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## Overview of India's Infra Sector

The Infra sector is responsible for propelling India's overall development and enjoys intense focus from the government for initiating creation of world class infrastructure. The new government has taken positions with key infrastructure ministries and we believe that implementation will begin soon as BJP's manifesto has promised an investment of ₹100 trillion for infrastructure development in the next five years.

A number of large infrastructure projects are expected to be initiated, apart from the under execution projects like the Smart City Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Water Supply and Irrigation Projects, Roads & Highways, Metro Rail, Sagarmala and Bharatmala schemes, Swachh Bharat Mission, National Mission for Clean Ganga, River Development & Interlinking, power sector initiatives like Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Ujwal Discom Assurance Yojna (UDAY), Integrated Power Development Scheme (IPDS), Unnat Jyoti by Affordable Lighting for All (UJALA), Sahaj Biji Har Ghar

Yojana (Saubhagya) for the development of power transmission, distribution and rural electrification.

It is projected that India will become the third largest construction market globally by 2022 and will require an investment of ₹50 trillion (USD 777.73 billion) in infra development. Sectors like power transmission & distribution, roads & highways, renewable energy and drinking water supply will drive investments in the coming years.

There is a paradigm shift now from government-funded projects to newer business models involving partial or complete ownership of



42 MLD Sewage Treatment Plant, Kanpur



160 MW Ramgarh Power Project, Rajasthan

the private sector as the government is making efforts to create an environment for sustainable and proactive involvement of private players in the form of hybrid annuity, PPP and other formats.

But some key challenges need to be addressed: these include investment gaps, funding issues, land acquisition and environmental clearance, lack of coordination between various government agencies, inappropriate structuring of projects, lack of proper dispute resolution mechanism, payment and execution delays, old methods of construction, lack of adoption of innovative technologies, etc. It is also possible that projects may fail or be terminated for reasons such as changes in government policy,

failure by the developer or the government to perform their obligations, or due to external circumstances.

### Challenges

With the advent of modern technology and digitization of systems, technical and managerial competency is critical in ensuring timely execution of projects and optimum performance upon commissioning. However, compared to other industries, the productivity improvements in the construction sector have been meagre as the sector has been slow to adopt the new technologies and tools.

Infrastructure projects require specialized technical expertise during the project's construction stage as well as post construction O&M phase. Construction companies are struggling to find the requisite technological and digital talent and people with broader

skill sets (at all levels) to use sophisticated technology, tools and machineries. This is delaying the execution of large and complex projects and making the companies suffer delays and penalties.

SPML Infra has been implementing innovative concepts, technology and sustainable solutions. Our in-house engineering team undertakes constant R&D to provide the best engineering solutions without compromising on quality and for bringing down construction and operational costs. We are providing regular training to our workforce to keep them up to date with the latest technology and skill sets. This initiative has helped in creating a pool of technical resources for future projects.



3000 MM Dia MS Sauni Pipeline, Gujarat

## Artificial Intelligence & IoT

Construction projects are becoming increasingly complex and expensive, putting managers under greater pressure to improve costs, timelines, and efficiency. By providing advanced software, construction-focused hardware and analytics, many of the problems afflicting the construction sector can be eliminated, including difficulties in compiling and sharing project information. This is because technology is creating new applications and tools that are changing how companies design, plan, and execute projects.

The liberalization of policies and regulations as a deliberate strategy by the government to promote infra development for sustained economic growth, is yielding good results. There is a huge demand for constructing large and more complex projects with precision and in shorter durations. The advent of advanced technology for transportation, intelligent logistics, faster mobility and project tracking with smart phones is making project execution more efficient.

Construction companies are applying advanced analytics and machine learning to capture both structured and unstructured data to optimize decision making for multiple topics, including workloads, staffing levels, and strategies for minimizing inefficiencies. Drones and IoT are being used for project monitoring and to create digital representations of physical structures. Drones capture site images for precision surveying, safety compliance and aerial survey data, while IoT helps in monitoring equipment and preventive maintenance. Data and vital information are easily available on real time basis for making swift amendments and decisions.

Augmented reality, drones, 3D scanning and printing, Building Information Modelling (BIM), autonomous equipment and advanced building materials – all of them have now reached market maturity. By adopting and exploiting these innovations, companies

can boost productivity, streamline their project management and procedures, and enhance quality and safety. To capture this potential, the industry players must make concerted efforts across all aspects - from technology, operations and strategy to personnel and regulation.

At SPML Infra, we are using modern technology interventions to execute our projects in a faster and better way, and with rapid solutions for any issues that may crop up during execution.

## Order Book

SPML Infra has recorded a gross revenue of INR 20,766.83 million during financial year 2018-19, and registered a healthy profit after tax (PAT) for the year at INR 397.33 million. We also have strengthened our competitiveness for water infrastructure business with the pre-qualification limit of INR 12,000 million to bid for single large value water projects. Our expertise in above 3,000 mm dia pipeline projects will help us in executing high value irrigation pipeline projects. In the power sector, SPML Infra has the experience of executing 220 kV GIS Substation and 400 kV - 500 MVA Autotransformer that will help us to bid for 400 kV and 765 kV substation projects. The experience of electrifying more than 20,000 rural villages will be helpful in future rural electrification projects.

At present, SPML Infra has an order book of approximately INR 60,000 million. With the new government in place, we expect that several new schemes for infrastructure development will be initiated for drinking water supply, irrigation and power transmission & distribution. The 24x7 urban water supply projects in Delhi and in 6 cities in Karnataka is helping 1.5 million people with clean drinking water. Among the large power distribution projects, SPML Infra is executing 16 number of the 132/33 kV power substation projects in Tripura being funded by the World Bank. We are also looking forward to completing the smart city development project in Ujjain, a project under the Delhi Mumbai Industrial Corridor scheme.



Water Intake at Gagreen Dam, Rajasthan