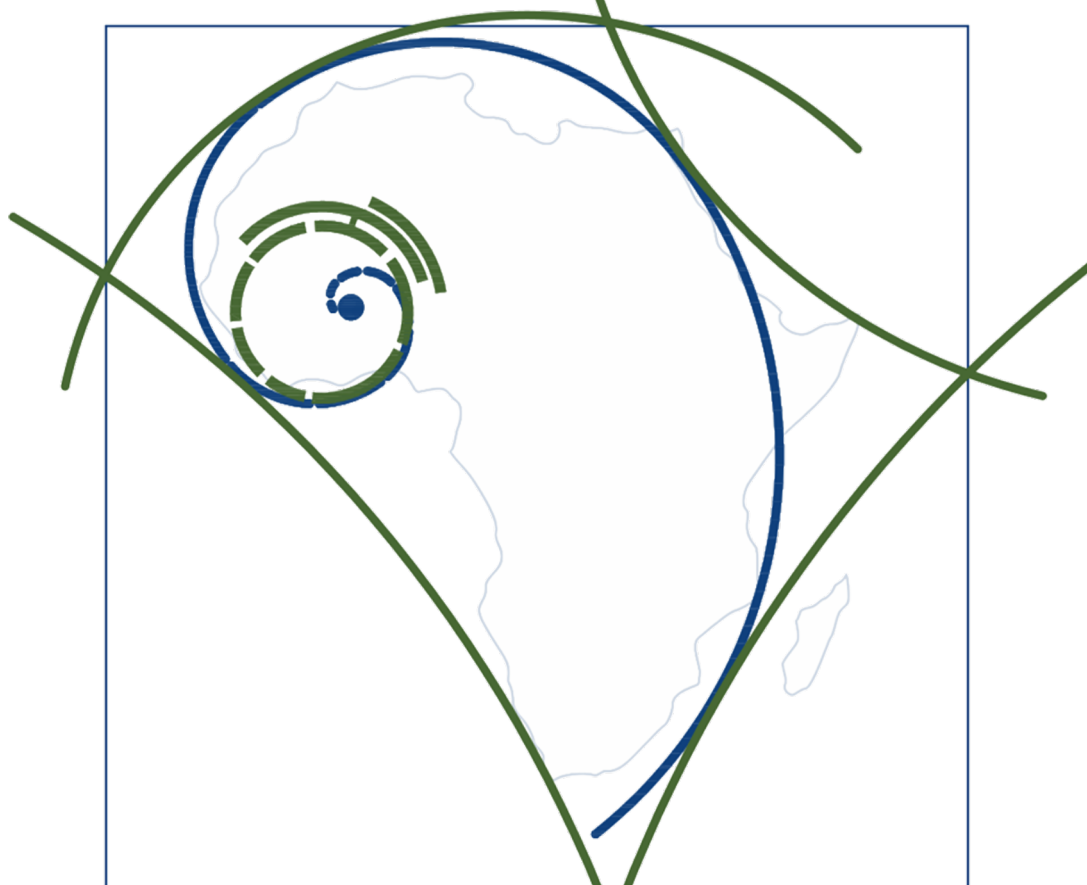


ARCHITECTURE HERITAGE and DESIGN

Carmine Gambardella

XXIV INTERNATIONAL FORUM

Le Vie dei
Mercanti



**WORLD HERITAGE | AFRICA LESS IS MORE
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Conference report

300 abstracts and 400 authors from 20 countries:

Albania, Algeria, Australia, Belgium, Canada, China, France, Germany, Greece, Hungary, India, Iran, Italy, Japan, Morocco, Mexico, Portugal, Romania, Republic of Guinea, Serbia, South Africa, Spain, Turkey, Uganda, United Kingdom, United State of America.

**From the XXIII FORUM WORLD HERITAGE and FOOD TO FEED
to the XXIV FORUM:
WORLD HERITAGE and AFRICA: LESS IS MORE
WORLD HERITAGE and FUTURE AS AN ETERNAL PRESENT**

The **XXIV International Forum “Le Vie dei Mercanti”** continues the path of previous editions by presenting World Heritage as a living organism able to connect memory, identity, and future. After the reflections on “*World Heritage and Food to Feed*,” the 2026 edition broadens its focus to Africa and to the idea of the future as a dynamic continuity of the present.

The theme **World Heritage and Africa: Less is More** recognizes Africa as the cradle of humanity and a laboratory of sustainability. Its cultural landscapes and vernacular architectures demonstrate how the integration of environment, traditional techniques, and community life can generate resilient, low-impact solutions. “Less is More” becomes an ethical and design paradigm: enhancement of local resources, natural materials, essential construction processes, circular economy, and community participation. Heritage protection is thus understood as an active process of social and economic regeneration, based on light settlement models attentive to biodiversity and the memory of places.

The theme **World Heritage and Future as an Eternal Present** interprets heritage as a dynamic system, not only a legacy of the past but a living structure shaping the future. Architecture and planning act as mediators between memory and innovation, integrating digital technologies, advanced education, and knowledge dissemination. Sustainability embraces public health, quality of life, and environmental responsibility within an inclusive global vision.

The logo of the XXIV International Forum synthesizes these values: Africa as a universal reference, the golden ratio as harmony between nature and culture, and the cell as a symbol of life and continuity. Heritage thus emerges as a balance between history and design, tradition and innovation.

Prof. Carmine Gambardella
General Chair XXIV Forum ‘World Heritage and Africa: Less is More’
and ‘World Heritage and Future as an Eternal Present’
President and CEO of the Benecon University Consortium
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**Dal XXIII FORUM WORLD HERITAGE and FOOD TO FEED
al XXIV FORUM:
WORLD HERITAGE and AFRICA: LESS IS MORE
WORLD HERITAGE and FUTURE AS AN ETERNAL PRESENT**

Il **XXIV Forum Internazionale “Le Vie dei Mercanti”** prosegue il percorso delle edizioni precedenti ponendo il patrimonio mondiale come organismo vivente, capace di connettere memoria, identità e futuro. Dopo la riflessione su “*World Heritage and Food to Feed*”, l’edizione 2026 amplia lo sguardo al ruolo dell’Africa e al futuro inteso come continuità dinamica del presente.

Il tema **World Heritage and Africa: Less is More** riconosce l’Africa come culla dell’umanità e laboratorio di sostenibilità. I suoi paesaggi culturali e le architetture vernacolari mostrano come l’integrazione tra ambiente, tecniche tradizionali e vita comunitaria generi soluzioni resilienti e a basso impatto. “Less is More” diventa paradigma etico e progettuale: valorizzazione delle risorse locali, uso di materiali naturali, processi costruttivi essenziali, economia circolare e partecipazione delle comunità. La tutela del patrimonio si configura così come processo attivo di rigenerazione sociale ed economica, fondato su modelli insediativi leggeri, attenti alla biodiversità e alla memoria dei luoghi.

Il tema **World Heritage and Future as an Eternal Present** interpreta il patrimonio come sistema dinamico, non solo eredità del passato ma struttura viva che orienta il futuro. Architettura e pianificazione diventano strumenti di mediazione tra memoria e innovazione, integrando tecnologie digitali, formazione avanzata e diffusione della conoscenza. La sostenibilità comprende salute pubblica, qualità della vita e responsabilità ambientale, in una visione inclusiva e globale.

Il logo del XXIV Forum Internazionale sintetizza tali valori: l’Africa come riferimento universale, la sezione aurea quale principio di armonia tra natura e cultura, la cellula come simbolo di vita e continuità. Il patrimonio emerge così come equilibrio tra storia e progetto, tradizione e innovazione.

Prof. Carmine Gambardella
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Recognizing the invisible: Value-Based approaches to architectural heritage in Rwanda

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Abstract

In the context of rapid urbanization, Rwanda's twentieth-century built environment faces intense redevelopment pressures. Despite historical, aesthetic, and social values, such as climate-responsive tropical modernism, much of this architectural heritage remains "invisible" due to the absence of a comprehensive national framework for built heritage identification and conservation. This paper argues that in rapidly transforming contexts where formal monumental designation is lacking, the preliminary recognition of values could serve as a crucial first step toward formal protection. Shifting from traditional material-centric conservation to a value-based, participatory paradigm aligned with the *Faro Convention*, this research explores how twentieth-century architecture in Kigali and Huye, and other secondary cities of Rwanda, can be made legible as built heritage. This paper was written based on results from the participatory mapping facilitated through public "Urban Walks", semi-structured stakeholder interviews, and direct urban observation. By engaging local citizens, officials, and urban planners during the master plan revisions for case study cities, the study uncovers the layered significance of endangered sites, such as Kigali's Quartier Matheus and Huye's colonial-era brick structures including housing. These methods demonstrate that participatory identification not only documents overlooked assets but actively translates local memory and architectural intelligence into actionable urban policy. Ultimately, this paper concludes that recognizing heritage values is not merely an interpretative exercise, but a foundational institutional requirement. By triangulating global heritage discourse with local participatory action, the research establishes a critical baseline for developing future inventories, selection criteria, and safeguarding strategies. This ensures Rwanda's architectural legacy contributes sustainably to its modern urban future.

Keywords: Built heritage, participatory mapping, urban walks, twentieth-century architecture, value-based assessment, Rwanda

1. Introduction

In recent decades, heritage theory has moved away from an understanding of conservation centered almost exclusively on the material permanence of monuments, towards a broader view of heritage as a field of meanings shaped by multiple and changing values. The question is no longer only how a building should be preserved, but why it matters, to whom, and through which qualities its *significance* is expressed. This shift, rooted in the *Burra Charter* and later reinforced by the *Nara Document on Authenticity*, has made it clear that heritage cannot be understood through the building analysis alone. Its significance emerges instead from the intersection of historical, aesthetic, social, symbolic, spiritual, scientific, and use-related dimensions, all of them historically contingent and open to reinterpretation [1][2][3][4][5]. From this perspective, the identification of values is not an accessory step within conservation practice, but the basis on which any process of protection, management, or transformation must rest [4][5][6][7].

The *Faro Convention* gave this shift an important social and political inflection by placing people, participation, and shared responsibility at the center of heritage discourse [8]. Its idea of the *heritage community* is particularly relevant, since it suggests that significance is not established only through

expert judgement or legal designation, but also through the meanings that individuals and groups attribute to places and through their willingness to sustain them as part of public life [8]. This is especially important in cases where heritage is not already stabilized by monumental status or by long-standing institutional recognition. In such contexts, significance must be articulated through a more open process, one that can bring together professional assessment, public understanding, and local experience [8][9]. This is especially true for twentieth-century and everyday architecture. Their importance often lies less in conventional monumentality than in more elusive and layered qualities: climatic intelligence, social use, urban memory, technical experimentation, symbolic resonance, or public recognition [4][6][7]. Recent work on the social value of built heritage has reinforced this point, showing that participatory methods are not merely instruments of consultation, but ways of revealing attachments, uses, and forms of meaning that expert-led assessments alone may fail to capture [9]. In this sense, heritage recognition is not simply a matter of assigning labels after the fact. It is the process through which the reasons for future protection are made visible and arguable. This has direct implications for policy.

Recent guidance on inventories and surveys has reaffirmed that these are not secondary technical tools, but essential instruments for understanding the heritage resource and for supporting later decisions about conservation and management [10]. The same applies to Tentative Lists: as UNESCO, ICCROM, ICOMOS, and IUCN have stressed, they are not substitutes for inventories, but selective instruments that should emerge from prior processes of identification, comparison, and assessment [11]. In other words, before heritage can be protected, it must first be recognised, described, and situated within a wider field of possible heritage resources. Recognition, inventorying, and selection are therefore part of the same chain. Without that first step, there can be no solid basis for deciding what should be protected, what should be studied further, and what might eventually form part of a tentative list of assets worthy of formal safeguarding [10][11][12][13]. These questions become particularly pressing in Rwanda, where the recognition of built heritage remains both urgent and methodologically complex.

Rwanda is undergoing rapid urban transformation, especially in Kigali and in secondary cities such as Huye, while still lacking a fully developed framework specifically devoted to the identification, valorization, and conservation of built heritage [14][15]. In practice, protection has often depended less on established criteria than on planning contingencies, participatory discussion, and ad hoc processes linked to master plan revision [14][15][16]. At the same time, the Rwandan built environment presents conditions that make conventional heritage categories difficult to apply: the limited survival of precolonial architecture due to perishable materials, the layered legacy of colonial and postcolonial urbanization, the fractures produced by the 1994 genocide against the Tutsi, and the speed of ongoing redevelopment [14][15]. For all these reasons, the problem is not only how to protect heritage, but how to recognize it in the first place. This condition has been critically addressed in recent studies on Rwandan architecture, which highlight how twentieth-century and contemporary built environments embody a latent cultural and climatic intelligence that remains largely unrecognized within formal heritage frameworks [17]. In Rwanda, this question is more than theoretical. What is needed is not simply the identification of a few isolated buildings of exceptional value, but the gradual construction of a first body of recognized built heritage that can support future planning and protection tools. This means moving from dispersed knowledge and local concern towards more explicit processes of documentation, comparison, and assessment. In practical terms, such work could provide the basis for preliminary inventories, for the definition of priorities at local or national level, and, in the longer term, for the development of a tentative list of properties considered worthy of formal protection [10][11][13]. Recognition, in this sense, is not just an interpretative exercise; it is the first step in building a heritage policy.

The relevance of this approach is already visible in the work of Gubić and Michieletto. Their studies on participatory mapping, urban walks [18][19], and twentieth-century built heritage in Kigali and Huye show that many buildings and urban fragments already embody significant historical, social, cultural, aesthetic, and technical values, even if they do not fit traditional monumental expectations [14][15]. In Huye, for example, colonial and early postcolonial buildings reveal a notable synthesis between imported architectural languages and local climatic adaptation, visible in orientation strategies, ventilation systems, shading devices, material choices, and spatial responses to tropical conditions [14]. In Kigali, areas such as Quartier Commercial and Quartier Matheus preserve traces of the city's urban evolution and forms of identity that are increasingly vulnerable to redevelopment pressures [15]. Here, participatory mapping and urban observation do more than document heritage already acknowledged elsewhere: they actively contribute to making it legible as heritage.

Seen from this perspective, a values-based reading offers more than an imported conservation methodology. It provides a way of bringing into focus elements of Rwanda's built environment that have remained insufficiently recognised, while also linking heritage discourse to urban policy. Recent guidance on statements of significance and local heritage listing has shown that assessment tools can

support more transparent and accountable decisions, especially where formal designation systems are incomplete or still evolving [12][13]. Bringing together international debates on significance, authenticity, participation, inventories, and sustainable development with local processes of mapping, urban observation, and public discussion can therefore help shape a more grounded understanding of architectural heritage in Rwanda [2][3][4][5][8][10][11]. In a context of rapid urban change and limited normative instruments, the recognition of values is not a secondary interpretative step. It is the necessary starting point for any future inventory, selection process, and tentative list of built heritage to be protected.

Previous investigations have also emphasized the need to reinterpret Rwanda's architectural production not as a marginal or transitional phenomenon, but as a coherent field of experimentation linking tropical adaptation, material pragmatism, and evolving urban identities [20]. This article starts from that premise. It argues that, in the Rwandan context, the first challenge is not simply conservation in the strict sense, but the prior cultural and institutional work of making built heritage visible, intelligible, and assessable. By focusing on the recognition of values as a necessary basis for future inventories, selection criteria, and protection strategies, the paper frames heritage not as a fixed category waiting to be discovered, but as a field that must be critically identified through the intersection of historical analysis, urban observation, and participatory interpretation. In doing so, it seeks to contribute both to the debate on heritage recognition in rapidly transforming contexts and to the development of more grounded tools for the future protection of Rwanda's twentieth-century built environment.

2. Methods and Methodology

To address the lack of a formalized framework for the identification, valorization, and conservation of built heritage in Rwanda, this research adopts a qualitative, value-based, and participatory methodological design. Aligned with contemporary heritage theory, which shifts the focus from mere material permanence to the social, historical, aesthetic, and cultural meanings attributed by communities, the methodology emphasizes making "invisible" heritage legible through public engagement and direct urban observation. The core of the primary data collection relied on participatory mapping facilitated through "Urban Walks" [21][22][23]. These events were organized in the rapidly urbanizing cities of Kigali (in February 2019, as a parallel event to the National Urban Forum) and Huye (in October 2019, marking Urban October). The Urban Walks engaged approximately 50 participants, encompassing local citizens, government and city officials, and urban planners, notably representatives from the firm responsible for revising the 2020–2050 master plans for both cities. Functioning as dynamic participatory mapping exercises, these walks allowed participants to collaboratively trace, identify, and assess 20th-century architectural assets, such as Kigali's Quartier Matheus and Huye's tropical modern structures, extracting local knowledge about their historical, aesthetic, and social significance.

To validate and expand upon the data collected from the public, the study incorporated 15 semi-structured interviews with government officials and relevant urban sector stakeholders. Because historical records and architectural plans in Rwanda are exceedingly scarce, many having been lost or destroyed during the 1994 genocide against the Tutsi, these interviews were crucial for verifying construction periods, historical functions, and the cultural importance of specific sites. Furthermore, the research integrated insights generated from an international academic workshop coordinated by the authors in Kigali in 2018, which involved 20 undergraduate students from Rwanda and abroad to discuss contemporary and historical architecture.

A comprehensive document and desk review was also utilized to situate the field findings within broader urban policies and global heritage discourse. This involved analyzing international frameworks, such as the *Faro Convention*, alongside local planning documents, including the revised master plans and District Development Strategies. The literature review tracked emerging patterns in policy formulation to understand how heritage is currently framed, or omitted, within Rwanda's rapid urban development.

Finally, extensive site visits and visual documentation were conducted across both cities. Original photographic data was captured by the authors to record architectural forms, material choices (such as the prominent use of local fired brick), and unique spatial adaptations to the tropical climate, including brise-soleil and cross-ventilation systems. By triangulating participatory mapping, stakeholder interviews, policy review, and direct urban observation, this methodology bypasses the limitations of missing official archives and constructs a foundational, values-based inventory of Rwanda's 20th-century built environment, establishing a necessary baseline for future protection.

3. Results

The results of the participatory “Urban Walks” demonstrate that public engagement can effectively overcome the severe absence of official historical archives, generating a robust preliminary inventory of Rwanda’s twentieth-century built environment. By directly engaging 50 participants per walk, including local citizens, city officials, students and professionals of architecture and urban planning, the mapping exercises successfully documented and assessed buildings across Kigali and Huye (Fig. 1) based on their historical, technical, aesthetic, and cultural values [21][22][23].



Fig. 1: Urban Walk in Huye (left), and in Kigali (right) © Ilija Gubić (left) and Pamela Birungi (right)

In Kigali, the mapping focused on the historic Nyarugenge district (Fig. 2), documenting 14 key buildings and urban fragments. The results highlighted the critical socio-historical value of the 1930s Quartier Commercial and Quartier Matheus. Originally established by Arab and Indian traders, these neighborhoods are characterized by continuous colonnades and one-to-two story light-coloured facades, forming a highly specific, yet previously unrecognized, urban identity. The mapping also catalogued the evolution of the city's built environment from colonial brick structures, such as the 1930 Kigali Central Prison and the Cloister of the Bernardine Sisters, to post-independence modernist structures. Buildings like the 1973 Hotel Mille Collines and the 1983 Consulate General of Switzerland illustrate the later shift towards reinforced concrete, visible columns, and modernist horizontal aesthetics.

heritage visible but successfully translates local memory and architectural assessment into formal spatial regulations

4. Discussion

The findings from this research demonstrate that shifting from a material-centric conservation model to a value-based, participatory approach is essential in contexts where formal heritage frameworks and historical archives are largely absent. In Rwanda, the widespread loss or destruction of architectural plans and official records, particularly during the 1994 genocide against the Tutsi, has rendered traditional, expert-led heritage identification incredibly difficult. By operationalizing the Faro Convention's concept of the "heritage community," the participatory Urban Walks held in Kigali and Huye proved that public engagement is not merely consultative, but a vital mechanism for generating primary data. Engaging citizens, government officials, and planners allowed for the extraction of local memory regarding construction periods and social functions, effectively bypassing the limitations of missing archives and bringing "invisible" 20th-century architecture into the urban discourse.

Kigali's Commercial Core The application of this methodology in Kigali revealed the urgent tension between rapid urbanization and heritage preservation. During the February 2019 Urban Walk in the Nyarugenge district, participants mapped critical 1930s settlements such as Quartier Commercial and Quartier Matheus. Quartier Matheus, established by Arab and Indian traders, is characterized by its light-coloured facades and continuous colonnades, forming an urban fragment with a highly specific, yet formally unrecognized, identity. However, in the context of Kigali's rapid demographic growth, which saw the population surge from approximately 358,000 in 1996 to over 1.6 million in 2017, these central areas face severe redevelopment pressures [24]. Driven by the demand for high-density, 5-to-10-storey commercial centres within the Central Business District (CBD), these historic nodes risk complete erasure. The participatory assessment highlighted that the significance of these neighborhoods lies not in individual monumental grandeur, but in their collective urban memory and historical continuity.

Crucially, the data generated from this participatory mapping directly informed the revision of the Kigali Master Plan (2020–2050). Acknowledging the cultural and economic potential of these areas, the revised Nyarugenge CBD Urban Design introduced a "Heritage Overlay". By integrating heritage into the master plan, Kigali demonstrates a nascent shift towards viewing built heritage not as a barrier to modernization, but as a foundational asset that fosters a vibrant, mixed-use economic environment.

In Huye, Rwanda's secondary city and historical cultural capital, the participatory mapping uncovered a different set of values, primarily centered around technical experimentation and climatic adaptation. The October 2019 Urban Walk documented structures from the 1940s to the 1960s that represent a unique synthesis of imported modernism and local environmental responsiveness, often referred to as tropical modernism. These structures provide a living archive of passive cooling strategies that are highly relevant to contemporary sustainable design. For example, the Huye Post Office (built in the 1940s) utilizes a flat roof hidden by a high cornice, with its main axis oriented east-west to exploit cross-ventilation through strategically placed openings between the roof and ceiling. Similarly, the Groupe Scolaire (1929) and post-independence structures like the Ethnographic Museum (1987–1989) showcase the extensive use of local fired bricks, deep arcades, and elevated roofs to combat tropical humidity and heat. Unfortunately, without formal recognition, many of these assets remain vulnerable; the 1960s home of Queen Rosalie Gicanda, for instance, remains unprotected and heavily devastated. By assessing these buildings through a value-based lens, it becomes evident that Huye's 20th-century architecture embodies an inherent "climatic intelligence" that transcends mere aesthetic appeal, offering tangible lessons for Rwanda's current urban development. This interpretation resonates with earlier research on tropical architecture in Rwanda, where climatic responsiveness, the use of local materials, and spatial adaptability are understood as defining characteristics of a context-specific modernity rather than as derivative adaptations [25].

Recognizing these historical values also bridges a critical gap between heritage conservation and contemporary environmental policy. The architectural intelligence mapped in Kigali and Huye, specifically the reliance on local materials like brick and the use of passive ventilation, aligns seamlessly with Rwanda's recent Green Building Minimum Compliance System [16][26]. This continuity between historical climatic strategies and contemporary environmental performance is further supported by empirical studies on user perception of energy efficiency in Rwandan buildings, which demonstrate how passive design principles, material choices, and spatial configuration directly influence thermal comfort and energy awareness [16][26][27]. The global push to reduce carbon emissions in the construction

sector has led to a renewed advocacy for brick due to its durability, low maintenance, and energy efficiency.

Contemporary architectural practices in Rwanda are already drawing upon these recognized heritage values to meet modern sustainability demands. For instance, the Women's Opportunity Center in Kayonza, designed by Sharon Davis, revives traditional vernacular forms through a circular layout and uses perforated brick walls to allow for passive cooling and natural ventilation. Similarly, the Education Center in Nyanza successfully utilizes locally crafted clay bricks, wicker, and papyrus to achieve a comfortable indoor climate without the need for energy-intensive air conditioning [28]. This continuity proves that the value of Rwanda's built heritage is not strictly retrospective; it is an active, functional resource that provides a sustainable blueprint for the nation's rapidly expanding built environment.

Despite the successes of incorporating mapped sites into the revised master plans of Kigali and Huye, a broader institutional challenge remains. Rwanda still lacks a comprehensive national framework, dedicated institutions, or academic curricula specifically tailored to the valorization and conservation of built heritage. While the master plans offer spatial protection mechanisms like the Heritage Overlay, urban planning tools alone are insufficient without parallel heritage legislation and formalized inventories.

Therefore, the recognition of values achieved through these participatory Urban Walks must be viewed as the foundational step toward establishing official Tentative Lists and national inventories. Aligning with the development agendas, the protection of this newly "visible" heritage should be institutionalized not merely as a conservation mandate, but as a core component of sustainable urban development, cultural infrastructure, and local economic resilience. By transitioning from ad hoc participatory mapping to formalized, value-based policy, Rwanda can ensure that its 20th-century architectural legacy continues to meaningfully anchor its future urban landscape.

5. Conclusion

The rapid urbanization of Rwanda's cities, particularly Kigali and Huye, as well as other secondary cities, presents a critical challenge to the survival of its twentieth-century architectural legacy. This research demonstrates that in contexts where formal monumental designation and institutional heritage frameworks are nascent or absent, transitioning to a value-based, participatory paradigm could play an essential role. By engaging citizens, urban planners, and government officials through participatory "Urban Walks," this study rendered the "invisible" built heritage legible, extracting local knowledge regarding the historical, social, aesthetic, and climatic significance of architecture. Consequently, this participatory mapping, and other findings from "Urban Walks" organized by other stakeholders, directly informed the 2020 - 2050 master plan revisions in both, illustrating that heritage recognition can actively shape urban policy, such as Kigali's "Heritage Overlay", and serve as a foundational asset for a vibrant, mixed-use economic environment rather than a barrier to modernization.

5.1. Research Limitations

Despite these advancements, this research encountered significant limitations. The primary constraint is the severe absence of official architectural plans, historical records, and written traces regarding Rwanda's built environment, much of which was tragically lost or destroyed during the 1994 genocide against the Tutsi. This lack of documentation makes conventional, expert-led historical evaluation exceedingly difficult. Additionally, there is a broader institutional gap: Rwanda currently lacks dedicated government institutions and academic curricula, such as specific courses at the University of Rwanda, focused on the valorization and conservation of built heritage. From a policy and planning perspective, while the revised master plans protect the broader historical urban matrix, they frequently fail to mandate the security of individual historical structures from redevelopment pressures. Finally, adequate funding for the restoration and adaptive reuse of mapped heritage remains a challenge, as municipal public funds are understandably prioritized for expanding basic urban services and infrastructure for a growing population.

5.2. Opportunities for Further Research

These limitations outline clear opportunities for future research and institutional action. Foremost, further research must focus on transitioning the preliminary data gathered from participatory mapping into a comprehensive national inventory of built heritage, accompanied by clear preservation guidelines. This

foundational work is a prerequisite for developing official Tentative Lists for formal protection. There is also a significant need to investigate the quantifiable social and economic benefits of protecting built heritage in Rwandan cities, particularly exploring how adaptive reuse and sustainable heritage tourism can generate equitable economic opportunities. To support this, research should actively identify innovative funding mechanisms and investment models to finance the respectful restoration of these sites. Furthermore, future scholarship could delve deeper into the specific architectural syntheses found in Rwanda, such as "tropical modernism" and the climatic intelligence of twentieth-century brick architecture, assessing how historical passive cooling strategies can inform contemporary sustainable building and green compliance practices. By expanding on these areas, Rwanda can ensure its architectural heritage is not only recognized but actively sustained as a core component of its future urban development.

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