Cities Alive

Towards a walking world

Illustration by Andrea Dezsö for Arup

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vision & strategy

Car free initiatives
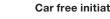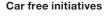Temporarily removing cars from a city can transform roads into public spaces, while raising awareness around car dependency and also immediately reduce air pollution. But more importantly, it reveals the potential opportunities created by having more – and safer – spaces for people. Car-free days have been trialled across the globe – from Bogota to Bangalore. In Paris, an event was so successful that mayor Anne Hidalgo vowed to implement a permanent downtown ban on diesel cars by 2020.

'Vision Zero' policies
'Vision Zero' is an international movement that began in Sweden, which aims to eliminate road-traffic fatalities through speed-reduction and safety measures. As pedestrians are the most vulnerable users of space, adopting this type of vision could dramatically improve safety for users.

Pedestrian and health campaigns
Governments, schools and businesses may initiate programmes aimed at improving health through walking, with initiatives like Walk To Work Week. Governmental roles include evaluating health impacts, setting out goals, monitoring progress and gaining support from local organisations. Private organisations and smartphone apps like Charity Miles or Newrose may offer rewards to those who walk to work or school.

Local champions
Celebrities, local heroes and champions can be powerful advocates of healthy living, and campaigners for pedestrians' right. With their money, power and image, they are able to get the wheels turning, and set examples for others to follow, promoting walking as an attractive option.

Pop-up and temporary initiatives
Temporary initiatives reveal how spaces usually deemed unattractive hold the potential to become destinations, and are a cheap and powerful way to get people walking. Their temporary nature allows for more imaginative and creative input, resulting in community-oriented spaces best experienced on foot. Many cities are trialling pop-up parklets in on-street parking spots, adding seating, tables and greenery to promote active streets and to support local businesses.

Economic incentives
Financial incentives and disincentives, including subsidies and taxes like congestion charges, can be used to encourage behaviour change. Businesses can play a major role in incentivising walking by providing economic incentives to encourage healthy choices. Using modern technology, pedestrians can be rewarded for their active lifestyle with points or actual money, which can be redeemed for goods or services.

Virtuous cycles
Technical innovations allow for the conversion of ordinary walks into resources, such as energy or data. They raise awareness for resource scarcities and invite people to walk, but at the same time they have the potential to provide sustainable energy to power lampposts, signage and public charging locations.

Density and mixed functions
Location of homes, places of work and facilities are the most structural determinants of transport demands and transport mode choice. The compactness of a city – especially whether or not different land-uses are within walking distance of each other – is the most decisive attribute that gets people walking, or choosing alternative modes of transport.

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safe & efficient transportation system

Walkable connectivity
Crossings of pedestrian networks with other transport networks and natural barriers such as rivers are often the biggest barriers to overcome on foot. Preferably, these are crossed with minimal disruption to the most direct walking route, to maintain the fastest, most understandable path, while still maintaining a safe connection.

Pedestrian streets
Removing private vehicles from streets is a radical but increasingly popular measure to create pedestrian friendly city centres. By going car free, streets can be fully designed for pedestrians, usually resulting in safe, vibrant and highly activated public spaces.

Road share
Shared-space, where there is little segregation between pedestrians, cyclists and drivers, is a holistic approach towards traffic calming and space activation. In shared spaces, the uncertainty or a lack of traffic rules encourages drivers to slow down, creating a pedestrian-oriented environment where people are aware of fellow road users. This is a common approach in Danish and Dutch traffic design, which can also be observed in places like Leonard Circus in London.

Integration with public transport
Integrating public transport into a pedestrian network contributes to developing a more sustainable, efficient and healthy city. Improving factors such as the distance between transit stations and walking routes, or improving the legibility of the network, fosters a pedestrian-friendly environment, and reduces the general need for cars.

Road diet
Road diet, or the reallocation of lanes from highways for new and different functions such as vegetation, cycling or walking paths may help achieving systemic improvements and balance the use of the street environment. Thus, a road diet is a great way for cities to reclaim redundant street space dedicated to cars, expanding mobility to other modes, while also preserving traffic flows and improving safety.

Safe crosswalks and intersections
Implementing audio or visual aids to crossings and intersections can reduce the boundaries posed by roads on pedestrian mobility. They are able to increase the safety and ease of travel for those on foot, while also raising the awareness of drivers. They also make it possible for people with mobility issues or impairments to manoeuvre junctions independently.

Traffic calming measures
Measures including speed bumps, restrictions or methods of filtered permeability (restricting vehicular access in favour of people on foot) directly slows traffic and improves safety on the street, while also redefining space for alternative use. In 2015, UK-based sustainable transport charity Sustrans trialled a number of "street kits" – street furniture able to bend and adapt to any road – that temporarily transforms space, while acting as a traffic-calming method that also enhances the liveability of a neighbourhood.

Improved signage
Because pedestrians travel relatively slowly, they have greater travel navigation needs to avoid lengthy detours. Increased and improved pedestrian information street signs can reduce dependency on additional devices such as mobile phones and hugely help pedestrians understand the network, increasing ease of navigation and permeability in public space. Furthermore, luminous signage can also affect traffic safety and street security.

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liveable environment

Infrastructure re-use
Unused infrastructure offers major opportunities for facilitating safe and attractive pedestrian routes and activity spaces. Elevated railways, viaducts or derelict places of gathering often held a connecting role in a neighbourhood and can offer new potential as places of recreational or social value. For example, New York City's High Line – an elevated railway line converted into a green park – attracts nearly 5m visitors annually, linking 1.5 miles of the city's West Side via a pedestrian-only route.

Innovative public spaces
Walking is a great way to discover new spaces or areas, and inventing new public spaces in previously inaccessible areas, such as underground or on water, is an attractive way to get people exploring on foot.

Street design and furniture
Citizens moving around at street-level will experience space most intensively. Therefore, creating attractive and accommodating spaces through thoughtful street design will result in improved functionality and often stimulate individuals to walk more.

Pocket parks
Urban regeneration creates the opportunity to redevelop small pieces of land (often single building lots or irregular land pieces) into pocket parks or public spaces with a green character. Although they may be of a temporary nature, pocket parks offer little havens of respite for pedestrians, while also providing permeable surfaces that will alleviate flood risk.

Parklets
The abundance of parking spots in a city offers an opportunity to re-imagine and reclaim public space. By temporary – or permanently – redesigning car bays as pedestrian havens, social interaction and safer streets may be an organic outcome. In Atlanta, staff, students and alumni of the Savannah College of Art and Design created a number of micro-apartments in bays of a multi-storey car park, to highlight the masses of under-used space in the city.

Greenways and blueways
Rivers and waterways can be transformed from major barriers into linear walking and cycling routes by creating green and accommodating waterfronts. The length of a space presents opportunities for longer trips on foot, catering to dog-walkers, runners and recreational walkers.

Microclimate measures
People commonly consider weather when choosing a transport mode. Measures to improve local microclimates have huge potential to stimulate walking. Creating an environment that protects pedestrians and cyclists from heat, rain, wind or bright sunlight can do this.

Active facades
To boost retail spending, shops and businesses can team up to create retail destinations, often resulting in better spaces for pedestrians. Their intention is to make real-life shopping as attractive as possible, by opening shops close together, holding events and by creating attractive and protected environments with awnings, on-street cafes and resting places.

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sense of place and communities

Open street events
Public events that take place on temporarily closed streets allow local residents and organisations to enjoy a larger pedestrian space. They reinvigorate the opportunity to use public space, reactivating areas and instilling a sense of confidence in the community around the future potential of their local streets for pedestrian use.

Public art
Public art can help foster an environment where pedestrians have priority. Art that can best be enjoyed while on foot brings a local feel to an area, increasing the cultural vibrancy of the street life and the attractiveness for pedestrians.

DIY opportunities
Enabling residents and local users of public spaces to improve the local functioning of a neighbourhood is an innovative way of unveiling local problems, by engaging the community. Locally developed ideas generate a sense of ownership of public space and are focussed on creating a more locally oriented public realm.

Street fairs & markets
Street fairs and markets have traditionally been pedestrian hotspots, as face-to-face communication and the direct experience of the available goods and services are invaluable to market shopping. Launching market-like events is a sound method of attracting people, acquainting them with the local area that can be explored on foot.

Heritage promotion
By nurturing cultural heritage, local history and identity of an area, the environment develops a strong and local feel. Often this heritage is best enjoyed on foot, which creates an environment where drivers adapt their behaviour accordingly.

Redundant spaces reallocation
Whereas many transport modes need a certain infrastructure to work, pedestrians need very little to access or pass through a space. Therefore, underused and redundant spaces have the opportunity to be transformed relatively easily into pedestrian ones. These seemingly inaccessible and possibly uncomfortable looks will reward its explorers with a feeling of victory.

Improved urban nightscape
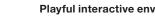As trading hours and economic activity extend into the night hours, cities are increasingly experienced in the dark. To overcome issues faced by pedestrians in hours of darkness – such as safety, navigation and visibility – light installations can effectively be used to welcome people in dark public spaces.
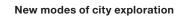
Inclusive design
Design can remove barriers between physical space and communities. The elderly, people with a disability and those with mobility issues often need more help than others to conquer physical barriers in cities. By providing public services such as public elevators or wayfinding aids, barriers can be overcome for people with different needs, allowing or assisting with walking and personal mobility.
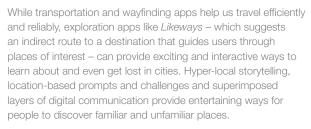
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smart and responsive city

Playful interactive environment
With digital technology, public facilities and street furniture like stairs, garbage bins, parks and lighting can be made interactive to enhance the experience of users and promote activity in the public realm. Sound, light and augmented reality can be used to invite pedestrians to engage with their surroundings and have fun along their route. These applications can also provide access to information services and communication layers using mobile phones or sound.

New modes of city exploration
While transportation and wayfinding apps help us travel efficiently and reliably, exploration apps like Likeways – which suggests an indirect route to a destination that guides users through places of interest – can provide exciting and interactive ways to learn about and even get lost in cities. Hyper-local storytelling, location-based prompts and challenges and superimposed layers of digital communication provide entertaining ways for people to discover familiar and unfamiliar places.

Wayfinding systems
Smarter wayfinding systems are able to actively promote and encourage walking by providing access to real-time data and making walking more engaging, efficient and informed. GPS enabled apps can more accurately inform users of their route possibilities and present walking as a viable mode choice. Travel-planning apps like Citymapper now enable users to calculate the fastest route from A to B, using multiple modes of transport, including walking.

Accessibility and inclusivity
Digital technology has the potential to make cities more inclusive and accessible, especially through access to accurate, real-time data and planning. Crowdsourcing can be used to map wheelchair accessible routes and places; apps can provide tailored guidance and help to visually impaired users; and providers of public services can publish accessible route information. The result is a city in which it is easier for everyone to explore, roam and move.
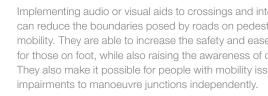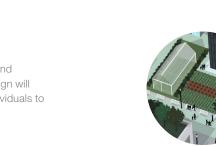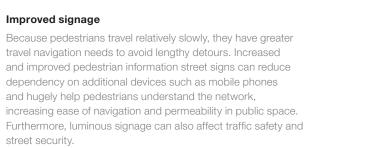
Sensing of people and the environment
As sensors become increasingly more affordable and ubiquitous, they can help make cities more walkable and accessible through real-time environmental data, and an improved understanding of how places are being used.

Mapping safety
Safety is a concern for many people considering walking, especially at night or when alone. New digital systems, services and technologies can ease these fears by mapping crowdsourced or public data in real-time, providing improved lighting conditions and even enabling tracking or check-in features. In addition, safer public spaces can be enabled through data-driven urban design, maintenance and policing.

City monitoring
The public realm and outdoors are more accessible and appealing to the public through digital platforms that make it easier for them to understand their state and plan. Real-time data allows users to assess features such as noise or crowds of a place, while smarter booking platforms make booking and planning activities easier.

Digital evaluation tools
Mobile phone applications and computer algorithms analysing vast quantities of data are now able to evaluate abstract yet important metrics like walkability. These provide a useful resource for urban planners, transport planners, architects and decision makers in designing spaces and routes that suit the needs of pedestrians, by also considering the 'softer' or more psychological aspects of route and mode choice.

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