

Urban transport needs a dedicated service cadre: Prof. Ashish Verma

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When there is much debate on the state of roads across Karnataka, especially Bengaluru, Prof. (Dr) Ashish Verma, convener of the Sustainable Transportation Lab at Indian Institute of Science, lists out various factors why bad roads characterise Bengaluru and where we are going fundamentally wrong. In an interaction with The New Indian Express, he advocated a dedicated transport body to address traffic woes. Excerpts...

Let's begin with the burning issue: potholes in the city. How bad is the situation?

It is, of course, very bad for every person who uses roads. A sum of Rs 1,100 crore has been earmarked to fill potholes, but they will reappear in no time. Will the government spend over Rs 1,000 crore again? This is actually an issue of the circular economy. Money is spent, potholes appear again, people start complaining, the government allows pressure to build up, and earmarks another chunk of funds for it. Again, and again, and again.

Why is it a persistent problem in Bengaluru?

Is Bengaluru the only place on earth with blacktop roads? No. Is Bengaluru the only place on earth where it rains? No. There are many places around the world where this happens, but roads there are good. But here, while repairing, certain fundamentals are not being taking care of, which is why these potholes reappear. Potholes occur when stagnant rainwater erodes bitumen, the binding agent which holds the elements of construction together. We need adequate drainage. If the fundamentals are taken care of, which all civil engineers are taught, a road could last up to five years without any maintenance. But the present method is a colossal waste of money; it is deliberately done.

Are any roads done according to acceptable standards?

Wherever water does not stagnate after rain, you can assume standards have been followed.

How much of research and findings are shared with the government?

Everything is shared. Directly, as well as indirectly, through the citizens and media. Everything is open source. Every bit of my research is published and empirically focused. It's not merely theoretical, it's practical as well, accounted for by real-world data.

Is there any instance where the government has considered your research?

The government has considered our research in pockets. One example is pedestrianising Church Street, where we developed and demonstrated how we can see the larger dimension of quality of life. It has become good evidence, not from any foreign country, but our own city. Currently, we are studying the public health impact of using the Metro Yellow Line. In our sustainability lab at Indian Institute of Science (IISc), we have developed a national-level and city-level transport Sustainable Development Goal (SDG) index to explain how much the transport system contributes to achieving SDGs.

There seems to be little synergy between academia and policy makers. How can research translate into practical solutions in urban transport?

One key issue is fragmentation of urban transport. Different modes are managed by separate agencies — BMTC handles buses, BMRCL handles Metro, and K-Ride handles other services — making seamless integration nearly impossible. Even in Mumbai, a single Metro line can have multiple operators. To address this, we need a dedicated urban transport cadre to bridge research, policy and implementation. I have raised this with MPs, and discussions are ongoing. Without such coordination, even well-researched ideas struggle to translate into practical solutions. Cities like Zurich, where all transport modes operate under one authority, demonstrate the benefits of integrated planning.

What is the solution for Bengaluru's traffic?

It's a very complex topic. Everyone has a different opinion about the problems and their solutions. I used to be a civil engineer, but I have long forsaken that lens while looking at mobility problems because it is unsustainable; it is not going to provide long-term solutions. Our quality of life is going down the drain. As our Gross Domestic Product (GDP) growth moves ahead, what does this mean in hard numbers? From our approximate per capita GDP of \$3,000, we want to go to at least \$18,000-20,000 per capita to be even called a developed economy. There is a huge gap with European countries, with per capita GDP of \$60,000-80,000.

What is the correlation between GDP growth and mobility?

A lot of rich economies have seen a strong correlation. India's ratio is 26 cars per 1,000 population. The United States has 800 cars per 1,000 population, and any other developed economy would have 600-800 cars per 1,000 people. Different countries have taken different paths. Despite being prosperous, Singapore has only 120 cars per 1,000 population, and it has remained so for decades without any increase, due to its policies. Singapore has decoupled car ownership. However, Bengaluru, which is way behind Singapore in terms of per capita income and development, already has 165 cars per 1,000 people.

What is the Singapore model of transport management? Is it essentially about financial gatekeeping — making people pay more?

The Singapore model is built on a system of push and pull measures, creating a fine balance between restrictions and incentives. It goes beyond financial deterrents on car ownership by simultaneously investing in efficient public transport, walking, and cycling infrastructure. The model recognizes that no single measure works in isolation — schemes like Delhi's odd-even policy failed because households simply bought additional cars.

By contrast, Singapore's integrated approach succeeds because it combines restrictions with attractive, reliable alternatives.

In India, cars are often seen as a status symbol rather than just transport. How have other countries shifted away from this mindset?

Countries like The Netherlands have decoupled wealth from car ownership — despite being rich, 50-60% of people cycle daily. This change comes from treating commuters as consumers and reshaping their mindset through culture, infrastructure and awareness.

But the government says it is a constitutional right to buy whatever you want to develop and grow...

Nobody is talking about banning vehicle ownership — people have the right to buy what they want. But we can make ownership difficult and expensive. Treat every commuter as a consumer and nudge their choices. It's about guiding behaviour, not restricting freedom.

Do you think GST rates coming down will increase the demand for vehicles?

When aiming to shift people from private vehicles to public transport, we must focus on balanced trip sharing. Incentivizing vehicle purchases or expanding road infrastructure like tunnel roads or double-deckers only encourages more private vehicle ownership and usage, ultimately working against sustainable mobility goals.

So if we have to start somewhere to set things right, where do we?

What Indian cities need is an equilibrium of trips. Through our research, we can say that 80 per cent of trips in Bengaluru should happen through public transport, plus walking and cycling, and the remaining 20 per cent on private vehicles. The moment we talk about walking, people say footpaths are encroached. They question whether we have dedicated cycle tracks, and where the buses are. This cannot be achieved overnight. But by doing the right things at the right time we can reach there -- starting from how you govern urban transport, policies influencing the mobility system, to infrastructure planning leading to achieving the above equilibrium and traffic management. All these layers are tucked together. However, in each of these layers, there are fundamental problems.

Can you list out the fundamental wrongs and provide solutions?

There are many fundamental wrongs in the way we handle urban transport. Our country needs a separate dedicated service cadre on urban transport, just like other specialised service sectors. There is a huge lack of capacity and technical capability. Imagine for a city like Bengaluru, we don't have a single transport planner. Things are handled by people who are not supposed to handle them. I personally think that organizations like Metro rail or bus corporations should not be led by bureaucrats. Take ISRO as an example — it's chaired by a scientist, not a bureaucrat, because bureaucrats lack the expertise. Urban mobility is even more complex than rocket science. Bureaucrats often head these organizations for short stints, without gaining enough technical understanding. Also, traffic management should not be the responsibility of police; it should be handled by dedicated transport departments. Police should focus on traffic law enforcement. Deciding where to place signals or creating one-way streets is a complex task that requires expertise.

What do you have to say about the Tunnel Road Project?

We've spent months simulating the impact of the proposed tunnel road, analyzing traffic patterns, emissions, and scenarios with and without tolls. With a toll of Rs 17/km — around Rs 600 daily — it's unaffordable for most, even well-paid professionals. Our model shows the tunnel would operate at just 10-20% capacity, serving mainly the ultra-rich and VIPs, while the Outer Ring Road remains severely congested.

What about delays in completing Metro and suburban rail projects?

This is a classic case of misplaced priorities. If road projects can be fast-tracked, so can Metro construction — instead, Metro and suburban rail projects are being sidelined. Planning future Metro corridors around double-deckers is a suicidal move by BMRCL. It reduces its prospects by making car travel faster and more direct. Our simulations show Metro ridership could drop by 6-20% across multiple corridors, due to misguided infrastructure choices.

Is it a doomsday kind of story?

All Indian cities, especially Bengaluru, are going to see a bleak future. When I say bleak future, it will lead to a degrading quality of life, overall.

Is Bengaluru a heart patient on whom a carpenter is operating?

Yes, Bengaluru is a heart patient. It's on ventilator but we are giving the wrong medicine, which is only going to make the condition of the patient worse.

If you look at Bengaluru's history 40 years back, does the current infrastructure seem to be imposed on a city which was not ready?

When asked about Bengaluru's future, I always say — look into its past. The city was highly liveable, with pleasant weather and the ease of cycling.

But sudden, unplanned growth turned it from a small city

into a large one without transition, overwhelming its infrastructure. Now, instead of endlessly building roads, double-deckers, or triple-deckers, we need to leapfrog to sustainable solutions.

Will creating five transport corporations improve the system?

Not necessarily. Splitting one flawed system into five corporations doesn't fix the underlying issues. It merely divides the responsibility without improving functionality, as each will inherit the same outdated processes and inefficiencies.

Why has the plan to develop five townships across Bengaluru not progressed?

The idea of decongesting Bengaluru by creating multiple townships remains largely on paper. Urbanization is heavily skewed toward the city because economic opportunities and population are concentrated here. One key reason for this imbalance is inadequate connectivity. A decade ago, I suggested that a network of high-speed trains across Karnataka could spread urbanization and economic opportunities to other regions, reducing pressure on Bengaluru. Without such infrastructure, townships and regional development plans remain unrealised.

If you had to suggest five quick solutions to improve traffic and roads within six months, what would they be?

Short-term improvements can be low-cost, yet effective:

1. Improve road geometry: Make roads uniform, like a pipe of consistent diameter, for smooth traffic flow
2. Enhance workmanship: Improve road surfacing, quality of footpaths and general infrastructure
3. Traffic signal optimization: Use simulation models to scientifically test and implement signal timings
4. Channelize junctions: Redesign junctions for better traffic management, revive well-functioning circles instead of converting them into underpasses or flyovers
5. Prioritize low-cost interventions: Focus on practical, effective measures rather than high-budget projects that civic bodies often favour