Abstract. The fortuitous discovery of oil in the 1960s was the catalyst for a whirlwind of change that has forever transformed the modest fishing, pearling and Bedouin settlements and farms of Abu Dhabi to cosmopolitan metropolises and fully-fledged towns. While the export of oil was the trigger to the astonishing urban transformation of Abu Dhabi over the past fifty years; today, the stock of the modern buildings that were witness to Abu Dhabi’s historic metamorphosis is quickly disappearing because of rapid development, real estate speculation and rising land value.

In 2011, Abu Dhabi Authority for Culture & Heritage (ADACH) launched the Modern Heritage Preservation Initiative with the aim of inventorying the extent of remaining resources, identifying the significance of this type of heritage and establishing criteria for significance and nomination for protection. A comprehensive survey complemented by case studies is being carried out to identify the threats to the original fabric and context, develop specifications for interventions on the physical fabric and preliminary regulatory mechanisms to ensure their preservation. The goal of the initiative is to develop strategies, policies and economic incentives that will ensure that these resources are protected and appreciated for their inherent merit while seen as boosters in the competitive real estate market, and valued as assets in Abu Dhabi’s growing cultural portfolio. The challenge is to reconcile the preservation of Abu Dhabi’s modern heritage with the inevitable and ambitious development that is so characteristic of the United Arab Emirates. This paper will provide the preliminary results and key findings of this initiative, which is the first of its kind in the Emirate of Abu Dhabi, in order to solicit peer-review and expert criticism to proceed forward.

“We lived in the eighteenth century while the rest of the world, even the rest of our neighbours, had advanced into the twentieth. We nothing to offer visitors, we nothing to export, we had no importance to the outside world whatsoever. Poverty, illiteracy, poor health, a high rate of mortality all plagued us well into the 1960s. We had nothing but our hopes our dreams of a better tomorrow and our belief in God.” (Al-Fahim 1995)
The fortuitous discovery of oil in the 1960s was the catalyst for a whirlwind of change that has forever transformed the modest fishing, pearling and nomadic settlements and farms of Abu Dhabi to cosmopolitan metropolises and fully-fledged towns [FIGURES 1 AND 2]. Until then, the Emirate and its inhabitants had been living, unnoticed from the rest of world. The export of oil triggered and has sustained an architectural boom and an astonishing pace of urban transformation over the past fifty years. The political, social, demographic and economic changes of the emirate that have led to a radical change in lifestyle and significant improvements to the harsh living conditions of the local inhabitants have occurred in cyclical spurts, symptomatic of a tug-of-war between two attitudes: the exhilarating drive for modernization and the concern for preserving cultural identity.

Until now, these attitudes have been viewed as conflicting, and, the changing weight of one over another has transformed and shaped the built environment at the expense of the survival of Abu Dhabi's modern heritage. Modern buildings that were witness to Abu Dhabi’s historic metamorphosis are thus quickly disappearing. While acknowledging that ambitious and fast-paced development is characteristic of the United Arab Emirates in general, it is necessary to take a moment to fully comprehend what are the forces driving these cycles and how they operate in the social, cultural, economic and political realms in order to reverse or curb their impact to the benefit of Abu Dhabi’s contemporary patrimony.

This study will inform the establishment of strategies within the context of the Modern Heritage Preservation Initiative recently launched by the Abu Dhabi Authority for Culture and Heritage (ADACH).*

1. Vicious Cycles of Abu Dhabi’s urban renewal

Although oil was discovered in the late 1950s, the modernization of Abu Dhabi was only made possible through the distribution of oil wealth and land through the vision of Sheikh Zayed Bin Sultan Al Nahyan when he became ruler of Abu Dhabi in 1966. Although always reaching a dizzying pace, the rate of development fluctuated over time as a function of the income from oil production, according to a study by Abu Dhabi’s early planner, Dr. Abdelrahman Makhlouf (Makhlouf 2010). Building infrastructure, providing amenities, sustaining growth and implementing development have been concrete signs to build a feeling of prosperity and financial security necessary to maintain social cohesion and political unity, particularly in a nomadic society that had had such a difficult past.

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* The history of development of Abu Dhabi and synthesis of the values assessment phase of the Modern Heritage Preservation Initiative were compiled in an earlier paper (Chabbi and Mahdy 2011).
Development first focused on the island of Abu Dhabi, capital of the emirate, and capital of the United Arab Emirates (since 1971). First plans for developments began in the early 1960s and were implemented in the later 1960s, particularly after the establishment of a centralized department of town planning under authority the Sheikh Zayed. The 1970s represent a period of rapid growth with the construction of housing projects, markets, public buildings and community services projects to cater to the inflow of expatriates who were needed to build the emirate. The design and construction of the buildings had often been of inferior quality because the demand was so high and quality control mechanisms were not fully in place, therefore in the following decade, a wave of “reconstruction” was undertaken to replace this stock of buildings. The 1970s experienced a period of rapid growth and a surge in oil revenue was streamed to the eastern region of the emirate. Abu Dhabi city expanded horizontally off the island as changes to zoning heights allowed the buildings to grow vertically. With these new changes, another phase of replacing the existing building stock took place. Comprehensive town planning began taking place in the Eastern Region and particularly in its capital of Al Ain. Only in the late 1980s did development begin in the Western Region, home to most of the confederation of tribes to whom the ruling family belongs. From the 1970s through the 2000s, development was decentralized and managed by regional branches dedicated to town planning. The pace of regional development was uneven; therefore, in the past decade, through the efforts of the Urban Planning Council of Abu Dhabi, a centralized entity, the planning objectives of the emirate have been reoriented and are being driven by a comprehensive plan for the entire emirate. The plan is “grounded in the cultural and environmental identity of Abu Dhabi” and focuses on “striking a balance between conservation and development” without “unnecessarily tearing buildings down” (Urban Planning Council 2007). The changes in the governmental structure of planning have affected the rate of urban development and its renewal. In addition to the financial and governmental factors affecting Abu Dhabi’s built heritage, other powerful driving forces - all resulting and contributing to the inherent conflict between economic development and the need to uphold cultural identity - have come into play, in cyclical phases.

2.1. LOCAL VERSUS EXPATRIATE
The ambitious development and modernization of the city was realized by waves of expatriates who were the main designers, and builders and have represented the majority of inhabitants of the newly developed modern Abu Dhabi city. Their percentage has reached up to 85% of the total population of Abu Dhabi. This exceptionally big percentage of foreigners and the fast cycles of their turnover have threatened the collective memory of the emirate. Land owners, real estate developers and decision makers tend to remain exclusively Emirati locals.

2.2. MODERNIZATION VERSUS EMIRATIZATION
The modern architecture in Abu Dhabi is particular in many ways and on different levels. It resembles in its designs and materials the architecture of the modern international movement from the second half of the twentieth century. However, it was built for a nation that was in the early phase of its modernization. Concepts and principles which were associated with modern buildings in the West, such as the nuclear family as opposed to the extended family, merit by achievement rather than by birth, and a secular rather than a religious society were not echoed in Abu Dhabi. It was a modern architecture for a conservative society. This evolved in a two-way process: the modernization of the Emirates and the ‘emiratization’ of the modern. Later, modern buildings were more adapted to Emirati culture and values, while the Emiratis caught up with certain modern ways of life in a very short time. Modern designs were gradually adapted to suite Emirati values and traditions. On the other hand the Emiratis dropped some aspects of their traditions in favor of modern values, concepts and designs. This two-way process started with the first modernization attempts and continues until today in cycles of ever developing trends in lifestyle that can be traced in architecture. Cycles of ‘emiratization’ and modernization can be identified in architectural plans, particularly in residential buildings [FIGURE 3].

2.3. IDENTITY VERSUS MODERNITY
Identity is an obvious concern for modern Emiratis. Attempts to domesticate, or “emiratize” international modern architectural designs are obvious and can be visually identified in the various architectural trends in facade designs. An Arab-Islamic architectural vocabulary was used in facades of modern buildings. Traditional vernacular architectural features from the Arabian Gulf region, other emirates and Abu Dhabi were also used in many modern buildings in search for local and regional identity. On the other hand, eagerness to build according to the most fashionable architectural trends in Abu Dhabi is unmistakable. This is pursued by commissioning world-class architects as well as importing the latest, cleanest and smartest construction technologies and materials [FIGURE 4].
2.4. FASHION VERSUS ECONOMY

A major threat to the sense of place is the cycles of development and urban renewal. Permissible building heights were revised almost every ten years. Thus, a five-story building from the early seventies was not anymore economically attractive by the eighties when the permissible height for the same location was doubled. Later the permissible height was even more relaxed as economic pressure by developers became tougher with the growth and prosperity of the city. Replacing early modern buildings with higher newer ones became a common sense practice. Thus a building is often threatened by demolition as it becomes unfashionable or not profitable and before its style makes a come-back or has a chance to become a “classic.” The demographic cycles of high turnover accelerates this threat as the collective memory is continuously erased or at least weakened [FIGURE 5].

2.5. EFFECTS

It is clear that these mechanisms, although described individually, are interrelated and feed into one another. Their effects have had repercussions at different levels. At the macro (emirate level), the push for wide-spread development has disrupted the cultural and physical landscape. Now that Abu Dhabi has caught up with and even surpassed some of its neighbors, the discrepancies in regional development are being addressed.
Provincial areas or areas of slow growth are being aggressively developed to catch up at the expense of their unique identity: for example, while it is clear that amenities should be provided in the Western Region such as improved roads, is it necessary to rearrange and partially demolish the first Emirati housing neighborhoods built in the late 1970s to impose a rigid street grid in order to implement the best practices of urban design [FIGURE 6]? In areas that are heavily developed of the Emirate, particularly in Abu Dhabi City, visibly vital areas are being redeveloped because their physical appearance and architectural style are no longer appreciated. In addition, to accommodate for the speed of development, a cookie-cutter approach to building services has often been preferred: for example, in developing the education system across the emirate, a number of identical schools with teachers’ accommodations. Similar looking bus stations and police stations are being planned as well. Rather than be contextualized with the identity of their environments, these designs fit the new trend of institutional re-branding to assert a strong emirate-wide message; thus, the lack of site-specific designs and choices of styles is hindering the distinctiveness of localities [FIGURE 6].

The vicious cycles of urban renewal are also breaking down social relationships. For example, the Central Market, built in the Central Business District in the early 1970s, was a space memorable for its liveliness and informality, conveying an authentic bazaar-like atmosphere. The Central Market was recently demolished and replaced by a modern high-end mall attached...
to luxury residential skyscrapers (Elsheshtawy 2008) [FIGURES 7 AND 8]. In general, spaces that have grown organically from the original designer’s intent are quickly disappearing to make way for ‘sanitized’, planned and regimented megadevelopment schemes, which not only disrupt spatial scale but also the memory of cherished landmarks’. For example, the ADNOC complex built in the 1980s built along the northern shore seaside road (the “cornice”) was innovative because of the arabesque configuration of the joined 3 structures comprising the residential section and because of the adjacent office building’s intricate façade details. In addition to being the first Abu Dhabi National Oil Company headquarters, the complex of buildings marked the end of the Corniche. Today, one of the three curved structures was severed from the residential building to make way for a new high-rise mixed use building [FIGURE 9].

3. Associations and meanings of heritage in Abu Dhabi
The notion of cultural heritage in Abu Dhabi has emphasized the intangible. Because of the nomadic roots of the local culture, poetry, storytelling, hunting, folklore, crafts, etc… are traditions that have lasted over the centuries. Although archaeological excavations began in the late 1960s, appreciation for
the physical fabric of places focusing on archaeo-
logical and pre-oil era earthen or stone buildings did 
not gain much momentum because of the large dis-
connect in time as well as lack of awareness of the 
significance of these buildings. In addition to these 
buildings being associated with an age long-gone, 
their conservation – which generally aims at resto-
ration or minimal intervention – has led to associate 
the discipline of preservation with the distant past. 
The preservation of modern heritage may therefore 
be negatively construed as freezing time and space. 
The concepts of refurbishment and renovation, which 
are the most common practices for modern heritage, 
have been misused and generally mean to preserve 
the function of the building but not the original fabric 
itself, i.e. demolition and reconstruction.

For the current and recent generations of Abu Dhabi, 
modern buildings are the only anchors to place and 
time within their lifetime. As the cityscape is constantly 
changing, there is very little sense of place because of 
the lack of reference points. It is clear that Abu Dhabi’s 
urban renewal is an unstoppable phenomenon and 
therefore, at this sustained pace, there will be little to 
no trace of the astonishing transformation undergone 
by Abu Dhabi in the past 50 years for future genera-
tions. These traces are witnesses of a period that has 
forever changed the lives of its people and the world 
around it, and are a testimony to the changes of cultu-
ral identity brought on by the impact of development. 
It is possible to reconcile the constant drive for deve-
lopment with the aims of preservation. The selection 
of significant buildings will provide benchmarks in this 
physical and cultural transformation. In addition, it will 
turn tangible and recognizable landmarks into spatial 
and temporal anchors, thus providing a context for 
collective memory and creating an authentic sense of 
place that reflects local distinctiveness as a product of 
social, economic, environmental, cultural and historical 
actors; moreover, it will create a sense of continuity 
between Abu Dhabi’s traditional past and its future.

4. Preserving modern heritage in Abu Dhabi
In 2011, ADACH launched the Modern Heritage Pre-
servation Initiative with the aim of inventorying the 
extent of remaining resources and establishing criteria 
for significance and nomination for protection. A com-
prehensive survey complemented by case studies is 
being carried out to identify the threats to the original 
fabric and context, develop specifications for interven-
tions on the physical fabric and preliminary regulatory 
mechanisms to ensure their preservation. The goal of 
the initiative is to develop strategies, policies and eco-


while seen as boosters in the competitive real estate 
market, and valued as assets in Abu Dhabi’s growing 
cultural portfolio. These strategies will also need to be 
sustainable so that they allow for Abu Dhabi’s urban 
renewal and provide appealing economic incentives 
for stakeholders and the public, at large, to value and 
appreciate modern heritage resources, invest in their 
long-term preservation, and guide sensitive, sustai-
nable and creative development. The challenge is to 
reconcile the preservation of Abu Dhabi’s modern heri-
tage with the inevitable and ambitious development 
that is so characteristic of the United Arab Emirates. 
A number of preliminary activities related to the study 
phase are being carried out. A rapid survey is being 
carried out block by block following existing standards 
and DoCoMoMo’s guidelines. Each building is being 
b Briefly assessed in terms of approximate age, condi-
tion, use, and threat as a preliminary assessment. In 
parallel, graphic, written and photographic records 
are being gathered to inform our understanding of 
the historic urban context and establish criteria for 
significance assessment. Case studies, representing dif-
ferent land use and typologies, construction periods, 
building condition, and contextual threats, are being 
identified and used to extract guidelines, principles 
and strategies.

The contextual contradictions described earlier are 
effectively threatening the survival of Abu Dhabi’s col-
l ective urban memory. Preserving modern heritage 
should be an effective approach to prevent or reverse 
urban decline by identifying conservation aims that 
channel the potential of cyclical renewal of the emi-
rate’s urban context into the revitalization and pres-
ervation. In order to prepare successful conservation 
strategies for Abu Dhabi’s modern heritage, it is neces-
sary to target the driving forces identified in this paper.

5. Reversing the tide: Virtuous Cycles
Viciouscircles of high turnover of expats, moderni-
zation versus ‘emiratization,’ identity versus moder-
nity and fashion versus economy form together, or 
separately, driving forces that should be understood 
and manipulated to allow the conservation and inte-
gration of modern heritage into urban development 
and revitalization in Abu Dhabi. Before a building falls 
from the peak of the fashion cycle, its refurbishment 
and, if needed, adaptive reuse will spare its fall into 
decline that usually leads to becoming a bad financial 
investment, thus leading to demolition. This can also 
be done for a building which is in the decline phase. 
But it needs to be highly significant in order to convince 
stockholders to save it. Saving modern heritage buil-
dings from falling into decline or saving them out of 
a decline phase are the aims of strategies proposed
by ADACH’s Modern Heritage Preservation Initiative. The strategies should address the cultural context. It is essential that modern heritage be better understood and accepted into the local traditional understanding of what is heritage. Around the world, recognition of 20th century as integral to the cultural heritage portfolio has taken time; it is the case here where what is related to the pre-oil period is what distinguishes the “authentic” local culture. Similar to the intangible heritage, modern built heritage has a story; and this story and its personal associations through memories need to be captured and celebrated. In addition, further comparative studies of aesthetic qualities of modern architecture in Abu Dhabi and a better understanding of the precedents of built heritage examples will highlight an aesthetic vocabulary and ingenuity unique to this locality and within a global context.

In order to have a wide social impact, the preservation strategies should aim to promote living in modern heritage buildings as an attractive option by encouraging the integration of the nationals and expatriate communities and promote the social status of residing or using modern heritage buildings. Technical oriented strategies should intend to keep modern heritage in good condition by building capacity in the technical skills required for the conservation of modern heritage (conservation architects, engineers, conservation specialists and technicians specialized in refurbishment and renovation – according to internationally accepted methods). A mechanism to provide technical assistance for owners and users of modern heritage buildings should be set up and good practices should be recognized through a reward system. Demolition is usually considered easier and cheaper and hence more economical. However, incentives for owners, developers, business owners and tenants such as through government subsidies will make it feasible or desirable and more attractive economically to retain and refurbish buildings rather than replace them. In doing so, the property value will increase from a financial and public point of view.

The success of the proposed strategies ultimately depends on how they are embraced at the political level. It is essential that preservation be integrated with future development and expansion plans. Presently, it is mandated by federal law that developments apply for a preliminary cultural resource survey as part of their pre-concept design. This process is carried out by ADACH, which, until the launch of the Modern Heritage Preservation Initiative, focused on the impact of developments on paleontological, archaeological and pre-oil historic resources; therefore, many modern buildings were unfortunately lost. However, since the launch of the project, a number of modern buildings deemed significant by ADACH have given rise to opportunities for compromise and testing out the waters for preservation. There is a close collaboration between the Urban Planning Council and ADACH in the approval of design plans for development and in establishing a building code and heritage overlay districts. As part of the 2030 plans, it is important to emphasize revitalization, as opposed to demolition and reconstruction, of existing areas, to celebrate the individuality of neighborhoods, districts, and cities by understanding the history of their development and integrating these findings with future expansion plans. Strategies should build closer relations with other governmental agencies such as the various branches of the municipalities in order to enforce the owners’ responsibility in maintaining buildings, which will prevent heritage from downgrading or depreciating and will reduce the rate of building turnover. In addition, a legal framework should be enforced to establish the extent of protection significant buildings will benefit from, mechanisms to enforce control on any changes to the fabric or its context. Demolition permits should require an ADACH review, particularly for significant buildings and the PCR process should carry the same weight for all types of buildings (private residences, commercial, mixed use, public, religious, and governmental). In the future, it would be beneficial to identify patrons and sponsors and to rally pressure groups for the preservation of buildings.

6. Conclusion

The advent of the Oil Era triggered the development of modern architecture in Abu Dhabi. Today, the stock of these modern buildings is quickly disappearing because of rapid development, real estate speculation, shifting trends and cultural paradigms, rising land value, and poor condition. ADACH’s Modern Heritage Preservation Initiative aims to establish strategies to address the driving forces of cyclical redevelopment and urban renewal that characterizes the Emirate. While it is clear that urban renewal is unstoppable, the strategies should aim to bridge together the economic development of the country with the inherent aspiration to preserve cultural heritage. These strategies will have an impact at different levels: politically, by integrating preservation needs with future development and expansion plans; economically, by making preservation economically feasible and appealing; technically, by defining the scope and limitations to interventions; culturally, by raising awareness of the meaning and importance of modern architecture globally and locally; and socially, by capturing and celebrating inclusive collective urban memory; and legally, by enforcing existing policies and laws and integrating urban preservation with planning.
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