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Envisioning, Empowering and Re-engineering the Sri Lanka Land Transport;

Interview with
Dr. H. R. Pasindu

Interviewed by
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Realizing his passion for the Transport Engineering discipline at a young age, Dr. Pasindu has had an illustrious career in the Transport industry, as an academic, an avid researcher, a consultant to some of the mega transport projects in Sri Lanka. Dr. Pasindu is currently serving as a Senior Lecturer in the Transportation Engineering Division of the Department of Civil Engineering at the University of Moratuwa. He also serves in the capacities of a Council Member at the National Council for Road Safety, and a Council Member of the Asian Pavement Engineering Society. He is also the Vice President of Highway Engineering Society in Sri Lanka.

For this edition of Link Magazine, as the Sectoral Committee Chair of Land Transport at CILTSL, he discusses with us his journey and the journey ahead for the Sri Lankan Land Transport sector, shedding light on some of the key issues in the industry, proposing both short term and long-term solutions.

projects that were carried out in Sri Lanka since I returned to the island in 2012. The Central Expressway Project, Ruwanpura Expressway Project, LRT Feasibility Study, New Kelani Bridge Project, Kandy Multi-modal Hub Project, Railway Feasibility Studies, Port City Traffic Study are some of the key projects I was a part of. I was able to contribute to the formulation of the National Transport Policy and the National Road Safety Strategic Plan for Sri Lanka.

Moreover, working as a Senior Lecturer at the University of Moratuwa and being able to contribute to the growth of the Transportation Engineering division within the Department of Civil Engineering is something I can be content about. At the Transportation Engineering division, our progress has been significant during the last decade. Some of the key achievements of the division during this time period include, securing funding and developing a pavement research building, addition of three new laboratories and now we have a total of 5 laboratories functioning under the Transportation Engineering division. We have increased the postgraduate research student numbers significantly and they are carrying out their research studies in these labs. This year, we had the highest intake for our Master's degree program (in highway and traffic engineering, transportation). At undergraduate level, we introduced Transportation Engineering stream under the Civil Engineering degree program from this year onwards, including offering new modules in Railways, Airport Engineering and Intelligent Transportation Systems. We were also able to hold the Transport Research Forum, annually from 2011 onwards and were also awarded the hosting rights for two International Conferences in the Transport sector.

Q. Looking back, what is the proudest moment in your career?

A. Obtaining my PhD from NUS could be considered as a significant milestone in my career, since that paved the way for a lot of opportunities.

The decision I made to return to Sri Lanka and join University of Moratuwa was something that I always wanted to do when I decided to pursue a career in academia.

Q. We would like to know your journey from childhood to university.

A. I studied at S.Thomas' College, Mount Lavinia. I got selected for University of Moratuwa in 2003 where I completed my B.Sc. Eng. Hons degree in Civil Engineering in 2007.

Q. You have chosen academic scholar as your career. What inspired you to make that choice?

A. Transportation Engineering was different to the traditional disciplines of Civil Engineering such as Structural Engineering or Hydraulics, in a way it had a multidisciplinary nature, even at a basic level of application. Also, it had quite a varied scope in terms of sub disciplines ranging from Traffic Engineering, Highways, Transport Planning, Railways, Transport Safety, Airport Engineering etc. At that time, the Expressway Project had started, and my final year research was also on a topic related to "Expressway Operations and Management" under the supervision of Prof. Saman Bandara (former CILT President). All these factors got me interested in the Transportation Engineering discipline.

After the completion of my Bachelor's degree, I decided to pursue postgraduate

studies in the Transportation Engineering related area. I was in contact with potential supervisors in a few universities that I was interested in applying to discuss research topics. In 2008, I accepted the scholarship offered by the National University of Singapore (NUS) to pursue my doctoral studies.

Q. What are the key highlights of your career?

A. The experience as a Research Scholar at NUS provided me with a good foundation for my career as a researcher and as an academic. The network I was able to establish with my colleagues at NUS who are now working as academics in various universities all over the world has helped my career immensely.

I was also happy that I got the opportunity to work at the Land Transport Authority (LTA) of Singapore. Although I resigned after 1 year since I decided to join my alma mater, University of Moratuwa as a Lecturer, the experience at LTA was invaluable, especially being in a Singapore Government organization. Their work culture and the attitudes of the higher management was particularly impressive.

Furthermore, I am quite pleased to be a part of most of the major transport

Q. According to your perspective, research, and consultancy experience in the industry, what are the key challenges we face in today's development of Land Transportation in Sri Lanka and what solutions do you propose for those challenges?

A. The biggest challenge is empowering the stakeholder organizations to implement the solutions identified through various studies, strategic plans, etc. There is no shortage of ideas to solve the existing problems. However, what is lacking is the implementation of such ideas with efficiency. We have been stuck in a cycle of feasibility studies and reviews for well over two decades now, especially in the Public Transport sector. I note that some of the agencies responsible for those projects do not seem to take ownership of the project implementation.

We have made good progress in the expressways development and improvements in the national roads as well as the rural roads. Governments over the past two decades have invested heavily in these areas and we must acknowledge the effort of the Highway Ministry, Road Development Authority and the Provincial Road Authorities for the implementation of these projects in a timely manner. This is what I was referring to when I said the implementing agencies should take ownership of project implementation and come up with a mechanism to get the projects moving.

If you look at it sector wise, I will just highlight the key challenges that should be given priority and for some of these, feasible solutions have already been proposed.

Urban transport - We need to decide on the way forward for Railways as an urban transit mode, should we invest in rail-based alternatives (LRT or conventional railway) to take bulk of the urban transport demand or are we going to tinker around with options based only on bus transport and urban road development projects? Evidence from any major city and studies done thus far in Sri Lanka suggest that we must invest in rail to make any significant impact on shifting private vehicle users to public transport to manage congestion. However, the responsible authorities are indecisive on this. When we have an efficient urban rail transit system in operation, the supporting systems such as feeder bus networks, bus priority schemes, integrated traffic management systems, park and ride schemes etc. can be developed. What is discussed is relevant to the Western region based around Colombo and the suburban cities.

For major cities such as Kandy, Kurunegala, Gampaha, Galle, etc. a similar urban transport and land use plan should be developed, some of which have already been developed. Therefore, it is a matter of execution of those plans.

Road safety - We need to identify key areas of intervention to reduce road crashes and related fatalities. Motorcycle riders, pedestrians are the main victims of road crashes. A more systematic approach to address the causal factors contributing to these must be adopted. Some of the rural road infrastructure development do not address safety issues. Our road safety strategies are based on ad-hoc, subjective decision making, and it is not evidence based. Fortunately, the background work for this is in progress, Sri Lanka Police with the support of WHO, is improving the crash data recording and management system, University of Moratuwa is also involved in an advisory capacity in this initiative. The National Road Safety Council has put together an action plan targeting these specific issues, which hopefully if we get adequate funding can be implemented.

Sustainability of the infrastructure investments - As I stated earlier, we have invested a lot on road infrastructure. One issue is that this would significantly increase the recurrent expenditure to maintain these at desired level. If we allow these to deteriorate because of poor maintenance the expected economic benefits would not be materialized. Therefore, we need a comprehensive asset management system as well as identification of cost-effective construction methods for our road infrastructure to ensure the funds allocation is carried out in the most efficient and effective manner. I note that this is more relevant for the local roads (low volume roads) which constitute more than 80% of the road network. If we are not careful with this, we will be running into more debt to finance the maintenance needs of these roads. We need to invest in research and development to find alternative materials for the road construction and introduce new specifications such that these can be used in construction which will reduce the depletion of natural resources and impact on the environment.

Freight transport - Cost of freight transport must be reduced, and the reliability of freight distribution must be improved. Identification of the types of goods that can be transported via rail and development of the necessary infrastructure and operation system is something that can be done in the short term. I think that the Ministry is looking at this issue now. Shifting more freight vehicles to the expressways is also critical, our expressways are still underutilized when you look at the freight vehicle composition. The next challenge is the reduction of the transport cost of agricultural produce. The entire supply chain is affected and as a result, both the farmer and the consumer are at a greater disadvantage. Perhaps, this is an area where we haven't identified feasible solutions yet, and the relevant Ministries must take the initiative in finding solutions with the support of the industry and research institutions.

Q. Compared to the other countries in the region and in the world, the Sri Lanka Transport sector lacks digital integration across modes. What do you think are the reasons for this and what measures have the educational and administrative institutions and the rest of the Government institutions have taken towards developing this area?

A. Digital integration is good if you have the supporting infrastructure and operations in place. Right now, we are not quite ready for it. In Singapore, of course you would have the smart card for an automated fare collection method which you can use across different transport modes such as MRT, bus and even taxi. Also, the information availability for trip planning using different modes is facilitated by different applications and online portals, which is very important for public transport users. Even the google maps can be used since the necessary data is available on time.

Although there have been several attempts in Sri Lanka to introduce such a system, I am not optimistic about this being implemented across different modes in the foreseeable future, unless regulations are improved especially for the bus sector. Transportation Engineering Division at the Civil Engineering Department of University of Moratuwa collaborated with the National Transport Commission to add the intercity bus transport data into the Google Maps and projects of such caliber should be improved further at least to improve the information availability of departure time and alternative routes for public transport users.



Q. You are a Council Member of the National Council for Road Safety (NCRS). Although the work done by the Council is commendable, the nation still loses many lives and experiences many traffic accidents and incidents on the road. This has been a bane to the economy as well to the welfare of the society.

Q. What are the reasons for the high number of accidents?

A. There are many factors which have been identified and NCRS and the Ministry of Transport are in the process of addressing these issues. We have a high percentage of vulnerable road users involved in road fatalities and that is the biggest concern. Lack of driver training is one major weakness, our license issuing process needs an overhaul to improve the standards of the driver training and evaluation, pedestrian infrastructure needs to be given priority when developing roads, road safety awareness among the public is still inadequate, enforcement level is inadequate since the Police does not have the sufficient resources. Furthermore, the road worthiness of the vehicle fleet may also be a reason. It is important to note that these are generalized factors, actual causation for different types of road crashes should be identified based on the statistics available for the crashes.

Q. What are the measures taken by the NCRS?

A. NCRS has now been able to finalize the action plan for the next 5-year period, which is a good start. Discussions are underway to obtain funding from donor agencies to some of the projects and we have got favorable responses thus far and NCRS funds are allocated to other projects. Some of the initiatives include expanding the Sri Lanka Accident Data Management System to two more Provinces within the year, rural road safety improvement schemes, conducting safety audits in accident black spots, developing programs to improve training and awareness targeting specific user groups.

Q. What are the measures that can be taken by the different stakeholders in the industry?

A. This is one of the major hurdles in the implementation of most of the safety initiatives. When the action plan was developed, there were more than 20 stakeholder state institutions that were identified as implementing agencies. Therefore, coordination between institutions that come under different Ministries, with different levels of resource availability and budget allocation is not an easy task. Hence, there must be an initiative taken by the relevant Ministries to at least provide necessary budget allocation for the identified projects, where the implementation is done by an institution under the Ministry. The question that is always raised is why aren't we improving road safety, but have we allocated sufficient funds and given priority to road safety improvement projects? Unless there is a commitment from the Government the improvements we can achieve will be marginal. It's a bit similar to investment at the national level for Research and Development (R&D). We are lagging compared to other countries due to years of neglect in these areas.

Q. What is the duty of the public?

A. All groups have a responsibility in ensuring the improvement of the road safety in the country. If the public is disciplined enough to follow the road rules that would go a long way in creating a safe road environment. Also being considerate about other road users, is also important.

Q. Where do you see Sri Lanka Railways in another 10 years of time?

A. It is no secret that Railways had the least growth during the last 20-30 years. Unless there is a significant modernization of the railway infrastructure, investment in urban rail transit, there would not be much change in their passenger volumes or modal share.

Also, the Railways Department must look at alternative sources of revenue to improve the financial performance. For example, Indian Railways had planned to increase its non-fare revenue share from 8% to 20%. Do we have such targets? Another example can be taken from Singapore, where one of the main bus and rail operating companies has their advertising and rental income equivalent to nearly 14% of their total revenue. The Railways Department owns some of the best real-estate in Colombo and suburbs. Are they realizing the full potential of those assets? If you look at a MRT station in Singapore or any major city, you will see the integrated land use developments that have been developed with the transport infrastructure. Imagine the potential of the Sri Lanka Railways Department if they can get over all the administrative constraints they might have and figure out how best to utilize those assets.

Q. What is your overall vision for the Land Transport sector in Sri Lanka? And what role do you intend to play in that vision?

A. In the short term, it would be the implementation of the strategies

identified up to now. It is especially challenging now due to the financial issues in the country and with the national debt level, further borrowings would increase the debt servicing requirements in the future. So, phasing out the transport sector investments and prioritizing them is vital.

As a long-term vision, the Land Transport system should aim at meeting the mobility needs of the people and facilitate distribution of goods in a cost effective and efficient manner. At the same time, we should ensure safety of all road users, minimizing environmental impact through meeting the relevant emission reduction targets and be financially sustainable.

As an academic, we have the responsibility of training the next generation of engineers who would take the lead in implementing these strategies to ensure we are heading in the right direction. Also, our research should focus on addressing these issues and identifying practical solutions.

Q. How have you seen the growth of CILTSL and what direction do you see it going in the future to aid the progress of the Land Transport sector in Sri Lanka?

A. CILTSL has made tremendous growth as a professional organization. They have reached out to most of the educational institutions that are offering Transport and Logistics sector related academic programs. Also, the CILT has expanded its focus on Land Transport sectors such as road safety, by doing more awareness programs. Hopefully, these will result in more professionals from those sectors being part of CILT.

CILT's role in the Land Transport sector should be focused on advocacy, especially on matters such public transport reform, road safety, where I believe CILT has a major role to play. Furthermore, CILT can contribute in an advisory capacity on the Transport sector Policy formulation, even now one of the Council Members is involved in the Transport sector Policy Review process, and that engagement should be a continuous process. CILT can build awareness on the issues through seminars and symposia since they have a good network and develop Continuing Professional Development (CPD) programs to improve the knowledge among professionals in the sector.

Q. As an experienced professional in the field of Land Transportation, what advice would you give to the young membership at CILT/WiLAT/YPF?

A. Transport sector is a very dynamic field, and it needs to adapt to different challenges that emerge, be it environmental regulations, financial issues and now due to the COVID-19 pandemic related complications. Therefore, for early career professionals you also need to be updated with the latest developments and improve your knowledge and skills to be in line with what the industry demands. Thus the CPD programs are very important to keep you engaged in the process of continuously learning and improving yourself. There are a lot of options now with several online learning platforms available so they should pursue those options. Similarly, involvement with professional organizations is beneficial in this aspect as well.

