

Technology In Building Design And Construction

By Rajan Goregaoker, Principal Architect and Partner, GA design

The broad obligations and opportunities of architecture were summarized by the ancient Roman architect Vitruvius in the prescription that buildings should provide Commodity, Firmness and Delight. While commodity addresses the spatial and functional utility, Firmness addresses the building's ability to resist natural forces, starting with gravity. Delight relates to the sensory and associative pleasures buildings can provide—their meaning. With time, we have advanced beyond the obligations that Vitruvius prescribed and Progress in technology has introduced successful techniques to develop strong and long-lasting buildings with a faster completion time.

Technology today starts at the drawing board and ends with the client receiving a high-tech home / office that would meet international standards in all aspects. Making a building is no longer limited to providing the customer with 4 walls and a roof. People expect a lifestyle when buy or rent property- Be it a home or office.

With newer construction technologies such as Building Information Modeling (BIM) that facilitate the collection of information about buildings under construction. Computer aided designing helps in designing flawless buildings. Such simulations problems can be found and resolved before constructing buildings physically. Some of the technologies used to help achieve this are-

Styrofoam Panels: Practiced for the last decade, it provides good resistance to thermal convection. The durability and strength of Styrofoam make buildings long lasting and cleaner than buildings constructed with other materials.

Unbounded PT Slabs: Unbounded PT slabs are used in the construction industry for their reliable quality, strength and affordability. With greased steel strands that resist rusting and thereby increasing age, these are successfully used on roofs, pavements, and even in the round water tanks.

Automation: A building automation system, or BAS, is a centralized control system that monitors an entire building's functionality including heating, ventilation, air conditioning (HVAC), lighting systems, and often water, fire and life safety. Efficiencies are increased by integrating all these functions into a unified system, that often drives down building costs as well as energy consumption. Automation controls can interact with other systems such as HVAC, to become more 'intelligent', thereby needing less control.

Solar panels: To encourage reducing day to day maintenance cost, Solar panels are used in a big way to generate electricity that could cater to the common areas of the project which include the staircase areas, garden areas, basements and parking areas. Double glazing glass facades using high performance glass reduce the solar gain leading to reduced electricity consumption.

Wireless systems: Rapid advancement of such systems are influencing the work environment in a big way where workspaces are planned with Fibre Optics to enable high speed internet connectivity.

Air filter systems: Air filtration systems effectively remove 95 percent of particulates and an air monitoring system measures not only carbon monoxide, but also carbon dioxide, Volatile Organic Compounds (VOCs) and small particulates. Air filters are used in applications where air quality is important, notably in building ventilation systems and in engines.

Recycle and Reuse: Recycled materials can be used when possible in the construction materials domain to enable efficiency and sustainability. , green roof and reflective pavers to offset the urban heat island effect are used.

Having come a long way from ancient Rome architecture, today's architecture is not limited to building anymore. Taking all the scientific revolutions from the days of Vitruvius, we have gone above and beyond in our attempts to make not only living but the environment also healthy, wealthy and wise.



Chembur: The Rising Real Estate Market Of Mumbai

By Amit Ruparel, Managing Director, Ruparel Realty

Fuelled by the soaring demand for homes, the real estate market in Mumbai has been experiencing a considerable growth in the last few years. Even areas outside the suburbs, which were earlier overlooked by builders, have become highly viable, thereby helping create opportunities for more and more micro-markets.

Chembur, located strategically, and connected to South Mumbai via the freeway, the Western Suburbs via the SCLR, Navi Mumbai via the Sion-Panvel Highway, and Central Mumbai via the Eastern Express Highway, is one such area which has rapidly risen in popularity, lately. As such, it is positioned perfectly to not only meet the ever increasing demand for homes, but also to address the lack of space and infrastructure, a major concern in several other areas of the city. Its close proximity to business districts and airports, along with its connectivity to the rest of Mumbai, makes commuting easy for professionals, resulting in a huge increase in the number of homeowners looking to buy properties here. Furthermore, upcoming projects like the Navi Mumbai International Airport, the Monorail Phase-II Wadala to Jacob Circle, and the elevated road from

BKC to Sion, are expected to majorly increase the demand for residential properties in the area.

One of the primary reasons for its rising popularity and market success has been its location, as Chembur is situated directly on the Eastern Express Highway. In addition to that, the massive infrastructural development taking place in the area has helped transform Chembur into a major cosmopolitan area. Several existing buildings are undergoing redevelopment, while the number of high-rise towers in the area has multiplied manifold as well. Also home to several malls, restaurants, hospitals, schools, and a golf course, Chembur boasts of a robust social infrastructure, without compromising on green spaces, rife with lush green gardens, and streets adorned with trees.

As a result, the demand for homes in the region has been rising consistently, making it a favourite of builders, and providing exceptional returns for investors. Projects in the region are clocking record figures in sales, and many developers are even conducting re-launches to appeal to customers.

The area is expected to grow even further, infrastructurally, as well as culturally, as people from several cross sections of society are now looking to buy homes here. These factors will further contribute to its rising popularity, and make Chembur a major real estate centre in the years to come.



Not just square feet of space – the new millennial home buyer wants it all

By Niranjan Hiranandani, President, NAREDCO

Buying a home is not just about square feet of space: the millennial home buyer wants the entire package: a "Lifestyle-Plus Luxury Home" in a "Posh Pin Code". With amenities and facilities that add value to living in a luxury residential destination, the aspiring and luxury home seeker wants a home that offers not just lifestyle-plus living.

This segment of home buyers is looking for a new age home for the discerning home buyer. It has to be in a stylish project offering contemporary luxury homes, situated in popular suburban setting of what would arguably, be the city's most elegant address.

In Mumbai, the trend-setting mixed-use integrated township, Hiranandani Gardens at Powai is an apt example of how the Smart City concept can be conceived and delivered to a select segment of home seekers who are also tech-savvy. Having been part of the planning

and conceptualization team right at the beginning to present-day, when a new tower opens up for bookings – and the first set of apartments get sold out within a short time. The same set of high-end amenities for discerning home seekers offered in a new set of towers in Hiranandani Estate, Thane also had a similar response.

What this makes amply clear is that there is a segment of home seekers who want a global lifestyle set within an urban conglomeration which spells 'class'. Viewed from an external

perspective, it is about homes that are designed in an architectural design which brings in the "wow" factor.

Fact is, you can't deliver these homes in a stand-alone tower. It has to be a mixed-use township which redefines the standards of elegant living. Intelligently planned, crafted with precision and embellished with care, it fulfills the "walk to work and walk back home" aspect. It is this segment of discerning home seekers who have seen similar projects in global business capitals who want something

similar, but with an Indian touch. It is truly, an exemplary testimonial apt example of how 'Global Thought' works its way through 'Local Projects'.

When we conceptualize, plan and create integrated townships, it is all about leveraging futuristic technology, innovative design, and precision engineering. The home has to be located in a world-class, mixed-use integrated township.

It is about creating 'workspaces' amidst 'living spaces', located amidst 'verdant greenery'. The 'Smart City' concept is about interweaving living spaces with nature and the mixed-use townships, providing a verdant Green and serene ambience with 24 x 7 work-and-live environment, amidst world-class infrastructure. It follows the adage that discerning home seekers want not just square feet of space, but want to live in 'better communities'.

For the new millennial home seekers, it is the location where their dream homes turn into a reality.



Can Rera truly resolves India's housing crisis?

By Advocate Pankaj Sinha, Right Directions

The introduction of the Real Estate Regulatory Authority (RERA) Act on May 1, 2017 by the Parliament of India came as a welcome move for Indian home-buyers, giving them the means to address pertinent issues such as project delivery delays, property pricing, quality of construction, and title and other changes. The act was established with the goal of bringing in unprecedented efficiency and transparency in the Indian real estate sector, which contributes more than 5-6 percent of India's GDP and is expected to touch a formidable USD 180 billion by 2020. However, in order for prospective home buyers to effectively leverage the benefits of RERA, they must pay attention to a few key factors, says Advocate Pankaj Sinha, founder of Right Direction.

RERA FOR BUYERS

"While RERA promises to usher in a new era of transparency for home buyers, many are still unaware about crucial factors they should look for before investing in a residential property. Most real estate transactions in metro cities are conducted via real estate agents. According to the RERA Act, in order to market RERA-certified projects, agents must also be registered with the regulatory body. Buyers can and must demand this registration number before conducting business with a real estate agent." Similarly, before deciding to put money down on a real estate purchase, Sinha recommends that buyers check for the RERA registration number for the property they are interested in. "Many buyers will put up boards that list the property as 'RERA Applied For' to confuse potential buyers into believing that the project is RERA-certified or listed. This is blatant misuse of RERA and an important consideration for potential home buyers," he says.

Safeguarding your investment and interests during property transactions, Sinha says, should be your topmost priorities. "When purchasing smaller items such as cell phones or laptops, many people will spend a substantial amount of time researching their options and reading reviews by industry experts. These same individuals, however, are unaware about the need to take legal advice from an advocate before making one of the biggest financial decisions of their lives. Seeking legal advice from an advocate is a simple but effective way to ascertain that the property is free from all encumbrances, he advises.

RERA FOR DEVELOPERS

The buyer-centric focus of RERA can pose a hindrance to real estate developers, Sinha says. "According to RERA legislation, builders must deposit 70 percent of the amount collected from consumers for a particular project in a scheduled bank, in order to initiate the project. This amount may only be used to cover construction and land costs for that particular project. Developers are liable to be penalised in case of any delays and may also be required to compensate buyers. While larger developers may be able to draw on their existing credit reserves to fund their projects, smaller developers will find it much harder to develop and build RERA-certified projects. As a result, many new developments are, as yet, unsold especially in suburban areas. Smaller developers also struggle with raising funds to undertake new projects, which creates an unfavourable playing field for them, in the domestic real estate market," he says. Further, the Act does not have any contingencies for delays caused by slow approvals from regulatory bodies, which can take months or even years. And while the Government of India has predicted that such regulation will improve the confidence of foreign investors, these investments usually work out only in favour of large developers. For the Act to be fair to all stakeholders, it must therefore also include safeguards for developers of all sizes, says Sinha.

HOME V/S INVESTMENT

Article 21 of the Constitution of India states that 'No person shall be deprived of his life or personal liberty except according to a procedure established by law.' This right to life takes on a much broader meaning than mere animal existence – it also includes the right to live with human dignity, the right to shelter, livelihood and health, which are the bare necessities essential and unavoidable to lead a meaningful, complete existence. Accordingly, the Pradhan Mantri Awas Yojana or the Housing for All 2022 scheme that was announced in June 2015 is a strident move towards providing affordable housing for the urban poor. At the same time, such schemes and Article 21 of the Indian Constitution are rendered futile or even unconstitutional if they are exploited for commercial gains.

For many buyers, houses are more than homes – these real estate purchases are regarded as lucrative investment tools. Sinha believes that a clear distinction must be made about the purpose of the real estate investment, and duties and surcharges levied accordingly to prevent such misuse. "For most home buyers, two properties will suffice their basic needs. If any buyer has already purchased two residential properties, the third purchase must be treated as a commercial property and stamp duty levied accordingly," he says. This will ensure that the government's measures to provide quality housing for all benefit their intended recipients more effectively.

