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PRESS KIT EXPO 2020 DUBAI

ARCHITECTURE AND INNOVATION VEHICLES



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TRAVEL SCHEDULE

From 25/11 to 01/12, 2021

- 25/11 - Departure to Dubai
- 26/11 - Arrival around 8:30 p.m., local time
- 27/11 - Visit to Brazil Pavilion with architects
- 28, 29 and 30/11 - Free visitation to explore Expo 2020 Dubai (registered as media, they can access other pavilions and book visits)
- 01/12 - Return in the morning

THE APEX-BRAZIL

The Brazilian Trade and Investment Promotion Agency (Apex-Brazil) is the official institution responsible for export promotion, internationalization of national companies and, also, for attracting foreign direct investments to Brazil in support of national public policies and strategies, in order to contribute to the sustainable growth of the Brazilian economy.

Created in 2003, it is a non-profit entity, of private law, collective interest and public utility. The agency seeks to attract investments that contribute to the development of technological innovations and new business models. It offers personalized service to foreign companies that aim to establish productive operations in Brazil, providing information about the market and the business environment, bringing them closer to public and private bodies and entities at the federal, state and municipal level.

Quality foreign investment should be considered not only a vector for regional development, but also an instrument for generating jobs, incorporating new technologies and inserting Brazil into global value chains.

Apex-Brasil operates mainly with five distinct audiences: international buyers, international investors, Brazilian entrepreneurs, opinion makers and the internal public.

The agency has invested heavily in programs to empower the Brazilian exporter, helping him/her to plan the exports safely. By expanding access to training, courses and basic and qualified information on international business for small and medium-sized Brazilian enterprises, Apex enables the country to expand its international competitiveness. It organizes Brazilian participation in pavilions of major sector or multisectoral fairs held abroad, enabling image promotion and business generation.

Objectives:

- // Facilitate Brazilian companies access to international markets.
- // Increase exports and insert more domestic companies into the foreign market (especially small and medium-size enterprises).
- // Diversify the export schedule and destinations of Brazilian exports.
- // Improve the international perception about Brazilian companies, products and services.
- // Promote the competitiveness of Brazilian companies in their internationalization processes.
- // Bring Brazilian entrepreneurs closer to international business partners.
- // Attract international resources to the country and generate employment and income.

Actions:

- // It offers support services to international investors, assisting them in the opportunities analysis to establish or expand units in Brazil, in the establishment of a partnership with a Brazilian company or in the capital commitment in Brazil, through funds and companies.
- // It qualifies, empowers, offers consultancy and advice with the aim of increasing competitiveness and promoting the export culture in companies, preparing them for international market challenges.
- // It organizes the coming of buyers to the country, to know the Brazilian production structure and participate in business meetings.
- // It organizes Brazilian participation in pavilions of major sector or multisectoral fairs held abroad, enabling image promotion and business generation.

- It supports companies that have an interest in opening overseas units through its offices in nine global markets.

APEX - BRAZIL IN NUMBERS

- ✓ 32 new investment projects in Brazil were developed from applications made by Apex-Brasil in 2020, resulting in US\$ 5,3 billion in investments and business, with an estimated generation of more than 12,3 thousand job openings.
- ✓ 71 investor events were held by Apex-Brasil in 2020, involving sectors such as infrastructure and energy.
- ✓ 14,485 Brazilian companies had Apex-Brasil support in 2020 - 1.4% more than in 2019.
- ✓ Companies' adherence to programs and services offered by Apex-Brasil increased by 5.7% from 2018 to 2020 – a total of 6,133 new companies had Apex-Brasil support for the first time in the last two years.

ARCHITECTURAL DESIGN OF THE BRAZIL PAVILION

Architects

- JPG.ARQ - Architectural firm based in São Paulo (SP), coordinated by José Paulo Gouvêa for projects development. In recent years, he has developed public and private projects and participated in several architecture and urbanism competitions. Among the projects highlighted are the new building of SESC Limeira (SP), still under construction, with 20 thousand m2 of area, and the Unified Education Center (CEU) in São Miguel Paulista (SP).

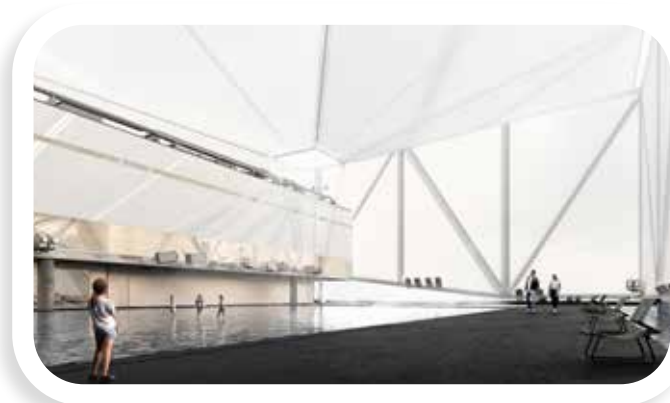
- /// MMBB - Architectural firm based in São Paulo (SP), formed by Fernando de Mello Franco, Marta Moreira and Milton Braga, architects graduated from the Faculty of Architecture and Urbanism of the University of São Paulo (FAUUSP) between 1986 and 1987. In its production, institutional buildings, social facilities and urban infrastructure projects stand out, fruits from the work focus that seeks to appreciate the public dimension intrinsic to architecture and urbanism, with the aim of contributing to urbanity construction in the cities where it operates.
- /// Ben-Avid - Architectural firm based in Cordoba, Argentina, and founded by Martin Benavidez. It undertakes national and international architectural projects of various scales and complexities: commercial spaces, galleries and exhibition pavilions, urban and metropolitan transport infrastructure, urban scale studies, among others. The standing out projects are due to the Santa Tecla Arena, located in El Salvador, with 17 thousand m², the Brazilian Maritime Museum, in Rio de Janeiro, and The View Point Antenna, to be installed at Expo 2023 in Buenos Aires, Argentina.

Furniture

- /// The furniture that makes up the Brazil Pavilion is signed by the renowned architect Paulo Mendes da Rocha in partnership with the OVO furniture manufacturer. The MMBB architecture firm, OVO and Paulo Mendes da Rocha had already partnered in the design of SESC 24 de Maio, a cultural space built in the center of São Paulo, in 2017.
- /// These furnishings were the only items transported from Brazil to Dubai to compose the Brazilian Pavilion, since the original space design was always to construct a temporary building with the spatial characteristics of Brazilian architecture, but with locally available materials.
- /// The furniture was conceived and designed for use in collective public spaces, that is, where many people circulate. Therefore, the material used was metal, which is resistant, easy to clean (something essential in times of pandemic), easy to transport and easy to handle. The colors used were developed exclusively for this line, made with powder and automotive paint, which make the material even more resistant in open spaces, being able to take sun and rain.
- /// The Brazil Pavilion at Expo Dubai will expand the visibility of Brazilian architecture and design to an opinion-maker and multiplier audience, ideas radiator, in a place that is a business hub, such as the Middle East and its neighboring regions.



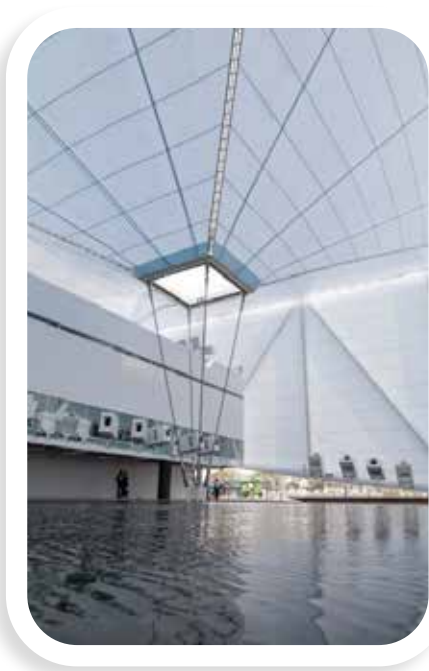
- Part of the armchairs that make up the Brazil Pavilion is part of Line 22, signed by Paulo Mendes da Rocha and the architects Marta Moreira and Milton Braga, MMBB firm owners, and composes the seal, Ovo Public. Line 22 line was designed as a furniture system – the low armchair, the high armchair and the conversation sofa, for example, use exactly the same shell-like seat, which optimizes production and allows greater flexibility in the use (and also in the maintenance) of products.



Design

- The winning project selection took place through an announcement launched in 2018 by the Brazilian Trade and Investment Promotion Agency (Apex-Brazil), Brazil Pavilion organizer at Expo 2020 Dubai.
- The starting point for the projects that participated in the competition was the theme “Joined for Sustainable Development”, with the sub-themes: “Joined for nature”, “Joined for the Human Being” and “Joined for Tomorrow”.
- The contest participants were asked to elaborate proposals that showed the fauna and flora diversity of Brazil and the ethnic, creative and cultural multiplicity of the people. The selection criteria were linked to technological innovation and sustainable design, prioritizing elements that enhance the sensory experience of the visitor.

- /// The projects were also drawn up in accordance with the technical guides established by the Expo organization with the legal building regulations in the city of Dubai (UAE).
- /// The Brazil Pavilion building has two floors, supported on stilts and bathed by a reflecting pool that occupies practically all the almost 4 thousand square meters of the land. In the surroundings there is a huge metal structure with four faces covered by a translucent membrane. It also brings a reproduction of the Amazon Forest, where projectors give life to the country's biodiversity, show images of our historical-cultural heritage, popular festivals, Brazilian cities and renewable energy sources.
- /// The sensory and aesthetic experience is the great highlight. When stepping on the pavilion, the visitor will feel in an oasis, immersed in the Brazilian natural environment, strolling through its richest and most beautiful landscapes. You will experience the gastronomic and cultural diversity, through the palate, rhythms, sounds, textures and images.



- /// The water used in the pavilion, which represents the abundance of Brazilian rivers, especially in the Rio Negro River, is the result of reuse from rain, backwash filters and condensation of the air conditioning system. One of the challenges was to retain the maximum volume of rainwater using filter installations (underground balancing tanks), always aiming at reducing consumption.
- /// In addition to the reclaimed water, the luminaries are all low consumption LED type. There is the use of the building automation BMS system for monitoring and control of

energy and water consumption. It is a computerized system that controls and monitors the mechanical, hydraulic and electrical equipment of the building, such as ventilation, lighting, thermal energy production systems, firefighting and prevention systems and security systems. It ensures smart and sustainable operation of the pavilion's engineering systems.

- There is also natural ventilation in the building with openings that allow air to enter the building on a lower level and exit on the upper level. This strategy ensures the accumulated heat dissipation, generated both by solar radiation and internal gains.
- The metal structure was used as a lightning protection system, increasing the effectiveness of the system and reducing the use of copper and aluminum materials.

Sustainability and high technology

The entire architectural project of the Brazil Pavilion was defined with sustainability premises, such as:

- Use of BMS system (building automation), for monitoring and control of energy and water consumption. It is a computerized system that controls and monitors the mechanical, hydraulic and electrical equipment of the building, such as ventilation, lighting, thermal energy production systems, firefighting and prevention systems and security systems. It ensures smart and sustainable operation of the pavilion's engineering systems.
- Use of the DALI system for lighting control.
- Use of low consumption luminaires, LED type.
- Reuse of water from backwash filters (from the reflecting pool), condensate water from the air conditioning system and use of rainwater. One of the challenges was to retain the maximum volume of rainwater using water filter facilities (underground balancing tanks), with the purpose of reducing overall water consumption. Rainwater retained in the hydraulic system will be used to equalize evaporation losses. In addition, in order to reduce water consumption, it was proposed to recycle the water used in the filter cleaning process. The recycled water destination is the discharge of toilets.
- Natural ventilation in the building. HVAC systems are based on a variable flow cooling system, known as VRF systems, responsible for the thermal energy production necessary for the climatization, ventilation and air conditioning of the building. The system consists of external units (condensers) located on the external roof and terminal units (evaporators), located in indoor environments. Natural ventilation is ensured by openings that will allow the wind to enter the building on a lower level and exit into

upper-level openings. This natural ventilation strategy allows the dissipation of the accumulated heat generated by both solar radiation and internal gains.

- /// The metal structure was used as a lightning protection system, increasing the effectiveness of the system and reducing the use of copper and aluminum materials.

BRAZILIAN PAVILIONS THAT STOOD OUT IN THE HISTORY OF EXPOS

1876-Philadelphia (USA)

- /// It was the first International Expo in which Brazil built its own pavilion. The space had eclectic inspiration and almost total symmetry. Designed by H. J. Schuarzmann, an American architect, received elements typical of North American eclectic architecture, such as *bay-windows, the wooden structure, the slender columns of the elevated balcony and embossed profiles marking "cushions" on the wall. The identification with Brazil was on the Imperial Coat of Arms placed at the main entrance.*

Source: DANTAS, Andre Dias. *The Brazilian pavilions at international exhibitions. Master's thesis in History and Architecture and Urbanism Foundations by the Faculty of Architecture and Urbanism of the University of São Paulo. São Paulo, 2010.*

Photo: Centennial Photographic Co.; William Notman. *Brazilian Pavilions at the Philadelphia International Exhibition, 1876. Philadelphia, United States / National Archive Collection*



1939-New York (USA)

/// The Brazilian government implemented a competition to choose the design of the Brazil Pavilion at The New York Expo in 1939. The architect and urban planner Lúcio Costa won the contest, but renounced the original idea to create a proposal jointly with Oscar Niemeyer, the runner-up in the contest. The new pavilion project represented the formalization of the new architecture as a symbol of Brazilian modernity.

Source: DANTAS, Andre Dias. *The Brazilian pavilions at international exhibitions. Master's thesis in History and Architecture and Urbanism Foundations by the Faculty of Architecture and Urbanism of the University of São Paulo. São Paulo, 2010.*

Photo: Manuscripts and Archives Division, The New York Public Library. "Brazil Participation - Building - Front" The New York Public Library Digital Collections. 1935 - 1945. <https://digitalcollections.nypl.org/items/5e66b3e9-0505-d471-e040-e00a180654d7>

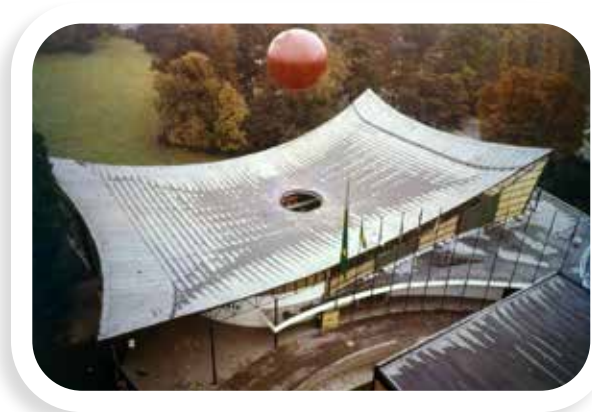


1958-Brussels (Belgium)

/// The Brussels exhibition was the first after the end of World War II (1945). The exhibition was strategically allocated in the host city of a newly created important organization: the UN. The Brazilian Pavilion was made possible through a contract that included the development of four distinct Pavilion projects, all with suspended roofs. It was proposed to the architect Sérgio Bernardes the challenge of designing a temporary steel pavilion that would demonstrate the efficiency of the material. The Brazilian Pavilion in Brussels denotes the full strength of the creative talent of Brazilian modern architects. Sérgio Bernardes dared in the forms, in the materials chosen and gave Brazil an award-winning pavilion at the exhibition.

Source: DANTAS, Andre Dias. *The Brazilian pavilions at international exhibitions. Master's thesis in History and Architecture and Urbanism Foundations by the Faculty of Architecture and Urbanism of the University of São Paulo. São Paulo, 2010.*

Photo: <https://www.bernardesarq.com.br/en/memoria/de-bruxelas-2/>



2010 - Shanghai, China

/// The Brazil Pavilion at Expo 2010 Shanghai was designed by Fernando Brandão Arquitetura e Design, after a competition held by Asbea (Brazilian Association of Architecture Offices) and Apex-Brasil (Brazilian Trade and Investment Promotion Agency). The pavilion had as theme Pulsating Cities: feel the life of Brazilian cities. Inside the space, visitors could walk through different rooms with virtual mosaics, among them one that was called “Everyday Urban Scenes”, which showed videos about human, tourist and gastronomic diversity of the country, as well as images of the host cities of the 2014 World Cup games.

Photo: <https://markobrajovic.com/pt-br/all/pavilhao-do-brasil-expo-china>



2015-Milan (Italy)

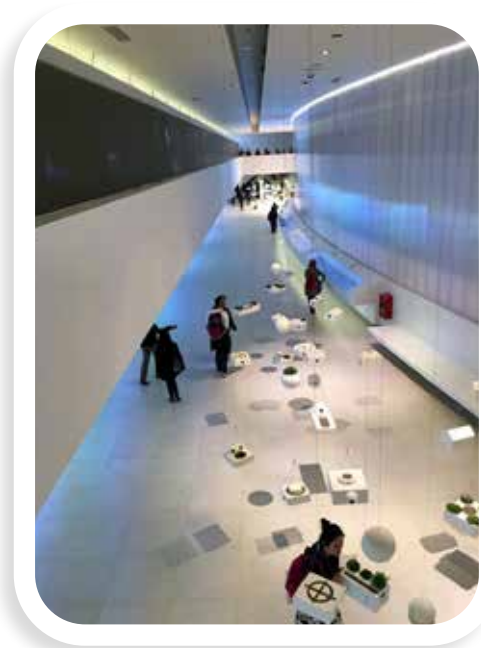
- /// The Brazilian Pavilion construction project at Expo Milan 2015 was chosen through a public competition organized by Apex-Brasil and the winner was Studio Arthur Casas in partnership with Atelier Marko Brajovic. The building, whose theme was “Feeding the world with solutions”, had three floors and a landscaping area, with space for growing Brazilian plants, flowers and fruits. There were also interactive tables with games and information about the cultures on display. There, a suspended net was placed, through which it was possible to walk. The net had sensors that captured the movement of visitors and thus influenced the sound and lighting systems.
- /// The Brazilian Pavilion was the second most visited, behind only Italy, the host country. The international press, especially the Italian, gave great prominence to Brazil’s space, several times cited as one of the best of Expo Milan in part of the more than 830 published materials.

Source:

<https://portal.apexbrasil.com.br/noticia/BRASIL-ENCERRA-EXPO-MILAO-COM-5-3-millions-of-visitors/>

<https://portal.apexbrasil.com.br/noticia/APEX-BRASIL-INAUGURA-O-PAVILHAO-BRASILEIRO-NA-EXPO-MILAO/>

Photos: Ministry of Foreign Affairs



2021-Dubai (UAE)

- /// The Brazil Pavilion at Expo 2020 Dubai was designed by JPG offices.ARQ, MMBB and Ben-Avid, winners of the contest held by Apex-Brasil. The space has almost 4 thousand square meters and is strategically located in the Sustainability district, designed under the theme “Joined for Sustainable Development”, with three sub-themes: “Joined for Nature”, “Joined for the Human Being” and “Joined for Tomorrow”.
- /// The Brazil Pavilion building has two floors, supported on stilts and bathed by a reflecting pool that occupies practically all the almost 4 thousand square meters of the land. In the surroundings there is a huge metal structure with four faces covered by a translucent membrane. It also brings a reproduction of the Amazon Forest, where projectors give life to the country’s biodiversity, show images of our historical-cultural heritage, popular festivals, Brazilian cities and renewable energy sources.
- /// In just over a month, the Brazil Pavilion is already among the five most visited of Expo 2020 Dubai, having received 330 thousand visitors.

THE MOST PROMINENT ARCHITECTURAL PROJECTS AT EXPO DUBAI 2020

Terra - Sustainability Pavilion



Al Wasl Plaza - Central Pavilion



Water Feature



UAE Pavilion



Singapore Pavilion



United Kingdom Pavilion



Italy Pavilion



Luxembourg Pavilion



Saudi Arabia Pavilion



South Korea Pavilion



Spain Pavilion



THE TOP 10 ARCHITECTURAL PROJECTS IN DUBAI

The United Arab Emirates is known for its large buildings and skyscrapers, mainly in Dubai, but the country's architecture is also made up of buildings with traditional Islamic historical elements. There is a rich historical-religious influence mainly in the ancient parts of the emirate. The reference, marked by hollow and Arabesque elements, is clear in residences built over the last century and in mosques.

Residential buildings rarely have balconies, since it is intense heat most of the year.

Burj Khalifa - SOM



O-14 - Reiser + Umemoto



Burj Al-Arab - Atkins Global



Palm Jumeirah - Nakheel



Cayan Tower - SOM



The Opus Tower - Zaha Hadid Architects



Dubai Frame - DONIS



Jumeirah Mosque



Dubai Opera



Atlantis The Palm



BRAZILIAN ARCHITECTURE AND BUSINESS OPPORTUNITIES IN DUBAI

- /// Few Brazilian architects work in the United Arab Emirates, although there are numerous construction opportunities in the country.
- /// Two construction companies, Damac Properties and Emaar, dominate the market there and are called “parent companies”. When they are hired, they subcontract other smaller builders responsible for choosing the architectural design and executing the work.
- /// Land in the UAE belongs to the government, and therefore, in order to be granted to local entrepreneurs, it is necessary to present construction projects that are interesting for tourism or local economy. (Source: Secretary-General of the Arab-Brazilian Chamber of Commerce, Tamer Mansour)
- /// Architects interested in working in Dubai can trigger Apex-Brasil, responsible for enabling futures *matches with entrepreneurs from the construction industry in the UAE. The process may also have the assistance of the Arab-Brazilian Chamber of Commerce. The architect must present him/herself, disclosing the portfolio to the Arab interested party.* (Source: Secretary-General of the Arab-Brazilian Chamber of Commerce, Tamer Mansour)
- /// The architect Daniel Fernandes, from São Paulo, has a partnership with a project office located in Abu Dhabi, United Arab Emirates. He has already carried out seven architectural projects approved for future construction in the country.
- /// For Brazilian architects interested in undertaking in the UAE, face-to-face interaction with local design and construction offices is essential. To do business there, it is necessary to have a license and be established in Emirati territory.
- /// The Brazilian architect Vincenzo Visciglia was twice elected (2016 and 2018) one of the 100 Most Influential People in the Middle East in the Hot 100 Ranking of “Ahlan! Magazine”, a magazine that is distributed in the United Arab Emirates. He created the AAVVA, architectural firm responsible for the creation and implementation of the mansions for the Middle East elite, such as the palace of the Royal Family of Saudi Arabia, the first Baghdad’s shopping mall design, in Iraq, and PappaRoti Cafés – with the design and branding developed by architect replicated to more than 400 branches between Asia, the Middle East, and Europe.

ARAB AESTHETIC AND ARCHITECTURAL INFLUENCE IN BRAZIL

- It is possible to find Arab culture traces in Brazil brought by the Iberians in the use of decorative tiles, fountain, flowered courtyards and in details with arabesques in buildings.
- According to sociologist Gilberto Freyre in his book *Casa-Grande & Senzala*, “the Moorish tile represented in the domestic life of the Portuguese and that of its Brazilian descendant from colonial times the survival of that appreciation for grooming, cleanliness, clarity, water, that almost instinct or sense of tropical hygiene, so alive in the Moorish (...). The tile almost became, for Christians, a decorative carpet from which the hagiologist took the best advantage in the pious decoration of the chapels, cloisters, and residences. However, by the very nature of its material, it kept the hygienic qualities, characteristically Arab and Moorish, of freshness, easy polishing and cleanliness”.
- The construction techniques, such as the clay tile of the *capa* and canal type, or even the pylon clay, so dominant in the first centuries of Brazil, are clearly Arab influence.

Source: LAPUENTE, Rafael Saraiva. *The Arab contribution to Brazil, an outline of the Arab influence in Brazil Colony. Article. 2012.*

- The hollow elements, present in several buildings, have their origin in the Middle East and can be defined as architectural pieces that provide sun protection, while enabling lighting and natural ventilation of the environment, since they filter the solar radiation through the existing openings in the piece. As a representative of this group, it is possible to cite the *muxarabis*, *kneecaps*, *gelosias* and *cobogos*. The hollow elements were brought to Brazil by the Portuguese, who were strongly influenced by Islamic architecture. These elements were incorporated and developed by Brazilian architecture, notably in the Early Modern Movement. The *muxarabis*, *kneecaps* and *gelosias*, hollow elements that could be found in several examples of colonial architecture, were gradually replaced by industrialized materials, such as glass, and they had their disuse confirmed by a Decree signed in 1809, at the request of Dom João VI, which prohibited the use of these elements in buildings (MARINS, 2001 apud MORAES and PEREIRA, 2017).

- /// The hollow elements returned to the scene with the creation of cobogo, in the 1930s. A Brazilian architecture element, it represents the integration between tradition and modern technology, since it was manufactured in industrial molds with concrete technology and it was influenced by traditional Islamic architecture. It was widely used in modernist architecture, being later forgotten for decades to then be used more often in works of the 2000s, but not as often as at its boom in the 1950s.

Source: *Miranda, Mariana A. (1); Camacho, Darwin (2); Bessa, Sofia A. L. (3); Sacht, Helenice M. (4). Brief History of the Use and Technical Aspects of the Hollow Elements in Brazilian Architecture in the Last 20 years. Article. 2012. Federal University of Minas Gerais - UFMG; Federal University of Latin American Integration - UNILA. Article. 2019.*

- /// From its early years, Brazil had the Arab presence and influence in the formation of its society, but it was from the second half of the 19th century that it consolidated with a large flow of Syrians and Lebanese.
- /// The researchers do not determine a date for the arrival of the first Arabs in Brazil, but they are unanimous in remembering that before 1850 there was already the culture and language diffusion even among slaves. And then, from 1880, this presence consolidated.
- /// The flow of Arabs to Brazil intensified from 1880 after two visits by Emperor D. Pedro II to Africa and the Middle East. Although the emperor's visits were not made on an official basis, his presence in Egypt in 1871 and in Egypt, Syria, Lebanon, Palestine and Turkey in 1876 eventually presented a new country to the inhabitants of that part of the globe. (Source: Director of the Center for Latin American Studies and Cultures at the Saint Esprit University of Kaslik (Usek), in Lebanon, the researcher and historian Roberto Khatlab)
- /// If the Arabs left a cultural heritage, in addition to negotiation methods here, Brazil also leaves its mark on Syrian and Lebanese lands. In some regions of Lebanon, the Brazilian menu has already been incorporated by local residents. Chimarrão, pastel, coxinha and cheese bread are part of the menu in the cities of the Bekaa Valley, in the East of the country, thanks to a group of Brazilian women who immigrated there. (Source: director of the Center for Latin American Studies and Cultures at the Saint Esprit University of Kaslik (Usek), in Lebanon, the researcher and historian Roberto Khatlab, available on <https://anba.com.br/de-1500-a-2020-arabes-encontram-no-brasil-seu-novo-lar/>)



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