

SITES OF MODERN INDUSTRIAL HERITAGE IN EGYPT AND IRAN

Local, National, and International Relevance for Conservation and Reuse

Mirhan Damir, Heike Oevermann, Martin Meyer, Mohammadjavad Mahdavinejad, Hassan Elmouelhi

ABSTRACT: The countries of the Middle East and North Africa (MENA) have only recently discovered their modern industrial heritage as an object of conservation and future development. Through an in-depth analysis of four industrial sites in Egypt and Iran, testifying to a designated modern era, this article documents the complex historical process of industrialization and its political and economic background. Building on fieldwork, archive studies, workshops, and interviews, the article explores how built structures of modern industrial sites signify the multi-faceted, symbiotic, and exploitative international exchange behind the modernization of economies in the region. In the face of many obstacles to the conservation of this heritage, ranging from incomplete listings and ineffectual policies to high development pressures on urban land, this article aims to transcend the current Eurocentrism in industrial heritage research and practice, and encourage regional claims on this significant heritage.

KEYWORDS: Industrial heritage, international exchange, modern era, Iran, Egypt

INTRODUCTION: In 2001, the UNESCO World Heritage Centre, ICOMOS (International Council on Monuments and Sites), and DOCOMOMO launched a joint program to document and promote the built heritage of the 19th and 20th century (van Oers & Haraguchi, 2003). During this period, most countries in the Middle East and North Africa (MENA) experienced major growth, often under prolonged periods of foreign rule (Owen, 1993). As a consequence, their industrial structures bear witness to the productive intertwining of the flow of resources and ideas: Linking nascent national economies to global markets and signifying a shift in relations toward their *de jure* or *de facto* colonial powers. In this process, industrialization reshaped whole townscapes and regions.

Par excellence, industrial heritage is part of a global heritage and necessitates research that pays attention to the global interchange in trade, production, and politics (Meier & Steiner, 2018). Far from acknowledging those transboundary aspects (Leung and Soyez, 2009), the Middle East has only recently begun to view its modern industrial heritage as an object of conservation and future development. Iran and Egypt are a case in point. In both countries, modern industrial sites are rarely recognized as

national heritage (Damir, 2022). The cultural dominance of a rich, pre-modern, built heritage, a lack of documentation, and little public debate on modernization, but also a dissociation of European countries with regards to their colonial projects, have hindered a broader debate on conservation and re-use of often dissonant local industrial heritage. Important sites are left vulnerable to decay and destruction. Consequently, there is an urgent need to challenge the predominantly European perspective on the history of industrialization across the diverse national and regional contexts of the MENA region by way of documenting and decoding its artifacts. In this paper, we try to answer the following research question: What is the relevance of the modern industrial heritage in Egypt and Iran that still remains? The research initiative 'Modern Heritage to Future Legacy' (MHFL) applies this approach in comprehensive listings and in-depth analyses of case studies, aiming to provide solid base of research and recognition for assessing the contextual impacts. Initial research in Egypt and Iran suggests an abundance of potential industrial heritage sites of local and national importance, and international relations represented by this heritage.

INDUSTRIALIZATION IN EGYPT

During the early 19th century industrialization commenced in Egypt—referred to as ‘Égypte Moderne’ even at the time (Bodenstein, 2010; Vatikiotis, 1991). Agro-industries were established under a state monopoly system with administrative and operational assistance from Ottoman artisans and European machinery, especially from Britain, France, and Italy. This system fell into obsolescence by the 1840s due to a lack of know-how, high operational costs, and defective imported machinery (Clot-Bey, 1840). However, Egypt’s strategic location between the European colonies in the Far East and the Mediterranean expedited the construction of transportation infrastructures to support the global commercial route. Against the background of the 1860s American cotton blockade, Egypt boomed as the main cotton provider to Europe (Yousef, 2000). Further agro-industries, such as sugarcane in Upper Egypt and grain in the Delta region were developed (Bodenstein, 2014). By the end of the 19th century, with the demise of the Ottoman Empire, the European powers competed to expand their colonial hold on and her resources. Oil and mineral extraction, especially in the Red Sea region, pushed Egypt into an ‘era of engineering’ Egypt, characterized by it (Alsayyad 2019, maṣlaḥit at-tijārah wal-ṣinā’ah, 1936). Foreign compradors brought their managerial and technical expertise, capital, and global networks. Egyptians connected to industrial operations were either agrarian bourgeoisie or laborers (Gerholm, 1987; Shamir, 2019). The labor movement in Egypt, with its anti-foreign sentiments, later played a catalyzing role in the Free Officers coup of 1952. Consequently, the newly founded Egyptian republic under Nasser nationalized private and foreign-owned industries. From the 1960s onwards, they were integrated into a propagated ‘ambitious program [...] of state-sponsored rapid industrialization’, especially for heavy industries and consumer goods (Beinin and Lockman, 1998). These policies, although founded on pan-Arabist and national sentiment, forced Egypt into an uneasy alliance with the Eastern Bloc. This lasted until 1971, when Nasser’s successor Sadat facilitated private-sector industrial development under the so-called Open-Door Policy (Harris, 2016).

INDUSTRIALIZATION IN IRAN

Compared to Egypt, industrialization in Iran had a late start. Ruler Naser al-Din Shah (reign 1848-1896) offered concessions and licenses to foreign entities and contracted out the construction of the telegraph network, railroads, trams, mining, and irrigation (Floor, 1984). Yet only after the 1921 coup d’état, industrialization accelerated under the heavily enforced modernization program of Reza Shah Pahlavi (Samadzadehyazdi et al., 2020). The Pahlavi

dynasty’s (1925–1978) desire to create a modern nation-state, combined with the growing interest of the British in Iranian oil resources after 1908, led to a first boost in modern production. A net importer itself, Iran sought to foster import-substituting industries, especially for consumer goods such as sugar, cotton, and other textiles and for construction materials such as cement (Hakimian, 2012). State control was assumed over virtually all foreign trade to accumulate foreign capital and to import required machinery (Floor, 1984; Jenkins, 2016). Central to the Iranian national project, industry and transportation sectors comprised around 40% of the state budget throughout the 1930s (Floor, 1984, Hakimian, 2012, p. 26). Despite the efforts of Reza Shah Pahlavi to align himself with Germany during the interwar period and an influx of German experts and technologies, the modern Iranian economy remained dominated by the Anglo-Iranian Oil company and British interests (Abrahamian, 1989; Khatib-Shahidi, 2013). After World War II, prime minister Mossadegh, who had pushed for the nationalization of the oil industries, was removed following a CIA-instigated putsch (Hakimian, 2012). As British rule in the Middle East weakened, the USA sought an economic and political alliance with the Reza Shah’s son and successor Mohammad Reza Shah, as part of its ‘containment’ strategy (Harris, 2016; Hein & Sedighi, 2016). Conglomerates such as Exxon invested in new oil refineries, a civil nuclear energy program was launched, and flourishing oil revenues paid for industrial development and military expenditure (Hein & Sedighi 2016; Malus, 2018). Eventually, the unsuccessful White Revolution, popular discontent, and the lingering anti-American and British sentiments led to the Islamic Revolution of 1979 and the end of the Pahlavi dynasty (Hetherington, 1982).

MARGINALIZED HERITAGE

Since the 1970s, both Iran and Egypt experienced phases of political upheaval during which their built cultural heritage suffered severe neglect as old political entities were disbanded and new institutions were assembled. With time, both countries introduced new political agendas concerning national heritage (Barakat, 2021; Mozaffari, 2015).

Iran today has several institutions concerned with protecting heritage sites of national importance, such as the Ministry of Cultural Heritage, Handicrafts and Tourism (MCHHT), parastatal organizations and NGOs engaged in the preservation of chiefly pre-modern historical sites and raising awareness to conservation issues (Mozaffari, 2015). In 2012 in which the country officially became a member of DOCOMOMO and which signified a paradigm shift concerning modern heritage in Iran (Ghahroodii

& Mahdavinejad, 2019). DOCOMOMO Iran pursues the documentation and protection of modern and contemporary buildings and sites of Iran, in line with the goals of DOCOMOMO International. The most important activities involve documenting sites of the modern period, holding events related to the dissemination and protection of the modern heritage and organizing awareness-building tours. However, the documentation of modern industrial sites is still at an early stage. After joining TICCIH (The International Committee for Industrial Heritage) in 2016, selected industrial sites have attracted the interest of local government and private initiatives and conversion of urban industrial sites has attracted public attention. Still, discourse is limited to special interest groups, such as the Modern Heritage and Future Legacy Research Hub, established in 2012 at Tarbiat Modares University.

In Egypt, heritage listing adopted a centralized state ideology that is reflected in the present conservation laws (Elsorady, 2011, p. 502). Despite emerging publications on modern heritage and private initiatives calling for the safeguarding of Egypt's diverse tangible and intangible legacy, the official listing of (modern) heritage is underpinned by a dominant top-down mechanism involving the Ministry of Tourism and Antiquities and the National Organization of Urban Harmony, the latter affiliated to the Ministry of Culture (Alsadaty, 2020). In practice, legislation is only applied where it does not conflict with the state's real estate-oriented vision for economic development. This is not only limited to modern heritage. However, due to their marginalized role in the public sphere and little interest from the dominant tourism industry, the listing and conservation of modern industries face more critical challenges than of Egypt's world-famous ancient sites. International heritage organisations such as ICOMOS, DOCOMOMO, and other NGOs have been officially suspended in Egypt through to political reforms that curbed their capacities and curtailed international funds (Herrold, 2016).

RESEARCH APPROACH AND CASE STUDIES IN IRAN AND EGYPT

One of the aims of the Modern Heritage to Future Legacy project is to advocate for the national and global recognition of modern industrial heritage in both countries through systematic research, documentation, and support of official listing. Firstly, the lack of a nationwide, structured overview of modern industrial heritage sites necessitated compiling a representative but not necessarily exhaustive inventory list of heritage sites for each country. These lists were developed primarily by reviewing the available literature, desktop research, local researchers' knowledge, university research programs, and archive work. As the availability of secondary data was limited, information

on the current condition and history of the case studies was consolidated by primary data obtained through field research. Data was supplemented by several expert interviews conducted between 2020 and 2021, together with archival research between the years 2018 and 2020, which included the BnF in France (Bibliothèque nationale de France), the CEAlex (Centre d'Études Alexandrines), DWQ (Dār al-Wathā'iq al-Qaūmiyah), and Bibliothèque Municipale d'Alexandrie (BMA) in Egypt, and the National Library of Iran. Additionally, three online workshop sessions were used for exchange, further contribution, and discussion with scholars and stakeholders from Egypt, Germany, Iran, and other countries. These workshops discussed the relevance of the site lists and case studies to historical industrial development.

Despite the limited availability of both primary and secondary data and the difficulty of obtaining security permits for site visits, the extensive research in this project resulted in an inventory of 102 industrial sites, buildings, and structures in Egypt and 58 sites in Iran. Detailed case studies were conducted on a total of eleven sites out of which two Egyptian and two Iranian examples of modern industrial architecture are presented here. The selection of the four case studies provides an insight into their national and global linkages and the incremental integration of modern architectural structures at the time.

SGPD (LA SOCIÉTÉ GÉNÉRALE DE PRESSAGE & DE DEPÔTS), ALEXANDRIA

Industrialization in Egypt was geared towards the international export of agro-industrial products. Besides several irrigation projects maintaining Egypt's status as a global cotton producer, ginning and pressing mills were key technologies in processing harvested cotton for successful commercial export. Generally, cotton ginning was the first processing step towards exporting cotton. Ginning plants were constructed in the Delta provinces, where about 65% of Egypt's cotton was harvested (La Société d'Entreprises Commerciales en Egypte, 1950; Bodenstein, 2010). For export, the cotton was transported to Alexandria, where Egypt's cotton presses and warehouses were located due to the port's geographic proximity to Europe.

By the turn of the 20th century, the visual manifestation of warehouses and cotton presses predominantly comprised plastered, functionally spacious, and scarcely ornamented structures. It was after WWI that the cotton press and warehouse owners first began to invest in the visual representation of their corporate images, coincidentally at a time when the industry also introduced highly mechanized industrial structures. This is evidenced in the SGPD company buildings located in al-Qabbārī district. SGPD was Egypt's most dominant cotton press and warehouse,

SGPD company in terms of capital, operations, and scale. The company had been founded in 1889 by Alexandrian Greek merchant Constantinos Zervoudachi; however, managerial and financial matters were controlled by a group of British financiers (see Glavanis, 1989, p. 322).

In the early 1920s, the SGPD held a competition to redesign three of its several cotton press and warehouse buildings in Alexandria. The realized project represents what Bodenstein (2010) refers to as the turn from “historicism to modernism” [FIGURE 01]. The modernist ideology of this project did not involve introducing an aesthetic character but rather pushing “functionalism to its bare essence” (Bodenstein, 2010). The design motive of the buildings was presumably part of the strategy proposed by Egypt’s *Commission du Commerce et de l’Industrie*, which promoted the operational security of the country’s industries by modernizing their manufacturing structures (Damir, 2022). British architect Noel Dawson contributed to the design of the three-story blocks with their visible concrete structural skeleton and brick façade overlooking the banks of the former Mahmoudiyah Canal. This design was distinguished from the other surrounding single-story plastered blocks by its conspicuous display of corporate dominance. Following the nationalization of SGPD in the mid-20th century, the buildings were renamed the Miṣr (Egypt), an-Nīl (Nile), and at-Tarīkh (History) presses.

Presently, only a few buildings associated with the cotton industry are listed and acknowledged by the Ministry of Tourism and Antiquities and the Ministry of Culture.

Owned by an Egyptian shareholding company, the cotton presses and the other listed cotton industrial sites ceased operation and are left in a deteriorating state. However, they are strictly guarded and are only accessible after exhaustive applications for security permits. In 2013, both buildings were incorporated within a rehabilitation partnership involving the BA (Bibliotheca Alexandrina) and AFD (Agence française de développement); despite years of study and planning, the project was abruptly suspended by the Egyptian authorities (Khalil & Elgohary, 2020).

NASCO (EL NASR AUTOMOTIVE MANUFACTURING COMPANY), HELWAN

In Egypt, the pursuit of industrial development, and especially mass production, intensified during the 20th century. This was led, among others, by the automobile industry. Until the nationalization of the private sector, which started in 1956, the automobile industry in Egypt was monopolized by the Italian-backed Fiat Oriente and the American companies Ford and General Motors (Zoides, 1935). During Nasser’s regime, a re-industrialization agenda was propagated with several state-sponsored industries including the establishment of a national automobile industry (Bodenstein, 2010).

In 1959, the Egyptian Government signed a contract with the West German company Klöckner-Humboldt-Deutz AG to supply trucks and buses (Kaiser & Steinbach, 1981). This resulted in the foundation of NASCO (El Nasr Automotive Manufacturing Company) in 1961 in



01 Alexandria - The former SGPD (far right) and its adjoining warehouse block with their bare functionalist architectural expression. The building was renamed to Miṣr Cotton Press post-nationalization. View north. © Damir, 2019.

Helwan, south of Cairo. According to Bodenstein (2010) industries constructed during this period represent the “high Modernism in Egypt’s industrial architecture” and planning. Like most state-sponsored constructions during Nasser’s socialist regime, the NASCO modernist design was symbolically national despite being internationally inspired in terms of design style [FIGURE 02] (Elshahed, 2022). The company site of more than 46 hectares consisted of single-story factory halls involving four operational sectors: a passenger car factory, a pressing factory, a parts factory for gears and thermal treatments, and finally a plant for engineering tools. Additionally, the factory plant comprised administrative, residential, and recreational facilities for the company’s employees.

To maintain its national lead in industrial manufacturing despite a lack of operational know-how, NASCO negotiated agreements with European companies to supply vehicles and train employees. These included renewed contracts for passenger car supply by Fiat of Italy. Other agreements included the Yugoslavian IMR (Industrija Motora Rakovica) to produce agricultural tractors and Germany’s Blumhardt for the production of trucks (LYNX, 2019). The aim of producing local, affordable cars was fulfilled within the first decade of its foundation, which saw worker numbers increase from 290 to 12,000. According to the 2019 Industry Note: ‘NASCO was the first and, at that time, the only production company for components in Egypt, and the monopoly position it enjoyed enabled it to profit substantially’ (LYNX, 2019). Following the company’s state-sponsored operational heyday during the 1980s, government support was abruptly suspended during the 1990s in favor of adopting private-sector approaches to industrial development under President Mubarak. Presently, the complex stands abandoned, still

containing its machinery, potentially awaiting operational re-activation. This is endorsed by the former company workers, who are still calling for their re-hiring to support the revival of one of the first-established and governmentally supported Egyptian companies, at that time, involved in national industrial operations.

MASHHAD TEXTILE FACTORY, MASHHAD

The Mashhad Textile Factory is an important example from Iran’s first period of industrialization. The factory was financed and owned by the Persian Government and is a pioneering example of modern industry in eastern Iran. The design process started in 1927 under the supervision of German engineer Max Otto Schünemann (IRNA, 2017). Siavash Teimouri (interview, 2021) mentions that Schünemann supposedly brought sketches by German architects, such as Walter Gropius, Hans G. Meyer, and Martin Hoffmann to Iran as inspiration for the design of the factory buildings. Mohammad Fateh (2021) states that the first section was built in 1934 and the factory started partial production until its completion and formal opening in 1937. Architectural elements such as the flat roof of the central hall, the gable roof of the production halls, and unadorned walls lacking conventional ornamentation show a clear resemblance to German blueprints of the time [FIGURE 03]. The stylistic influence of Peter Behrens is visible in architectural and structural details, such as the stair-shaped form, the entrance, limited ornamentation, and monochrome color. The architectural style of the Mashhad Textile Factory quickly became a source of inspiration for the city. In 2006, the factory was closed because of changing market characteristics and cheap textile imports from East Asia. In June 2020, following protracted efforts by the MHFL Research Hub at Tarbiat Modares University, DOCOMOMO Iran, and TICCIH Iran, Mashhad Textile Factory was inscribed on the national heritage list.

REY CEMENT FACTORY, TEHRAN PROVINCE

The historical background of the Rey Cement Factory dates to the beginning of the 20th century and the industrial development plans of the first Pahlavi era. A key argument for establishing the Rey Cement Factory was independence from Russia and the expensive Russian cement imports financed by the state. However, due to an agreement between Britain and Russia, the progress of the project stalled. Eventually, it was a German consortium including Sika, Siemens, and others that helped Iran build its own cement factory in the 1920s, in line with Germany’s foreign policy which identified Iran as a supplier of key raw materials (Jenkins, 2016). From 1925 to 1941 a German project coordinator oversaw construction work done by the Danish company FLSmidth, which



02 Helwan, probably 1960s. Former Egyptian President Nasser views the NASCO site complex model during its inauguration. The model depicts the large-scale complex with its single-story factory halls © Collection Bibliotheca Alexandrina.



03 Mashhad - The Mashhad Textile Factory with its gable roofs of the production halls and unadorned walls. © Sheikholeslami, 2021.

in turn employed Italian workers [FIGURE 04] (Fateh 2021). Schünemann was responsible for later extensions and redesigned the older parts based around new equipment supplied by Siemens. One of the buildings was named after Walter Gropius. It is noted as being designed by him in the style of *Neue Sachlichkeit* and, as such, differs architecturally from the other buildings. The building remained operational until 1984, when production was halted. Due to the pollution crisis in Tehran, the plant's poor environmental performance was deemed unsustainable. In 2019, the municipality of Tehran decided to preserve the site. This was a direct result of the campaign by TICCIH Iran, DOCOMOMO Iran, and the MHFL Research Hub. The visit to the factory by the German ambassador and the mayor of Tehran in May 2019 might be seen as a turning point for a joint future and adaptive reuse is being discussed for this significant monument.

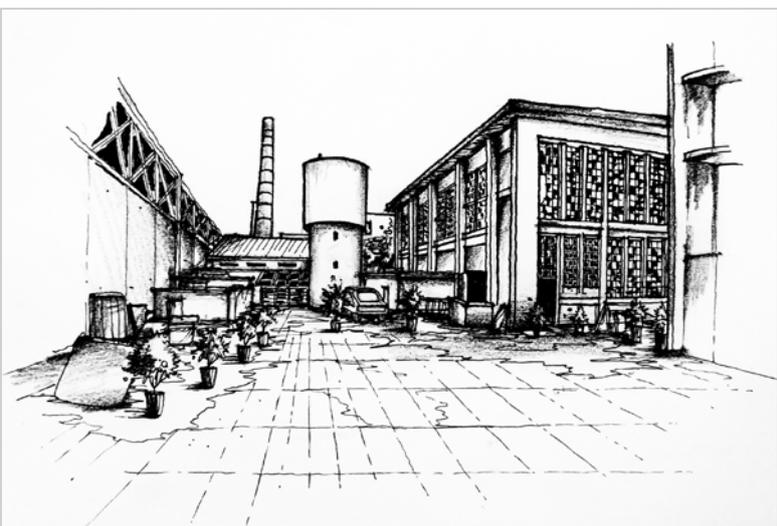
DISCUSSION AND CONCLUSION

Modern industries in Egypt and Iran started in different periods. Yet, in both countries the early stages of industrialization were implemented through a state-led, top-down process linked to progressive national agendas. Despite the growing national sentiment, the considerable impact

of foreign interference cannot be denied for Egypt and Iran. Relations with foreign powers could be described as simultaneously symbiotic and exploitative, depending on which period is in focus. In both countries, geostrategic interests played (and still play) a key role in the sustained efforts of international powers to maintain a foothold in the region.

The four cases from Egypt and Iran outline in exploratory form pathways for a contextualized understanding of their local, national, and international relevance, both at the time of their establishment as well as their current potentials for acknowledgment and development. At the level of artifacts and structures, the case studies highlight the different Modernist concepts in both countries and local appropriations imposed on them. The turn to Modernism also reveals the hold of the International Style over both countries which can partly be explained by the needs to house larger and larger machinery, but is also testament to the productive exchange of engineers and architects.

Although the sites are of immense historical significance, this is not reflected in the level of conservation efforts. At the local level, responses to the industrial heritage vary and reflect different prioritizations of heritage value over use value and economic impact. In Egypt, industrial sites



04 Tehran - The Rey Cement Factory. © Ensaf, 2021.

are mainly reclaimed for the profit of the land use without integration of the local community. The Mişr and an-Niġ cotton presses are officially listed yet continue to deteriorate due to a lack of capacity and feasible reuse options. The an-Nasr site demonstrates the close linkages and persistent identification between the local population and former workforce and the industrial sites, as hopes for their revitalization still abound. The local relevance of the Iranian case studies shed a somewhat more positive light. They are showcases for successful lobbying and proactive local government efforts towards reuse, as exemplified by the Rey Cement Factory and Mashhad Textile Factory. However, also in Iran new real-estate developments and lack of funds pose severe threats to modern heritage.

Partial recognition is apparent at the national level. Sites of industrial heritage are being listed, although industrial heritage does not exist as its own category in either country. In the discussion conducted during online workshop sessions, most academics and scholars agreed that heritage listing in Egypt provides no guarantee of conservation. Although heritage is usually considered within strategic urban plans as a land use, it lacks clear implementation mechanisms (Shalaby, interview, 2021). The situation is similar in Iran, although the more independent position of the NGOs such as DOCOMOMO and TICCIH seems to foster a more conducive environment for reuse scenarios.

Until now, the international relations of modern industrial heritage sites in the MENA region remain within the academic domain in most cases. Historically, Iran attempted to strategically leverage partnerships with Germany, Austria, and Switzerland on the eve of World War II for economic gain, as evidenced by the Mashhad Textile and Rey Cement Factory case studies. In Egypt, modern industrial development was incentivized by global interchange with various European powers, especially Britain, France, Italy, Germany, and later the former Soviet Union, among others. For the resulting industrial heritage, practical strategies that would acknowledge its international relations remain underdeveloped, as evidenced in the project involving the Bibliotheca Alexandrina and the Agence Française de Développement.

While an abundance of research has been produced on the history of economic development and colonial and post-colonial dependencies between Egypt, Iran, and Western powers, especially by academics in the Global North, further work is needed to link these back to the actual sites of production. This includes studies on Modernism in Egypt and Iran which are still predominantly focused on residential and public buildings. We argue that there is an urgent need to tackle the "industrial gap", especially given the dire condition of many industrial heritage sites. It is thus a necessary first step to revise, contextualize

and redefine local, national meaning in an international and intercultural dialogue. The imminent threat to important sites of industrial development in Iran and Egypt, some of which are explored through the case studies presented here, is a call for researchers to provide a solid basis for the conservation and future use of such sites.

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Mirhan Damir is a Lecturer at the Faculty of Fine Arts, Alexandria University in Egypt. She holds a doctorate from Bauhaus Universität Weimar. She is also a board member of TICCIH (The International Committee for the Conservation of Industrial Heritage) and the co-leader of the TICCIH Communication Commission. Damir is experienced in research, teaching, and coaching in academic and governmental institutions in her home country, Egypt, and abroad. She has experience in the inventory and transnational valuation of heritage, especially in Egypt, with the wider lens between the MENA region and the West.

Heike Oevermann is Professor for Heritage Conservation and Architecture in Existing Fabric (Denkmalpflege und Bauen im Bestand) at the TU Vienna. She holds a doctorate from the TU Berlin and was habilitated at the Bauhaus-Universität Weimar. She worked as an Interim Professor at the Otto-Friedrich-Universität Bamberg (2021-2022) and is a Guest Professor at The Oslo School of Architecture and Design. Her research focus is the heritage of the 19th and 20th centuries, with a focus on urban transformation, industrial places, and housing.

Martin Meyer is a PhD-researcher at TU Berlin and is currently acting Head of Faculty 2 Administration at HTW Berlin. Having worked with Violence Prevention through Urban Upgrading in South Africa; the German Development Cooperation's Land Use and Settlement Program in Lesotho; and at the Building, Road, Housing & Urban Development Research Centre in Iran, he is passionate about international urbanism and the global exchange of knowledge and practical experiences. His research focuses on housing provision in Iran, theories of urban modernity and modern industrial heritage in the Global South, as well as participatory urban governance and planning processes.

Mohammadjavad Mahdaveinejad is an architect by education and is also interested in the sci-tech approach toward architectural design. He was Professor of Faculty of Art and Architecture, Tarbiat Modares University, Tehran, Iran, founding member of TICCIH-Iran and is an active member of Docomomo-Iran. He established MHFL – Modern Heritage and Future Legacy Research Hub at Tarbiat Modares University to study how modern aesthetics, values, and technology left their footprint on modern movement monuments in general and the shared heritage of Iran and Germany in particular. After a successful career in Iran, he now serves as a professor at the College of Engineering and Architecture, University of Nizwa, Oman.

Hassan Elmouelhi is an architect and urban planner by training. He is a senior researcher, post-doc and project leader at the Department of Urban Development and the Department of International Urbanism and Design-Habitat unit at the Berlin Technical University. He also currently acts as the leader of the "Urban Living Lab" at the Arab Urban Development Institute. He holds a doctorate from the TU Berlin. His academic interests in international urbanism include: culture and urban informality in relation to aspects of urban development and governance in the global South with special focus on Arab/MENA region.

ENDNOTES

- 1 The First Booklet on Industrial Heritage in Egypt and Iran, <https://ticcih.org/the-first-booklet-on-industrial-heritage-in-egypt-and-iran/>.