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CONSTRUCTION PHILOSOPHY

CP

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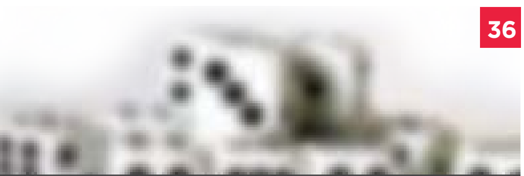

Recovery under threat?

The second wave of the Covid 19 pandemic is certainly a matter of concern for the construction industry. The first wave itself had caused a debilitating disruption in the industry with construction workers in their millions deserting project sites and supply chains getting snapped. This had affected all the players in the industry, be they in the infrastructure segment or the housing and real estate sector. Several projects got stuck at different stages of execution. The Government and the NBCC did try to provide some relief to the industry, but that was hardly sufficient given the gargantuan size of the industry and the massive labour population who needed to be supported during the crisis.

With different vaccines becoming available and the mass vaccination programme of the Government getting underway, there was hope that the industry would quickly get back on the recovery track. That did happen in a certain way, particularly in the metros, and in the case of major national infrastructure projects such as highways where the Government has been focusing over the past few years. That the country could set a record of sorts by constructing 34-38 km highways everyday even amidst the pandemic was quite inspiring. The country has also been witnessing some stirrings in the demand for co-working and warehousing spaces.

It is into this context that the third wave of the pandemic has come. We hope that the industry would display continued resilience and learn the right lessons from the ongoing disruption. Our cover story is a panel discussion on the theme 'Covid and After: What Next for the Construction Industry?" We hope it will contribute at least in a small way to the learning process we wish to see happening in the industry.

Nebu Abraham
Editor

Send your articles/feedback to
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'NRI investments in real estate to rise'

Investment by Non-Resident Indians (NRIs) in real estate in the country would go up substantively in fiscal 2022 and would touch $14.9 billion, according a report prepared by 360 Realtors' report.

Although Covid 19 had hit the housing sector hard, NRIs have been showing steady, though muted, interest in new living spaces. During FY2020, investment volume climbed up by 6.4% compared to the previous fiscal despite the overall market sentiments taking a beating due to the pandemic.

360 Realtors have arrived at a 12% growth prospect during FY2022, which translated to $14.9 billion, based on a regression analysis. According to Ankit Kansal, Founder & MD, 360 Realtors, NRI investments did go for a tailspin as soon as the lockdown was declared.

"However, soon developers introduced numerous attractive payment plans and embraced the digital medium to build resilience. The government's fightback strategy pinned on liquidity infusion that resulted in a reduction in home loan rates further set the stage for a quick recovery. This was also a time that was marked by a lowering in the value of the Indian rupee, furthering NRI investments," says Kansal.

The report points out that GCC continues to be the major source of NRI investments in India. Collectively, GCC accounts for around 41% of the total investments. Investment inflow from the expatriate community in the USA comprises 17% of the total purchase, followed by Singapore (12%). Other major source markets include Canada, UK, Germany, Kenya and South Africa.

Another point that has emerged in the present edition of the NRI report is incremental growth in average ticket size. Earlier reports had suggested a dip in average ticket sizes. This time, however, after the pandemic, most of the buyers are now opting for larger spaces, which has made the ticket sizes edge up.

In FY21, average ticket sizes from the USA reached $124,000 compared to $111,000 in FY20. From Singapore, the average ticket sizes inched up to $93,000 from $91,000 in FY 20. Similarly, the average ticket size of purchases from UAE-based NRIs grew by 11.5% to reach $97,000.

NRI investments in FY 14 were pegged at $6 billion. Since then, it has gone from strength to strength, reaching $13.3 billion in FY 21, growing by a CAGR of slightly over 12%, the report, titled 'NRI Investments in Indian Real Estate', says. The report can be accessed at https://static.360realtors.ws/Research/PDF/69/NRI%20Report.pdf

Maharashtra to restore 5% stamp duty

Maharashtra Government has decided not to extend the 2% stamp duty waiver on property registrations from April.The State would reinstate its earlier system of 5% stamp duty on property registrations from April 15.

The state government had slashed the stamp duty to 2% between August and December last year to boost the real estate market, which was reeling under the impact of COVID-19 pandemic. It had raised it to 3% between January 1 and March 31.

RBI nod must before foreign nationals transact in real estate: SC

NEW DELHI: The Supreme Court has held that compliance with Section 31 of the Foreign Exchange Regulation Act, 1973, is mandatory when foreign nationals carry out transactions of real estate.

Section 31 of FERA 1973 stipulates that 'No person who is not a citizen of India and no company (other than a banking company) which is not incorporated under any law in force in India shall, except with the previous general or special permission of the Reserve Bank, acquire or hold or transfer or dispose of by sale, mortgage, lease, gift, settlement or otherwise any immovable property situated in India'.

"Until such permission is accorded, in law, the transfer cannot be given effect to; and for contravening with that requirement, the concerned person may be visited with penalty under Section 50 and other consequences provided for in the 1973 Act", said a Division Bench of the Supreme Court chaired by Justice A.M. Khanvilkar.

The Supreme Court gave the verdict on February 26 when disposing off a appeal petition dealing with a suit property, measuring 12,306 square feet at Bengaluru, which was gifted in March 1977 by the widow of Charles Raitt, a foreigner and owner, to Vikram Malhotra, without obtaining previous permission of the RBI.

The Division Bench further said: "A priori, we conclude that the decisions of concerned High Courts taking the view that Section 31 of the 1973 Act is not mandatory and the transaction in contravention thereof is not void or unenforceable, is not a good law".

TN RERA says home buyer cannot claim compensation not provided for in agreement

Tamil Nadu Real Estate Regulatory Authority (TNRERA) has said held that a home buyer will not be eligible for compensation not provided for in the agreement between him/her and the promoter.

Giving his verdict on a petition against the Indian Railway Welfare Organization, a not-for-profit organisation, promoters of a housing project, TNRERA adjudicating officer G Saravanan pointed out that the brochure of the project in question did not have details about delivery of the dwelling unit and that the clause regarding delay in construction states that if construction was delayed for any reason, no interest or compensation is payable.

The complainant applied for allotment of the dwelling unit accepting the terms and conditions. Therefore, the claim of compensation for delay is not sustainable," the Adjudicating Officer said.

Pandemic no dampener for housing demand

All does not seem to be lost for the realty sector owing to the Covid 19 pandemic. Urban India witnessed a spike in demand for houses during the first quarter of 2021, according to ANAROCK's Q1 2021 data.

The housing demand rode on stamp duty cuts, discounts and low home loan rates, helping seven major cities to stage an impressive 29% increase during the first quarter. The three months also saw new launches go up by 51% against the corresponding period in 2020.

Q1 saw 58,290 homes being sold in the top 7 cities as compared to 45,200 units sold in Q1 2020. Mumbai Metropolitan Region and Pune together accounted for 53% of housing sales in the quarter, Mumbai registering a 46% increase and Pune 47%. Bengaluru, which sold about 8,670 units, was the only city in the top seven to not record a major yearly change in total sales numbers in this quarter.

There were as many as 62,130 new launches in the top seven cities, against 41,220 units launched in Q1 2020. New launches also remained muted in Bengaluru which saw a 11% yearly drop in new launches. Mumbai MR, Pune and Hyderabad together accounted for 66% of the new launches during the quarter.

Unsold inventories continued to be a cause for concern with the top seven cities, showing a marginal year-on-year decline—from 6.44 lakh units during Q1 2020 to approximately 6.42 lakh units during Q1 2021--, and actually showing a 1% increase in unsold stock on a quarter-to-quarter basis.

According to ANAROCK, housing affordability will potentially remain extremely favourable throughout 2021. If the current sops and incentives continue, there will be sustained vibrancy in the upcoming quarters as well with end-users driving maximum demand.

Mid-segment housing saw the maximum new launches during the quarter with a 43% overall share, with the affordable housing segment accounting for 30%. The supply of luxury housing—priced upwards of Rs. 1.5 crore—also rose by 31% in Q1 2021 against the corresponding period in 2020.

Office leasing in seven cities falls

Net leasing of office space across top seven cities in the country fell 48% during Q1 2021 due to the COVID-19 pandemic even as demand for flexible spaces increased, according to Cushman & Wakefield, global real estate services firm.

Cushman & Wakefield said in its Q1 2021 report that the net office space leased in the top seven cities during the period had registered a sharp decline from 69,31,922 sq. ft. during January-March 2020 to 35,78,585 sq. ft. during Q1 2021.

However, the flexible space leased by corporate clients during Q1 this year increased to 15,523 seats from 10,690 seats in the year-ago period.

Among the cities hit by fall in net office leased, Mumbai suffered the most with the net leasing of office space plunging to 2,01,642 sq. ft. January-March 2021 from 8,82,693 sq. ft. during the corresponding period last year.

Developers step up measures for workers' safety

Real estate developers are going the extra mile to offer protection to construction workers currently in various project sites.

Steps are being taken to get the workers vaccinated and provide food and shelter for them at the sites. Efforts are also being made to avoid recurrence of the reverse migration witnessed last year by providing for their family members. The workers had begun returning to the sites from August 2020.

The Confederation of Real Estate Developers' Associations of India (CREDAI) has already announced ambitious plans to vaccinate over 2.5 crore construction workers at the sites of its over 13,000 developer members across 217 Indian cities and towns.

Developers are keen to avoid the situation that arose last year when following workers' migration project schedules went haywire. The attempt now is to keep construction activity unaffected.

Commercial developers seek GST waiver for JDAs

Commercial developers have urged the government to waive the 18% GST now applicable to joint commercial real estate development.

In a memorandum to the government, they have pointed out that this stipulation was resulting in those who opt for joint development agreement with landowners being forced to pay both the stamp duty and 18% GST. When GST is added to the stamp duty, it results in escalation of project cost, reducing returns in case the developer plans for a REIT.

Numerous representations have been made to the government by various industry bodies, but to no avail. The government stipulation is particularly hurtful to a large number of developers who propose to construct malls, multiplexes, hotels, shopping complexes, commercial towers (including office spaces), industrial parks and warehouses across the country under joint development agreements.

Experts say it's unfair to not get the input credit as such loss of credit becomes cost, reduces the overall return and more importantly breaks the chain which is not the intent of the GST legislation. Transactions involving transfer of land development rights were out of the gamut of indirect tax in the erstwhile tax regime but the issue came to the fore following a recent government notification.

As per the notification GST was payable by both the land owner and the developer.


Construction industry
key to economic revival

C. Gouridasan Nair

For nations everywhere, the key concern today is revival of their economies that have been devastated by the Covid-19 pandemic. The prolonged lockdowns announced by federal, State and local governments have dealt a body-blow to all industries, particularly the construction industry.

The labour-intensive nature of the construction industry is often cited as one of its greatest weaknesses and this has been exposed in no mean measure by the Covid-19 pandemic. This is an industry that can hardly practice physical distancing, given its predominantly traditional character. The latest in technologies that help in large-scale replacement of human labour can, by and large, apply only to big ticket projects. The sad fact is that these constitute only a fraction of the construction activities taking place all over the place. Given its labour-intensive character, the construction industry can contribute to economic revival like no other segment of the economy. Once the project sites begin to hum with activity, the economy will receive the much-needed fuel to return to its former robust self. The role that construction of the Interstate highways after the Great Depression and after World War II afford good lessons for us.

India should think of massive infrastructure projects, particularly in the development-starved regions of the country, to put money into the hands of legions of the skilled and semi-skilled workforce. That would trigger demand and, thereby, ensure revival of the durable and non-durable consumer goods industries. One sticking point here is how such massive infrastructure push would affect the

environment. Matters cannot be left to crass commercial interests. The government should evolve a transparent and responsible mechanism to address such larger concerns of society and ensure that development initiatives do not get bogged down in avoidable controversies.

Construction industry is the second biggest job-giver in the country that employs more than 50 million people and accounts for 8% of the

country's GDP. More than 50% of the Plan outlay goes, directly or indirectly, to the construction industry. It is also directly or indirectly linked to over 250 different industries, employing tens of thousands all over the country. Thus, any surge in construction activities would have a large Impact on all these industries and, as a result, in employment, spending and saving.

What this implies is that construction industry deserves special support from the government. For, if industry gets a leg up, it will have a cascading effect on the economy, increasing demand. In the current scenario, many factors prevent the industry's revival. Almost the whole of 2020 was a difficult time for the industry but, if one were to go by statistics pertaining to the first quarter of calendar 2021, pent up demand for housing units is helping the industry's revival efforts. However, piled up inventories and cost-escalation continue to be a major worry for project promoters and real estate developers.

Construction activities have indeed resumed in different parts of the country, though not on the scale that existed during the pre-pandemic days. With the second surge of Covid 19, workers are either reluctant or are finding it impossible to return to project sites in the cities. Sadly, this is also resulting in labour force becoming all-male, hurting work participation rates across the country. Scant availability of labour cannot but affect project schedules, especially those in the medium and small sectors.

What the industry faces today is a multi-dimensional challenge that calls for multi-angled solutions. The Central government's push for affordable housing and large infrastructure projects in the 2021-22 Budget is a move in the right direction here. But mere statements will not do. For instances, a close reading of the Budget numbers would show that the proposed spending on infrastructure would be spread over the coming three years. There has to be a composite plan to relieve the current stress on capital and labour.

What the government could immediately do is to initiate measures to augment the industry's liquidity by releasing funds that have been held up with the Central and State governments, quasi-government entities and various Central and State agencies for long now. The low bank interest regime is helpful for the affordable housing segment, but stamp duties are returning to the former high levels. Maharashtra has already decided to restore its 5% stamp duty, which it had reduced to 2% to rev up demand at the height of the pandemic.

The situation was grim in the construction industry even before the onset of Covid-19. Now it is a case of an already bad situation turning worse with each passing day. We at Construction Philosophy (CP) have been in conversation with major players in the industry at the national level about the diverse challenges faced by them during the past one year and more. These interactions have been quite a learning experience for us.

The second Covid 19 surge has only aggravated matters. If construction activities have begun in some parts of the country, it is only because nobody can wait for the pandemic to pan out to return to the project sites. The construction industry would get to heave a sigh of relief only when a sizeable section of the population is vaccinated and life crawls back to normal, particularly in urban agglomerations that are currently under rolling shutdowns.

That is certainly a long way off and it is certain that it will continue to be a rough ride for the industry for some time to come. One can only hope that the resilience of the Indian people and determination of the industry would see us through this crisis.

PANEL DISCUSSION

Covid and After

What Next for the Construction Sector?

Panelists:

Arun Sahai
Chief Operating Officer,
Ahluwalia Contracts (India) Ltd.

Jayant Vaitha
Chief Operating Officer,
Director, Colliers International Design Services

Siva Senathipathy
Director,
Gleeds Consulting (India) Pvt. Ltd.

K. Lava
Managing Director,
SFS Homes, Kochi

Cherian John
Managing Director,
Hilife Builders

Nebu Abraham
Editor
Construction Philosophy

Covid and After

The Covid 19 pandemic dealt a body blow to the construction sector. As a responsible publication, Construction Philosophy has been watching the situation on the ground closely and trying to map the experiences of key players in the industry—the builders, workers, material and product suppliers and hundreds of others. We spoke to some of them on their survival strategies during the pandemic and the challenges that they anticipate as the country reopens.

In this issue of CP, we bring to our readers exhaustive excerpts from the long online conversation we had at the height of the pandemic with an eminent panel of industry players. Though some of their observations might seem dated when read in the post-pandemic days, there are important lessons to be learnt from their experiences and hopes for the future.

Construction Philosophy: We are trying to look at the many challenges that the construction industry and the housing sector faced with the Covid 19 pandemic outbreak. The huge disruption it caused in the industry is now well documented, especially the massive and tragic migration of labour and the desolation at the project sites. What was perhaps not so evident was the way the pandemic wrought havoc with the diverse participants in the industry—the builders, suppliers of a wide variety of materials and equipment, the financing agencies and the consumers. The state of play in the industry before the onset of the pandemic and when it wrought havoc with the normal lives of the entire population deserve to be studied in some detail to understand how unforeseen events such as these can upset even the best laid-out plans and perhaps change the way an entire industry function. Let us, therefore, take a close look at the pre-pandemic days and how matters are likely to evolve in the days to come. How was the industry faring before the Covid-19 pandemic outbreak?

Arun Sahai: The real estate sector has been under huge stress for about four years now. It started with the demonetization followed by the rollout of GST. The real estate sector, especially the housing sector, where there are multiple players and consumers, had run up a lot of inventory. Many could not make deliveries as promised. As a result, consumers began losing faith in the developers and many consumers refused to make their scheduled payments. This aggravated matters and work on several projects came to a halt. The Central and State governments did try to rescue the developers. The NBCC (National Buildings Construction Corporation) set up a fund to support the developers, but it never got disbursed because even as the process was on, the pandemic struck. Things moved from bad to worse with the Covid 19 outbreak.

K. Lava: Kerala is a little different from rest of the country because our economy has been governed by the Gulf money for the last 30 years with some 2 million Malayalis working in Gulf countries. They have been sending in huge remittances and thus keeping the economy afloat. Investment by expatriates in land, building, construction, hotels, hospitals has been crucial. All the major private structures, including all the big houses in Kerala, are being built with money coming from the Gulf. So, we have been a little insulated during the national recession and all that.

However, whenever there is a fall in the dollar price of oil, it has a direct implication for the Kerala economy. Even before Covid struck, we have been experiencing the effects of adverse developments in the Gulf. There was pressure on sale of higher value products, be it a house or a car. This was going on six months prior to the pandemic. When the pandemic struck, some 2-3 lakh people came back and that resulted in a lot of uncertainty. But there was also a silver lining there. There was the possibility of many of these people wanting to buy a home. So, we are waiting for some good times to come.

CP: Was the situation the same pan-India, Mr. Vaitha?

Jayant Vaitha: There certainly were regional divergences because the character of the market is different in different parts of the country. Mumbai market is known for very expensive homes and Delhi is one with large projects. Both had their problems. While there were no takers for the expensive homes in Mumbai, in Delhi it was a case of the large projects remaining stuck midway. Bangalore was somewhere between the two. There was high demand for affordable homes, developers in Bangalore were experiencing a serious fund crunch because of the uncertainties in the software industry. Even in Chennai, which is a conservative market, demand was falling and there was also a big mismatch between the ticket size required and that on offer.

GST and demonetization and all that had already impacted the housing Industry adversely. But, at the same time, there was demand for commercial spaces, office spaces and warehousing. There were already a lot of issues relating to land and planning regulation. Still, the quarter prior to Covid was really good in Bangalore. There was increase in demand for housing. Sobha was doing well. So was Purvankara. In short, we were about to step out of the demonetisation-GST turmoil when Covid struck. I think now it is up to the industry to rediscover itself.

Siva Senathipathy: Yes, I agree with much of what Mr. Vaitha said. The market situation was region-specific. Still, across the country, the market was coming out of the woods and moving in the right direction when Covid struck. The only challenge was the fluctuation in the prices of built-up spaces and availability of construction materials. There was a significant fluctuation over the last one-and-a- half to two years in the prices of key raw materials like steel and that was affecting the builders. But then, at the same time, a lot of promoters were performing well, especially those in the warehouse segment and commercial spaces. E-commerce boom was also proving quite helpful. Those of us engaged in cost management and project management were hopeful that the market would keep growing with increased business in the different sectors, if not in housing.

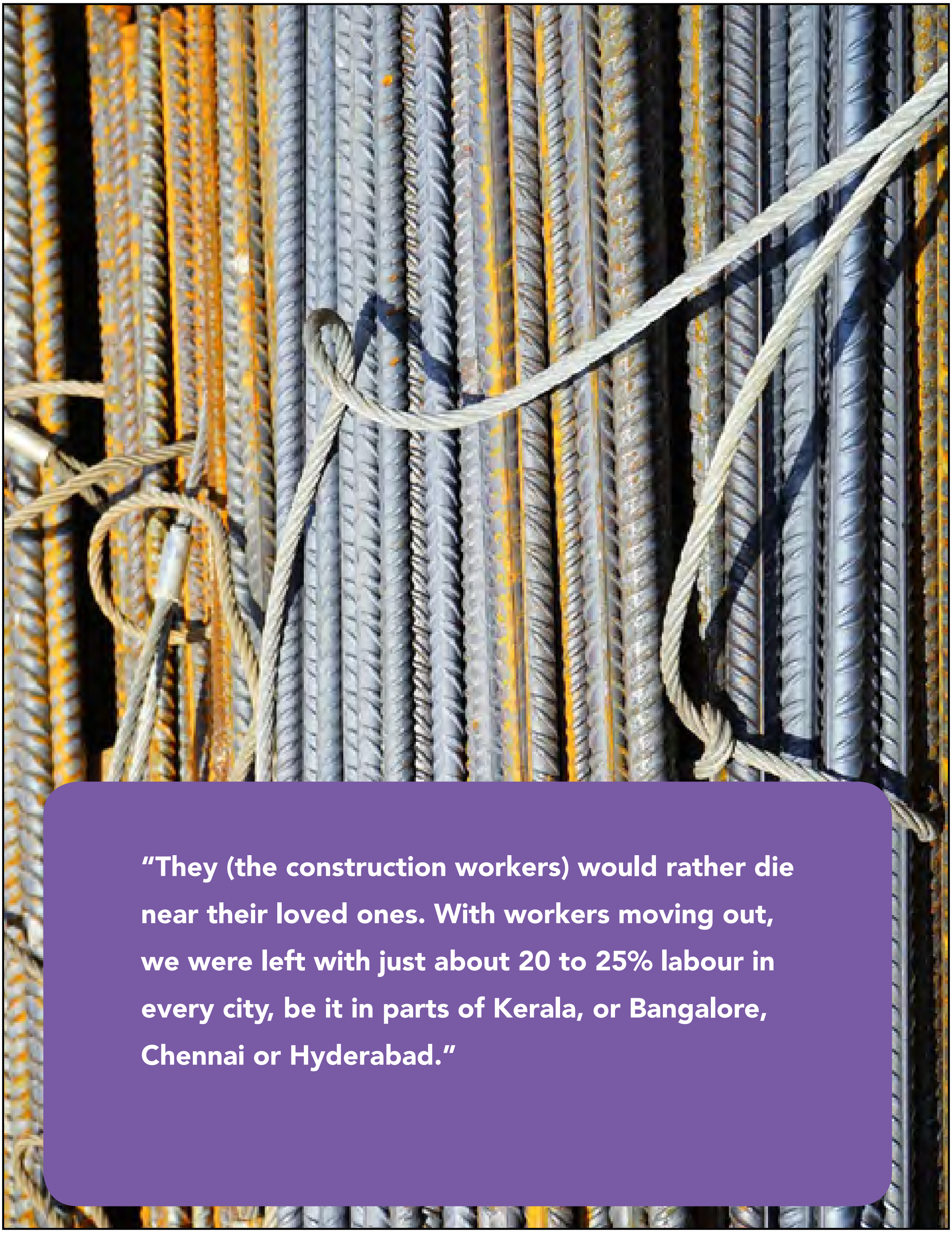
Cherian John: One positive thing in Kerala is that we don't have such a huge inventory involving huge costs. Of course, the industry is highly leveraged with low margins. The market was already in trouble because of demonetization and GST. How Covid 19 impacted Kerala can be seen from the experience of just one panchayat in Thrissur. The first Covid case in India was reported in Thrissur. Following this, a Covid rapid response team conducted a survey here. In one small panchayat called Kandanassery, they found that out of the total population of 21,000, 2324 people are living abroad, in 38 countries. We also found that people from the district living in 78 countries. As Mr. Lava just mentioned, around 65% of our customers live in different countries and out of these, 45% are in the Gulf. So, this is an atypical market when compared to other cities. The impact of Covid on the expatriates affected our market too.

CP: Obviously, all of you in the construction industry, whether you are engaged in housing or public infrastructure, must be really concerned about the mounting inventories and loan repayment commitments besides, of course, the marketability of all that you have already built. There would also be the worry about the number and quality of human resources that you would have for sometime to come.

K. Lava: Basically, we had to follow strict protocols when the pandemic hit because then it was a matter of life and death. Our workforce is from all over India. The quality of accommodation being given by Kerala CREDAI builders is of much higher standard than what you would find in the rest of the country. The government has set stiff norms regarding hygiene and sanitation facilities in labour camps. I have seen construction sites in other big cities. I don't want to name them, but they are so pathetic. So, gener-

ally, the workers were taken care of well. I did not hear even a single case of a migrant worker contracting Covid in Kerala, while many who returned from abroad have reported positive. Still, when they expressed the desire to go back home, the government put us under some pressure to comply. While it would be okay to send back people who are jobless, it was wrong on the government's part to insist on sending back those who are in worksites. The wages they earn here are three or four times more than what they would get in the north or the north east. It is like the Gulf for them or Indians going to the U.S. It is a win-win situation for all but, unfortunately, the government chose to drive people with jobs out.

Arun Sahai: I really appreciate Mr. Lava's observation that Kerala has set a benchmark that is something of a model for every State. But one thing should be noted. Kerala being a small State and also perhaps because the project sizes there are smaller compared to what we have in north or western region, the number of migrant workers would be smaller. In the north and north west, the size of the projects is quite big, but still the government, the builders and contractors have come together to ensure welfare of the workers. We have standard operating procedures now. I'm the Chief Operating Officer of Ahluwalia Contracts. We have a pan India presence and we are doing a lot of big projects. We have a SOP for all our worksites to ensure hygiene and safety of the workers. There is an additional cost here, but nobody minds that. So that is something very positive. Post covid too, we all need to continue to focus on physical distancing, hygiene, clean toilets, etc. in the labour camps. This will be on everybody's priority list.



"They (the construction workers) would rather die near their loved ones. With workers moving out, we were left with just about 20 to 25% labour in every city, be it in parts of Kerala, or Bangalore, Chennai or Hyderabad."

CP: We have been hearing about at least some of the State governments trying to provide relief to the construction workers, but certainly not all. But the workers were generally insisting that they would rather be in their homes than at the worksites. How many would return, we do not know. Does this mean that the disruption would continue longer than we all anticipate?

J**yant Vaitha:** Only much after onset of Covid did the governments realise that the migrant workers are probably the key to reviving the construction economy and are now appealing to them to stay back. However, if you look at it, though the migrant workers wish to keep their jobs, the confidence level in the industry is very low right now. Even where they have been given hygienic accommodation and good food, they are not prepared to stay back. There is this fear that they would get infected. You would understand the working of their minds only if you step into their shoes. They are either uneducated or semi educated young people who wish to be with their families. They would rather die near their loved ones. With workers moving out, we were left with just about 20 to 25% labour in every city, be it in parts of Kerala, or Bangalore, Chennai or Hyderabad. All of them are from the North, right? From Jharkhand, Bihar and all? These are skilled workers. Their absence would affect project execution in a big way. If you don't have the migrant workers, nothing would move. All State governments have realised that, but the situation is beyond the control of most State governments. Of course, the situation has begun to improve, but it is not the same as before. So, the bottom line is that there is going to be some disruption in delivery schedules across the country. If the work flow is not proper, it would affect not just the construction sector, but the entire economy.

CP: Isn't mounting inventories as big a headache as the shortage of skilled labour? This is an industry which does not deal with perish-

ables, but it stsill has a big cash flow and work flow issues to tackle, right? Many of the builders across the country, whether handling infra projects or housing projects, must be quite worried about the mounting inventories...

Siva Senathipathy: You see, this is a completely integrated market. When people talk about lockdown in one region being lifted, they don't realise that it is not going to help the industry elsewhere. The industry depends on a complex supply chain besides labour and finances. It is not only my supply chain, but several other supply chains of several others too are affected. So, everybody has to be completely operational. Otherwise, movement of goods would not happen, whether we are talking about a raw material or a finished product. Particularly so

"Construction cost would increase because of the productivity and efficiency issues arising from Covid 19 pandemic. Labour output is definitely going to be less for any job considering that everybody would have to follow norms of physical distancing, etc. That would be a real issue..."

in the case of finished products, which have a network of factories behind them. They need to have their own supply chain in operation. They will be depending on probably 5-6 vendors to manufacture their products. So, even in normal situations, it is a challenge for you to get the materials on time and plan your works at site. In the times like these, it's going to be even more complicated. And nobody knows what is going to happen now and only time will tell whether we can actually go about it properly. Which means only when relaxations are completely in place in all the zones and all the States can we figure out whether it's going to get back to normal within a reasonable amount of time, but definitely I'm looking at anywhere between three to six months when the industry can be fully operational because we are talking about cash flow issues and funding issues.

Cherian John: Being smaller in size as compared to other States and urban centres, we don't have that much inventory. However, there are many who will have to face a lot of issues in the coming days. There is much that the government can do here, like offering better finance schemes and restructuring the existing loan portfolios. We are also looking forward to some changes in the GST regime. The government should ensure that we get input credit tax. It is not possible for us to continue with the present scheme. Definitely, we will have to postpone deliveries. We expect a lot of support from the government. Only then can we continue in this industry.

To add one more point in connection with your earlier question, besides cement and steel, most of the construction materials come from MSMEs,

which are mid-segment industries. They have been hit with the labour migration and the resultant lower productivity. So, the availability of materials would, without a question, be under stress. We will really have to see how best we can perform as construction companies.

CP: Now the question is whether the construction costs, which includes payments for both materials and labour, would be impacted by this disruption and by what degree…

Arun Sahai: Construction cost would increase because productivity and efficiency issues will be there. Labour output is definitely going to be less for any job considering that everybody would have to follow norms of physical distancing, etc. That would be an issue as far as productivity is concerned. Second, we have to understand what Mr. Jayant said; that is, migrant workers are not limited to construction industry, they are also part of the supply chain. If we have different factories producing a lot of construction products--and, as Mr. Siva said, construction industry uses hundreds of products—they are all going to be affected. Shortage of workers and raw materials would be there in the near term. So, nothing is going to be normal for, say, the next 6-10

months. We are expecting things to improve and progress but it is still anybody's guess to what extent. Yes, cost of materials will definitely see an uptick of around 5 to 10% and, similarly, the labour cost would also go up. So, eventually, construction cost will definitely go up.

CP: What is the current liquidity position of the big and small players?

Arun Sahai: That is a big issue for developers because liquidity can come only through sale. In the absence of liquidity, we will have to cut down on our costs and do value engineering. For a company like ours, when a project comes to us as an EPC contractor, everything is left to us. We have to do everything possible to curtail costs and save on time. When we succeed in both, we can offer a better within a short time. So, value engineering is something that we must do to keep the costs down.

As for liquidity, it can come only by selling our present inventory, even if that means selling on no profit basis. That would be better than being burdened by heavy loan servicing commitments. See, we have to come out of this crisis. And nobody knows how long it's going to last. We cannot predict what would be the best price a couple of months later. What is certain is that the real estate sector will be under stress for the next one year. So, liquidity has to be generated with whatever inventory we have. The market dynamics will play a major role in determining the price.

CP: Isn't also there a possibility of the migrant workers not finding enough work and coming cheap once the disruption is over?

Siva Senathipathy: We have to look at the migrant labour situation closely to understand the dynamics there. Rather than a fall in labour costs, we might be in for an increase in our wage bills because there will be a shortage of labour, not only in the construction sector, but in all the industries that use migrant labour, particularly in the southern parts of the country. The situation might improve once the labour returns to its former strength, but that will take some time. People are reluctant to return and only time will tell what shape the migrant labour population will take, going forward. In the medium term, there will definitely be higher wage costs because construction has resumed in cities like Bangalore and there is already a shortage of labour. People who have deeper pockets will pay higher wages and the others will be left with few choices. But, in the long run, there is going to be reduction in labour costs, I believe.

CP: Mr. Lava, the credit profile of every industry player is going to be affected by this disruption. Some of you are well placed financially, but most others are not. So, will it be a case of the survival of the fittest? Do you see the possibility of at least some of the players falling by the wayside because of this disruption?

K. Lava: Let me first answer your earlier question. Everybody should know that Kerala has got minimum wages. If the minimum wage is Rs. 20,000, you cannot employ someone who says he is ready for work for Rs. 15,000. Kerala Labour Department has fixed minimum wages for each job. So, the labour rates will not come down. It is not a demand-supply issue here. Again, this is not a business where someone can enter and exit just like that. This is a very organized business, like making a car or some other product. Just because you have a piece of land, you cannot become a builder. Being a builder means you have at least 100 things to do from finding the location, getting all the clearances, labour and materials and, at the end, the customers. And once you sell a property, the customer expects you to service him for the next 15 years. So those people who don't have a long-term vision of housing cannot enter this business. You have to think long-term, build your brand and keep it credible.

CP: What are the challenges now that we are, though slowly, opening up?

K. Lava: Construction sites have opened, but the supply of sand and metal have not picked up. All your input costs and land costs are going up but the selling price cannot rise at the same pace because of affordability issues. So, I think there are some real re-engineering to be done. Everyone will have to manage costs and innovate. That's how I look at it.

Cherian John: I want to add one point to what Mr. Lava said just now. See, the size of our projects is small in Kerala and the labour cost is very high. As a result, we are not able to go for high technology or what you call mechanized construction. And we have to depend on other States for cement and steel. That also increases the cost of our products. The builders here will have to face several challenges in the coming days. The government will have to step in with a lot of support for the industry.

CP: What happens to the demand for built up spaces post-Covid?

Jayant Vaitha: This is something on which we have been doing a little bit of research. While earlier we used to allocate 60 square feet per person in structures meant as workspaces, we are expecting some real change. Work from home will continue in some form. It could well be a case of some 80% of the people alone being present in the office space at a given time an, even then, you will have to provide for physical distancing. Thus, we could well be talking about 80 or 100-feet space per person.

K. Lava: Definitely the product of the future is going to be affordable housing. The sizes of houses are likely to come down. If it is 2000 square feet now, it will become

1500 square feet. The variations will still be there because there is greater migration to cities like Bangalore, Mumbai, Pune, Delhi, Hyderabad, etc. In Kerala, the demand for bigger homes might continue because the intensity of migration is not so high. In general, affordability will be the key criterion determining the size of homes.

Cherian John: The Central government is pushing affordable housing schemes, houses that cost less than Rs. 45 lakh. In Kerala, this product is not at all viable because of the high land price and high cost of construction. So, we would request the government to increase the price tag from Rs. 45 lakh to Rs. 75 lakh. If the government takes a decision to stop the so-called hartals and bandhs for two years, definitely we will have more working days in Kerala and that will ensure speedy completion of projects and prompt deliveries at lesser costs.

Siva Senathipathy: One thing we have to keep in mind is that in the construction industry, it would take a significant amount of time for delivery of any product. If what you were talking about projects being delivered in one year, it can now go up to 3-4 years. So that is one of the main problems. Demand will return in another three years' time. I think the industry must move forward remembering that this is a very long-term process.

Jayant Vaitha: The real estate industry has survived lot of ups and downs. The industry has never sought financial support from the government. Especially the builders, as Mr. Lava said, have never asked for financial support from the government. The industry only wants simplified regulations and a low tax regime. The industry will reinvent itself through affordable housing, low-cost products like warehousing and co-working spaces. I think this will happen globally. We have to keep our eyes open and see what people are doing elsewhere, fill all gaps and come up much better.

Arun Sahai is also National Vice-President & Spokesperson, Builders Association of India (BAI); Member, CEDC in BIS and Smart Cities Committee; former Vice President (two terms), Indian Building Congress (IBC) from 2016 to 2018 and continues to be Governing Council Member of the body.

Jayant Vaitha is also Founding Member, Synergy Property Development Services.

K. Lava is also former Chairman (two terms each), BAI, Kochi, and Thiruvananthapuram Centres; former Chairman, Kerala Builders Forum (KBF- now CREDAI).

Cherian John is also Vice Chairman, CREDAI, Kerala

Siva Senathipathy is Director, Gleeds Consulting (India) Pvt. Ltd.

Harsh Vardhan Patodia is new CREDAI president

Harsh Vardhan Patodia, MD, Unimark Group, Kolkata, has taken charge as national president of the Confederation of Real Estate Developers' Associations of India (CREDAI) that has a membership base of over 13,000 realtors across 21 states and 217 cities. He takes over from Satish Magar whose tenure ended on March 31, 2021.

Other office bearers include Satish Magar (Chairman), Boman Irani (President-elect), Pankaj Goel (Secretary), and Deepak Goradia (Treasurer).

Patodia has announced a free COVID-19 vaccination drive for 2.5 crore construction workers at the sites of member developers across India. He also announced the setting up of CREDAI Start-up Angel Network and Incubation & Acceleration Centre, an initiative that aims to help and support tech start-ups in the real estate space.

Patodia has also announced the setting-up of CREDAI's own Research and Analytics Centre. The CREDAI Research and Analytics Centre will facilitate the availability of real time and authentic data for future growth strategies.

Colliers appoints senior leaders in CMIS team

Nilanjan Chakraborty and Deval Valia have joined Colliers in its Capital Markets & Investment Services (CMIS) team in Bengaluru and Mumbai, respectively, with immediate effect.

"We are delighted to have Deval Valia and Nilanjan Chakraborty join the CMIS team. Their appointments significantly enhance our capabilities and I am confident that their extensive market expertise will allow us to deliver capital, growth, business solutions and value, accelerating the success of our real estate stakeholders to lead our industry into the future." said Piyush Gupta, Managing Director, CMIS (India) at Colliers.

Nilanjan Chakraborty joins Colliers as a Senior Director from Mahindra Happinest, where he led acquisitions for the brand and invested in relationships with key industry stakeholders. He will be based out of Colliers' Bengaluru office.

Deval Valia has worked for firms like Piramal Capital & Housing Finance and Axis Bank, leading real estate investments and large corporate accounts. Deval will be based out of one of our major markets- Mumbai.

"Colliers India has grown from strength to strength in the past year due to our strong leadership team and solutions-oriented professionals. Our dedication to attracting market-leading talent demonstrates our commitment to deliver enterprising solutions to our clients," said Sankey Prasad, FRICS, Chairman & Managing Director (India), Colliers.

Kalliath TMT wins 'India 5000 Best Award'

Kalliath TMT, makers of steel bars, have bagged the India 5000 Best Award given nationally to MSMEs that maintain high quality in their products.

The Kalliath Group, with 92 years' business experience, set up the steel bar manufacturing unit in Palakkad in 2001. Besides being TMT bar makers, Kalliath is also original steel manufacturers.

Kalliath was the first company to make 6 mm TMT FE 500 Grade steel bars in the country. The group had gone on to become the first to secure the BIS certification for the product.

Kalliath Group was also the first group to export TMT steel bars from the State.

The Rs.1000-crore turnover Kalliath Group is also pioneer in the manufacture of cut and bend steel, which is marketed under the brand name Steelfab, in the country, and first makers of binding wires with ISI certification in Kerala.

The group, which is also engaged in the manufacture of LPG cylinders, cover blocks, flooring and sanitary items and several other products for the healthcare and realty sectors, has a strong sales network in Kerala, Tamil Nadu and Karnataka.

"The India 5000 Best Award is a recognition for our sustained effort to manufacture and market only quality products," Kalliath Group Managing Director Noor Muhammed Noorsha said.

Kalliath Group Executive Director Dirsha Muhammad Kalliath said the company has never compromised on quality and has been adopting the latest technology to enhance quality of its products. A fool proof quality checking system has also been put in place at every stage of manufacture, he said.

NHAI to develop 600 wayside amenities

The National Highways Authority of India (NHAI) has initiated steps to develop world-class wayside amenities at more than 600 locations across 22 states in the next five years to improve commuting experience on national highways for both passengers and truckers/

Out of these wayside amenities, 130 is targeted for development in 2021-22. NHAI has already invited bids to develop 120 such wayside amenities.

These amenities will be developed every 30-50 km of present and upcoming highways and expressways. The amenities would feature

fuel stations, electric charging facilities, food courts, retail shops, ATMs, toilets with shower facility, children's play areas, medical clinics, outlets for local handicrafts, etc.Separate 'truckers' blocks' would also be developed with large amenities that will include truck and trailer parking areas, auto workshop, truckers' dormitory, cooking and washing area, toilets with shower, medical clinics, dhabas, retail shops, etc.

449 infra projects show Rs. 4.29 lakh crore cost overruns

The Ministry of Statistics and Programme Implementation has found that as many as 449 infrastructure projects, each worth Rs 150 crore or more, have been hit by cost overruns totalling more than Rs 4.29 lakh crore.

The Ministry of Statistics and Programme Implementation monitors infrastructure projects worth Rs 150 crore and above. Of the 1,736 such projects, 449 reported cost overruns and 547 were delayed. According to the Ministry, the cost overrun in respect of the 449 projects works out to be Rs 4,29,186.02 crore.

Out of 547 delayed projects, 109 projects have overall delay in the range of 1-12 months, 132 projects have delay of 13-24 months, 187 projects reflect delay in the range of 25-60 months and 119 projects show delays of 61 months and above. The average time overrun in these 547 delayed projects is 44.59 months.

Reasons for the delay included delay in land acquisition, tendering, ordering and equipment supply, law and order issues and State-wise lockdown due to COVID-19.

NHAI files papers with SEBI to form InVIT; to raise Rs. 5,100 crore

National Highways Authority of India (NHAI) has filed draft papers with market regulator SEBI, for floating an Infrastructure Investment Trust (InVIT) to raise Rs. 5,100 crore. InVITs are instruments on the lines of mutual funds, intended to pool small sums of money from various investors, which assures cash flow over a period of time.

The NHAI is planning to mop up funds through InvIT and monetisation of operational assets via the ToT (Toll-Operate-Transfer) model and toll securitisation to boost non-debt resources. Five operational roads with an estimated enterprise value of Rs. 5,000 crore would be transferred to the NHAI InvIT.

NHAI has set a goal of construction 34,800 km of highways under the Bharatmala Pariyojana at an estimated cost of Rs. 5.35 lakh crore. The Union cabinet has given permission to NHAI to set up InVITs and monetise its assets to raise capital. The units are proposed to be listed on NSE and BSE. The Power Grid Corporation had, in January, filed papers with SEBI to raise Rs. 5,000 crore through InVIT.

Delhi-Mumbai Expressway SPV gets 'AAA' rating

The National Highways Authority of India's fully owned Special Purpose Vehicle (SPV), DME Developers Ltd. (DMEL), has received AAA rating from CRISIL, CARE and India Rating. The SPV is executing the Delhi Mumbai Expressway project. Through this SPV, NHAI has planned to diversify its resource base and develop a project specific sustainable and self-liquidating approach to raise finances.

Delhi-Mumbai Expressway is a flagship greenfield project under 'Bharatmala Pariyojna'. The project is being executed under 48 sub-projects, out of which 17 are Hybrid Annuity Model projects (Vadodara-Mumbai segment) and 31 are under EPC Model (Delhi- Vadodara segment). Of these 48 sub-projects, 27 are under construction, 17 are awarded and work to be started and the rest are under process for awarding.

The project is scheduled for completion by March 2023, with one of the stretches to JNPT getting completed by Sept 2023. The total estimated cost of the greenfield project is about Rs.87,500 crore including land acquisition cost of about Rs. 20,600 crore. Expenditure other than land acquisition during construction period will be about Rs.53,849 Crore, to be funded through Rs.48,464 Crore debt and equity of about Rs.5,385 Crore from NHAI, with debt equity ratio marked at 9:1.

For the project, DMEL's role will be limited to housing the debt and servicing thereof. For the debt, NHAI is extending a Letter of Comfort to lenders. The Concession Agreement, Implementation Agreement and letter of Comfort have been finalized. Annuity payments to DMEL will be structured to enable timely servicing of debt and other incidentals. NHAI plans to form similar SPVs for other high value highway/expressway projects. This will further enhance NHAI capability to execute large scale infrastructure projects of national importance.

UP Government to acquire 1,365 acres for Noida International Airport

The Uttar Pradesh Government has approved acquisition of another 1,365 hectare land in Jewar for the second phase of the upcoming Noida International Airport and set apart Rs 2,890 crore for land acquisition, besides resettlement and rehabilitation of people who are likely to be displaced.

The Jewar airport project was approved by the Yogi Adityanath Government in December 2017 and the concessionaire agreement between Yamuna International Airport Private Limited, the Special Purpose Vehicle (SPV) set up by Zurich international AG and Noida International Airport was signed in October, 2020.

The Rs 29,650-crore airport will be developed, operated and maintained by the European company under a 40-year concession agreement. The company plans to invest Rs 4,663 in the first phase of the Jewar Airport project. The first phase was originally scheduled to be completed by 2023, but some slippage is expected given the Covid 19-induced disruption.

When the first phase becomes operational, the Jewar International Airport will handle around 12 million passengers every year. The project will be spread over an area of 5,000 hectares and may have six to eight runways.

Maharashtra CZMA approves draft coastal zone management plans

The Maharashtra Coastal Zone Management Authority (MCZMA) has approved the draft Coastal Zone Management Plans (CZMPs) for cities and suburbs. The MCZMA has updated the CZMPs in line with the provisions of the Coastal Regulation Zone Notification, 2019.

The draft CZMPs show the demarcation of the high tide and low tide lines and hazard lines along with the various classifications of CRZ categories as well coastal land use maps indicating eco-sensitive areas. Land use information pertaining to fishing villages, fishing infrastructure, highways and roads would be superimposed on the CZMPs by the local bodies concerned.

In case of any disparity in the CZMPs, the matter will be referred to the Ministry of Environment, Forests and Climate Change (MoEFCC) along with valid reasons for rectification. The Ministry will, in turn, refer the matter to the National Centre for Sustainable Coastal Management (NCSCM) for verification based on latest satellite imagery and ground truthing.

Tender for construction of Upper Narmada project floated

The Narmada Valley Development Authority has floated tender for construction of the Upper Narmada project. The work involves construction of upper dam and a 45,600 ha CCA micro irrigation system in Dindori district of Madhya Pradesh and Anuppur. The work will entail an investment of Rs 983.8 crore.

Gujarat Housing Board floats tender for construction of high-rise residential buildings

The Gujarat Housing Board has invited bids for construction of high-rise residential buildings in Ahmedabad.

The scope of work includes detailed design and construction of flat type high-rise residential buildings for medium income group including on-site development with all infrastructure services at Chandkheda, Phase-IV, Ahmedabad city in Gujarat under Mukhya Mantri Gruh Yojana. The estimated value of the project is Rs 469.83 crore with a completion period of 24 months.

L&T Construction bags multiple contracts

L&T Construction has secured EPC orders from the Rural Water Supply and Sanitation Department, Odisha, to execute individual rural water supply projects in the Kendrapada and Khorda districts of Odisha.

The scope of work includes design and construction of intake structures, four water treatment plants of a cumulative capacity of 105 MLD, laying of transmission and distribution pipelines, construction of overhead service reservoirs and booster pumping station and provision of house service connections. The project will provide drinking water to 12.28 lakh people across 780 villages in Kendrapada and Khorda districts of Odisha.

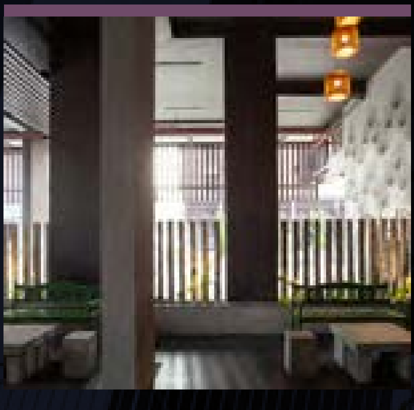
L&T Construction has also secured a repeat order from the Odisha Water Resources Department to construct an intake structure and pressure main along the right bank of Bargarh Main Canal of the Gangadhar Mehar Lift Irrigation Project in Bijepur, Odisha, on EPC-turnkey basis.

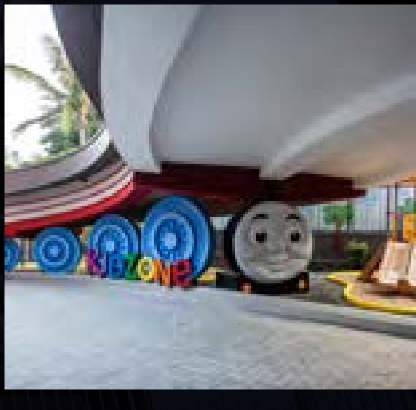
The scope of work includes design and construction of an intake structure, pump house, a 34-km pressure main and associated electromechanical and instrumentation works. The cumulative value of these and a contract with a leading cement manufacturer for their facility in Rajasthan is around Rs 2,500 crore.

L&T Construction

THE EARTH TOWER

From Jibu & Thomas Architects





Naturally Elegant !

Located at a walking distance from the Kadavanthra Metro Station in Kochi, Kerala, Noel Earth offers a humble yet elegant living environment that stands in sharp contrast to the bustle of the busy city. The green dynamics in its individual as well as interactive spaces bring an organic value to the project. A modest palette of mostly natural materials keeps the tall masses earthy and grounded.

Housing more than 50 families, the Earth tower is positioned alongside a central garden where a conceptual sculpture creates an imposing axis with direct views from the balconies. Of the total G+14 floors, the third to twelfth floors follow a typical floor plan with four types of 3BHK apartment units spread equally on the four corners of a central lobby, while the uppermost two floors comprise a duplex on the southern side. Vehicle parking is restricted to the ground and first floors. Simple details like the kid's play area below the ramps to first floor parking, granite stone fencing, minimalist wall paintings, and the fixed stone seats in the lounge further aid in creating a homely ambience for the residents.

The Clubhouse is placed at the primary focal point from the main gate which houses a multitude of recreation spaces at different levels—indoor swimming pool including a children's wading pool on the ground floor, indoor recreation area on the first floor, health club on the second floor and an attic party hall on the top floor. While the swimming pool on the lowest floor aids in regulating the microclimate of the building, it also offers a soothing view from every floor together with the hanging bamboo lantern lights that drift along with the cool breeze.

Open areas at multiple levels, green gardens with various species of indigenous plants and trees, terrace gardens, indoor badminton court and pool, and the attic party hall are carefully dispersed within the layout. These spaces meet the need for many essential, frequently overlooked, elements of shared community life such as adequate socializing and recreation spaces along with a commendable degree of foliage.

JIBU & THOMAS ARCHITECTS

Jibu & Thomas Architects was founded by Architect Jibu John and Architect Thomas K. George in 1996. A team of dedicated architects and technical and administrative professionals, the design firm is based on the 'hands-on services' philosophy, wherein all project functions are delivered with close attention to details. From the beginning, they have produced customized planning and design services for a wide range of projects from independent bungalows, group housing and mini townships to commercial retail malls, and hospitality projects.

The primary focus is on designing facilities that are more than just functional spaces, but to go beyond to creation of structures with functional utility and aesthetic charm. Collaborating with experienced hands in structural, electrical and fire engineering, experts in building management and landscaping and renowned hands in green building construction, Jibu & Thomas Architects ensure that the final outcome is a holistic, resourceful, architectural intervention. Other notable works by Jibu & Thomas Architects are Noel Greenature and Wind Chimes apartments in Kochi.

FACT FILE	
PROJECT NAME:	NOEL EARTH
LOCATION:	KADAVANTHRA, COCHIN, KERALA
ARCHITECTURAL FIRM:	JIBU & THOMAS ARCHITECTS
PRINCIPAL ARCHITECT:	ARCHITECT JIBU JOHN
STRUCTURAL CONSULTANT:	Geostructurals Pvt. Ltd.
MEP CONSULTANT:	Bhavani Consultants
YEAR OF COMPLETION:	2018

Dr. N. Krishnamurthy

ENTERPRISE RISK MANAGEMENT IN INDIA

In India, there is a woeful lack of awareness about Occupational Safety and Health (OSH) and a disconcerting inability to evolve a philosophy and practice of risk management.

Arguably, India is way ahead in many technical endeavours within our land and even globally. But among the many areas where much is left to be desired for the nation to claim its place in the world map, occupational safety and health (OSH) is a crucial one. We do not find a place in many OSH statistics of the International Labour Organisation, for instance.

In recent years, much headway has been made and continues to be made in OSH, and signs are encouraging that we will catch up with other advanced nations in the foreseeable future.

Having studied the history of developments in this area in India, and of the industrial and public response to the push towards improving safety culture in the nation, and having contributed to similar efforts elsewhere, and attempting to share that experience within India through courses and webinars, I have come to the conclusion that the main malaise afflicting us in many areas, is neither money nor skills, but lack of awareness of the OSH problem and the lack of will to implement the solution.

The subject is multifaceted, including, in the Indian context:

- Legislation and regulation (which are quite extensive and progressive),
- Education and training (which are sparse and disorganised),
- Dissemination and communication (which face enormous hurdles due to the size and variability of the population), and
- Implementation and enforcement (which involve citizen perception and acceptance of solutions).

It will take volumes to analyse these aspects. I do not intend to cover them here. What I plan to do in this short article is to highlight the importance of what I consider an essential pre-requisite to OSH, namely risk management. This itself involves a vast area of knowledge, very much dependent on the industry and project as well as human factors.

I shall offer an overview of the subject, hoping to motivate readers to learn more and do something about the current situation.

Current status of risk management

India is a huge land and its professionals quite competent and hence, predictably, the output on even such an unfamiliar (and unpopular!) topic as risk management comprises numerous papers (both from within and outside India) and government documents. Many Government regulations and some of the private company practices are world class.

What became clear to me in my studies and webinars is that because of the general lack of safety awareness, there is little appreciation of the importance of the need for risk management, let alone about how to analyse and manage risks at the workplace.

There are what I call ‘spikes’ of awareness around. For instance, some of the big companies do a pretty good job of risk management. ISO standards happen to be the world standard for risk management as for most other professional activities, and many in India have taken ISO 9001 and ISO 31000 training from certified training institutions.

But even ISO carefully avoids prescriptive procedures for risk assessment and controls, sticking to its principle of establishing only management concepts, and leaving detailed guidelines and specific procedures to the different industries and stakeholders.

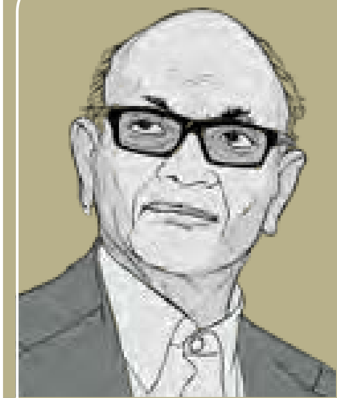
I have found that engineers who claim to have taken ISO and other courses, and have been practising risk management in their organisations for many years, mostly use risk matrices and follow risk analysis procedures given to them by their training organisations or their management without explanation or guidance on how the criteria and tools were developed.

Consequently, while the output looks slick, the safety analyst himself or the company itself may not have the insight to develop their own risk matrices and controls or even modify their templates for their specific needs and with their own resources.

What this means is that when it comes to implementing the relevant standards, every user may not be able to tailor the procedure to the specific demands of not only his project but also of each step of every task in a particular phase of the project. The ‘one-size-fits-all’ approach to risk management may at best be ineffective and, at worst, result in human injury, property loss, and/or environmental and other damage.

Ignorance and negligence of risk

With the exception of a few competent risk assessors, the large majority of our professionals view risk management as an unnecessary luxury,



Dr. N. Krishnamurthy – 'Prof Krishna' as he is known to his students and colleagues – is in his sixty-second year of professional service, teaching and training, doing research and consultancy, in structural engineering, computer applications and workplace safety, in India, USA, and Singapore. He has published six solo books, and co-authored five others, and has to his credit over a hundred twenty papers, and two patents in his areas of specialty.

not realising that such an attitude perpetuates unnecessary accidents and injuries at worksites, and may even hinder our national productivity and progress.

As an example, consider the pie-chart below of fatalities from accidents in India in 2019:

Although not quite a workplace activity, most of travel is work-related. How many Indians know that every day, 500 people – that is one human being every three minutes – die on Indian roads! How many of us know that most of the fatalities are from two-wheeler drivers and pillion riders, and a big chunk of these in turn are because they did not wear a helmet?

I have discussed this in many ways and on many occasions. The general response is: "Oh, accidents happen to only riders who are rash or drunk or stupid …, (take your pick!) – But I am cautious, sober, and smart, so it won't happen to me!" How do we convince them that accidents (by very definition) can happen to anybody, anywhere, anytime, and to the best of people, and most can be avoided or their impact minimised by some pre-planning?

This attitude amounts to ignorance or negligence and, as a result, many, if not most, citizens have become so inured to helmetless riding, beltless driving, and other dangerous behaviour on our roads (and elsewhere) which are contrary to norms or specifically forbidden by laws, that staggering statistics do not affect them.

Somehow, it must be brought to the conscience and consciousness of our people that most activities at the workplace carry the potential for danger, and it behoves every one of us to first learn about them, and next to do whatever we individually and collectively can to evaluate them so that we may either avoid them or mitigate their consequences.

It is only formal risk management that will, literally, save us.

What is risk management?

Risk management is simply the process of:

(a) Identifying potential dangers in any activity or process;

(b) Assessing the likelihood of them happening and the severity of their consequences, to us or to others, and to assets under our care or control; and,

(c) Finding ways and means of bringing the risks to an acceptable or tolerable level.

This is not a new invention or discovery. It is what we instinctively, spontaneously do in our personal and family lives most of the time, adapting our actions to address situations that may pose a danger to us or those with us, analysing and avoiding or controlling the risks.

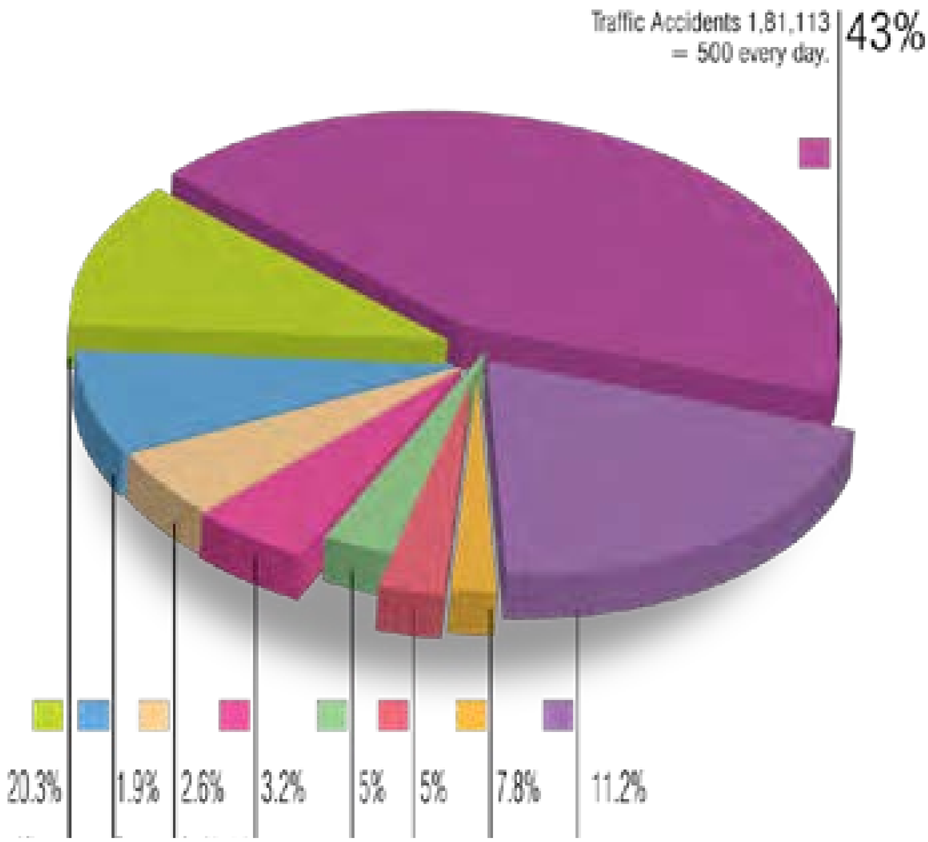
That is why most Indians will not take up mountaineering or wave surfing as a weekend hobby like the Westerners do.

That is why we take an umbrella if it looks like raining.

Whether we realise it or not, our mind (both conscious and sub-conscious) will analyse the possible consequences of our getting into potentially bad situations, and choose some preventive or protective measure against them.

However, we must formalise our analyses and procedures for professional use, aiming to satisfy any and all applicable regulations and good practice in letter and spirit.

Percentage Share of Various Major Causes of Accidental Deaths during 2019



Why do people take risks?

People take risks for various reasons, including the following:

- **Ignorance**
  E.g., Not (or wrongly) wearing of COVID mask
- **Negligence, carelessness** --
  E.g., Riding without helmet
- **Necessity, livelihood, survival** --
  E.g., Working at heights without harness
- **As a dare or challenge** --
  E.g., Two-wheeler racing
- **Hobby, fun, entertainment** --
  E.g., Circus acts
- **Fear, self-destruction** --
  E.g., Suicide
- **Greed** --
  E.g., More profit.

Why risk management?

To explain further the role of risk management, we need only ask why we: Read the weather report – Take out life insurance – Go for a medical check up – Set an alarm for next morning – Stretch out our hands walking in dark…

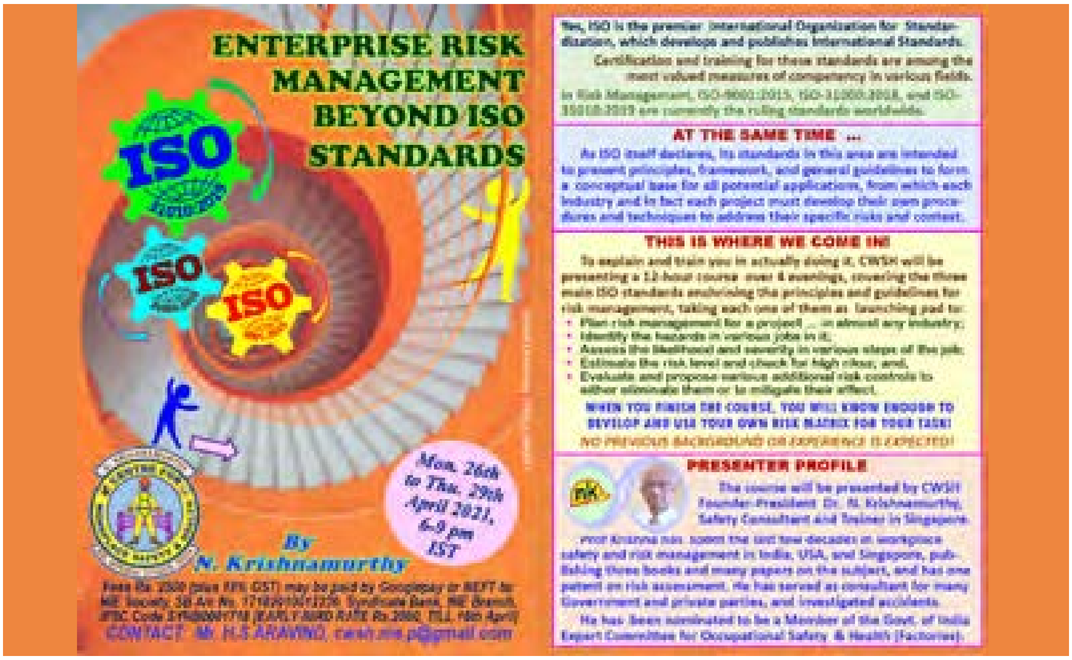
The answer is, to identify and avoid potential dangers.

Except that if and when we are responsible for others under our jurisdiction, or if our failure to foresee danger and control it will lead to some loss, we must do it more diligently and in a more organised way.

Risk management serves as a predictor, a 'leading indicator', of possible risks so that we can plan to avoid or reduce accidents, and hence injuries and deaths, and other losses. It is well established that companies that do risk management have a much better safety record with fewer accidents than those that do not.

Other benefits from risk management are that it:

Facilitates appropriate optimum and realistic solutions to promote safety, and productivity;



Improves personnel morale, and reputation of the organisation;

Automatically enables meeting most legal requirements.

Philosophy of risk management

Let us admit it, there is no activity without some risk.

Risk management underlies our human need for survival and self-improvement. We must learn to discipline ourselves for our own welfare and common good, and in our professional lives, organise our thoughts and actions towards a pragmatic application of scientific principles to identify and assess risks, and plan and implement suitable safety measures.

There are many time-honoured guidelines to support this idea:

"Look before you leap."

"Hope for the best, but plan for the worst."

"Being forewarned is to be forearmed."

It is our right to expect our employers to protect us from dangers in our work. It is likewise our duty to protect our colleagues and employees, and our assets from harm or loss during their work with or for us.

In the professional arena, with responsibility for the health and safety of others, it would be wise to anticipate and be prepared to address danger, rather than smugly feel it won't happen and then have to face the adverse effects if and when they do.

My advice: Don't believe that a mishap won't happen to you. Rather, ask yourself whether you can afford its consequences if and when one should happen to you or to others under your care.

In short, we should proactively do risk assessment and control! Conclusion

Conclusion

What I have given is a bird's eye view of the necessity and utility of risk management to promote workplace safety by avoiding mishaps and reducing their adverse effects.

You might have heard the adage, attributed to the Chinese and Red Indians, which says:

"Give a man a fish, and you feed him for a day.

Teach a man to fish, and you feed him for a lifetime."

Let us put it this way to emphasize that we need broad training to do good risk management:

"Give a man a risk matrix and he will apply it in that project.

Teach him to design a risk matrix, and he will manage risk anywhere, any time."

Dr. N. Krishnamurthy is Founder-Director, Centre for Workplace Safety and Health, Mysuru and Safety Consultant and Trainer, Singapore.

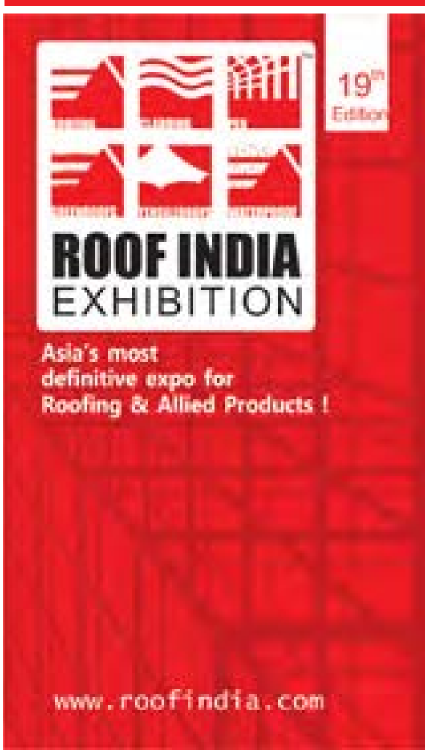
6th National Convention on Ferrocement 2021

Ferrocement Society is organising **FS 2021**, the 6th National Convention on Ferrocement from 8 to 10 April 2021.

This year the theme is PRECAST ferrocement for future construction industry. Delegates from many countries are likely to participate in this hybrid event. The brochure of the Convention has been uploaded on the website www.ferrocementindia.com

The main Topics that would be covered by the convention include:

1. Precast components necessity, different shapes and ideas; 2. Moulds and their types, techniques to design and produce moulds; 3. Types of matrix- cement mortar, geomortar, polymer mortar, colgrout mortar, mortar without cement; 4. Precasting techniques. Meshes cutting, bending, inserting, mortar filling, spraying mortars etc.; 5. Designing precast buildings; 6. Assembling of components; 7. Water conservation, prefabricating water tanks and check dams, storage concepts and case studies; 8. Various machines available for precast industry, conceptual machines, hand casting and pre-casting equipment; 9. Stability of assembled buildings, tests, stress analysis; 10. Hybrid or composite construction using ferrocement components; 11. Mass housing using ferrocement, multi-storied buildings; 12. Factory on wheels 13. Other precast applications using ferrocement.



Roof India 2021 Exhibition

Roof India, a three-day exhibition of roofing and allied products will take place at Hall III of Bombay Exhibition Centre, Mumbai, from 28 to 30 April 2021. This is the 19th edition of Roof India Exhibition.

Being organised by Hyve India Pvt. Ltd., Roof India has been billed Asia's largest roofing and allied products event which provides the ideal platform for the building construction and infrastructure industry fraternity ‘to converge, network and strike lucrative business deals and establish business partnership’.

Roof India 2021 also features concurrent technical seminars aimed at educating and empowering roofing professionals with knowledge about the latest trends and technologies in the roofing industry.

Hyve India Pvt. Ltd., which is part of Hyve Group plc (formerly ITE Group), is an international organiser of exhibitions and conferences.

Flexible

Important cogs in hybrid workplace models

The total flexible workspace stock in top six Indian cities is almost 30 million sq feet (2.8 million sq meters), which is 4.3% of the total commercial office stock in the country. The demand for well-located, high quality and efficient flexible workspaces will increase, resulting in their occupying 5.4% of the total office portfolio by 2022.

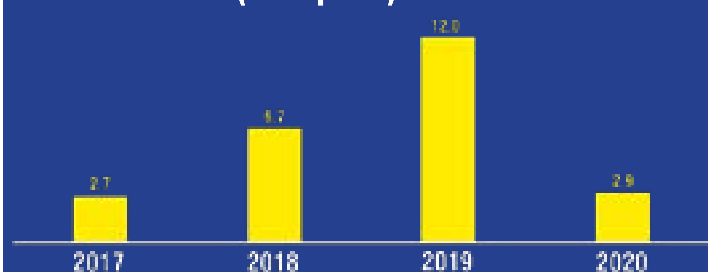
Siddhart Goel

Senior Director- Research-
Colliers India

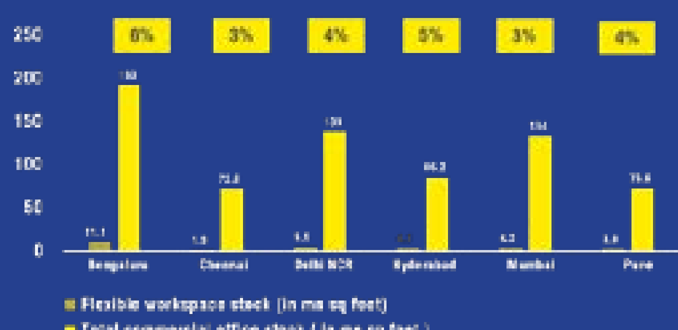
Work spaces

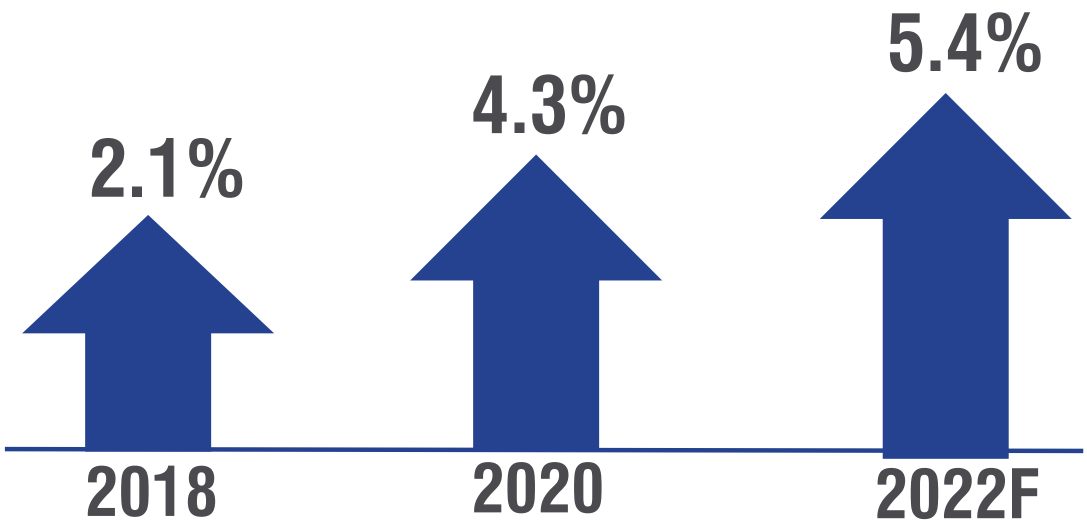
Flexible workspaces in India grew at a CAGR of 38% from 2017 to 2019, with many local and global operators entering the space led by increased demand from corporate occupiers or enterprise clients. As of end-February 2021, the total flexible workspace stock stood at 30 million square feet (2.8 million square metres) across the top six Indian cities.

Flexible workspace operator leasing, top six Indian cities (mn sq feet)



Proportion of flexible workspace stock, February 2021 (mn sq feet)





Due to muted demand amid uncertain conditions, 2020 saw flexible workspace operators lease 2.9 million square feet (269,000 square metres) of space, down by 75.8% from 2019. This was about 8.5% of the total leasing recorded across the top six cities. Bengaluru, Hyderabad and Mumbai accounted for the bulk of transactions as some operators expanded their footprints, mainly in decentralized locations.

Deals totalling around 1.7 million square feet (158,000 square metres), which were pre-committed or in the final stages, were cancelled across the top six cities during the prolonged lockdown. As of March 2021, about 65% of the desks on offer are leased, across the top flexible workspace operators' portfolios.

Since the bulk of this space is occupied by established corporates as opposed to freelancers or start-ups, there is still scope for enterprise clients to take up more flexible workspace as operators are offering attractive prices for large or multi-location deals.

The leasing period is currently about one to two years as firms look at flexible workspaces as a temporary solution to accommodate their workforce until they finalize their expansion and footprints beyond 2023.

Constrained growth of flexible workspaces

During 2020, the growth of flexible workspaces took a significant hit with operators curtailing their expansion plans, cancelling planned leases and some even surrendering spaces, due to muted demand resulting from COVID-19. Going forward, flexible workspace operators are likely to continue to optimize their existing flexible workspace portfolios and focus on profitability of the existing centres during 2021.

The operators are also likely to focus on signing large enterprise-level deals and cut down on speculative centres that cater to freelancers, professionals, start-ups and entrepreneurs. While expansion into new centres will likely be slow this year, there could be more partnerships between developers and operators that are aimed specifically at catering to corporate occupiers' needs for managed offices. For instance, Prestige Group has entered into a revenue sharing alliance with flexible workspace provider Awfis.

Thus, flexible workspace operators would do well to engage in a management fee and revenue share model with landlords, acting as managers for enterprise clients. Under such arrangements, the focus should be on attracting large corporate clients to ensure profitability and tenure.

During 2021, the Colliers forecast was that flexible workspace operators will lease around 3 million sq feet (0.28 million square metres), similar to 2020, unless larger and established operators sign up multiple deals for managing new offices on behalf of corporate clients. However, some new and interesting models did emerge as can be seen from cases such as Ibis Hotels offering flexible workspaces across all their properties in India in 2020.

Consolidation on the cards

The flexible workspace sector remains fragmented and is dominated by operators of various sizes in terms of number of centres and total area occupied. However, the top five operators in India currently operate nearly half of the total area occupied by flexible workspace operators in the Indian market, with the next five operators accounting for more than a third of total area occupied.

There will be consolidation, mainly through smaller fragmented operators facing acute cash flow challenges ceasing operations. This does not exclude takeovers of established operators as can be seen in the case of Brookfield Properties taking over CoWrks this year. Over the next three years, flexible workspace operators are likely to acquire smaller players to ensure they have the geographic range necessary to support their enterprise clients' distributed workforce.

Occupiers encouraged by flexible leases and low upfront capital costs

Enterprise clients have been increasingly incorporating flexible workspaces in their real estate portfolios over the last two years. During 2020, technology, and banking and financial services (BFSI) enterprises drove the bulk of enterprise flexible workspace deals.

In the current scenario too, occupiers would do well to lease some desks in flexible workspaces for 2021 and 2022 as part of their portfolio, to avoid long-term capital expenditures, and to get more flexibility on their lease terms until the time they have firmed their occupancy plans.

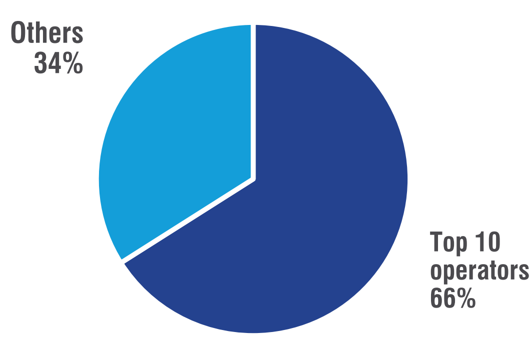
Enterprises are driven by the desire to offer locational flexibility to some of their employees and functional departments. Thus, they are leasing desks in flexible workspaces closer to their employees' homes to provide ease of access and flex-

***Situation:** Many corporate occupiers are likely to remain uncertain about long-term office leasing plans in 2021 and 2022 as they are still reassessing their office space needs.*

***Recommendation:** We recommend that they build a part of their office portfolio in flexible workspaces to avoid long-term capital expenditures, and to get more flexibility on their lease terms.*

***Situation:** Outlook for flexible workspace operators and landlords: Demand for managed space is set to increase in 2021 and 2022, but we expect growth beyond to depend on the ability of operators and landlords to deliver quality workspaces at competitive costs.*

***Recommendation:** We recommend that they build a part of their office portfolio in flexible workspaces to avoid long-term capital expenditures, and to get more flexibility on their lease terms.*



Key enterprise deals across various cities

Year	City	Occupier/ Tenant	Flexible workspace operator	Number of seats
2020	Bengaluru	Myntra	Indiqube	4,800
2020	Bengaluru	Target	ANSR	2,000
2020	Bengaluru	Microsoft	Tablespace	1,000
2020	Chennai	Walmart	CoWrks	900
2020	Chennai	CRISIL	Smartworks	400
2020	Delhi NCR	GSK	WeWork	300
2020	Delhi NCR	FranConnect	WeWork	150
2020	Hyderabad	Moschip Technologies	Simpliwork	400
2020	Hyderabad	Mordor Intelligence	Awfis	350
2021	Mumbai	Eureka Outsourcing Solutions	EFC	450
2020	Mumbai	Fullerton	Smartworks	400
2021	Pune	Xoriant	Smartworks	1,800
2021	Pune	MAN Truck & Bus	Smartworks	350

ible work hours. During 2021, we expect technology companies to be at the forefront of demand, followed by BFSI and consulting companies.

Demand from such companies is likely to increase from the latter half of 2021. As occupiers focus on portfolio optimization through 2022, many might be exploring ways to shift teams into multiple, smaller managed spaces than their existing large, consolidated offices or use flexible workspaces as a stop-gap arrangement until they relocate to entirely new offices.

The occupiers are also likely to take up flexible workspaces near suburban residential catchments, providing their employees more conveniences and choices. Many of these existing centres are currently operating at 50-70% occupancy levels. Operators are increasingly investing in workspace infrastructure like digital touch points, health and wellness facilities, hygiene and sanitization instruments. Thus, operators would do well to maintain this focus on workplace hygiene and wellness standards, which should see greater enquiries from enterprise clients.

Singapore's newest desalination facility treats seawater and freshwater

In its latest bid to improve the resilience of its water supplies, Singapore's national water agency — the Public Utilities Board — officially opened the 137,000 cu m/day Keppel Marina East Desalination Plant in February. The facility is entirely underground, with a publicly accessible park located atop it.

Singapore's fourth desalination facility, the new treatment plant is also the island city-state's first large-scale dual-mode desalination facility, meaning that it can treat freshwater and seawater. This dual capability facilitates PUB's ongoing efforts to diversify the water supplies for the densely populated but water-limited nation.

Singapore's potable water supply comes from four sources, or "taps," as PUB refers to them: rainfall from local catchments, imported water, desalination, and recycled water, which is known locally as NEWater. Of the four taps, only desalinated water is a "practically limitless source," according to PUB CEO Joo Hee Ng.

AI-driven building facade will learn and 'improve' itself

Polish firm FAAB Architektura has released the design for a 53-story tower dubbed Vertical Oasis. The building will be capable of changing the climate in its immediate proximity through a combination of geometry, vertical gardens, artificial intelligence, machine learning, and renewable energy harvesting.

The tower has been designed for dense urban populations, be they in areas of extreme heat, such as the Gulf region, or extreme cold, such as Sweden. The mixed-use building will combine retail, office, hotel, and residential spaces.

The 181,975 sq m tower will contain numerous gardens located in what appear to be a series of hollowed-out niches that extend vertically up the building. Carefully selected local plants and microorganisms will be grown, taking advantage of such building features as a stormwater capture process.

Closed-circulation technologies will purify the air of carbon dioxide, nitrous oxides, and particulate-matter pollution. The plants' natural process of transpiration will humidify and cool the air, while their sound absorption and deflection properties will reduce noise pollution. The geometry of the tower's niches will also create shade for the building's users.

This green facade will be paired with a mobile application driven by AI and machine learning that will be capable of improving its own performance, according to the architects. Users will be able to monitor how each plant is doing and how much oxygen is being produced. The prototype design indicates that, together, the plants and microorganisms will reduce the building's demand for air conditioning by up to 66% in the Gulf region and for heat by 30% in Sweden.

Drinking water from air!

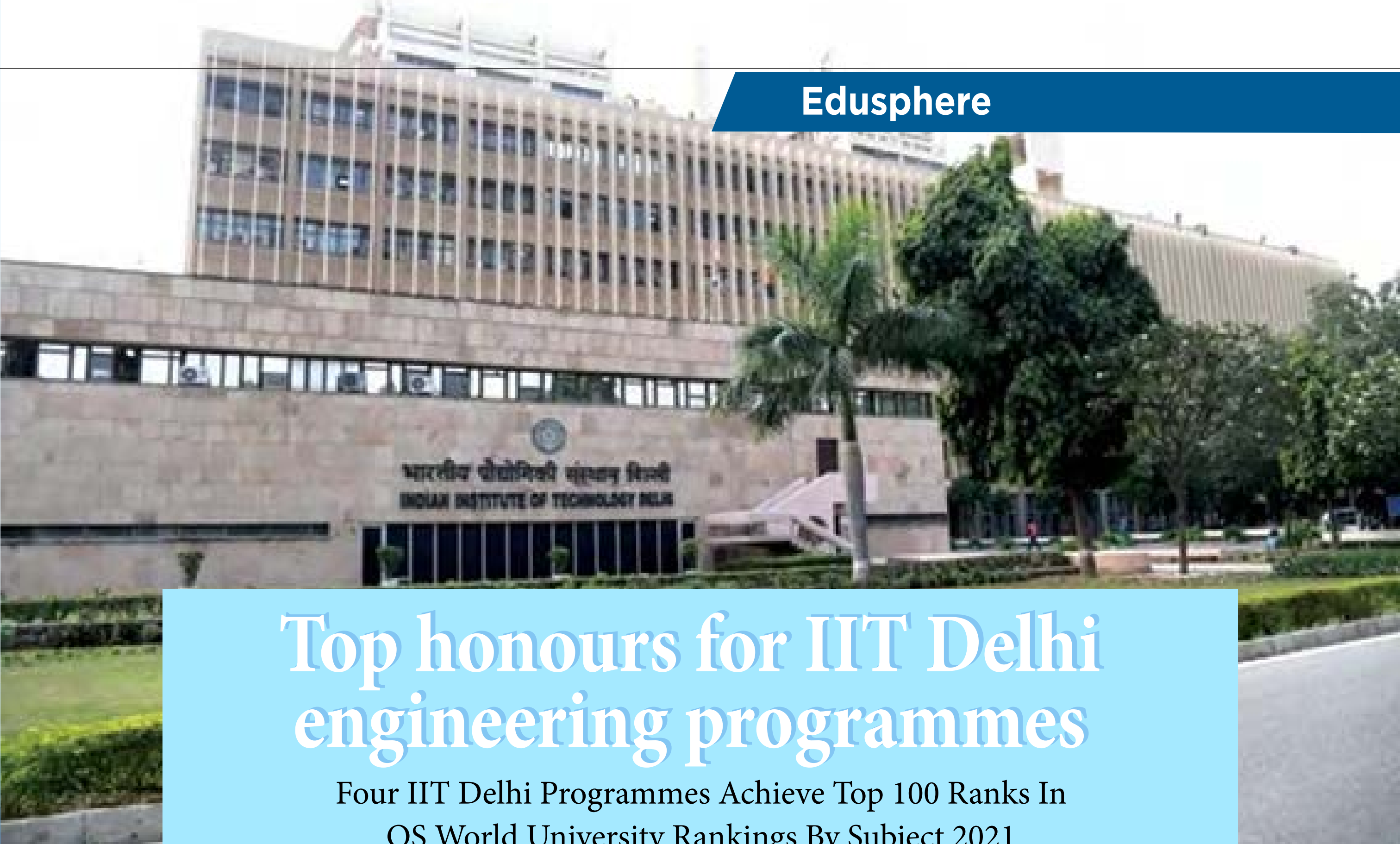
IIT Guwahati researchers develop an efficient method to harvest drinking water from air

Researchers at Indian Institute of Technology Guwahati have developed novel materials that can efficiently harvest water from humid air. A research team led by Dr. Uttam Manna, Associate Professor, Department of Chemistry and Centre of Nanotechnology, IIT Guwahati, along with his research scholars Kousik Maji, Avijit Das, and Manideepa Dhar, has published the results of this path-breaking work in the prestigious journal of The Royal Society of Chemistry.

Scientists have turned to nature to design new ways of water harvesting. For example, in regions of the world with naturally scanty rainfall, plants and insects have devised ingenious strategies to pull and collect water right out of the air. Mimicking this, scientists worldwide are trying to build technologies that can pull out water from thin air, both literally and figuratively. "Such water-harvesting techniques use the concept of hydrophobicity or water-repelling nature of some materials", explains lead researcher Dr. Manna.

Taking a leaf from paddy and cacti which have 'Slippery Liquid-Infused Porous Surface(s)' or SLIPS, the research team produced a patterned hydrophilic SLIP by spraying a sponge-like porous polymeric material on top of a simple A4 printer paper. Further, chemically modulated hydrophilic spots were associated on the coating prior to lubricating with two distinct types of oils – natural olive oil and synthetic krytox. This surface could harvest water from foggy/water vapour laden air without the need for any cooling arrangement.

"We have produced a highly efficient water harvesting interface where the fog collecting rate is as high as 4400±190 mg/cm2/h," says Dr. Manna. Apart from water harvesting, SLIPS could be used for other purposes, such as easily cleanable household appliances, in underwater hulls of ships and submarines to prevent bio-fouling and anti-icing windows for aircraft.



Top honours for IIT Delhi engineering programmes

Four IIT Delhi Programmes Achieve Top 100 Ranks In QS World University Rankings By Subject 2021

Four academic programmes of the Indian Institute of Technology Delhi have come within top 100 ranks in the QS World University Rankings by Subject 2021.

The four IIT Delhi programmes, which achieved top-100 ranks globally are Electrical Engineering, Computer Science, Mechanical Engineering and Civil Engineering. IIT Delhi's Electrical Engineering programme achieved 54th rank (overall score 73.9), Computer Science 70th (overall score 71.3), Mechanical Engineering 79th (overall score 69.3) and the Civil Engineering was ranked in the 51-100 bracket.

The Institute was also ranked among India's top institutions for Electrical and Electronic (1st rank), Mechanical (1st), Mathematics (1st), Statistics and Operations Research (1st), Linguistics (2nd), Computer Science and Information Systems (2nd), Civil and Structural (2nd), Physics and Astronomy (3rd) and, Business and Management Studies (3rd).

Engineering and Technology is IIT Delhi's strongest field and the Institute has been consistently ranked among the top 70 education institutions globally and top 3 domestically in this category

ISRO signs MoUs with 3 institutes

The Indian Space Research Organisation (ISRO) has signed bilateral memoranda of understanding with three prestigious institutes to set up space technology incubation centres (S-TIC) on their campuses.

The incubation centres will come up at the Visvesvaraya National Institute of Technology, Nagpur, Maulana Azad National Institute of Technology, Bhopal, and National Institute of Technology, Rourkela.

Dr. K. Sivan, Chairman, ISRO, and Secretary, Space, said the S-TIC would provide opportunities for final year graduate and post graduate students and research scholars as entrepreneurs. Projects of practical relevance linked to the space missions will be made available at the S-TICs. The research outcome will be translated into a proof-of-concept or prototype through industries within their region, he said.

India's first centralised AC station is ready

Sir M. Visvesvaraya Terminal Railway Station, India's first centralised AC terminal is ready.

Named after Bharat Ratna-winning civil engineer Sir M Visvesvaraya., the railway station has been provided with enhanced passenger amenities, adequate parking spaces, beautiful landscape, and infrastructure.

The Railway Ministry is working to redevelop as many as 123 stations across the country. The Habibganj and Gandhinagar railway stations are set to become the country's first world-class airport-like stations. While the Indian Railway Stations Development Corporation (IRSDC) is working on 63 stations, the Rail Land Development Authority (RLDA) is working on the remaining 60 stations.

According to the Railway Ministry, the total investment required for the redevelopment of 123 railway stations along with real estate development is approximately Rs 50,000 crore as per current estimates.

Morgan Stanley India Infrastructure acquires stake in iBus Networks

Morgan Stanley India Infrastructure has acquired a stake in iBus Networks, which offers in-building wireless solutions, outdoor small cells and other last-mile connectivity solutions to mobile operators, for Rs. 150 crore.

iBus, through its coverage of 277 million sq ft across top 10 cities, serves approximately 4 million customers. The company currently deploys its infrastructure across 233 commercial, residential and retail sites across the country.

The funds raised will be used for business expansion plans, support working capital requirements to scale the indoor wireless coverage to 400 million sq ft in the next few years to cover 7 million people.

India's per capita data consumption is the highest globally with an average monthly data consumption of 11GB per month compared to only 1 GB per month as recently as March 2017. Almost 80% of data consumption takes place indoors where telecom coverage is least adequate and the growth in mobile data consumption and the transition to 4G/5G requires densification of indoor telecom networks.

Alstom to supply 14 more HP locomotives

France-based Alstom will supply 14 more high-power locomotives to Indian Railways from its Madhepura locomotive plant in Bihar by the end of this month.

This is in addition to the 76 locomotives already supplied to Indian Railways by the French major. The Madhepura Electric Locomotive is a joint venture between Alstom and the Indian Railways.

Under the contract signed in 2015, the Madhepura Electric Locomotive will provide 800 heavy-haul locomotives of a total capacity of 12,000hp to the Indian Railways.

Alstom Asia Pacific senior vice-president Ling Fang has said that the Madhepura plant now has the capacity to deliver 20 locomotives in a month, which is almost double the earlier capacity. The company is also looking for opportunities to export the locomotives from India to international markets, he said.

With the capacity to carry 6,000 tonnes at a top speed of 120km/h, these locomotives will be used on the dedicated freight corridors being established by Indian Railways.

TCS bags digital project from construction company Skanska

Tata Consultancy Services (TCS) Ltd has been selected as a strategic partner by leading construction company Skanska to help in its digital transformation.

As part of this multi-year partnership, TCS will leverage its Machine First Delivery Model (MFDM) framework to streamline Skanska's journey to the cloud and help it transition to a more proactive IT model with automated processes, such as a chatbot for support services.

The MFDM framework leverages automation, robotics and artificial intelligence (AI) to help enterprises achieve their business outcomes faster by automating repetitive tasks and enabling humans to move up the value chain.

"TCS will also be responsible for the application management of the company's Oracle Cloud applications across finance, projects, procurement, supply chain, human capital management and analytics planning functions. By moving IT operations to the cloud and driving automation, Skanska's IT employees will be freed up from routine support activities and can focus on more sophisticated, value-adding tasks," TCS said in a statement.

KONE Elevator India Launches iREFRESH Rejuvenated Designs to Elevate User Experience

Every building that offers smooth people-flow with the right choice of elevators that have attractive interiors and that seamlessly merges with its architecture significantly enhances its attractiveness and user perception. With added elevator car interiors, the design-rich KONE I MonoSpace and KONE I MiniSpace now offer a wider range to choose the ideal elevators that add to the ambience, style and class of the building's interiors and exteriors.

KONE has for long been the preferred choice of real estate developers and builders across the country. The company, with its focus on continuous R&D, advanced technical inputs, and emphasis on creating unique aesthetic rich interiors in its elevators, has replenished the design theme of KONE I MonoSpace® and KONE I MiniSpace™ with even more imaginative designs.

These elevators come in themes that are fresh and energetic, and now offer various captivating material finishes to meet the evolving aesthetic demands of the industry. There are 5 natural elements expressed in attractive finishes and 35 car designs to match a building's interiors, namely, SunGlow (Fire), DewDrop (Water), SandStone (Earth), CoolBreeze (Air) and MilkyWay (Space).

New Artistic Finishes for Interiors

KONE I MonoSpace and KONE I MiniSpace designs are now available in more distinct finishes such as Wood Fusion, Art Deco, Stainless Steel and Exotic Motif, apart from the popular Coloured Finish. Each design sets a benchmark for modern buildings with its stand-alone finish, vibrant colour scheme, exclusive pattern, and user-friendly interfaces. The interiors include the following:

- An opulent design style presented in floral, ripple and layered patterns
- Subtle colours carefully chosen for their affinity with the natural elements, and powder coated with finesse at one of the world's most advanced automated paint plants
- The most coveted wood-look finish in alluring combinations with mirror polished stainless steel in tantalizing patterns
- Unique patterns in gold finish, copper tinge, and rich hues
- Classic stainless steel with overtones of tradition and cultural significance

The elevators have been designed to enhance the modern and contemporary look of low, mid and high-rise residential buildings and low and mid-rise commercial buildings. Excellent ride comfort, energy savings, product design, futuristic technology, and impressive aesthetics come together to take the quality of elevator experiences several notches higher for the builder, developer, architect, facility manager and the end-user.

KONE's modern elevators are powered by KONE EcoDisc®, the pioneer in gearless technology that has revolutionized the elevator industry since 1996. KONE I MonoSpace are machine-room-less elevators, while KONE I MiniSpace are compact machine-room elevators, designed to take the quality of elevator experience higher.

SWISH COATINGS

Roof protection is now just a swish away!

If you are thinking of protection from water seepage and heat, look no further. At your reach is Swish Coatings, offering a wide variety of Solar repellent coating, roofing waterproofing compounds, and various other roof guards coating.

Swish Coatings is the answer to many leakage issues faced by the construction industry, especially leakage of buildings through roofs within a short period of time after construction. This might be due to the poor quality of construction materials used or poor construction or extreme climatic variations due to global warming, etc. Heat build-up inside the buildings is another major issue, especially in concrete buildings during summer.

Swish Coatings has a product range that is durable and of high quality. Stringent quality measures ensure that the products are of superb quality. That is an insurance against leakage which can cause further damage to leaking buildings and against heat build-up.

Swish Coatings's Roof Shield, which doubles as waterproofing and solar reflective coating, takes care of leaks and also keeps the surface temperature normal without much variations 24x7. This also minimizes thermal expansion and contraction of the substrate and avoids formation of new cracks.

Being elastomeric, the coating remains intact for years. Most of the products available in the market are made for specific purposes. Thus a customer must look for separate products for waterproofing and solar insulation. But Swish Coatings' Roof Shield is a two-in-one product that takes care of solar insulation as also waterproofing with guarantee.

Roof Shield withstands extreme climatic conditions and the coating doesn't peel off, which is a main shortcoming of most other products available in the market. If maintained properly with water cleaning every 3 months, the coating lasts for years. The life of the coating can be extended by applying a fresh coating over the existing coating. And that saves money!

ROOF SHIELD

Swish Coatings

ROOF SHIELD

(Solar Reflective & Water Proof Coating)

- Surface Temperature Reduction up-to 21* C
- Fiber enriched
- Suitable for all types of Roofs
- Lasts for Years
- Leads to Lower Power Consumption a Saves Money on Electrical usage
- Easy to Apply - Can be applied by brush easily
- Easy to re-coat existing surfaces coated earlier with Roof Shield

Enjoy Cooler Summer & Leak Free Monsoon

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Asween Santhosh

East is India's next infra frontier

The Maitri Setu, built over the River Feni, linking Tripura with Bangladesh, is today a symbol of the massive infrastructure development happening in the North East of India.

When Prime Minister Narendra Modi inaugurated a bridge connecting India with Bangladesh, it marked a major step in the direction of India's 'Look East' policy for infrastructure development.

Named 'Maitri Setu' (Friendship Bridge), the bridge built on the Feni river, which flows between India's northeastern border state of Tripura and Bangladesh, is the result of the country's focusing its energies more on infrastructure development in the north east.

The 1.9-kilometer-long bridge joins Sabroom town in India with Ramgarh town in Bangladesh.

With the inauguration of 'Maitri Setu', Tripura would become the gateway of northeast, with access to Bangladesh's Chittagong port, which is

just 80 km from Sabroom. Efforts are also underway to connect the Chittagong port with northeast India through an alternative river route. The integrated checkpoint in Sabroom will work as a full-fledged logistic hub with warehouses and container trans-shipment facilities.

The 'Maitri Setu' should be seen in the context of the latest World Bank report on the potential that connectivity between India and Bangladesh holds. According to the report, titled Connecting to Thrive: Challenges and Opportunities of Transport Integration in Eastern South Asia, seamless connectivity between Indian and Bangladesh has the potential to increase national income by as much as 17 percent in Bangladesh and 8 percent in India.

The report, which analyses the Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement (MVA), comparing it with international best practices and identifying its strengths as well as gaps for seamless regional connectivity, says that regional policy actions the countries can take to strengthen the MVA, giving priority to infrastructure investments, will help the countries maximize its benefits.

Today, bilateral trade accounts for only about 10% of Bangladesh's and a mere 1% of India's trade. In East Asian and Sub-Saharan African economies, intraregional trade accounts for 50% and 22% of total trade. In fact, it is about 15-20% less expensive for a company in India to trade with a company in Brazil or Germany than with a com-

pany in Bangladesh. High tariffs, para-tariffs, and non-tariff barriers also serve as major trade barriers. Simple average tariffs in Bangladesh and India are more than twice the world average.

Previous analysis had indicated that Bangladesh's exports to India could increase by 182% and India's exports to Bangladesh by 126% if the countries signed a free trade agreement. This analysis had found that improving transport connectivity between the two countries could increase exports even further, yielding a 297% increase in Bangladesh's exports to India and a 172% increase in India's exports to Bangladesh.

Weak transport integration makes the border between Bangladesh and India thick. Crossing the India–Bangladesh border at Petrapole–Benapole, the most important border post between the two countries, takes several days. In contrast, the time to cross borders handling similar volumes of traffic in other regions of the world, including East Africa, is less than six hours, according to the World Bank report.

At present, Indian trucks are not allowed to transit through Bangladesh. As a result, northeast of India is particularly isolated with the rest of the country and connected only through the 27-km-wide Siliguri corridor, also called the "chicken's neck". This leads to long and costly routes. Goods from Agartala, for example, travel 1,600 kilometers through the Siliguri corridor to reach Kolkata Port instead of 450 kilometers through Bangladesh. If the border were open to Indian trucks, goods from Agartala would have to travel just 200 kilometres to the Chattogram Port in Bangladesh, and the transport costs to the port would be 80 percent lower.

All districts in Bangladesh would also benefit from integration, with the eastern districts enjoying larger gains in real income. States bordering Bangladesh such as Assam, Meghalaya, Mizoram, and Tripura in the northeast, and West Bengal on the west, and states further away from Bangladesh such as Uttar Pradesh and Maharashtra would also gain huge economic benefits from seamless connectivity.

However, unleashing the full potential of integration in the region requires strengthening the agreement signed in 2015. Countries need to address a number of challenges such as infrastructure deficits, particularly in designated border posts, harmonization of regulations and customs procedures.

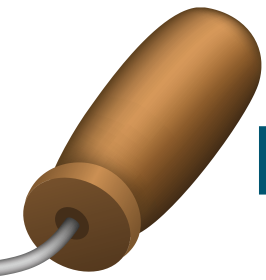
The report recommends key policy actions the two countries should take to strengthen the MVA. These include:

- Harmonizing driver's licensing and visa regimes
- Establishing an efficient regional transit regime
- Rationalizing and digitizing trade and transport documents
- Liberalizing the selection of trade routes

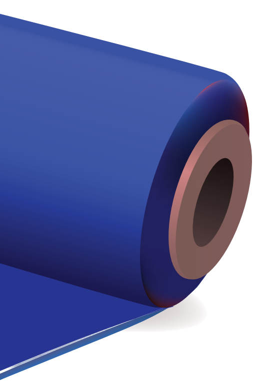
The report also makes the following policy recommendations to improve regional connectivity:

- Standardize infrastructure design
- Expand the effective capacity of core transport and logistics infrastructure along regional corridors
- Ensure competition in transport service markets
- Deploy modern information technology infrastructure at land ports and seaports
- Develop off-border custom clearance facilities in Bangladesh and India

Covid 19



adds to woes of building materials sector



Growth in the building material sector, which has been struggling over the past 3-4 years due to issues like demonetisation, RERA, GST and the NBFC funding crisis, would now need to cope with the COVID-19 impact.

According to ICICI Securities, "The sector's growth, which has already been substantially impacted due to muted real estate growth over FY17-FY20, would possibly witness further deceleration with renovation demand likely to shrink in the near term."

Within the space, we expect the plumbing pipe segment to be relatively less impacted followed by the adhesive segment while categories like wood panel, tile and sanitaryware seem likely to witness further pressures on growth in these testing times, said Nehal Shah, research analyst, ICICI Securities.

Pipes followed by adhesives to be relatively less impacted. Categories like wood panel, ceramic tiles and sanitaryware are largely classified as discretionary spends. They are thus likely to see deferment of demand due to expected decline in renovation/refurbishment activity in the near term due to COVID-19 outbreak.

However, categories like plumbing pipes and adhesives, which are non-discretionary categories (to an extent), may get less impacted in the near term.

While prolonged lockdowns in several states on account of COVID-19 would impact the entire building material sector, the organised plumbing pipe segment is likely to be relatively less impacted due to: 1) the ongoing consolidation in the PVC/CPVC pipe segments (big getting bigger); 2) strong growth in affordable and mid-income housing projects; and 3) sustained replacement (need-based) to the traditionally used GI/CI pipes.

In March 2020, demand in metros and key tier-1 cities has seen some deceleration with calibrated lockdowns, particularly in the second fortnight of the month. "Some dealers are willing to let go of their annual turnover discounts and are instead resorting to destocking or lean inventory citing expectations of demand slump. Also, retail sales is trending lower with less footfalls largely on account of deferment of refurbishment demand, said Jigar Shah, research analyst, ICICI Securities.

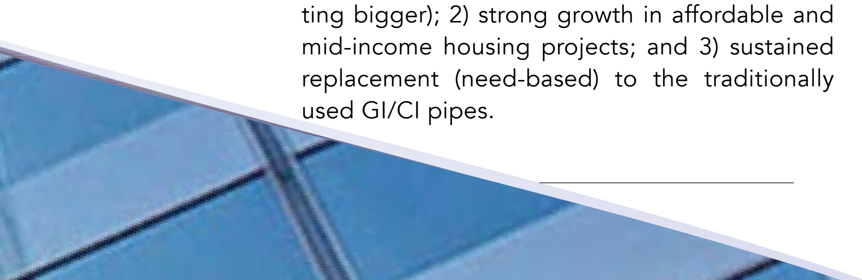
'Cement sector expected to grow by 10%'

The domestic cement industry is likely to witness a growth rate of over 10% in 2021 on account of demand revival, according to ACC Ltd. The government's spending on big infrastructure projects and affordable housing schemes such as Pradhan Mantri Awas Yojana (PMAY) with enhanced budgetary allocations would be "primary drivers of growth" for the cement industry, ACC said in its latest annual report.

The cement industry had witnessed a degrowth of 10-12% due to the Covid-related disruptions. "The outlook for the cement sector in 2021 is robust, with growth estimated at more than 10 per cent Y-o-Y over that in 2020," ACC said. The demand revival is likely to be led by the north, east and central regions, it added.

"The primary drivers of growth will be infrastructure and affordable housing. Highways and roads, metro rail projects and dedicated freight corridors, which are expected to see increased levels of activity with sharply higher budgetary allocations in the next year," it said. The continued focus on affordable housing will also ensure healthy demand for cement in the coming year, said ACC, which is owned by Swiss building materials company Lafarge Holcim.

According to ACC, rural demand continues



to be the silver lining for cement consumption while that from the infrastructure sector was in a slower lane. This was led by agricultural profitability and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). "Infrastructure demand witnessed gradual pick-up from September onwards on the back of improving government spending, coupled with gradual normalisation in labour availability," it added. Moreover, the pandemic has led to slowdown and delay in capacity expansion projects of the cement industry. India is the world's second-largest cement producer with a cumulative production capacity of 540 MTPA in 2020, it said.

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