

INTERNALISING INFRASTRUCTURE

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Urban India is beset with severe infrastructure deficits. While, on the one hand this has led to secular decline in quality of life for the average urban citizen, on the other it is causing severe disruption in commercial and industrial activities. Due to chronic shortage of financial resources and other bottlenecks, we must accept that these deficiencies will remain for the time being. It is thus necessary that we have a *denovo* look at the way we plan infrastructure provision and to think of alternative and more sustainable way of providing the same service within the given constraints and bottlenecks in urban India.

The key and foremost issue while designing, self-sustaining, infrastructure plans is to decided on the type of land. Most of our problems with water procurement and water disposal are due to our disregard to these issues while selecting land. The logic that normally prevails among planners is to opt for flat and barren land. This is in isolation of issues relating to other infrastructure requirements like water, solid waste management, sewage, storm water drainage, etc. The planners end up designing roads, which are higher than mother-earth level. This necessitates construction of plinths higher than the road level. All this leads to avoidable investments.

Take the prevalent rationale of designing water supply and sewage disposal. It was the traditional practice not to intermingle kitchen and bath waste with the sewage. These were separated right at the origin. Sewage was disposed off through percolation into the soil through pits. The underlying principle was that the kitchen and bath wastewater was non-pathogenic. The pathogenic wastes were treated differently. Plantation of wide leafed plants such as Banana and Papaya took care of the gray water. Thus, there is a need to evaluate our practices. Let us combine our ancient wisdom with modern know-how.

As a solution the kitchen and bath waste can be safely discharged into the open storm water drain that exists everywhere. Let there be storm water drains, which are open-jointed rather than cemented to allow the wastewater to percolate. This process would help to make the environment green through more plants and richer soil. This would also allow parks to be the central focal points around which a neighbourhood would be developed.

Another area so far unexplored is waste percolation in the soiling layer of the soil. A natural slope in the road would enable wastewater flow. This is due to the fact that buildings are built with plinths higher than the road. Wastewater can easily be discharged under the roads into the soiling layer, through leaking pipes, thus providing for wastewater disposal that is not exposed. Further, there will a natural flow of water resulting in less blockages and overflows.

There is also a serious contradiction in our planning strategies to roads and drainage systems. Roads require a minimal slope and drainage requires steel slope and there is no need to combine the two, that is, run them along each other. This would reduce costs and make drainage more effective.

Internalizing infrastructure is the need of the day where all aspects and related issues of infrastructure are considered simultaneously while selecting land. The objective is to combine the costs and flow of various infrastructure facilities to aim to make them self-sustaining and

recyclable to the extent possible. Of course, this would be done within the international norms of hygiene. Not only would it save costs but also result in a more eco friendly and green neighbourhood, thus enhancing the quality of urban life. This would be a step in the right direction to achieve sustainable cost effective development given the existing constraints and bottlenecks.

In my view while we should continue to talk and plan mega infrastructure projects for the present and future, it would not be wise to ignore the minor and simple idea, which more often than not provide the solutions. Proper attention and planning during the project development itself would go a long way in resolving many of the immediate concerns.