



Urban Agenda Platform

The global platform for sharing progress, action and knowledge on the implementation of the New Urban Agenda to achieve sustainable urban development.

Specialized Hospital of Sick Buildings

Region	Middle East and North Africa
Award Scheme	Guangzhou Award
Sustainable Development Goals	Goal 3 - Ensure healthy lives and promote well-being for all at all ages Goal 6 - Ensure availability and sustainable management of water and sanitation for all Goal 7 - Ensure access to affordable, reliable, sustainable and modern energy for all Goal 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable Goal 16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels Goal 17 - Strengthen the means of implementation and revitalize the global partnership for sustainable development

Summary

In one point of view, a city is nothing but a numerous number of buildings. We thought of buildings as alive organs of city, then as we care about the health of our population, we should also care about the health of our buildings, but why we don't have a Specialized Hospital equipped with sustainable doctors for sick buildings to systematically address them?

Background and Objective

All the buildings are neither dead, nor the municipality have the capacity to destroy all of them to build new ones with highest possible standards, but we can cure them and let them live healthily. The trained doctors visit the buildings for different diseases such as Non-resilience, Non-resistance, High consumption of energy, Pollution, Lack of safety standards etc. and write prescription based on which there will be some financial and technical aids. The cured building will receive "The Certificate of Health" accompanying with significant advantages.

BACKGROUND INFORMATION

The project is carried out under the following legislative or policy framework: Iran's Sixth Five-Year Development Plan 2016-2021 (Article 59); Iran's Law on Regulating and Protection of Building's Construction & Housing Supply (Article 1, 2, 11, 12); Iran's Law on Changing Consumption Patterns (Article 18); Iran's Law on Protection of Renewal, Rehabilitation; Strategic National Document for Renewal, Rehabilitation and Empowerment of Deteriorated and Dysfunctional Urban Fabrics; Executive Regulation for Sustainable Urban Regeneration; Isfahan Province's Document of Sustainable Urban Regeneration; UN Sustainable Development Goals. ORIGINS Deteriorated urban fabrics of Isfahan are more than 2304.8 hectares, full of non-resilient and non-resistant buildings, while in other areas of the city the buildings suffer from a vulnerable condition which affect a population of more than 2 million people, live in more than 1,500,000 residential buildings; The rate of energy consumption of the buildings is 6 times more than global consumption while Iran and specially Isfahan (as an arid city) is facing a serious water and energy crisis and just in last 3 month more than 100 buildings were on fire because of the lack in safety standards, where there is no systematic method to address the condition of buildings after construction (No Building's Checkup). The project aims to: Change the point of view of local authorities and urban managers to see the buildings as alive organs of the city; Create a systematic method to monitor regularly the condition of the buildings years after construction. (Buildings' Checkup); Reform policies of urban renewal in a sustainable framework; Improve the quality of the buildings in energy consumption, safety, resilience after construction; Train experts and improve unemployment rate among academic graduates in urban-related majors. This project is the initiative of Mr. Omid MAHMOUDI GHASAREH (Right Owner & Director) which was developed at Baraye Fardaye Shargh Institute (Leading Partner) and is implemented by Municipality of Isfahan (Executive and leading Partner). Following organizations are also benefiting from the innovation: Isfahan Heritage & Urban Renewal Organization (Urban Policies) Isfahan Construction Engineering Organization (Training sustainable & resilience doctor of sick buildings) Water & Waste Water company of Isfahan Province (Reduction of water consumption and improve sanitation systems of buildings) Isfahan Electricity Power Distribution Company (Reduction of Electricity consumption of buildings) Isfahan Fire Department (Safety Standards of buildings) Insurance companies (Decrease of buildings' incidents) The financial and funding strategy of the project provides from the existing budget of municipality for Urban planning and renewal (\$9 million) and mainly include: Research funding: \$80,000 Costs of training specialized doctors: \$119,000 Construction of Specialized Hospital of Sick Buildings: \$2,380,000 Management of Hospital: \$180,000 (Monthly) Other resource: The possibility of benefit from the capacity of 80,000 unemployed graduates in Isfahan; \$350,000 Energy-saving appliances (Faucet, Valve, Lamp, ...) ready for distribution form Water & Waste Water company and Isfahan Electricity Power Distribution Company; 100 Safety experts of Isfahan Fire Department.



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Outcomes and Impacts

A: Short-Term Outcomes:

Nature of Outcomes: Create a systematic framework to improve buildings' standards; Improved quality of life, Improved efficiency, effectiveness; Scale Local (City of Isfahan) Improve building's resistance and resilience: 10-40% Reduce building's energy consumption: more than 30-50% Training 2,700 doctors (Buildings' Specialist) from academic graduates in the related field; On-site survey and health diagnosis of 300 buildings every month; (The numbers can raise significantly if the project gains success and controlling the buildings' health becomes a "norm" in Isfahan) Issuing Health Certification of 20 buildings every month; (The numbers can raise significantly until many buildings' have acquired certification.) Added values to healthy buildings (the rate of price increase depends on market response but an increase of 10-15% is possible) Reduction in cost of buildings insurance rates (up to 15%) Municipal tax & charges reduction (up to 40%)

B: Long-Term Outcomes:

Nature of Outcomes: Improve sustainable urban policies; Improve macro image of city's condition in case of crisis and emergency event, Improved quality of life in a regional scale. Scale Local & Regional Obtain macro statistics and big data usable for urban sustainable renewal Mitigating losses from Natural Disasters Urban regeneration in a house by house framework Decrease of annual buildings' accidents (Fire, Monoxide incident, ...) For a deep analysis & a reliable assess of the changes, different measurement systems have been used based on outcomes which included 3D computer models, Geographical Information System (GIS), UrbanSurveillance Drones, and Analytical software and, On-site surveys. The municipality of Isfahan devise advertising initiatives to make the increase in added values to the healthy houses with a reality in the real-estate market. When there is a systematic framework for ensuring the quality of the buildings in the city, that makes confident to others that our community are living in healthy buildings to keep them safe and happy, similar to a city with a significant medical system which bring them a remarkable reputation that everyone who lives there whether is healthy or at least has access to the best medical services.

Innovative Initiative

It's an evolutionary initiative as it's based on the past experiences on the maintenance, restoration, refurbishment or renovation of buildings but it makes a significant change to the views towards the buildings to see them as alive organs of the city. This new perspective proposes a systematic method to monitor the buildings regularly and get informed about their health, something that never existed before. In fact, today, the only existing mechanism for ensuring a high level of condition for buildings is just in the process of construction and after that, the local authorities and urban managers usually leave the building aside, but this project gives a reason to always systematically check up the health condition of buildings. As it seems from the title, this initiative was inspired from what we do in medical systems for keeping the population healthy which helped us a lot to create a new medical system for the buildings. The innovation applies: Strategies and policies of renovation and regeneration of deteriorated and dysfunctional urban fabrics. The national and regional planning of building resilience against natural crisis. The strategies of combating Iran's water crisis and energy consumption. The executive regulations of building's safeties. Mainly, this initiative cannot be achieved without the help of the owners of the building which is an obstacle to persuade them for cooperation and to make their building in a healthy condition. The cultural and encouraging plans are designed to address this issue: There are financial aids from municipality such as loans and discount of the costs, as well the owner will receive in the end the certificate of building's health which will add value to the building and will rise its price, also the owner will benefit from deductions of tax and municipal charges, and insurance costs and also much less paying for cost of utility bills.

Conclusion

The other cities could start to have their own specialized hospital of sick building and create their own systematic building's checkup where we are ready to share our experiences.