Achieving High Performance in Construction

IN ASSOCIATION WITH ACCENTURE

Building Systems and Practices that Enhance Productivity

The infrastructure and construction business in India is targeted to be at about 8% of the Indian GDP by 2020. With an annual expenditure of $75 billion and a consistent growth of over 10%, it is the second-biggest economic activity in the Indian economy. A slated investment of $1 trillion for the 12th Five Year Plan amply demonstrates the governmental focus on the sector. There are, however, some loose ends that Indian industry players need to tie up before they are at par with their counterparts in the global industry.

India has its own set of very unique problems which range from labour productivity to government policy reforms and even handling of bids at the macro level. There is a need to collaborate and work towards building systems and practices that enhance our productivity and effectively manage resources. Besides this, sustainability of the environment and civilisation at large is a challenge to be met in the coming years as ecological resources get depleted.

In order to identify the key steps towards High Performance in the Infrastructure and Construction Industry in India, every two years Accenture does a study on leaders in the construction industry. The report helps identify consistent achievers on certain parameters, such as revenue growth. It takes a look at the reasons behind the successes and failures, the challenges faced, the accelerators, and the extent and nature of support the construction industry requires for accelerating towards high performance. This year, Accenture partnered with CIDC (Construction Industry Development Council) for this study. The report identifies some of the roadblocks and brings out the key enablers that drive an entity towards high performance. It shares and disseminates information about the economic parameters, business framework, opportunities, as well as new and advanced technologies used globally. The discussion helped to promote a dialogue between key stakeholders of the construction business, construction and infrastructure finance industry experts and policy makers – to deliberate issues and prioritise focus on key areas.

Speaking at the conference, Dr Pronab Sen, principal advisor to the Planning Commission, the Government of India marvelled at the speed at which the Indian infrastructure industry has come of age. At the launch of the Highway Development Authority at just about the turn of the century, there were not too many players that would be able to take up the challenge offered. Today, Indian infrastructure companies are also diversifying into newer geographies in the construction and development business. He pointed out that over the next few decades, the Indian economy will be creating about 9-10 million jobs a year, of which about 3-4 million will be in the construction sector. But these will be absorbed by smaller players, like the companies that do construction in rural areas. However, at the end of the day, it is not really about size of the company, and this, he assured, was the reason the discussion was so relevant.

Going forward, it would be about 'excellence' not size, when we refer to "high performance". In this vertical, the performers would be those who possess "the ability to do something beyond what is expected of them." At the end of the day, it would be about excellence in ethics, eagerness to grow and perform, and of course, ethics in money. Forums such as this, he said, set the stage for people to emulate success and hence high performance. These things are held as guiding factors.

Accenture in association with The Economic Times had organised a panel discussion on "Achieving High Performance in Construction." The discussion was moderated by Damini Kumari, senior editor, ETNOW, and had distinguished panelist from the industry which included Dr Pronab Sen, principal advisor to the Planning Commission, Government of India, principal author and coordinator of the mid-term appraisals and the plans for the Eighth, Ninth and Tenth Five Year Plans, BD Mundhra, chairman & managing director, Simplex Infrastructures with over four decades of strong experience in the construction industry, SK Goel, chairman & managing director, India Infrastructure Finance Company (IIFCL), Shailesh Pathak, president, SREI Infrastructure Finance, Dr PR Swarup, director general of Construction Industry Development Council (CIDC), recipient of the prestigious Golden Peacock National Training Award 2008 and Sanjay Dawar, managing director, Accenture Management Consulting.

(L-R) – **SHAILESH PATHAK,** President, SREI Infrastructure Finance, **SK GOEL,** Chairman & Managing Director, India Infrastructure Finance Company Ltd., **SANJAY DAWAR,** Managing Director, Accenture Management Consulting, **DAMINI KUMARI,** Senior Editor ETNOW, **DR PRONAB SEN,** Principal Advisor to the Planning Commission, Government of India, **DR PR SWARUP,** Director General of Construction Industry Development Council, **BD MUNDHRA,** Chairman & Managing Director, Simplex Infrastructures Ltd

Given the current state of the economy, the discussion started on a somewhat sceptical note. Large investment industries are finding the going very tough. The rising need to sub-contract and the project management challenges that come up therefore, add to the woes, but also helps achieve success if properly monitored and streamlined. Process, thus, play a large role in the business.

Mundhra commented that in his five decades, he had seen many such business cycles in which things went low and then gradually straightened themselves up. His biggest concern was not lack of money or workers, but lack of faith. Are we willing to come out of the depression? Are we willing to work towards it? The second issue for construction vendors would be the erratic flow of money – would it disturb the ability to take risks or the ability to complete a project and deliver it on time? In India, where most of the equipment is not very technology oriented, perhaps it is time we came up with our own indigenous machinery that could help resolve the slowdown in the flow of finances.

Processes, too, would play a big role if there was talk of expansion and proper project management. But processes need a certain minimum size of the project. So the question was what mattered for excellence? It was about capacities, Dr Pronab Sen said, but the real question was, did the government have the capacity required to lead excellence? A couple of decades ago, government departments were much more capable at conceptualising large projects, but lately, this task has also been given to industry players, which essentially limits capacities.

Given these many uncertainties – money, capacities, men, technologies, how does the equation come together for the Indian industry? What are the realities that the industry players are facing today?

Sanjay Dawar told the gathering that the study threw up the fact that as orders are choking up from Indian markets, there is an increasing trend of geographical diversification. Another key factor that is helping Indian companies stay afloat is that they are subcontracting at the project level. So the risk is spread even thinner.

Dr Swarup added that in a human capital oriented business like construction, there was no formal training available, at least in India, and certainly not at the worker level. Engineers who are trained are not imparted site skills, but only project management abilities. This is a major drawback on the industry players' side.

On the other side, even if a company presents a beautiful concept document and bid, the decision to award the bid takes a long time, simply because the person reading it may not be able to correctly interpret it. The resultant delays in taking decisions alone are costing us as much as Rs 150 thousand crore, maybe more. The companies have no faith that their bid or proposal will get a fair deal, and this is one of the biggest reasons that foreign brands of infrastructure and construction industries globally, are reluctant to touch the shores of India.

The third set of players - the enablers - the bankers, financers, insurers are sometimes not even aware of the real,

on-ground risks involved in the business. Shailesh Pathak added that under the circumstances, even the smaller sub-contractor is not making money, because none is flowing down. This is pressing banks for operational finance, more than capital finance, and becoming the biggest issue facing bankers and financers now.

Risk, added Goel, is abounding in the infrastructure industry. In every infrastructure vertical, there is a huge amount of construction involved, and that pushes up the risk in current situations. In railways, 78% is for construction, 75% of investments in dams is for construction, for roads and bridges about 66% goes into construction. Only in the power sector, construction comes to 35%. But that means if Rs 100 crores is earmarked for infrastructure development, a large part of it goes to the construction industry. As for the Planning Commissions intention of earmarking $1 trillion for infrastructure, distributed into various sectors, between 2012 to 2017, it is debatable how this money will be raised. The only way out may be the infrastructure bonds market, which can be developed to raise this money.

Industry players like Mundhra opined that he would focus on manpower. Agreeing that no institute can train labour formally, he pointed out that it is supervisors and project managers that need to be trained for the successful and timely execution of projects. The average worker who is said to have productivity of 12-15% can touch a 30% mark if trained properly, he added. Dr Swarup disagreed with the productivity figures and said no comparison can be made with other countries where almost all the elements are factory made.

Then the question arises that in the Indian scenario, there are companies that deploy high technology and then

there are the ones that go largely manual, how do the two co-exist? Sanjay Dawar said that finally it was all about economics, what made more money, and how fast. Even those of his clients who are looking at automating, are doing so only for economic reasons, productivity of labour is not the driving factor here. We should see productivity in the context of construction, not only labour.

Dr Sen said that when we talk about infrastructure, at the end of the day the real issue is time. Infrastructure's real return to the economy is how quickly it is operational. Some of the largest works done in India within the shortest time, are marvels of execution. Labour productivity may be low but at the end what matters is, it worked and on time. That's where the whole debate needs to change. What we actually need to be discussing is the facilities required for faster product to market, not the funds or reforms alone. Shailesh Pathak agreed with Dr Sen, adding that in order for projects to be completed within time, they need the best equipment and hence financing.

The PPP (Public Private Partnership) model has been around for a decade now. Does it need a new avatar, because market fluctuations make it uneconomical for contractors? Dr Sen does not agree. He pointed out that in India the success of PPP is really remarkable. In 1999 there was nothing like it, today a large percentage of infrastructure and construction is under PPP. We are still learning, it's an evolving process. From a one way conversation in the P and the P, it is now a two-way street, the private contractors can also make themselves heard.

Mundhra pointed out, contractors only care about the profits in the business, and the model is a far second. However, he insisted that the contract that is drawn up should be interpreted correctly so both parties get their due and there should also be a certain degree of standardisation involved to maintain that fairness. There needs to be a model agreement. Goel stated that as far as the IFC is concerned, it has been mandated to finance 8% of the resources to the PPP model. He also added with the public sector's brand value and the private sector's efficiency, the PPP model is bound to be a success. In some projects, the ownership has to remain with the government and construction etc goes to developers, which also helps minimise risks for smaller contractors or sub contractors.

Moving to the global arena, which would be the best models that could be emulated by India? Sanjay Dawar believes that there is no single model that will be predominant, but a combination that works well. Finally it is the ability to adapt to the changes in the economic environment that will help. Flexibility to make those corrections, depending on the economic situation, is what is important but that is unfortunately not happening. Dr Swarup also pointed out that in the current situation, banks and institutions are also not playing the trigger mechanism for driving contracts and hence growth.

Despite weaknesses like these, the industry is looking up in India, why is there a need to go global? Mundhra thinks, any company would want to expand into other geographies, especially since businesses have their seasons and India is going through a lean season right now. But what is important is we will go where the work is, and where we can sell our services. As he sees it, this crisis is only for a few more years, for another 20 years India will be a good market.

Is land acquisition one of the key challenges facing the infrastructure and construction industry in the country? Dr Sen thinks it is not just this industry, land acquisition is the issue facing the larger industry. But while this does delay the launch of a project, it cannot hamper the project itself. It is the clearances and compliances that do and they are a much larger issue.

Dr Swarup felt that there are a few things that we have done very well. The fact is that the Indian construction industry is pretty robust and has been taken cognizance of. If trained workers are an issue, some companies do claim to have training institutes, but that is not enough. CIDC has initiated the concept of training workers at the site. But then, as Dr Sen pointed out, most companies are using labour contractors, so who is being trained? There is a bit of a twist there, Dr Swarup said, the workers are actually kept on the parole of a supplier, to handle tax and other situations. These people are raw, big companies train them using their own people. After the project gets over, they go back to their parent company.

As far as financers are concerned, training was a facility to be provided. Shailesh Pathak told the gathering that the NSDC has given SREI Infrastructure Finance Rs 100 crore to train a million people. The group has 28,000 e-governance centres. These can be then utilised according to skill sets required.

Mundhra felt that the right people to be trained should be the person who is going to manage the project, so that he knows how to do it and what technologies can be used. They need to be trained before they come into the industry. He said he had requested a number of educational institutions to train students so that they can contribute to the infrastructure and construction industry, but most do not have a detailed exposure to all aspects - skills, technologies, financial planning and timeline planning. That is why CIDC and the Working Group has recommended that there should be compulsory one-year curriculum probation for interns. While there is a huge requirement of this education, training capacity has to be there for the 9-10 million workers that will be needed in the next ten years.

Drawing from his experience, Mundhra's very frank and clear inputs summarised the expectations of the sector. He pointed out that the biggest problem is, that we lack planning at all levels - there is no land acquisition planning, neither is there any calculation of financial cash flows, nor for what can go wrong. Even after planning, it has to permeate at the micro level, but it doesn't. There will also be a need for very good hedging and risk management processes to help in the survival and growth of smaller players as well.

The other part of the picture is financing, which is essential, without which operational efficiency is of no use. Overseas diversification is essential especially since India is going a bit dry right now. In addition, the contractual systems in place today, the PPP norms need to be reworked in a manner that makes them profitable for both the sub-contractor, the government as well as the worker. Should these things be taken care of, there will be no reason why India will not find a place in the global infrastructure and construction industry arena.

EXPERT SPEAK

DR PRONAB SEN,
Principal Advisor to the Planning Commission, Government of India

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SHAILESH PATHAK
President, SREI Infrastructure Finance

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B D MUNDHRA
Chairman & Managing Director, Simplex Infrastructures

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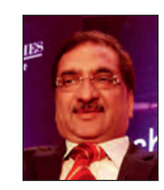
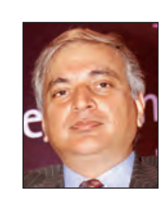


S K GOEL
Chairman & Managing Director, India Infrastructure Finance Company

There is no doubt this region will also develop. How can we remain undeveloped when the east and west is developed?

DR P R SWARUP
Director General of Construction Industry Development Council

The Indian worker has a manual job ahead, so there really cannot be a percentage put to his productivity, it is like comparing inches with centimetres.



SANJAY DAWAR
Managing Director, Accenture Management Consulting

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Long-term Outlook Appears Very Positive

The construction industry plays an important role in the development of a country's infrastructure, which is a key engine of economic growth. Its significance to the Indian economy can be gauged by its growing contribution to gross domestic product (GDP) - from 5.1% in 2001-02 to 7.9% in 2010-11.

Over the next decade, India will continue to be among the fastest-growing countries in terms of construction output. While globally, the construction market is expected to grow at 5.1% and 4.7% during 2010-15 and 2015-2020, respectively, in India it is expected to grow at 9.9% and 7.6% during the same periods. By 2020, India is expected to emerge as the world's third-largest construction market. Key drivers enabling growth for the construction Industry in India are as follows:

- Increased infrastructure spending: Under India's Twelfth Five Year Plan (2012-17), investment of more than $1 trillion is expected to flow into infrastructure. The construction industry, which will account for a substantial portion of the proposed investments in infrastructure, stands to gain the most.
- Increased urbanisation: Underinvestment in housing and urban infrastructure has resulted in a substantial pent-up demand. This, coupled with growing urbanisation, is expected to drive growth in the construction industry.

While the long-term outlook for the construction industry appears very positive, concerns have been raised about its immediate future. Rising interest costs, stagnating orders, a slowdown in new government projects and an increasing number of stalled projects are just some of the challenges the industry is facing today.

Against the backdrop of India's economic slowdown and the impediments to growth mentioned above, Accenture and CIDC surveyed senior executives at leading engineering, procurement and construction (EPC) companies, project developers and financiers. The objective was to identify the key priority areas, critical roadblocks and interventions expected from the government in the construction and infrastructure industry.

Overall, the C-suite executives identified four top priorities:

1. Building order pipeline,
2. Achieving operational excellence in existing projects,
3. Ensuring capital efficiency
4. Focusing on key enablers.

Building order pipeline

Building the order pipeline with forays into new markets and sectors is the topmost priority for the construction industry. While the industry saw order books grow by 15-20% in terms of value in fiscal year 2011, it has slowed in the first half of fiscal 2012.

- **New markets:** Nearly 60% of respondents felt the need to look beyond Indian shores to new markets such as the Middle East, Africa and Turkey. The preferred entry strategy for these overseas forays was joint ventures, said 63% of respondents. They felt that partnerships with local incumbents help mitigate risk in a hitherto untapped market.
- **Diversification:** 37% felt that diversifying into new sectors is the best way to ensure growth. Companies are looking to expand their construction and development activities across sectors for better margins and growth. Further, given the cyclical nature of the construction business, diversification helps in mitigating risks to sustainable growth.

Achieving operational excellence

In a highly competitive market where margins are constantly under pressure, greater efficiency is key to achieving profitability. In the survey, Accenture asked the respondents to name the top three factors contributing to operational excellence. Project management excellence was identified as the most important factor by 88% of respondents. Leadership qualities and the ability to navigate through the complexities, conflicts and challenges associated with a typical project were consistently highlighted as key factors for success in project management.

Superior engineering and design leveraging concepts such as standardisation and 3D modeling were identified as critical enablers.

Ensuring capital efficiency

In past years, secondary market volatility forced companies to turn to high-cost debt to fund their projects. With interest rates showing no signs of falling soon, highly leveraged organisations are now worried about servicing their debt. This scenario has impacted project execution, with a number of projects suffering from schedule and cost overruns due to delayed payment and working capital issues.

Focusing on key enablers

Talent, knowledge management and technology emerged as the areas that organisations are focusing on to drive superior performance.

Talent: There is an acute shortage of experienced project managers, design engineers, planners and skilled construction workers. It is commonly felt in the construction industry that the education system needs an overhaul to be able to produce the talent the industry needs. Some leading construction companies are partnering with organisations such as CIDC to develop the skills of their workers whereas others have invested in their own skill training institutes.

Knowledge management: Nearly 60% of respondents felt that to improve their capabilities, organisations need to adopt industry best practices. Documenting and sharing failures and near misses provide invaluable lessons for project teams across various verticals.

Technology: Respondents agreed to the growing importance of technology as a key enabler. Technology has helped businesses create a virtual environment for collaboration in which all partnering entities can be integrated on one platform. This can result in improved overall project delivery, efficiency, asset operability and cost control through enhanced data and information transparency.

Roadblocks to growth

The CIDC-Accenture study has also identified the key roadblocks challenging the huge growth potential in the Indian construction industry. Perpetual problems such as lack of equitable bidding norms, ambiguous and widely differing land acquisition laws, and delays in project execution have bogged down the industry players.

Conditions as well as clauses of the bidding and contract documents strongly influence bid evaluation and the subsequent performance. About 55% of respondents cited the lack of equitable and standardised bidding norms as an important challenge.

Bidding procedures for government tenders, for example, fail to weed out low-quality, unrealistic quotes, thus compounding the problem of projects being stalled due to the lack of competency or funding at a later stage.

About 45% of respondents felt that projects were delayed due to numerous reasons such as lack of project management capabilities, lack of engineering and design capabilities and issues related to environment and approvals.

Industry leaders also felt that there is a strong need for reforms in the arbitration laws to reduce project delays due to disputes.

Removing Roadblocks

To accelerate the pace of growth in the construction sector, the industry needs to persuade the government to implement reforms and help remove the major roadblocks faced by the sector. The respondents listed some steps that the government could initiate:

The government should modify existing land acquisition and rehabilitation legislation, which balances the needs of various stakeholders without compromising on the quality and velocity of projects. Stringent qualification criteria should be put in place at the time of tendering as well as for bidding. There is a need to draft model contracts aligned to global and local best practices, with the underlying principle of being equitable.

The government should establish more monitoring cells on the lines of the investment tracking system planned by the finance ministry for all major projects in the private sector, as well as for public-private projects with investments larger than a reasonable threshold.

A robust mechanism for fast and efficient dispute resolution should be put in place. This should be aligned with international best practices and institutional arbitration system.

Financing of large infrastructure projects with long gestation periods remains a significant challenge. Industry leaders believe that the government needs to focus on two key interventions-creating an environment to attract investments and structural reforms to enable long-term financing.

On an overall industry level, recognising and honoring skilled workers, projects and organisations for their contribution to the industry should be explored as a way to strengthen the talent pool.

Finally, promoting sustainable infrastructure and green construction through policy changes and incentives will be a key imperative as India develops it's infrastructure for future.

Conclusion

Volatility in today's business environment is making it necessary for construction companies to rethink their business models. Building a robust order pipeline with forays into new markets and sectors is the top priority to achieve growth. At the same time, companies will need to continuously focus on operational efficiencies to maintain margins. Project management, superior engineering and design, and efficient procurement of resources will be the essential levers for operational excellence.

The Accenture study concludes with the belief that in the current business environment there are three main building blocks of success: market focus (requiring agile positioning to capture revenue), excellence in delivery (to improve profitability) and performance enablers (centered on a culture and mindset that will sustain success, with a focus on enablers such as talent, organisation and technology). Firms that achieve all three will successfully differentiate themselves from competitors.

Given its pivotal role in the creation of infrastructure, as a regulator and a facilitator, the government must play a proactive role in fostering an enabling environment for growth.