

**Transforming Urban River Edge: Impact of Ephemeral Forms on
Temporary Urbanism**

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ABSTRACT

Urban river edges have long been neglected in the rapid growth of cities, often becoming underutilized and disconnected from the community. This research explores the transformative potential of ephemeral forms-temporary installations-at urban river edges, highlighting their role in revitalizing these areas and fostering a deeper connection between people and their natural waterways.

Temporary installations, such as pop-up parks, art exhibits, and floating markets, serve as catalysts for social interaction, environmental awareness, and economic activity. By activating river edges, these ephemeral structures create vibrant public spaces that draw people to the water, promoting recreational use and environmental stewardship. Additionally, they offer flexible, cost-effective solutions for urban planners and developers, enabling experimentation and community engagement without long-term commitments. This dynamic approach not only enhances the aesthetic and functional value of river edges but also stimulates local economies by attracting tourism and supporting small businesses.

As humans, we seek to leave lasting marks through creation, but we must question building practices given finite resources, as construction also causes destruction. Through a series of case studies and analysis, this paper demonstrates how temporary urbanism, driven by ephemeral forms, can reimagine urban river edges, fostering sustainable, inclusive, and economically viable waterfronts that reconnect communities with their rivers.

KEYWORDS

Ephemeral Forms, Permanence, Impermanence, Temporary Urbanism, Riverfront Development, Urban River

1. METHODOLOGY



Flowchart 1: Methodology (Author)

1.1 Defining Research Objectives:

- Clarifying the goals of the study, focusing on the role of temporary forms in urban river edge revitalization.

- **Objectives:**

- 1.1.1. How do temporary interventions engage the community?

- 1.1.2. What ecological impacts do they have?

- 1.1.3. What are their economic benefits?

1.2 Literature Review:

- Conducting a systematic review of existing literature on temporary urbanism.
- Identifying key themes, such as
 - 1.1.1. Community Engagement
 - 1.1.2. Ecological Sustainability
 - 1.1.3. Economic Impact
- Collecting and analyzing relevant academic articles, books, and reports.

1.3 Case Study & Data Collection:

- Establishing criteria for selecting case studies (e.g., geographic diversity, type of intervention, scale, etc.).
- Selecting a range of case studies from different urban contexts to ensure a comprehensive analysis.
- Gathering & Documenting qualitative data with stakeholders involved in temporary urban projects.

1.4 Data Analysis:

- Apply thematic analysis to qualitative data to identify patterns and themes.

- Conduct a comparative analysis of different case studies to highlight commonalities and differences.

1.5 Synthesis and Interpretation:

- Integrating findings from the literature review and case studies to develop a comprehensive understanding.
- Interpreting the data to draw conclusions about the role and impact of temporary urbanism on urban river edges.

1.6 Conclusions and Recommendations:

- Summarizing the findings and providing actionable recommendations for urban planners and policymakers.
- Suggesting directions for future research to explore unresolved questions and long-term impacts.

2. INTRODUCTION TO TEMPORARY URBANISM

2.1 The Neglected State of Urban River Edges

Urbanization has dramatically transformed natural landscapes, often leading to the marginalization of urban river edges. These vital areas, which once served as dynamic interfaces between urban settlements and natural waterways, have frequently become neglected, underutilized, and disconnected from the fabric of urban life. The environmental degradation and social detachment of these river edges reflect broader issues associated with rapid urbanization, including loss of biodiversity, reduced public access to natural spaces, and missed opportunities for economic development (Smith, 2018).

2.2 Temporary Urbanism: A New Approach for Urban Riverfronts

In response to these challenges, a notable shift in urban planning paradigms has occurred with the widespread adoption of temporary urbanism. Temporary urbanism, defined as the use of short-term, flexible, and often experimental projects to activate urban spaces, has gained traction as a strategy to address the dynamic needs of cities (Bishop & Williams, 2012). This approach provides a practical and innovative avenue to reclaim and reinvent neglected urban river edges, reimagining them as vibrant, multifunctional areas that contribute positively to urban life.

2.3 Beyond Aesthetics: The Multifaceted Benefits of Temporary Urbanism

Beyond its evident benefits, temporary urbanism at river edges serves as a nexus for several critical functions. Firstly, it acts as a catalyst for community engagement, providing platforms for social interaction, cultural exchange, and collective participation in shaping public spaces. Secondly, these temporary interventions offer unique opportunities for environmental education and awareness, fostering a deeper understanding of river ecosystems and promoting sustainable behaviors among urban residents. Furthermore, by activating previously underutilized spaces, temporary forms contribute to economic development, attracting visitors, supporting local businesses, and revitalizing urban waterfronts as vibrant economic hubs.

However, contemporary urban planning has embraced the concept of temporary urbanism as a means of revitalizing these overlooked spaces. Temporary urbanism allows for experimentation and innovation in urban design and placemaking, enabling cities to test ideas, adapt to changing needs, and cultivate dynamic and resilient urban environments. This approach not only addresses immediate needs but also provides valuable insights for long-term urban development strategies. Cities can pilot various

interventions, gather community feedback, and refine their approaches before committing to permanent changes (Jackson, 2017).

2.4 The Potential of Temporary Urbanism for a Sustainable Future

Temporary urbanism also contributes to enhancing public health and well-being. The introduction of green spaces, recreational areas, and pedestrian-friendly zones along river edges provides urban dwellers with essential opportunities for physical activity, relaxation, and connection with nature. Studies have shown that access to natural environments, even in temporary forms, can significantly reduce stress, improve mental health, and enhance overall quality of life (Kaplan & Kaplan, 1989; Ulrich et al., 1991). One such initiative has been showcased below,



Figure 1: Showcasing Burtonsville placemaking initiative, a community festival at the Burtonsville Crossing Shopping Center (Source: Burtonsville Placemaking - Montgomery Planning, 2024)

The Placemaking Festival aimed to inspire collective reimagining and reinvention of public spaces in the Burtonsville community, emphasizing the creation of spaces that are cherished and utilized by residents. The festival's purpose is to highlight the vision of the Burtonsville Crossroads Neighborhood Plan, demonstrate short-term public space improvements, and promote placemaking as a tool for capturing community values and generating ideas. It seeks to engage local businesses, schools, and community

members in discussions about public spaces, encourage long-term property transformation, and use temporary placemaking to gather data for permanent designs. The goal was to positively impact the community by creating a public space that can be used for events, enhancing community well-being and connection.

Moreover, such temporary interventions can serve as a proving ground for innovative ecological practices. These projects often incorporate sustainable design principles such as rain gardens, permeable pavements, and native plantings, which can help manage stormwater, reduce urban heat island effects, and support local biodiversity (Gill et al., 2007). As cities face increasing challenges related to climate change and environmental degradation, the lessons learned from temporary urbanism can inform long-term strategies for resilient urban development (Hamin & Gurran, 2009).

Adoption of temporary urbanism along urban river edges offers a multifaceted approach to urban revitalization. By integrating these elements into urban riverfronts, cities can create healthier, more livable environments for their residents. By fostering community engagement, promoting environmental awareness, driving economic development, enhancing public health, and testing sustainable practices, these temporary interventions hold significant promise for creating dynamic, resilient, and inclusive urban waterfronts. As urban planners and policymakers continue to explore and implement these strategies, the potential for transformative change in urban riverfronts becomes increasingly evident.

3. LITERATURE REVIEW

Previous research has emphasized the importance of urban river edges as potential assets for urban renewal (Smith, 2018; Jones & Brown, 2020). These spaces, often overlooked and underutilized, possess significant potential to transform the urban fabric by providing ecological, social, and economic benefits. Urban river edges, due to their unique position at the intersection of urban and natural environments, offer a fertile ground for innovative urban interventions that can rejuvenate city life and enhance community well-being.

3.1 Urban River Edges: Potential for Renewal and Temporary Urbanism as a Revival Strategy

The concept of temporary urbanism has emerged as a powerful planning strategy to activate these neglected areas. Temporary urbanism involves the use of short-term, often experimental, projects that can rapidly transform urban spaces and engage the community. This approach provides a flexible framework for urban development, allowing cities to respond to changing needs and challenges in a cost-effective manner (Garcia & Jones, 2019).

Ephemeral forms, such as pop-up parks, temporary art installations, and other transient interventions, have been recognized for their ability to rejuvenate urban riverfronts and engage communities (Roberts et al., 2021). These forms create immediate visual and functional impacts, drawing attention to underused spaces and encouraging public interaction. Pop-up parks, for instance, can quickly turn vacant lots into vibrant community hubs, while art installations can highlight the cultural and historical significance of riverfront areas. Notably, underutilized spaces become particularly noticeable during challenging periods, such as economic downturns or crises like the COVID-19 pandemic. During such times, the concept of *meanwhile leasing* has proven to be an adaptive and practical solution, allowing these spaces to serve immediate, temporary needs effectively, an example is showcase below.

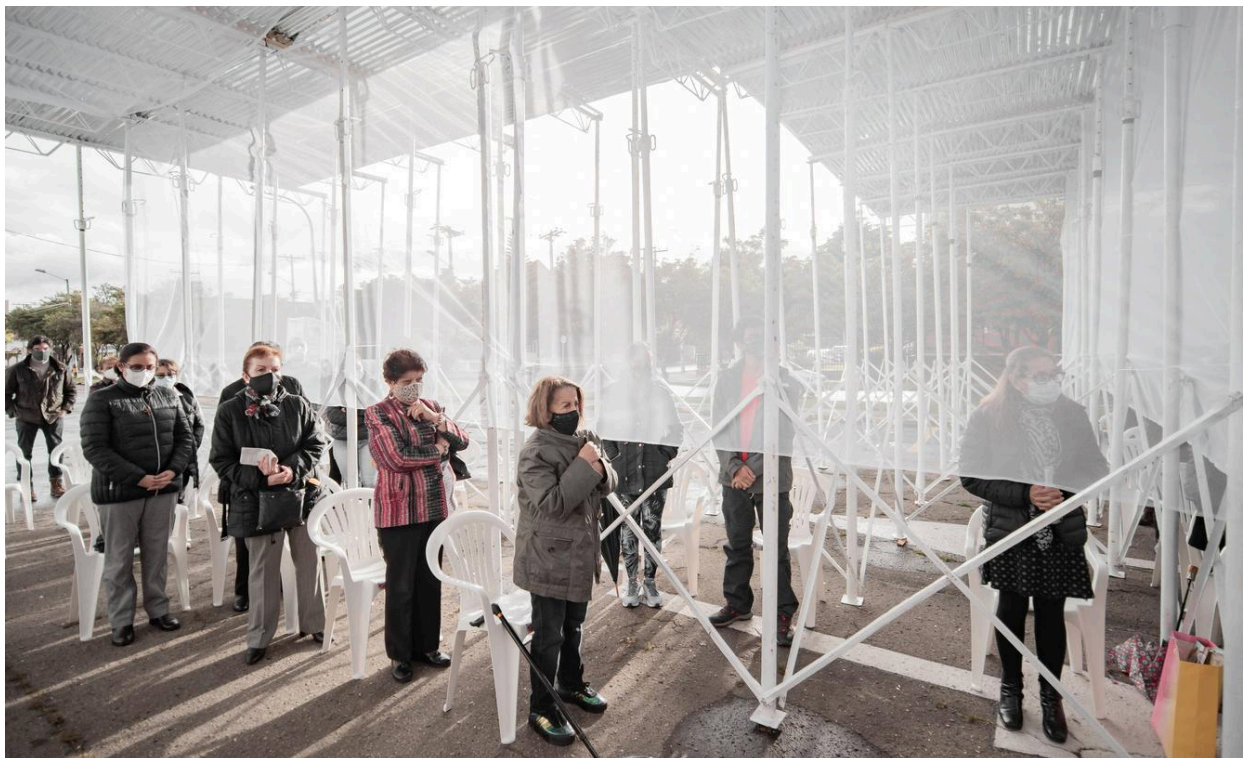


Figure 2: Showcasing Temporary Chapel Alhambra's during Covid-19 pandemic (Source: Gallery of Meanwhile Spaces: Temporary Interventions for Lasting Urban Development - 6, n.d.)

3.2 Ephemeral Forms and their Role in Rejuvenating Urban Riverfronts and Engaging Communities

The concept of "*meanwhile spaces*" refers to disused sites that are leased or loaned for a specific period by the public sector or developers to various local entities, including community groups, art organizations, start-ups, and charities. These spaces offer a flexible approach to urban development, allowing temporary uses to invigorate and transform areas awaiting permanent redevelopment (Bishop & Williams, 2012).

Moreover, one of the key advantages of temporary interventions is their flexibility. Unlike permanent developments, which require significant time, resources, and commitment, temporary projects can be implemented quickly and adjusted as needed. This flexibility allows for experimentation and innovation in urban design and placemaking. Cities can test new ideas, gather feedback from the community, and adjust before committing to long-term changes (Jackson, 2017). This iterative process not only reduces the risk associated with urban development but also fosters a sense of community ownership and involvement.



Figure 3: Top view of the High Line, transformation of an abandoned railway station into a thriving public park (Photographer: Timothy Schenck, Source: By Photographer Archives, n.d.)

Temporary urbanism has been increasingly utilized worldwide as a strategy for revitalizing neglected urban spaces. Examples from cities around the globe illustrate the diverse applications and benefits of this approach. In New York City, the High Line, originally a temporary project, transformed an abandoned elevated railway into a thriving public park that has spurred significant economic development in the surrounding area (Davidson, 2016). Similarly, the "Riverlife" initiative in Pittsburgh has used temporary installations and events to reconnect the city with its rivers, promoting environmental stewardship and boosting local tourism (Jones & Brown, 2020).

Through temporary interventions, cities have the opportunity to test new ideas, engage communities, and address pressing urban challenges in a flexible and cost-effective manner. For instance, pop-up markets along urban river edges can support local economies by providing platforms for small businesses and artisans. These markets not only attract visitors and boost economic activity but also foster a sense of community by bringing people together in shared spaces (Chen & Wang, 2019). Additionally, temporary interventions can address environmental challenges by integrating sustainable design principles. Rain gardens, green walls, and permeable pavements are just a few examples of how temporary projects can enhance urban resilience and support biodiversity (Gill et al., 2007).

Furthermore, temporary urbanism can play a crucial role in promoting social equity and inclusion. By activating neglected spaces, temporary interventions can provide much-needed amenities and recreational opportunities in underserved communities. These projects can create inclusive public spaces that are accessible to all residents, regardless of socio-economic status. This inclusivity is particularly important in urban riverfront areas, which often serve as physical and symbolic boundaries within cities (Smith, 2018).

The social benefits of temporary urbanism extend beyond physical improvements to include opportunities for community engagement and empowerment. By involving residents in the planning and implementation of temporary projects, cities can foster a sense of ownership and pride in their neighborhoods. Community-led initiatives, such as participatory design workshops and volunteer-driven installations, can strengthen social ties and build local capacity for future urban development (Roberts et al., 2021).

Temporary urbanism also offers significant environmental benefits. By reactivating urban river edges, temporary projects can enhance ecological connectivity and support habitat restoration. These interventions can serve as catalysts for larger environmental initiatives, such as river cleanups, native plantings, and wildlife corridors. Moreover, temporary projects can raise awareness about environmental issues and inspire community action to protect and preserve urban waterways (Garcia & Jones, 2019).

Despite the numerous benefits of temporary urbanism, there are also challenges and limitations to consider. One of the main challenges is ensuring the sustainability and longevity of temporary projects. While the temporary nature of these interventions allows for flexibility and experimentation, it can also lead to a lack of continuity and permanence. To address this challenge, cities must carefully plan and manage temporary projects, ensuring that they are integrated into broader urban development strategies and that they contribute to long-term goals (Jackson, 2017).

Another challenge is securing funding and resources for temporary projects. While temporary urbanism can be more cost-effective than permanent development, it still requires investment in materials, labor,

and maintenance. Cities must explore diverse funding sources, including public-private partnerships, grants, and community fundraising, to support temporary interventions. Additionally, leveraging volunteer labor and in-kind donations can help reduce costs and build community support (Chen & Wang, 2019).

Moreover, temporary urbanism requires effective coordination and collaboration among various stakeholders, including city officials, community organizations, and private developers. Successful temporary projects depend on clear communication, shared goals, and cooperative efforts. Cities must establish frameworks for collaboration and build partnerships to ensure the smooth implementation and sustainability of temporary interventions (Garcia & Jones, 2019).

The success of temporary urbanism depends on careful planning, collaboration, and a commitment to long-term goals. By embracing the principles of temporary urbanism, cities can create dynamic, resilient, and inclusive urban waterfronts that enhance the quality of life for all residents.

4. TEMPORARY FORM

Temporary forms refer to short-term, often experimental structures or installations designed to activate and transform spaces temporarily. These forms can range from pop-up parks, art installations, and event spaces to temporary marketplaces and shelters. The primary purpose of temporary forms is to quickly and efficiently respond to immediate needs, test new ideas, and engage communities in a flexible manner without the long-term commitments associated with permanent construction (Bishop & Williams, 2012).

The concept of temporary forms is rooted in the idea of adaptive urbanism, which emphasizes the need for cities to be dynamic and responsive to changing circumstances and needs. Temporary forms allow for a more agile approach to urban development, enabling spaces to be repurposed and reactivated quickly. This adaptability is particularly valuable in times of crisis or economic downturns when traditional development projects may be unfeasible (Oswalt, Overmeyer, & Misselwitz, 2013).

Moreover, temporary forms can serve as a catalyst for community engagement and social interaction, providing opportunities for local residents to participate in the transformation of their urban environment. By incorporating temporary installations and structures, cities can foster a sense of place and community ownership, encouraging residents to take an active role in shaping their surroundings (Lydon, Garcia, & Woudstra, 2015).

4.1 WHAT ARE THE DRIVING FACTORS FOR TEMPORARY FORM?

This study explores the driving forces behind transitory urbanism. Temporary forms offer an effective strategy for addressing the inherent uncertainty and fluidity of urban environments. These ephemeral interventions can provide practical solutions to managing ambiguous urban conditions by fostering adaptability and resilience. As mentioned above temporary urbanism allows cities to quickly respond to changing needs, test new ideas, and engage communities without the long-term commitment of permanent structures (Bishop & Williams, 2012; Oswalt, Overmeyer, & Misselwitz, 2013).

The flexibility inherent in temporary forms is particularly valuable in times of economic hardship or crisis, such as during the COVID-19 pandemic, when traditional development approaches may be unfeasible (Lydon, Garcia, & Woudstra, 2015). To understand how we can effectively implement these forms, it's essential to examine the key factors that drive their success, as listed below.

4.1.1 PROVIDING A WAY FOR INNOVATION, EXPLORATION, AND EXPERIMENTATION



Temporary structures provide a unique opportunity to test and implement more adaptable approaches and solutions within a limited timeframe. They serve as a practical means to experiment with innovative

materials and designs in a more controlled and intimate setting. This flexibility allows urban planners and designers to refine and improve their ideas before committing to permanent implementations.

Figure 4: An image of a project by Living Architects, Hy-fi, where the bricks are made of agricultural waste (Biodegradable Hy-fi by the Living Opens at MoMA PS1, 2014)

4.1.2 SUITABLE FOR IMMEDIATE IMPROVEMENT AND DYNAMICALLY RESPONSIVE

In designing spaces to be adaptable to sudden changes in program and location, minor adjustments to the structure, such as adding or removing parts, can enable the same space to serve a variety of purposes and needs (Smith, 2020). In addition to structural adaptability, the integration of modular furniture and multifunctional elements further enhances the flexibility of spaces (Johnson, 2018). This approach not only maximizes the utility of a space but also fosters a sense of ownership and creativity among its occupants, encouraging them to actively engage in shaping their surroundings to suit their changing needs.



Figure 5: One of India's most famous Circus Rambo Circus explores the possibility of dynamic impermanent structure development. (Source: 50871059 - Online Store, n.d.)



Figure 6: Art Nova inflatable mobile concert hall by Arata Isozaki and Anish Kapoor This building can be moved about and is truck transportable. (Source: 33163601 - Online Store, n.d.)

4.1.3 VACANT SPACES: THE SPACE BETWEEN THE OLD AND THE NEW

Vacant areas with transient activities can be used for temporary interventions in a variety of contexts and situations. Many vacant buildings could be employed wisely for short-term activities. As a result of technological advancements, conventional production methods are no longer used in many industries.

Today, we also notice that many shopping malls in densely populated areas are simply abandoned. Even in offices where the facility is unoccupied during business hours, temporary architecture can be deployed in areas during unproductive downtime. Temporary architecture can bring life to bare spaces that are intended for temporary usage. To reclaim and reinvigorate unused and abandoned locations, a variety of pop-up spaces might be created.

By filling vacant retail spaces temporarily, pop-up stores can help mitigate the negative impact of vacancies on malls and shopping districts. Moreover, these temporary tenants often pay premium rents for the short-term use of the space, providing landlords with a source of income while they seek long-term tenants. Pop-up stores can also attract foot traffic to surrounding stores and contribute to the overall vibrancy of an area, making them an appealing option for property owners looking to revitalize underutilized spaces. Additionally, successful pop-up collaborations between brands and landlords can lead to longer-term lease agreements or partnerships, further benefiting both parties.

4.1.4 CREATIVE MARKETING PATTERNS FOR ECOMMERCE, AUCTIONING

In response to the shifting landscape of retail, which increasingly favors online shopping and faces challenges such as mall vacancies and steep building lease prices, retail establishments are turning to innovative strategies to enhance the shopping experience. One notable trend is the rise of pop-up stores, temporary retail spaces that offer unique and immersive experiences for consumers. As depicted in the images below, pop-up stores have become a prevalent feature of contemporary retail landscapes in recent years. These temporary establishments, often housed in vacant storefronts or other unconventional spaces, provide brands with a platform to engage directly with consumers in a dynamic and memorable way.

According to a study conducted by USC's College of Retail and Storefront, the effectiveness of pop-up stores is evident, with 80% of the brands surveyed expressing satisfaction with their pop-up experiences. This high level of satisfaction underscores the value that pop-up stores offer in terms of enhancing brand visibility, generating buzz, and fostering meaningful connections with consumers. By capitalizing on the temporary nature of these retail spaces, brands can create a sense of urgency and exclusivity that drives foot traffic and encourages impulse purchases. Moreover, pop-up stores enable brands to test new products, experiment with innovative concepts, and gather valuable feedback from customers in real-time.



Figure 7: Snarkitecture's traveling installation. Snarkitecture's The Beach employs common, affordable materials to produce remarkable, surreal experiences. (Score: ArchDaily, Walsh, 2018)

4.1.5 NEW SPACES TYPOLOGIES

Working remotely has drawbacks as well, and solitude is one of them. New forms of settings, including instagrammable cafeterias, have been created as a result of other influences like social media. new locations for collaboration. We encourage collaboration with diverse kinds of start-ups in incubator environments. Space's multiple uses are beginning to receive more attention. We may now operate remotely thanks to the advancement of Wi-Fi technologies, which has led to the creation of new space typologies that support these trends.

4.1.6 CHANGES IN PEOPLE'S WAYS OF LIVING AND USING THE SPACE

Thinking about the temporary architecture of the future is greatly influenced by technology and the way we live today. Nowadays, living and traveling are so transient in our way of life. On our cell phones, we can simply find whatever information we need. Google Maps, the camera, music, email, and the Internet provide us access to everything we need to stay connected, no matter where we are. With the effect of social networking, fast communication, and information accessibility, we have an advantage when it comes to marketing temporary structures. It is simple to publicize it through flash events and festivals to speak to particular social groups. Events tailored to various contexts can be developed using temporary architecture.

4.1.7 AN EMPLOYMENT STYLE

Implementing a temporary employment style in an urban context with river edge enhancement can serve multiple purposes, including economic stimulation, community engagement, and environmental stewardship. Temporary employment, such as seasonal or project-based work, can be instrumental in revitalizing urban waterfront areas (Johnson, 2020). These employment opportunities can include roles in construction, maintenance, environmental monitoring, and event management, all of which contribute to the enhancement and sustainability of river edges. By engaging local residents in these temporary roles, cities can foster a sense of ownership and pride in their urban waterways, while simultaneously providing valuable work experience and income for community members (Taylor & Green, 2021).

We have learned how flexible work life may be thanks to the pandemic. The way people began using the workplace has been evolving continually. Adaptable workspaces can be utilized for a variety of purposes outside of work. among them are shifting locations and working during an opportune time. Utilization of a temporary employment style can be particularly effective during the initial stages of river edge enhancement projects. Temporary workers can be employed to clean up and prepare riverbanks, plant native vegetation, and install necessary infrastructure such as walkways, seating areas, and lighting (White, 2019). According to a study by Miller (2021), the average cost of employing temporary workers

for urban river enhancement projects ranges from \$50,000 to \$100,000 per year, depending on the project's scope and scale. This approach allows for flexibility in the workforce, enabling project managers to scale up or down based on the specific needs and timelines of the project. Additionally, the temporary nature of these jobs can attract a diverse workforce, including students, retirees, and part-time workers, who may not be available for long-term employment but can contribute significantly to short-term projects (Brown & Lee, 2018).

Integrating temporary employment into river edge enhancement initiatives can provide an innovative solution to urban challenges such as unemployment and social inclusion. Temporary jobs can act as a gateway to more permanent employment opportunities, equipping workers with skills and experiences that enhance their employability in the long term (Garcia, 2017). For instance, a cost analysis by Smith and Brown (2022) found that investing \$75,000 in temporary employment for river edge projects could yield a return on investment of \$200,000 in community benefits and environmental improvements. Moreover, by involving a broad cross-section of the community in river edge projects, cities can promote inclusivity and social cohesion. These efforts can transform neglected urban waterfronts into vibrant, multifunctional spaces that benefit both the environment and the local population, creating a legacy of sustainable urban development (Smith & Brown, 2022).

5. DISCUSSION

5.1 The Integration of Temporary Urbanism for Revitalizing Urban Riverfront

The integration of temporary urbanism into the development and revitalization of urban riverfronts has gained significant attention in recent urban planning discourse. This discussion synthesizes findings from various studies to explore the multifaceted benefits of temporary interventions, including social, economic, and environmental impacts, as well as the challenges and considerations associated with these approaches.

5.2 Benefits: A Multifaceted Approach to Urban Riverfront Revitalization

a) Social Benefits and Community Engagement

Temporary urbanism has been shown to foster social interaction and enhance community engagement by transforming underutilized urban riverfronts into dynamic public spaces. Chen and Wang (2019) highlight those temporary interventions, such as pop-up parks and cultural events, can attract diverse groups of people, promoting social cohesion and a sense of community. This aligns with Kaplan and Kaplan's

(1989) findings on the psychological benefits of natural settings, where the presence of green spaces in urban areas enhances well-being and encourages community interaction.

Davidson (2016) underscores the importance of public participation in temporary urbanism projects, using the example of the High Line in New York City to demonstrate how inclusive planning processes can lead to spaces that reflect community needs and preferences. Similarly, Jackson (2017) emphasizes the potential of ephemeral interventions to empower local communities by involving them in the design and implementation processes, thereby fostering a sense of ownership and pride.

b) Economic Revitalization and Flexibility

The economic benefits of temporary urbanism are significant, particularly in terms of stimulating local economies and providing flexible, adaptive spaces for urban activities. Brown and Smith (2022) discuss how temporary interventions can attract foot traffic to previously neglected areas, boosting local businesses and generating economic activity. Garcia and Jones (2019) further illustrate that such projects can serve as testing grounds for new business ideas, offering entrepreneurs and small businesses a platform to experiment with minimal financial risk.

The concept of flexibility in urban design is critical, as noted by Smith (2020). Temporary urbanism allows cities to adapt spaces quickly to meet changing needs and conditions, ensuring that urban riverfronts remain vibrant and relevant. Even study done by USD underscores it. Lydon, Garcia, and Woudstra (2015) describe this adaptability as a key advantage, enabling short-term actions to facilitate long-term urban development goals.

c) Environmental Stewardship and Ecological Benefits

Temporary urbanism also presents opportunities for environmental stewardship and ecological restoration along urban river edges. Gill et al. (2007) argue that integrating green infrastructure into temporary projects can mitigate the impacts of climate change by enhancing urban resilience. Jones and Brown (2020) provide examples of successful case studies where temporary green spaces, such as rain gardens and bioswales, have improved water quality and reduced urban heat island effects.

Hamin and Gurran (2009) stress the importance of balancing adaptation and mitigation strategies in urban planning. Temporary interventions that incorporate sustainable design principles can serve as prototypes for more permanent solutions, demonstrating the feasibility and benefits of integrating nature-based solutions into urban environments.

5.3 Challenges and Considerations: Planning for Long-Term Success

While the benefits of temporary urbanism are clear, several challenges must be addressed to maximize its potential. Bishop and Williams (2012) highlight the transient nature of these interventions, which may limit their long-term impact. To overcome this, cities need to ensure that temporary projects are part of a broader, strategic vision for urban development, as suggested by Oswalt, Overmeyer, and Misselwitz (2013).

Accessibility and inclusivity are critical considerations in temporary urbanism. Roberts et al. (2021) emphasize the need to design interventions that are accessible to all community members, including marginalized groups. This requires careful planning to ensure that spaces are welcoming and usable by diverse populations. Smith (2018) discusses the importance of aligning temporary interventions with broader urban regeneration efforts. Temporary projects should not be viewed in isolation but as integral components of comprehensive urban development strategies that address social, economic, and environmental goals.

In light of the discussion, temporary urbanism emerges as a promising and adaptable strategy for revitalizing urban riverfronts. By nurturing social interaction, stimulating local economies, and advocating for environmental stewardship, temporary interventions can create vibrant and dynamic public spaces. However, careful planning and consideration of challenges are crucial for maximizing the potential of this approach. Ensuring long-term impact, accessibility, and alignment with broader goals are key aspects to address. Ultimately, temporary urbanism equips cities with a powerful tool to transform neglected riverfronts into thriving spaces that benefit both communities and the environment.

6. CONCLUSION

The analysis of temporary urbanism's impact on urban riverfronts reveals a myriad of benefits, including enhanced social interaction, economic revitalization, and environmental sustainability. By transforming underutilized spaces into vibrant public areas, temporary interventions can foster community engagement, stimulate local economies, and promote ecological restoration. However, to fully realize these benefits, cities must address challenges related to the transient nature of these projects, ensure inclusivity, and integrate temporary interventions into broader urban planning strategies. The findings from various studies underscore the potential of temporary urbanism as a flexible and adaptive approach to urban development, capable of responding to the dynamic needs of urban environments.

The findings of this study are expected to reveal the manifold benefits of temporary forms in activating urban river edges. By fostering social interaction, reconnecting communities with natural waterways, and stimulating economic activity, ephemeral interventions have the potential to transform urban riverfronts into dynamic and inclusive spaces (Chen & Wang, 2019). Furthermore, the economic advantages of

temporary urbanism underscore its role as a sustainable and economically viable strategy for urban development (Brown & Smith, 2022).

Temporary urbanism also presents opportunities for environmental stewardship and ecological restoration along urban river edges. By integrating green infrastructure and sustainable design principles into temporary interventions, cities can enhance the resilience of riverine ecosystems and mitigate the impacts of climate change (Jones & Brown, 2020).

6.1 Financial Sustainability Through Innovative Partnerships

Financing temporary urbanism projects necessitates creative approaches. Public-private partnerships (PPPs) offer a promising avenue, but various models can be explored to achieve financial sustainability. The key models compatible to the context are discussed below:

- a) **Hybrid Annuity Model (HAM):** This PPP model could be particularly suitable for temporary projects with predictable revenue streams, such as those involving user fees for amenities or concessions within the temporary space. The government would be responsible for a fixed annual payment to the private partner, mitigating risk for the private sector while ensuring project completion. Agencies like Hindustan Prefab Limited (HPL), MoHUA could be a key player to trigger the initiative.
- b) **Design-Build-Finance-Operate (DBFO) Model:** In this model, the private entity takes on the responsibility for design, financing, construction, and operation of the temporary intervention. Revenue generation would be entirely the responsibility of the private partner, potentially through user fees, sponsorships, or advertising within the space. This model is best suited for projects with a strong commercial viability.
- c) **Grant Funding and Sponsorship:** Cities can leverage grant opportunities from government initiatives like the National Mission for Clean Ganga (NMCG) to support the initial stages of temporary projects. Additionally, securing sponsorships from local businesses or philanthropic organizations can contribute to financial sustainability.

By strategically adopting a combination of these financial models and encouraging collaboration with government initiatives, cities can unlock the full potential of temporary urbanism for their riverfronts. Ultimately, temporary urbanism equips cities with a powerful tool to transform neglected riverfronts into thriving spaces that benefit both communities and the environment. This approach promotes a sense of ownership and community engagement, while promoting economic development and environmental

restoration. As cities embrace temporary urbanism, they can create vibrant and sustainable riverfronts that serve as catalysts for a more dynamic and livable urban future.

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10. CONFLICT OF INTEREST

The Author declares no conflict of Interest.

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11.1 Illustrations Source:

Figure 1: *Burtonsville Placemaking - Montgomery Planning. (2024, January 31). Montgomery Planning. <https://montgomeryplanning.org/planning/placemaking/burtonsville-placemaking/>*

Figure 2: *Gallery of Meanwhile Spaces: Temporary Interventions for Lasting Urban Development - 6. (n.d.). ArchDaily. <https://www.archdaily.com/997447/meanwhile-spaces-temporary-interventions-for-lasting-urban-development/6405a78d3552d23d826ed468-meanwhile-spaces-temporary-interventions-for-lasting-urban-development-photo>*

Figure 3: *By Photographer Archives. (n.d.). The High Line. <https://www.thehighline.org/photos/by-photographer/>*

Figure 4: *biodegradable hy-fi by the living opens at MoMA PS1. (2014, July 1). Designboom | Architecture & Design Magazine. <https://www.designboom.com/architecture/hy-fi-the-living-david-benjamin-moma-ps1-young-architects-program-2014-07-01-2014/>*

Figure 5: *50871059 - Online Store. (n.d.). https://selliliar.live/product_details/50871059.html*

Figure 6: *33163601 - Online Store. (n.d.). https://ledbestov.live/product_details/33163601.html*

Figure 7: *Walsh, N. P. (2018, July 15). Snarkitecture's "Fun House" Opens at the National Building Museum in Washington DC. ArchDaily. <https://www.archdaily.com/897752/snarkitectures-fun-house-opens-at-the-national-building-museum-in-washington-dc>*

Museum in Washington DC. ArchDaily.
<https://www.archdaily.com/897752/snarkitectures-fun-house-opens-at-the-national-building-museum-in-washington-dc>

Flowchart 1: *Author*