Sri Lanka: Integrated Road Investment Program

Setting the Scene: The Innovation Opportunity

In the past 2 decades, Sri Lanka has made great strides in reducing poverty. However, this progress has been uneven across the country, and disparities persist, in particular in rural communities. Improving access to markets can go a long way toward ensuring that the rural areas share in the country’s prosperity. However, harvests can only build prosperity if they reach the market. Suboptimal transport infrastructure, particularly poorly maintained provincial and local authority roads, has so far made it extremely challenging to improve rural livelihoods through trade.

Sri Lanka has a dense and well laid-out network of more than 117,000 kilometers of roads, providing basic access for the country’s population. However, improving provincial and rural roads has been slow going. The challenge is how to match the progress that has been made in developing the trunk road system with similar improvements to provincial and rural roads that connect to the trunk roads. In addition to these much-needed improvements in infrastructure, management capacity also needs to be enhanced to ensure that the value of rehabilitated road infrastructure is preserved with sustainable maintenance.

What ADB Did: Innovation in Action

In 2014, the Asian Development Bank (ADB) approved an $800 million multitranche financing facility, the Integrated Road Investment Program (iRoad), to the Government of Sri Lanka to improve road conditions between selected rural communities and socioeconomic centers, and to enhance the capacity of road agencies to better manage their road assets. A second iRoad was approved by ADB in 2017, bringing an additional $900 million multitranche financing facility. Counterpart funding was provided by the Government of Sri Lanka for program implementation. The two programs combined are a huge and complex undertaking. Ensuring that Sri Lanka gets the most out of the project funding called for innovative ways to approach both construction and project management.

Key Innovations
Several key innovations ensured iRoad built on the success and lessons learned from ADB’s previous engagement in Sri Lanka’s road sector, including the Southern Transport Development Project, which was approved in 1999.

Clear selection framework
A key part of iRoad was a clear framework for subproject selection. The program identified rural hubs with at least 50 families, basic utilities, educational and health facilities, and other factors.
supportive of development potential. These were then connected by the access roads to the areas with a high level of socioeconomic activity. This transparent approach helped garner the support of stakeholders. Post-construction impact analysis also demonstrated its contribution to local economic development.

A community approach to road design
Another critical feature of iRoad is the way in which it is building a sense of ownership among the rural communities for road improvement projects in their area. This community participation is achieved through a process called context-sensitive design, which addresses local requests and concerns at the planning and design stage, as well as during road rehabilitation and maintenance. This was a departure from typical road development projects by ADB, which are more top-down and dominated by engineering and technical experts. iRoad ensured strong community engagement throughout the program cycle. Context-sensitive design can be successful only when all parties realize the strategic importance of community engagement, consultation, and information sharing in all phases of project implementation.

Capacity building at all levels
Other than financing road construction, iRoad also supports the national Road Development Authority (RDA) to enhance its management capacity and transfer knowledge to local agencies. For example, the RDA had a comprehensive road asset management system, and the first iRoad supported the expansion of the system to cover provincial and local authority roads funded under iRoad. This should improve sustainability after roads are improved. iRoad also supported the development of the rural road design manual, piloting of new pavement design, enhancement of financial sustainability, and exploration of other research and development activities.

Project management
The RDA had a challenge: how to simultaneously oversee more than 50 contracts comprising more than 2,000 roads all happening at the same time across a huge geographic area. With ADB support, the RDA created a digital platform to house all program documents and updates. The tool dashboard shows the program’s overall financial and physical progress based on the monthly update by subproject engineers. It also has dashboards for progress by province, district, and subproject package (Figure). The data updating process is both user-friendly and secure, with authentication mechanisms in place so that only those with relevant program roles can modify the data. The system also incorporates a mechanism to log complaints and recommendations from the public, submitted via a web-based app.

Key innovation takeaways
Transparent selection criteria lead to clear economic benefits
The selection criteria for iRoad were clearly and explicitly linked to economic development. This meant that all stakeholders had a shared understanding of the project’s purpose, which in turn helped ensure the project was well supported by the affected communities.

Make community engagement the norm
For iRoad, it is a mandatory requirement for project designers, planners, and engineers to engage in community consultations and information sharing. This can be done through various means, including pre-project walks in project areas, focus group discussions with community members, individual interviews, and grievance redress meetings. In this way, not only can affected communities express any concerns and present their requests, but they can also share their local knowledge, particularly on environmental aspects, with the project designers, planners, and engineers.
Invest in capacity building
At every level, from national to regional and down to local villages, iRoad has never just been about construction. The sustainability of the program outputs relies on improved institutional capacity to adopt the practices demonstrated in the program, uphold rigor in program selection processes, and maintain the strong sense of community engagement.

Make the most of digital tools
The sheer size and complexity of the construction undertaken under the program meant that only a digital platform could effectively keep track of it. The key to success was designing the platform to be user-friendly, both at the data input end and for those using the platform for project monitoring. The program also made ample use of other digital tools, such as geographic information systems, to map the program areas and also to monitor their impact.

Program Voices from the Field

“Before, schoolchildren had to wake up very early to go to school, as it took at least 2 hours. Now, everyone can save time as well as money using this road.”
N.G.A.I Jayawickrama
project beneficiary

“Several years back there had been a plan to build a clinic in this village. Because of the difficulties of this road, it has not been successful. I think now we can build the clinic. Also, we can now attend to our duties efficiently, saving time. I’m very thankful to everyone who helped improve this road for us.”
L.D. Maduwanthi Saman Kumari
village midwife

“Before the road was improved, our buses broke down frequently. Now I can do eight trips per day.”
Harsha Saman
bus driver

“Our main problem was transportation of goods; now we can do it very easily. Most of the villagers are working in this estate. They faced many difficulties while traveling to this estate. Now we can provide more vehicles to the factory. Things have changed and we can improve our business; now, I think our turnover will increase.”
Weerasekara
rubber and tea estate manager

Faces of Impact: Yang Lu, transport specialist, and Aruna Uddeeptha Nanayakkara, senior project officer (transport), both of ADB’s South Asia Department

Q: How important was the use of context-sensitive design?
A: Local communities may not necessarily welcome the road, and they sometimes see its disadvantages. This can lead to delays and carries reputational risk for ADB. Context-sensitive design incorporates the needs of local communities in a systematic manner. If people have requests, they can ask, for example for a road to be slightly realigned, or to incorporate erosion protection, which can help ensure the local communities’ support.

Q: Is context-sensitive design work difficult to put into practice?
A: The program team needs to go to the various program sites anyway to do measurements, but if they go a bit earlier, they can also talk to the community and organize meetings through community leaders. Then the contractor finalizes the design with the community. There are typically a lot of requests, and the contractors try to accommodate those that are reasonable and within the project scope. If a project is designed well, it won’t need to be rectified later. We think this approach is replicable.

LEVELS OF INNOVATION
INTEGRATED ROAD INVESTMENT PROGRAM

Incremental innovation
improving on existing products, services, approaches, or processes, i.e., doing what is already done, but better

Disruptive innovation
“shakes things up” or subverts previous approaches. Instead, using approaches that are new in the country context or are a demonstration project.

Transformative innovation
shifts the whole system over time to new viable approaches by scaling disruptions, new approaches, and pilots.

**Q: What are you doing to measure the impact of iRoad?**

**A:** We see projects fail from time to time because they don’t benefit society and the economy. One thing that made iRoad successful is that it had a very clear road selection procedure based on what really contributes to economic development. To compare areas with and without iRoad, we used nighttime light data as a proxy for economic activity. We found statistically significant improvement in areas with iRoad intervention, which demonstrated the program’s impact on rural development.

**Learn More**

**Project documents:** Integrated Road Investment Program
Second Integrated Road Investment Program

**Videos:** iRoad Southern Province Highlights 2019
The Journey of Integrated Road Investment Program in Sri Lanka
https://www.youtube.com/watch?v=9DXi2H_NFrA.


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**South Asia Innovation Project Brief Series** captures and disseminates knowledge on innovation embedded in ADB’s operations in South Asia. This series promotes cross-project learning, improves project design and implementation, strengthens the understanding of innovation needs and trends, and enhances development effectiveness of ongoing and future projects and south-south knowledge cooperation. The South Asia Department administers the series. Please contact SARDKM@adb.org.

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