

# Check Local Role Models In The New Technology Building

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## ABSTRACT

Construction and civil engineering projects in terms of capital and human resources of the country are involved in the industry. The rapid growth and increasing population and increasing demand, the need to reduce delivery time and reduce the payback period of project's investors have caused the necessity to change the traditional manner of construction is growing. The Iranian architecture have manifested themselves in different forms in different buildings, is a special place where beliefs and rituals in the geographic and climatic conditions and the result is tangible fruits of the artists is to promote the art on the basis of their faith, It's his life and in this way they have done. A quick look at the vernacular architecture of different areas of environmental and climatic characteristics of the zone indicates the recognition of Iran's diverse and ingenious remedy by our ancestors to make greater use of natural resources and deal with the problems of environmental and climate anomalies.

Must be realistic and understand that society and our architecture can be formed on the basis of achievements and to stand up, not from the West and East reserves imposed on us and is repeated thousands of times in classrooms and communities! New roles and we have to think of everything we thought and thought architecture. Therefore, this article attempts to introduce new technology in the building, looking for a solution that at least local patterns of each region in the import industry! We use while on the retrofitting effort, originality and architectural history to be maintained and only pure blind follower of the eastern and western patterns not seen that unfortunately, despite the fact that many of us have nothing in common with Iranian culture and traditions.

## Keywords

traditional patterns - patterns and Western - Construction industry - Iranian architecture

## 1. INTRODUCTION

Glory and beauty of Iranian architecture, especially in the Islamic period, furnish and make depends. Iranian supreme art, decorative arts and applied to the construction of the largest religious building have a special significance. Decorations such as mirror work, brickwork, stucco and plaster traditional joinery, tiling, carvings, mosaics, carvings and wall paintings spread throughout the Islamic period and in each period of time has progressed with its features. Vernacular architecture Iran architecture is the identity value that exactly matches the cultural and geographical conditions, computer and has its own identity, so recognizing the value of the architecture and its own solutions for use in the new

space Organization of full and empty spaces in the scale of architecture and urban context of the separation of private and public spaces due to social and cultural conditions for adaptation to climatic conditions and particularly interesting in this region have created the physical architecture and the years to the accumulation of experience generations. Probab a significant development has been different to what is now well can be used for spaces and new needs. Iran's first modern architectural trends, which coincided with the rise of Reza Shah came and after 1320 the trend was changing the face of ancient architectural elements of the exact without making any changes with modern architecture and integrate the functionalist. Prominent examples include the police office and the National Bank pointed out that the capital Tehran, the Achaemenid bas and stairs without any change in the body of the new architecture were used. The architecture of the time trying to reconstruct "lost glory" was borrowed from ancient architecture. But over time, there was another trend in Iranian architecture (Advent International style), again we see the greatest impact in Tehran. However, due to economic growth, national projects were not just limited to the capital [1].

## 2. GARLIC MODERN ARCHITECTURE IN IRAN

Early in the reign of Reza Shah to looking down modernization programs, different trends led by Iranian architects educated in Europe and European architects were invited by the Iranian government against the traditional architecture emerged. Their architecture is a direct reflection of the development of modern architecture in Europe [9]. These new materials, especially concrete, steel and glass and innovative ways to implement the structure replaced previous methods. The most important of these changes, the use of concrete that features unprecedented in terms of the structure and aesthetics of Iranian architects have left [3]. The major aim of the architects of this era of change in the world and promotes the traditional construction methods of modern architecture in Reza Shah Pahlavi [15]. These new trends took two different ways. The first part of the international or global style that can be called, including buildings and collections that have been considered in the first place functionalism and modern architecture in Europe and America Anti-date as mainstream practice, and does replication or use of concepts, architectural elements aren't seeing past. In this era of widespread use of new building materials such as concrete, steel and glass helping to change the architectural language. The building of any local features, they do not reflect historical or cultural environment, but away from the extra decorations were trying to be efficient. International style in the area was repeated in many cities and

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capitals of the world and the result was buildings with more or less the same characteristics but in different geographical and cultural situations. The second trend (look back to the past) among Iranian architecture, the tendency was to try to re-use of concepts, architectural elements of the Iranian past, but not for repeat or emulation of elements in the new buildings, but rather to attract and internalize it [9]. Golden years, this trend by combining the spirit of the architecture in the new architecture survived and evolved in the late forties and fifties were more. In recent years, architects are less than three or four decades were able to create works that without exaggeration so many years as a symbol of modernity and its confrontation with Iran shone architecture. Many items can be found in the lack of continuity of thought and action, thoughts of that era were considered very important, so the impact of measures already witnessed in the past few decades, especially during the construction are but this time we do not want to thought-provoking book and gaps architects Today's society with the proscription, our satisfaction! On the other hand addressing Iran's future with the terms of the architecture seems futile! Always draw on that past concerns and ambitions of future slogans tie and the time and place where we are present, escape. Never tried to believe in the reality of our society in a context where the demand conditions, economic, social and even political that activity. For years, in the shadow of Persepolis and Naqsh e Jahan Square, only a very expensive prides themselves, we show to the world and from every move and re-open a new architectural trend. We are also asking others to the West opened and tools votes' architecturally correct their path to a "right" people. These are used in the absence of transportation and even as we recognize the place where we were, incapable and unable, impossible without examining the capabilities of modern architecture and meaning of architecture in mind and the agents of presenting solutions abroad existing what the traditional Iranian architecture and society of the West, and to achieve the desired results. 80s architecture is of great architectural consultants, partners from European countries, architects from different countries have conducted extensive studies, writing a lot about traditional architecture, new materials and technologies to the market and above all, the same life of some of the architects of the 40s and 50's, however, and in this context, and with the architectural features of the plight of his head! If their realistic look around, we see that the result of the last three decades, we except a few of architecture that can be expressed only in scale and in the number of fingers the country does not exceed what is and is not possible to approach or the beginning of a new thought and affect the intellectual and structural gaps that could improve Iran's architecture. Today's architects and those who sit on the throne masters of this country, at this critical difficult and heavy task, especially with respect to the future and expect much more from their activities from there. Have a deep belief in themselves and achieve their Iranian and do not forget the old advice that we have managed for centuries and yet if we will be able to achieve in architecture and great ideas, this time as we role model and symbol of progress and innovation in the world and in the face of the West's powerful [1].

### 2.1 Local Architecture

Vernacular architecture based on the needs of the regional branch of the architecture and construction materials that reflect regional traditions. Vernacular architecture over time based on environmental history, culture, technology, and the date on which there have evolved. Vernacular architecture can be cross-

Romanesque architecture (with elements designed to be an accidental style for aesthetic purposes that go beyond the requirements necessary to put together the building), he said. The so-called vernacular architecture should not be confused with what is called traditional architecture, although links between the two traditional dared. Many can include buildings with formal design elements: the temples and palaces. The first name for the phenomenon of architecture, was built (spontaneous architecture) and antitype was invented. Here, from spontaneous, random means that it is not normal that [1] the traditional architectural forms refers to residents of an area based on the needs and constraints of location and climate, is formed [14]. It can be said that indigenous architecture with double the population and the environment is compatible [12], has direct communication lines, immediate and strong with mass culture and their daily lives (14), commonly known architect, architecture [2] and can be any type of architecture that belong to a specific location, apply [4] Vernacular architecture is the first name on the architectural phenomenon, called the "spontaneous architecture and the introduction of the foot. Here, from spontaneous, random means that it is not normal that [1] the traditional architecture are able to process that is based on the needs of residents and the limitations of location and climate, is formed [14] it can be said that indigenous architecture with double the population and the environment is compatible that has direct communication with mass culture and their daily lives[10], commonly known architect architecture and be any type of architecture that belong to a specific location to be expressed. Efficient use of energy and ecological exploitation of sustainable energy, the main characteristic of this type of architecture is [13]. Using environmental facilities and harmony with nature, is reflected in the local architecture [16] Using local techniques and use of materials was the smell, it is often a relatively simple process and can easily meet the needs of the residents had been performed [11] on vernacular architecture, not only to consider the implications of acid, but the original inspiration in applying the pros to achieve comfort [5].

## 3. REGIONAL AND LOCAL ARCHITECTURE, IRAN HOT AND DRY AREA (CENTRAL PLATEAU)

Iran's central plateau areas with warm and dry. The low rainfall and high temperature difference between day and night. A slight reflection of the architecture of traditional houses of the area shows that they share the whole project together.

### 3.1 Tips and Features

In this climate, dense and introspective home plan and the central courtyard. The outer walls of houses, low and simple decoration, the only entrance of the house, with niche and decoration, as compared to the rest of the exterior walls has been identified. In these houses, after the entrance, vestibule space are taken. Traditional porch at home, saw strangers in the inner space is closed, so that even with the door open, saw the internal garden and courtyard houses have been impossible. This type of architecture in traditional houses, the principle of confidentiality important to show that the expression of the introvert and the nobles. In these houses, halls connected to the porch, someone has to yard. In some houses in the inner courtyard where the inhabitants of the house, the yard surrounding the outer courtyard there was the man of the house for the reception of guests. In

traditional homes, the outer courtyard and an inner courtyard, you did not either. Specific geometric arrangement of the traditional houses prevailed. So that in all parts of the house, the entire component was seen. The principle of confidentiality of time before Islam (Achaemenid) in Iranian architecture has been considered and implemented. Other design features of the houses, the architectural harmony with the region's harsh climate - create a deep and shady courtyard of the building - put a pool and garden in the courtyard - in, combining and connecting living spaces with outdoor spaces - of up to porch, porch and semi-open spaces that are often the most important room in the house has become home. - The long louvers, vents and the doors and windows in the middle of the walls - the use of the basement and cool it - use the form arched and domed roof buildings - thick seams and roofs of houses - Using a mud brick building - the space is divided into two parts: summer living (back to Mecca) and stay the winter (to Mecca) - Breakdown service spaces living spaces.

Breakdown service spaces living spaces that traditional houses, usually hot and dry climate makes that all service areas such as kitchen and sanitary spaces, warehouses and stables in East and West and relaxing home away from eyes comfortable living spaces on both satisfied [11].

#### **4. COLD AND MOUNTAINOUS REGION (WEST AND NORTH-WEST AREAS)**

In the Alborz and Zagros mountain range, central Iran from the Caspian Sea to the north and the plains of Mesopotamia in the West separated. The cold weather with snow is plentiful and of a large temperature difference between day and night.

##### **4.1 Tips and Features**

In this climate - like the hot and dry climate in central Iran - home runs for the central courtyard and has plans have been compacted. In cold climates, rooms located on the north side yard, the other part is bigger and wider. The main hall and living room, was on the north side yard. In cold climates, rooms, South, East and West, have been used for storage and service spaces. In cold climate, flat roofs, low-slope Tyrpvsh and openings (doors and windows) to the least reached. Stone, the main building material used in cold climate and, because of the abundance and availability of coal were in this climate. Located living room and master bedroom on the north side yard, the use of direct radiation and heat of the sun in the winter. In cold climates, because of the short summer and mild temperatures in the season, from the south side of the building has been used less. Features of traditional houses in the hot and dry climate, there are many similarities. In mountainous areas, people sometimes their houses carved into the rocks, the best example of it Kandovan near Tabriz Sahand is on a hillside. The cone-shaped rock in Kandovan, "Bound," they say. Boundary height of between ten to fifteen meters. Bound along the river and across the river and the surrounding hills are located and in terms of climate and the sun is in a very good position [7].

#### **5. HOT AND HUMID AREA (SOUTHERN COAST)**

This area includes the southern shores of the Sea of Oman and the Persian Gulf is Iran. Temperature and humidity in the area high and low volatility during the day and night. The difference in air temperature on land and at sea in the region caused by the breeze [16].

#### **5.1 Tips and Features**

In this climate, the traditional home design homes to be placed in the shade. The porch is wide and high, and prevent the infiltration of rain into the room, creating a shadow on the wall is complete. In areas close to the sea, wind towers cool breeze of the sea and brought into the house. Near the sea, due to ground moisture, house on the site (the pilot) was used. The climate is temperate and humid as well as hot and humid climate, the house on the seat (the pilot) was built. Facade materials, bright colors and is made of light materials. Room height has been raised in this region [7].

#### **6. MILD AND HUMID AREA (SOUTHERN COAST OF THE CASPIAN SEA)**

The Caspian Sea is the southern margin of the greenest and most rainy climate regions of Iran and the humidity is relatively high in total seasons. The temperature difference between night and day is low and wide coverage across the region is covered plant.

##### **6. Tips and Features**

Because of high humidity, the traditional home of the Province of draft bilateral airs their advantage. It was built for steep roof and porch around the building as an important space in the house is raised. In this climate - in contrast to the arid climate and cold climate - the buildings are designed for extroverts and see around the house into the yard. Home on the seat (the pilot) was used. The buildings and houses, and pulled to the right because of the wind from the sea, in the east - west direction and a maximum draft of air. Windows are elongated. Most materials used in construction and most of the wood where light [8].

The description refers to the example of the innovative technologies in the construction industry with the aim that if in such a situation, at least in how we operate in that enterprise decent of imported models of a Zone, of native and local accuracy and originality of the region from Iran to protect the use and operation is taken. Although this precedent, but it would need some kind of compulsion seems essential.

#### **7. SUPER PANEL OLDER SYSTEMS EVOLVED TYPE**

Building sustainability issues in developed countries for many years, speed implementation, reduce material loss; wasting energy and robustness of buildings against natural disasters were constant attention and research that leads to innovation and modern techniques in the building industry. These new systems, using a combination of reinforced concrete as a porter and panels polystyrene (EPS) as concrete and thermal insulation that have been popular with concrete systems. SUPERPANEL system that produced and marketed by the company will be the latest and most complete system that is the above-mentioned deficiencies and bugs have been fixed in the older methods. The system developed by the Swiss company placidly production in Iran will be conducted under the license. The technique has in many countries, including Germany, Italy, Turkey, Canada, America, UAE, Bahrain, Saudi Arabia, Russia, Ireland used. Under this system of load-bearing structures of reinforced concrete on the ceiling and walls of buildings, and partitions made of polystyrene reinforced lightweight, non-load-bearing walls of the blade into the mold of polystyrene reinforced concrete panels and roofs format from polystyrene armed just like the roof caved in and made concrete Aspavrl. In other words, the building complex

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that were two layers of polystyrene insulation having the highest efficiency. All parts of polystyrene wall and ceiling and partitions armed in the factory ready for installation direction is carried to the place of execution [6].

### 7.1 Ceiling Panels

The panels in the 16 to 32 cm width 60 cm in thickness and the desired length are produced. On the underside of the piece 2 made of bent sheet or Z-shaped studs that good resistance to applied loads during installation and construction of the system while in the joinery can be used as a fulcrum, to juicers any type of joinery, including plaster panels used Knauf. The lower edge of the crotch section and the tabs are interlocked with adjacent panels at the top, making space for a conventional steel roof provides Piles or any other form. In this manner need to implement the ceiling joists and joist ceiling, concrete is not poured at the same time that the work will lead to an increase in speed and quality. Ear candles when concrete support up to 2 meters are applicable. The traditional plaster can be advocated under the ceiling using metal or plastic Vmharan the roof, joinery operations conducted [6].

### 7.2 Load-bearing Wall

The main load-bearing walls and a two-tier system of polystyrene with a thickness ranging from 5 cm to 5 cm in thickness of the outer layer is high in the recent film thickness depends on the amount of heat required to increase. These two layers by Blthay ends thread with a diameter of 5 mm at a distance of 20 cm are connected to each other. Bolt factory spot welds connected to the vertical reinforcement and the plastic pieces are solid polystyrene panels. Bliithe role, a maintenance tolerance Barnashy side panels of concrete support both horizontal and vertical wall reinforcement is necessary while the high resistance against buckling wall perpendicular to the wall provides the screen as you type. The distance between the two panels can be expanded to 30 cm length Bltha. Wall vertical bars of a diameter of 8 to 12 mm with belt holder in the wall of the factory and then installed in place concrete are designed according to plan [6].

### 7.3 Wall Partitions

Partition systems made of polystyrene and a width of 60 cm and a thickness of 6 to 20 cm in length is produced. Within each module 2 made of bent sheet folded punch has been inserted at the height of the wall continues, and in addition to providing static resistance to mechanical connection to ceiling partitions and floor finishes and coating is used. Pipes and electrical installations are easily made into sections and holes are permeable partition [6]

### 7.4 Ceiling

Super-panel roof system components, width 60 cm in length is formed. After preparation of the load-bearing wall between two walls Svprpanl parts are soft in the mouth. The under-roof distances of about 2 meters of the pile. Due to the special shape of the roof sections, of being both pieces together, creating space for secondary beams and joists bars in this area are based on structural calculations [6].

## 8. PARTITION

To implement the first partition wall studs of bent sheet folded along the architectural design by the firm Hilti gun. Under the ceiling, along the plumb studs, floor, a number of bent sheet folded corner profiles by screws to the metal strips on the sturdy

roof element is then placed on the floor studs element partition in place and will support up to the ceiling corners and finally by Paige automatically partitions and under-roof metal stripes sewn on it. After the traditional joinery or plaster panels on the partition will be applicable.

The major advantage of this system, in addition to a top speed of implementation and reinforcement against earthquakes removes the formatting and reinforcement of reinforced concrete load-bearing walls is at least 90% in the project.

Floor and wall pieces at an altitude of span roof parts made on the basis of architectural design, transportation to the site to quickly put in place and concreting operations can be done. Building and Housing Research Center, Svprpanl system in line with the framework of a permanent structure with reinforced concrete wall Polystyrene is approved. According to earthquake regulations (2800 earthquake in Iran), building up to 15 floors without the use of frame structures designed and implemented.

Super panel system for developers and for users of advantages, including the following can be named:

Advantages of view of manufacturers:

1. Flexibility in design
2. Full and lasting system: Super system is a complete system consisting of panels and partition walls and ceiling. So to run the building is not required to refer to different systems.
3. The speed of faster return on investment due to a high speed, the time required for delivery and operation of the project and subsequently decreased faster return of capital construction that provides the possibility of investing in future projects. The speed, fixed overhead costs also declined workshop and in this respect it is also a more economical project.
4. Lack of Perth materials according to specification Super-panel system for execution, primarily Perth materials in the hard work and joinery minimal operations that preserve natural resources makes the materials produced to many more homes. Therefore, efficient use of materials, reduced project cost [6].

**The system benefits from the perspective of users**

1. Withstand earthquakes with an intensity so that its probability is very high in our country.
2. Halt the system against heat or cold outside.
3. Reduce the cost of fuel and electricity for heating and cooling buildings.
4. Appropriate sound insulation against noise nuisance outside transfer
5. No restriction on the architecture and the architecture matched with a variety of demands
6. Reduce the consumption of fossil fuels and to reduce the amount of CO<sub>2</sub> released into the air and keep the environment clean
7. Durability and longevity of the building and operation of the building longer
8. Comforting thought of living in an apartment earthquake-resistant, wind and other natural elements, grinding [6]

## 9. CONCLUSION

Chaotic urban growth that arises from the lack of planning, is responsible for many social ills. The attention to the exterior of buildings that belong to all people, and dealing with the psyche of the citizens is crucial that privacy is contrary to the interior decoration of homes. Decoration and arrangement of the building, which is an integral part of the architecture in brickwork, tiling, stucco and mirror work in the carpet weaving, carpet weaving, feather work, ceramics, wood carvings, wood carvings

and crafts as well as other gains and Iran provides a unique hybrid architecture that is full of spiritual beauty and the beauty of its appearance there as well.

Climatic diversity in Iran's climate is very diverse in its architecture and decoration. And as a result of a variety of crafts in the decoration of architecture, have a major role. Crafts to cause a wide variety of different fields, has many applications in architectural decoration, which consists of four parts: the decorated exterior, decorated entrance spaces, decorating the building, decorated inside and outside the connection space. Decorating the exterior of the building must be such as climate change and sunlight resistant and does not lose its quality. The decorations include a mosaic tile decoration in addition to the seven colors and designs and different colors, insulation against heat and cold, rain and snow. In fact, the birth certificate is tiled in Iranian architecture and has a regular date and evolution. The interior decoration of a building could be more use made of a variety of art crafts. Carpet mat in addition to being one of the important components in the interior decoration of an Iranian monuments. Close to the plan and the carpet with tile patterns, proximity and solidarity of Iranian art is expressed. The following drivers such as rugs, woolen cloth and traditional textiles and curtains of cloth with various applications and suites decorated with inlaid and carved and inlaid wood, of Something and metal objects, all and all, make the Location Iran. Ornate architecture of the spacecrafts in Iran are not only in place, but each has a variety of applications.

Between interior and exterior decoration including door and window frames. "In" buildings that in the past were made of wood and metal work was the home of Srpnjh inlay artists. Finally, we need to know neither the architect nor the integrity and architecture in such a diversity of architectural space and no cash incentive on the part of scholars in this field, despite having features and tools, can be raised, Unless position ourselves without exaggeration and without the use of concepts and ideas of the past and the West, recognized the right mindset, and be realistic and understand that society and our architecture can be formed on the basis of achievements and to stand up not based on reserves of East and West imposed on us, then proceed to analyze the relationship that we have established with history and posterity.

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