PLACEMAKING WEEK: 2016 NAIROBI
For the love of our public spaces
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Introduction

The inaugural Placemaking Week Nairobi was held in 2016, from November 28th - December 4th. The theme of the week-long event was “For the Love of Our Public Spaces”. It aimed to celebrate Nairobi’s public spaces and the community-led activities that are revolutionising the use and experience of public spaces, streets and the city at large. Placemaking Week saw Nairobians descend on the streets around the city's Jeevanjee Gardens to paint cycle lanes on the parking zones, create artistic murals on the streets, and walk, cycle, skate or simply stroll leisurely while enjoying street food, music, pop-up shops, and public events.

The event leveraged on the expertise, experience and interests of various grassroots organisations, businesses, non-governmental organisations, professionals, academic institutions, youth organisations and individuals to create awareness on the value of public spaces, raise their status and galvanise efforts towards completing the 2nd and 3rd phases of the Jeevanjee gardens interventions.

This spontaneous transformation in the heart of downtown Nairobi, more commonly known for traffic snarl ups, polluted air, and streets choked with parked cars, was initiated by the Nairobi City County Government and the United Nations Human Settlements Program (UN-HABITAT), and organised in collaboration with several other organisations who are actors in public spaces and placemaking in Nairobi.

PLACEMAKING WEEK ACROSS THE GLOBE: EXAMPLES
Placemaking Week in Nairobi

Global response to placemaking week call for proposals 2017

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Streets as Places, Vancouver, B.C. ©Flickr/Paul Krueger

The Gather Round at 10th Avenue and St George Street. ©Vancouver Sun
Placemaking

Placemaking is a collaborative people-centred process of planning, designing and managing public spaces. It involves revitalising a space, street block or neighbourhood by initiating a variety of small-scale initiatives that improve the use and quality of these spaces, and the lives on their communities in tandem. The ultimate goal is to improve the living environment and the networks of these neighbourhoods.

In practice, placemaking seeks to build or improve public spaces, spark public discourse, create beauty and delight, engender civic pride, connect neighbourhoods, improve community health and safety, nurture social justice, catalyse economic development, promote environmental sustainability, and of course, provoke an authentic ‘sense of place’.

Placemaking is by no means a new concept. It dates as far back began as early Canadian Aboriginal settlements where a totem was erected in dedicated space, and symbolically marked to represent community. Placemaking returns to the origins of these early endeavors, enabling individuals to be active agents in their physical surroundings. Today we have parks, monuments, murals, sculptures and more - all in their way providing for the enhancement of our living spaces and elucidating our stories of place.

As previously mentioned, placemaking is a process. It begins with citizens working together to improve their local environment. Placemaking is committed to strengthening the connection between people and the places they share, shaping the public realm in order to maximize shared value. More than just promoting better urban design, placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution. This inclusive process emphasizes the collaborative ‘making’ that builds local capacity and leadership to empower communities.
The Importance of Public Spaces

Public spaces are essential to the prosperity of a people and their culture. As expressed by Rebecca Solnit, an American writer, “Culture is not only beneficial to cities; in a deeper sense, it’s what cities are for. A city without poets, painters and photographers is sterile.” By providing a venue for social interactions, public spaces foster creativity through artistic expression, democracy through protest and discussion, and even public health through exercise and improved air quality.

High quality and pleasant public spaces are central to the realization of a world class working, living and business environment. They provide a high quality of life for urban residents and visitors alike, attracting investors and highly skilled personnel. By all standards, public spaces are an excellent entry point to improve the standards of urban life for all citizens. The liveliness and continuous use of public space leads to urban environment that is well-maintained and safe, making the city an attractive place to live, work and play.

Public space improves public health: a good network of public spaces including streets can help to improve physical and mental health by encouraging walking and playing, making walking more attractive, reducing stress and providing a calming environment. Public space improves the environment: Green and open public space brings many important environmental benefits such as, the cooling of air and the absorption of atmospheric pollutants.

Public space enhances safety. Well-designed and well-maintained streets and public spaces can help to reduce fear of crime and violence and contribute to improving safety. Pedestrianisation leads people to naturally monitor the streetscape and one another, hence enhancing public safety. Buildings with balconies and windows that face streets or parks – as well as the presence of street vending or on-street cafes - help to increase visibility and surveillance.

Public space increases transportation efficiency: One of the fundamental functions of public space is that it allows us to move around from our homes to work, schools and other amenities – by Public Transport, on foot, bicycle or any other means. People-centered street designs furthermore enhance efficiency and safety for non-motorised transport users and enhance universal accessibility for mobility-constraint people such as people with disabilities, elderly or pregnant women.

Public space supports economic development: Public space can stimulate the small scale, local and informal economy, while generating tax revenue for local governments. To be fully productive and effective, the space needs to be physically flexible in function over the day and seasons and adaptable over the years. Creating safe, inclusive and accessible public spaces for all through public action, participation and partnerships is a key lever for transforming our cities and ensuring universal access to streets and public space!
Rationale for Placemaking and Placemaking Week

The difference between ‘space’ and ‘place’ is not unlike the difference between ‘house’ and ‘home’. Many tangible and intangible elements combine to create a sensory experience that is memorable. Activities, people’s conceptions, physical attributes, all come together to make a place (Place Leaders Asia Pacific, 2017). Cities that offer a higher quality of life are dotted with people-centred places.

1. Placemaking connects people and places. Placemaking inspires people from all walks of life to collectively reimagine and reinvent public spaces and streets as the heart of the city. Placemaking Week Nairobi provides excellent opportunities for Nairobians to meet and take part in civic and community life.

2. Placemaking fosters place-attachment. It helps build community goodwill, and gives investors and businesses the confidence to innovate and create places that people would love. This is an economic imperative for cities.

3. Placemaking promotes the creation of public spaces and streets for interaction. Placemaking Week presents a platform that connects stakeholders and urban enthusiasts to the physical alterations happening within their vicinity, and it also facilitates dialogue and conversations about the urban commons. In essence, it promotes emotional bonding between people with their places, which is key for the cultural pulse.

“It takes a place to create a community and a community to create a place.” Fred Kent, Project for Public Spaces

4. Placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place, and support its ongoing evolution.

5. Placemaking facilitates experimentation with urban planning and design scenarios, in order to test the impacts of interventions. Through a tactical urbanism approach, Placemaking Week provides an opportunity for Nairobi to experiment with short-term action for long-term change. It leverages on low-cost, often immediate, and temporary interventions that help plant the seeds for longer-term, more permanent physical interventions. The approach is convenient for all urban stakeholders including the
general public, the city government, academia, the private sector, resident associations, and non-profits to “hack the city” and “disturb the order of things in the interest of change” (Timo, 2015). This could be to prepare the city for what permanent interventions would look like, mobilise resources, and allow for public consultation.

6. Placemaking fosters partnerships and collaborations, and facilitates creative models of financing urban intervention. Placemaking Week provides a platform for unprecedented, and often unlikely partnerships and collaborations. Provided the vision is right, for the right reasons, and with appropriate stakeholder benefits, financial support is sure to come (Hardy, 2017). This could be through donations, crowd funding, and public funds, among others.
Objectives of Placemaking Week

The main objective of Placemaking Week was to transform the streets of downtown Nairobi into a working urban laboratory. This was essentially to raise the profile of public spaces and the status of people who use them. It would additionally optimize both pedestrian and vehicular traffic to promote walkability and better air quality.

This main objective was supplemented by the following:

1. To activate public spaces and streets through a variety of low cost high impact interventions, including coordinated pop-up activities;

2. To celebrate Nairobi’s public spaces and streets, raise their profile & create awareness about their importance;

3. To promote cross-sector dialogue about quality of life in the city, and foster partnerships and collaborations for our public spaces; and

4. To advocate for a healthier, safer, and more inclusive and vibrant city through safe, walkable and pedestrian-oriented streets, with a focus on downtown Nairobi.
Safe, inclusive vibrant city
Celebrate and Raise the Profile
Placemaking Week

Administrative Teams

Nairobi boasts a rich mix of urban stakeholders working in various ways to improve and upgrade public spaces, and impact livelihoods and quality of life. The idea of Placemaking Week was actualized in collaboration with Hope Raisers Youth Initiative, Architects Without borders (Sweden), Kounkuey Design Initiative (KDI), Placemakers, Kuwa, Citilinks, Slum Architects, Kilimani Project Foundation, the Technical University of Kenya (TUK), Naipolitans, Institute of Transport and Development Institute - Africa, the GoDown Arts Centre, and the Architectural Association of Kenya (AAK).

Placemaking week started with an in-depth study and analysis of several elements, including stakeholder mapping, the flow of both vehicular and pedestrian traffic, and activities and uses in the shops aligning the streets. This guided the interventions that followed. Thereafter, two preparatory meetings were held to brainstorm on the idea, refine the concept and share responsibilities based on strengths and interests. This also served to build on the idea of creating a network and platform of actors in public space and placemaking. The following teams were developed to guide the placemaking week:

**Sustainable Mobility Team**

This team was responsible for realizing streets as public spaces using measures like pedestrianisation and open street activities. The task at hand involved developing sketches for the proposed temporary partial pedestrianisation of Muindi Mbingu street, visualising the rerouting of traffic, and coordinating with engineering department and traffic marshals. The team also developed interventions to promote sustainable mobility and road sharing, and took the lead in coordinating the sustainable mobility exhibition and coordinating the critical mass Nairobi cycling event, in collaboration with partners like C4D Lab and ITDP (Institute for Transportation and Development Policy) and Critical Mass Nairobi. The team was further tasked with reaching out to the biking and skating community in the city. The sustainable mobility team was also in-charge of measuring the impact of the pedestrianisation interventions on air quality in order to build the case for making the light interventions permanent, and by extension up-scaling and replicating the pedestrianisation of streets in the city both for public health and the local economy.

The team comprised the NCCG, UN-Habitat, UNEP, Architects Without Borders (SE) and Hoperaisers Youth Initiative.
The micro-interventions team was tasked with coming up with Lighter, Quicker, Cheaper (LQC) interventions that would be carried out both inside Jeevanjee gardens and on the adjoining streets. This included coordinating the design of the space cleared by the parking lots, painting trees, used tyres, benches and the roads, creating temporary seating (crates and tyres), planting flowers, making preparations for the Jeevanjee Gardens Amphitheatre, and communicating to the implementing partners (e.g. Debonnaires) on permissions and restrictions. The team was also tasked with looking for opportunities for collaboration with the private sector to implement select intervention areas.

This team comprised the NCCG, Placemakers, AAK, UN-Habitat, iNCOMMONEs, Slum Architects, Kuwa and Kounkuey Design Initiative.

The micro-interventions team was tasked with coordinating activities like a movie night, a street soccer match, a pizza party, pop-up dance, and an open-air music and spoken word concert. The team also reached out to potential organisers and partners to assist with these events, and ensure their success. This team was especially key in the social programming of the streets using activities that encouraged by-standers to stay and participate.

This team comprised Architects Without Borders (SE), Hope Raisers Youth Initiative, UN-Habitat & the NCCG.

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Communication and Outreach team

The communications and outreach team was responsible for developing a promotion strategy for the event. It was to develop blog posts, press releases, posters and flyers and manage the social media accounts. The team was also charged with ensuring that there was sufficient documentation of the week’s activities through video, photography, and write ups and posting them on partners’ websites, YouTube channels, and the Urban Gateway among others. Furthermore, the team was expected to scout for volunteers to help manage the event and to reach out to platforms such as UP Magazine so as to promote public space and placemaking to the general public.

This team comprised everyone in the extended larger group of partners.

Urban Dialogue Team

The urban dialogue team was responsible for developing the theme for the dialogue session, scouting for speakers, and organising the session to be fruitful and efficient. This team also ensured that the questions to be discussed were relevant to normative and emerging agendas like air quality, public health and the New Urban Agenda.

The team comprised the NCCG, AAK, UN-Habitat, UNEP, Naipolitans, and the GoDown Arts Centre.
Painting of benches in Jeevanjee Gardens during Placemaking week

© Placemaking Network
Placemaking Week 2016 Activities

The week was programmed with various activities centred on a building party; a co-building event with professionals, volunteers, Nairobi County staff, students and children among others. The activities therein included a BRT exhibition showcasing innovations in sustainable public transport, reclaiming space for walking, cycling and recreational activities, an open mic session, a concert, an outdoor movie night, and urban dialogue and critical mass events. Placemaking Week presented a great opportunity for urban enthusiasts, practitioners and actors shaping Nairobi’s placemaking and public space ecosystem to leverage the ideas and momentum generated by the week’s activities, to advance the overlapping agendas of public space, placemaking, walkability and bikeability among others, towards a common agenda for the city’s public spaces.
The Bus Rapid Transit (BRT) Exhibition

As part of the SUSTRAN Project (Promoting Sustainable Transport Solutions for East African Cities), the Institute for Transportation and Development Policy (ITDP) Africa and UN-Habitat, organized a Bus Rapid Transit (BRT) exhibition to display to Nairobi residents and city authorities the potential for better public transport, and inspire them to implement BRT in Nairobi. We are visual beings, and an exhibition is a simple tool that can reach out to a wide audience whose daily lives revolve around spaces and buildings. The exhibition showcased successful examples of BRT from across the world, starting with the newly launched DART BRT (Dar es Salaam Rapid Transit) in nearby Dar es Salaam, Tanzania. There were also photos of BRT systems in Yichang (China), Ahmedabad (India), Mexico City (Mexico), and Belo Horizonte (Brazil) – raising issues on design principles and accessibility. Bringing it closer to home, the last two panels displayed renderings of Kenyatta Highway in Kisumu and Moi Avenue in Nairobi, showing how people-centred transformations of these streets can create more space for pedestrians, cyclists, and public transport.

UN-Habitat contributed by sensitising the public on plans by the government to roll out a city-wide Bus Rapid Transit system for the Nairobi Metropolitan Area in the coming years. The Nairobi BRT rendering was inspired by the on-going work for Nairobi’s BRT Line 1, running along Mombasa Road and Waiyaki Way and passing through the CBD. The response from the public was very positive, appreciating the efforts by UN-Habitat and ITDP in creating awareness among the citizens.
Urban Dialogue: Making the Case for Public Spaces

An urban dialogue session was held at the BUS, a mobile space activator managed by The Bus collective. Hosted in collaboration with Art@theBus, the session included discussions around the importance of public spaces, their intricate link to quality of life and the way forward for Nairobi City. The session aimed at delivering strategic and targeted messages about the importance of public spaces, the mutual benefit of partnerships and collaborations in creating and managing public spaces and the need to raise the status of public spaces and public life in Nairobi.

The urban dialogue session featured a plenary discussion at both technical and grassroots level, followed by an interactive Q&A session. The discussions sought to unpack the bottlenecks around the creation, protection and management of public spaces and streets in Nairobi and the roles of various stakeholders in the same, with strategic reference to the implementation of the New Urban Agenda. It made a commendable attempt to tackle issues traversing both policy, academic and grassroots levels, with representations from across the board.

While sharing the successes of the week, UN-Habitat emphasized the role of public spaces and streets for enhancing the liveability of a city, as well as the concept of understanding the streets as public space.
Critical Mass Sunday: Cycling for A Healthy and Sustainable City

The critical mass event brought together over 60 cyclists from various parts of the city in an effort to heighten awareness on the challenges faced by cyclists in the Nairobi CBD – such as the lack of bicycle parking facilities in the CBD or the inexistence of safe lanes for cyclists. In addition, the event presented a platform for a discussion on possible solutions that could be undertaken by the City County among other partners to ameliorate the experiences of cyclists. The cycling through the city was strategically aimed at raising awareness on the need to share the road with cyclists, at promoting road design focused on Non-Motorised Transport, and at raising the profile of people on bicycles. Placemaking week provided a great opportunity for facilitating links between the County and the cyclist community.
Key Emerging Themes

The Lighter, Quicker, Cheaper (LQC) Approach

The Lighter, Quicker, Cheaper (LQC) approach is based on taking incremental steps, using low-cost experiments, and tapping into local talents (e.g. citizens, entrepreneurs, developers, corporates and county staff). This approach could then inspire civic participation, spark discourse and catalyse unlikely alliances between a wide range of urban stakeholders including the business community, the county government, civil society organisations, culture houses, creative sector and grassroots organisations among others. It is especially useful in informing longer-term permanent interventions in public space by testing scenarios, experiencing impacts and generating context-specific evidence before heavy investment.

Among the many success stories that emerged during Placemaking Week, the affirmation of streets as places was the greatest achievement of this historic milestone in Nairobi’s public space agenda. It also opened the eyes of many to the myriad possibilities, and how easily the city could be made safe, accessible and inclusive for all. Notably, it created a clear picture of how the streets could look like without cars, and how a place can be transformed with a minimal budget and low-cost interventions to become a liveable and vibrant space. It only takes focusing on place, redirecting the traffic flow, reclaiming some parking spaces from cars and replacing cars with people and activities.

Open Streets: Streets as Public Places

A street is not just a conduit for moving cars and traffic, but also a place for informal social interactions, entertainment, commerce, and for civic expression. Streets are a public stage where life unfolds. They are places where people go to meet others and also experience unexpected encounters. Sidewalks are the urban arterials of cities. Thus, they need to be wide, well lit, stylish and accommodating with seating opportunities, outdoor cafes and public art. Roads can be shared spaces with pedestrian refuges, bike lanes, and on-street parking. Parking lots on the other hand can be converted into public markets in the weekends and during public holidays.
During Nairobi Placemaking week Hope Raisers and Architects Without Borders Sweden showed how the streets around Jeevanjee Gardens easily could be transformed into a liveable public space and a democratic arena of self-expression by bringing art, sports and music. This was accomplished through complete pedestrianisation and such activities as an open-air concert, graffiti, street soccer, painting and food vending by neighbouring retailers who enthusiastically joined the action and were happy to extend their services onto the street. The impact on business was so profound that the retailers asked if they could be allowed to continue the placemaking as it brought life to the street and boosted sales.

Muindi Mbingu Street on the other hand was partially pedestrianized and converted into a two-lane, one-way street to create more pedestrian space and a cycle lane. This was achieved by doing away with on-street parking to create awareness of the rights of non-motorised transport users and road safety issues. Nairobi County worked closely with its traffic engineers and the traffic police – with technical support by UN-Habitat staff. The street quickly became the soul of the city; a pedestrian corridor and a place to linger, take selfies, lie on street for pictures and to see and be seen. A DJ and an MC kept the crowd entertained while the young in age and heart, danced the day away. Following in-situ observations and prior analysis of pedestrian desire lines, an artistic pedestrian crossing was painted to link Jeevanjee Gardens with restaurants on the opposite side of Muindi Mbingu Street.

Placemaking Week increased liveability and turned the space from car-dominant to people-oriented. It was shown that a street can receive positive change in only one day. Involving youth and children in reclaiming the streetscape showcased the potential of the streetscape as a democratic public space. This exercise underscored the economic and health benefits of pedestrianisation, walkability and bikeability, as is discussed in the Impact Assessment. The event also saw a lively interaction on social media about the unusual event and brought Nairobians to enjoy, experience and appreciate what could be if permanent pedestrianisation interventions were implemented.

“The street is the river of life of the city, the place where we come together, the pathway to the center.” - William Whyte
Space was also reclaimed for cyclists and skaters. These forms of active mobility are generally neglected in Nairobi’s transport planning efforts. To encourage more sustainable mobility in the city centre, the main focus should be on providing safe infrastructure and facilities for them. A 2-metre-wide one-directional cycle lane, uninterrupted by obstacles, painted in red or green color, and physically separated from the motorized lanes, would be ideal to make it attractive and convenient. This has to be complemented by safe and free-of-charge parking facilities.

This painting below of the zebra crossing was utilized to raise awareness of the potential in creating permanent and safe crossing facilities at desired lines of pedestrians. Ideally, a safe crossing incorporates an at-grade crossing as shown, where pedestrians remain on the level of the footpath while ramps will force vehicles to reduce their speed. This concept also contributes to the achievement of universal accessibility and thus ensuring ease of movement for people in vulnerable situations (e.g. wheelchair users, tricycle users, etc.).
Example of a public plaza reclaiming space on a street corner.
Art and Culture as Catalysts for Social Change

Art and culture are powerful tools to engage people and provide them with tools and perspectives to transform conflict into creativity, adversity into opportunity, oppression into expression and subsequently inspire positive change.

Since 2012 Hope Raisers Youth Initiative and Architects Without Borders (SE) have been transforming the streets in Korogocho by involving children and youth in different activities. The collaboration is called Korogocho Streetscapes and takes departure from the acknowledgement of streets as an important platform for democratic action and cultural expression. Korogocho Streetscapes believes that art, sports and music provides children and youth with tools and direction to become agents of changes for positive transformation processes.

During Placemaking Week, these methods were brought to the streets in downtown Nairobi. By adding art in the form of Talking Walls, involving children and youth in street painting, using the street as a place for football tournaments and roller-skating, and organising music concerts and performances, visitors could get actively involved, and understand the big spectrum of possible uses. Altogether these activities turned the streets into an experience of positive and democratic public spaces, touching on a big spectrum of aspects: Through art the streets visibly changed. The involvement of people strengthened a sense of ownership and responsibility for the street, as well as the notion that it is possible to transform one’s city. Music performances enriched the space and offered a cultural experience, showcasing art and music to the wider audience.

“The games that you play as a child, as well as the environment you play in, influence your behaviour. Therefore, the streets influence the behaviour of children. We should see the streets as an arena where children and youth can interact and become ambassadors for change. In Korogocho, skating in the streets has become a symbol of how activities in the streetscape can be used to transform the community.” Daniel Onyango, Hope Raisers (Project Manager)
The Organic Farmers Market, Kilimani

The Kilimani Project Foundation run a weekly Organic Farmers Market at the Kilimani Primary School. This is done in partnership between the school, the foundation and the farmers. About 30 farmers display and sell their produce to the over 200 regular market attendants every Sunday.

In November 2016, the market was combined with Placemaking Week, to raise awareness amongst Kilimani residents regarding their use of public spaces.

The concept behind the Kilimani Organic Farmers Market goes far beyond just selling food and other items. The market makes use of a public space, in this case a public school to create a space and an opportunity for ‘Kilimanians’ to come together, get to know each other and interact over a cup of coffee or a meal. They also get to spend time in one of the few public spaces in the neighborhood. In order to make it as inclusive as possible, children have an opportunity to play on the bouncing castle or swim at the school swimming pool which is open to the public. Surplus generated through the trading activities is donated to the school for the improvement of its facilities.
Impact Assessment of Placemaking Week

Air quality

Air pollution is the single largest environmental health risk globally. WHO estimates that at least seven million annual premature deaths are attributed to poor air quality. That adds up to one in eight premature deaths globally! A significant proportion of these deaths occur in fast-growing cities where air pollution levels are high and is growing rapidly.

Economically, air pollution is associated with a burden equivalent to 5-14% of a country’s GDP. Premature mortality and morbidity, lost earnings, and medical costs hurt productivity, which is essential for economic growth.

The extent of health-related damage caused by air pollution is directly proportional to the total exposure to pollutants, a measure of the duration of exposure and the concentration of the said pollutants. According to one UNEP study, 90% of urban air pollution in fast-growing cities like Nairobi is attributable to motor vehicle emissions.

As such, the promotion of non-motorised transport is a good place to start reducing urban air pollution levels.

Taking strategic and targeted action to control urban air pollution is therefore an urgent health and urban development issue for Nairobi City County. By reducing urban air pollution levels, the city and indeed Kenya at large can reduce the burden of disease from stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma. The inaugural Placemaking Week Nairobi presented a rare opportunity to measure and document the impact of pedestrianisation on air quality. This is an important first step in providing air quality information and investigating its intricate link to various forms of mobility and nature of the streets in downtown Nairobi.

“A polluted environment is a deadly one, particularly for young children. Their developing organs and immune systems, and smaller bodies and airways, make them especially vulnerable to dirty air and water.” Dr. Margaret Chan, WHO Director-General
Particulate matter

Definition and principal sources

PM affects more people than any other pollutant. The major components of PM are sulfate, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water. It consists of a complex mixture of solid and liquid particles of organic and inorganic substances suspended in the air. The most health-damaging particles are those with a diameter of 10 microns or less, (≤ PM10), which can penetrate and lodge deep inside the lungs. Chronic exposure to particles contributes to the risk of developing cardiovascular and respiratory diseases, as well as of lung cancer.

Health effects

There is a close, quantitative relationship between exposure to high concentrations of small particulates (PM10 and PM2.5) and increased mortality or morbidity, both daily and over time. Conversely, when concentrations of small and fine particulates are reduced, related mortality will also go down – presuming other factors remain the same. This allows policymakers to project the population health improvements that could be expected if particulate air pollution is reduced.”

Study Design

A fixed-site affordable air quality monitor from Atmospheric Sensors Ltd UK (model AS510) – hereafter referred to as the node, was set up along Muindi Mbingu street. The node provided continuous measurements of nitric oxide (NO), nitrogen dioxide (NO2), sulphur dioxide (SO2), particulate matter (PM1, PM2.5 and PM10) as well as temperature and relative humidity for three months (October, November and December) at high temporal resolution (every minute). The analysis presented focusses on ambient particulate matter (PM10 and PM2.5) for the pre-placemaking week, placemaking week and post-placemaking week periods. The first few weeks of measurements (5th to 30th October) are excluded from the analysis to account for sensor stabilization within the surrounding ambient environment. Extract from WHO Air Quality Factsheet

Findings

Data analysis was done using the OpenAir open source air quality analysis tool (OpenAir version 1.8-2 on R version 3.3.0). There was negligible reduction (< 1%) in average PM2.5 concentrations during the placemaking week with a higher reduction of 8% recorded the week after (December 5 – 11). In the same context however, a significant reduction (14%) in average PM10 concentrations was recorded during the placemaking week with a lower reduction of 5% recorded the week after.

Sources of ambient particulate matter vary and include, for the purposes of this intervention, combustion sources from vehicular emissions and resuspended dust from paved and unpaved roads. Generally, combustion processes form fine particles (PM2.5 fraction) while resuspended dust sources are predominantly coarse particles which are part of the PM10 fraction. It is important to note that this study
was performed in the short rains season when concentrations are generally observed to decrease in the greater Nairobi area (5 other units deployed across the city).

The bivariate plot (Figure 1) was used to explore source locations and corresponding atmospheric transport directions of particulates. For placemaking week analysis, observed measurements were split to three different time intervals (before, during and after) using the OpenAir function. PM2.5 concentrations increase with winds blowing from the north-east at low speeds (Figure 1 - Top) associated with local emissions from vehicles along Muindi Mbingu street. Contribution from long-range transport is observed at high wind speeds. During the placemaking week, concentrations were observed to decrease with little contribution from long-range transport. PM10 concentrations increase with winds blowing from the north-east and south-east directions at high speeds (Figure 1 - Bottom) associated with polluted air masses from Moi Avenue and beyond.

High daily mean concentrations associated with proximity to the street road source were observed. Statistics derived from the data give diurnal variations (Figure 2) consistent with the analysis. The diurnal pattern for PM2.5 (Figure 2 - Top) is similar to diurnal profiles described for anthropogenic urban pollutants due to traffic with morning and evening rush hours clearly visible. The peaks were less pronounced during the placemaking week as concentrations decreased. In general, the analysis reveals a bimodal pattern with two peaks in the morning - 6.00 am local time, and evening – 6.00 pm local time that follow times of peak traffic.
Air Quality and Policy implications

Air pollution is a priority area of action significantly contributing to the global burden of disease. Interventions aimed at improving public health by reducing emissions and personal exposure can help assess the impact of policies, whether positive or negative. The findings of this study suggest that it would be beneficial to focus on actions that limit ambient pollutant concentration and spatial distribution. These would include promoting sustainable modes of transport like public transport, and safe walking and cycling to reduce emissions. Emitted pollutants disperse in the atmosphere at different rates often influenced by meteorology. Green spaces are able to trap and absorb suspended particulate matter. It is therefore important that Nairobi focuses on create more public, and green spaces in order to ameliorate the concentration of these pollutants. In the Central Business District, one strategy to limit spatial distribution would be traffic routing particularly in the city center where traffic density is not evenly distributed resulting in higher emissions in certain zones. This would present city authorities with the option to offer alternative forms of non-motorized transport to city dwellers. The change seen above was accomplished in just one week, proving that investing in green spaces and discouraging motor vehicle use would have an immediate and significant impact on air quality in Nairobi.
Public Response

Individuals had the chance to give feedback using their own expression of the activities and event in situ (Figure 7). Their reaction was overwhelmingly positive.

As a more detailed assessment of the public’s response to Placemaking Week, and the associated micro-interventions, UN-Habitat prepared questionnaires to be filled by the users of the created and activated spaces and for merchants along the three streets adjoining Jeevanjee Gardens. The questionnaires assessed their views during and after the event. The survey received responses from 55 users and 36 merchants during Placemaking Week, and 40 users and 35 merchants after.

General Public (Users)

Although 84% of the users surveyed appreciated the use of streets as public spaces, only 46% wanted the interventions to be permanent. There were varied opinions of the nature of the permanent street interventions, as shown in Figure 3. A grand 87% of the respondents, however, confirmed that they would be visiting the area if the interventions were made permanent. Installation of the exhibition and urban furniture and the demarcation of a cycling lane were identified as the most preferred uses of this space.

After Placemaking Week, the support for the interventions was sustained. The majority of the users agreed that the vehicles invade the
street meant for pedestrian use (85%), and that more pedestrian facilities would improve street life (77%). Most users preferred partial spatial (60%) and temporal pedestrianization; 45% for weekdays, 33% for weekends and only 23% for the full week. 90% of the respondents stated that they would be happy to participate in Placemaking Week in the following year.

**Merchants**

The questionnaire revealed mixed reactions from the neighbouring merchants. While fast food kiosks and restaurants recorded a massive increase in the number of clients (some even doubled), mobile money agents (e.g. M-Pesa agents) claimed that their clients had reduced drastically as they mainly depend on drivers who park on the affronting street. A major footwear store along Muindi Mbingu street, in particular, recorded that the number of customers halved. Boutique shops who got the opportunity to display their products along the street noted that the display enabled more customers to browse their products and subsequently consider buying, hence an increase in profit margin. When asked if they would like to participate if the interventions were made permanent, 40% of the merchants said yes, 17% said no, and 43%, the majority, said they would only participate partially.

In the post-Placemaking-Week survey, the merchants differed from the users in their opinion of vehicular invasion of the street. 60% did not observe this invasion. When asked if pedestrianisation would favour their businesses, the responses illustrated in Figure 4 were given. With regards to timing, most merchants (51%) preferred pedestrianisation only on weekends.
Lessons and Recommendations

As an inaugural event, Placemaking Week 2016 was a success. The various activities and interventions brought Nairobians from all walks of life together and inspired them to re-imagine the concept of public space. The event showcased the effectiveness of placemaking and the LQC approach in activating public spaces, testing solutions and reclaiming urban streets from cars and traffic. These techniques allowed the organisers to:

- Transform city streets and underused spaces into exciting laboratories that citizens and the business community can start enjoying with minimal interventions and showcase possibilities.
- Leverage local partnerships that have greater involvement by a community and results in more authentic places.
- Encourage an iterative approach and an opportunity to experiment, assess, and evolve a community’s vision before launching into major construction and a long-term process.

Placemaking Week also illustrated that partnerships and shared leadership are crucial for building momentum and harnessing the power of arts and culture to improve the quality of life and revitalise public spaces and streets in downtown Nairobi. Just as it took the effort of several teams, made up of multiple organisations, to organise the event, so will it take their combined efforts to improve public spaces and streets in Nairobi as a whole.

In correspondence with this, the placemaking and public space agenda need to be connected to the normative programmes of both the national and county governments such as public health, urban planning and transport initiatives. Public spaces and streets have an enormous capacity to help reduce morbidity, thus helping healthcare providers cut down on treatment costs. As a result, they may be encouraged to invest more in public spaces as a preventive measure. From a transport perspective, the support of the relevant government bodies is crucial in promoting sustainable mobility. The city, in collaboration with partners, should aim to create a network of safe pedestrian-only and pedestrian-priority streets. These interventions would greatly reduce traffic in the city and the associated vehicular emissions. With this support, future Placemaking Week pedestrianisation efforts can be made more permanent, extending beyond the one week.

Unfortunately, one of the week’s objectives remained unachieved due to lack of sufficient time. This was the commencement of Phase 2 of the Jeevanjee Gardens Amphitheatre project. It is anticipated that better planning and the engagement of more partners and volunteers can make this happen in the future, and ensure that future Placemaking Week Nairobi events are able to realise all their objectives. Nevertheless, Placemaking Week 2016 managed to re-ignite public interest in Jeevanjee Gardens as a safe and inclusive public space.
References


