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A WALK THROUGH THE WORLD OF IIDD AND BEYOND

INSITE STORY **window** DRESSING

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ABIN CHAUDHARI
**HOLISTIC
LEANINGS**



**THE FABRICATION
OF SPACE**

NURU KARIM



B2B DESIGN MAGAZINE ON INTERIOR ARCHITECTURE

a smart & sustainable FUTURE

*Sustainable buildings can prove catalysts in developing socially thriving,
financially secure and environmentally just communities.
It is time we all shifted to building methodologies that can be beneficial
for the planet, its people and their pockets.*

TEXT: Ashka Naik | PHOTOS COURTESY: Artha Studio



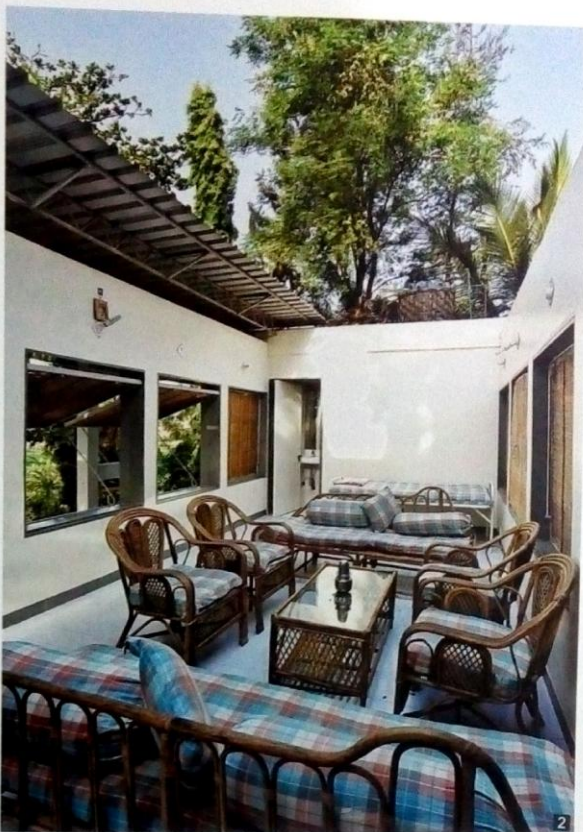
Buildings, urban infrastructure, neighborhoods and cities create the very foundation of our social system. These physical extensions are expressions of human actions, ideas, and the imaginative spirit, but also an evidence of vulnerabilities, complexities and the resilience of human mind. Hidden behind the brick and mortar geometry, buildings have continually narrated the story of human value and morality.

We have been building since we learnt how to use the opposable thumb. But the way we have learnt to build in the past century supersedes all our previous creations. We can slice off insurmountable mountains and wipe out millions of acres of idyllic forests in the matter of days to build that one structure, which can satiate our desire to rise higher, span vaster and live larger than ever before.

In this age of flattening world and homogenising global culture, buildings become pioneers as their physicality cannot be outsourced or virtualized. Buildings will always remain that one "real" connection between man and his immediate surroundings. The skin of a building will forever be needed to protect us from the elements of nature. No matter how many frontiers nanotechnologists and quantum physicists conquer, they and their inventions will need to be "housed" in a building. It may not be illogical to say that buildings will exist in one form or the other until the extinction of mankind, as we know it. However, this building substructure is considerably more transient and rapidly transformed in terms of its average lifecycle compared with its natural counterpart of ecosystems, geological formations and the environment.

These two truths about buildings, 1) they will always be needed, and 2) they will always be ephemeral, should provide a vigorous argument to make buildings smarter and more sustainable.

In India, the urban sprawl is at its peak. Farmlands and forests are being bartered



for residential colonies and industrial parks. One can ask why not. What is wrong in building new buildings that allow more people and businesses to flourish? Well, to say the least, this is not a question of what is "right" or "wrong." It is more of an investigation into the "why" and the "how." And, what is not quite well understood is why we are still building in reckless ways when we can in ways that can be beneficial for the planet, its people and their pockets. And how we can systematically change these ways without losing more time, in addition to further jeopardising the health of our planet and its ecology.

It should not be surprising to learn that in the past three years 18-20 per cent of global GHG emissions have resulted from residential and commercial building stock, a paramount contribution disrupting the fundamental balance that has ensured this health, as well as

1. The south face of AR Folly. In Portuguese, AR means air and folly, architecturally refers to a built form that does not have the usual purpose of housing and sheltering associated with a conventional structure

2. The upper room of AR Folly is a living space that can be converted to an open-to-sky courtyard with the help of a retractable roof – a response to the dry climate

[No framework can] educate us in ways that centuries of experimentation, implementation and improvisation can

safety and sustainability allowing our civilisation to thrive. However, when we begin to see buildings themselves as a solution, then the paradigm shifts in a universal sense. Sustainable buildings can now prove catalysts in developing socially thriving, financially secure and environmentally just communities. Smart buildings can generate market growth by fostering innovation in material, technology and skilled labour.

Following these assimilative ideologies, there have already been several strategic frameworks developed all over the world that allow and implement sustainability principles in various phases of building's lifecycle. One of the most aggressive mechanisms has been established by the International Living Future Institute (ILFI), and the framework is called **The Living Building Challenge**. This standard, according to the ILFI, is not only a certification tool, but also an advocacy platform and a philosophy. The Living Building Challenge is composed of seven performance areas, or "Petals": Site, Water, Energy, Health, Materials, Equity and Beauty. According to the framework, the Petals are subdivided into a total of 20 Imperatives, each of which focuses on a specific sphere of influence. To understand the Petals and their Imperatives, please visit www.living-future.org/node/117. The ultimate objective of the Challenge is to engender an ecosystem of business leadership and environmental stewardship that would promote buildings to be built in absolute harmony with nature.



Another innovative initiative is **Architecture 2030**. To slow the growth rate of GHG emissions and then revert it as it is the key to addressing climate change and keeping global average temperature below 2°C above pre-industrial levels, Architecture 2030 issued The 2030 Challenge asking the global architecture and building community to adopt three important targets:

- All new buildings, developments and major renovations shall be designed to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 60 per cent below the regional (or country) average/median for that building type.
- At a minimum, an equal amount of existing building area shall be renovated annually to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 60% of the regional (or country) average/median for that building type.
- The fossil fuel reduction standard for all new buildings and major renovations shall be increased to: 70 per cent in 2015, 80 per cent in 2020, 90 per cent in 2025 and carbon-neutral in 2030 (using no fossil fuel GHG emitting energy to operate).

These targets may be accomplished by implementing innovative sustainable design strategies, generating on-site renewable power and/or purchasing (20% maximum) renewable energy. For more information on this call to action, please visit www.architecture2030.org.

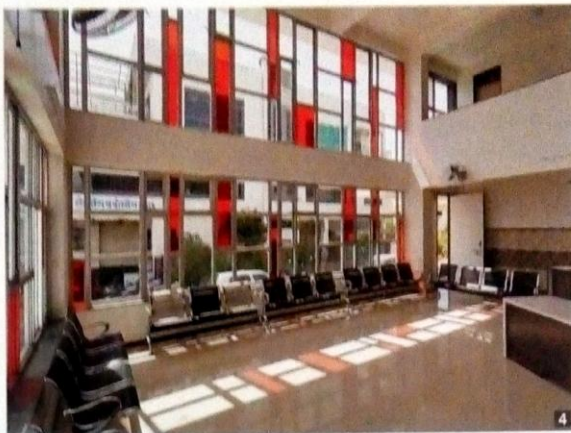
The Leadership in Energy and Environmental Design (LEED) rating systems offer another popular and effective framework. With various rating systems addressing neighborhoods and schools to homes and hospitals, LEED certainly creates a potential for integrating holistic building approach into all stages of design and operations, creating sustainable spaces and offering extensive benefits to its inhabitants. Recently the World Green Building Council published

a report, *The Business Case for Green Building: A Review of the Costs and Benefits for Developers, Investors and Occupants*, that presents findings summarising these critical benefits of building green. The analysis is supported by the most recent and relevant research, which examines whether or not, it's possible to attach a financial value to the cost and benefits of green buildings. Today, green buildings can be delivered at a price comparable to conventional buildings and investments can be recuperated through operational cost savings and, with the right design features, by creating spaces that promote health, attentiveness and productivity of its users. (More information on this report can be found here: www.worldgbc.org/activities/business-case).

The purpose of sharing the overview of some of these frameworks is two-fold; one is purely informational. However, the more germane reason is to remind ourselves that a framework cannot educate us in ways that centuries of experimentation, implementation and improvisation can. The latter is where we have a unique opportunity to bequeath the world community of green building thinkers with our indigenous wisdom, deep "green" mindset and profound reverence for nature. Sanskrit, the classical language of India, has 65 words to describe various forms of earth, 67 words for water, and over 250 words to describe rainfall; each word depicting the myriad of nuances of that specific element of nature, each word capturing the context, the importance, the beauty, the usage, the geography, the climate, the ecology, and even the personality of that element. The way water would mean differently to a man of the desert than to the one living in a flood zone, these words emphasised the relevance and inter-connectedness of objects.

As individuals devoting our lifetimes to the process of building, what we can reminisce, re-examine and "re" practice is this infinite inter-connectedness.

At Artha Studio, our constant endeavour is to uncover vital relationships between



the project and its context. Starting from the idea that the "greenest square footage is the one never built", which entails conserving, repurposing and revitalising existing built form, to executing building strategies that invigorate local economies, employ vernacular technologies and catalyse community engagement, our goal has been to find the financially, environmentally and socially sustainable design solutions for our projects. The process always begins by serious assessment of the need and alignment with the vision of the client, which allows us to hit the ground running with the most effective, and audacious, approach to the building process.

The most important aspect however is to practice the inter-connectedness with the environment, but also with different entities involved in the process of building - from the inception through manifestation. During this practice, synergies are realised and opportunities are leveraged that make a particular solution the most optimal answer to the design problem. And as designers, architects, engineers and builders, it is our choice to either settle with a solution that is oblivious to this inter-connectedness and ordinary, or struggle to create a solution that is in unity with its milieu and extraordinary.

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3. In the Jain House, located in heavy rain-prone terrain, we opted for load-bearing walls with local bricks and a country-tiled roof

4. At Bholane Hospital, a small urban hospital with the north and east corners facing the street, the morning sunlight creates pretty patterns on the floor

5. At Janakee Sadan, the high windows are traditional details that were respected for re-use of materials and aesthetics

