

Smart and Sustainable Infrastructure

What is the present condition of infrastructure?

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- During 20th century, crippled infrastructure was a commonplace.
- Now, a near 100% electrification has been achieved.
- Similar developments occurred across other sectors, like highways, airports and ports.
- Over the period, the government actively encouraged **public-private partnerships (PPPs)** tapping into the capital pool and efficiency of the private sector.

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Is the attempt to bring in private successful?

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- Nearly one-third of the \$450 billion investment in the 11th Plan period came from the private sector.
- In the 12th Plan, half of the more than \$1 trillion investment is expected to have come from the private sector.
- By taking over the government's obligations to the tune of \$500 billion, India Inc. has enabled the state to use such resources towards poverty alleviation programmes. This is apart from the 50 million jobs that the sector has created.

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What are the challenges the infrastructure sector face?

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- The challenges that the sector faces includes the **laws surrounding land acquisition**. Land records remain archaic, even establishment of ownership takes years of litigation.

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- The process consumes considerable time and energy on the part of developers, and often leads to **delays and overruns**. So, in order to improve the current situation, the government should give land issues topmost priority.

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- Financing and refinancing norms should be addressed on priority too to enable India Inc. to take up newer projects.

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- Other challenges, including **clearance delays**, have been addressed adequately by the government, and the time taken to obtain clearances has come down sharply in recent years.

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What are the opportunities?

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- Having made significant progress in the creation of basic physical infrastructure, now the approach should move towards smart and sustainable infrastructure.

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- Sustainability is expected to be key for new capacity addition in the power sector. Buoyed by the National Solar Mission, we can expect the solar-installed capacity to touch 100 GW. A similar push towards wind and mini-hydel plants is also expected.

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- In the power sector, we have reached a point where the deficit is well within the manageable limits. **The focus now has to shift to demand-side management**. Starting with the AT&C (aggregate technical and commercial) loss management, to monitoring household and other consumption.

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- There are a lot of opportunities in the application of smart grids that can integrate the entire spectrum—generation, transmission and distribution—to achieve optimum results.

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- The private sector is expected to take the lead in setting up mini-smart grids

in India. The 100 Smart Cities Mission is going to change municipal administration — be it for traffic, water or waste management.

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- Cutting-edge technology like the **Internet of Things** (IoT) finding application in solving complex real-life problems. The integration of physical infrastructure and virtual infrastructure presents interesting opportunities for the private sector.

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Source: Live Mint

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