



# Pedestrianisation In India and Across the Globe





# introduction

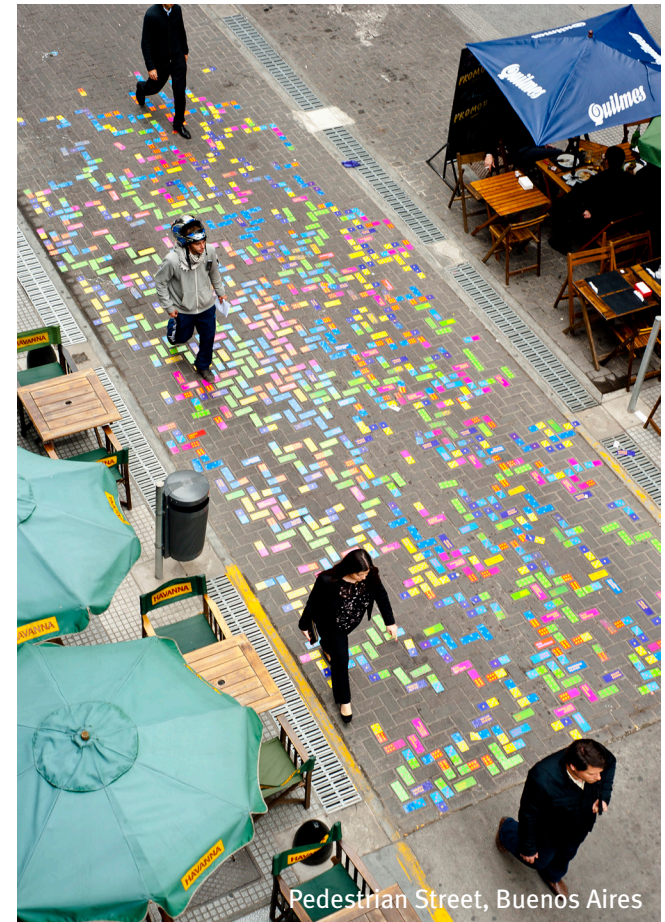
We live in a world where the word 'street' conjures up an image of a pathway filled with cars and two-wheelers, and people trying to walk their way through the interweaving traffic, literally putting their lives on the line. Indian urban areas contribute to about half of all road accidents and 39% of deaths i.e. 156 deaths per day. Making things worse is the soaring levels of pollution contributed by the transportation industry. The Industrial Revolution brought an onslaught of vehicles to the roads and changed the lives of pedestrians for the worse - however, not forever. The tide has begun to turn.

Cities are waking up to the importance of the pedestrian. The activity of walking, either as part of one's transit, fitness regime or for leisure, is being increasingly associated with a city's social life. The measures a city takes for the safety of its pedestrians is now becoming a deciding factor in its popularity. Increasing ease of walking is one of the least expensive methods to reduce CO2 emissions, and cities around the world are working towards this.

Streets with wider footpaths and dedicated cycle tracks are being introduced all over the world. Indian cities including Chennai have placed non-motorised transport on a pedestal by creating a policy that prioritises walking & cycling over motor vehicles. Cities have gone on to cut off access to vehicles completely from some of their streets, converting them to pedestrianised areas.

Apart from providing better mobility for pedestrians, pedestrianisation also helps enhance the shopping experience & volume and reduce the number of accidents and pollution level. Although the idea of creating pedestrian-only streets seems modern, it has been tested and tried out in various cities. Despite initial resistances, many of these projects have proven to be great successes.

This report aims to learn from the best practices in pedestrianisation across the world.



“ Whether you live in a city or a small town, and whether you drive a car, take the bus or ride a train, at some point in the day, everyone is a pedestrian.

-Anthony Foxx, US Transportation Secretary

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**around the world**



**Strøget, COPENHAGEN**

- In 1880, Strøget was a trading street
- By 1960, the street was invaded by car traffic
- Two narrow pavements for pedestrians with no room to stop & shop



Copenhagen is Denmark's capital and greater Copenhagen has a population of 1.3 million inhabitants. Once a small fishing village, the city grew to become a bustling trading port. The inner city continues to be Copenhagen's most important business and cultural area, with various shops and institutions.

Strøget, Copenhagen's main thoroughfare, in 1880, was a workplace, a place to sell or transport goods, as depicted in the picture on the previous page. The street was frequented by the privileged for shopping and leisurely walks.

In the years up to 1962, the growing number of cars led to increasing pressure upon the streets and squares for both traffic and parking. Strøget was invaded by cars and pedestrians were confined to two narrow footpaths with space just sufficient to walk - no room to stop and shop.



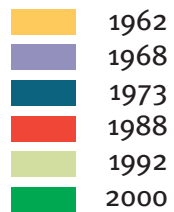
- Pedestrianisation trial in 1962
- 1.1 km stretch
- Parking on the squares along the street reduced in 1962
- Recreational activities developed
- Permanently pedestrianised in 1964



On 17 November 1962, the 1.1 km stretch of Strøget was pedestrianised as an experiment. Parking on the squares along the pedestrian street was reduced. Recreational activities began to develop gradually after the move.

After a successful 2-year trial period - with much cleaner air - and no traffic - plus many happy pedestrians - Copenhagen's city council decided to transform the tested zone into a permanent "Pedestrian Street" in February - 1964.

## Copenhagen's Pedestrianisation Journey



By 2000, a total of 100,000 sq.m was pedestrianised



In 1962, 15,800 sq.m of pedestrian area was created. Today, a total of 100,000 sq.m once dedicated to motorised transit has been converted to traffic-free space for pedestrians in Copenhagen.

The city centre once dominated by cars has completely changed character. Pedestrian streets, pedestrian priority streets and ordinary, narrow peaceful streets form an extensive network of comfortable walking routes.

The city also set up a bike sharing system of 2000 cycles back in 2000. By 1990s, a third of the city's trips were made on cycles.

For the successful conversion, the city authority adopted an integrated traffic management strategy for the city centre by:

- Limiting the number of parking spaces - 600 parking spaces have been eliminated in the city centre. This has been achieved by reducing the number by 2-3% annually. There is now a total of 3000 slots in the centre.
- Increasing on-street parking charges
- Reducing number of lanes on several main routes into the city and using the gained space for bus and cycle lanes instead
- Restricting through-traffic





The key to the success of the pedestrianisation project in Copenhagen was the gradual expansion of the system & for 2 reasons:

- Gave residents time to adapt, to develop a new city culture - to change from driving and parking their cars to walking, using bicycles and public transport.
- Has become easier for city's politicians to take small step-wise decisions based on previous successful measures

The city has also taken various measures to invite foot traffic. The streets and squares have been repaved with fine stone material to improve ease of walking. The 18 squares in the core of the city have been stripped off of parking spaces and returned to the public for recreational activities. They invite people to come and stay a while and to engage in other public activities that need space.

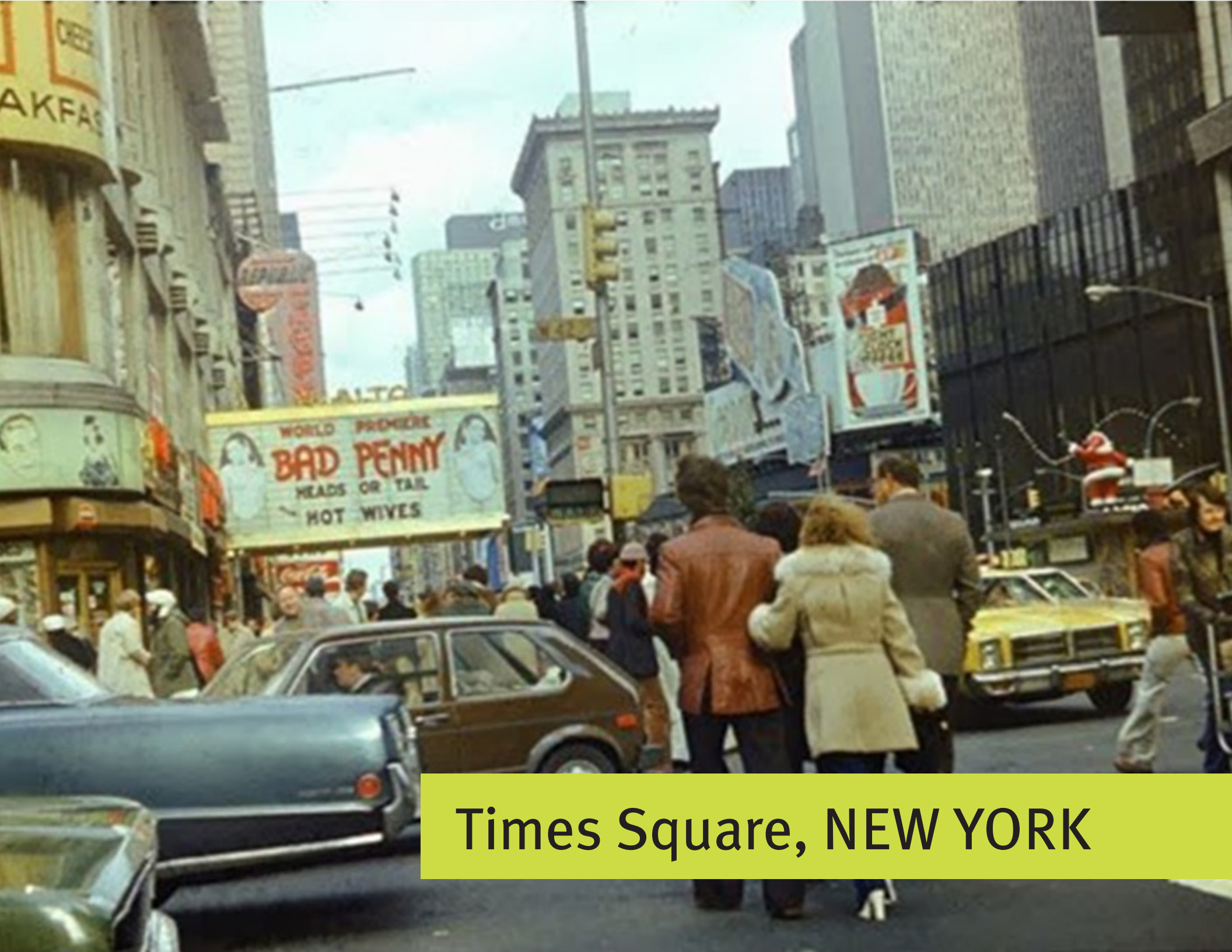
1500 seats on benches and 5000 on sidewalk cafe chairs provide ample opportunity to sit, and they are in almost constant use. Refined street lighting has also played an important role in sustaining the pedestrian footfall.

Today, 80% of the movement through the city centre is foot traffic. The whole of inner Copenhagen has become an area devoted to people on foot.

Strøget today

- **Has 6 times more area for pedestrians than in 1962.**
- **Is 10-12 m wide carrying 145 people/min**
- **Has seen an increase in sales by 30%**

The key to success has been the gradual expansion of the pedestrianisation project, giving citizens the time to adapt to the new culture of not using their cars!



Times Square, NEW YORK



There is a strong diagonal axis that disrupts the regular grid of Manhattan. Times Square sits central to this grid.

From the 1960s to the early 1990s, the seediness of the area, especially due to its go-go bars, sex shops, peep shows and adult theaters, became an infamous symbol of the city's decline. By 1984, an unprecedented 2,300 annual crimes occurred on that single block, of which 460 were serious felonies such as murder and rape. It came to be known as the "worst block in town".

In the 90s and 2000s, the area was remodeled with improved quality of commerce and cleanliness, going on to make Times Square the icon of New York. This invited unmanageable traffic congestion around the square in the early 2000s.



Project Extent - 25,000 sq.m



The diagonal path of Broadway tended to disrupt traffic at points of intersection with other streets. To ease traffic congestion throughout the midtown grid and improve pedestrian safety, mayor Bloomberg decided to close Broadway to vehicular traffic around Times Square for a trial on May 24, 2009.

On the day of the pedestrianisation, officials closed the street part by part throughout the

afternoon and into the evening. This test run continued until the end of the year.

The pedestrian plaza project was opposed by local businesses, who thought that closing the street to cars would hurt business. The citizens were given the chance to vote on whether it should remain closed.

They voted unanimously for it to stay.



Since 2009, the project has progressed in the following stages:

Stage 1 : When the road was first closed off, inexpensive multi-coloured plastic lawn chairs were put out. This stage lasted a few months.

Stage 2 A temporary art installation entitled 'Cool Water, Hot Island', was painted as a mural over the road, by Molly Dilworth.

Stage 3 : Following these temporary trials, a final design competition was undertaken, which was won by Snøhetta.

Stage 4 : The redesign is being undertaken in phases; phase one was opened at the end of 2012, when the curbs were removed to create an even surface for pedestrians, with enhanced paving and new benches. Another phase was completed by the end of 2016.

Initially, the plaza had a few tables, 376 rubber folding chairs, potted plants and orange barrier cones. The chairs were later replaced by metal furniture. Temporary art installations followed; the plaza is now being redesigned permanently at \$55 million.

Once complete, the permanent redesign of the plaza by Snøhetta will add 13,000 sq.m, or 53% more pedestrian space to Times Square



Snøhetta's final scheme, like the interim designs, respond to Times Square's historic associations with theatre and entertainment, providing public spaces that act like an outdoor stage.

The permanent redesign features less signs, a flush surface, more rationally placed benches, and more subtle tactile elements for people with impaired senses.

The Snøhetta design utilises robust & less expensive precast concrete pavers that can withstand 400,000 people daily, providing a durable surface requiring minimal maintenance.

The paving is embedded with steel disks arranged in linear rows, to capture the neon lights that define Times Square, bringing the light into the floor surface.



The testing of the Time’s Square pedestrianisation over the years has taught the world a valuable lesson - trials over a long period help in better understanding the needs of the stakeholders. Using temporary interventions in the street space has helped the City Council test new ideas, analyse the results and address the concerns of the shopkeepers & businesses.

Today, Times Square is the busiest tourist destination of the world, with 400,000 visitors per day. It is known as “the Crossroads of the World”.

- The pedestrianisation project aimed to
- Increase pedestrian safety
  - Decrease vehicle congestion to improve pedestrian amenity
  - Increase public space in Manhattan

- Increase economic productivity
- Create a network of carfree pedestrian streets
- Reduce pollution in the area.

Since the creation of the pedestrian plaza, Times Square has seen:

- **71% increase in revenue - the biggest rise in history.**
- **33% reduction in traffic related injuries**
- **180 % increase in shops around the square**

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indian examples



# Mall Road, SHIMLA



The pedestrian character of the Mall Road has been retained over the centuries, despite the introduction of motorised vehicles



Ever since colonial rule, the 'Mall Road' has been completely pedestrian and has served the purpose of social interaction, recreation, leisurely walks & shopping - Shimla's prime attraction and central downtown.

During British times, a few horses and manually-pulled 'rickshaws' were used to carry some elite officials and difficulty abled

across the street. In the 20th century, cars were allowed only up to a certain elevation to access the Mall Road at various drop-off points.

The local body has carried on the legacy of keeping the Mall Road 'strictly pedestrian', allowing only select cars, ambulances and fire engines through, hence retaining its pedestrian culture, a rarity in the country.



The Mall Road has been able to retain its pedestrian culture over the years due to its favorable conditions and setting. The local environment, aesthetics and climatic conditions encourage walking. The British history enhances the experience of those who visit and walk down.

'Mall' originally meant a walking/shopping area that is covered or open air (like a British High Street). The Mall Road, a unique pedestrian only shopping street (POSS), is a 6 km road stretch. It is home to a number of shops, restaurants and a heritage theatre.

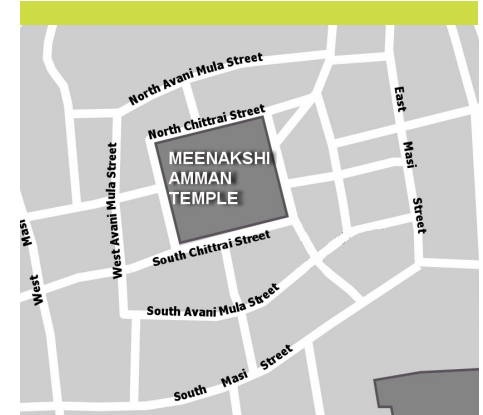
The Core Mall Road, however, is only about 1.5 km long. It is one of the cleanest open public

stretches in the entire country. Along the sides are uniform double-storied buildings of the English style.

The Mall Road sees a lot of pedestrian activity owing to its setting. There are plans to replace the asphalt road with cobbled stones. Signage and entertainment along the route could be improved further.

# Temple Street, MADURAI





“ A no-vehicle zone would be the best way to enjoy a city like Madurai. - Lakshmi, visitor from Chennai



Madurai, one of the oldest cities in Tamil Nadu, is famous for its rich heritage and cultural history. The Madurai Meenakshi Amman Temple is one of the most important landmarks in the city. Due to rapid urbanisation, the area surrounding the temple began facing issues due to increased density and congestion. The Madurai City Corporation wanted to relieve the centre of the pressure for

space and infrastructure. Thus was born the idea of pedestrianisation in the region.

Under a JNNURM scheme, Chitirai Veedhi, the street encircling the temple quadrilateral, has been converted into a pedestrian zone, open only to battery-operated cars. This allows pedestrians to now walk without fear around the temple, even inviting morning walkers.

- 80mm concrete paver blocks
- 150 mm footpath finished with flamed granite
- Storm water drains provided and road level maintained to prevent water flooding the temple as well as stagnation.



The bitumen road around the temple was replaced by paver blocks of 80mm thickness. Road levels were maintained such that water would not stagnate - which has been a constant problem due to overlaying of roads. Storm water drains were also provided based

on a detailed contour survey of the site. The footpaths are of 150mm height and have been finished with flamed granite. Trenches under the pavements have been provided to shift the overhead electricity cables underground.



The city traffic police close off the (outer) concentric street- like the West Perumal Maistry Street which is home to big stores- ahead of Diwali, to ease congestion. Temporary parking lots are created in playgrounds in schools and colleges, to aid the vehicle ban.



The battery-operated cars and service vehicles that ply on the Chitirai Veedhi are very helpful for the elderly and those carrying children. The street has become a haven for pedestrians and school-going cyclists who frequent the place.

The Chitirai Veedhi surrounding the temple was historically not designed to handle vehicles. Being a popular tourist and pilgrimage spot worsened the situation by increasing pressure for parking. Pedestrianisation of the street has helped visitors and the citizens of the city experience the temple comfortably and at a convenient pace.

# Heritage Street, AMRITSAR







- Entry gate built at a cost of Rs.9.5 crores
- Project Cost of 800 m stretch from Town Hall to Golden Temple - Rs.160 crores
- Special committee for upkeep formed with Rs.30 crores



Once congested with rikshaw-pullers and hawkers, the revamped Heritage Street has now been completely pedestrianised. The 800m walkway has been repaved to allow for comfortable walking.

The stretch from Town Hall to the Golden

Temple has been given a 'heritage' look with a homogenous facade for 170 shops along the route. The street hosts a walk down memory lane, with galleries informing the public of the history of the temple.

The redesign of the street cost Rs.160 crores.

# Aundh Pedestrianisation Trial, PUNE





- 1.5 km stretch pedestrianised during week-long trial run
- One half of the road was closed off to vehicular traffic
- Street furniture like benches & potted plants enhanced the trial



Pune Municipal Corporation (PMC) organised a weeklong trial of “HEALTHY Aundh – Street and Pedestrian Walkway”. A stretch of 1.5 kms between Bremen Chowk and Parihar junctions in Aundh was pedestrianised between 8 - 15 October, 2016. One half of the road was completely reallocated for pedestrians and cyclists.

The design elements of the pedestrianised

street included a cycle track and a separate, wide footpath to allow pedestrians to walk without obstructing the cyclists, street furniture such as benches and potted plants with clear road signage.

While some on-street parking was retained along the other half of the road, the overall design aimed to reduce space occupied by parking and repurposes it for people’s use.

The pedestrianisation trial run saw a large visitor crowd, with kids playing badminton and participating in the various events which were planned, especially during the weekend. Numerous stakeholder meetings involving residents and shopkeepers, prior to the event, helped organise the trial run better, as issues of all concerned were heard.



To make it easy for the shoppers to visit this popular shopping street, Kinetic Motors provided electric vehicles to shuttle along four colour-coded routes every ten minutes during the trial week. This free service encouraged residents to abandon their private vehicles and opt for publicly-shared transport methods instead.

During pre-event meetings with various stakeholders, shop owners and residents of Aundh expressed that it was high time for a change of this scale. However, a small group of local shop-owners are still apprehensive about the impact of the pedestrianisation on sales in the region. Stakeholder discussions have been planned to address their concerns.





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