

Case 25

India

Road Sector

Thiruvananthapuram City Improvement

Sreejith Narayanan

Thiruvananthapuram City Road Improvement Project

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Public Organization, managing the public interest: Kerala Road Fund Board

Private Organization, developing the project: Thiruvananthapuram Road Development Company Limited

Capital Providers, financing the project: IL&FS Transportation Networks Limited

Why is this project a Case Study for PPPs:

The first PPP project in the country for Urban Infrastructure Development and has been completed successfully with accolades from various National and International Organisations

Why is this project a Case Study for PPPs based on SDGs:

This Project has demonstrated a very high degree of sustainable principles and assets resulting from pragmatic assessment of design and application on the ground

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Context:

- 1) Describe the communities and the environment before the project started:** Narrow roads, increasing traffic, hap hazard parking, lack of safety measures, very low level of maintenance leading to high level of public dissatisfaction.
- 2) The context that lead you to wish to improve quality of life for those communities:** The State of Kerala had already built solid social infrastructure. Leveraging on this, there was an opportunity to elevate the public to demand better quality infrastructure, thus there is also a demand for sustainable development for roads and other facilities. Increasing population & traffic density compounded the need.
- 3) How did you relate “quality of life improvement” with “infra gap”:** Faster movement of vehicles using GPS enabled traffic signals adequately met the threat of congestion in the roads resulting in over 13% year on year growth in vehicle population. Added to this, significantly improved pedestrian safety with segregated pedestrian friendly foot paths, arboriculture to provide necessary shade, improved greenery and professionally designed junctions were sufficient to convey to the public that planned, improved infrastructure provides a substantial elevation in quality of life
- 4) A short description of the infra solution imagined:** Wider and profile corrected (geometric and vertical) roads, continuous footpath for pedestrians without cutting for property entrances, signalised junctions, storm water drains, quality road furniture, bright standard signs, road markings and landscaping and arboriculture and sustained professional maintenance of all these providing a clean and bright environment for years to come.
- 5) What made you think about a PPP solution:** Kerala being a deficit budget run state, EPC mode of construction will incur huge burden on the Government. On the other hand, better infrastructure attracts more investment which was the need of the hour for the Government. Sustained maintenance and upkeep was another concern for the Government which gets resolved through the PPP model.

Strategy:

- 1) How was the concept designed, which parties approved the project start up :** The project concept was developed to include the best possible road and related infrastructure on par with internationally accepted norms. To make it easier for finding necessary funds, a PPP model was considered. Since the transition from existing facilities and existing mode of delivery would be drastic, the Government deliberated and decided to invoke the Indian Road Fund Act of the Government of India and constitute **Kerala Road Fund Board** through which the project would be delivered.
- 2) What were the main topics studied on the feasibility phase and what made you decide for PPP solution:** The prime task was to weed the trees from the forest: i.e. to decide which roads were to be included in the project. Origin and Destination studies were conducted for assessment of traffic volumes, land use was mapped and a balance was struck between need and possibility. In view of deferred payment facility and assured level of service in maintenance, PPP route was resorted to.
- 3) "Closure" involves all contracts needed to start the development phase, mention the most important contracts signed / to be signed, namely the financial closure and steps to first disbursement :** The MoU between the Concessing Authority and the Concessionaire was as per draft memorandum approved by the Planning Commission of India and along the FIDIC lines. This gave necessary comfort levels to the Consortium of banks in the public sector for funding the project.
- 4) Development concerns the phase of transforming or creating a new asset; describe how you managed to combine: respect for quality, delay and budget:** The overall goal was improving the infrastructure and quality of life of people. The route used to achieve this was only next in importance to the goal itself. In times of distress or difficulty, the deciding factor has been achievement of the goal rather than the cost implications. This attitude has helped maintain quality paramount and subsequently address the issues of delays and budget concerns.
- 5) Exploitation is about providing a public service and improving the quality of life; describe how do you manage operation & maintenance, revenue stream and guaranty quality of public service :** Since TCRIIP is an Annuity project , revenue stream is pre-determined and definite. However, this being an urban project, unpredictability of available work fronts and complexity compounded by presence of a huge number of utility service providers demand continuous inspection, stringent planning and meticulous delivery of service.

Project KPI's:

- 1) Where is located, the area covered by the project, how was the access to the "land", and what were the main permits obtained / needed to develop the project :** 42.08 kilometers of roads in Thiruvananthapuram city were implementing the project. Since land acquisition deferred from 30 cm to 9 metres, the process of Land Acquisition had to be fool proof and meticulous to avoid challenge in the court of law and subsequent delay or redesign of specific reaches. Since this is a Government project, no special permissions were required other than stringent control by the Labor department of the Government of Kerala on the wages paid to local and migrant workers, health and insurance facilities and facilities and amenities meted out to the labors.
- 2) Describe the main lines of the budget: Capex, Opex and Revenue Stream :** As the project was executed through an EPC contractor initially and by developing number of locally available contractors subsequently, the budget was kept on a need base basis keeping government in confidence. Under the operations phase, it is ensured that there is no cost over run by utilising locally available resources.
- 3) Describe the finance structure: equity, mezzanine, debt and guarantees used :**

Equity	Amount (INR Million)
ITNL	684.10
Debt	
Loan from Banks/ FI's	1833.75
Total Project Cost	Rs 2,367 million

Describe the main milestones of the project namely: pre development, development and exploitation :

The land acquisition was the most demanding task in the development of the project. As the platform from where the land acquisition would take off was the justification acceptable to the land commissioner and a justifiable compensation to the owner of the land being acquired. The process of land acquisition proceeded flawlessly . Thus land acquisition was the main milestone. The next milestone in the project was bringing utility service providers such as water supply, power, telecommunications to the discussion table and impressing on them the need to plan and prepare for any activity.

How did you communicate the project with the community to obtain their support :

Direct one-to-one contact was initially established with schools and other educational institutions and residents associations in the project areas. The project benefits were communicated, which was then taken up by the media.

In view of acceptance by the public as well as the media, the political fraternity also supported the project cutting across political lines which is one of the significant success of the project.

Key Milestones	Date
TRDCL SPV formed	2004
Signing of Concession Agreement	March 16, 2004
Supplementary Agreement	May 1, 2009
Lease / Sub Lease Agreements	
EPC Contract Awarded	
Land Acquisition Completed by Govt.	
Financial Close	
Commencement of Construction	
Commercial Operation begin	
commissioned	

Impact on People & Planet:

- 1) **Does the community perceive the quality of life improved?** Yes, the people residing in the city have experienced a drastic change from the older infrastructure and have started raising requests for similar quality of infrastructure in other areas too. Also, they have shifted their morning walk to these roads and are also using the new roads, as much as possible, for travel.
- 2) **How do you measure it today ? Is it about arriving faster to destination? Having utilities available on a 24 hours basis? Spending less on utilities? Having better facilities and services on education, health, justice, security? Did it have an impact on other public services not directly linked to the project developed?** Utilisation of footpath for almost carefree morning walks, improved sense of road discipline such as stopping for signals, a distinguishable improvement in lane discipline. Absence of traffic congestion in spite of phenomenal increase in the number of vehicles on the road, very few road cuttings for utility laying, reduction in accidents and an attitudinal change in cutting trees for road development where arboriculture and landscaping are included are significant manifestations of the change on account of TCRIP.
- 3) **How do you measure the eco foot print of the project?** We had to cut 374 trees as per the Project Report and was supposed to plant 1234 trees and nurture it to full growth. However we have planted close to 2200 trees and 600 more are under process. Added to this, we have landscaped every extra bit of land which was available after utilising for the road and footpath which comes around 3 Acres and have created lush green traffic islands totaling to an area around 1.6 Acres. We have also planted local fruit bearing bushes bringing back many birds that have not been seen in the city for a long time. By altering the composition of footpath from tile-on –mortar to polymer coated interlocking blocks, the project has ensured harvesting of copious monsoon rains and ensuring recharging of the ground water. By utilising solar powered signaling systems TCRIP has saved on at least 15KW power consumption per month.
- 4) **Please describe impact, using the 5 Ps (people, planet, prosperity, partnership and peace) :** Road Infrastructure based on 5 Ps for the users of the urban road for the first time in India

No.	Sustainable Development Goals	No impact	Some impact	High impact	Describe impact
1	end poverty		✓		We have created at least 2.25 lakh man days of work for unskilled labour and close to 1.2 lakh man days of work for skilled labour contributing close to Rs. 3,700 Mn to the local economy
2	end hunger		✓		
3	well being- healthy lives		✓		
4	quality education	✓			
5	gender equality	✓			
6	water and sanitation for all	✓			
7	affordable and sustainable energy	✓			
8	economic growth and decent jobs for all		✓		Better infrastructure leads to better economic growth and increased investment
9	resilient infrastructure, sustainable industrialisation, foster innovation		✓		
10	reduce inequalities within and among countries	✓			
11	cities inclusive, safe, resilient and sustainable			✓	Represents the complete goal of the project which has been achieved
12	responsible consumption by all		✓		Have been able to bring about attitudinal changes
13	combat climate change		✓		Increased greenery and changing footpath specification to allow water percolation
14	take care of the earth			✓	
15	protect the ocean	✓			
16	peaceful and inclusive societies, justice for all, accountable institutions at all levels	✓			
17	mechanisms and partnerships to reach the goals			✓	Awareness creation in public domain has helped the success of this PPP project

Escalating the (Case Study) project:

- 1) **Can we replicate the project within the country?** Yes, the Ministry of Urban Affairs has already given instruction to replicate the project in other major cities in the Country. The Government of Kerala has already started work in other cities adopting the same model and approach to execution. This project was an eye opener for the government that using private capital Urban road networks can be developed when organizations like ITNL prevail!
- 2) **Can we replicate the project globally?** Yes, this is a replicable project for developing countries as the financial burden and the responsibilities are partly shared by the Private firm and the Government and people become the major beneficiaries. Also in places where there is a high level of public activism.
- 3) **Can we extrapolate the experience to other sectors?** Yes, Extrapolation to other sectors have already been taken up in the state for construction of different infrastructures from fish markets to multi-crore projects like International football stadium, Bus stations and other major structures. The fundamental objective being public good, the route taken to achieve the goals can be replicated to other sectors.
- 4) **Describe the main key success factors for escalation?** Transparency, commitment (includes financial support), sincerity, pragmatism, and patience.
- 5) **Describe what should be avoided in future projects?** Responsibilities of the Government to see the project through should be better defined for the benefit of both the Government as well as the Concessionaire. This will avoid unnecessary delays due to lack of cooperation between various Government departments.