

Review of: "Successful Community Infrastructure Risk Management in a Decarbonized Future"

Atef Ahriz¹

¹ Centre Universitaire de Tebessa

Potential competing interests: No potential competing interests to declare.

General Comments:

This paper presents a comprehensive framework for managing community infrastructure risks in the context of decarbonization and climate change. The author advocates for a systems-based approach to infrastructure planning and risk management, emphasizing the importance of stakeholder engagement, shared understanding, and holistic value assessment. The paper draws on concepts from infrastructure planning, risk management, sustainability, and community development to propose an integrated model for successful transition to a low-carbon future.

1. The title is suitable and clear.
2. The abstract is comprehensive, well-structured, and well-written.
1. The paper is non-structured according to a conventional method.
4. References are not sufficient.

Strength Points:

1. Holistic approach: The paper effectively integrates multiple disciplines and perspectives, providing a comprehensive view of the challenges and opportunities in infrastructure risk management and decarbonization.
2. Clear conceptual framework: The author presents a well-structured conceptual framework, including the vitae system of systems (VSOS) and common reference models, which offers a solid foundation for understanding and addressing complex infrastructure challenges.
3. Practical implications: The paper goes beyond theoretical concepts to discuss practical implications, such as financial reporting standards, stakeholder engagement, and implementation strategies, making it relevant for practitioners and policymakers.
4. Focus on social aspects: The emphasis on community ownership, beneficial capability, and social "stickiness" of infrastructure projects is a valuable contribution, highlighting the importance of social factors in successful transitions.

Weak Points:

1. Limited empirical evidence: While the paper presents a strong conceptual framework, it lacks substantial empirical evidence or case studies to support the proposed approaches.

2. Complexity: The paper introduces numerous concepts and models, which may be overwhelming for readers not familiar with the field. Some concepts could benefit from further explanation or simplification.
3. Limited discussion of challenges: The paper focuses primarily on the benefits and opportunities of the proposed approach, with less attention given to potential challenges or limitations in implementing these ideas.
4. Lack of quantitative analysis: The paper is primarily qualitative in nature and could benefit from more quantitative analysis or metrics to support its arguments.

Suggestions to Improve the Paper:

1. The paper must be restructured according to a conventional.
 2. Include case studies: Incorporate one or more detailed case studies demonstrating the application of the proposed framework in real-world settings. This would help illustrate the practical benefits and challenges of the approach.
 3. Simplify key concepts: Consider providing more accessible explanations or visual aids for some of the more complex concepts to make the paper more approachable for a broader audience.
 4. Add quantitative elements: Where possible, include quantitative data or metrics to support the qualitative arguments and demonstrate the tangible benefits of the proposed approach.
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14. The introduction is too poor and doesn't reflect the interest of the paper, because the introduction of a scientific paper serves to provide background information, highlight the research gap, state research objectives or questions, and emphasize the significance of the study. It sets the stage for the reader by introducing the topic and explaining why the research is important. It should be concise and engaging. Start with a broad statement, provide brief background information, identify the research gap, state the research objectives or questions, and explain the significance of the study. Avoid jargon and maintain clarity.
 15. The methodology section is totally absent while it is so important in a scientific paper. The methodology section of a scientific paper must describe the study design, participants, data collection methods, data analysis techniques, ethical considerations, and limitations. It should be concise and clear. Explain the study design, participant characteristics, and data collection methods. Briefly mention the data analysis techniques and ethical considerations. Acknowledge any limitations or potential sources of bias. Provide enough information for replication while maintaining brevity.
 16. The conclusion is too poor regarding the interest of the work; the conclusion must be rewritten. Because the conclusion is intended to help the reader understand why your research should matter to them after they have finished reading the paper. A conclusion is not merely a summary of your points or a re-statement of your research problem, but a synthesis of key points.

A conclusion should contain these points:

- Restate the problem statement addressed in the paper
- Summarize your overall arguments or findings
- Suggest the key takeaways from your paper

By addressing these points, the paper could be strengthened and provide even greater value to both academic and

practitioner audiences interested in community infrastructure risk management and decarbonization.