JALUR: Journal of Architecture Landscape and Urban Design
Volume 3 No. 2, March 2026
e-ISSN: 3025-3837
https://jalur.ejournal.unri.ac.id/

Shared Creative Space Intervention: Enhancing Collaborative Behavior among Rattan Artisans in Pekanbaru

Dea Amanda[1], Ratna Amanati[2*], Wahyu Hidayat[3]

[1,2,3]Department of Architecture, Faculty Engineering, Universitas Riau, Pekanbaru, 28293, Indonesia

**Corresponding author: ratnamanati@gmail.com*

Keywords:
creative rattan workshop;
participatory architecture;
participatory rural appraisal;
sense of ownership;
spatial flexibility

ABSTRACT

The creative rattan handicraft industry in Pekanbaru faces significant physical infrastructure constraints due to rigid, top-down conventional design approaches. Current workspaces are unrepresentative of dynamic production workflows, which decreases productivity and neglects intergenerational local knowledge transfer. This study aims to formulate a participatory architecture framework for the design of a community-based, adaptive Creative Rattan Workshop in Pekanbaru. This study employs a descriptive-qualitative method through a structured literature review on spatial flexibility and responsive architecture, combined with a comparative analysis of creative industry building precedents. The analysis demonstrates that integrating the Participatory Rural Appraisal (PRA) method in the design phase successfully transforms artisans into active co-designers. The synthesis yields five core spatial strategies: active artisan involvement, the application of the six-stage PRA method, the utilization of flexible architectural elements (modular furniture and non-permanent partitions), layout zoning based on actual operational sequences, and the provision of social communal spaces. The application of participatory architecture is proven effective not only in generating ergonomic physical infrastructure that flexes with production volumes but also in fostering a profound sense of community ownership while sustainably preserving the collective memory of the local rattan craft.

©2026 The Authors, published by Department of Architecture, Universitas Riau

INTRODUCTION

Rattan is one of Indonesia's leading commodities and plays a vital role in the international market, given that the country supplies more than 85% of global rattan demand (Arafat & Fatchurrohman, 2025; Kumalasari, 2019). Despite this immense potential, most rattan is still exported as raw material. This reality limits value-added development within the domestic creative industry sector (Aspita & Kamaludin, 2021).

In Pekanbaru, local artisans acutely feel the impact of these development constraints. The majority of artisans still work individually using simple tools and operate within confined production spaces. Consequently, product design variations remain stagnant, and market expansion is difficult to achieve. This challenge is further exacerbated by the lack of training facilities and public exhibition spaces that could otherwise boost product promotion on a massive scale.

As a creative industry rooted in local craftsmanship, rattan weaving plays a crucial role in strengthening the community-based economy while preserving cultural heritage. However, the current unrepresentative working conditions present a significant infrastructural bottleneck. As a result, a fundamental issue arises regarding how to create a workspace that truly accommodates the field dynamics, habits, production rhythms, and operational sequences of the artisans (Kumalasari, 2019). Architecture that ignores a logical production flow—from material sorting, wet areas, and dry areas,

to weaving and finishing processes—ultimately hinders work efficiency and decreases artisan productivity.

The failure of rigid, top-down design approaches also negatively impacts the users' psychosocial well-being. When artisans are excluded from the planning process, they tend to view physical facilities merely as alien, static objects. This deters a sense of responsibility and ownership (sense of ownership) toward the facility (Sahu, 2025). Without a strong sense of ownership from the local community, shared facilities often end up neglected, poorly maintained, and fail to achieve long-term sustainability. Therefore, a new paradigm is required—one that positions artisans not merely as passive targets, but as active co-designers.

Fundamentally, an artisan's creative space is a living environment shaped by its users' activities, rather than just a workshop filled with rows of production machinery. Such a space should ideally facilitate inclusive, intergenerational interaction by fostering collaboration between senior and novice artisans. The presence of communal areas is vital to enable the transfer of tactics, techniques, and the community's collective memory. Given that the historic lack of collaborative spaces has stifled design innovation and slowed down the revitalization of craft skills (Dita Hardiyani & Aulia, 2023), the establishment of a Shared Creative Space is highly urgent. This integrated facility must seamlessly merge production, design innovation, education, and collective marketing within a single interconnected ecosystem.

Based on these complex challenges, this study aims to formulate a participatory architecture framework utilizing the Participatory Rural Appraisal (PRA) method for the design of a Creative Rattan Workshop in Pekanbaru. Through a dialogical and collaborative approach, this research is expected to yield spatial solutions that are not only functionally adaptive and sustainable, but also capable of strengthening social capacity and preserving the cultural identity of the rattan artisan community.

MATERIALS AND METHODS

This study employs a descriptive-qualitative method based on a literature review and a comparative analysis of multi-functional creative industry precedents. The literature review focuses on five core pillars: community space, collaborative activities, principles of spatial flexibility, material characteristics, and responsive architecture.

The data analysis process was carried out systematically across three main phases:

1) Principle Extraction: Identifying adaptive space parameters from peer-reviewed scientific literature.
2) Conceptual Synthesis: Assessing the alignment (cross-examination) between adaptive spatial principles and the organizational spatial layouts required by the artisan community.
3) Spatial Typology Formulation: Generating specific design recommendations regarding spatial characteristics, workflow zoning, and spatial dimensions (capacity and area layout).

By integrating these phases, this study establishes the ideal spatial parameters to design a contextual Shared Creative Space for rattan artisans in Pekanbaru.

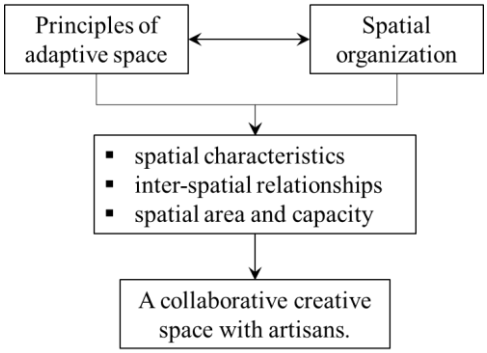

Figure 1. Analytical Flowchart of Literature Review and Spatial Design Formulation.
Source: Authors' analysis (2026)

RESULTS AND DISCUSSION

Principles of Participatory Architecture

The principles of participatory architecture emphasize the active involvement of users or communities in the design process. This ensures that the resulting built environment reflects not only the architect's vision, but also the lived experiences, needs, and aspirations of the community inhabiting it. Participation is understood through the role of users as agents who directly refine architectural elements (Muhammad & Antaryama, 2016). Consequently, architecture is no longer viewed as a static object, but as a space continuously produced and transformed through the real-world activities, behaviors, and interventions of its users.

This participatory concept is manifested through the use of temporary materials, reconfigurable spatial elements, and circulation patterns independently shaped by the occupants. Collectively, these processes contribute to the formation of a collective memory, as architectural space emerges from everyday experiences deeply tied to a shared community identity.

In practical terms, participatory architecture is implemented through the Participatory Rural Appraisal (PRA) method, which engages community members across all design stages—from needs identification and problem formulation to ideation, prototyping, and final implementation (Mariotti, 2023). The core tenet is that the community possesses the most relevant local knowledge; therefore, the design must emerge from an active dialogue between the designer and the residents. The six main stages—empathy, definition, ideation, prototyping, testing, and implementation—demonstrate that participatory processes yield more than just physical structures; they strengthen the community's social capacity (Preambudi et al., 2025). With clear role delegation and collaborative engagement, the resulting facilities become more functional and sustainable, as the community develops a profound sense of ownership and management responsibility.

The Relationship Between Participatory Architecture Principles and Artisans

Participatory architecture principles correlate strongly with the needs of rattan artisans by providing opportunities for direct involvement in designing and configuring their workspace based on daily activity patterns. Within this context, artisans are not merely considered occupants of a static space, but rather individuals capable of modifying, expanding, and rearranging architectural elements. This capability allows the workspace to evolve organically in response to habits, production rhythms, and the collective memory formed across generations of rattan craftsmen.

This approach becomes significantly more effective when combined with structured participatory methods like PRA. This method actively involves artisans in identifying needs, brainstorming ideas, and comprehensively evaluating spatial designs—ranging from production zones and material storage areas to design studios and exhibition rooms. Through this dialogical process, creative spaces can be tailored precisely to mirror the actual workflow, ergonomic requirements, and production sequences of the artisans in the field.

Overall, applying participatory architecture principles fosters an adaptive, contextual workspace capable of evolving alongside the changing needs of the community. The space ceases to be rigid; instead, it becomes flexible to reconfigure according to shifting skill levels and daily production dynamics. Simultaneously, the participatory process nurtures a sense of ownership and empowers artisans as co-designers in facility development, ensuring that every spatial element supports their social and functional roles. This reciprocal relationship is mutually reinforcing: the artisans' practical experience enriches the design process, while the participatory design delivers a space truly aligned with the identity of the rattan community.

Implementation of Design Strategies in Developing the Creative Space

There are the design strategy for creating creative spaces.

Involving Artisans as Co-Designers

This strategy places artisans as key actors with the authority to define their own spatial characteristics. Artisans are directly involved in mapping work patterns, ergonomic constraints, and rattan production flows to ensure the design process is not top-down. This concept aligns with the notion that space evolves through continuous user intervention, such as rearranging or adding material elements (Cruz, et.al., 2023; Muhammad & Antaryama, 2016).

Applying the Participatory Rural Appraisal (PRA) Method in the Design Phase

The PRA method serves as the core framework guiding the participatory process. The stages of empathy, definition, ideation, prototyping, testing, and implementation allow artisans to contribute actively to defining their spatial needs. During this phase, artisans provide crucial input regarding production zones, raw material storage, design studios, training spaces, and exhibition galleries. This collaborative approach has proven highly effective in yielding functional designs that satisfy community needs (Preambudi et al., 2025).

Designing Flexible and Adaptive Spaces

Participatory principles require spaces that can adapt to the shifting rhythms and fluctuating work volumes of artisans. Therefore, the creative space is designed with a high degree of flexibility using modular furniture, non-permanent partitions, and workspaces that can expand or contract based on actual production demands (Sahu, 2025). This flexibility supports a living, dynamic environment that grows alongside the artisans' activities, ensuring the built environment is never rigid or unilaterally imposed by the architect.

Collaboration in Layout Planning and Activity Sequences

Artisans are engaged in determining zoning and operational sequences, such as separating wet work areas, dry work areas, weaving zones, finishing rooms, and logistical storage. This collaboration ensures that the spatial flow accurately reflects real-world field conditions. By understanding the production process firsthand through dialogue and observation, the resulting

layout becomes highly efficient, ergonomic, and representative of daily work practices (Sahu, 2025).

5. Building Communal Spaces for Interaction and Skill Revitalization

This strategy emphasizes creating communal hubs, such as discussion rooms, training zones, and design experimentation areas. These areas act as "social spaces" that support intergenerational knowledge transfer, peer collaboration among artisans, and inclusive engagement with the broader public (Calvo & Sclater, 2021). The presence of communal spaces reinforces the identity of the creative workshop as an ecosystem shaped by the community's participation and collective experience (Muhammad & Antaryama, 2016).

CONCLUSION

The design of the Creative Rattan Workshop in Pekanbaru demonstrates that the application of participatory architecture principles yields a space deeply aligned with the actual needs of the artisan community. Through active engagement in the design process, artisans are able to dictate spatial layouts, workflow sequences, and supporting facilities that directly boost their productivity and creativity. This approach allows the creative workshop to grow into a flexible, adaptive, and sustainable facility because it evolves in tandem with local work patterns and rattan craft culture. Consequently, participation-based design not only enhances community capacity and innovation but also drives the development of Pekanbaru's creative rattan industry in a more inclusive and effective manner.

RESEARCH ETHICS

All data utilized in this study were obtained from literature reviews, field observations, and conceptual analyses without causing harm to any party. The analytical process was developed out of respect for the experiences, local knowledge, and work culture of the rattan artisan community. This study did not collect sensitive data or exploit information that could negatively impact the target community. All stages of writing were conducted by upholding academic integrity, avoiding plagiarism, providing accurate citations for every reference, and ensuring that the resulting design analysis is presented objectively, transparently, and responsibly.

ACKNOWLEDGEMENTS

The authors express their sincere appreciation to all parties who provided support during the research and design study process. Special thanks are extended to the rattan artisan community in Pekanbaru, whose hard work, dedication, and local knowledge served as the primary inspiration for developing this community-based creative workshop concept.

ARTIFICIAL INTELLIGENCE (AI) USE DECLARATION

The use of Artificial Intelligence (AI) tools in the preparation of this manuscript was strictly limited to language editing assistance, refining sentence structures, and improving the readability of the academic text. All design concept developments, literature data analysis, interpretation of results, and final conclusions were conducted independently by the authors. The use of AI did not influence the originality of the scientific findings or manipulate data in any form. The authors bear full responsibility for the accuracy, integrity, and authenticity of all content presented in this manuscript.

REFERENCES

Arafat, B., & Fatchurrohman, N. (2025). Innovation in Alternative Materials for the Handicraft Industry. *Jurnal Teknologi*, 14(2). https://doi.org/10.35134/jitekin.v14i2.123

Aspita, S., & Kamaludin. (2021). Identification of Rattan and Bamboo. *Jurnal Kehutanan*, 17(1), 167–186.

Calvo, M., & Sclater, M., (2021). Creating Spaces for Collaboration in Community Co-design, International Journal of Art & Design Education published by National Society for Education in Art and Design and John Wiley & Sons Ltd, DOI: 10.1111/jade.12349.

Cruz, M. G., et.al. (2023). Towards a framework for urban landscape co-design: Linkingthe participation ladder and the design cycle, Codesign, vol 19, No 3, 233-252, https://doi.org/10.1080/15710882.2022.2123928

Ditahardiyani, P., & Aulia, R. (2023). Factors Influencing Consumer Purchase Decisions of Eco-Friendly Rattan Handicraft Products. *Jurnal Manajemen Agribisnis*, 11(1), 185–196. https://doi.org/10.24843/jma.2023.v11.i01.p19

Hartanti, G. (2012). Rattan Material Development and Its Application in Interior Design. *Humaniora*, 3(2), 494–502. https://doi.org/10.21512/humaniora.v3i2.3354

Kołacz, K., (2025). From Structure to Social Fabric: Comparing Participatory and Conventional Residential Design in the Context of Social Sustainability. Sustainability, 17, 8456. https://doi.org/10.3390/su17188456

Kumalasari, G.W. (2019). Local Government Policy Model of Indonesia Rattan Handicraft Creative Industry in Trangsan Village, Jurnal Humanities & Social Sciences Reviews, Vol 7, No 3, 2019, pp87-91, https://doi.org/10.18510/hssr.2019.7313

Mariotti, I., Capdevila, I., & Lange, B., (2023) Flexible geographies of new working spaces, European Planning Studies, 31:3, 433-444, DOI: 10.1080/09654313.2023.2179232.

Muhammad, M. I., & Antaryama, I. G. N. (2016). Turning Point Architecture: Participatory Design and Collective Memory. *Jurnal Sains dan Seni ITS*, 5(2), 320–324.

Preambudi, A., Tisnawati, E., Alfathoni, D. Q., Ikhwan, R., Arifin, N., Nur, T., Firdaus, B. B., Akmaly, M. L., Hariyanto, F. E., Prima, J., Wibisono, H., & Prasaja, I. W. (2025). Community Collaboration and Participatory Design in Building Functional Tourism Facilities in Green Kayen Tourism Village. *Jurnal Pengabdian Arsitektur*, 2(1), 36–46.

Sahu, A., Pandit, S., (2025). Occupational Ergonomic Research and Contextual Design Execution of a New Workstation to Reduce Work-Related Musculoskeletal Disorders (WRMSDs) among Dhokra Handicraft Artisans: An Unorganized Sector of India, Industrial Health, J-Stage Advance Publication, National Library of Medicine, https://doi.org/10.2486/indhealth.2025-0039