

Twentieth-century Architecture and Conservation Management Planning. Experiences in Italy and in Brazil



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Abstract This book presents a comparative discussion of the experiences developed on the topic of management and conservation of 20th-century architecture in Italy and Brazil with the support of the Getty Foundation in Los Angeles. Building upon the scholarly findings compiled by experts in the field, this book publication offers an analysis of the management and conservation plans developed in the two countries and attempts to evaluate their tangible effects on architectural conservation practices and institutional protective measures. Our aim is to contribute to the international debate on the protection of modern architecture catalysed by the Getty Foundation’s “Keeping it Modern” program between 2014 and 2020 by providing insights into the impact of this investment in human and financial resources in Italy and Brazil.

Keywords Conservation management plan · Modern architecture · Italy · Brazil · Planned conservation

1 Introduction

The book includes eight essays written by researchers who were instrumental in formulating the conservation plans, reflecting on the true impact of these projects on the conservation of the buildings drawing upon the research descriptions outlined in the final reports compiled by the Getty Foundation, and on other publications (https://www.getty.edu/foundation/initiatives/current/keeping_it_modern/report_library/) [1–3].

Several significant variables need to be considered when evaluating research and projects in the two countries. These include the differing timelines for their development and publication, and the time elapsed since their effective dissemination. For

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instance, projects for the Edifício Artigas at the Universidade de São Paulo were documented in 2017, for the Casa de Vidro in São Paulo in 2018, for the Museo das Artes de São Paulo-MASP in 2019, for the Stadio Flaminio in Rome in 2020, for the School of Mathematics at Rome's University Campus in 2021, for the School of the Arts in Cuba in 2022, and for the Torino Esposizioni Hall B in 2023. The following considerations also consider the Conservation Management Plans completed in 2017 for the Collegi del Colle in Urbino (Giancarlo De Carlo, 1962–1986) and for the Arthur Neiva Pavilion of the Oswaldo Cruz Foundation in Rio de Janeiro (Jorge Ferreira, 1942–1948), already published extensively and not included in this publication for editorial reasons [4, 5].

It is therefore crucial to allow more time for a comprehensive assessment of the ultimate impact of these experiences, based on the actual implementation (or non-implementation) of the planned interventions, also considering the lingering effects of the pandemic crisis, which significantly impacted the projects between 2020 and 2021.

Furthermore, it is important to note that the “Keeping it Modern” programme could not directly act on the buildings due to the diverse ownership regime, legislative framework, and the distinct institutional arrangements for protection across the involved countries. The programme's primary aim is instead fully cultural, serving as a catalyst to foster dialogue on the conservation of 20th-century architecture. This dialogue is intended to occur primarily among specialists, conservation institutions and the communities of ‘inhabitants’, facilitating a discourse on balancing heritage conservation with the needs of collective use.

Therefore, the assessment of the impact of the conservation plans discussed in this volume primarily focuses on the capacity that the drafting of these documents has developed in researchers while planning modern heritage conservation, thus cultivating a sense of belonging within the communities inhabiting these spaces, and promoting their conservation efforts, albeit indirectly.

Moreover, the decision to focus on a comparative analysis between Italy and Brazil stems from the substantial number of projects funded by the Getty Foundation: apart from the United States of America, which participated with 17 projects, and the United Kingdom that received five grants, Italy and Brazil contributed most to the project, respectively with 4 and 5 projects (Fig. 1a, b).

Additionally, the choice is influenced by direct and collaborative dialogue established amongst the working groups involved in these projects. This collaboration is built upon the long-standing scientific and academic cooperation between universities and research centres in both countries, particularly regarding 20th-century architecture. Furthermore, it is based on a deep-rooted cultural connection between the two countries, addressing questions of architectural historiography and of 20th-century architectural conservation and restoration, which are of mutual interest despite some notable differences. While modernism in Brazil symbolises independence, post-colonialism and the creative vitality of a country in constant socio-cultural evolution, Italian 20th-century architectural production occupies a complex historical–critical position, marked by historical events that separate the first half of the century, which is

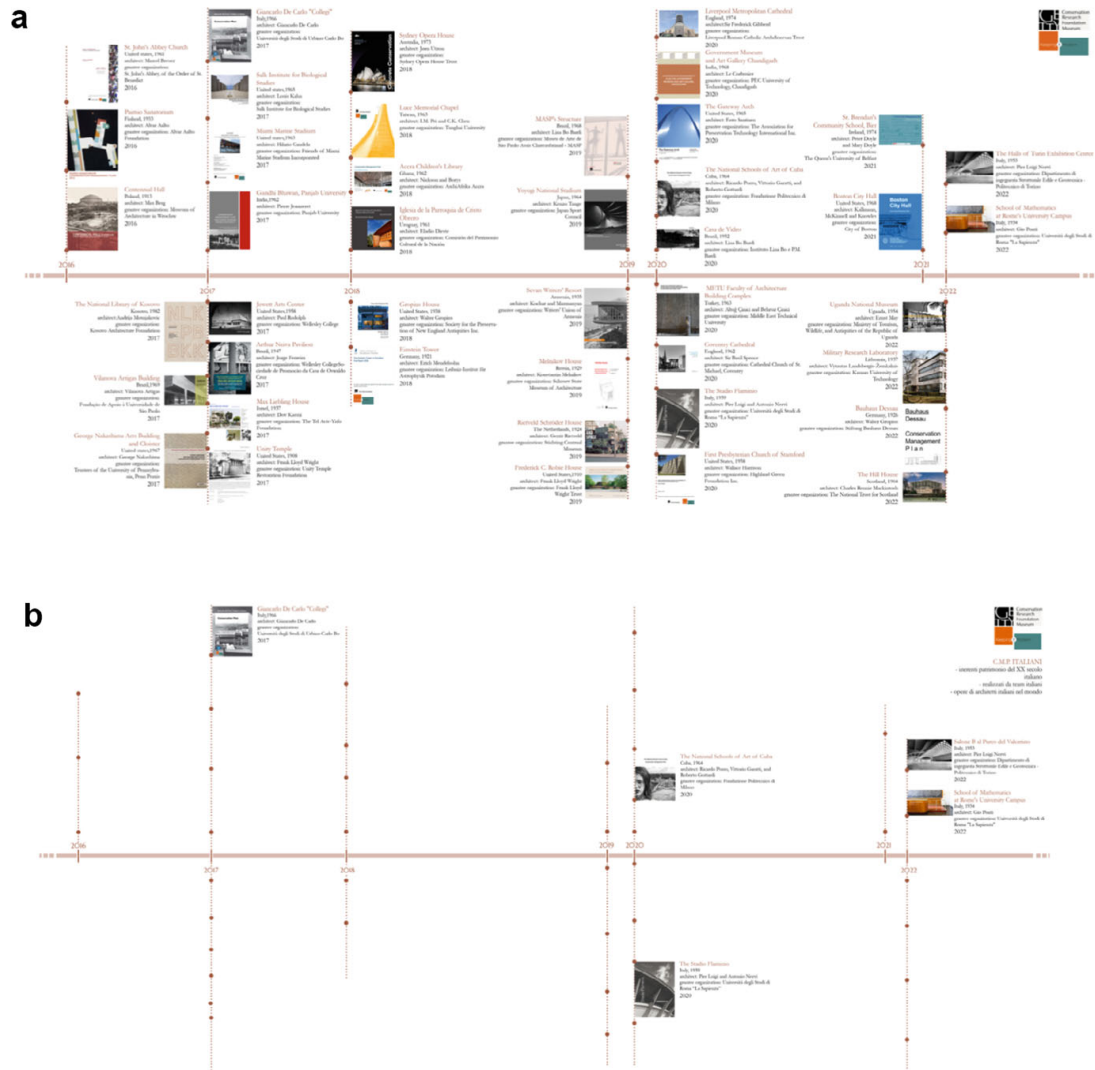


Fig. 1. a Development of “Keeping It Modern” projects in the world between 2007 and 2023. **b** Development of “Keeping It Modern” projects in Italy and Brazil between 2007 and 2023

associated with the Fascist dictatorship, from the second, which is linked to building speculation and aggression against historic urban centres.

Moreover, while Brazil legislation governing the conservation of cultural heritage provides that protection can be initiated almost concurrently with the achievement of the building itself, placing no chronological limits on the protection of cultural heritage, in Italy the progression of historiography is more gradual and deliberate, particularly concerning recent architectural heritage. The tendency to centre historical–critical assessments around the more well-known works, often elevated to the status of ‘icons’, links the two countries instead, with some recent openness towards residential historical estates and widespread cultural heritage, especially in Italy. Some profound differences between the two countries also exist in terms of heritage conservation implementation—perhaps even in their fundamental conceptualisations—as well as in the management of maintenance and, notably, in the

varying degrees of emphasis placed on integrating conservation plans with broader issues such as sustainability, resilience, community involvement, artefact usage, and the concept of ‘risk’. The conservation and management plan for the National Art Schools of Cuba, among others, has tried to include some of these issues within its framework, for example investigating the hydraulic risk to which buildings are exposed due to their proximity to the Caribbean Sea and the violence of tropical rainfall, which is increasing due to global climate change [6].

However, before delving into any comparison it is crucial to acknowledge the distinct theoretical and methodological frameworks that underpin conservation planning and management in the Anglo-Saxon cultural context that rules the approach of the Getty Foundation, and those inherent to the purely Italian and ‘Latin’ context. With its historical and cultural precedence in conservation, viewed as an “act of culture” rather than as the mere functional recovery of a historical asset, Italy actually struggles with a long-standing inertia in embracing maintenance as a protective practice. This may stem from deep-rooted attitudes within individuals and communities, or may be considered the output of the country’s administrative, political and social organization. Nonetheless, this reluctance to assume responsibility for the maintenance of architectural heritage (especially public properties), which instead is a more common practice in Anglo-Saxon countries, diminishes the effectiveness of any conservation planning efforts. Contrastingly, despite sharing a Latin cultural background with Italy, Brazil exhibits a greater readiness for accountability and an understanding of the advantages that shifting perspectives toward maintenance practices can yield.

2 Cultures of Conservation

The Conservation Management Plan (CMP) proposed by the Getty Foundation is structured in five operational steps defined by the Australia International Council on Monuments and Sites back in 2013 based on the Burra Charter, drafted by the Australia ICOMOS in 1979 and subsequently updated up to the version adopted in 2013 [7], and in stark contrast to the Venice Charter of 1964 and to its principles of material conservation (Fig. 2).

In the Anglo-Saxon cultural context, which is strongly marked by pragmatism, conservation and management plans are understood as tools “to manage change for an adequate balance between preservation of values and evolution of use”, identifying “operational methodologies and process organization to enable managers and owners of historical assets to operate consciously, in a planned and controlled manner”: the criteria identified for ensuring architectural conservation are therefore conceptualised “in terms of hierarchies of values and tolerance to change, not design proposals”. This condition stems from a preliminary “statement of significance” that underpins the conservative approach.

The Italian cultural and methodological context, instead, presents a markedly different approach characterised by processes of “value assessment”, rooted in a

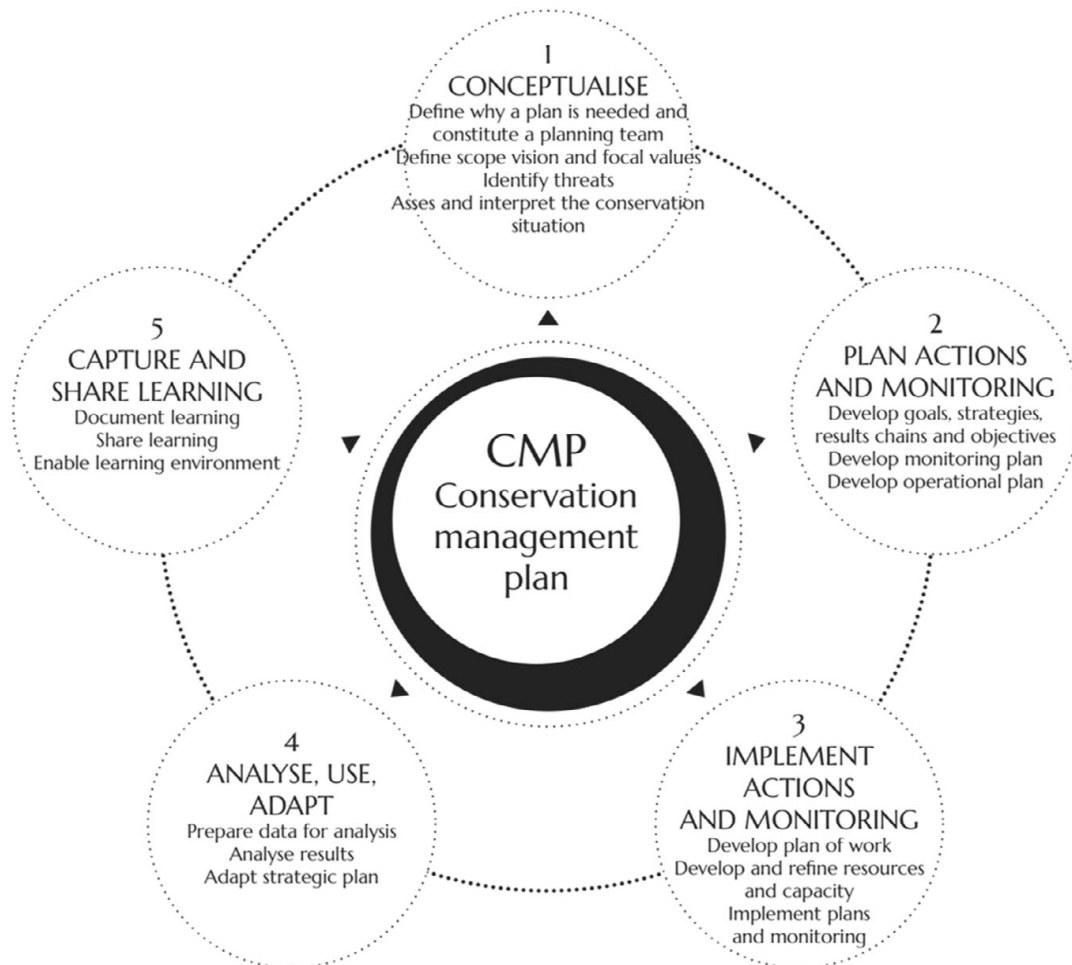


Fig. 2 The phases of a CMP

theoretical framework derived from philosophy and art criticism rather than in more contingent cultural, socio-economic and political circumstances. Brazil also follows this approach in many ways, albeit with a value scale that encompasses historical, aesthetic, socio-cultural, anthropological and political dimensions. In Italy, the commitment to prioritizing material conservation, even at the expense of considerations about use and functionality [8], poses a significant contrast to the Anglo-Saxon framework that informs the development of CMPs. These disparities represent significant challenges that have already emerged in the attempts to formulate a global approach to the conservation of the world's cultural heritage, which require extensive collaboration and mutual understanding to ensure benefits for the community in a broad, inclusive and intercultural sense.

3 Opportunities

A consistent theme shared by all the researchers involved in the Keeping It Modern projects emerges from the experiences narrated in this volume, which concerns the opportunity provided by the Getty Foundation to conduct scientific, systematic and multidisciplinary research on works that had never been carefully studied before despite their undeniable architectural and testimonial value. This opportunity is an undoubtedly unique and exceptional endeavour in the context of contemporary heritage conservation as it also ensures full organisational autonomy in proposing organisations and in covering the costs without imposing any restrictions.

The Getty Foundation's support has in fact facilitated a substantial investment of energy and resources aimed at deepening knowledge of the studied properties, being this an indispensable prerequisite to identify protection strategies. In the cases herein examined, the development of CMPs has in fact necessitated investigations into the historical construction phases, direct studies of building materials and construction techniques, in-depth studies of the cultural, socio-economic and political context in which the buildings were constructed and the consequences of its changes over time, and the original and current usage patterns, among others. These investigations, often carried out for the first time, have produced fundamental and original information that finally sheds light on individual works, their authors and the historical context in which they were conceived. Thus, while primarily serving as predictive tools, CMPs also possess a hermeneutic potential, fostering the advancement of scientific knowledge and unveiling previously unknown aspects of the artefacts, sometimes even suggesting their repositioning in the historiographical context, as in the case of the National Schools of Art in Cuba, where preliminary CMP investigations revealed the actual structural mechanisms underlying thin concrete and brick vaults [1].

The drafting of CMPs, in certain instances, has also played a significant role in fostering experimentation with restoration techniques, prompting the refinement of maintenance practices. The CMP for the University Colleges of Urbino, characterised by Brutalist architecture featuring reinforced concrete façades, includes a chapter dedicated to the conservation of this challenging material. In order to maximise the applicability of the research results, the compilers of the plan for the Urbino Colleges tested a selection of commercially available products for cleaning, consolidation and protection of concrete, rather than relying on experimental laboratory-developed products. This approach aimed to align the Conservation Plan with the needs of maintenance personnel by recommending easily implementable techniques and readily available products, particularly within the context of public tendering procedures for routine maintenance services [9].

In the case of the Torino Esposizioni Hall, the application of Geomatics to analyse the vast reinforced concrete structure designed by Nervi facilitated the creation of an incredibly detailed and accurate survey. This survey served as a “digital twin” of the structure, offering a scaled representation that enables precise evaluation of its structural layout. Here, and in the case of the Stadio Flaminio, the comparison with structural safety regulations—rather strict and restrictive in that it imposes high seismic

safety requirements to guarantee the durability of the work (which, however, lead to an underestimation of the building's actual structural capacity)—greatly influences the type of intervention that can be carried out, even in the case of listed buildings. In Torino, the strategic use of three-dimensional models made it possible to identify the main structural weaknesses in the reinforced concrete structure and an insufficiency in the shear reinforcement (which is a typical feature of the structural design of the time, and not a 'design error'), thus defining minimal intervention strategies. Similarly, in the case of the Stadio Flaminio in Rome, the use of Heritage Building Information Modelling (H-BIM) facilitated dialogue with public administration, leading to the adoption of the CMP as a scientific reference in tenders calls for the renovation of the building, with a promise to enhance the quality of future projects. In Brazil, on the other hand, greater emphasis was placed on investigating structural aspects to assess the building's resistance under changed conditions of use, as evidenced in the Museo das Artes de São Paulo (MASP) where the actual functioning of the structure (which closely coincides with the architectural form) was previously unknown. However, in this latter case a regrettable discontinuity occurred between the drafting of the CMP, as identified by researchers who meticulously examined the building's structure with entirely new insights, and its subsequent implementation. This discontinuity reflects a disconnect between the philological reading of the artefact, conservation planning and its implementation, ultimately leading to a reduction in the effectiveness of the conservation process.

In other cases, the financial support from the Getty Foundation arrived late, after projects had already been executed. Unfortunately, these projects proved to be empirical and unsuccessful due to a lack of comprehensive understanding of the artefact, as in the case of the building designed by Vilanova Artigas for the Faculty of Architecture of São Paulo, where the façade and the roofing, characterised by a network of skylights embedded in the reinforced concrete structure, underwent repairs through radical but ultimately ineffective and aesthetically intrusive replacement operations.

However, even in these cases, the opportunity provided by the Getty Foundation proved to be a beneficial platform for conducting applied scientific research. It is no coincidence that out of a total of 64 projects funded by the Getty Foundation, many were proposed by universities and research centres to study university buildings. The experiences gleaned from academic contexts in Italy and Brazil—the School of Mathematics at Rome's University Campus and the Vilanova Artigas Building at the University Campus of São Paulo—highlight differing approaches by the universities in systematizing the outcomes of in-house scientific research. Despite Italy's long-standing conservation tradition, exemplified by Sapienza University of Rome, little attention has been directed towards the CMP developed for the building designed by Gio Ponti in 1935. In contrast, the university in São Paulo demonstrated a better understanding of the significance of coordinating scientific research and its practical implications, fostering a culture of care for the university's historic assets and facilitating greater involvement in the management of the public assets by the academic community and the by students themselves.

The projects carried out in Italy and Brazil have further significant similarities. Firstly, they share a common methodological approach characterised by an

operational investigation methodology. This approach typically involves historical research, direct surveys, and critical-comparative analyses. In Italy, there is an increasing reliance on three-dimensional digital tools (albeit sometimes to excess) such as Heritage Building Information Model, which in Italian projects, does not depend on a methodological proposal put forward by the Getty Foundation as much as on the results of scientific research carried out within the Research Projects of National Significance financed by the Ministry of Education over the past decade, and the very recent publication of the new public procurement act; see in this regard the essays dedicated to Rome's Stadio Flaminio, Torino Esposizioni Hall B and Rome's School of Mathematics. A few other projects in the Keeping It Modern programme make use of BIM, but none of those carried out in Brazil. Yet, Italy and Brazil place strong emphasis on the analysis of construction elements, considered as constituent architectural features. In particular, in Italian and Brazilian CMPs, there is a recurring focus on modern materials and construction techniques whose preservation often proves problematic and strongly in contrast with the instances of use, or difficult to resolve in terms of effective material conservation. Indeed, the reference to reinforced concrete is immediate and dominant. Whether utilised as a structural system for creating new spaces or left exposed as a design element, reinforced concrete poses significant preservation hurdles: chief among these preservation challenges is the material's inherent reluctance to acquire patinas and 'traces of time' without compromising its form and appearance (Fig. 3).

Another important issue concerns the protection of door and window frames and opening systems, which are integral elements of 20th-century architecture alongside reinforced concrete, but seldom retained during processes of transformation and adaptation, often sacrificed to accommodate functional requirements considered of higher-order. Fixtures and finishes, however, suffer far less conservative attention than reinforced concrete, even though they (the finishes) are responsible for much of the image of the artefacts, and the real sustainability of the building's functional upgrade (the fixtures). The functionality and intended use, both original and current, play pivotal roles in determining the survival of historical heritage, particularly from the twentieth century. In many instances, however, the intended use has undergone radical transformations albeit retaining the original function. For instance, early 20th-century university buildings have been consistently repurposed due to university reforms, as seen in the cases of the Roman School of Mathematics and the Brazilian Faculty of Architecture, and residential buildings face challenges related to energy efficiency regulations alongside distribution issues, exemplified by the University Colleges in Urbino.

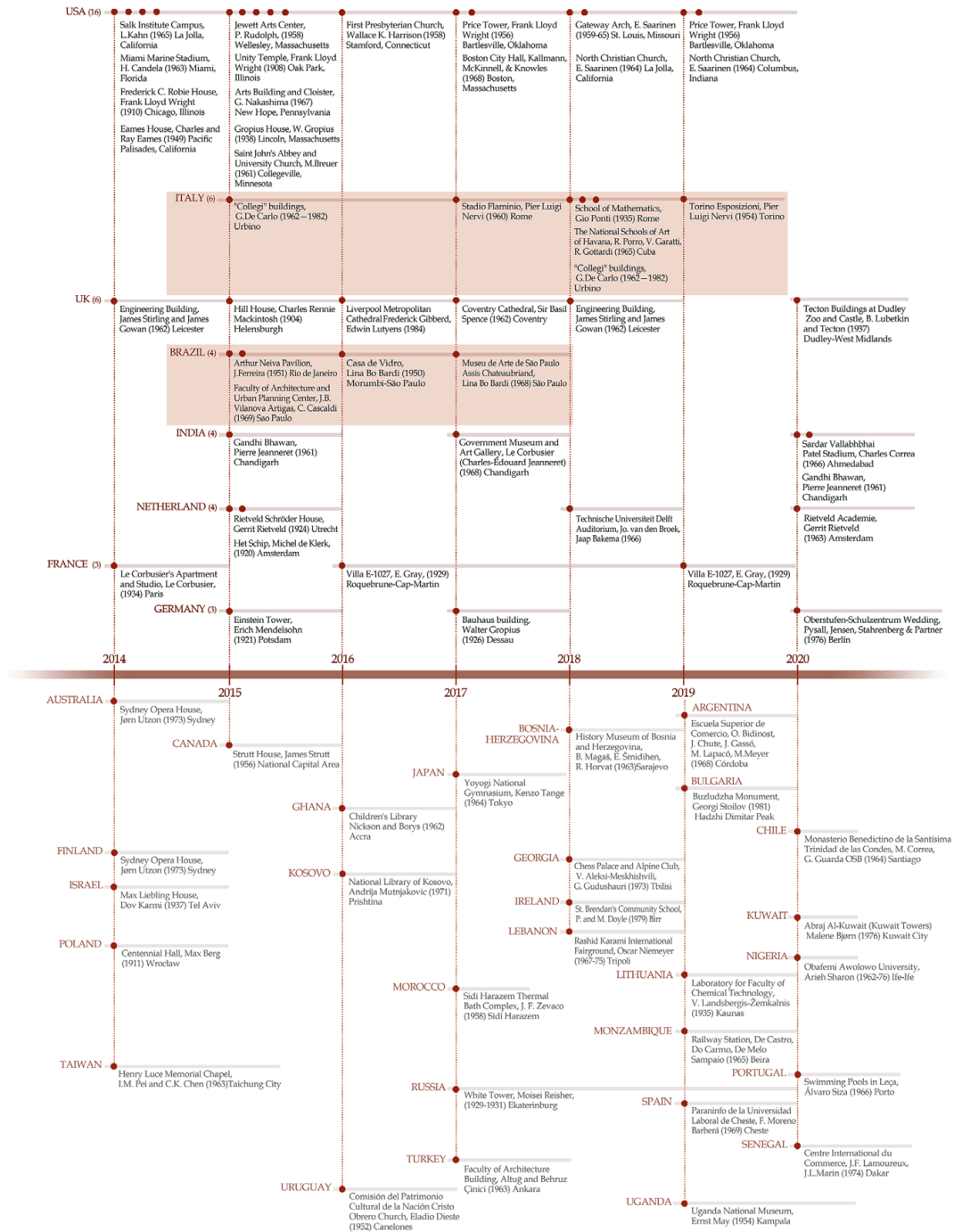


Fig. 3 Framework of the “Keeping It Modern” program in the world; projects in Italy and Brazil are highlighted in red

4 The CMP in Italian legislation between Code of Cultural Heritage and Landscape and Legislative Decree No 42/2004

When contextualising the CMP within the Italian legal framework, it is plausible to consider its alignment with the Codice dei Beni Culturali e Paesaggio (Code of Cultural Heritage and Landscape) and the Codice degli Appalti (Public Procurement Code) as outlined in Italian Legislative Decree n. 36/2023.

In the first case, we observe a shared objective and a distinct variance in approach concerning the process of determining the cultural significance of a historical building or cultural asset in general. The “statement of significance”, which represents steps 1 and 2 of the CMP process, aims to identify the elements that define the cultural value of the site or building, to assess its characteristics of integrity and authenticity, to compare it with similar examples, to ascertain its cultural significance, and to identify levels of value relative to each specific element of the property. With obvious differences in method, this procedure therefore aims to establish the cultural value of the building by addressing the fundamental question “why does it matter?” and bears resemblance to the verification of cultural interest procedure, regulated by Article 12 of the Code.

Another parallel can be drawn between ‘Step 3’ and ‘Step 4’ of the CMP Process, which focus on defining procedures and actions to preserve the identified cultural value of the building (addressing the question: “how to retain the building’s significance?”). In this regard, we observe a similarity in intent with the conservation and restoration activities outlined in Article 29 of the Italian Code of Cultural Heritage and Landscape.

A third parallel arises from the shared and well-established inclination to view conservation as an ongoing process of “taking care”, rather than a sporadic intervention aimed at addressing emergencies or imposing an authorial stamp. In this context, the broad and inclusive definition of conservation provided in the Italian Code, defined as “coherent, coordinated and planned study, prevention, maintenance and restoration activities” (Article 29, paragraph 1), served as reference in drafting Italian Ministerial Decree n. 154/2017 “Regulations on public works contracts concerning protected cultural heritage”, which recommends planned conservation as the framework reference for planning and implementation of heritage conservation, in close alignment with the principles outlined in the Burra Charter. In the final analysis, we can therefore recognise a convergence of activities between the CMP and the objectives of protection delineated in Art. 3 of the Italian Code: to identify cultural heritage (“to assess the building’s significance”) and ensure their protection and preservation (“to retain the building’s significance”).

In the case of the Procurement Code, the CMP occupies an intermediate position between the “Design Guidance Document” and the “Technical and Economic Feasibility Plan” due to their shared objectives and similar content. The CMP, resembling the programmatic nature of the former, serves as a document initiated by the contracting authority. However, in comparison to the “Design Guidance Document”, the CMP advances beyond the preliminary stage by outlining priorities and project

phases more explicitly. Moreover, as observed so far, the CMP encompasses a vital phase of documentation and building analysis, essential for determining its cultural value and thereby justifying its inclusion in the list of buildings meriting protection and special conservation measures. Therefore, the CMP contributes to the broader definition of a planning strategy for protection projects and aids in drafting the Three-Year Programme of Works that regulates the planning of investments and the definition of priorities within the Italian public administration.

5 Plans in the Socio-cultural Context

The overall reading of the Brazilian and Italian experiences prompts several observations regarding the approach to the legacy of the twentieth century within the Western culture, manifesting in diverse institutional and cultural contexts within each country. While Italy boasts a widely recognized conservation culture rooted in its millennia-old heritage, Latin contexts face challenges in translating theoretical elaborations into practical planning due to administrative realities that are often unaccommodating, and at times reluctant. Indeed, disparities among the experiences examined here stem not only from cultural differences but also from distinct political-administrative contexts at national and municipal levels. The notable difference in the ability of municipal administrations to implement CMPs underscores a significant gap between Brazil and Italy.

Given the same type of artefact, the different outcomes that have emerged from the experiences gained around Pierluigi Nervi's works—Stadio Flaminio in Rome and Torino Esposizioni Hall B—cannot be explained by the different contexts surrounding the two artefacts (eg state of conservation, structural consistency, urban location, demand for urban infrastructures on a neighbourhood or urban scale, speculative pressures that have affected Italian stadiums in recent years, and the prolonged impact of post-pandemic financing) unless one considers the contrasting administrative frameworks governing the two cities. In Torino, public ownership readily accepted and systematised research and projects developed by the Politecnico, while the Municipality of Rome initially supported the Conservation Plan for Stadio Flaminio drawn up by Sapienza, only to abandon the implementation of a restoration and functional recovery project.

Rome—undoubtedly the Italian city with the most complex political-administrative structure—values the conservation of 20th-century architectural heritage in principle but not in practice, despite most of the structures that welcome the daily life of its citizens are, in fact, buildings from the last century. The persistent inertia of Rome's Municipality in fostering collaboration with research organisations cannot be attributed solely to cyclical reasons; on the contrary, the considerable influx of post-pandemic funding justifies the opposite. Conversely, in a larger and more complex city than Rome as São Paulo, public administrations, private foundations and ordinary citizens demonstrate a marked awareness of the values associated with heritage conservation. Despite the dramatic social emergencies afflicting the

Brazilian society, this exhibits a greater commitment to cultural demands. This is largely demonstrated by the challenging case of the Casa de Vidro, a fragile and complex architectural piece that houses artworks, furniture, the Bo Bardi archive, and a tropical garden with precious plant species. Continuous and integrated maintenance is imperative here, prompting consideration for the establishment of a ‘house museum’.

Apart from significant side effects of the activities facilitated by the “Keeping it modern” initiative—such as the designation of Stadio Flaminio in Rome as a listed cultural asset according to protection law No 42/2004 based on the documentation produced by the research team—it is evident that projects in Brazil have enjoyed attention from owners, public administrations and users, who have demonstrated conscientious and responsible response to the challenges posed by the research and projects more than in the Italian cases.

6 A Provisional Balance

The comparison between the Italian and Brazilian “Keeping It Modern” projects provide a nuanced understanding of current international conservation of 20th-century architecture. It becomes evident that in countries with more entrenched legislative structures and a long-lasting conservation tradition, the Getty Foundation’s funding programme has served as a catalyst for more sophisticated and comprehensive research, encouraging specialists to delve deeper into the knowledge of often underexplored architectural heritage, in many cases subjected to inadequate use, and vulnerable to radical transformations or abandonment. Gio Ponti’s School of Mathematics in Rome, despite being a renowned work by this master of Italian modern architecture, has often been overshadowed by his other achievements. Research supported by the Getty Foundation has shed light on the genesis of this work, its historical transformations and its material composition of buildings, and from these has led to the formulation of a conservation plan aimed at effectively preserving the building’s material integrity; however, the document has remained a dead letter. Similarly (albeit to a lesser extent), the case of the Collegi del Colle in Urbino illustrates a missed opportunity. Although essential restoration work on exposed concrete surfaces was undertaken, it largely disregarded the valuable guidance provided by the CMP developed by Politecnico di Milano.

On the other side, in countries where conservation culture lacks a foundational role in national heritage management policies, the Getty Foundation’s activities have yielded better results not only by sponsoring the study and knowledge of works, but also by providing operational tools to guide and facilitate conservation and restoration processes. This scenario parallels UNESCO’s approach in declaring World Heritage Sites, where the designation can significantly influence protection efforts, especially in countries where architectural heritage is under severe threat due to armed conflicts

or regime changes. Conversely, in other nations, such declarations serve as additional encouragement to safeguard heritage, which is already extensively protected by national legislation.

While Conservation Plans in Italy may be perceived as ‘blunt weapons’ for the conservation of 20th-century architecture, given their weak (if not missing) engagement with technical-administrative protection bodies, in Brazil they serve as catalysts, playing a pivotal role in fostering research and projects, and in engaging stakeholders who can facilitate protection. Therefore, the success of the “Keeping It Modern” programme, in either case, is not contingent on technical or cultural factors, as there is certainly no lack of intellectual resources for developing projects dedicated to the protection of the built heritage of the last century, but rather hinges on the prevailing cultural policy and on the technical-administrative capacity to manage protection efforts of the respective country. It is worth noting that in Brazil, the awareness cultivated by the local community—whether it is the academic community regarding university buildings or the efforts of cultural foundations and organised groups of users (such as the management of Casa de Vidro or Museo de Arte Contemporanea in Sao Paulo)—partially offsets the inertia of the country’s public administration, certainly more pronounced and effective than in Italy.

However, the outlined framework offers optimism, as the dialogue initiated among involved stakeholders—from the creation of the CMPs to the crafting of this very contribution—paints the picture of a community of specialists keen to engage, collaborate and exchange ideas not only to increase the quality of their work, but also (and perhaps more importantly), to contribute to the protection of a genuinely international heritage.

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