

Application of Specialized Hospital of Sick Buildings (Sustainable Doctor of Sick Buildings)

A. Profile of the Initiative

Geographic Region	Asia-Pacific
Country/Region	Iran(Islamic Republic of)
Name of City/Local Authority	Isfahan/Municipality of Isfahan
Organization	Baraye Fardaye Shargh Institute
Title, Name and Position of Person(s) Leading the Initiative	
Basic City Data	
Population size: 2,094,867	
Population Growth Rate(%)3.20	
Surface Area (sq.km): 550.000	
Population Density (people/sq.km): 3.809	
GDP Per Capita (U.S.\$): 5.219	
GINI Index: 0.38	
URL/Webpage of Your City:	
URL/Webpage of Your Initiative:	
Main source of prosperity (e.g. industry, trade, tourism, creative industry, etc.): industry	

B. Title and Abstract

For a large integrated initiative, please consider submitting up to three initiatives under the same title. For example, you may wish to submit under “Low-Carbon Urban Development for My City” an initiative on public transport, an initiative on energy efficiency in buildings, and an initiative on use of renewable energy.

Title or Tagline of the Initiative	Specialized Hospital of Sick Buildings (Sustainable Doctor of Sick Buildings)
Sub-title	
Start date of the initiative	2016-05-01
Tentative End Date of the Initiative (if not yet completed)	2020-11-01
Thematic Areas	Social Economic Environmental Governance/Management Technology

Abstract/Short description of the innovative initiative being submitted for Award.(150 words max)

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? 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 which based on this prescription, there will be some financial and technical aids. The cured building will receive “The Certificate of Health” accompanying with significant advantages.

C. Background Information

Describe the legislative or policy framework under which the initiative is taking place, for example, a public policy document at the central or local government level, a policy statement, a covenant, a compact or internationally recognized agreement including, for example, the Sustainable Development Goals, and/or the New Urban Agenda

- 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;

D. Summary of the Origins of the Initiative

Describe how the initiative came about and what challenges or issues of sustainable development it is meant to address using the following lead questions as your guide. (350 words max)

1. Describe briefly the reason(s) for undertaking the initiative including social, economic, political or cultural challenge(s) or issues confronting the city/region/community. Include where relevant number of people, enterprises or institutions affected.

Deteriorated urban fabrics of Isfahan are more than 2304.8 hectares, full of non-resilient and non-resistant buildings, while in other areas of 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).

2. Describe the goals of the initiative in terms of desired change or outcome and timeframe for achieving the change or outcome (for example, change in policy, strategy, business model, technology, means of implementation, financing arrangements, human development and empowerment, measuring and evaluating progress and impact, etc.).

- ü Change the point of view of local authorities and urban managers to see the buildings as alive organs of the city;
- ü Create a systematic method to monitor regularly the condition of the buildings years after construction. (Buildings' Checkup);
- ü Reform policies of urban renewal in a sustainable framework;
- ü Improve the quality of the buildings in energy consumption, safety, resilience after construction;
- ü Train experts and improve unemployment rate among academic graduates in urban-related majors;
- ü As well, sustainable goals checked in the last page.

3. Describe whether the innovation involves any partnership (public-public, public-private, public-community, etc.) and if yes, who is or was the leading partner(s), the role they each played and whether other parties have benefited or are benefiting from your innovation and how?

This project is the initiative of Mr. Omid MAHMOUDI GHAHSAREH (Right Owner & Director) which was developed at Baraye Fardaye Shargh Institute (Leading Partner) and is implementing by Municipality of Isfahan (Executive and leading Partner), as well following organizations are 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)
- Esfahan Electricity Power Distribution Company (Reduction of Electricity consumption of buildings)
- Isfahan Fire Department (Safety Standards of buildings)
- Insurance companies (Decrease of buildings' incidents)

4. Describe the resources used for implementing the initiative, including funding/financing strategy or arrangements and any significant contributions that are not in cash, for example, in human, technical or managerial resources.

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 Esfahan Electricity Power Distribution Company;
- 100 Safety experts of Isfahan Fire Department;

E. Summary of the Innovative Aspect(s) of the Initiative

Describe the innovation for the initiative using the following lead questions as a guide. (350 words max)

1. Describe whether the initiative should be considered evolutionary or revolutionary. Evolutionary would imply that innovation evolved over time based on lessons learned from experience and that the changes or outcomes are cumulative. Revolutionary would imply something quite new or something that has been borrowed from elsewhere but never been tried before in the sector or context in question and therefore bears a certain degree of risk. If it's borrowed from elsewhere, describe what the linkage with the other preceding experiences is.

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 checkup the health condition of buildings.

As it seems from the title, this initiated 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.

2. Describe where the innovation is being applied, for example, in policy or strategy; planning, design and implementation; business model or financing arrangement; tools and technology; governance and administration; etc

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.

3. Describe whether there was or are any obstacles or resistance to the innovation and if so, how were/are they being overcome.

Mainly, this initiative cannot be achieved unless with 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.

F. Summary of the Desired Change or Outcome and how it is being Measured

Describe how the initiative, and in particular the innovation, is or will be making a qualitative and/or quantitative change and how that change or outcome is being measured. (350 words max)

1. What change(s) or outcome(s) have you already achieved or hope to achieve? Please describe the nature of the change(s) or outcome(s) in, for example, improved quality of life; new levels of social, economic or environmental sustainability, including new attitudes and behavior; improved efficiency, effectiveness, accountability or transparency, etc. Please describe the scale of the change, for example, primarily local, regional, national or global and where possible, please quantify the change(s) or outcome(s) being achieved.

A: Short-Term Outcomes:

Scale Local (City of Isfahan)

Nature: Create a systematic framework to improve buildings' standards; Improved quality of life, Improved efficiency, effectiveness;

- Improve building's resistance and resilience: 10-40%
- Reduce building's energy consumption: more than 30-50%
- Training 2700 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: 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, ...)

2. What indicators or metrics are you using to assess the change? Describe who is doing the measuring, and who is using the measurements and how.

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), Urban Surveillance Drones, and Analytical software and, On-site surveys.

3. Describe any specific tools or methods that were developed or applied to improve the chances to attain the desired outcome or change, for example, new working methods, new data and information, new incentives or disincentives, new means of communication and knowledge, new technology, etc.

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.

4. How does the initiative and its intended changes or outcomes contribute to a new image or reputation for your city or community?

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.

G. Describe what you think other cities can learn from our initiative and what your city/community is prepared to do to further that learning.

Choose any of the above headings or a particular aspect of the initiative that you wish to highlight and that you think best describes the reasons why the innovative aspect(s) of the initiative could be of benefit to improving social, economic and environmental sustainability in cities and regions and, in so doing, to advance the prosperity and quality of life of their citizens. (400 words max)

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.

H. Relevance of the Initiative to the 2030 Agenda for Sustainable Development, Commonly Referred to as the “Sustainable Development Goals” and to the New Urban Agenda.

Please tick the most appropriate boxes and provide a brief description of the relevance of your initiative in relation to the relevant goal(s). Please also refer to the complete text of the Sustainable Development Goals at:
www.un.org/sustainabledevelopment/sustainable-development-goals/

Goal 3: Ensure healthy lives and promote well-being for 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 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work 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 Target 1: Access for all to adequate, safe and affordable housing and basic services and upgrade slums

<p>Target 3: Participatory, integrated and sustainable human settlement planning and management</p> <p>Target 4: Safeguard cultural and natural heritage</p> <p>Target 5: Reduce deaths and number of people affected by disasters with particular focus on the poor and people in vulnerable situations</p> <p>Target 6: Improve air quality and manage municipal and other wastes</p> <p>Target 9: Improving resource efficiency, mitigation and adaptation to climate change, resilience to disasters and implement holistic disaster risk management</p> <p>Target 10: Support least developed countries in building sustainable and resilient buildings utilizing local materials</p>
<p>Goal 12: Ensure sustainable consumption and production patterns</p>
<p>Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</p>

I. Descriptive Materials in Annex to the Document

<p>These are materials destined to allow members of the Technical Committee and the Jury to have a better understanding of the context of your initiative which is a very important consideration. Please do not exceed the specifications below; anything that exceeds these specifications may not be availed to the Technical Committee or the Jury. Please provide, where possible and relevant, the following:</p>
<p>◆ Up to 5 press clippings or copies of covers and tables of content of reports published on the initiative.</p>
<p>◆ Up to 5 photos (with titles) that best illustrate the initiative (.jpeg at 300 dpi, 2000 x 2000 px max).</p>
<p>◆ Up to 5 graphics that best illustrate the initiative (300 dpi). These graphics could illustrate for example, trends, ratios or percentages; tools or technologies; etc.</p>
<p>◆ 1 map that best illustrates the physical context of the initiative (300 dpi)</p>
<p>◆ 1 chart that best illustrates the initiative (300 dpi)</p>
<p>◆ 1 technical drawing (300 dpi)</p>

J. Additional material

Any additional material such as videos should be submitted on a DVD/CD or by email to the Secretariat at info@guangzhouaward.org.

Note: Any additional material should be submitted to the Secretariat via email or mailing.

The Guangzhou Award Secretariat

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