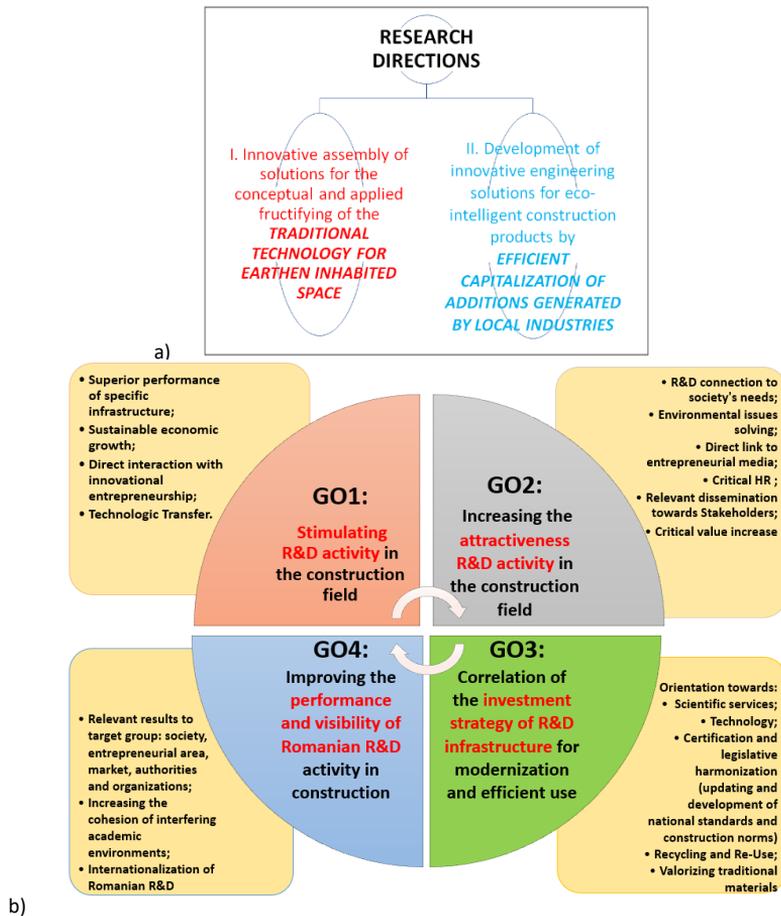


Fig. 5. URBAN-INCERC research project PN 23 35 04 01 [1], [55]: a) The two distinct, but complementary research axes of the project; b) the scheme of project's general objectives (GOs)

The four General Objectives (GOs) of the ECODIGICONS project directly reinforce the enabling environment for SE in Romania, particularly in the domain of protecting and revitalizing traditional heritage:

GO1 – Stimulating Romanian R&D activity in the construction field supports SE development by generating innovative, validated solutions for the conservation and adaptive reuse of vernacular architecture, including modernized earthen-based materials. This provides heritage-oriented social enterprises with scientifically tested products and methods, enhancing their credibility and market competitiveness.

GO2 – Increasing the attractiveness of Romanian research and development activities in the construction field can foster stronger partnerships between research institutes, local artisans, and community enterprises, making heritage conservation more appealing for entrepreneurs and investors by demonstrating its economic, cultural, and environmental value.

GO3 – Correlating the investment strategy for research and development infrastructure modernization and efficient use ensures that state-of-the-art laboratories, testing equipment, and digital heritage tools become accessible to social entrepreneurs, enabling them to prototype, certify, and scale heritage-friendly construction products and services.

GO4 – Improving the performance and visibility of Romanian R&D activity in construction amplifies the national and international profile of heritage-based innovation, facilitating knowledge transfer and attracting funding from public, private, and EU sources for SE projects. Together, these objectives establish a robust scientific and infrastructural foundation that can empower social enterprises to act as custodians of Romania's built heritage while generating sustainable socio-economic impact in rural and heritage-rich regions.

The ECODIGICONS applied research on innovative conservation of vernacular architecture combines non-destructive testing, laboratory validation at Technology Readiness Level 4, and the creation of technology-transfer pathways, performance declarations, and good practice guides. The project's integration of scientific innovation, heritage preservation, and community-oriented applications demonstrates how engineering research can serve as a foundational driver for SE, providing validated technologies, training opportunities, and knowledge resources that empower local actors to generate both social impact and sustainable economic value in rural and heritage-rich contexts.

The community dimension: Bridging policy, practice, and social impact

In Romania, communities - comprising local society, public administrations, entrepreneurs, NGOs, and cultural associations - represent a fundamental pillar in advancing SE, particularly in fields connected to heritage preservation and sustainable construction. Within the Triple Helix model, the community acts as both the beneficiary and co-creator of social value, ensuring that academic and research-driven initiatives align with real societal needs.

At the local level, public administrations play a key role in facilitating SE development through policies, heritage protection frameworks, and access to resources such as land or public buildings suitable for rehabilitation. Entrepreneurs and SMEs can leverage vernacular knowledge and earthen-based materials to create innovative products and services, transforming traditional construction practices into viable business opportunities with both cultural and ecological relevance. Meanwhile, NGOs and community associations act as mediators between residents, universities, and research centers, mobilizing participation, preserving traditional knowledge, and advocating for sustainable interventions in heritage-rich areas.

Within the Triple Helix model for SE development, the community pillar - encompassing NGOs, civic associations, entrepreneurs, and grassroots initiatives - functions as a critical driver of both social innovation and cultural continuity. In Romania, several initiatives exemplify how

community actors can effectively support SE in the domain of vernacular heritage and earthen-based building technologies.

For instance, the Bunesti Summer School (*Școala de la Bunești*), <https://www.bunesti.ro/media/>, founded in 2008 by Ana-Maria Goilav (Doctor in architecture, Ion Mincu University) and Petre Guran (Doctor in history of civilizations, EHESS Paris), is a summer school in a Wallachian forest in Argeș, Romania, dedicated to reviving vernacular architecture through hands-on construction of pavilions using traditional techniques and natural materials, such as Mesopotamian catenary vaults and Byzantine masonry. With nine pavilions built, it has engaged 1,230 students, 50 professors, and 30 craftsmen, earning the 2024 Philippe Rotthier Prize among 189 global projects.

Emphasizing self-limitation to counter consumerist excess, the school fosters sustainable, contemporary architecture rooted in local resources and traditional crafts of the Vâlsan Valley, offering an alternative educational model for high school graduates that blends practical learning with philosophical reflection on culture and environmental respect [58].

In addition, in the West Region of Romania, Timis County, the Center for Cultural Heritage and Anthropology Studies (RHeA), (<https://www.rhea-uvt.ro/>, <https://lift.uvt.ro/centre-de-cercetare/>; <https://www.facebook.com/profile.php?id=100057198139882>), an independent scientific unit of the West University of Timisoara, fosters research and community engagement around cultural heritage, anthropology, and heritage-driven innovation. Similarly, the RE Cult NGO (<https://recult.ro/>) promotes sustainable practices rooted in traditional building methods, whole mobilizing volunteers and local stakeholders in awareness-raising campaigns and heritage protection activities. At the same time, grassroots civic initiatives such as Gradinescu Timisoara (GreenFeel Community), part of the national Grădinescu Project (<https://gradinescu.ro/despre-gradinescu/>) emphasize urban ecology, community gardens, and eco-education, thus linking local environmental stewardship with participatory social innovation. An illustrative entrepreneurial case within this community ecosystem is ECO LIVING PROJECT SRL and its innovative product Caminota (<https://www.caminota.ro/>), a sustainable earthen-based building material inspired by Romania's vernacular architecture. Positioned initially within the sphere of SuE, Caminota demonstrates how ecological innovation can be effectively linked with community-oriented actors to foster broader social value creation.

These examples demonstrate how communities provide not only social legitimacy and grassroots participation but also create enabling environments where entrepreneurial and research initiatives can be tested, scaled, and socially embedded. In this sense, the Romanian community pillar is not merely a passive beneficiary but an active cocreator, contributing knowledge, practices, and values essential for the transition from SuE to fully-fledged SE.

The Romanian context offers both challenges and opportunities. Rural communities face issues of depopulation, limited economic opportunities, and infrastructural gaps, yet they possess intangible cultural capital and craftsmanship skills that are increasingly rare. By embedding these assets into SE initiatives, communities can foster local employment, preserve traditional architecture, and stimulate ecotourism. The development and use of earthen-based building materials, for instance, could be enhanced by research-driven innovation while being scaled through community-led enterprises. This integration not only sustains the built heritage but also creates inclusive socio-economic value, positioning local communities as active agents in shaping the future of sustainable development. Thus, in the collaborative framework of university–research–community partnerships, the community pillar ensures that SE initiatives grounded in vernacular heritage and sustainable materials are socially embedded, culturally sensitive, and economically viable. Through active participation, Romanian communities transform from passive recipients of top-down initiatives into co-designers of heritage-driven social innovation ecosystems.

Figure 6 presents a visual concept map of the Triple Helix model and its application in the presented research context. It illustrates how the three dimensions previously specified, universities, research centers, and communities collaborate to foster social entrepreneurship through initiatives like DigiFunCollab, ECODIGICONS and Caminota.

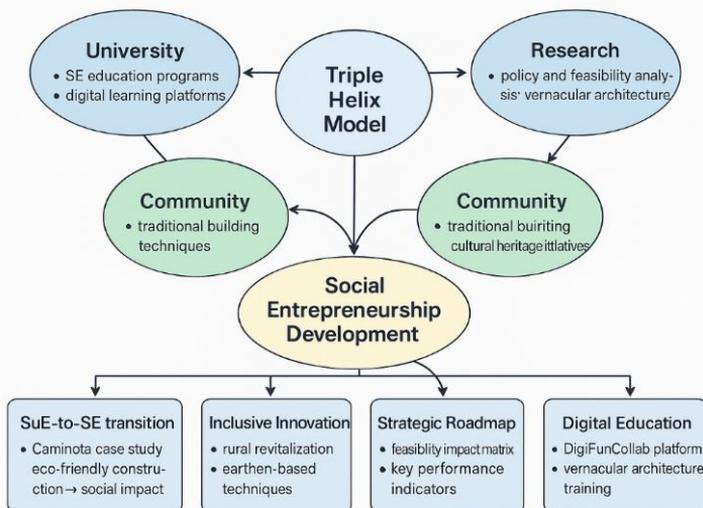


Fig. 6. URBAN-INCERC research project PN 23 35 04 01 [1, 41]: The two distinct, but complementary research axes of the project (left); the scheme of project’s general objectives (GOs)

In addition to the conceptual map, in Table 1 is presented the analysis of the stakeholders’ involvement in the considered collaborative ecosystem by identifying the key actors and evaluating their roles, contributions, and interactions. This brief analysis has been considered in the improvement of the stakeholder involvement in the development of SE through university–research center–community collaboration (creating the concrete stakeholder engagement plan).

Table 1. Analysis of the stakeholders’ involvement in the collaborative ecosystem (authors’ own development groups)

1. Key stakeholders identified		
Stakeholders	Brief description	
Universities	Act as knowledge hubs, providing research, education, and innovation support. They are central to the Triple Helix model	
Research centers	Contribute technical expertise, particularly to sustainable materials and construction (e.g., earthen-based architecture)	
Communities (especially rural)	Serve as both beneficiaries and co-creators in social entrepreneurship initiatives	
Entrepreneurs and NGOs	Implement and scale social innovation projects.	
Policy makers and local authorities	Implicitly involved in enabling or constraining the ecosystem through regulations and funding	
2. The Nature of Stakeholders Involvement		
Collaborative engagement (The research emphasizes co-creation and participatory approaches, especially through the <i>DigiFunCollab</i> project)	Knowledge transfer (Universities and research centers share expertise with communities to foster innovation)	Empowerment and capacity building (Communities are not just passive recipients but active participants in shaping and sustaining social enterprises)
3. Strengths in Stakeholder Involvement		
Interdisciplinary collaboration (The integration of education, research, and community needs is a strong point)	Focus on local context (Emphasis on vernacular architecture and local materials shows sensitivity to cultural and environmental factors)	Digital tools for engagement (Use of digital platforms to facilitate learning and collaboration is innovative and scalable)

4. Potential Weaknesses or Gaps in the Study Approach

Limited representation of stakeholder voices (The research is based on social needs assessments, direct testimonials and data collected from stakeholders; the dynamics of the local social context may weaken the depth of analysis)	Unclear power dynamics (Special attention should be given to how the decision-making is shared among stakeholders, especially at the micro-communities' level, as villages)
Scalability and sustainability (The long-term commitment of stakeholders, especially in resource-constrained settings, may not be fully addressed)	Policy engagement (The role of local or national government appears underdeveloped, despite its importance in enabling systemic change)

Methodological Framework - Target Transition from SuE to SE
Possible directions for SE development tied to vernacular architecture and traditional, earthen-based building materials

Romania can offer a promising landscape for social entrepreneurship (SE) tied to vernacular architecture and traditional, earthen-based building materials by combining several concepts like heritage preservation, community development, entrepreneurial education and sustainable construction. The present Romanian entrepreneurial context can achieve the transition towards SE due to some strategic advantages, like [1], [5]-[9]: strong vernacular heritage (Transylvanian Saxon villages, Maramureş wooden churches, wattle and daub houses in Oltenia, and adobe and rammed earth houses in Banat, Romania); EU funding streams for cultural heritage and green innovation; growing eco-tourism demand; increasing interest in sustainable housing facilities, aligned with climate policies.

Some possible directions to cover the transition from classic entrepreneurship, but most commonly from SuE to SE, are as follows:

1. Heritage conservation and skill revival - creating a social enterprise that trains unemployed or underemployed locals (especially youth and rural residents) in traditional construction techniques (such as cob, adobe, and wattle-and-daub) to restore historic houses and community buildings. The social impact lies in preserving disappearing craftsmanship, creating jobs in rural areas (with extremely high unemployment rate) and strengthening cultural identity of the community.

2. Sustainable tourism through vernacular architecture - converting restored traditional homes into eco-guesthouses that promote Romanian rural life, offer workshops in earth building, and use the profits to fund further restorations. The social impact lies in reviving rural villages suffering depopulation, promoting cultural tourism and educating visitors on sustainable living and specificity of local traditions, too.

3. Earthen Material Innovation Lab - A community enterprise that develops modernized versions of traditional materials (e.g., compressed earth blocks, clay plasters with natural pigments, earth-based structural solutions, etc.) for use in both heritage projects and modern sustainable buildings. The social impact lies in creating a local green industry, encouraging sustainable construction in urban areas, building trust and appreciation in Romania's architectural heritage.

4. Education and outreach hub - Running workshops for schools, universities, and the public on vernacular building techniques, climate resilience, and the cultural value of traditional architecture. The social impact lies in raising awareness of environmental construction methods, inspiring young architects and builders to adopt low-carbon practices, preventing further loss of intangible heritage.

5. Mobile restoration unit - Equipping a mobile workshop and team that can travel to different rural areas, teaching and assisting with earth building repairs and restorations on-site. The social impact lies in reaching isolated communities, sharing skills directly in context, and creating a platform for intergenerational knowledge exchange.

The feasibility - impact matrix for social entrepreneurship in vernacular / earthen building (Romania) is presented in Table 2.

Table 2. Feasibility - impact matrix for SE in vernacular / earthen building (Romania) per different initiatives

Feasibility	Impact	Rationale (why)	Est. time-to-impact	Key risks	Top partners / funding sources (suggested)
Initiative: Heritage conservation and skill revival (training + restoration jobs)					
High	High	Proven model: training programs are straightforward for pilots (workshops, apprenticeships). Clear local needs: aging craftspeople, youth unemployment.	6–18 months	Finding master craftsmen; steady demand for restoration work	Local municipalities, county cultural departments, EU cultural heritage grants, NGOs (heritage foundations), vocational schools, universities (architecture)
Initiative: Sustainable tourism - Eco-guesthouses + workshops					
High	Medium	Tourism can generate revenue fast if you pick the right village/hub. Positive ripple effects for employment and preservation.	6–12 months	Seasonality; dependency on tourism flows; overtourism risk	Local tourism boards, Chambers of Commerce, EU rural tourism grants, travel platforms, cultural festivals
Initiative: Earthen material innovation lab (CEBs, improved plasters)					
High	High	<i>Technical development needs testing, certification and market education but can scale into construction industry and manufacturing. Strong climate benefits.</i>	12–30 months	<i>Technical standardization; building code acceptance; initial market reluctance</i>	<i>Technical universities, materials labs, SMEs, innovation grants, EU green funds, construction companies</i>
Initiative: Education and outreach hub (schools, public workshops)					
High	Medium	Low barrier to entry; builds awareness and pipeline of practitioners. Impact accumulates over time.	3–12 months	Low engagement if not well promoted; sustaining funding	Schools, faculties (architecture/engineering), cultural centers, municipalities, NGOs
Initiative: Mobile restoration unit (traveling team + pop-up workshops)					
Medium	Medium–High	Reaches remote communities and pairs skills transfer with on-site repair. Operational logistics are moderate. It has a very visible impact on villages.	6–18 months	Travel costs; seasonal access; scalability	Local councils, regional development agencies, cultural heritage funds, volunteer networks

Best Practice demonstrating Triple Helix Model use for SE transitioning

A relevant example of the Triple Helix collaborative model for Social Entrepreneurship in Romania is the Central and Eastern European Festival of Earth Architecture, Regio Earth (<https://www.regioearth.com/>), an itinerant international summer school about earth heritage, design, and art. Since it was founded in 2017 by the Italo-Romanian Collective Atelier Terrapia, the Serbian association KFZ Fine Art & Craft Club, and the Association of Environmentally Conscious Builders Kőrépítők from Hungary, RE moves each summer to a new location in the founding countries. The focus of the cross-border organizing team and of their international

partners is the protection of the common earthen heritage of this region, while finding new ways to integrate it in present socio-cultural dynamics. The dialogue between the international professionals and the local communities favor the common creation of new educational content with strong roots in the local cultural specificity, based on the traditional know-how inherited by the communities in which RE takes place. This approach attracts participants from different backgrounds and places, gathering an increasing number of followers every year: with a total of 7 editions, RE reached 721 participants, with a minimum of four countries represented per edition and a maximum of 32 [28], [29], [30].

The Regio Earth summer schools, including the 2023 edition, generally aim, through an interdisciplinary approach, to inspire a contemporary and sustainable perspective on this type of heritage (Fig. 7). More precisely, it identifies ways to transform the earthen house into a regional brand through various ways: researching and documenting the material and immaterial heritage of the earth, filming testimonies related to traditional earthen architecture, identifying local craftsmen who still know how houses were built in the past in Banat, and designing of cultural routes that include this type of heritage. Promoted as a symbol of local specificity, as a tourist attraction, and integrated into coherent programs, it can generate various and multiple sources of entrepreneurial inspiration and income for residents and participants, too.



Fig. 7. a) Kick-off activities for the REGIO EARTH 2023 summer school (August 22, 2023), Urban Garden, UVT, Timisoara; b) Workshops associated with various techniques for working with earth as a raw material in construction, as part of the REGIO EARTH 2023 summer school (August 22, 2023), Urban Garden, UVT, Timisoara

The target audience are architects and construction specialists. The Regio Earth Summer School (2023) is an essential event for architects and construction professionals interested in expanding their knowledge of earth construction, offering the opportunity to learn from international experts, experience different earthwork techniques and understand how these methods can be integrated into modern construction projects, and potential business ideas.

In addition, people who want a healthy and natural home are interested in this project. The event is also aimed at people who dream of a home that offers a comfortable, healthy living environment and in harmony with nature. Understanding the benefits of earth building and how it can help create a more natural living environment is essential. Participants in this event are offered the opportunity to create valuable contacts with other professionals in the field or potential clients as well, opening valuable perspectives for social entrepreneurship.

The Regio Earth 2023 edition (<https://regio.earth/>) (Fig. 8), held in Timisoara, Western Romania, brought together academic research, entrepreneurial creativity, and community engagement, thereby exemplifying how partnerships across sectors can generate both cultural and socio-economic impact. Relevant examples include the Center for Cultural Heritage and Anthropology Studies (RHeA) of the West University of Timisoara, which fosters interdisciplinary research and community engagement in cultural and heritage preservation; RE Cult NGO, which promotes ecological practices and cultural revitalization through grassroots initiatives. The Urban Garden of UVT (part of the Digital and Green Living Lab of the West University of Timisoara - <https://www.uvt.ro/en/cercetare/cercetare-si-inovare/inovare-si-transfer-tehnologic/dezvoltare-durabila/>), and Grădinescu Timisoara (GreenFeel community and association - <https://greenfeel.ro/>), part of the Grădinescu Project, which creates urban gardens and ecological education hubs to strengthen urban sustainability. Both ecological and educational platforms, Urban Garden UVT and Grădinescu Timisoara – Greenfeel, were co-designed together with the local communities by Atelier Terrapia (www.atelierterrapia.com) and Studio Peisaj (<https://www.facebook.com/StudioPeisaj/>). These organizations not only promote awareness but also provide platforms for collaboration, volunteering, and social learning.



Fig. 8. a) Promotional brochure for the REGIO EARTH 2023 summer school (22–27 August 2023); b) Earth-based mixes, varying amounts of sand or natural fibers added, specific application on different support layers (right)

An illustrative entrepreneurial case within this community ecosystem is SC EcoLiving Project SRL and its innovative product Caminota, a sustainable earthen-based building material inspired by Romania's vernacular architecture (Fig. 9). Positioned initially within the sphere of SuE, Caminota demonstrates how ecological innovation can be effectively linked with community-oriented actors to foster broader social value creation. By collaborating with initiatives such as RHeA for heritage knowledge, RE Cult, Atelier Terrapia and Studio Peisaj for community-driven ecological awareness, and Grădinescu Timisoara - Greenfeel for citizen engagement in sustainability, SC EcoLiving Project SRL has the potential to transition toward social entrepreneurship (SE). This transition would involve expanding beyond environmentally responsible products toward initiatives that also generate social impact, such as rural empowerment, education on traditional techniques, and community-led conservation projects.



Fig. 9. Demonstration of applying Caminota decorative plaster on a prefabricated wall made of com-compressed straw (bales) – SC EcoLiving Project SRL, at REGIO EARTH 2023 summer school (Romania).

Pathways for transition to SE through self-learning

Transitioning from SuE to SE requires more than ecological awareness; it demands the acquisition of new competencies, frameworks, and strategic tools that align entrepreneurial activity with explicit social missions. Digital self-learning resources such as the DigiFunCollab platform offer structured pathways for this transformation, providing entrepreneurs, researchers, community leaders, and HEI staff with comprehensive training in social entrepreneurship (<https://elearningproject.eu/courses/social-entrepreneurship-in-university/>). The platform's modular structure addresses the critical dimensions of SE development. The Introduction to Social Entrepreneurship and Social Impact Innovation modules enable participants to engage in mission redefinition, shifting from a purely sustainability-oriented approach to one that explicitly incorporates social value creation, equity, and inclusion, thereby aligning with strategic management principles. Modules on Community Development and Environmental Sustainability guide entrepreneurs in embedding operational model shifts, such as integrating community employment, capacity-building programs, and vernacular heritage conservation into their core business strategies. The Social Enterprise Business Management (Planning) and Funding & Financial Management modules provide entrepreneurs with the necessary tools to design social business plans, evaluate financial sustainability, and access diverse funding mechanisms, including EU funds and social impact investment.

The program also emphasizes the importance of research integration, where modules like Legal Frameworks and Ethics and Project Management & Leadership help participants use academic and heritage research to validate and guide their interventions while ensuring compliance with Romanian and EU legislation. Furthermore, the Digital Social Entrepreneurship Strategies module supports the adoption of digital tools for knowledge transfer, communication, and scaling impact, underscoring the role of higher education institutions as enablers of capacity building and digital literacy. Finally, the Teaching and Mentoring Student Projects component fosters a multiplier effect, preparing future generations to engage with SE and ensuring long-term continuity. By systematically addressing these dimensions, DigiFunCollab creates an enabling environment for entrepreneurs to track critical key performance indicators (KPIs) - mission alignment, operational restructuring, financial sustainability, research integration, and digital capacity. These pathways, reinforced through the collaborative efforts of universities, research institutes, and community actors, offer a scalable model for social entrepreneurship development in Romania, particularly in sectors such as heritage protection, traditional materials, and community-based innovation.

From sustainable enterprise to social impact: Caminota's transformation roadmap

Further on a detailed roadmap to transition Caminota product of EcoLiving Project SRL (Fig. 10) (currently a successful sustainable building materials company) to a model that embodies social entrepreneurship, is presented.



Fig. 10. SC EcoLiving Project SRL (Romania) Solutions for modern houses: <https://www.caminota.ro/case-moderne>;
Solutions for traditional houses: <https://www.caminota.ro/case-traditionale>

A snapshot of Caminota product today indicates (<https://www.caminota.ro/despre-noi>) that with a strong foundation in sustainability, SC EcoLiving Project SRL produces and commercializes the Caminota line, a certified, natural earthen plasters and paints line, with R&D roots stretching back to their “earth-concrete” prototype and eight experimental homes under the Ecobordei brand. Since 2021, they have scaled production in Timisoara, serve 1,000+ B2C Romanian customers, and export to Bulgaria, Greece, Hungary, and Moldova, showing a and consistent market share growth. The brand follows an innovative trajectory, being currently engaged in the iREBBELS project for new raw-earth materials and collaborating on strawboard insulation with partners like Coliba Verde and SSH System

In the following, there will be described the step-by-step transition roadmap of the project.

1. Defining a clear social mission includes: (a) craft a compelling mission statement that builds on sustainability: e.g., “Empowering rural communities through access to natural building materials and heritage skills”; (b) identify target beneficiaries as for example the rural artisans, low-income homeowners, villages with degraded heritage homes;

2. Launching the community skills and restoration initiative refers to the use of Caminota's products and expertise to train residents in traditional earthen plaster techniques. Also, there should be considered piloting “local heroes” refinish project as restore community buildings (like village schools or cultural houses) using Caminota materials for preserving heritage, demonstrating value;

3. Building a cooperative or social enterprise arm that includes actions to establish a dedicated social venture - either as a nonprofit subsidiary or hybrid legal entity - that drives community-based projects, training, and restoration. This “arm” can reinvest profits back into community programs, bridging the gap between sustainability goals and social impact;

4. Engaging in revenue-generating social products by offering affordable restoration services to local communities using Caminota materials; set up budget “starter kits” or “demo makeovers” for individual homeowners to try natural plasters affordably - especially valuable in villages with deteriorating traditional homes. In addition, there can be organize paid “earth-plaster workshops” for tourists, students, and architecture enthusiasts, offering immersive learning experiences with materials and methods rooted in heritage;

5. Expand through schools and cultural outreach could take into consideration partnerships with local schools or universities to introduce curriculum modules or workshops on vernacular building and natural materials or tie up with heritage centers or cultural NGOs to promote earth-building traditions and Caminota’s role in preserving built heritage;

6. Formalize partnerships with local governments and funders could be based on collaborations with municipal or regional authorities (particularly in areas with traditional vernacular architecture) for small restoration grants or pilot projects or tap into EU cultural heritage, rural development, or green innovation funding (PNRR, FEADR, Interreg) to scale social loan programs or community training;

7. Measures and communication of social impact could consider aspects and indicators related to the development impact metrics, such as number of people trained or hired; square meters of restored heritage; cost savings or improved indoor air quality for low-income households, etc. Also, publishing annual impact reports, sharing outcomes alongside product and financial reports to strengthen stakeholder trust and attract further support could be of great interest at the local and regional level.

Caminota (EcoLiving Project SRL) currently operates as a SuE initiative, focusing on environmentally responsible construction using traditional and earthen-based materials. By engaging with the DigiFunCollab self-learning platform, Caminota can redefine its mission toward explicitly addressing social challenges - not only reducing environmental impacts but also generating measurable community benefits. Through structured modules on community development and environmental sustainability, Caminota could embed socially inclusive operational models that engage rural communities, train local artisans, and integrate disadvantaged groups into the value chain of heritage conservation. A new social enterprise business plan, supported by the platform’s finance and management modules, would ensure that the enterprise diversifies its revenue sources and taps into EU-level social economy funding schemes.

Crucially, Caminota’s partnership with research institutions, such as URBAN-INCERC, can provide scientific validation of traditional materials, improving both market acceptance and heritage protection outcomes. Finally, with modules on digital SE strategies, Caminota can position itself as a national and international knowledge hub in earthen architecture, amplifying its impact far beyond Romania through digital dissemination and collaborative mentoring. In this way, Caminota exemplifies how DigiFunCollab’s pathways and key performance indicators (KPIs) can guide a successful transition from SuE to SE, turning a sustainable business into a social enterprise with long-lasting economic, cultural, and community impact. Table 3 presents the extended KPI-to-module table and a contextualized explanation for Caminota’s potential transition from SuE → SE, grounded in DigiFunCollab’s framework.

Table 3. The extended KPI-to-module table and a contextualized explanation for Caminota’s potential transition from SuE → SE, grounded in DigiFunCollab’s framework

Relevant DigiFunCollab modules for self-learning	Application to Caminota case	Impact
KPI1 = Mission redefinition – from sustainability to explicit social mission		
Introduction to Social Entrepreneurship; Social Impact Innovation	Caminota can expand its mission beyond eco-friendly construction materials to explicitly include community empowerment, job creation in rural areas, and preservation of traditional earthen techniques	Clearer alignment with SE values; stronger positioning for EU and national social economy programs
KPI2 = Operational model shifts – embedding community employment, training, and heritage conservation		
Community Development; Environmental Sustainability; Project Management and Leadership	Caminota could set up training programs for local craftsmen and young entrepreneurs, integrating knowledge of vernacular earthen construction into their business model	New employment opportunities; intergenerational knowledge transfer; preservation of fragile cultural assets
KPI3 = Social enterprise business planning & financial sustainability		
SE Business Management; Funding and Financial Management	Development of a dedicated SE business plan that incorporates blended financing (ESF, Horizon Europe, social impact investors). Caminota could explore hybrid models: sales + grants + service provision	Long-term financial resilience; access to SE-specific funding instruments
KPI4 = Integration with research		
Legal Frameworks and Ethics; Project Management and Leadership	Collaboration with NIRD URBAN-INCERC Timisoara and HEIs for testing, validating, and certifying earthen building materials, linking entrepreneurial outcomes to evidence-based research	Increased credibility and visibility; contribution to national R&D priorities in sustainable construction
KPI5 = Digital Learning and Knowledge Transfer		
Digital SE Strategies; Teaching and Mentoring Student Projects	Caminota can leverage digital tools for virtual workshops, online catalogues of earthen techniques, and knowledge-sharing platforms with architects, NGOs, and local communities	Reaches remote communities and pairs skills transfer with on-site repair. Operational logistics moderate. It has a very visible impact on villages

Conclusions and Future Research

The research underscores the transformative potential of social entrepreneurship (SE) in Romania, particularly when driven by collaborative frameworks involving universities, research centers, and local communities. By applying the Triple Helix model, the study demonstrates how academic institutions can nurture civic responsibility and entrepreneurial skills, while research centers contribute validated methodologies and eco-innovative technologies. Communities, in turn, offer cultural assets and grassroots engagement essential for sustainable impact.

This study demonstrates that the transition from SuE to SE is not only feasible but also highly beneficial in contexts where cultural heritage, environmental sustainability, and community resilience intersect. The Caminota initiative exemplifies how traditional building techniques and local knowledge can be leveraged to create inclusive, socially driven enterprises,

reinforced by ECODIGICONS project initiatives. The integration of digital education platforms like DigiFunCollab further enhances the scalability and accessibility of SE models.

However, the paper also acknowledges several challenges that must be addressed to ensure long-term impact. These include legal and financial constraints, limited awareness of SE frameworks, and the need for stronger institutional support. Future research should focus on gathering empirical data to validate the proposed roadmap and explore the replicability of the model in other regions.

By aligning policy, education, and community action, SE can become a powerful tool for sustainable development, especially in rural and culturally rich areas of Romania. The main recommendations for a smooth SE transition are presented in the following.

- Mission reorientation - Enterprises in heritage-related sectors should move beyond environmental sustainability to articulate explicit social objectives, such as combating rural decline, fostering local employment, and sustaining intangible cultural heritage.
- Community-centered models - Businesses are advised to adopt participatory approaches that incorporate local stakeholders as active contributors, thereby embedding social value creation within business operations.
- Policy development - National and local authorities should expand targeted support schemes for social enterprises in heritage and green construction, including financial incentives, technical assistance, and integration into regional development strategies.
- Strengthening SE education - Romanian HEIs should broaden access to SE-specific educational opportunities, integrating digital self-learning platforms and mentorship schemes to cultivate socially innovative mindsets among students, entrepreneurs, and community members.
- Cross-sectoral partnerships - Enterprises should engage systematically with universities, research bodies, and NGOs to co-develop socially responsive business models aligned with broader societal needs.

In the end of our SE skills development journey, future research directions have been identified:

- Developing context-specific frameworks and indicators for measuring the social value generated by enterprises in the fields of vernacular architecture and sustainable construction. This is associated with the development of a new approach for social impact assessment;
- Investigating innovative governance and financing structures that balance commercial viability with measurable contributions to cultural and social capital. This new research direction could generate Hybrid Business Models in the field of social entrepreneurship;
- Critically assessing the role of Law 219/2015 on social economy and related EU frameworks in enabling transitions from SuE to SE, with recommendations for improvement. This direction is focused on strengthening the policy effectiveness;
- Exploring participatory and transdisciplinary research methodologies to better integrate community knowledge and agency into heritage conservation and SE development. This approach will support new ways and projects for community co-creation;
- Evaluating the effectiveness of digital learning tools, such as DigiFunCollab, in scaling social entrepreneurship education and supporting knowledge transfer across diverse stakeholder groups (supporting digitalization of SE education not only at the HEIs level but also in collaboration with different local stakeholders as non-governmental organizations).

In conclusion, Romania presents a favorable yet underexploited environment for the institutionalization of SE, particularly in sectors linking cultural heritage preservation with sustainable innovation. By leveraging collaborative frameworks, reorienting missions toward social value, and embedding research and education into entrepreneurial practices, sustainable enterprises such as Caminota can evolve into impactful social enterprises. Such a transition not

only addresses pressing socio-economic challenges but also contributes to safeguarding Romania's cultural and architectural heritage as a collective resource for future generations.

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