



ESTD. : 1947

60 glorious years
1947-2007

THE GUJARAT
INSTITUTE OF
CIVIL ENGINEERS &
ARCHITECTS

GICEA LIBRARY

GICEA

Vol. No. 73 | No. 1 (2007-08) | SEPTEMBER-2007

NIEWIS



60 YEARS OF JOURNEY



GROUP PHOTO OF GICEA'S FOUNDER MEMBERS



GICEA NIRMAN BHAVAN, EARLYDAYS



GICEA NIRMAN BHAVAN, 2007



AR. ATMARAM GAJJAR
A VISIONARY OF GICEA



welcome

GICEA LIBRARY



60 glorious years
1947-2007

GICEA

NEWS

CONTENTS

COVER STORY

Urban Rural Linkages by Vishal Goyal

06

A research on some innovations about sustainable development and to effectively control the increasing urbanization in the cities.

BEYOND LIMITS

German Town wants its own Pyramid by Bojan Pancevski

10

The pharaohs of EGYPT may have set the standard, but German entrepreneurs are hoping to challenge Egypt by building the world's largest pyramid and making it the world's largest collection of tombstones.

PROJECT REVIEW

Mur Island, Austria

11

GICEA EVENTS

April September 2007

12

BOOK REVIEW

Use of Glass in Buildings

14

SPECIAL FEATURE

Free and Open Source Software for Civil engineers and Architects by Ujal Gandhi

15

A perspective into the popular open-source software, how to use them, how can you effectively switch from commercial software to free ones, and discussion about some myths surrounding open-source software.

NEWS

Investors line up for India

18

Contribution by Asia Times

MATERIALS

Concrete in this millennium by Umesh Soni

20

Concrete is economical, versatile, beautiful, and reliable and gives ample scope of innovations. It is the material, 21st century is exploring in various forms and techniques.

TECHNOLOGY

Wood Free Interior Design by Jitendra Shah

22

To save the wood architect Amit Zaveri has designed wood free interior furniture, doors & windows from solid PVC Sheets. Here is the detail about his attempt to aware the people that even without using wood, one can design interiors.

03

Shri Haresh S. Patel
Hon. Jt. Treasurer - 9426007134

Shri Bakul N. Desai
Hon. Treasurer - 9825779394

Shri Mukesh N. Majethia
Hon. Jt. Secretary - 9426064416

Shri Vatsal S. Patel
Hon. Secretary - 9825063115

Shri Nitesh J. Shah
Vice President - 9825802817

Shri Prashant J. Shah
Vice President - 9979855701

Shri Chirag M. Patel
President - 9825609011

Shri Bharat K. Patel
Im. Past President - 9377751236

GICEA - team

Nirmam Bhavan,
Opp. Law Garden Road,
Ellisbridge, Ahmedabad 380 006,
Gujarat.
Ph.: 079 26565935
telefax : 079 26430213
email: gicea2005india@yahoo.co.in
www.gicea.com

THE GUJARAT
INSTITUTE OF
CIVIL ENGINEERS &
ARCHITECTS



ESTD.: 1947

NEWSLETTER & PRINTING COMMITTEE

Mehul H. Bhatt
Co-Chairman - 9825022867

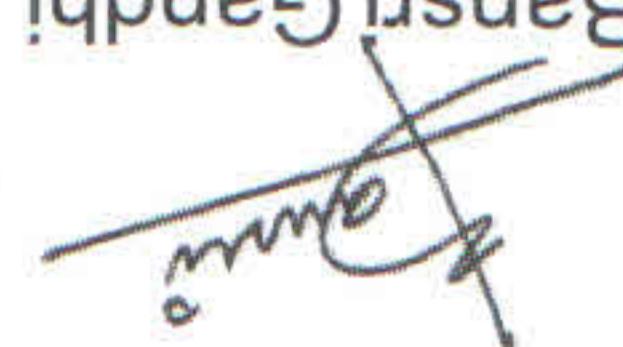
Mukesh N. Majethia
Convenor - 9426064416

H. G. Vachhrajani
Chairman - 9824215536

N. K. Patel
Co-Ordinator - 9825323888

Bansri Gandhi
Technical Editor - 9825198647

Techical Editor, GICEA NEWS
Bansri Gandhi
Jai Hind



We are proud to be 60.
And we thank everyone, who made it possible.

A new and fresh outlook of this newsletter is a proud announcement that GICEA, with its strong committed team, is standing tall to fight all the challenges ahead.

"Today, we are here to celebrate this change."

During these 60 years, many things had to change. And every change was aimed to make the institute climb one more ladder of success.

INDIA hugged its freedom.

An institute that took birth when

"GICEA"

they can stay united, speak and serve for our country and its people.

It was an idea to bring people from the same profession on one platform, so that holding the same spirit of togetherness.

But today, we celebrate an idea that was established 60 years ago, and is still

They are born and re-born with each passing day.

Ideas are like dew drops.



Editorial

Urban Rural Linkages

Innovations for Sustainable Development

Vishal Goyal, Regional Manager, National Housing Bank, New Delhi



It is a well-recognized fact that urbanization all over the world is on the rise. As we move into the 21st Century, there is a growing recognition that urban and rural development must be closely linked. There exists an economic, social and also environmental interdependence between urban and rural areas.

Background

The 20th Century has witnessed rapid increase in world population as well as the biggest migration of human population from rural to urban areas.

The 20th Century began with a population of 2 billion, which increased to 6 billion by the end of the Century.

"Close to 3 million people are added in Asia alone every month i.e. equivalent to one new city a month."

Also, Out of the 21-mega cities (population 10 million plus) in the world today, 17 are estimated to be in developing countries.

(Source: UN population Division, world population data sheet)

Some of the reasons for this large-scale exodus from rural to urban can be grouped into the following broad heads :

- War and conflict
- Employment
- Better infrastructure
- Major Political and economic changes
- Better living conditions
- Opportunities

Considering the velocity and extent of urbanization in the world today has resulted in putting large pressure on the Urban Infrastructure. Slums in the urban areas have come up with poor living conditions. The development of urban-rural linkages has been envisaged as an option to ease the pressures on urban infrastructure and improving the living conditions.

The development of urban-rural linkages has been envisaged as an option to ease the pressures on urban infrastructure and improving the living conditions.

There have been two dominant perceptions of the rural-urban divide.



An anti urban view and a pro-urban view

An anti urban view and a pro-urban view. The anti-urban view moans about the perceived disappearance of rural life. The pro-urban view sees urbanization as a progressive driving force for positive change.

It is recognized that a number of projects undertaken in the recent past in various countries and regions are increasingly adopting the urban-rural linkage development strategy for achieving faster development in relatively under-developed areas. Some of the successful examples are highlighted below.

China

Since reform and opening up to the outside world in 1978, China has made great progress in the integrated development of its urban and rural areas. The Chinese Government has adopted four measures to create job opportunities for surplus rural labour and poverty alleviation.

- Development of township enterprises vigorously
- Transferring of rural population to cities and towns in an organized way
- Increase in comparative income from agriculture through the expansion of market demand for farm produce
- Encouragement of Partnerships, for poverty reduction



Township enterprises are farmer-initiated enterprises in rural areas. Huge gains in agricultural efficiency have released huge numbers of rural laborers from the land, thus laying the basis for the development of township enterprises whose competitively priced goods and services sell well across China.

A great number of small-scale facilities for science and technology, education, culture, sanitation and sports activities were constructed. At present, development programmes in the rural regions, such as those for power grid upgrading funded by the Central Government, village-to-village road connection, and school re-construction are underway.

Transportation, water supply, garbage disposal and public services are being planned and integrated between the urban and rural areas in some coastal areas.

Moreover, the study of a unified social security system is also underway.

Argentina

In the Argentina provinces of Jujuy, Misiones, Buenos Aires and San Juan, so many young people were migrating way to urban centers that small communities saw their populations ageing prematurely. In an innovative attempt to improve urban-rural links, a program called NET was introduced to help train and educate young people in helping develop and boost the economies of their local districts.

Successful proposals are given seed funding after proving that they will be financially sustainable in the long run. The aims are to establish youth networks, build the capacity to plan and manage development projects, encourage communications between young people and their communities and develop a regional information system.

Nearly 300 networks of young people have joined the program in the three provinces, and close to 6,000 have been directly involved in various programs that range from health education to social and cultural programs. Some 34 municipalities have collaborated and helped sustain these programs.

Promoting Positive Rural - Urban Linkages

The above trends need to be enhanced and promoted in a wider range of countries among national, regional and local development actors. Some of the common features from the above successful programs relate to:

- Policy
- Institutionalizing approaches through local and international agencies
- Fostering partnerships and collaboration
- Infrastructure
- Trade Relations
- Information Systems
- Stress on Peri-Urban Areas
- Operational partnerships at city level
- Towards local empowerment
- Decentralization

Some Innovations for Sustainable Development

A. Creation of a Rural Urban Fringe

A vision to create a rural urban fringe is attractive, accessible, diverse and multi functional. It should serve the needs of both urban and rural community, strengthens the links between towns and country, and contributes fully towards sustainable development. Different policy solutions are clearly needed to develop the peri-urban areas.

The peri-urban poor depend to a greater extent on access to natural resources than do wealthier than the urban-based groups. Consequently, the peri-urban poor are adversely affected when these resources are lost or degraded by: influxes of people from expanding urban areas; and solid waste disposal and untreated liquid waste from residential and industrial areas.

Active support to poorer and more vulnerable groups and a search for environmental sustainability demand creative management of the problems and opportunities arising from the meeting of urban and rural activities. Land use policies that help to enhance livelihoods and promote a better use of scarce resources and urban waste are crucial.

Equally important are appropriate policies concerning basic infrastructure, training, information and improved governance for the peri-urban interface.



B. Increasing Trade/Markets Between Urban and Rural

Productive Rural Areas need to establish long-term, stable market links with nearby towns and cities. Community Supported Agriculture is a simple example. In this case, a farm offers its customers a chance to purchase a subscription share that runs through the growing season. Deliveries are made, typically weekly, either to a center location or subscribers homes, with an assortment of that weeks produce.

This arrangement allows farmers to get very strong prices for their produce on a predictable basis, and allows subscribers to get to know the farmers and the land responsible for their food. Farmers markets, which are extremely popular in California, Oregon, and Washington, offer important market linkages, allowing farmers, beekeepers, bakers, and many others to sell their wares at good prices.

Pikes Place market in Seattle adds a vibrant fish market to the mix, along with a range of local crafts. Many farms offer visiting opportunities, with roadside stands or you-pick arrangements. In recent years, many restaurants specializing in regional, seasonal, and organic ingredients have sprung up.

Members of the Collaborative like Greg Higgins of Higgins Restaurant in Portland and Alice Waters of Chez Panisse in Berkeley seek out regional specialties at their peak taste, purchasing from the same suppliers year after year.

C. Promoting small Towns

New policy should take into account that people in both urban and rural areas deserve the benefits of an increased and sustainable urbanization process.

This would require allocating more resources to the urbanization of rural areas, providing services, infrastructure, better governance and employment opportunities for rural populations.

This should be supported with adequate policy and legal instruments to attract resources, or at least retain labour and revenues in small towns. This policy towards more balanced urban-rural urbanization, going against established patterns may not be easy.

But it can help break the present vicious cycle of increasing rural poverty and slum proliferation, and show the way forward to countries trying to solve the urban slum problem in an integrated way while supporting rural areas.

To implement this alternative, policy makers need to work on two fronts:

- A national urban and regional policy is required with the backing of government and partners.
- Local communities must be engaged and motivated to improve the social, economic & environmental conditions.

A project undertaken in the north of Mozambique showed a social and productive pattern organized around villages, and these villages organized under a settlement system with clearly delimited boundaries and a locally recognized administrative structure. The tenure pattern is at community level rather than on an individual basis.

D. Tourism to Bridge the gap

Eco tourism is fairly recent

Northwests Healthy Forests Healthy Communities Partnership is working to build rural economies based on forest restoration and ecosystem management.

The Partnership is creating new markets for the small diameter suppressed trees and underutilized species harvested in restoration operations, producing flooring, furniture, crafts, fixtures, and other products, hereby creating jobs in communities adjacent to degraded forests. Rural-Urban linkages like these make an important contribution to Local Economies.

Tourism is an important income earner for cities and their hinterlands, particularly those that are branded by their historical or cultural heritage like Cairo, Cape Town, Paris, Rome etc. This kind of tourism can be generalized to the origination of appropriate visits for professionals attending conferences on technical subjects in many fields.

The idea of visiting slums and housing estates is also gaining currency. Some cities have developed well-organized township tours laid in Cape Town and Johannesburg and tours of the Favelas of Rio in Brazil.

It can stimulate investment in infrastructure, most of which helps improve the living conditions of local people as well as being of interest and benefit to the visitors themselves. Well-managed tourism can certainly help strengthen the positive links between urban and rural areas.



E. Urbanization of the rural areas

The ecological footprint of cities extends over wide areas, not just those immediately affected by pollution and generated waste, but also to the areas, which supply them with food, fuel and new residents. The overall effect is to create less division than a rural urban continuum, along which each different locality finds a place. The pull of the cities with their opportunities for employment and other personal advancement is reinforced by a push out of declining rural areas.

Both are influenced by creating urban-type opportunities in rural areas, or decisions affecting a wide variety of transfers of goods, services, associations, communications and other exchanges. Expanding urban markets generate demand for rural products, including raw and processed agricultural products, crafts and other manufactures.

This demand invigorates rural regional centers and small cities as collection and distribution points. This can spur improvement in rural economies which generate demand and expand local markets, initially for locally-produced non-farm goods and services, then increasingly for other domestic and for imported products.

Recycling the Nutrition Cycle

Consumption-related waste, however, ends up in urban latrines, drains or landfills, transforming cities into vast nutrient sinks. Composting this waste for agriculture could bring rural nutrients back to the farmer. The potential for recycling nutrients from organic city waste for use in agriculture is great.

Estimates for Bangkok, Thailand, and Kumasi, Ghana, show that up to only 10 percent of the major plant nutrients entering the city is currently being reclaimed. The recycling of nutrients from urban areas and their channeling into rural agriculture would reduce farm soil nutrient mining and land degradation and enhance the life span of urban landfills.

Although this is a win-win scenario for municipalities and farmers, there are still few success stories and negligible impact on a larger scale. Most compost stations have encountered numerous technical, institutional and marketing problems.

Often the products are too costly, even for most commercial farmers. Thus, successful compost planning involves not only technical, but also social and economic considerations.

The Way Forward

The above suggestions have a role for all to play, whether it is the Government, Local Bodies, communities, people or international agencies. The efforts of all need to be integrated since no one Government or institution or a community can successfully innovative these linkages for sustainable development in the urban-rural landscape.

Innovations have made our lives safer, more pleasant and more varied in many different ways.

To insist that cities must solve their own problems, while rural areas should be assisted to achieve the very life that can only be provided to them by well functioning cities, is wrong idea. This would leave cities to aggravate and simmer while the countryside continues to wait in vain for economic salvation.

A whole country will benefit when the urban-rural linkages thrive.

For any queries or more information on this article, please contact vishalg@nhb.org.in



PROJECT REVIEW



Mur Island, Austria

Designs: Vito Acciari

Vito Accocci & Accocci Studio, New York

An aerial photograph of the Reichstag dome in Berlin, Germany. The image captures the iconic glass and steel structure of the dome, which is tilted at an angle. The glass panels reflect the surrounding sky and clouds. The steel framework of the dome is clearly visible. In the background, the city of Berlin is visible, with various buildings and landmarks. The overall image is a high-angle shot, providing a comprehensive view of the dome and its surroundings.

Project Review

Mur Island, Austria

An aerial photograph of the Burj Khalifa, the world's tallest building. The image shows the building's unique sail-shaped profile, with its glass and steel structure catching the light. The illuminated spire at the top is a prominent feature against the dark sky. The surrounding urban environment is visible in the background, with other buildings and infrastructure.

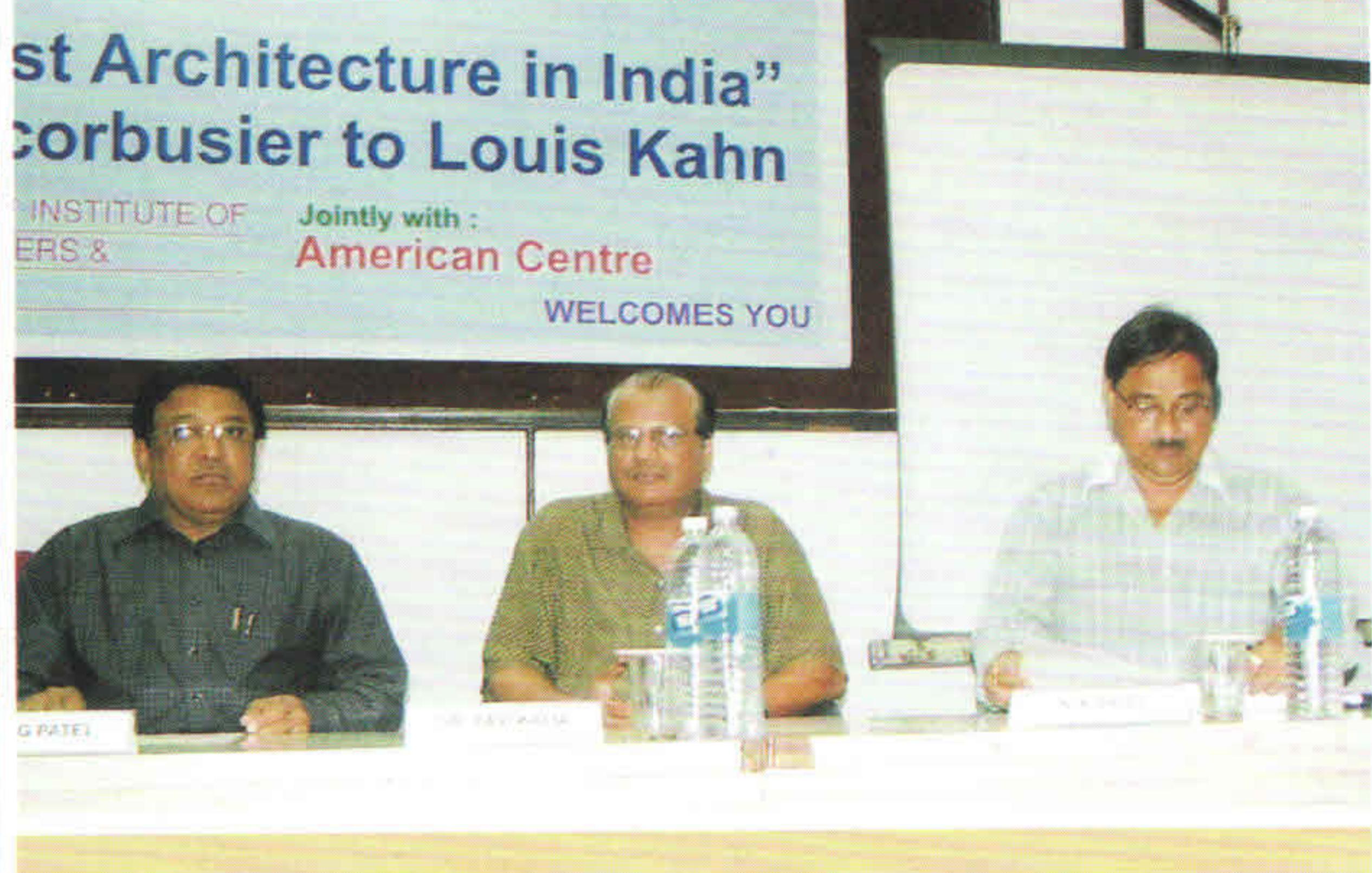
The island, which is connected by two access ramps and footbridges to the riverbanks, contains an amphitheatre, cafe/bar and a children's playground.

The artificial floating Mur Island is a technically sophisticated and challenging structure created for the historic city of Graz in Austria as part of the Graz European City of Culture celebrations in 2003.



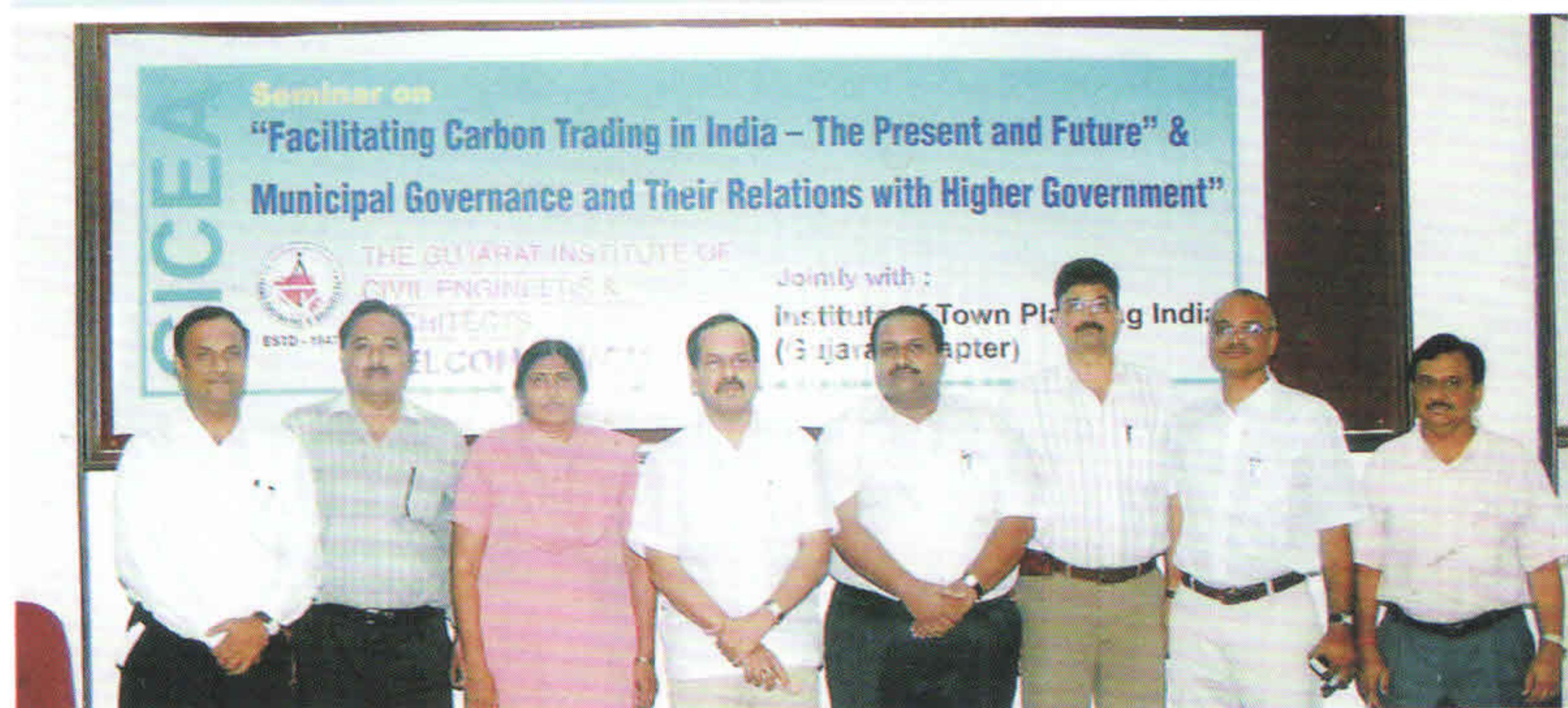
2007

Team of New office bearers, 7th August



Seminar on modernist architecture in INDIA from Le Corbusier to Louis Kahn, 25th July

New Administration committee of Social Security Scheme, 27th May

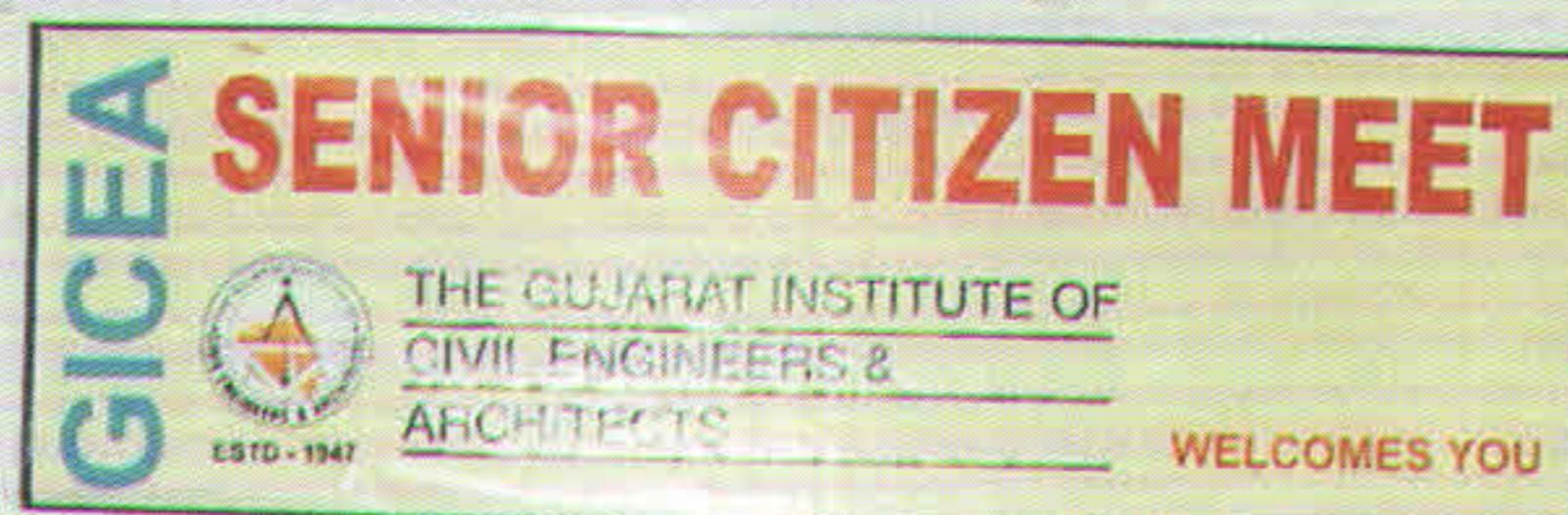


Seminar on parking structure design by Shri Dilip Nandwana, 25th May



Seminar on Income Tax Raids by Shri K.D.shah & Shri Mukesh Patel, 24th August

EVENTS



Shri Viral Sidhdharth Jasubhai present at
Flag hoisting Ceremony, 15th August



One day course on designing steel structures with Limit state, 6th July



A seminar on Yog Mukti with Rog Mukti by Shri Janak Acharya and Shri Birju Acharya, 14th July



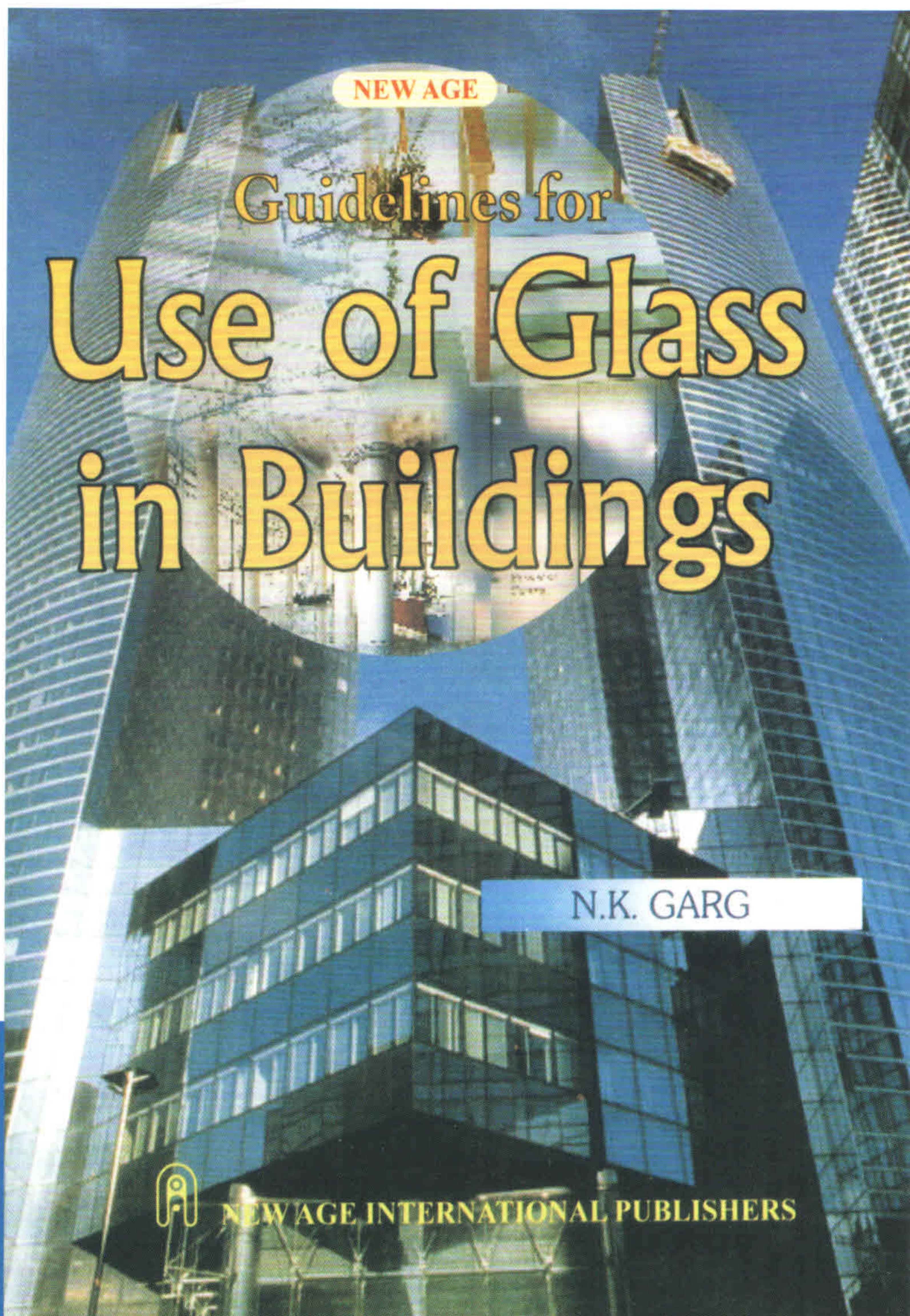
Receiving Gold Medal
from Shri Sudarshan
Iyenger, 30th June,



“Light is Life.”

And thus, glass has been one of the most important building materials, since it was invented. More than light, the GLASS is a strong connection between interior and exterior environment.

Author: N.K.Garg
Publisher
New Age International Publishers, New Delhi
First Edition: 2007, Pages 135, Hard Cover
ISBN: 81-224-2065-6



It is generally thought to have originated in Middle East some time before 1500 B.C.. In those days, glass was seen as a fragile material, used for decoration purposes. But now, with structural, optical and acoustical properties, it is an indispensable building material.

Knowledge about the use of glass in buildings along scientific lines is currently a 'gap' in the presently available literature and this book is an interesting attempt to fill it. The author presents a comprehensive guideline of the technical and practical aspects of uses of glass in the buildings.

The book talks about variety of issues like the types of glasses, their properties, selection criteria, determination of glass thickness, glazing systems and other general guidelines of using glass in the buildings.

The book would have been more exciting with colored and sharp illustrations. But this simple and informative book will prove useful reference for all building professional for using glass correctly in the building.



FLM - 3070

Free & Open Source Software

For Engineers, Architects and Business Owners

Ujal Gandhi, GIS Consultant

"Are you worried about HIGH SOFTWARE COSTS in your business?"

**"Cautious of using pirated software, but can't afford
Licensed software?"**

Today I am going to tell you how free and open-source software (FOSS) can save you a lot of money and improve your computing environment. Engineers, Planners, Surveyors, GIS Professionals and Architects can use this high-quality software in business free of cost and get benefits from the freedom and flexibility it offers.

Free software or Open-source software is a philosophy that has emerged into mainstream in past decade or so. Here free means Freedom, not as in Free of Cost. The 'Freedom' means, free to copy, free to distribute, free to modify and improve. And because of this philosophy the 'software' remains free of cost.

Early developers of Free and Open-source developers were hackers, or individuals with passion.

I will tell you the popular open-source software, how to use them, how can you effectively switch from commercial software to free ones, and discuss some myths surrounding open-source software.

Now, most open-source projects are sponsored, backed and actively promoted by large organizations - Autodesk, Sun Microsystems are to name a few. The people who work on these projects are full-time paid employees, but also include a large volunteer community to help in improving the product.

Myth: "Free software is developed by individuals who have no other work, And is not suitable for businesses like mine."

***So you must be thinking
"why do people spend so much money and resources,
And give away the software for free?"***

Well, it is a different business model altogether. Rather than charging for the software, the companies charge for customer support. So if you want to deploy this software in your office and need some help, you can hire the company to do this. But if you'd rather use it without their help, you are free to use it without paying a single rupee.

Companies or organizations make open-source projects for several reasons, primarily

Lack of in-house resources

By making the software open-source, people and volunteers from across the globe can help in development, and improving the software. For example, the Linux operating system was built by lacs of volunteers across the globe.

High quality software

Because of the development model of open-source software, errors get fixed much faster, new features and security errors are fixed instantaneously. So companies benefit from high quality software. For example, more than 50% of world's websites use the open-source Apache server, which is much more secure and reliable than other Commercial servers.

Belief in 'open' philosophy

Many individuals and organizations believe that open software is better than proprietary software, free is better in quality than commercial, and pursue this philosophy developing free and open-source software.

Enough background, let's cut it to the chase.

Below is a list of software that you can download, install, and use free of cost. Many of these are simple to use, come with plenty documentation and tutorials, and easy enough to learn and use with little training. But, if you want additional support and training, many companies offer support for a fee as well.

BUSINESS SOFTWARE

Using Microsoft Office at work? Switch to Open Office (<http://www.openoffice.org>) - a full fledged package that comes with equivalents of Word, Excel, Power Point and more. It's open-source, free of cost and can be used freely in any business.



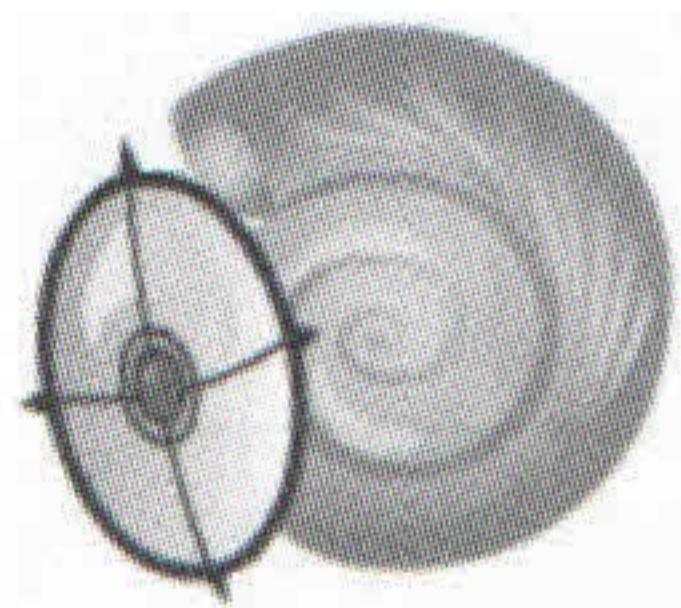
OPERATING SYSTEM

Are you cautious of using your pirated copy of Windows and want to save on operating system? Try Ubuntu Linux (www.ubuntu.com). It costs zero and is really easy to switch. It is so easy to operate and runs fast even on old computers. If you have a 5 year old computer that is too slow for you, try installing Ubuntu and you will see it can run much faster.

It comes with built in tools for routine office work, like internet browsing, email, photo editing, spreadsheets, etc. Plus, need not to worry about viruses! It's a great alternative for small offices and you can even ask Ubuntu office to send you free installation Cds!

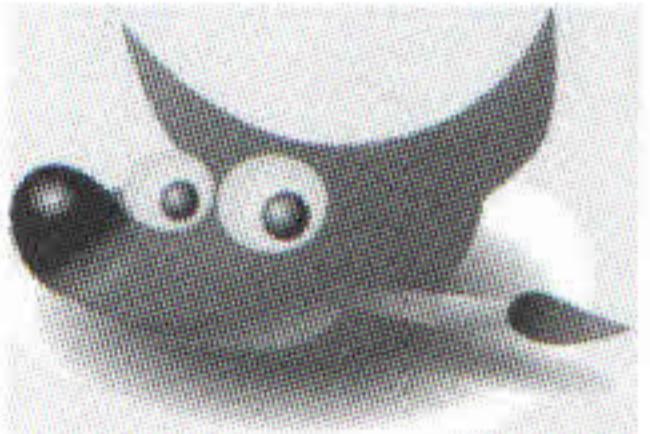


ANIT-VIRUS



Most Windows systems nowadays are plagued with Viruses and Malware. You can save a lot of money and make your systems secure by switching from McAfee or Norton antivirus, to the open-source ClamWin antivirus (<http://www.clamwin.com/>).

GRAPHICS



Need Adobe Photoshop for your graphics work? Try the open-source GIMP software (<http://www.gimp.org>). One of the best tools for graphics works !!



CAD & 3D MODELING

Unfortunately, there is no open-source software the quite match AutoCAD or Archi CAD yet. But if your requirements are not very complex, you can try BRL-CAD (<http://brlcad.org/>). For 3D modeling, if you use software like Maya, the open-source Blender (<http://www.blender.org>) is a great tool, indeed.



GIS & SURVEYING



If you use ArcGIS, Mapinfo, Autodesk Map, you can try the open-source Quantum GIS (<http://www.qgis.org>), that comes with full-range of GIS analysis tools with GRASS plug-in. GRASS has been tried and tested by millions of users over 2 decades and has been the preferred tool for serious GIS analyst. Now Quantum GIS makes it easy and available to all range of GIS users. For other smaller software and utilities, you can try freegis.org for complete list of open-source GIS and Surveying software.

MAPPING

If you want to publish online maps and create sophisticated web GIS applications, you can use Mapserver (<http://mapserver.gis.umn.edu>) or the newest open-source offering from AutoDesk Mapguide (<http://mapguide.osgeo.org>).

Myth: “Training for Open Source Software is difficult”

Now, a lot of you may be thinking of trying some of these open source software. But how do you get trained on these. Many first time users give-up on open-source software because it's simply 'very different' from what they are used to. The first step is the hardest one - To overcome this !!

There are a quite a few sources for training

- **Software Documentation and User Manual**

All software comes with a user manual and a 'help' section. They contain tutorials and step-by-step guides to getting started. Check 'Help' menu in these programs for detail studies.

- **Mailing lists and forums**

This is the by far the best source for training and help. There is always a passionate and dedicated community of users and software developers around an open source project. They are ready to help other users and answer questions - for free. You can subscribe to the mailing list, and ask questions via email. Or post your questions on online forums, and get quick answer from other users. Just search for forums or mailing list of the software and you can find a link.

- **Commercial support**

There are companies that offer training and support for a fee. They also conduct on-site training and help you with migration. Currently, not many companies offer commercial support, but as open-source software become more and more popular, you will see many such organizations coming into existence

Open source Software can do wonders to you!! Even if you feel slightly reluctant to use these software, I assure you that by doing that, you will not only save money, but increase productivity in your organization.

***And if you like and adopt any open-source software,
Don't forget to mention it to a friend!***

For more information and queries, please contact ujaval@gmail.com or visit www.spatialthoughts.com

“News Update”

India will have more Economy Class Hotels

Courtesy: Worldwide Hotel Reservation Service

Wyndham Worldwide Corp., a company that manages about 6,500 hotels on six continents, has revealed its plans to open at least 38 economy class hotels in India under Super 8 and Days Inn brands.

According to the agreement signed between Wyndham Worldwide Corp. and Gammon India Ltd., a construction company, most of the hotels will open by 2011. 12 hotels will be built in 2009, 13 hotels in 2010, and finally, Gammon India Ltd. will open another 13 hotels in 2011. When built, hotels will be managed by Gammon India whereas sales and marketing services will be contributed by Wyndham.

Since more business travelers come to India, the issue of new hotels and accommodation has long been of high importance in the country. Because of the lack of hotel rooms, sometimes tourists can't find a place to stay in, even if they are ready to pay high rates. India has approximately 110 hotel rooms to offer, which is half less than needed.

Investors, line up for India's real estate

Contributed by Asia Times

India's real-estate boom keeps getting bigger. In the past few weeks, private investments in the sector amounting to US\$50 billion have been announced.

The country's biggest real-estate developer, DLF, inked a \$20 billion deal with the largest privately held real-estate developer in the world, Al Nakheel of the United Arab Emirates, to build two townships in northern and western India.

"We have signed 50:50 joint ventures with Al Nakheel to develop integrated townships with an investment of \$20 billion,"

A DLF executive said on the sidelines of a conference of UAE and Indian officials, business and political leaders in New Delhi.

The companies will initially invest \$5 billion each in the next three years to develop about 16,000 hectares, most probably in the states of Haryana (Gurgaon) and Maharashtra (between Pune and Mumbai). The townships, scheduled to be completed in 2013, with more than 70% of the land already acquired, will feature an integrated combination of residential, retail and commercial properties. DLF has already applied to statutory regulators for the second time to launch a public float that could raise about \$2 billion for a 10.2% stake. Joint-venture partners include Hilton Hotels, Feedback Ventures and the UK-based infrastructure company Laing O'Rourke.



In another deal announced, the Hinduja Group, owned by the London-based Hinduja brothers, said the company planned to start a chain of hospitals in India with an investment of \$1 billion in a tie-up with Dubai's government-owned Limitless LLC.

Under the project, hospitals would be established in the major Indian cities of Delhi, Mumbai, Bangalore and Hyderabad.

In January, Macquarie Bank, Australia's largest securities firm, announced that it would invest US\$25 billion along with three partners to create an ultra-modern integrated township on 26,300 hectares in Andhra Pradesh, just 170 kilometers from software hub Bangalore.

Last month, Tishman Speyer Properties LP, which owns New York's famous Rockefeller Center and Frankfurt's MesseTurm, said it, along with ICICI Bank and Nagarjuna Construction Co, will build a \$2 billion residential and commercial township for 30,000 people, spread over 160 hectares near Hyderabad.

Indeed, real estate has been a focus area for investors. There have been warnings about a speculative bubble and the need to set up a regulatory authority to ensure transparency.

But observers have said that the investment is the result of real pent-up demand arising from runaway economic growth and rising incomes. It is expected that the creation of adequate commercial/residential space will rein in runaway prices, which are beyond the reach of many people.

Currently growing at 30% per annum, the Indian real-estate market is estimated to be worth more than \$15 billion. A recent study has shown that domestic and overseas investors and private-equity funds are looking to pump a whopping Rs 320 billion (\$7.36 billion) into India's real-estate sector.

"The transparency in real estate has contributed to the increase in interest by domestic and financial institutions, resulting in greater availability of financing for real-estate developers," an ICICI Property Services-Technopak paper said.

In what could be a fillip to massive real-estate opportunities, New Delhi is keen that proposed special economic zones (SEZs) remain on course despite massive farmer protests in Nandigram, West Bengal. Recently, Prime Minister Manmohan Singh said government was moving slowly because of "inadequacies", but made it clear that the decision was "irreversible".

"There are issues pertaining to land alienation and displacement of people, and these must be addressed. We will address them to the satisfaction of all. I do not see any reason why there should be a conflict between industry and society. The development of modern industry should be a societal goal." Said Prime Minister

As per government estimates, more than 250 SEZs proposed to be set up have a projected investment of \$100 billion and employment potential for 2 million. Last year, India's largest private-sector entity, Reliance Industries Ltd, and the Haryana government signed an agreement for setting up India's single largest multi-product SEZ, involving an investment of nearly \$9 billion. Although all SEZ approvals have been put on hold after the Nandigram violence, New Delhi is widely expected to give the go-ahead. States such as Tamil Nadu, Gujarat, Andhra Pradesh, Karnataka and Haryana, where the land-acquisition process has been peaceful, have been pushing for SEZs.

Hospitality is one red-hot area into which an estimated \$2 billion is likely to be pumped over the next three years, the bulk of it through private-equity funds. Many funds are allocating as much as 50% of their planned real-estate investments into the sector, as hospitality remains highly under-serviced, with a huge demand-supply imbalance.

This year's budget has provided a further fillip through the tax holiday announced by Finance Minister P Chidambaram in advance of the Commonwealth Games in Delhi. This week, the Haryana Urban Development Authority sold a 2-hectare plot for a five-star hotel in Sector 47, Gurgaon, for a humongous Rs2.5 billion (\$57.5 million).

The ICICI-Technopak study charted the future of mall development. It predicted that because of the sustained yield of about 18% in the retail real-estate sector, the next stage of sophisticated funding mechanisms might include real-estate investment trusts, real-estate mutual funds (REMFs), venture-capital funds and initial public offerings.

Apart from DLF, other developers - including Omaxe Ltd, Puravankara Projects Ltd, Housing Development and Infrastructure Ltd, IVR Prime Urban Developers Ltd and Kolte Patil Developers Ltd - have also filed red-herring prospectuses with the regulator. However, poor performance of recent issues, because of high interest rates and fluctuating stock markets, have made retail investors wary. The paper concluded that REMFs would institutionalize investments and provide a major source of capital for the industry. At the same time, a mix of retail investors and institutional investors would be good alternative solutions.

Another major source of funding is from the Middle East and Southeast Asia. Emaar Properties (Dubai), IJM Corp (Malaysia), Lee Kim Tah Holding (Singapore) and Salim Group (Indonesia) are looking to invest more than Rs50 billion. While Bangalore, Delhi and Chennai figure prominently in everybody's plans, new and cheaper locations are being charted in Andhra Pradesh, West Bengal, Tamil Nadu and Rajasthan, the study said.

According to Peter Penhall, chief executive officer of Gow Wealthy.com, one of the Middle East's well-known real-estate and online property-brokerage portals, India will see an international shift in the real-estate sector due to the ongoing information-technology boom.

For more information, please visit www.atimes.com

"Internet Update"

Top Five Websites of the MONTH

www.aia.org Interesting articles and a large database of architecture related issues, news and updates.

www.gpsinidina.com Largest repository of GPS knowledge in INDIA

www.indianrealtynews.com A well updated website with news about India's realty business.

www.constructiontrends.com Articles related to home improvement, interior design, and trends in the construction industry.

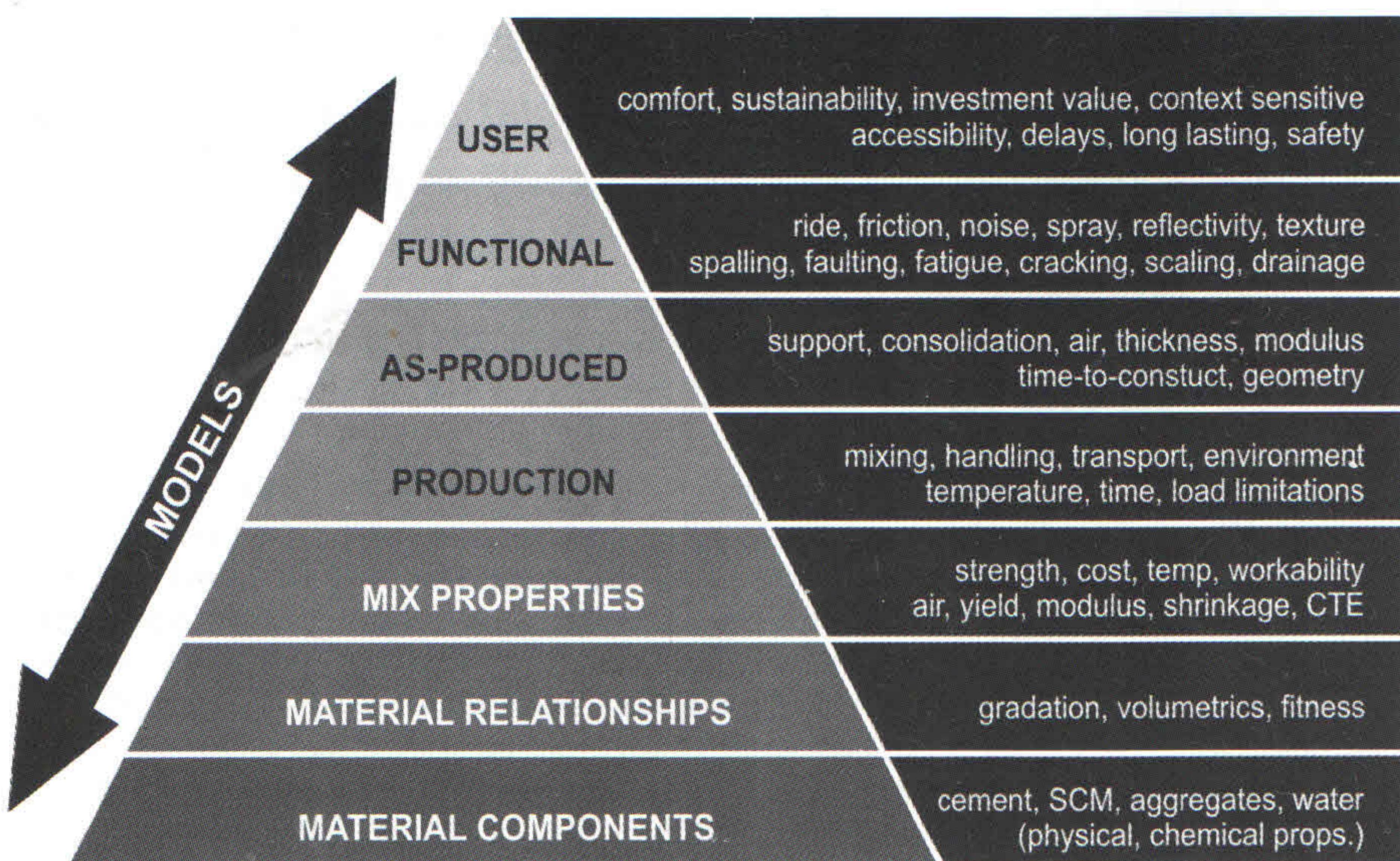
www.architonic.com An independent source for Materials, Products and Concepts in architecture and design

Concrete - In this Millennium

Umesh Soni, GM (customer support), Ambuja Cements Ltd.



FLM - 3104



In order to achieve this, we have to change our concrete construction practices in following directions:

- Using innovative concrete materials
- Good and consistent quality of chemical and mineral admixtures
- Use of standard quality aggregates
- Training of skilled workers, supervisory forces and engineers
- Use of various testing methods and equipments to assure quality

Concrete for the Future

Concrete has continuously posed challenges to architects, engineers and researchers. Concrete has been always developed mitigating the needs of technical performance for specific applications. Here, is a brief on various types of concrete to achieve better quality and performance in the building construction.

Self Compacting Concrete

This concrete was first developed in Japan in 1980 to counter shortage of skilled labors and to save the time in construction. SCC is defined as "Concrete which flows under its own weight without any segregation and maintaining his homogeneity. It also flows through all shapes and obstructions and needing no vibrations for compaction". This can be achieved by using more fineness in concrete mix and also by using chemical and mineral admixtures.

In Akashi Kekiyo bridge in Japan, 2.9 Lac cum. of SCC was used, this helped in placing concrete in densely reinforced anchor block also having cable frames in them.

Fiber Reinforced Concrete

Fiber Reinforced Concrete is a new composite material in which fibers are introduced in the mix as micro reinforcement, so as to improve the tensile properties of concrete. Fiber produced from steel, carbon, glass, plastic, polypropylene, nylon, rayon, basalt etc.

Concrete

As a construction material is being extensively used all over the world where climatic, environmental and sub-soil conditions vary. Concrete has played a key role in development of infrastructure and housing. Concrete has been conquered by researchers, designers and constructors who have created Icons and Monumental structures displaying a high level of creativity and beauty.

The greatest challenge in this millennium will be to build high performance concrete structure in as short a time as possible to meet the high infrastructural demands in a developing country like ours.

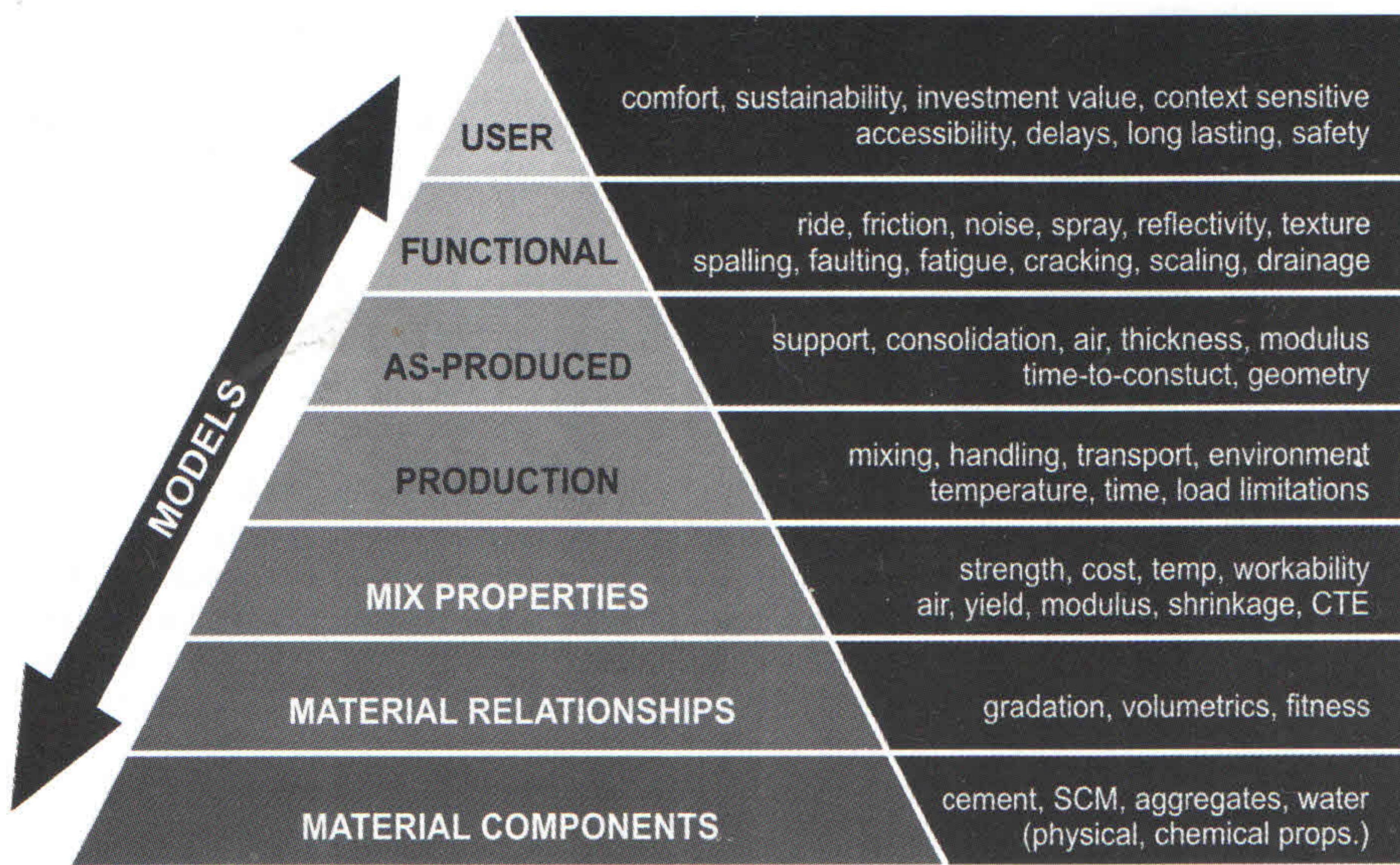
Housing Needs & Population Growth

The housing needs will increase with rise in world population. This will create a massive pressure for the housing sector especially in country like ours. In industrial countries, 76% of the population is in urban areas. Across the world, over 85% of urban population lives on just 7% of the total area, making buildings grow taller and taller.

Hence construction industry has to gear up to build taller buildings in aggressive environmental conditions by producing high quality concrete.

High Performance Concrete

High performance concrete has been redefined by American Concrete Institute, and it says that it should be used in special combinations of performance and uniformity requirements that can not always be achieved routinely using conventional constituents and normal mixing, placing and curing practices. The HPC is required in structures which are exposed to very severe environments like tunnels, sewage pipes, offshore piers and platforms, high rise buildings, chimneys etc. Broadly HPC should meet the requirement of dimensional stability and impermeability.



In order to achieve this, we have to change our concrete construction practices in following directions:

- Using innovative concrete materials
- Good and consistent quality of chemical and mineral admixtures
- Use of standard quality aggregates
- Training of skilled workers, supervisory forces and engineers
- Use of various testing methods and equipments to assure quality

Concrete for the Future

Concrete has continuously posed challenges to architects, engineers and researchers. Concrete has been always developed mitigating the needs of technical performance for specific applications. Here, is a brief on various types of concrete to achieve better quality and performance in the building construction.

Self Compacting Concrete

This concrete was first developed in Japan in 1980 to counter shortage of skilled labors and to save the time in construction. SCC is defined as "Concrete which flows under its own weight without any segregation and maintaining his homogeneity. It also flows through all shapes and obstructions and needing no vibrations for compaction". This can be achieved by using more fineness in concrete mix and also by using chemical and mineral admixtures.

In Akashi Kekiyo bridge in Japan, 2.9 Lac cum. of SCC was used, this helped in placing concrete in densely reinforced anchor block also having cable frames in them.

Fiber Reinforced Concrete

Fiber Reinforced Concrete is a new composite material in which fibers are introduced in the mix as micro reinforcement, so as to improve the tensile properties of concrete. Fiber produced from steel, carbon, glass, plastic, polypropylene, nylon, rayon, basalt etc.

Concrete

As a construction material is being extensively used all over the world where climatic, environmental and sub-soil conditions vary. Concrete has played a key role in development of infrastructure and housing. Concrete has been conquered by researchers, designers and constructors who have created Icons and Monumental structures displaying a high level of creativity and beauty.

The greatest challenge in this millennium will be to build high performance concrete structure in as short a time as possible to meet the high infrastructural demands in a developing country like ours.

Housing Needs & Population Growth

The housing needs will increase with rise in world population. This will create a massive pressure for the housing sector especially in country like ours. In industrial countries, 76% of the population is in urban areas. Across the world, over 85% of urban population lives on just 7% of the total area, making buildings grow taller and taller.

Hence construction industry has to gear up to build taller buildings in aggressive environmental conditions by producing high quality concrete.

High Performance Concrete

High performance concrete has been redefined by American Concrete Institute, and it says that it should be used in special combinations of performance and uniformity requirements that can not always be achieved routinely using conventional constituents and normal mixing, placing and curing practices. The HPC is required in structures which are exposed to very severe environments like tunnels, sewage pipes, offshore piers and platforms, high rise buildings, chimneys etc. Broadly HPC should meet the requirement of dimensional stability and impermeability.

Are in use. However, for most structural and non-structural purposes, steel fiber is most commonly used. In addition to improving tensile strength of the matrix, steel fiber in concrete leads to improvement in sheer strength, fatigue strength, torsion resistance, speed resistance, impact strength etc. The important features of the fibers are their aspect ratio, orientation of the fiber, ductility and direct tension.

Whisper Concrete

This was first developed in Austria to combat the problem of type of road noise. The requirement to produce low noise on the road and to make concrete that could withstand the vigorous Austrian climate, developed as Whisper Concrete. Concrete for these pavements is done in two layers. Bottom layer is normal concrete whereas the top layer is of 50 mm air entrained special concrete mix spread with retarder. This top layer is brushed next day. The roughly textured road reduces the road noise considerably. For the roads in noise sensitive area or roads carrying more than 75,000 vehicles per day, Whisper Concrete is the only option.

Ultra High Performance Concrete

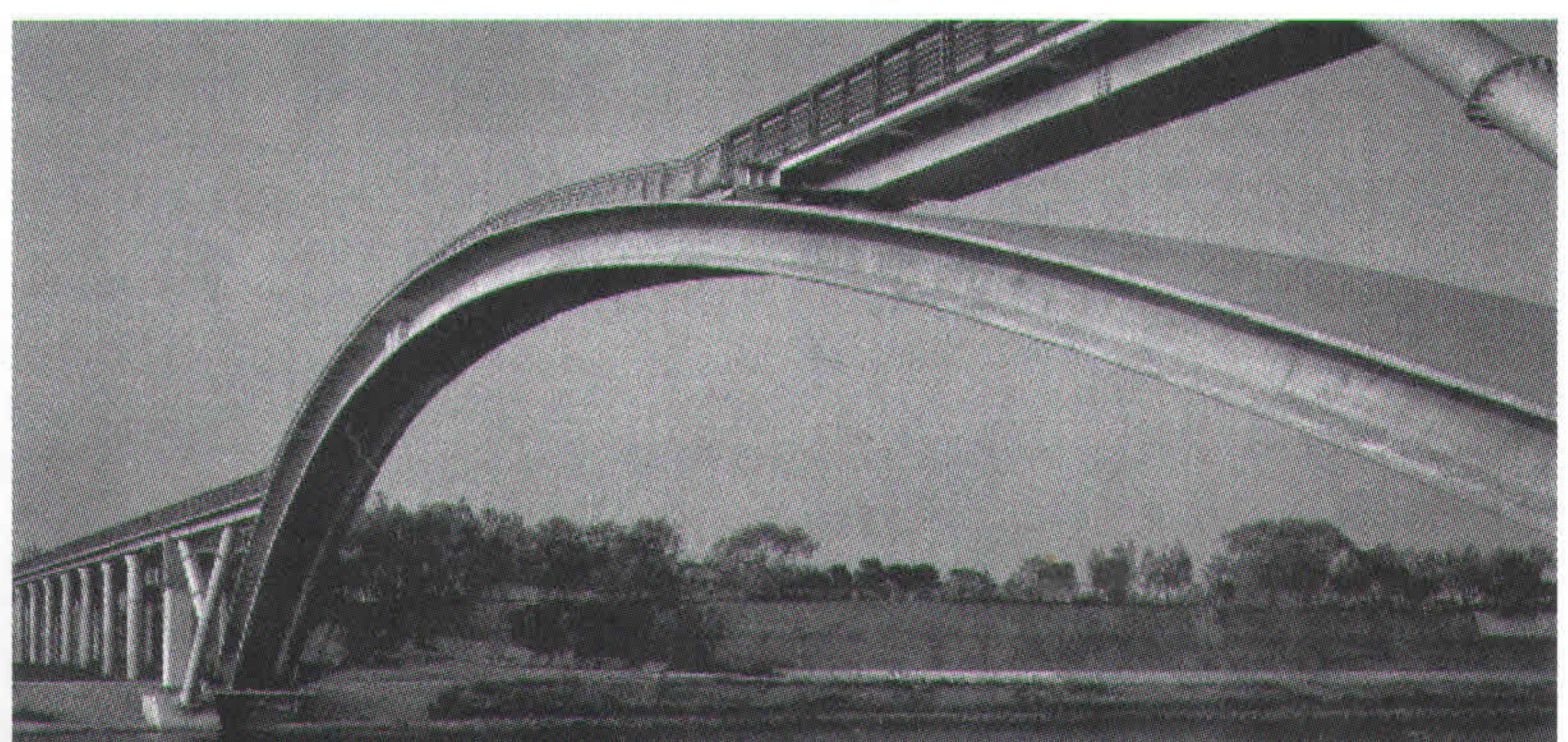
The concrete mix of Ultra High Performance Concrete incorporates metallic or organic fiber and is highly ductile. It can be bent while continuing to carry load. The compressive strength with reinforcement is nearly 230 MPa and flexural strengths are nearly 30 to 60 MPa. The arch shape foot bridge constructed using UHPC on river Han in Korea has a deck slab with a thickness 30 mm.

In this millennium, concrete will not be just a mixture of cement, fine aggregates, coarse aggregates and water but several chemical and mineral admixtures will also be used to improve the properties of concrete both in plastic and harden stage. Concrete in future will not be just a building material but will be looked upon as a building chemical. Concrete will no longer be produced by using the four conventional materials; it will be produced using several more materials like silica fume, super plasticizers, GGBS, fly ash, viscosity modifying agents, fibers etc. to suit concrete's requirements and environment around it.

The 'Golden Age of Concrete' has begun. It is quite likely that this Golden Age of Concrete may continue indefinitely. However, new concrete materials will continue in its composition to give more reliable and durable concrete structures

In this millennium, we notice that the economic and political forces have accelerated the pace for integration of modern world. Mega projects with long span bridges, under sea tunnels linking islands and many other high-tech projects will be planned.

Offshore concrete platforms for oil and gas production, floating bridges and airports and cluster cities on man made islands will present an exciting future for concrete, particularly in developed and industrialized countries. Concrete is economical, versatile, beautiful, and reliable and gives ample scope for innovations.

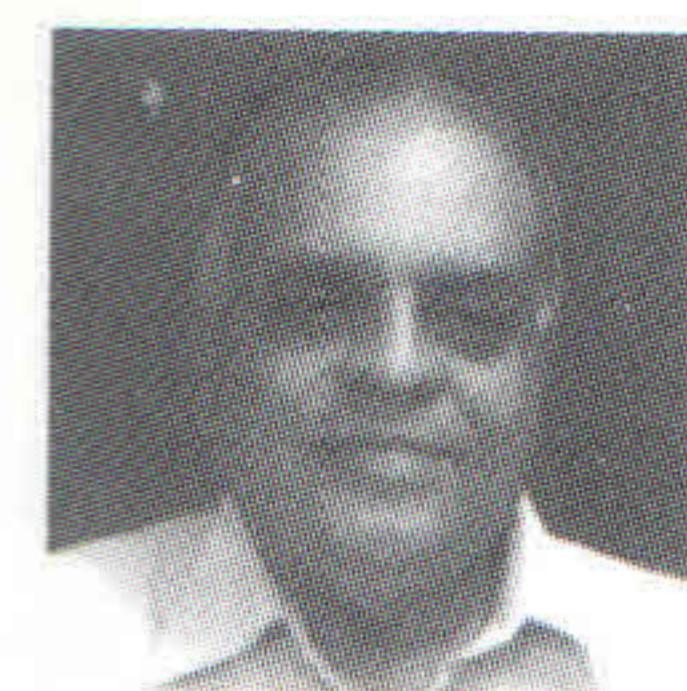


Together, let us conquer the concrete for strength, durability, workability, beauty.



Wood Free Interior Design

Jitendra Shah



FLM - 687



CONCEPT

The showroom had to look and be spacious. The light entering the building from the front have to be judiciously used. The client's brief required the showroom to display solid PVC Sheets for a various application such as wall paneling, false ceiling and furniture. The challenge lay in creating modern look to this show room by using solid PVC Sheets. "We will change the way the world think about the plastiwood" was a vision shared by Er. Jitendra Shah & Er. Anil Ruchandani, the owner of the Marvellous show room & Ar. Amit Zaveri. All convention will this show room break such was the idea behind its make.

MATERIAL

The main material of showroom is solid PVC Sheets. PVC Sheet is a 100% plastic sheet. It has durability of plastics and workability of wood. PVC Sheet has all the advantages of plastic materials, such as 100% moisture proof, 100% termite proof & borer free, flame retardant & self extinguishing, unbreakable & shatter proof. It can be fabricated using conventional wood working tools. It can be easily sawn, nailed & screwed, planed & chiseled, heat bent & thermoformed etc. Sheets are available in 1mm. to 18mm. thickness. The standard size is 8'x4'. The second material is m.s. pipes of sizes 19*19*19 mm. gauge and

15*15*18 mm. gauge which provide reinforcement to the PVC Sheets, which protects bending & warping. It gives stability to the structure.

ENTRANCE HALL & KITCHEN AREA

The show room has nice reception area with a display area of different doors of PVC Sheet. The doors have been display on custom made sliding tracks. This not only offers compact solution to display a large number of doors but make it easy for the customer to select door of his choice. The pantry & toilet are hidden behind the door. The vaulted ceiling is made to show the banding capacity of solid PVC Sheet. The glass partition between reception area & the director's cabin is finished with one way vision film poster. The modular kitchen's doors are made from thick PVC ply sheet. Being 100% plastic, these cabinets do not attract cockroaches. The accountant's table and cup-board are made of PVC Sheets.

DIRECTOR'S CABIN

Both the director's tables are made out of solid PVC Sheets with glass top. The cup-board in the director's cabin is again made out of solid PVC Sheets. The ceiling is made out of PVC Sheet in a stepping manner to show the use of PVC Sheet in a different way. The ceiling is finished with Altek texture colour.

COLOUR SCHEME

Walls: 5mm.prelam PVC Sheets are used in 2 colours. One is Pine & other is Burl.

Ceiling: 5mm. thick PVC Sheets are used in the ceiling with metal frame. These sheets are shatter proof & do not crack or break like cement sheets. The ceiling's general area is painted with white Altek texture colour paint. The depression or projection in the ceiling is painted in a bright Altek texture colour paint. All the colours in the project are a soothing experience to the eye.

The showroom is a heaven of imaginative plastic wood usage. Unconventional, smart, contemporary - there are adjectives galore to describe this mélange of quality and timelessness, but I'll end with just two words "must visit".

For more information, please contact:
azaveri2003@yahoo.co.in



